

TDOTDepartment of Materials & Tests Division Materials & Pavements Section

PAVEMENT DESIGN REPORT

Washington County

SR353

Bridge and approaches over Nolichucky River (LM 0.44)

PIN:135866.08

Submitted to:

Amber Warren TDOT Project Manager 1
Region 1 Alternate Delivery

Pavement Designer:

Kara Shears TES 3

Pavement Engineering Team Materials & Tests Division

Quality Control Reviewer:

Ulises Martinez Team Lead - Pavements

Pavement Engineering Team Materials & Tests Division

Tennessee Department of Transportation

Proj Year

Flexible

Materials and Pavements Section

Pavement Design

County Washington

PIN

Design YR

135866.08

2024

Route SR353

Bridge and approaches over Nolichucky River (LM 0.44)

2024

Road SR353

Description

Traffic Information

ADL 37

Design Year 2044 Design ESALs 270,100
Traffic Data Provided by TDOT Traffic Data Date 10/17/2024

Design Yr ADT 1820

Soil Data

CBR 6.1 Mr 9150 psi

Geotech Report Number County Avg. Report Date 1/0/1900

Geotech Provided by TDOT

Proposed Design Data

SN required 2.6 SN proposed 3.62

The proposed design provides

139% of the required SN

The proposed pavement design is designed up to 2,041,166 ESALs



Pavement Design

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Route SR353

Design YR

2024

Description Bridge and approaches over Nolichucky River (LM 0.44)

Road SR353

Pavement Schedule				
		Mainline		
	Item #	Description	Depth (in)	
Pavement	411-01.10	ACS MIX(PG 64-22)Grading D	1.25	
	307-01.08	Asphalt Conc Mix(PG 64-22)(BPMB-HM) GR B-M2	2	
	307-01.01	Asphalt Conc Mix(PG 64-22)(BPMB-HM) GR A	3	
P				
Base	303-01	Mineral Aggregate, Type A	8	
Subgrade	0			

		Shoulder	
	Item #	Description	Depth (in)
Pavement	411-01.07	ACS MIX(PG 64-22)Grading E	1.25
	307-01.08	Asphalt Conc Mix(PG 64-22)(BPMB-HM) GR B-M2	2
P			
Base	303-01	Mineral Aggregate, Type A	11
Subgrade	0		

Notes:

- 1 Use Tack Coat @0.15Gal/SY in lieu of prime coat due to small quantity project
- 2 Add Tack Coat Per Standard Specification 403.05 between each layer
- ³ 303-01 stone is not required if the subgrade is built of Graded Solid Rock and has a layer of 57 stone. In this case, pave A-mix directly on the 57 stone
- ⁴ For areas where the finihs grade varies, use successive A-mix lifts. Mill as necessary to create a tie-in to the existing pavement at the project ends
- 5 Mainline design may be used as alternative to the shoulder design

