Welcome to Roadway Design Manual



TDOT Department of Transportation Roadway Design Division

Website: www.tn.gov/tdot/roadway-design/training.html

Email: TDOT.RoadwayDesignDivisionTraining@tn.gov

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Introduction

This manual is designed to provide a list of useful resources including the Roadway Design Division website. For convenience, each title is a link to the corresponding page on the Design Division's website. A brief description is right below the title, followed by a screenshot of what each page looks like.

Roadway Design Division

The Roadway Design Division consists of the Design Standards and Policy, Contract Management, Aerial Surveying, and Consultant Management sections. The key responsibility of the Design Standards and Policy Section is to provide guidance and oversight for the Tennessee Department of Transportation (TDOT) personnel by establishing roadway design criteria, maintaining and developing roadway design standards and training manuals, ensuring roadway plans meet the state and federal policies as well as the targeted quality assurance and compliance standards.

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Roadway Design Division	Roadway Design Division
Pesign Standards	James K Polk Building, Suite 1200
itandard Drawings Library	505 Deadenck Street Nashville, TN 37243
Survey Standards	 Phone: 615.741.2221 Fax: 615.532.2799
Pavement Design	
Quality Assurance/Quality Control	
Training	
/alue Engineering	
Plan Sales	Martin C
Staff	
Additional Resources	Jennifer Lloyd Director
Consultant information	jennifer.Lloyd@to.goz
Related Divisions	The Roadway Design Division consists of the Design Standards and Policy, Contract Management, Aerial Surveying, and Consultant Management sections. The key responsibility of the Design Standards and Policy Section is to provide guidance
Traffic Operations Division Resources	and oversight for TDOT personnel by establishing roadway design criteria, maintaining and developing roadway design standards and training manuals, ensuring roadway plans meet the state and federal policies as well as the targeted qualit
CADD Support	assurance and compliance standards.
TDOT ADA Office	The division's responsibilities include support activities such as maintaining the TOOT GNSS Reference Network for groun surveyors and providing CADD support and Microstation training and for TDOT personnel and consultant firms. This section also reviews loadly administrated projects for the Program Development Division for Clusibility Assurance and
	Compliance. The Aerial Surveys office is tasked with the planning and acquisition of digital imagery, which is then used in
	the assembly of and the delivery of geo-referenced mosaics encompassing the entire geographic extent of the state of Tennessee, as well as high-resolution aerial images for use in precision corridor design for engineering projects. The

Standard Design and Survey CADD Files and Documents

The CADD Support group is responsible investigating new software used for Designers and for addressing issues that occurs within the design software. They also update the CADD standards and templates so that they match the most up-to-date version based from the Standard Drawings, Roadway Design Guidelines and other design guidance.

The standard files provided on this page were developed for use by Designers with MicroStation and other software. Designers should keep these files up to date on their computers. Instruction on how to download each file can be found <u>here</u>.

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Instructional Bulletins V	8.11.07.443 and other software by All files are self-extracting archives	/ TDOT designers. Others may unless otherwise noted.	y download and use at their (own risk. No warranty is given.
Drainage Manual	NOTE: If you would like to be notifud update notification group.	fied of updates to this page, er	nail <u>TDOT.CADDSupport@tn</u>	. <u>gov</u> to be added to the
	<u>MicroStation</u>	• <u>Geopak</u>	<u>Office</u>	<u>e</u>
	<u>Aerial Survey</u>	• <u>Iplot</u>	• Auto	Track
	Documentation	<u>STD Survey Files</u>	• Lates	at Revisions
	<u>TN Map Files</u>	• Survey Standard Files		

The Design CADD Files page also includes a Documentation section that is beneficial to Designers to learn how certain programs work. One of the more important documents that you should review is the *CADD V8 Manual*. This is especially important in instructing you of the correct file naming conventions that should be used by everyone.

There are some general documents on this page as well. A couple of the more important documents is *How to Create a TDOT Helpdesk Ticket* and *FileNet User Guide for Design*. Most of the other files will become useful as you reach that point with a design project. If you get stuck, these documents provide step by step instructions on how to complete a task throughout the design process.

For all CADD related questions, email <u>TDOT.CADDSupport@tn.gov</u>.

DOCUMENTATION			
Name	Description	Size	Date
How to Create a TDOT Helpdesk Ticket.pdf	Step by step instructions on how to create a Helpdesk Ticket. Download Location: none specified	486 KB	01/25/18
<u>Creating PDF Files</u> from Microstation DGN Files.pdf	T.D.O.T. Design Division personnel have two methods available to them for producing PDF files from plan sheets in MicroStation. Both of these are described in this document. The recommended method is with InterPlot Organizer, which is used for batch plotting and generating PDF plan sets. They can also use MicroStation Print to produce individual sheet PDF files. Download Location: none specified	2972 KB	12/06/19
<u>TDOT Public</u> <u>Hearing Plot</u> <u>Doc.pdf</u>	This is for TDOT personnel only and is to be used with the HP Designjet T1300 Series Color Printer Download Location: none specified	719 KB	02/02/17
<u>Title Sheet Preset</u> Filters Tutorial	This tutorial is intended to assist users on learning to apply preset filters to new title sheets throughout the various phases of a TDOT roadway project. Download Location: none specified	2300 KB	08/24/18
Recommended Plotting Workflow Procedures	This document provides instructions for a new plotting workflow for full size design files when using Projectwise Interplot Organizer and IPLOT within MicroStation to match current needs and standards. Download Location: none specified	9.49 KB	07/08/16
CADDV8.pdf	Acrobat pdf document containing documentation for T.D.O.T. Roadway Design Division CADD standards. Download Location: none specified	2603 KB	05/01/14
<u>TDOT Roadway</u> <u>Design Division</u> <u>Programs.pdf</u>	Acrobat pdf document containing description and workflow documentation for special programs used to access cells, produce graphic displays or to perform special functions. These include Geopak 3PC and MicroStation VBA programs. All programs can be accessed from Geopak's Design & Computation Manager. When running the T.D.O.T. Roadway Design Division interface most of them can be accessed from the TDOT drop down menu. Download Location: none specified	40455 KB	05/01/14

Roadway Design Guidelines

The Roadway Design Guidelines have been created to ensure that there is consistency in TDOT projects across the state. These guidelines indicate the currently recognized design standards for new construction or reconstruction of existing highways and shall be utilized while giving due regard to topography, natural conditions, availability of road material, and prevailing traffic conditions. Designers should read the Roadway Design Guidelines before starting to design a project. This is where Designers should go if they have questions about design, creating plans, submittal process or various other topics.

For all Roadway Design Guidelines related questions, email TDOT.Design@tn.gov.

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Design Standards	Roadway Design Gui	deline	5
Design CADD Files 🗸 🗸	Revised: July 7, 2020		
Design Guidelines			
Roadway Item Lists	NEW ROADWAY D	ESIGN GUID	ELINES
Instructional Bulletins			
Drainage Manual	CHAPTER		REVISION DATE
Roadway Design Documents	Chapter 1 General		05/15/2020
	Chapter 2 Geometric Design		03/02/2020
	Chapter 4 Preliminary Plans Development		[NEW]
	Chapter 9 General and Special Notes		05/15/2020
	Chapter 10 Index of Standard Drawings		06/29/2020

Reference Documents

As a subsection of the Roadway Design Guidelines, there is the Referenced Documents. One of the more important documents here are the various versions of the Design Checklists. The Roadway Design Division has a checklist to assist the designer when turning in their plan set for each stage of design. Here you can find the Preliminary, Right-of-Way, and Construction Checklist. There are other documents that are in this subsection that can be viewed below in the figure.

REFERENCE DOCUMENTS
Roadway Design Guidelines Notes & Footnotes [NEW]
Highway - Rail Crossing Handbook
Railroad Safety Crossing Review
Roadway Design Initial Studies Checklist
Roadway Design Preliminary Checklist

Road Item Lists

The Road Item Lists is used when a designer needs to look up what an item number represents. It can also be used if you need to find an item number based on a brief description. You can also use the items.dat file that is located on the CADD downloads page or within the Estimated Quantities Excel file.

After you have determined there is a certain item you want to use, see Section 4 of the Roadway Design Guidelines. This section is useful in providing details on when to use a certain item number. It also provides calculations, necessary footnotes, and other considerations. Chapter 1-Section 400 of the Roadway Design Guidelines discusses the estimated quantities submittal procedure and things to consider when developing the estimated quantities. Designers should also refer to the appropriate standard drawings and construction specifications to ensure the correct item numbers are being used. TIP: The first 3 numbers of the item number correspond to the specification.

TD TRoa	d Item Lists	
SearchOptions		
English (Spec. Year 2000) Metric (Spec. Year 2001)	Search by an Item Number	Search By Description Keyword
(Note: To display the entire list, sea and Partial Description Keywords a	rch with out entering any Keyword or re allowed in the search.)	Item Number, Partial Item Numbers

Instructional Bulletins

Instructional Bulletins (also known as IBs) are used to let the designers know that there have been changes to the Roadway Design Guidelines, Standard Drawings, or other supporting documentation. Notification of new IBs are sent via email. If you need to refer to an IB, they can be found here on the website. The IBs from previous years can also be found there with a brief description. The information in the IBs take precedent over the information found in the manual that is being updated. Once the IB is incorporated in the manual, the IB will then be voided.



Drainage Manual

The TDOT Design Division Drainage Manual discusses TDOT's policies, practices, and procedures for performing drainage design and hydraulic analyses on projects. To assist the designer performing drainage and hydrologic design, TDOT has developed this manual to provide a collection of applicable drainage criteria, policies, and examples. All basic design elements are included such that roadway drainage design can be accomplished. All the chapters will be useful to designers but the two that will be more useful are described below:

Chapter 3 guides you as to what should be shown on the plan sheets and should correspond to the MicroStation Sheet Level filters and checklists.

Chapter 10 guides you through all Erosion Prevention and Sediment Control (EPSC) devices and gives a description of each and how to calculate them in your plans. This chapter follows closely with the EPSC Manual discussed below.

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Design Standards	Drainag	ge Manua	l		
Design CADD Files V	Table of Content				
Design Guidelines		ICTION			
Roadway Item Lists		<u>ichon</u>			
Instructional Bulletins	CHAPTER 2 - GENERAL	DRAINAGE POLICIES & PRA	CTICES		
	CHAPTER 3 - DRAINAG	E PLAN REQUIREMENTS			
Drainage Manual	CHAPTER 4 - HYDROLO	DGY			

EPSC Manual

This manual presents the procedures, methods, and available measures to be used by TDOT for the proper design of an effective EPSC plan. This manual goes through various EPSC measures from the designer's perspective so they can have a better understanding of EPSC measures in the field. If you need more information that what is discussed in this manual, see Chapter 10 of the Drainage Manual and the EPSC Standard Drawings.



Roadway Design Documents

Roadway Design Documents contains all the forms for a Designer's use. The Roadway Design 2nd Sheets can be used in a roadway set of plans. The Forms and Letters are various documents that are to be sent out at different stages of your project. (i.e. Initial Studies, Pavement, Revisions, Work Zone, etc.)

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Design Guidelines				
Roadway Item Lists	> Roadway Design 2nd Sheets			
Instructional Bulletins	> Roadway Design Forms & Letters			
Drainage Manual	Field Survey Documents			
Roadway Design Documents	 Regional District Boundaries 			
		This Page Lo	ast Updated: February 18, 2020 a	: 11:01 AM

Standard Drawing Library

Standard Drawings contain standard notes and details and are referenced from the contract plans. That way these commonly used notes and details do not have to be recopied repeatedly into every set of plans. Standard Drawings help reduce not only the number of special details that will be used, but also the time it takes to prepare a project's plan set. There are the 3 types of Standard Drawings and it is based off which division the drawing would be a part of. The 3 types are Roadway, Structures, and Traffic Operations.

The previous Roadway and Structure Standard Drawings can be found below the current standard drawings on this page as well.

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Design Standards	Roadway Design Division	Structures Division	Traffic Operations Division
Standard Drawings Library Standard Roadway Drawings	Standard Roadway Drawings Previous Standard Roadway Drawings	Standard Structure Drawings Previous Standard Structures Draw	Standard Traffic Operations Drawings
Previous Standard Roadway Drawings Survey Standards	Standard Drawings contain standard no commonly used notes and details do no	ites and details and are referenced fro at have to be recopied again and again	om the contract plans. That way these n into every set of plans. Standard Drawings
Pavement Design	DISCLAIMER	gs in project plans and the time it take	es to prepare project plans.
Quality Assurance/Quality Control	The Standard Drawings shown on this v > Department of Transportation (TDOT), /	vebsite are intended for use only on p Any use made of these drawings by an	projects undertaken by the Tennessee ny other party shall be entirely at the party's
Value Engineering	Standard Drawper are in Adobe Acrob	serves the right to void, revise or creat	te new trawings at anytime.
Plan Sales	view and/or print these files. The defau size, the PDF file must be directed to pr	t for PDF files is 8.5 X 11 print size and int 11 X 17 and landscape under the P	f portrait orientation. To print standard half- AGE SET-UP option in the Adobe Acrobat
Staff	Reader.		
Additional Resources	MicroStation design files are not availab	le for distribution.	

Standard Roadway Drawings

There are 9 different sections of the Standard Roadway Drawings which can be further divided into subsections based on which type of Standard Roadway Drawing it is. One of the more important sections of the Standard Roadway Drawings is the Roadway Design Standards-RD11 Typical Sections and Design Criteria. This section is important because it contains the graphical representation of the major cross-sectional elements of a proposed roadway. It also contains the standards a designer must follow to stay compliant with the current guidelines.

As a Designer, it is important to review the standard drawings to ensure the correct item number is used and any associated standard drawings are included in the Standard Drawing lists in the plan set.

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Standard Drawings Library	Standard Roadw	vay Drawings	
Previous Chandard Poachura Drawings	Revised. October 11, 2015		
Previous standard koadway Drawings	TDOT Standard Drawings Sections Standard Drawings are divided into eight section the desired section from the list below.	is, which are further divided into subsections for specific drawings. Sele	ect
	Roadway Design Standards	Standard Abbreviations and Legends Typical Sections and Design Criteria RD11 Typical Sections and Design Criteria RD11 Slope Developement and Runoff Lengths RD11 Intersection Sight Distan Slope Development Intersection Sight Distance Underdrains	ce
	Pipe Culverts and Endwalls	Pipe Culverts and Flume Safety Cross Drain Endwalls Safety Side Drain Endwalls Protected Endwalls	
	Catch Basins and Manholes	Catch Basins Junction Boxes Manholes Spring Drain Boxes Slotted and Trench Drains	
	Natural Stream Design	Deflectors, Vanes and Energy Dissipators	
	Roadway, Pavement Appurtenances, and Fences	Concrete Pavement Intersections Curbs Walls Fences and Rig Of-Way Markers	;ht-
	Multimodal	Curb Ramps Pavement Markings Safety Rail Sidewalk Typical Section	
	Safety Design and Guardrails	Clear Zone and Safety Plans Cable Barriers Crash Cushions Guardrail Details Guardrail Connections Guardrail (Special Cases Guardrail Terminals Guardrail Anchors Concrete Median Barriers Guardrail Maintenance) 5
	Design - Traffic Control	Pavement Markings Work Zones	
	Erosion Prevention and Sediment Control	Dewatering Devices Slope Devices Ditch Devices Inlet Protection Detaining Devices In-Stream Devices	n

Standard Structures Drawings

These drawings are mostly used by the Structures Division; however, it may be useful for a designer to reference a structure's drawing, especially if their project requires a box culvert. Here, you can view any type of structural component such as bridge railings, expansion joints, parapets, etc.

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Structures	Standa	rd Structu	ires D	Drawir	ıgs		
Better Bridge Program	Recreated: Decem	ber 7, 2017			•		
Tennessee Bridge Facts							
Structural Design	Select Section						
Standard Structures Drawings	New						
New Structures	Structures Deta	ge Railings, Slider Plates, Medi ills, Light Support & Detail Dra	ian Barriers, B wings	ridge Ends, Expan	ision Joints, E	iridge Deck Panels, Se	eismic
LRFD Box Culverts							
Bridge Repair	LRFD Box Gen Culverts Brid	eral Notes/Details, Typicals, W ges & Slab Bridges	ingwalls, Inlet	s & Outlets, Exten	sion Details,	Box Culvert Details, E	Box
Previous Standard Structure Drawings							
Inventory and Appraisal	<u>Bridge</u> Gen <u>Repairs</u> Brid	eral Notes/Details, Expansion ge Rails	Joints, Precast	: Slabs, Concrete F	arapets, Bar	riers, Endposts & Exi	sting

Standard Traffic Operations Drawings

These drawings will mostly be used by the Traffic Operations Division. A designer would review these drawings if they need to view a sign or signal standard drawing. This section also includes drawings for lighting and utility poles and railroad crossings.

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			SIGN	ALS	
			LIGHTING AND	UTILITY POLES	
			RAILROAD C	ROSSINGS	
			SIG	NS	
	DRAWING	REVISION DATE	DESCRIPTION		
	<u>T-S-6</u>	02/12/1991	STANDARD MOUNTING DETAILS	5 - BOLTED EXTRUDED PANELS	

Aerial Surveys

Aerial Survey is a section of the Roadway Design Division. This Office assists: project development and scheduling, production supervision, information technology liaison, new flight requests, base mapping, corridor mapping, historical imagery and projects, and facilities. The difference between Regional Project Development Survey Group and Aerial Survey, is that the Regional Project Development Survey Group does all the surveys for projects and the Aerial Survey group does corridor mapping projects to assist the regional survey groups.

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GNSS Reference Network	521 Olen Taylor Drive				
Aerial Surveys	Nashville, TN 37217				
Field Surveys	Prandon Webb				
Standard Survey CADD Files and Documents	Assistant Director				
Roadway Design Survey Manual	Phone: 615.253.1189	@to gov	and the second se		
GEOPAK Survey Training Manual	Aerial Surveys is a sect section covers project supervision, informati completed mapping, h facilities.	tion of the Roadway Design development and schedulin on technology liaison, new fl nistorical imagery and projec	Division. This ig. production light requests, ts, and	-	

One manual that is used by both the Regional Project Development Survey Group and Aerial Survey is the <u>Roadway Design Survey Manual</u>. These guidelines shall be used as the standard for all computer-aided mapping produced by and for the Survey Office in the Design Division of the Tennessee Department of Transportation.

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Survey Standards	Roadway Design	Survey Ma	nual
GNSS Reference Network	Updated May 3, 2011		
Aerial Surveys	<u>COVER PAGE AND TOC</u>		
Field Surveys		MATION	
Standard Survey CADD Files and Documents	CHAPTER 2 - AERIAL SURVEYS AND MAPPING		
Roadway Design Survey Manual	CHAPTER 3 - SURVEYING PROCEDURES AND PRACT	ICES	
GEOPAK Survey Training Manual	CHAPTER 4 - CARE AND MAINTENANCE		
	CHAPTER 5 - GENERAL SURVEY INFORMATION AND	CONSULTANT COORDINATION	
	APPENDIX		

Roadway Pavement Design

The Roadway Pavement Design Office provides pavement design for interstates and state routes in the four regions of Tennessee, including Local Programs projects. The office is also responsible to ensure that the pavement design for minor road projects, including State Industrial Access (SIA) roads, are properly selected by the consultants and roadway designers. The office also performs Life Cycle Cost analysis to aid in pavement type selection. The office is an integral part of the TDOT Roadway Design Division.

For all pavement design request submittals, a pavement design request packet should be emailed to <u>TDOT.PavementDesign@tn.gov</u>.

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Design Standards V	The Roadway Pavement Design Office provides pavement desi	ign for interstates and state ro	outes in the four regions of			
Standard Drawings Library \sim	 Tennessee, including Local Programs projects. The office is also responsible to ensure the read projects, including State Industrial Accord (SIA) reads, and projects dependently elected by the 		ne pavement design for minor			
Survey Standards v	designers. The office also performs Life Cycle Cost analysis to aid in pavement type selection. The office is an integra of the TDD Randway begins the cost of the top of the to					
Pavement Design	or are room to dating being romaion.					
Quality Assurance/Quality Control	The Roadway Pavement Design Office is aggressively pursuing Design Guide (MEPDG) now called Pavement ME Design in Ten	sis aggressively pursuing the implementation of Mechanistic-Empirical Pavement vement ME Design in Tennessee. It also oversees numerous research projects				
	regarding the improvement and technological innovations rela	ited to pavement design.				
Training	For pavement design or research related questions, please cor	ntact:				
Value Engineering	, , ,					
	Sampson Udeh					
Plan Sales	Pavement Design Coordinator TDOT Roadway Design Division					
Staff	James K. Polk Bldg, 12th Floor					
	505 Deaderick Street					
Additional Resources	Nashville, TN 37243					
Consultant Information	Phone: 615.741.4894 Email: <u>Sampson.Udeh@tn.gov</u>					

Quality Assurance/Quality Control

The Roadway Design Division Quality Assurance/Quality Control group (also known as QA/QC) has the responsibility of managing the QA review process in the design of roadway plans. This group helps to ensure that all guidelines, standards, and instructional bulletins that relate to the project are followed. They also check format standards relating to the design and production of roadway plans.

This group, located at TDOT Headquarters in Nashville, reviews the plans for all regions to help ensure consistency across the state. To accomplish this, the designer submits their plans to the QA/QC group prior to all field reviews so they can start the review process. This process involves referencing the checklist against the set of plans for each phase. The plans will then be returned to the designer, by the QA/QC group, before the field review of each phase of the project. The QA/QC process is applied to all projects designed In-house and by consultants. This group also offers a review of projects that come through the TDOT Local Programs Office.

A couple useful links on this page are the links to the common issues with plans. For your convenience they are listed below:

- <u>Common Issues on Local Program Plans</u>
- Common Issues on TDOT Plans

For all Quality Assurance/Quality Control related questions, email <u>TDOT.QualityAssurance@tn.gov</u>

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Roadway Design Division	Quality Assurance/Qu	uality Control			
Design Standards	lames K. Polk Bldg. Suite 1200	,			
Standard Drawings Library	505 Deaderick Street Nashville, TN 37243				
Survey Standards	The Roadway Design Division Quality Assurance/Quality Control	(QA/QC) group has the responsibility of managing the QA			
Pavement Design	review process in the design of roadway plans. This group helps bulletins that relate to the design quality control are followed. Fo	review process in the design of roadway plans. This group helps to ensure that all guidelines, standards, and instructional bulletins that relate to the design quality control are followed. Format standards relating to the design and oroduction of			
Quality Assurance/Quality Control	roadway plans are also checked.				
Training	This group, located at TDOT Headquarters in Nashville, reviews t the state. The OA/OC process is applied to all projects designed in	he plans for all regions to help ensure consistency across in-house and by consultants. This group also offers a			
Value Engineering	review of projects that come through the TDOT Local Programs Office.				
Plan Sales	See the Roadway Design Checklist under Roadway Design Guide	lines Reference Documents toward the bottom of page.			
Staff					
Additional Resources	Common Issues on Local Program Plans (pdf)				
Consultant Information	Contract States on 1 2 of 1 forty				
Related Divisions					
Traffic Operations Division Resources	Contacts				
CADD Support	Andrew Wisniewski, P.E. Transportation Project Specialist Supervisor 2	Phone: 615.741.6341 Email: <u>Andrew.Wisniewski@tn.gov</u>			
TDOT ADA Office	Melissa Shull, P.E. Transportation Project Specialist Senior	Phone: 615.741.3370 Email: <u>Melissa.Shull@tn.gov</u>			
	John Portwood, P.E. Transportation Project Specialist Senior	Phone: 615.532.3883 Email: <u>John.Portwood@tn.gov</u>			
	Wanda Jordan Transportation Project Specialist Senior	Phone: 615.741.4485 Email: <u>Wanda.Jordan@tn.gov</u>			

Roadway Design Training

The purpose of the Roadway Design Training Section is to identify and provide all employees in the Roadway Design Division and Project Development with the proper technical training to perform their job duties in a professional and expedient manner. Classes may be held in a classroom setting or they may be online and self-guided. The Training Program is facilitated by Headquarters and Regional personnel, with the oversight and support of the HR Office of Learning & Development.

Each month the Training team will send out a Newsletter. It will include any upcoming training opportunities with links on how to register for a specific class. These training opportunities may include those with TDOT, an outside source that leads the training or any free web-based training opportunity. The newsletter may also include any design updates and anything that relates back to training.

For all Training related questions, either email <u>TDOT.RoadwayDesignTraining@tn.gov</u>.

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Design Standards v	Revised: July 17, 2020	-	
Standard Drawings Library 🗸			
Survey Standards v	The purpose of the Roadway Design Training Section is to ident	ify and provide all employees in the Roadw	vay Design
Pavement Design	expedient manner. The Training Program is facilitated by Heado support of the Office of Learning & Development	quarters and Regional personnel, with the	oversight and
Quality Assurance/Quality Control	Support of the Onice of Learning & Development.	r surrantly school yed training classes. If ye	u baux questions
Training	concerning the scheduled training classes please email the con- Instructor-lad classes provided by TDOT follow the link in the cl	tact person listed on the class description.	To register for an
Roadway Design Training Classes	Many classes and tutorials are available poline for students to u	work through at their own page	
Roadway Design Training - Tutorials and Training Guides	wany casses and toto has are available of nine for students to v	work unough at their own pate.	
EPSC Manual	Design Classes Tutorials and Training Guides		
Class Registration	The Welcome to Roadway Design Manual provides a list of usef	ful resources for a new roadway designer, i	ncluding the
Value Engineering	Roadway Design Division website, various manuals, and more. tools to assist you. For your convenience, each title is a link to the	It has learning programs and current proje he corresponding page on the Roadway De	ect development esign Division's
Plan Sales	website. A brief description is right below the title, followed by a	a screenshot of what each page looks like.	
Staff	Welcome to Roadway Design Manual		
Additional Resources	The Roadway Design Process Guide is intended to direct a new	designer through the design process. It pr	ovides locations
Consultant Information	for the information needed in each phase for all submittals and their supervisors to assist in the correct development of a proje	field reviews. It is intended to be used by etc. The flowchart depicted in Figure 1 disol	designers and avs an overview
Related Divisions v	of this process and can be referenced as a general guide.		
Traffic Operations Division Resources	Roadway Design Process Guide		

Roadway Design Training Classes

This page contains the Roadway Design Training classes offered. These classes can be downloaded and completed on your own. In the future, Open Road Design (ORD) class material will be available here and taught in the classroom.

The first manual that a Roadway Designer should work through is the *MicroStation V8i Course Manual*. The purpose of this MicroStation manual is to teach the user the basics of MicroStation and the tools that are most commonly used. This manual should be followed by the *GEOPAK Road Manual* then the *GEOPAK Drainage Manual*. Using GEOPAK will help ensure consistency and accuracy of design work and generate significant time savings in the overall effort of producing construction plans. These manuals should be used in conjunction with the CADD Downloads Documentation guides and manuals to help complete your project design in MicroStation and GEOPAK.

The *Roadway Design Manual* should be another one to work through on this page. This purpose of this manual is to serve as a general guide for the design of a roadway project. This manual provides the basic background of how to start and design a project with minimal direction and where to find design information.

This page can also be used to find and schedule other training opportunities that may be offered. These various training opportunities include: Tennessee Transportation Assistance Program (TTAP) classes taught across the state, Transportation Research Board (TRB) webinars, American Association of State Highway and Transportation Officials (AASHTO) training resources, and various National Highway Institute (NHI) training opportunities.

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Training	Roadway Design 7	Fraining Cl	asses	
Roadway Design Training Classes	Revised: July 17, 2020	0		
Roadway Design Training - Tutorials and Training Guides				
EPSC Manual	TDOT Training			
Class Registration	Geopak Road, Geopak Drainage and Contract Plans Reading classes were formerly held in a classroom setting, but are currently available online for students to work through on their own. If you have questions as you work through the material, please contact us at <u>TDOT.RoadwayDesignTraining@tn.gov</u> .			
	MicroStation V8i Course Manual (Download Class	Files <u>HERE</u>)		
	TDOT GEOPAK Road Course Guide (Download Clas	is Files <u>HERE</u>)		
	GEOPAK Drainage V8i Course Manual (Download)	Class Files <u>HERE</u>)		
	Roadway Design Manual (Draft) (Download Manua	al <u>HERE</u>) (Download Class Files	HERE)	
	TDOT Highway Contract Plans Reading			
	Interactive Contract Plans Reading [REVISED]			
	TDOT employees can also access a Contract Plans Re by clicking <u>here</u> .	eading course through the Learr	ing Network Raodway Design channel	
	Other Training Opportunities			
	TTAP Training Opportunities			
	TRB Webinars			

NHI Training Opportunities

Here are the most useful NHI Training Opportunities. TDOT regularly host a couple classes that are offered by NHI. Those classes are Urban Drainage, Culvert Design, and Intro to Highway Hydraulics. These classes are offered in one of two ways: instructor led, classroom style class or a web-based class that can be taken on your own.

Prerequisites for NHI Culvert Design Class are EITHER college level fluid mechanics coursework OR NHI Introduction to Highway Hydraulics Class. Participants are encouraged to take the web based NHI Basic Hydraulic Principles Review Class as well.

 NHI Training Opportunities

 Highway Safety Manual Online Overview

 * Hydraulic Toolbox

 Highway Hydrology: Basic Concepts and Methods

 Culvert Hydraulic Analysis and Design Program (HY-8)

 Plan of Action (POA) for Scour Critical Bridges

 Scour at Highway Bridges: Concepts and Definitions (Prerequisite)

 Basic Hydraulic Principles Review

 Stream Stability Factors and Concepts (Prerequisite)

 Seach all NHI Classes

Prerequisite for NHI Urban Drainage Class is marked in the image below by the *.

Tutorials and Training Guides

On the Tutorials and Training Guides Site, there are more tutorials and training guides that can be used for selfguided teaching. We created a PowerPoint with more information regarding these tutorials and is located on the Roadway Design Channel on the Learning Network.

The Interactive Plans Reading Tutorial is one of the more important guides on this page. It is a great tutorial for a new designer who may not know what all goes into a set of plans. This guide walks you through an entire plan set and points out everything that needs to be on a set of plans and where it needs to be located.

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Training	Roadway Design Trai	ning – Tutorials a	nd
Roadway Design Training Classes	Training Guides		
Roadway Design Training – Tutorials and Training Guides	Revised: July 17, 2020		
EPSC Manual			
Class Registration	Roadway Design Tutorials		
	Superelevation Diagram Tutorial		
	Title Sheet Preset Filters Tutorial		
	Catch Basin Minimum Depth Tutorial (Excel)		
	MicroStation V8i and Google Earth Tutorial		
	Side Drain Length Calculation		
	Superelevation Calculations		
	Superelevation Calculation in Accordance to RD11 Standard Dr	awings	
	Topsoil Calculations		

Class Registration

This is where you can come to register for a class. To do so, just fill out the appropriate information and submit the form and you will be signed up for whichever class you choose.

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Training	Class Registration	
Roadway Design Training Classes	Recreated: June 15, 2018	
Roadway Design Training – Tutorials and Training Guides		
EPSC Manual		
Class Registration	TDOT Class Registration	
	Email address * Your email	
	First Name * Your answer	

TDOT Learning Network

The TDOT Learning Network is full of videos that are very useful to all employees of TDOT. Here you will find all the introduction videos and classes that is required of you to take when you first start at TDOT.

On the Learning Network, there is a <u>Roadway Design Channel</u> that is beneficial to designers. Various videos discussing the basics of roadway design are located here. New designers are encouraged to take these courses to gain a better understanding of roadway design.

A couple of the more important items that you need to complete is the TDOT Highway Contract Plans Reading Class and the Roadway Design Resources. The TDOT Highway Contract Plans Reading Class will take you through an entire Construction set of Roadway Design Plans and describe everything that is shown on each sheet. It will also explain how some of the calculations are found and the basics behind the actual design of a roadway. To assist you through this training, there is an <u>Interactive Plans Reading Tutorial</u>, that was mentioned earlier, that can be found on the Roadway Design Division website. This can be used to highlight and explain every detail that is shown on each sheet. The Roadway Design Resource class is a walkthrough of all the manuals offered online that you can use.



Roadway Design Value Engineering

Value Engineering (also known as VE) is a systematic independent multidisciplinary team review process which utilizes project functional analysis to develop recommendations that:

- Optimize the value and quality of the project.
- Provide the needed functions, considering community and environmental commitments, safety, reliability, efficiency, and overall life-cycle cost.
- Reduce the time to develop and deliver the project

While VE studies would be beneficial to every project, that is not practical. To limit the number of projects that have a VE study there are a couple rules when selecting a project:

- VE Projects that may be studied must be located on the National Highway System and be a federally funded project where:
 - o <u>Roadway Projects</u> having an estimated cost equal to or exceeding \$50 million or
 - o <u>Bridges</u> having an estimated cost equal to or exceeding \$40 million

For any Value Engineering questions, contact Mike Flowers at Mike.Flowers@tn.gov

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Design Standards 🗸	Revised: January 14, 2019		-		
Standard Drawings Library 🗸					
Survey Standards V	Value Engineering (VE) is a systemic, independent, multidisciplinar	ry team review process used to analyze	e projects and		
Pavement Design	reliably, efficiently, and at the lowest overall cost; and reducing the time to complete the project.				
Quality Assurance/Quality Control	It is the responsibility of the TDOT VE Office to identify projects the	at meet the selection criteria and to en	isure that VE		
Training	Project Analysis Information	n lograni, see <u>instructional builetin in</u>	<u>amber 10-01</u> .		
Value Engineering					
Plan Sales	Region 4 Region 3	Region 2 Region 1	82 46		
Staff	5 66 92 40 42 21 11 19 55 80 = 23 27 9 3 43 22 19 9 9 95	44 67 25 187 29 32 3 71 65 1 7 45 15	0 90 10 0 36		
Additional Resources	21 32 57 39 58 60 60 60 60 60 60 60 60 60 60	93 18 73 53 5 78 78 78 72 78 78 78 78 78 78 78 78 78 78 78 78 78			
Consultant Information	73 24 35 55 36 91 50 28 64 75	11 77 54 62 33 54 62			
Related Divisions V		500 Que 6 70			
Traffic Operations Division Resources	2019 - 2020 Tentative Project Analysis				
CADD Support	Tennessee National Highway System (NHS) Maps				
TDOT ADA Office	The Tennessee NHS was expanded by MAP-21 to include urban a NHS.	nd rural principal arterials not previou:	sly included in the		

Roadway Plan Sales

Final construction plans for TDOT roadway construction projects are maintained by the Plan Sales Office. This group works with the final sealed project plans assembled by the Regional EPlans group (Plans Assembly Team) and loads them to the FileRoom FileNet folder. The Plan Sales office is responsible for updating the plans with construction revisions. Files that are located on the FileRoom FileNet folder are our permanent records for projects. Electronic copies of final construction plan sheets in PDF format are available for purchase from the Plan Sales Office.

Requests for plan sheets must be submitted by email to <u>Plan.Sales@tn.gov</u>. When submitting requests, as much identifying information as possible should be provided to ensure the correct sheets are located and provided to the customer.

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Design Standards	Revised: May 8, 2019		
Standard Drawings Library			
Survey Standards	Final construction plans for TDOT roadway construction project	s are maintained by the Plan Sales Office. Electro	nic copies
Pavement Design	of final construction plan sheets in PDF format are available for	purchase from the Plan Sales Office.	
Quality Assurance/Quality Control	 Requests for plan sheets must be submitted by email to <u>Plan.Sa</u> identifying information as possible should be provided to ensur suctomer. Click here for plans request information cheet. 	<u>les@tn.gov</u> . When submitting requests, as much e the correct sheets are located and provided to	the
Training	 Customer: <u>Click here for plans request information sneet</u> 		
Value Engineering	 For additional assistance or questions contact: 		
Plan Sales	TDOT Roadway Design Plan Sales Office		
Staff	James K. Polk Bldg, Suite 1200 505 Deaderick Street		
Additional Resources	Mashville, TN 37243 Email: <u>Plan.Sales@tn.gov</u>		

Roadway Design Division Staff

The website includes a HQ Roadway Design Division staff directory. Should you have questions regarding any of the Standard Drawings, CADD, Design Guidelines, other manuals and processes, use this link to find the appropriate personnel to direct your question.

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Roadway Design Division	Roadwa	ay Design	Division St	aff		
Design Standards	 Revised: February 28 	3, 2019				
Standard Drawings Library	~					
Survey Standards	 James K. Polk Building, 9 505 Deaderick Street 	Suite 1200				
Pavement Design	Nashville, TN 37243	505 Deaderick Street Nashville, TN 37243				
Quality Assurance/Quality Control	Fax: 615.532.2799					
Training	~	-				
Value Engineering	A COL					
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Staff	1977					
Additional Resources		k				
Consultant Information	Jennifer Lloyd					
Related Divisions	 Koadway Design D Phone: 615.741.22 	21				
Traffic Operations Division Resources	Email: <u>Jennifer.Lloy</u>	<u>a@tn.gov</u>				
CADD Support	DESIGN STANDA	ARDS and POLICY				
TDOT ADA Office	Ali Hangul, P.E. Assistant Director		Phone: Email: <u>/</u>	615.741.0840 Ali.Hangul@tn.gov		
	Robert Braun, P.E. Civil Engineering N	Manager 1	Phone: Email: <u>F</u>	615.741.6719 <u>Robert.Braun@tn.gov</u>		

Additional Resources

The Additional Resources page is a good source of various forms, manuals, links, and other resources that may become useful during the design process.

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Roadway Design Division	Roadway Design Additional Resources
Design Standards 🗸 🗸	Revised: February 20, 2020
Standard Drawings Library 🗸 🗸	
Survey Standards v	Please select from the attachments and links provided below. Additional materials can be found under each subsection on
Pavement Design	the IDOI koadway Design website.
Quality Assurance/Quality Control	FURINIS
Training ~	ITS Project Identification Form (Word)
Value Engineering	Survey & Design Manday Form Version 2.26 (Excel)
Plan Sales	NPDES and Water Quality Permits
Staff	
Additional Resources	MANUALS
Consultant Information	Manual on Uniform Traffic Control Devices (MUTCD). 2009 Edition

TDOT CADD Support

The purpose of the TDOT CADD Support group is to promote respective personnel and software users in the development of roadway projects using computer aided drafting and design (CADD) in the most accurate and efficient manner available.

On this page, you can find the CADD Support FAQ's and a link to the distribution list request page. There is also information about Bentley Connection Client and what to do if you have a MicroStation or Geopak issue.

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Survey Standards V	505 Deaderick Street Suite 1200		
Pavement Design	Nashville, TN 37243 TDOT.CADDSupport@tn.gov		$\mu_{3}\otimes \mathcal{S}$
Quality Assurance/Quality Control			
Training			
Value Engineering	It is our utmost pleasure to promote respectiv	e personnel/software users in the de	velopment of roadway projects using
Plan Sales	computer aided drafting and design (CADD) ir possible use of time and resources.	the most accurate and efficient man	ner available thereby making the best
Staff	Our goal is to support designers in accomplisi	ning roadway projects in a timely mar	nner so regardless of what other CADD
Additional Resources	support effort we may be working on at the ti	me, our software users and their p	rojects always come first!
Consultant Information	Either face to face or via email or phone, it is o encountering in getting something done on th	ur duty to assist the following groups eir roadway projects.	with specific problems they may be
Related Divisions	Headquarters - Since our office resides a	t headquarters this where most of o	ir one on one or face to face support is
Traffic Operations Division Resources	provided.	and a second and the	a one on one of face to face support is
CADD Support	 Regional and Survey Offices - This help is 	usually conducted via email or by ph	one but occasionally does involve going
TDOT ORD Info	to these remote locations for face to face as	sistance.	
TDOT ADA Office	 Other TDOT Divisions - Most TDOT Divisi Design is ultimately the place where all group 	ons do not have personnel directly as ips come together on project data, m	signed for support of CADD. Since any have adopted and use our

TDOT Email Distribution List Request for Roadway Design

The purpose of this distribution list is for designers and consultants to receive updates for the Design CADD Standards, Design Division Training Information and Roadway Design Related Documents such as: Design Guidelines, Instructional Bulletins, Standard Drawings and Drainage Manual Etc. Also, from the Traffic Operations Division, the Traffic Operations Memorandum's "TOM."

On this page, you can be added to, make changes, or remove yourself from the Distribution List that CADD Support delivers.



TDOT OpenRoads Designer

This page contains any and all information regarding OpenRoads Designer (ORD). If you would like to register for a live webinar or watch an on-demand webinar, they can be found through the links on this page.

For all ORD related questions, contact the TDOT ORD Team by emailing <u>TDOT.ORD@tn.gov</u>.



TDOT ADA Office

TDOT ADA Section provides accessibility for users of our services, programs and facilities, support for the design of accessible facilities and policy direction on how to implement the Americans with Disabilities Act (ADA).

For more information about ADA, <u>follow this link</u>.

For all ADA related questions, contact TDOT's ADA/504 Coordinator, Margaret Mahler, or email TDOT.ADA@tn.gov

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Roadway Design Division	TDOT ADA Office				
Design Standards 🗸 🗸	Created: May 13, 2019				
Standard Drawings Library 🗸					
Survey Standards 🗸 🗸	TDOT ADA Unit provides accessibility for users of our services, programs and facilities, support for the design of accessible				
Pavement Design	facilities and policy direction on how to implement the Americans with Disabilities Act (ADA). Our goal is to improve existing pedestrian facilities so that accessibility for those with disabilities can be ensured. TDOT ADA Office is the primary contact for individuals who need accomodations or have concerns or are encountering accessibility barriers. Our desire is to do more than just comply with the ADA.				
Quality Assurance/Quality Control					
Training	Key Link				
Value Engineering	IDOT ADA Office				
Plan Sales	For questions contact:				
Staff	Margaret Zeman Mahler				
Additional Resources	ADA/504 Coordinator ADA Office				
Consultant Information	Tennessee Department of Transportation 505 Deaderick St., Suite 1200				
Related Divisions	Nashville, TN 37243				
Traffic Operations Division Resources	Phone: 615.741.4984 TTY: 615.253.8311				
CADD Support	<u>TDOT.ADA@tn.gov</u>				
TDOT ADA Office					

Resurfacing Projects

The Pavement Office is responsible for managing TDOT's Standard Operating Guidelines for Highway Resurfacing. These guidelines ensure appropriate selection of paving treatment type and timing to optimize the Department's return on investment. This is a very useful page when working with resurfacing projects.

The 2018 Standard Operating Guidelines for Resurfacing intends to serve as guidelines for the selection of routes to be resurfaced and how resurfacing projects can be developed. It also shows differences in types of pavements.

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Pavement Office	Project Selection an	nd Developme	ent			
Pavement Management		Standard Counting Cuidelines for birth	for in These			
Project Selection and Development	The Pavement Unice is responsible for managing TDUT's Standard Operating Guidelines for highway resurtacing. These guidelines ensure appropriate selection of paving treatment type and timing to optimize the Department's return on investment. TDOT utilizes a lone list of pavement resurfacing treatments ranging from low-cost for seak to trait milling					
Future Paving Projects	and replacement of asphalt. Resurfacing projects are sele	ected based on existing pavement condi	itions such as distress, implemented, diverse			
Open-Graded Friction Course (OGFC)	pavement programs maintain highway networks at a mu roads first. This diverse program type is referred to as a "p	ch higher quality level than programs w pavement preservation" program, in whi	hich only pave "poor" ich select roads with fair			
Frequently Asked Pavement Questions	conditions are preserved with lower cost treatments befo utilizes historical pavement data to continuously verify the preservation has repeatedly proven to be a highly cost-eff can be found at <u>https://www.pavementpreservation.org/</u>	ore they have the opportunity to deterio at all project selections are cost-effective fective approach. More information on l	rate. The Pavement office e, and pavement Pavement Preservation			
	2018 Standard Operating Guidelines for Resurfacing	; D				
	<u>Appendix A – Resurfacing Delivery Schedule</u> (up	odated August 2019) 🕒				
	° Appendix B – Blank Resurfacing List 🛣					
	° Appendix C − PS&E Form 🕅					
	 Appendix D – Sample Set of Resurfacing Plans 	A				
	° Appendix E – Additional Information 🕅					

2015 Standard Specifications

The Standard Specification for Road and Bridge Construction (also known as the Spec Book) is a specification book that is mostly used by contractors.

It is important to inform yourself of the Specifications because any portion of the plans that contradict the specifications, the plans will take precedence (see Spec Subsection 105.04).

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2015 Standard Specifications	2015 Standard Sp	ecifications for Road and I	Bridge Construction	Spec Book Or	der Form	
2006 Standard Specifications			0			
Special Provisions	2015 Supplemental S	pecifications				
Circular Letters	100 SS (Rev. 8-12-	19) 200 SS (Rev. 5-13	-19) 300 SS (Rev. 5	-13-19) 400) SS (Rev. 5-13-19)	
Price Information						
Road Items List	500 SS (Rev. 5-13-	19) 600 SS (Rev. 5-13	-19) 700 SS (Rev. 5	-13-19) 900) SS (Rev. 5-13-19)	



TDOT Right of Way Manual

This manual describes the organization of the Right-of-Way Division and outlines the policies, procedures and practices to be followed in carrying out the responsibilities of each office. The manual incorporates the major functions performed by the Division of Right-of-Way.

It also includes a description of operational procedures and provides a detailed discussion of the process by which all major right-of-way functions are to be accomplished.



TDOT Utility Manual

The purpose of the Utility Manual is to establish the procedure governing the adjustment, installation and relocation for utilities involved in State right-of-way acquisition. This publication is for the use of Department personnel as well as public and private Agencies affected by highway construction. This publication cannot cover every circumstance that may occur during utility relocations. It is intended to provide general policies and guidelines for resolving special circumstances that are encountered. Each special circumstance will be evaluated on a case-by-case basis.



Work Zone Safety and Mobility Manual

TDOT will systematically consider and manage work zone impacts, and it will develop, implement, and maintain work zone assessment and management procedures. Consideration and management of work zone impacts begin at project inception and continue through all phases of design. A designer can use this Work Zone Safety and Mobility (also known as WZSM) manual for guidance on significance determination that must be done for each project.

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Traffic Operations Division Resources	Work Zone Safe	ty and Mobilit	y Manual
	Manual		
	Work Zone Safety and Mobility Manual - Update	<u>d 5-6-2019</u>	
	Forms		
	Work Zone Significance Determination (Fillable F	<u>form)</u>	
	TMP Cover Page (Fillable Form)		
	Resources		
	Example TMP		
	FHWA Resources		

Some additional information regarding Work Zone safety and Traffic Control can be found on the website at the following links:

Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition

Tennessee Supplement to the Standard Highway Signs Book, 2018 Edition

TDOT Traffic Design Manual

QuickZone - Work Zone and Traffic Analysis Tool

FHWA Work Zone Training

Roadway Design Flowchart

The Roadway Design Flowchart shown below was created by Region 4 Project Development. This walks you through each phase of a roadway project. This diagram shows you how long each step will take, the PPRM number correlating to the project step, some details pertaining to each step, and what is required for some steps. This is a good reference for when you are at one step in the design process and do not know what to do or what you need to move on to the next step.



Project Folders Structure

It is important that you place the appropriate files into their correct folders. Here is an example of how your project folder should be structured for your project. Each folder will include various files and documents regarding your project.

This Project Folder Layout information can also be found in the CADDV8 document located in the <u>CADD Files</u> on the TDOT website.



Here is a brief description of each folder and what should be included.

Base Drawings:	All DGN files and sheet files
Correspondence:	All correspondence including emails, letters, memos, or documented meeting notes that should be broken down into subject matter so that it is easy to find. This would not include your official submittal packet information (i.e. Field reviews, turn-ins)
Cost Estimate:	Contains monetary estimates received from the Bid and Estimates Office.
Environmental:	Includes all environmental documentation and calculations, EX: EBR, NEPA, Mitigation,
Geopak:	Contains all files from Geopak design, including: Proposed tins, Criteria Files, Earthwork files, .inp files, etc.
Geotech:	Contains all Geotech information
Multimodal:	Contains all Multimodal information
Pavement Design:	Includes all pavement design iterations and relevant information
Quantities:	Contains Preliminary Estimate, ROW Estimate, and Construction Estimate. These are item quantities. Also includes sub-folder labeled Embedded and Linked Files. This sub-folder will include any files that are linked or embedded into your DGN or SHT files.
Structures:	This includes all Structure documents and relevant information (add subfolder about retaining walls)
Submittals:	This would include the items in Deliverable Request and Reports folder. Subfolders should include Initial Studies, Preliminary Field Review, Preliminary, Site Review, ROW Field Review, ROW, Construction Field Review, Final Plans Review, Construction, and Revisions. QA/QC, Sign in sheet, Field review report. (these will be stored in each file.)
Survey:	Contains all Survey material and calculations. Save both the 2D file and 3D file to this location. All original survey files, including the TIR, will be saved here as well.
Traffic:	Contains all traffic material and calculations

ASTM Compass

This is a free resource that is available for TDOT employees. This site allows you to download various AASHTO documents, such as the Green Book, Roadside Design Guide, etc. You will need to register and use your login credentials to access the documents.

This link can also be found on the TDOT website on the Additional Resource page.



FileNet

Designers and Design Managers are responsible for archiving project development records for all new construction, reconstruction, and resurfacing projects on the Design folder on the FileNet server utilized by the Department.

FileNet is also used by each designer for uploading their submittal packages at the completion of each phase of a project. This is useful because all your design files are in one common place, so other divisions have access to your files. More information on what is included in each submittal package can be found in Chapter 1 of the Roadway Design Guidelines and in the <u>FileNet Project Deliverables</u> document.

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		Contract Number: ?	Equals	•					
		Design Creator: ?	Equals	•					•
		County: ?	Equals	•					•
		Region: ?	Equals	•					•
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Shown in the image below, is another way to get to FileNet through <u>TeamTN</u>.

TN TDC Depar Trans)T tment of portation	14. A.	N.	
	Business Applications 👻	Department Resources 🗸	Useful Sites 🗸	Help/How to 🕶
	Average Unit Price			
	Application Updates			
	AASHTOWare Project		TN Department of Transportation	
	ASTM & AASHTO Standards w	eb Portal	vork	
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	Correspondence Tracking Syst	term (CTS)		
rk With U	E-TRIMS			
	FileNet			the state of the second second

Program/Project/Resource/Management System (PPRM)

The Program/Project/Resource/Management system is a database where designers can find information about any project. To access PPRM, there should be a shortcut on your desktop screen, if not it is on the TeamTN website right below FileNet.

TIP: Open the link in Internet Explorer, it will not work in any other browser. Once you are on that page select Project Manager.



Once there, you will be able to see each project in the Project Data Manger window. You may have to change the filter (marked by the red arrow) to go to a specific project. On the Main tab, you can look up where a project is, the length of it, what the name of it is, its schedule, and various other details about the project. The Activities tab is an important one because that is where you can find the schedule of your project. The Project Commitments tab is also important. Designers should review the information shown on this tab before each submittal phase to ensure that no additions/modifications have been made.

•			Project	Data I	Manage	r		3
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Federal-Aid Essentials

This is a website with videos explaining details of the Federal-Aid Process. Watching these videos will help you gain a broader understanding of the processes that must be completed to have a project built.

FEDERAL-AID PROGRAM OVERVIEW

GENERAL INFORMATION

Stewardship and Oversight

Risk-Based Stewardship and Oversight (RBSO)

- ✓ <u>A Process from "Cradle to Grave"</u>
- Key Actions in the Cradle to Grave Process

Avoiding Waste and Abuse, and Detecting Fraud

- Funding Basics and Eligibility
- ✓ Project Requirements

