Draft Qualitative MSAT Analysis Technical Report

FM 156
From US 81/US 287 to McLeroy Boulevard/ Watauga Road
Tarrant County, Texas
CSJ: 0718-02-045

TxDOT Fort Worth District
December 2016

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 16, 2014, and executed by FHWA and TxDOT.

TABLE OF CONTENTS

Page

1.0 PROJECT DESCRIPTION 1

2.0 QUALITATIVE MOBILE SOURCE AIR TOXICS (MSAT) ANALYSIS 1

2.1 BACKGROUND 1

2.2 PROJECT-SPECIFIC MSAT INFORMATION 3

2.3 INCOMPLETE OR UNAVAILABLE INFORMATION FOR PROJECT-SPECIFIC MSAT HEALTH IMPACTS ANALYSIS 4

2.4 CONCLUSION 5

LIST OF TABLES

Table 1 – Projected National MSAT Emission Trends 2010–2050 for Vehicles Operating on Roadways Using EPA's MOVES2010b Model 2

LIST OF APPENDICES

Appendix A Figures

Appendix B Traffic Data

This page intentionally left blank.

1.0 PROJECT DESCRIPTION

The Texas Department of Transportation (TxDOT) proposes an expansion of Farm-to-Market Road (FM) 156/Blue Mound Road with logical termini extending from US 81/US 287 to McLeroy Boulevard/Watauga Road in Tarrant County, Texas (see **Figure 1** in **Appendix A**). The proposed improvements would have independent utility without the need for additional improvements. The portion of FM 156 under study lies within the cities of Saginaw, Blue Mound and Fort Worth.

The existing facility is a two lane undivided roadway with one 12-foot lane in each direction and variable width shoulders. The existing facility has a typical right of way width of 120 feet. The current posted speed limit for this section of FM 156 is 45 miles per hour (mph). Average annual daily traffic (AADT) for the facility in 2020 is estimated as 26,550 vehicles per day (vpd), while the 2040 AADT is estimated to be 37,750 vpd.

The Build Alternative would expand the existing facility from two lanes to four lanes with a raised median. The facility would include 14-foot outside lanes and 12-foot inside lanes with a curb and gutter (see **Figures 2-4** in **Appendix A**). Ten-foot wide sidewalks would be included on the outside southbound lane, and six-foot wide sidewalks would be included along the outside northbound lane.

Overall, the proposed improvements would extend 3.8 miles and would require the acquisition of 0.41 acres of additional right of way.

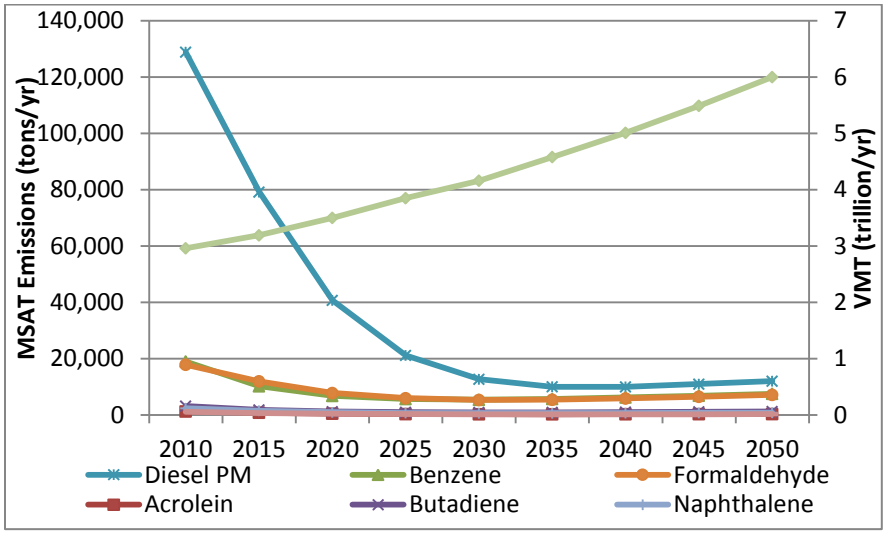
2.0 QUALITATIVE MOBILE SOURCE AIR TOXICS (MSAT) ANALYSIS

2.1 BACKGROUND

Controlling air toxic emissions became a national priority with the passage of the Clean Air Act Amendments (CAAA) of 1990, whereby Congress mandated that the EPA regulate 188 air toxics, also known as hazardous air pollutants. The EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources (*Federal Register*, Vol. 72, No. 37, page 8430, February 26, 2007), and identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System (IRIS) (http://www.epa.gov/iris/). In addition, EPA identified seven compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 1999 National Air Toxics Assessment (NATA) (http://www.epa.gov/ttn/atw/nata1999/). These are acrolein, benzene, 1,3-butidiene, diesel particulate matter plus diesel exhaust organic gases (diesel PM), formaldehyde, naphthalene, and polycyclic organic matter. While the Federal Highway Administration (FHWA) considers these the priority mobile source air toxics, the list is subject to change and may be adjusted in consideration of future EPA rules.

The 2007 EPA MSAT rule mentioned above requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines. Based on an FHWA analysis using EPA's MOVES2010b model, as shown in **Figure 2** and **Table 1**, even if vehicle-miles travelled (VMT) increases by 102 percent as assumed from 2010 to 2050, a combined reduction of 83 percent in the total annual emissions for the priority MSAT is projected for the same time period.

Figure 2 – Projected National MSAT Emission Trends 2010–2050 for Vehicles Operating on Roadways Using EPA's MOVES2010b Model



Source: Table 1 below.

Note: Trends for specific locations may be different, depending on locally derived information representing vehicle-miles travelled, vehicle speeds, vehicle mix, fuels, emission control programs, meteorology, and other factors.

Table 1 – Projected National MSAT Emission Trends 2010–2050 for Vehicles Operating on Roadways Using EPA's MOVES2010b Model

Pollutant / VMT	Pollutant Emissions (tons) and Vehicle-Miles Traveled (VMT) by Calendar Year									Change
	2010	2015	2020	2025	2030	2035	2040	2045	2050	2010 to 2050
Acrolein	1,244	805	476	318	258	247	264	292	322	-74%
Benzene	18,995	10,195	6,765	5,669	5,386	5,696	6,216	6,840	7,525	-60%
Butadiene	3,157	1,783	1,163	951	890	934	1,017	1,119	1,231	-61%
Diesel PM	128,847	79,158	40,694	21,155	12,667	10,027	9,978	10,942	11,992	-91%
Formaldehyde	17,848	11,943	7,778	5,938	5,329	5,407	5,847	6,463	7,141	-60%
Naphthalene	2,366	1,502	939	693	607	611	659	727	802	-66%
Polycyclics	1,102	705	414	274	218	207	219	240	262	-76%
Trillions VMT	2.96	3.19	3.5	3.85	4.16	4.58	5.01	5.49	6	102%

Source: EPA MOVES2010b model runs conducted during May–June 2012 by FHWA.

Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how the potential health risks posed by MSAT exposure should be factored into project-level decision-making within the context of the National Environmental Policy Act (NEPA). The FHWA, EPA, Health Effects Institute, and others have funded and conducted research studies to try to more clearly define potential risks from MSAT emissions associated with highway projects. The FHWA will continue to monitor the developing research in this emerging field.

2.2 PROJECT-SPECIFIC MSAT INFORMATION

A qualitative analysis provides a basis for identifying and comparing the potential differences among MSAT emissions, if any, from the Build Alternative and No Build. The qualitative assessment presented below is derived in part from a study conducted by the FHWA entitled A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives, found at: http://www.fhwa.dot.gov/environment/air_quality/air_toxics/research_and_analysis/mobile_source_air_toxics/msatemissions.pdf.

For the Build and No Build Alternatives, the amount of MSAT emitted would be proportional to the vehicle miles traveled, or VMT, assuming that other variables such as fleet mix are the same for each alternative. The VMT estimated for the Build Alternative is slightly higher than that for the No Build Alternative, because the additional capacity increases the efficiency of the roadway and attracts rerouted trips from elsewhere in the transportation network. This increase in VMT would lead to higher MSAT emissions for the Build Alternative along the highway corridor, along with a corresponding decrease in MSAT emissions along the parallel routes. The emissions increase is offset somewhat by lower MSAT emission rates due to increased speeds; according to EPA's MOVES2010b model, emissions of all of the priority MSAT decrease as speed increases. Also, regardless of the alternative, emissions will likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce annual MSAT emissions by over 80 percent between 2010 and 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future in nearly all cases.

The additional travel lanes contemplated as part of the Build Alternative would have the effect of moving some traffic closer to nearby homes, schools, and businesses; therefore, under the Build Alternative there may be localized areas where ambient concentrations of MSAT could be higher than the No Build Alternative. The localized increases in MSAT concentrations would likely be most pronounced at the intersections along FM 156 where additional turn lanes are added under the Build Alternative. However, the magnitude and the duration of these potential increases compared to the No-Build alternative cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts. In sum, when a highway is widened, the localized level of MSAT emissions for the Build Alternative could be higher relative to the No Build Alternative, but this

could be offset due to increases in speeds and reductions in congestion (which are associated with lower MSAT emissions). Also, MSAT will be lower in other locations when traffic shifts away from them. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region-wide MSAT levels to be significantly lower than today.

2.3 INCOMPLETE OR UNAVAILABLE INFORMATION FOR PROJECT-SPECIFIC MSAT HEALTH IMPACTS ANALYSIS

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The EPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the Clean Air Act and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain the IRIS, which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (EPA, http://www.epa.gov/iris/). Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). Two HEI studies are summarized in Appendix D of FHWA's Interim Guidance Update on Mobile source Air Toxic Analysis in NEPA Documents. Among the adverse health effects linked to MSAT compounds at high exposures are; cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations (HEI, http://pubs.healtheffects.org/view.php?id=282) or in the future as vehicle emissions substantially decrease (HEI, http://pubs.healtheffects.org/view.php?id=306).

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts – each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable.

It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near roadways; to determine the portion of time that people are actually exposed at a specific location; and to establish the extent attributable to a proposed action, especially given that some of the information needed is unavailable.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI (http://pubs.healtheffects.org/view.php?id=282). As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The EPA (http://www.epa.gov/risk/basicinformation.htm#g) and the HEI (http://pubs.healtheffects.org/getfile.php?u=395) have not established a basis for quantitative risk assessment of diesel PM in ambient settings.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA as provided by the Clean Air Act to determine whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires EPA to determine an “acceptable” level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than one in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld EPA’s approach to addressing risk in its two step decision framework.

Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than deemed acceptable. Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

2.4 CONCLUSION

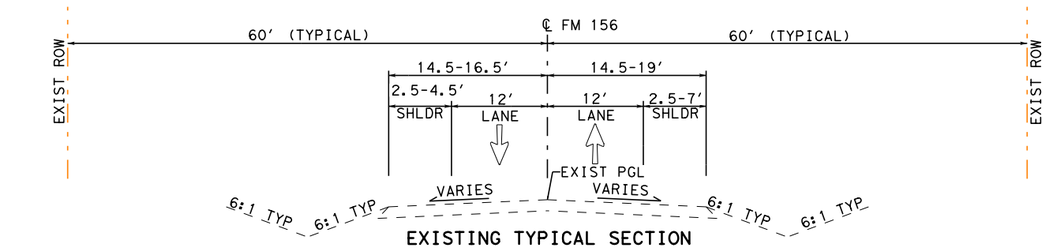
In this document, a qualitative MSAT assessment has been provided relative to the various alternatives of MSAT emissions and has acknowledged that the Build Alternative may result in increased exposure to MSAT emissions in certain locations, although the concentrations and duration of exposures are uncertain, and because of this uncertainty, the health effects from these emissions cannot be estimated.

This page is intentionally left blank.

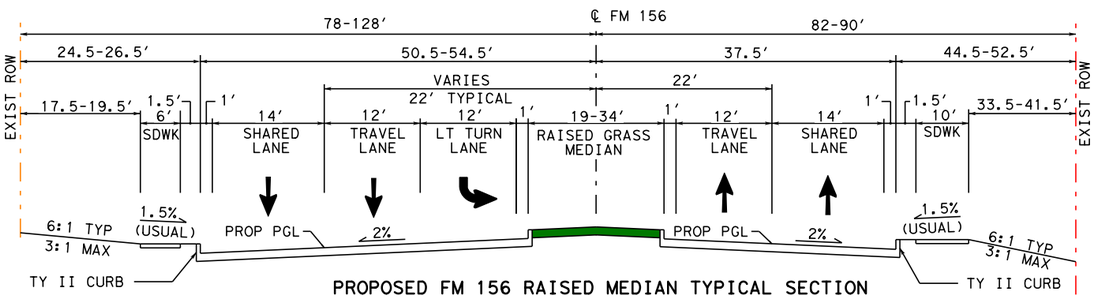
APPENDIX A
FIGURES

Figure 1
Project Area Location

FM 156 From US 81/US 287 to
McLeroy Boulevard/Watauga Road
Tarrant County, Texas
CSJ: 0718-02-045

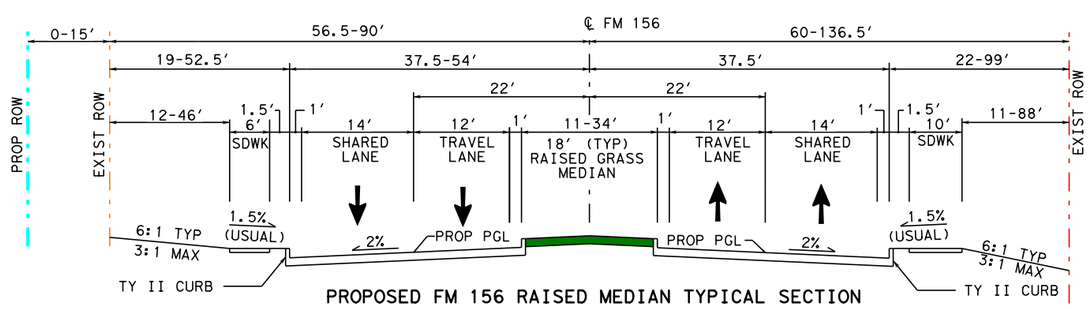


EXISTING TYPICAL SECTION



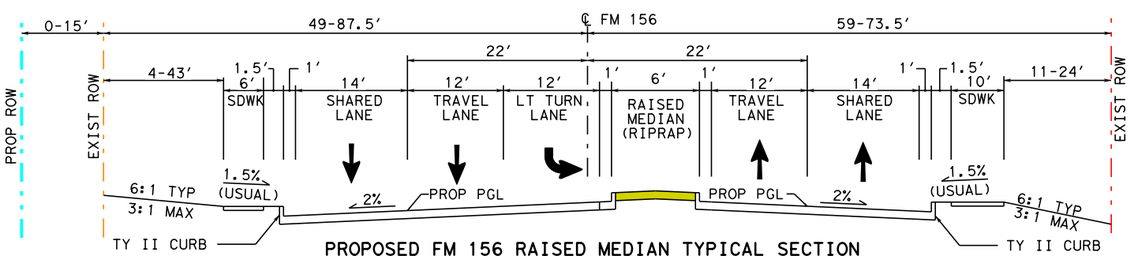
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION

STATION 295+25.73 TO 298+92.38



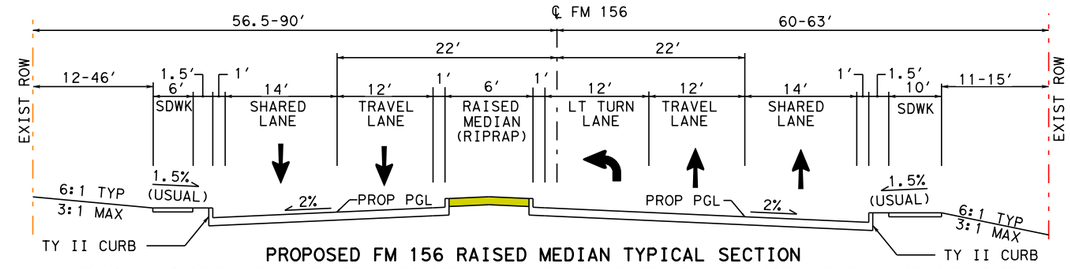
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION

STATION 298+92.38 TO 303+11.43
STATION 309+88.21 TO 312+80.91
STATION 317+81.00 TO 325+27.74
STATION 332+07.00 TO 337+97.81
STATION 348+86.80 TO 356+87.67
STATION 386+61.00 TO 395+00.00



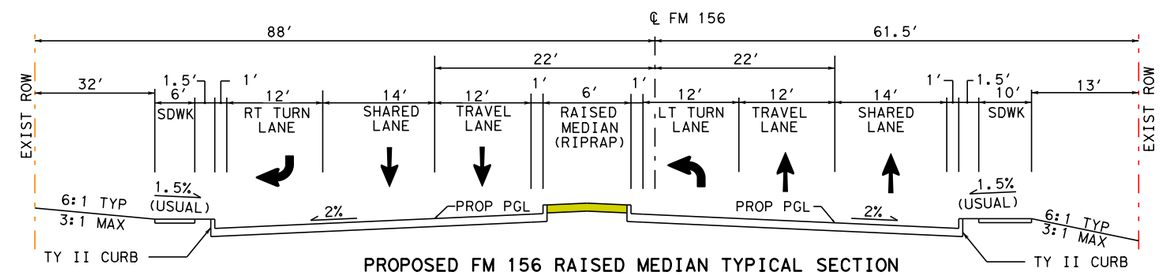
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION

STATION 303+11.43 TO 309+88.21
STATION 325+27.74 TO 332+07.00
STATION 356+87.67 TO 364+22.32
STATION 377+84.91 TO 379+61.00



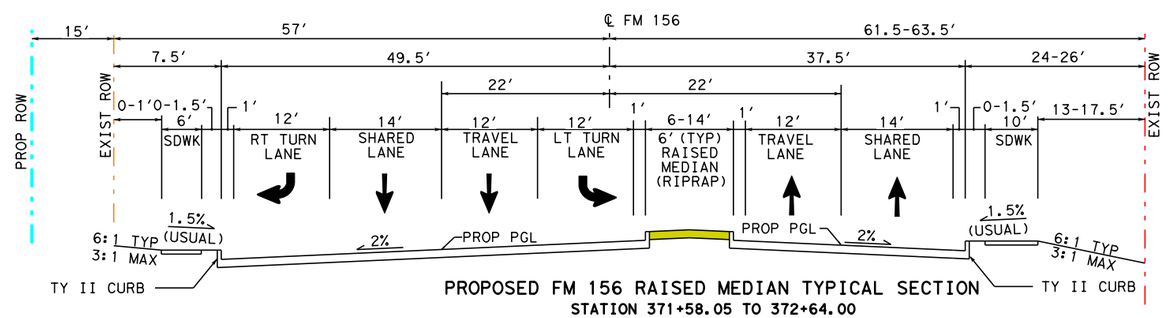
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION

STATION 312+80.91 TO 317+81.00
STATION 337+97.81 TO 343+00.00
STATION 347+01.45 TO 348+86.80
STATION 364+22.32 TO 371+58.05



PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION

STATION 343+00.00 TO 347+01.45



PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION

STATION 371+58.05 TO 372+64.00
STATION 374+64.00 TO 377+84.91

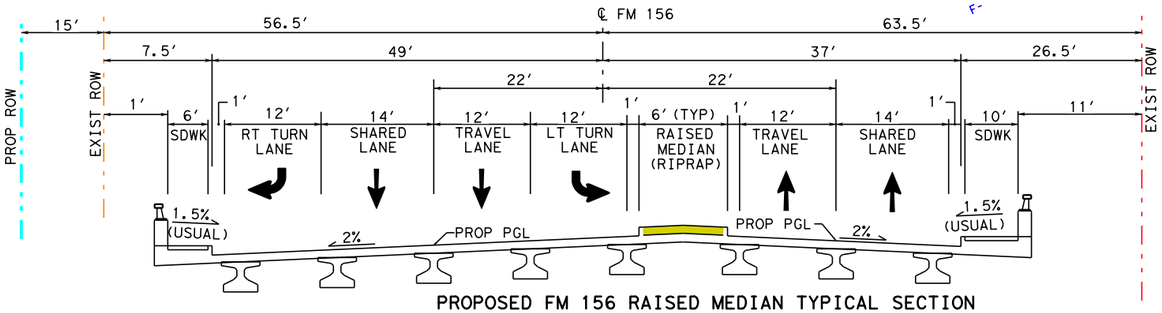
TEXAS DEPARTMENT OF TRANSPORTATION
FORT WORTH DISTRICT
BRIAN R. BARTH, P.E. DISTRICT ENGINEER

FIGURE 2
TYPICAL SECTIONS

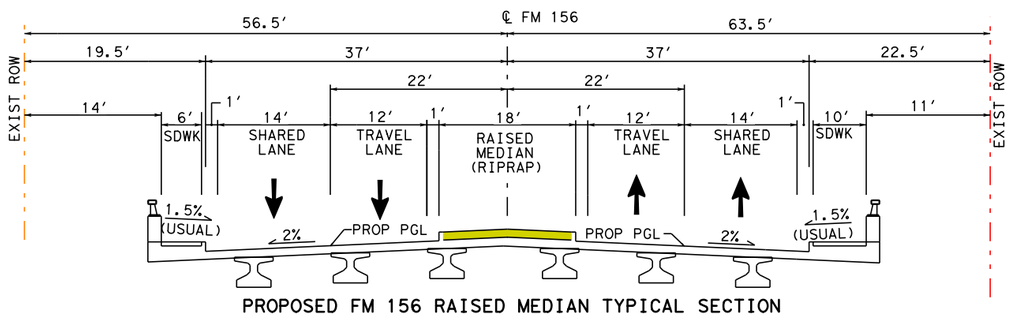
FM 156 FROM
US 81/US 287 TO MCLEROY BOULEVARD/WATAUGA ROAD

TARRANT COUNTY, TEXAS
NOVEMBER 2016
CSJ NO. 0718-02-045

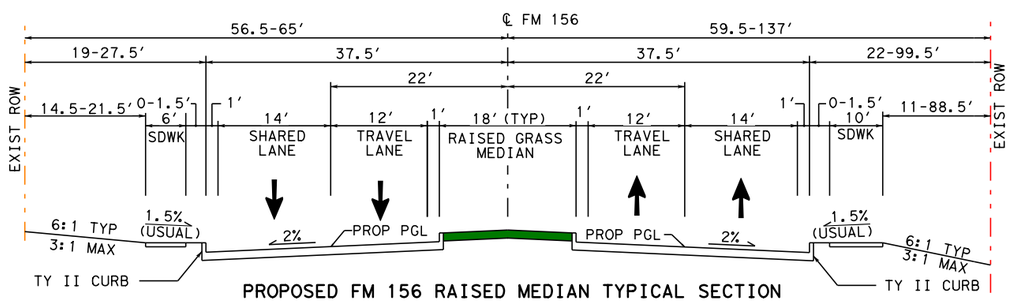
Texas Department of Transportation



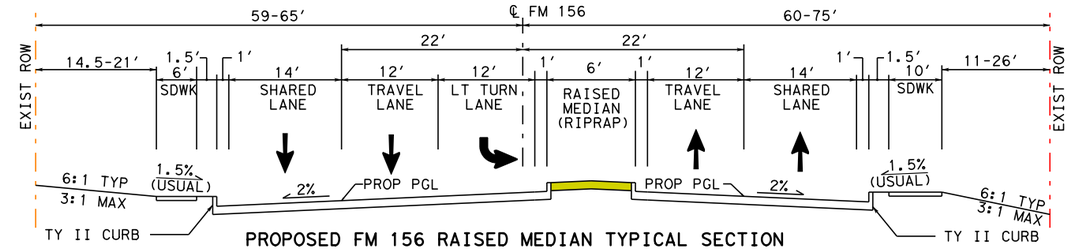
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 372+64.00 TO 374+64.00



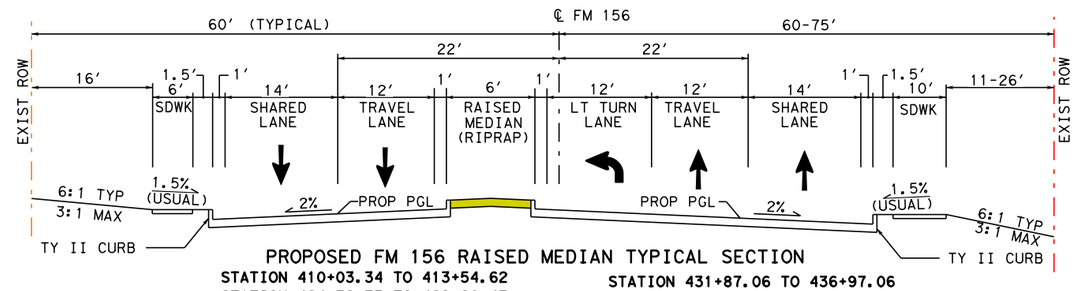
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 379+61.00 TO 386+61.00



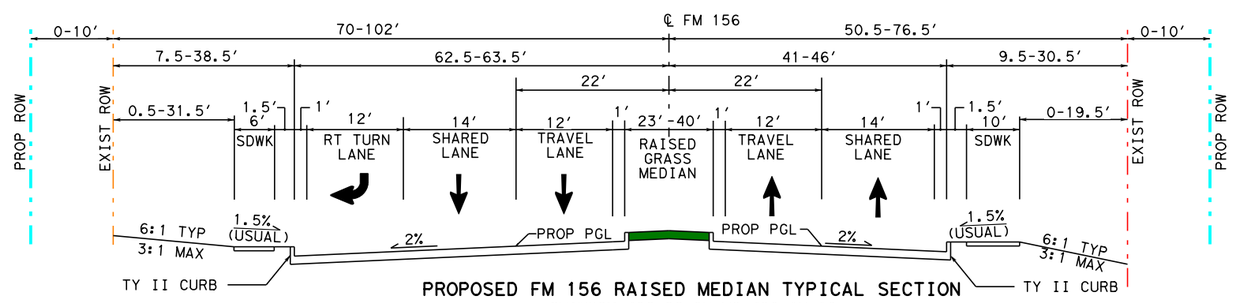
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 395+00.00 TO 410+03.34
STATION 429+20.43 TO 431+87.06
STATION 442+07.06 TO 444+09.27
STATION 453+30.49 TO 454+73.17
STATION 477+86.51 TO 481+05.91



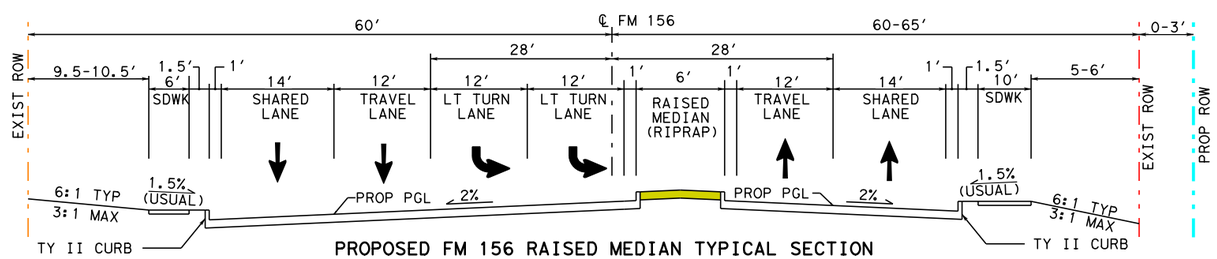
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 413+54.62 TO 424+38.73
STATION 436+97.06 TO 442+07.06
STATION 448+88.27 TO 453+30.49
STATION 467+19.48 TO 471+36.53
STATION 473+03.00 TO 477+86.51



PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 410+03.34 TO 413+54.62
STATION 424+38.73 TO 429+20.43
STATION 431+87.06 TO 436+97.06
STATION 444+09.27 TO 448+88.27



PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 486+86.03 TO 490+17.10



PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 460+83.56 TO 465+48.41

TEXAS DEPARTMENT OF TRANSPORTATION
FORT WORTH DISTRICT
BRIAN R. BARTH, P.E. DISTRICT ENGINEER

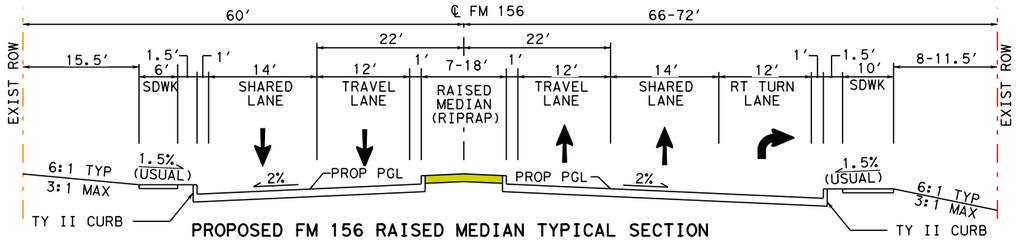
FIGURE 3
TYPICAL SECTIONS
FM 156 FROM
US 81/US 287 TO MCLEROY
BOULEVARD/WATAUGA ROAD

TARRANT COUNTY, TEXAS

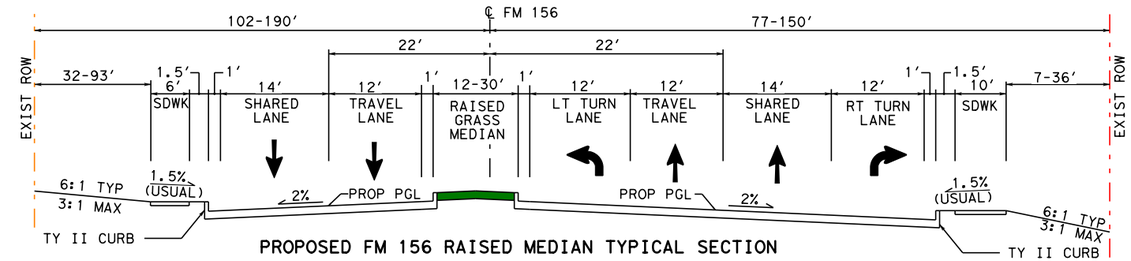
NOVEMBER 2016

CSJ NO. 0718-02-045

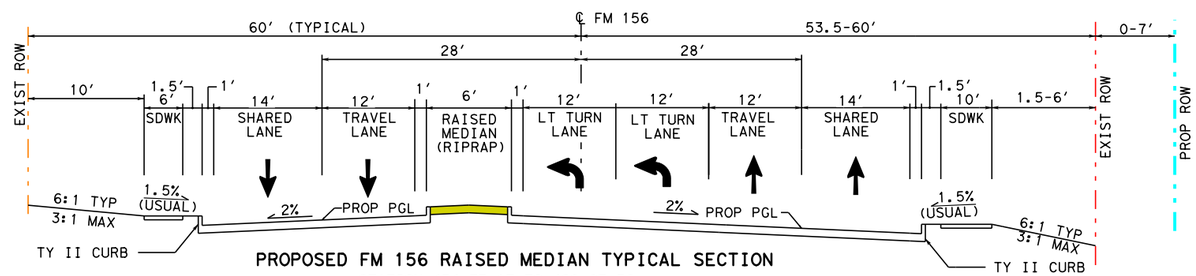
Texas Department of Transportation
© 2015 By Texas Department of Transportation
All Rights Reserved



PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 465+48.41 TO 467+19.48
STATION 471+36.53 TO 473+03.00



PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 490+17.10 TO 494+65.75



PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 454+73.17 TO 460+83.56
STATION 481+05.91 TO 486+86.03

TEXAS DEPARTMENT OF TRANSPORTATION
FORT WORTH DISTRICT
BRIAN R. BARTH, P.E. DISTRICT ENGINEER

FIGURE 4
TYPICAL SECTIONS
FM 156 FROM
US 81/US 287 TO MCLEROY
BOULEVARD/WATAUGA ROAD

TARRANT COUNTY, TEXAS

NOVEMBER 2016

CSJ NO. 0718-02-045

Texas Department of Transportation

APPENDIX B
TRAFFIC DATA

Texas Department of Transportation

TXDOT – FTW
OCT 20 2015
DISTRICT MAILROOM

MEMO

October 20, 2015

To: Brian R. Barth, P.E., District Engineer
Attention: John Cordary, Jr., P.E., Director of TPD

Through: William E. Knowles, P.E.
Traffic Analysis Section Director, TPP

From: Robert C. Williams
Transportation Analyst, TPP

Subject: Traffic Data
CSJ: 0718-02-045
FM 156:
From US 81/ US 287
To Watauga Road (McElroy)

Tarrant County

Attached is a copy of a schematic depicting 2020, 2040 and 2050 anticipated daily traffic volumes and turning movements at specified points along FM 156 in your request. Also attached are tabulations showing traffic analysis for highway design for the 2020 to 2040 twenty year period and 2020 to 2050 thirty year period for the described limits of the route. Included are tabulations showing data for use in air noise analysis.

Due to significant differences in traffic volumes the project was separated into two sections.

Section 1: From US 81/ US 287 to Harmon Road
Section 2: From Harmon Road to Watauga Road (McElroy)

Please refer to your original memorandum dated September 16, 2015.

If you have any questions or need additional information, please contact Robert C. Williams at (512) 486-5145.

Attachments

CC: Sara Finch, Transportation Funding Specialist, Fort Worth District Design Division

TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

Fort Worth District

October 14, 2015

Description of Location	Average Daily Traffic 2020	Average Daily Traffic 2040	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 20 Year Period (2020 to 2040) Flexible Pavement	S N	Rigid Pavement	SLAB
FM156 Section 1 From US 81/ US 287 To Harmon Road Tarrant County	11,500	16,300	57 - 43	10.5	6.8	5.1	11,100	40	2,527,000	3	3,259,000	8"

Data for Use in Air & Noise Analysis

Vehicle Class	Base Year % of ADT	Base Year % of DHV
Light Duty	93.2	94.9
Medium Duty	3.3	2.5
Heavy Duty	3.5	2.6

Description of Location	Average Daily Traffic 2020	Average Daily Traffic 2050	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2020 to 2050) Flexible Pavement	S N	Rigid Pavement	SLAB
FM156 Section 1 From US 81/ US 287 To Harmon Road Tarrant County	11,500	18,250	57 - 43	10.5	6.8	5.1	11,200	40	4,056,000	3	5,232,000	8"

NOT INTENDED FOR CONSTRUCTION
BIDDING OR PERMIT PURPOSES
William Erick Knowles, P.E
Serial Number 84704

TRAFFIC ANALYSIS FOR HIGHWAY DESIGN

Fort Worth District

October 14, 2015

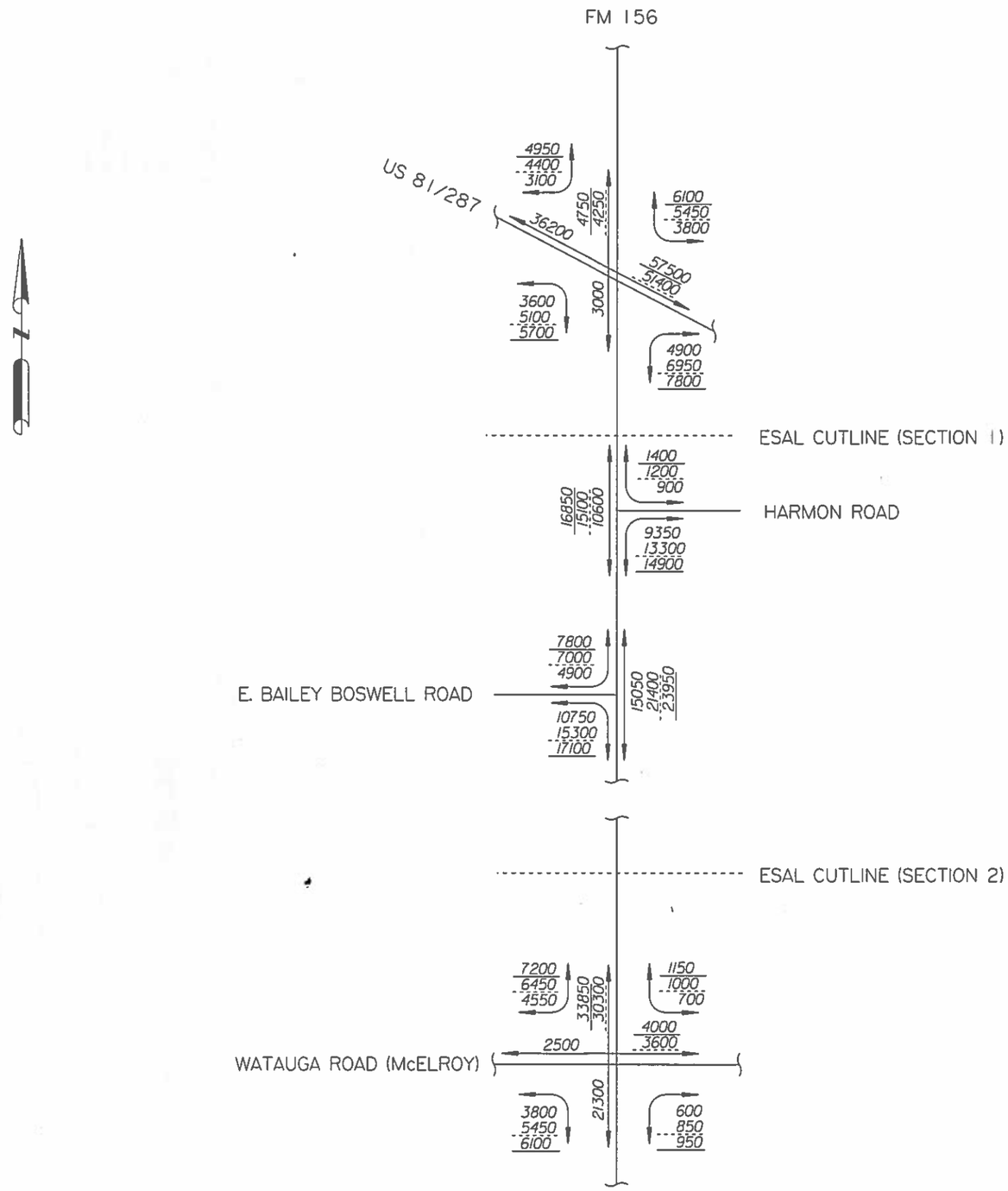
Description of Location	Average Daily Traffic 2020	Average Daily Traffic 2040	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 20 Year Period (2020 to 2040) Flexible Pavement	S N	Rigid Pavement	SLAB
FM156 Section 2 From Harmon Road To Watauga Road (McElroy) Tarrant County	26,550	37,750	57 - 43	10.5	4.6	3.5	11,500	40	3,977,000	3	5,115,000	8"

Data for Use in Air & Noise Analysis

Vehicle Class	Base Year % of ADT	Base Year % of DHV
Light Duty	95.4	96.5
Medium Duty	2.3	1.7
Heavy Duty	2.3	1.8

Description of Location	Average Daily Traffic 2020	Average Daily Traffic 2050	Base Year Dir Dist %	Base Year K Factor	Base Year Percent Trucks ADT	Base Year Percent Trucks DHV	ATHWLD	Percent Tandem Axles in ATHWLD	Total Number of Equivalent 18k Single Axle Load Applications One Direction Expected for a 30 Year Period (2020 to 2050) Flexible Pavement	S N	Rigid Pavement	SLAB
FM156 Section 2 From Harmon Road To Watauga Road (McElroy) Tarrant County	26,550	42,200	57 - 43	10.5	4.6	3.5	11,600	40	6,379,000	3	8,203,000	8"

NOT INTENDED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES
William Erick Knowles, P.E.
Serial Number: 9[illegible]



LEGEND

1000 - 2020 ADT
1000 - 2040 ADT
1000 - 2050 ADT

2020, 2040 AND 2050 ANTICIPATED AVERAGE DAILY TRAFFIC VOLUMES AND TURNING MOVEMENTS AT SPECIFIED POINTS ALONG FM 156 FROM US 81/ US 287 TO WATAUGA ROAD (McELROY)

TARRANT COUNTY

TRANSPORTATION PLANNING AND PROGRAMMING DIVISION
OCTOBER 20, 2015

SHEET 1 OF 1

NOT INTENDED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES
William Erick Knowles, P.E.
Serial Number 84720

Draft Congestion Management Process Technical Report

FM 156
From US 81/US 287 to McLeroy Boulevard/ Watauga Road
Tarrant County, Texas
CSJ: 0718-02-045

TxDOT Fort Worth District
December 2016

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 16, 2014, and executed by FHWA and TxDOT.

TABLE OF CONTENTS

Page

1.0 PROJECT DESCRIPTION 1

2.0 CONGESTION MANAGEMENT PROCESS (CMP) 1

LIST OF TABLES

Table 1 – Congestion Management Process Projects 2

LIST OF APPENDICES

Appendix A Figures

Appendix B Congestion Management Process (CMP) Forms

This page intentionally left blank.

1.0 PROJECT DESCRIPTION

The Texas Department of Transportation (TxDOT) proposes an expansion of Farm-to-Market Road (FM) 156/Blue Mound Road with logical termini extending from US 81/US 287 to McLeroy Boulevard/Watauga Road in Tarrant County, Texas (see **Figure 1** in **Appendix A**). The proposed improvements would have independent utility without the need for additional improvements. The portion of FM 156 under study lies within the cities of Saginaw, Blue Mound and Fort Worth.

The existing facility is a two lane undivided roadway with one 12-foot lane in each direction and variable width shoulders. The existing facility has a typical right of way width of 120 feet. The current posted speed limit for this section of FM 156 is 45 miles per hour (mph). Average annual daily traffic (AADT) for the facility in 2020 is estimated as 26,550 vehicles per day (vpd), while the 2040 AADT is estimated to be 37,750 vpd.

The Build Alternative would expand the existing facility from two lanes to four lanes with a raised median. The facility would include 14-foot outside lanes and 12-foot inside lanes with a curb and gutter (see **Figures 2-4** in **Appendix A**). Ten-foot wide sidewalks would be included on the outside southbound lane, and six-foot wide sidewalks would be included along the outside northbound lane.

Overall, the proposed improvements would extend 3.8 miles and would require the acquisition of 0.41 acres of additional right of way.

2.0 CONGESTION MANAGEMENT PROCESS (CMP)

The congestion management process (CMP) is a systematic process for managing congestion that provides information on transportation system performance and on alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet state and local needs. The proposed project was developed from the North Central Texas Council of Governments' (NCTCOG's) operational CMP, which meets all requirements of 23 C.F.R. 450.320 and 500.109, as applicable. The CMP was adopted by the Regional Transportation Council (RTC) of the NCTCOG in the July 2013 Update. The CMP for the Dallas-Fort Worth region can be found at http://www.nctcog.org/trans/cmp/.

The region commits to operational improvements and travel demand reduction strategies at two levels of implementation: program level and project level. Program level commitments are inventoried in the regional CMP, which was adopted by NCTCOG; they are included in the financially constrained MTP, and future resources are reserved for their implementation.

The CMP element of the plan carries an inventory of all project commitments (including those resulting from major investment studies) that details type of strategy, implementing responsibilities, schedules, and expected costs. At the project's programming stage, travel demand reduction strategies and commitments will be added to the regional TIP or included in the construction plans. The regional TIP

provides for programming of these projects at the appropriate time with respect to the single occupancy vehicle (SOV) facility implementation and project-specific elements.

Committed congestion reduction strategies and operational improvements within the proposed project area will consist of roadway infrastructure improvements (access management improvements, addition of new lanes, bottleneck removal and intersection improvements), system management and operation improvements (ITS devices), work zone/construction management operations (maintenance and construction activity coordination, winter maintenance, work zone management and safety plans). Individual projects are listed in **Table 1**.

Table 1 – Congestion Management Process Projects

Project Code	Street/Name	City	County	Implementing Agency	Project Type
11183	Freeways in NW & SE Tarrant County	Various	Tarrant	TxDOT – Fort Worth	ITS
55027	US 287 From US 81/287 to IH 35W	Various	Tarrant	TxDOT – Fort Worth	Addition of Lanes, Convert Frontage Roads to One Way
54104.1	IH 35 W From US 81/287 to Denton County Line	Fort Worth	Tarrant	TxDOT – Fort Worth	Addition of Lanes
52166	IH 35 W From US 81/287 to North Tarrant Parkway	Fort Worth	Tarrant	TxDOT – Fort Worth	New Roadway
1348	North Tarrant Parkway From US 287 to US 377	Fort Worth	Tarrant	Fort Worth	New Roadway
11736	Longhorn Road From Old Decatur Road to Business 287	Saginaw	Tarrant	Saginaw	Addition of Lanes

Source: NCTCOG TIPNS (accessed December 2016).

In an effort to reduce congestion and the need for SOV lanes in the region, TxDOT and NCTCOG will continue to promote appropriate congestion reduction strategies through the Congestion Mitigation and Air Quality (CMAQ) Improvement Program, the CMP, and the MTP. The congestion reduction strategies considered for this project would help alleviate congestion in the SOV study boundary, but would not eliminate it.

Therefore, the proposed project is justified. The CMP analysis for added SOV capacity projects in the TMA is on file and available for review at NCTCOG.

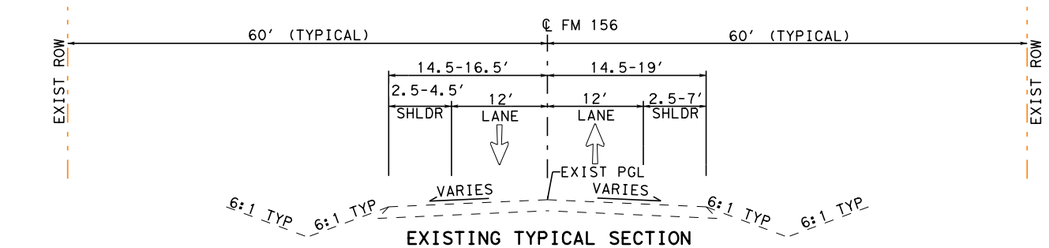
In July 2013, the RTC also adopted a policy that requires the review and application of congestion mitigation strategies to correct corridor deficiencies identified in the CMP when performing corridor and environmental studies and report findings back to NCTCOG. Therefore, NCTCOG has developed a project level CMP analysis. The analysis requires completion of the Project Implementation Form, and the Roadway Corridor Deficiency Form and Corridor Analysis Fact Sheet. The results of this analysis are attached in **Appendix B.**

APPENDIX A

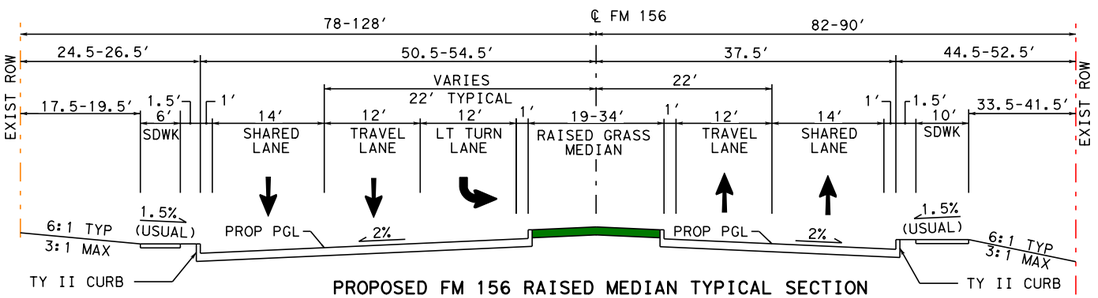
FIGURES

Figure 1
Project Area Location

FM 156 From US 81/US 287 to
McLeroy Boulevard/Watauga Road
Tarrant County, Texas
CSJ: 0718-02-045

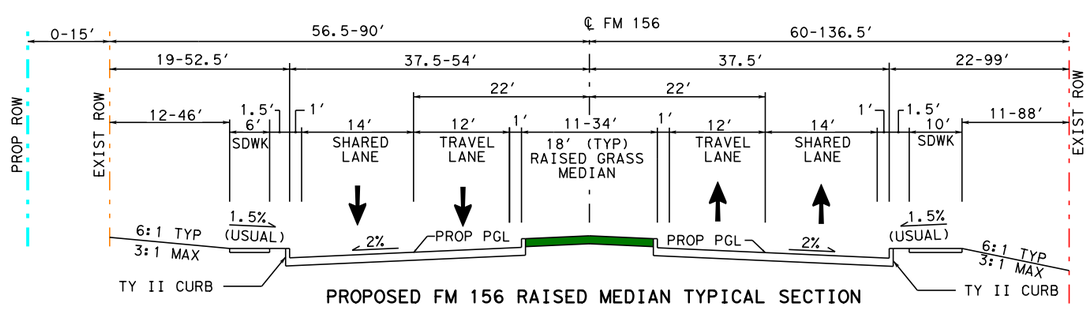


EXISTING TYPICAL SECTION



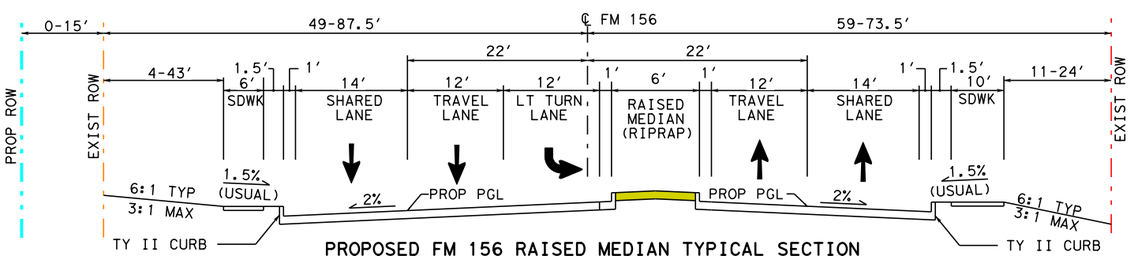
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION

STATION 295+25.73 TO 298+92.38



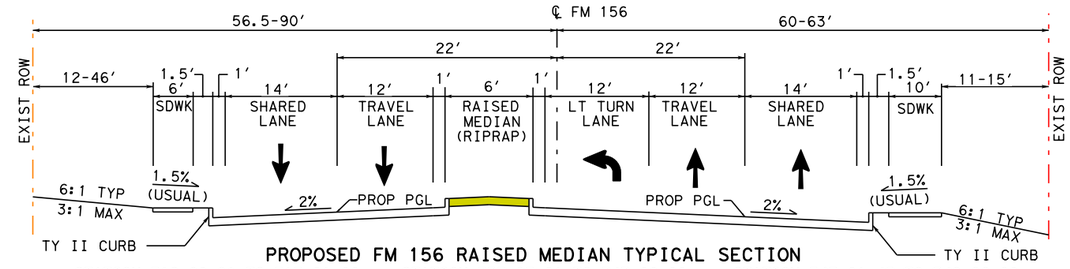
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION

STATION 298+92.38 TO 303+11.43
STATION 309+88.21 TO 312+80.91
STATION 317+81.00 TO 325+27.74
STATION 332+07.00 TO 337+97.81
STATION 348+86.80 TO 356+87.67
STATION 386+61.00 TO 395+00.00



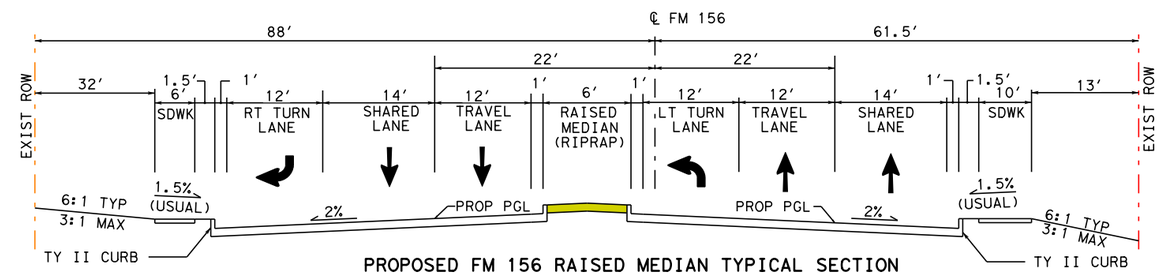
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION

STATION 303+11.43 TO 309+88.21
STATION 325+27.74 TO 332+07.00
STATION 356+87.67 TO 364+22.32
STATION 377+84.91 TO 379+61.00



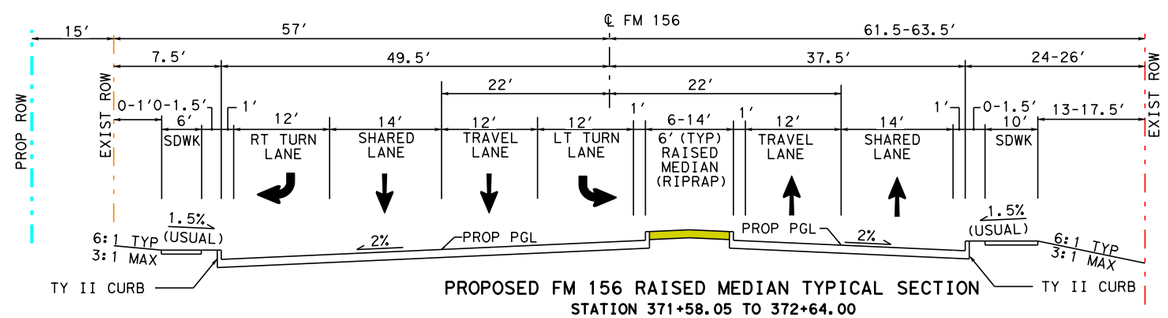
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION

STATION 312+80.91 TO 317+81.00
STATION 337+97.81 TO 343+00.00
STATION 347+01.45 TO 348+86.80
STATION 364+22.32 TO 371+58.05



PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION

STATION 343+00.00 TO 347+01.45



PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION

STATION 371+58.05 TO 372+64.00
STATION 374+64.00 TO 377+84.91

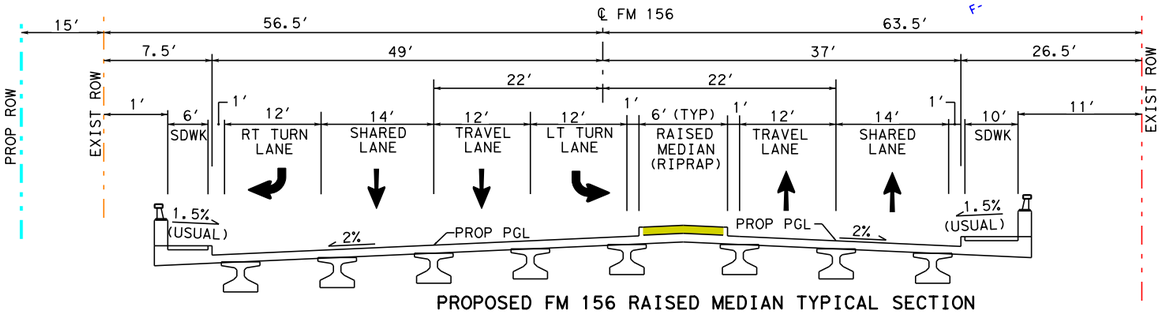
TEXAS DEPARTMENT OF TRANSPORTATION
FORT WORTH DISTRICT
BRIAN R. BARTH, P.E. DISTRICT ENGINEER

FIGURE 2
TYPICAL SECTIONS

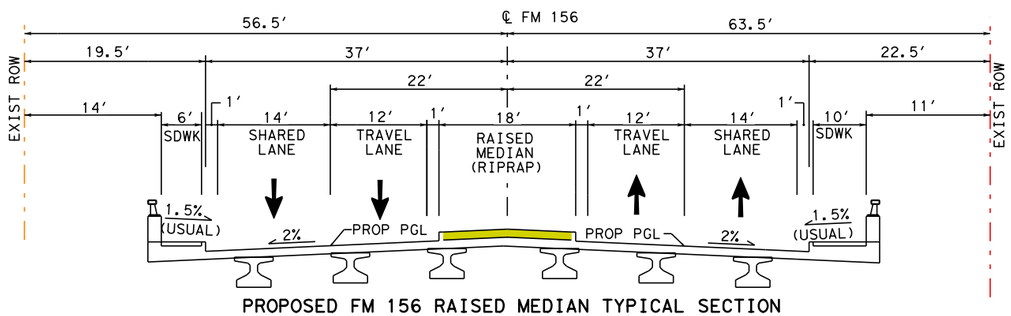
FM 156 FROM
US 81/US 287 TO MCLEROY BOULEVARD/WATAUGA ROAD

TARRANT COUNTY, TEXAS
NOVEMBER 2016
CSJ NO. 0718-02-045

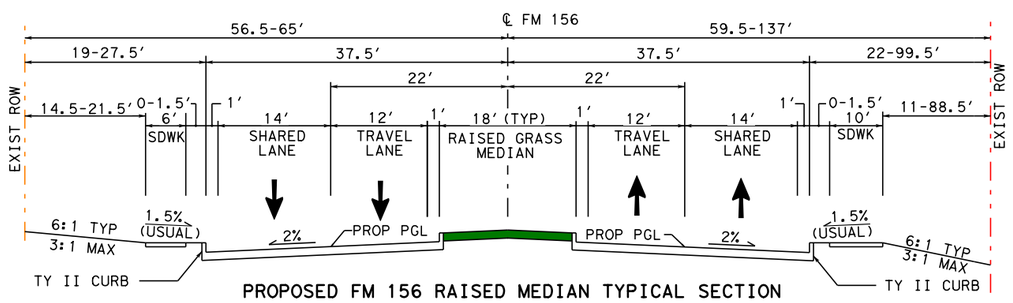
Texas Department of Transportation



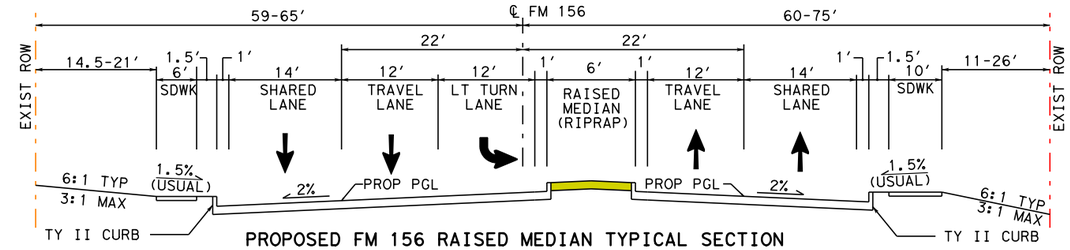
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 372+64.00 TO 374+64.00



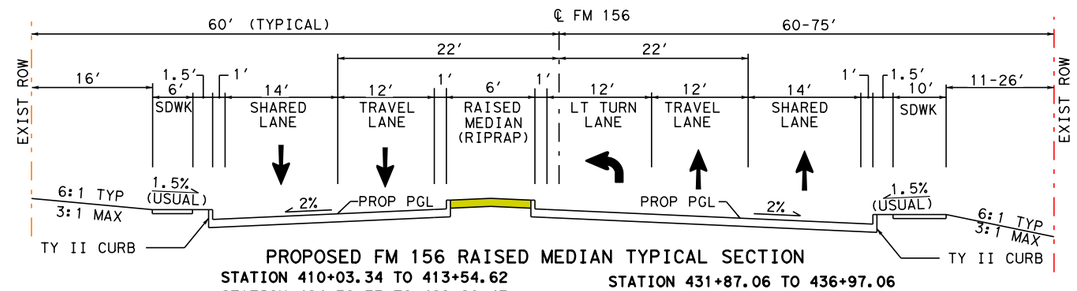
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 379+61.00 TO 386+61.00



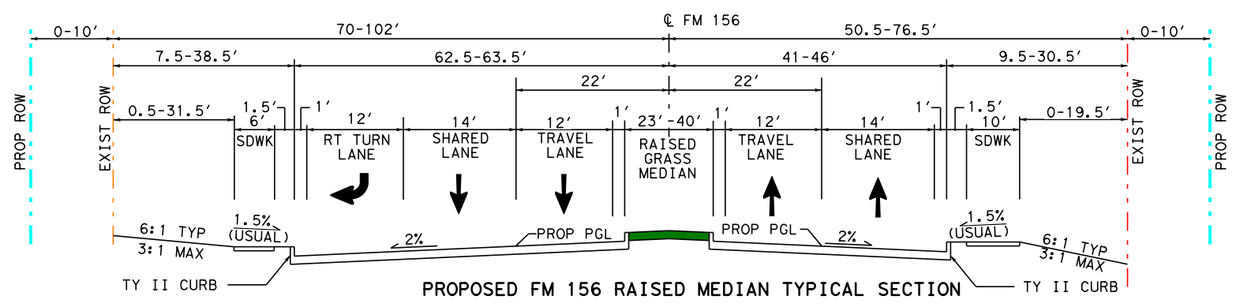
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 395+00.00 TO 410+03.34
STATION 429+20.43 TO 431+87.06
STATION 442+07.06 TO 444+09.27
STATION 453+30.49 TO 454+73.17
STATION 477+86.51 TO 481+05.91



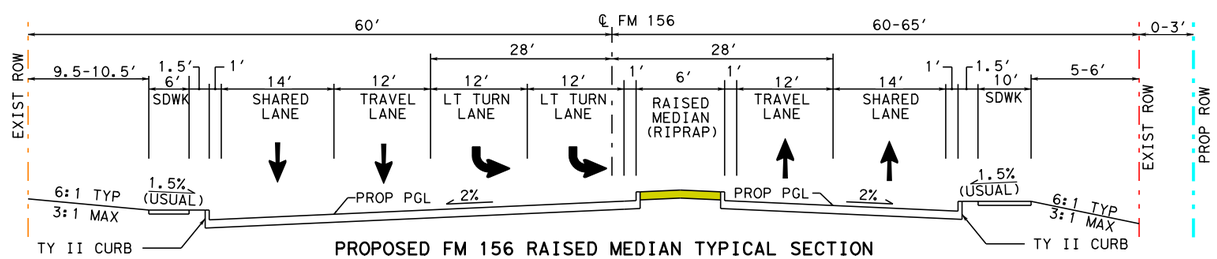
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 413+54.62 TO 424+38.73
STATION 436+97.06 TO 442+07.06
STATION 448+88.27 TO 453+30.49
STATION 467+19.48 TO 471+36.53
STATION 473+03.00 TO 477+86.51



PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 410+03.34 TO 413+54.62
STATION 424+38.73 TO 429+20.43
STATION 431+87.06 TO 436+97.06
STATION 444+09.27 TO 448+88.27



PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 486+86.03 TO 490+17.10



PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 460+83.56 TO 465+48.41

TEXAS DEPARTMENT OF TRANSPORTATION
FORT WORTH DISTRICT
BRIAN R. BARTH, P.E. DISTRICT ENGINEER

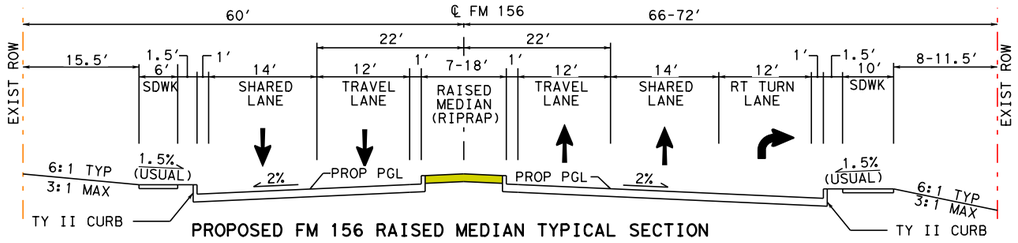
FIGURE 3
TYPICAL SECTIONS
FM 156 FROM
US 81/US 287 TO MCLEROY
BOULEVARD/WATAUGA ROAD

TARRANT COUNTY, TEXAS

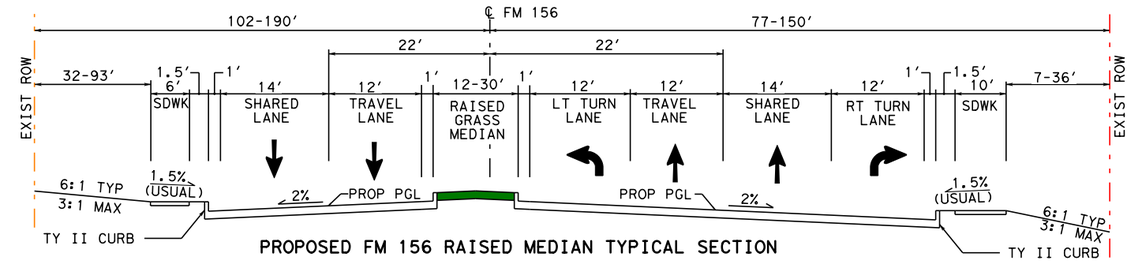
NOVEMBER 2016

CSJ NO. 0718-02-045

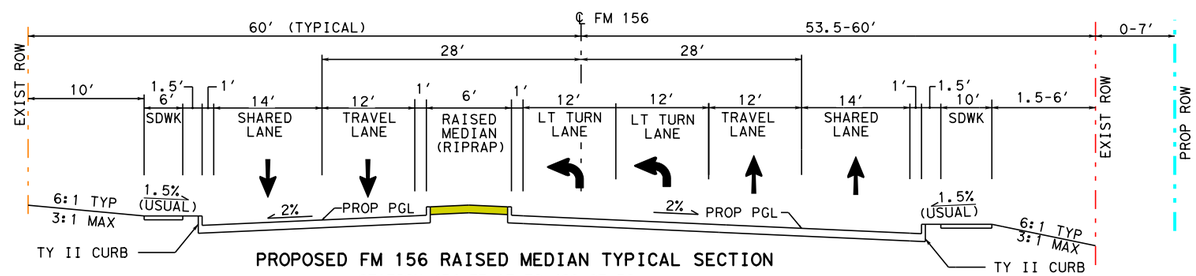
Texas Department of Transportation
© 2015 By Texas Department of Transportation
All Rights Reserved



PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 465+48.41 TO 467+19.48
STATION 471+36.53 TO 473+03.00



PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 490+17.10 TO 494+65.75



PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION
STATION 454+73.17 TO 460+83.56
STATION 481+05.91 TO 486+86.03

TEXAS DEPARTMENT OF TRANSPORTATION
FORT WORTH DISTRICT
BRIAN R. BARTH, P.E. DISTRICT ENGINEER

FIGURE 4
TYPICAL SECTIONS
FM 156 FROM
US 81/US 287 TO MCLEROY
BOULEVARD/WATAUGA ROAD

TARRANT COUNTY, TEXAS

NOVEMBER 2016

CSJ NO. 0718-02-045

Texas Department of Transportation

APPENDIX B

CONGESTION MANAGEMENT PROCESS FORMS

NCTCOG CMP
PROJECT IMPLEMENTATION FORM

Submitter Name: Chad Putnam
Agency Name: TxDOT Fort Worth District
Agency Address: 2501 SW Loop 820, Fort Worth, TX 76133
Email: chad.putnam@txdot.gov
Telephone Number: 817-370-6567

Date: 12/29/2016

Please answer the following questions

Project Name Farm-to-Market (FM) 156
Project Limits (From) US Highway (US) 81/287
Project Limts (To) McLeroy Boulevard/Watauga Road

2. Does this project add roadway capacity? (IF NOT, THIS FORM IS NOT REQUIRED)

YES

3. Are complementary Travel Demand Management (TDM) or Transportation System Management & Operations (TSM&O) projects within the corridor in the TIP?
If "yes," enter the project name(s), TIP Code(s) and/or CSJ number(s) in table below.
This information can be verified at the following link: Transportation Improvement Program Information System (TIPINS)
*For a list of TDM and TSM&O project types see: Appendix A - TDM and TSM&O Strategies

YES

Project Name	US81/287 From Tarrant/Wise County Line to I-35W	**TIP Code**	55027	**CSJ#**	0014-15-037
Project Name	I-35W From US 81/287 to I-820	**TIP Code**	52441	**CSJ#**	0014-16-248
Project Name	Longhorn Road From Old Decatur Road to Business 287	**TIP Code**	11736	**CSJ#**	0902-48-957
Project Name	North Tarrant Parkway From US 287 to US 377	**TIP Code**	1348	**CSJ#**	--

3b. Are there any other projects not included in the TIP that may compliment the project?
If "yes," enter the project name(s) and implementing agency in table below.

NO

Project Name	[Enter Here]	**Implementing Agency**	[Enter Here]
Project Name	[Enter Here]	**Implementing Agency**	[Enter Here]
Project Name	[Enter Here]	**Implementing Agency**	[Enter Here]
Project Name	[Enter Here]	**Implementing Agency**	[Enter Here]

4. Are the project limits within a corridor included in the current Metropolitan Transportation Plan?
This information can be verified in the Mobility Options found here: Appendix E of the MTP (pg. 53 - 97 / pg. 102 - 112)
If "yes," enter the MTP Reference #(s) in table below

YES

MTP Reference #	NRSA1-FTW-4
MTP Reference #	[Enter Here]
MTP Reference #	[Enter Here]
MTP Reference #	[Enter Here]

5. Are the project limits within a corridor included in the current CMP Corridor Analysis?
The complete inventory of corridor fact sheets can be found here: Appendix C - CMP Corridor Fact Sheet

NO

*If "yes," please proceed to question six.
*If "no," please evaluate corridor to determine if improvements are needed by completing the Fact Sheet Form in Step 2 in the tab below, before proceeding to question six.

6. Is the corridor identified as deficient in any category?

YES

*If "yes," please proceed to questions seven.
*If "no," please proceed to question 11.

7. Identify corridor deficiencies as specified in the current CMP Corridor Analysis or in the CMP Roadway Deficiency Form. (Check all that apply)

- [ ] Alternative Roadway Infrastructure
- [x] Modal Options
- [x] System Demand
- [x] System Reliability

- [x] System Demand
- [x] System Reliability

8. Review Appendix A of the current CMP or other available resources to identify possible congestion mitigation strategies to correct the deficiency. (Check all that apply)
Appendix A - TDM and TSM&O Strategies

- [ ] Commuter Transportation Options
- [ ] Freight Management Activities
- [ ] Incentive to Use Alternative Modes
- [ ] In-Vehicle System Efficiency Improvements
- [ ] Roadway Incident and Emergency Management Options
- [x] Roadway Infrastructure Improvements
- [ ] Sustainable Development Improvements
- [x] System Management and Operations Improvements
- [ ] Transit System Efficiency Improvements
- [ ] Traveler Information Services
- [x] Work Zone/Construction Management Operations

9. Specify deficiency-correcting congestion mitigation strategy that will be implemented as part of the project.

Access management improvements, addition of new lanes, bottleneck removal and intersection improvements; ITS devices; maintenance and construction activity coordination, winter maintenance, work zone management and safety plans.

10. If not implementing a congestion mitigation stragegy, please explain reason.

[ENTER HERE]

11. Submit completed form to NCTCOG - CMP Team at: CMP@nctcog.org or by clicking SUBMIT below

*Submit button will auto generate email to NCTCOG with completed excel document attached.
Please finalize step by sending the email.

SUBMIT

CMP CORRIDOR ANALYSIS - FACT SHEET

ROADWAY NAME	Farm-to-Market (FM) 156

HIGHWAY	LIMITS	LENGTH	DIRECTION	MAINLANES
FM 156	US 81/287 to McLeroy Boulevard/Watauga Road	3.8 miles	NB/SB	2 Lanes

CORRIDOR FACTS (WITHIN 1 MILE)

Functional Class	Minor Arterial	**Direct Connections**	NO
HOV Lanes	NO	**Truck Lane Restriction**	NO
Parrallel Freeways (within 5 miles)	YES	**Hazmat Route**	NO
Shoulders	NO	**Population**	209,564
Frontage Roads	NO	**Number of Employees**	140,000
Bike Options	YES	**FIM Training Participants**	rth Police, TxDOT Fort Worth, Fort Worth Transpor
Available Transit	NO	**Crash Rate (Use Most Recent Year)**	387.31
Park and Ride	NO	**Construction Status**	NA

PARRALLEL ARTERIALS (ENTIRE LIMITS)

US 81/US 287 - 35W, US 377

PARRALLEL ARTERIALS (PARTIAL LIMITS)

None

CORRIDOR SCORE (Results from Step 3 - CMP Deficiency Form)

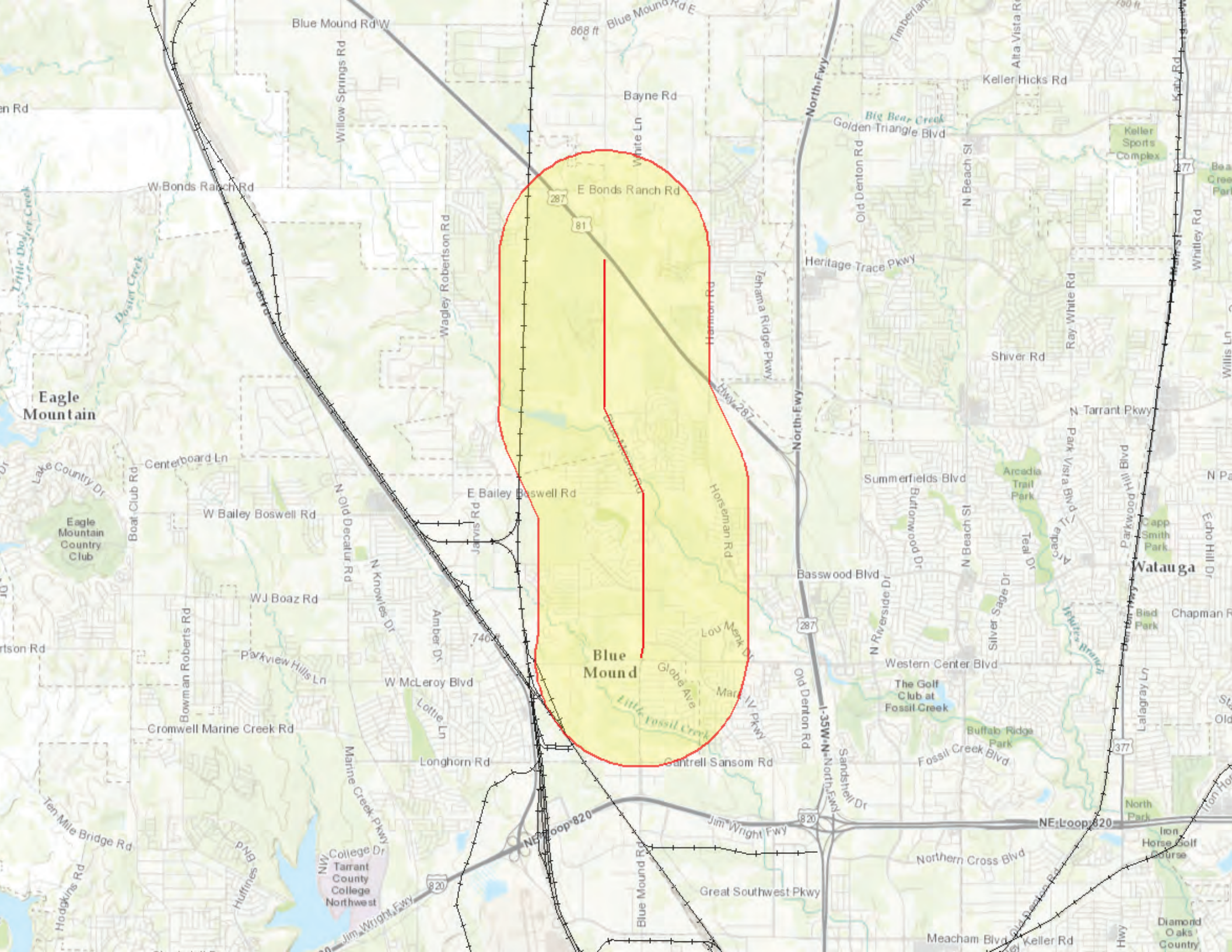
ROADWAY	MODAL OPTIONS	SYSTEM DEMAND	SYSTEM RELIABILITY	SCORE
16	0	12	4	32

CONCLUSIONS/RECOMMENDATIONS

Modal Options Deficiency would be improved by the shared use outside lanes throughout the entire limits.

ADD PROJECT CORRIDOR SEGMENT MAP HERE.
(jpg,pdf,png,wmz)

DEFICIENCY FORM IS REQUIRED WITH THIS SHEET
PLEASE COMPLETE BY GOING TO TAB 3 (STEP 3. DEFICIENCY FORM)
CLICK HERE


Blue Mound Rd W
Blue Mound Rd E
868 ft
Bayne Rd
Willow Springs Rd
White Ln
North Fwy
Keller Hicks Rd
Alta Vista Rd
Katy Rd
Big Bear Creek
Golden Triangle Blvd
Keller Sports Complex
W Bonds Ranch Rd
E Bonds Ranch Rd
Old Denton Rd
N Beach St
Wagley Robertson Rd
Harmon Rd
Tehama Ridge Pkwy
Heritage Trace Pkwy
Ray White Rd
Whitley Rd
Little Dogie Creek
Dogie Creek
Shiver Rd
Eagle Mountain
Hwy 287
N Tarrant Pkwy
Centerboard Ln
Lake Country Dr
Boat Club Rd
E Bailey Boswell Rd
Summerfields Blvd
Arcadia Trail Park
Park Vista Blvd
Parkwood Hill Blvd
Eagle Mountain Country Club
W Bailey Boswell Rd
N Old Decatur Rd
Jarvis Rd
Horseman Rd
Buttonwood Dr
Capp Smith Park
Watauga
Basswood Blvd
Teal Dr
Echo Hill Dr
WJ Boaz Rd
N Knowles Dr
Amber Dr
Lou Menk Dr
N Riverside Dr
Silver Sage Dr
Bird Park
Chapman Rd
Bowman Roberts Rd
Parkview Hills Ln
740 ft
Blue Mound
Globe Ave
Western Center Blvd
W McLeroy Blvd
Lottie Ln
Little Fossil Creek
Mark IV Pkwy
The Golf Club at Fossil Creek
Lalaway Ln
Cromwell Marine Creek Rd
Buffalo Ridge Park
Fossil Creek Blvd
Longhorn Rd
Cantrell Sansom Rd
Sandshell Dr
I-35W N North Fwy
Marine Creek Pkwy
Ten Mile Bridge Rd
NE Loop 820
Jim Wright Fwy
North Park
Iron Horse Golf Course
Northern Cross Blvd
Hodgkins Rd
Huffines Blvd
NW College Dr
Tarrant County College Northwest
Great Southwest Pkwy
Meacham Blvd
Keller Rd
Diamond Oaks Country

Project Name:	Farm-to-Market (FM) 156
Project Limits (From and To):	US 81/287 to McLeroy Boulevard/Watauga Road
Agency Name:	TxDOT
Submitter Name:	Chad Putnam
Telephone:	817-370-6567
Email:	chad.putnam@txdot.gov
Date Submitted:	12/29/16

Alternative Roadway Corridor Deficiency

The factors that influence alternative roadway infrastructure include the presence of parallel freeways, frontage roads, parallel arterials, and direct connections or interchanges.

	Click Cell To Select Answer	Score
1. Does the roadway facility have a parallel freeway or toll road within five miles?	Yes	12
2. Does the roadway facility include a frontage road system?	No	0
3. Does the roadway facility have a parallel arterial within two miles?	Yes, both entire and partial limits	4
4. Does the roadway network include a direct connection or non-signalized interchange to another highway?	No	0
Total Points Received in Alternative Roadway Infrastructure Category		**16**

If total score is 14 or below, then improvements are needed in this category. Please see Appendix A of the current CMP to identify possible congestion mitigation strategies to correct the deficiency.

Modal Options Deficiency

The factors that influence modal options include the presence of transit options (bus and/or rail), park-and-ride facilities, HOV/Managed Lanes, and bicycle/pedestrian options.

	Click Cell To Select Answer	Score
1. Does the roadway facility have established transit service?	No	0
2. Is a park-and-ride facility located along the roadway corridor?	No	0
3. Are HOV or Managed lanes available along the roadway corridor?	No	0
4. Are bike trails or other bike options available along the roadway corridor?	No	0
Total Points Received in Modal Options Category		**0**

If total score is 14 or below, then improvements are needed in this category. Please see Appendix A of the current CMP to identify possible congestion mitigation strategies to correct the deficiency.

System Demand (Recurring) Deficiency

The factors that influence system demand include traffic volume, truck volume/percentage, number of employees along the roadway corridor block, and residential population.

	Click Cell To Select Answer	Score
1. Is the peak hour volume capacity above or below the current average Peak V/C of 0.692?	Above the average	3
2. Is the truck volume percentage along the corridor above or below the current average of 9%?	Below or equal to the average	7
3. Is the total number of employees along the corridor above or below the current average of 82,549 (by TSZ)?	Above the average	1
4. Is the population along the corridor above or below the current average of 74,611 (by TSZ)?	Above the average	1
Total Points Received in System Demand Category		**12**

If total score is 14 or below, then improvements are needed in this category. Please see Appendix A of the current CMP to identify possible congestion mitigation strategies to correct the deficiency.

System Reliability (Non-Recurring) Deficiency

The factors that influence system reliability include facility crash rates, agencies that participate in incident management training, truck lane restrictions, roadway shoulders, and the presence of Intelligent Transportation Systems (ITS) technology.

	Click Cell To Select Answer	Score
1. Is the crash rate for the corridor below or above the current crash rate average of 75.19?*	Above the average	3
2. Does the roadway facility have paved shoulders?	No	0
3. Have emergency response agencies (police and fire) along the corridor participated in Freeway Incident Management (FIM) training?**	Yes, partial limits	1
4. Have truck lane restrictions been implemented along the corridor?	No	0
5. Is Intelligent Transportation Systems (ITS) technology being utilized along the corridor?	No	0
Total Points Received in System Reliability Category		**4**

If total score is 14 or below, then improvements are needed in this category. Please see Appendix A of the current CMP to identify possible congestion mitigation strategies to correct the deficiency.

Notes:
*Please use most recent crash year if available.
**FIM attendance information is maintained by NCTCOG Safety staff. Please call 817-695-9245 to request information.

NCTCOG CMP
PROJECT IMPLEMENTATION FORM

Submitter Name: Chad Putnam
Agency Name: TxDOT Fort Worth District
Agency Address: 2501 SW Loop 820, Fort Worth, TX 76133
Email: chad.putnam@txdot.gov
Telephone Number: 817-370-6567

Date: 1/6/2016

Please answer the following questions

Project Name Farm-to-Market (FM) 156
Project Limits (From) US Highway (US) 81/287
Project Limts (To) McLeroy Boulevard/Watauga Road

2. Does this project add roadway capacity? (IF NOT, THIS FORM IS NOT REQUIRED)

YES

3. Are complementary Travel Demand Management (TDM) or Transportation System Management & Operations (TSM&O) projects within the corridor in the TIP?
If "yes," enter the project name(s), TIP Code(s) and/or CSJ number(s) in table below.
This information can be verified at the following link: Transportation Improvement Program Information System (TIPINS)
*For a list of TDM and TSM&O project types see: Appendix A - TDM and TSM&O Strategies

YES

Project Name	US81/287 From Tarrant/Wise County Line to I-35W	**TIP Code**	55027	**CSJ#**	0014-15-037
Project Name	I-35W From US 81/287 to I-820	**TIP Code**	52441	**CSJ#**	0014-16-248
Project Name	Longhorn Road From Old Decatur Road to Business 287	**TIP Code**	11736	**CSJ#**	0902-48-957
Project Name	North Tarrant Parkway From US 287 to US 377	**TIP Code**	1348	**CSJ#**	--

3b. Are there any other projects not included in the TIP that may compliment the project?
If "yes," enter the project name(s) and implementing agency in table below.

NO

Project Name	[Enter Here]	**Implementing Agency**	[Enter Here]
Project Name	[Enter Here]	**Implementing Agency**	[Enter Here]
Project Name	[Enter Here]	**Implementing Agency**	[Enter Here]
Project Name	[Enter Here]	**Implementing Agency**	[Enter Here]

4. Are the project limits within a corridor included in the current Metropolitan Transportation Plan?
This information can be verified in the Mobility Options found here: Appendix E of the MTP (pg. 53 - 97 / pg. 102 - 112)
If "yes," enter the MTP Reference #(s) in table below

YES

MTP Reference #	NRSA1-FTW-4
MTP Reference #	[Enter Here]
MTP Reference #	[Enter Here]
MTP Reference #	[Enter Here]

5. Are the project limits within a corridor included in the current CMP Corridor Analysis?
The complete inventory of corridor fact sheets can be found here: Appendix C - CMP Corridor Fact Sheet

NO

*If "yes," please proceed to question six.
*If "no," please evaluate corridor to determine if improvements are needed by completing the Fact Sheet Form in Step 2 in the tab below, before proceeding to question six.

6. Is the corridor identified as deficient in any category?

YES

*If "yes," please proceed to questions seven.
*If "no," please proceed to question 11.

7. Identify corridor deficiencies as specified in the current CMP Corridor Analysis or in the CMP Roadway Deficiency Form. (Check all that apply)

- [ ] Alternative Roadway Infrastructure
- [x] Modal Options
- [x] System Demand
- [x] System Reliability

8. Review Appendix A of the current CMP or other available resources to identify possible congestion mitigation strategies to correct the deficiency. (Check all that apply)
Appendix A - TDM and TSM&O Strategies

- [ ] Commuter Transportation Options
- [ ] Freight Management Activities
- [ ] Incentive to Use Alternative Modes
- [ ] In-Vehicle System Efficiency Improvements
- [ ] Roadway Incident and Emergency Management Options
- [x] Roadway Infrastructure Improvements
- [x] Sustainable Development Improvements
- [x] System Management and Operations Improvements
- [ ] Transit System Efficiency Improvements
- [ ] Traveler Information Services
- [x] Work Zone/Construction Management Operations

9. Specify deficiency-correcting congestion mitigation strategy that will be implemented as part of the project.

Access management improvements, addition of new lanes, bottleneck removal, sidewalks and intersection improvements; ITS devices; maintenance and construction activity coordination, winter maintenance, work zone management and safety plans.

10. If not implementing a congestion mitigation stragegy, please explain reason.

[ENTER HERE]

11. Submit completed form to NCTCOG - CMP Team at: CMP@nctcog.org or by clicking SUBMIT below

*Submit button will auto generate email to NCTCOG with completed excel document attached.
Please finalize step by sending the email.

SUBMIT

CMP CORRIDOR ANALYSIS - FACT SHEET

ROADWAY NAME	Farm-to-Market (FM) 156

HIGHWAY	LIMITS	LENGTH	DIRECTION	MAINLANES
FM 156	US 81/287 to McLeroy Boulevard/Watauga Road	3.8 miles	NB/SB	2 Lanes

CORRIDOR FACTS (WITHIN 1 MILE)

Functional Class	Minor Arterial
HOV Lanes	NO
Parrallel Freeways (within 5 miles)	YES
Shoulders	NO
Frontage Roads	NO
Bike Options	YES
Available Transit	NO
Park and Ride	NO

Direct Connections	NO
Truck Lane Restriction	NO
Hazmat Route	NO
Population	209,564
Number of Employees	140,000
FIM Training Participants	rth Police, TxDOT Fort Worth, Fort Worth Transpor
Crash Rate (Use Most Recent Year)	387.31
Construction Status	NA

PARRALLEL ARTERIALS (ENTIRE LIMITS)

US 81/US 287 - 35W, US 377

PARRALLEL ARTERIALS (PARTIAL LIMITS)

None

CORRIDOR SCORE (Results from Step 3 - CMP Deficiency Form)

ROADWAY	MODAL OPTIONS	SYSTEM DEMAND	SYSTEM RELIABILITY	SCORE
16	0	12	4	32

CONCLUSIONS/RECOMMENDATIONS

Modal Options Deficiency would be improved by the shared use outside lanes throughout the entire limits.

ADD PROJECT CORRIDOR SEGMENT MAP HERE.
(jpg,pdf,png,wmz)

DEFICIENCY FORM IS REQUIRED WITH THIS SHEET
PLEASE COMPLETE BY GOING TO TAB 3 (STEP 3. DEFICIENCY FORM)
CLICK HERE

Project Name:	Farm-to-Market (FM) 156
Project Limits (From and To):	US 81/287 to McLeroy Boulevard/Watauga Road
Agency Name:	TxDOT
Submitter Name:	Chad Putnam
Telephone:	817-370-6567
Email:	chad.putnam@txdot.gov
Date Submitted:	01/06/17

Alternative Roadway Corridor Deficiency

The factors that influence alternative roadway infrastructure include the presence of parallel freeways, frontage roads, parallel arterials, and direct connections or interchanges.

	Click Cell To Select Answer	Score
1. Does the roadway facility have a parallel freeway or toll road within five miles?	Yes	12
2. Does the roadway facility include a frontage road system?	No	0
3. Does the roadway facility have a parallel arterial within two miles?	Yes, both entire and partial limits	4
4. Does the roadway network include a direct connection or non-signalized interchange to another highway?	No	0
Total Points Received in Alternative Roadway Infrastructure Category		**16**

If total score is 14 or below, then improvements are needed in this category. Please see Appendix A of the current CMP to identify possible congestion mitigation strategies to correct the deficiency.

Modal Options Deficiency

The factors that influence modal options include the presence of transit options (bus and/or rail), park-and-ride facilities, HOV/Managed Lanes, and bicycle/pedestrian options.

	Click Cell To Select Answer	Score
1. Does the roadway facility have established transit service?	No	0
2. Is a park-and-ride facility located along the roadway corridor?	No	0
3. Are HOV or Managed lanes available along the roadway corridor?	No	0
4. Are bike trails or other bike options available along the roadway corridor?	No	0
Total Points Received in Modal Options Category		**0**

If total score is 14 or below, then improvements are needed in this category. Please see Appendix A of the current CMP to identify possible congestion mitigation strategies to correct the deficiency.

System Demand (Recurring) Deficiency

The factors that influence system demand include traffic volume, truck volume/percentage, number of employees along the roadway corridor block, and residential population.

	Click Cell To Select Answer	Score
1. Is the peak hour volume capacity above or below the current average Peak V/C of 0.692?	Above the average	3
2. Is the truck volume percentage along the corridor above or below the current average of 9%?	Below or equal to the average	7
3. Is the total number of employees along the corridor above or below the current average of 82,549 (by TSZ)?	Above the average	1
4. Is the population along the corridor above or below the current average of 74,611 (by TSZ)?	Above the average	1
Total Points Received in System Demand Category		**12**

If total score is 14 or below, then improvements are needed in this category. Please see Appendix A of the current CMP to identify possible congestion mitigation strategies to correct the deficiency.

System Reliability (Non-Recurring) Deficiency

The factors that influence system reliability include facility crash rates, agencies that participate in incident management training, truck lane restrictions, roadway shoulders, and the presence of Intelligent Transportation Systems (ITS) technology.

	Click Cell To Select Answer	Score
1. Is the crash rate for the corridor below or above the current crash rate average of 75.19?*	Above the average	3
2. Does the roadway facility have paved shoulders?	No	0
3. Have emergency response agencies (police and fire) along the corridor participated in Freeway Incident Management (FIM) training?**	Yes, partial limits	1
4. Have truck lane restrictions been implemented along the corridor?	No	0
5. Is Intelligent Transportation Systems (ITS) technology being utilized along the corridor?	No	0
Total Points Received in System Reliability Category		**4**

If total score is 14 or below, then improvements are needed in this category. Please see Appendix A of the current CMP to identify possible congestion mitigation strategies to correct the deficiency.

Notes:
*Please use most recent crash year if available.
**FIM attendance information is maintained by NCTCOG Safety staff. Please call 817-695-9245 to request information.
CMP 2013 - Appendix A

Texas Department of Transportation
125 EAST 11TH STREET | AUSTIN, TEXAS 78701-2483 | (512) 463-8588 | WWW.TXDOT.GOV

April 16, 2018

Transmitted Via E-mail

Mrs. Barbara C. Maley, AICP
Env/Tranp Plan Coord & Air Quality Specialist
Barbara.Maley@dot.gov

Re: Request for Project-Level Conformity Determination
Tarrant County
CSJ 0718-02-045
FM 156 (Blue Mound Road): From US 81/287 to Watauga Road/McLeroy Boulevard

Dear Mrs. Maley:

Attached is the copy of the Transportation Conformity Report Form for your review and concurrence.

A project-level conformity determination is requested from you. If you have any questions regarding this project, please contact me at (512) 416-2659.

Sincerely,

DocuSigned by:
Timothy Wood
C9CB724D35CE4BD...
Tim Wood
Air Specialist
Environmental Affairs Division

Attachment(s)

Transportation Conformity Report Form

Project Facility Name: FM 156 (Blue Mound Road)

MPO Project IDs: 11244.1

Project CSJ Numbers: 0718-02-045

Project Limits

From: US 81/287

To: Watauga Road/McLeroy Boulevard

Project Sponsor: TxDOT

Project Description[1]: The Texas Department of Transportation (TxDOT) proposes an expansion of Farm-to-Market Road (FM) 156 (Blue Mound Road) with logical termini extending from US 81/US 287 to Watauga Road/ McLeroy Boulevard in Tarrant County, Texas. The proposed improvements would have independent utility without the need for additional improvements. The portion of FM 156 under study lies within the cities of Saginaw, Blue Mound and Fort Worth.

The existing facility is a two lane undivided roadway with one 12-foot lane in each direction and variable width shoulders. The existing facility has a typical right of way width of 120 feet. The current posted speed limit for this section of FM 156 is 45 miles per hour (mph) south of Bailey Boswell Road and 55 mph north of Bailey Boswell Road. Average annual daily traffic (AADT) for the facility in 2020 is estimated as 26,550 vehicles per day (vpd), while the 2040 AADT is estimated to be 37,750 vpd.

The Build Alternative would expand the existing facility from two lanes to four lanes with a raised median. The facility would include 14-foot outside lanes and 12-foot inside lanes with a curb and gutter. Ten-foot wide sidewalks would be included on the outside southbound lane and six-foot wide sidewalks would be included along the outside northbound lane. The proposed facility is designed to have a 45 mph posted speed limit. Overall, the proposed improvements would extend 3.8 miles.

Date of anticipated environmental decision/re-evaluation: July 9, 2018

Let Year: 2018

ETC[2] Year: 2022

Conformity Year[3]: N/A - non-regionally significant

Total Project Cost: $62,328,085.84

Adding Capacity? ☒ Yes ☐ No

Counties: Tarrant

---

1 Project description, project details, and other project information should include enough detail in order to make a determination of project consistency with the MTP, TIP, STIP, and corresponding transportation conformity determination.

2 The ETC or estimated time of completion year is the date the entire project as described in the environmental review document will be open to traffic.

3 If this project is NOT considered regionally significant by the MPO, enter “N/A – non-regionally significant”. In addition, note that the conformity year is sometimes referred to as the network year. When a MTP identifies a specific timeframe during which a project will be operational, the last year of that timeframe is the conformity year.

Project Classification: ☒ CE ☐ EA ☐ EIS ☐ Re-evaluation

Important Information

A determination of project-level conformity is not permanent. It is recommended that conformity be checked early and often in the project development process, but that this specific form be coordinated within 60 days of the anticipated environmental decision to avoid coordinating the form more than once. The following events would require a project's conformity determination to be reevaluated.

1. Changes to the project's design concept, scope, limit, funding, or estimated time of completion (ETC) year
2. Changes to the project's listing in the MTP, TIP, or STIP related to design concept, scope and limits; funding or ETC year
3. New conformity determinations on the applicable MTP, TIP, or STIP (even if it occurs after the FHWA/FTA project-level conformity determination has been made)

In particular, if there is a planned MTP update/amendment and associated transportation conformity determination expected to be completed on or near the time of project approval, it is recommended that the project sponsor prepare this conformity determination after the plan update/amendment and associated transportation conformity determination is completed, if the update/amendment will affect the project as specified in item 1 above. Consult with ENV air specialist if further assistance is needed.

Instructions

Check the appropriate box for each question, using the most current information available, and be aware that the answers will dictate which questions must be answered for each specific project. Start with Step One, and follow the instructions included in each step, if any additional instructions are provided.

The information displayed between carets, <like this> represents a field that should be customized with project specific information. In the electronic file, these fields are highlighted in grey. Content prompts, like ***Choose an item***, represent dropdown menus, which also must be customized with project specific information.

If the form requires the preparer to "STOP" because something is lacking, then it is recommended that the time it would take to make the necessary changes to the MTP, TIP, or project should be re-evaluated against the project's proposed letting date (i.e., letting date may need to be adjusted).

Step 1: Is this a federal project with a federal lead other than FHWA/FTA?

☐ **Yes – STOP. Transportation conformity does not apply to the project, however, general conformity may apply.**

Consult the ENV air specialist regarding this project and potential general conformity requirements.

☒ No – Continue to Step 2.

Step 2: Is this a FHWA/FTA project[4]?

☒ Yes – Proceed to Step 4.

[4] Note that this includes projects which may not have federal funding but would otherwise require federal approval.

☐ No – Continue to Step 3.

Step 3: Is this project considered regionally significant[5] in accordance with 40 CFR 93.101 or 30 TAC 114.260(d)(2)(iv)?

☐ Yes – Continue to Step 4.

☐ No – **STOP. In accordance with 40 CFR 93.102(a)(2), a project level transportation conformity determination is not required for non-regionally significant, non-FHWA/FTA projects.**

Step 4: Is the project located in a nonattainment or maintenance area6 for ozone7, nitrogen dioxide (NO2), carbon monoxide (CO), particulate matter (PM2.5 or PM10)?

☒ Yes – **Transportation conformity rules apply.** The project is located in the EPA designated Dallas-Fort Worth moderate nonattainment[8] area for 8-hour ozone. Continue to Step 5.

☐ No – **STOP. Transportation conformity does not apply to the project.**

Step 5: Is the project exempt[9] from conformity in accordance with 40 CFR 93.126[10] or 40 CFR 93.128[11]?

☐ Yes – **STOP. Transportation conformity does not apply to the project.** This project falls under the following exemption: ***Choose an item.***

☒ No – Continue to Step 6.

Step 6: Is the project exempt from the regional conformity analysis in accordance with 40 CFR 93.127?

☐ Yes – **The project is exempt from regional conformity requirements.** This project falls under the following exemption: ***Choose an item.*** Proceed to Step 16.

☒ No – Continue to Step 7.

Step 7: Does the project fall within the boundaries[12] of an MPO?

☒ Yes – Proceed to Step 9.

---

[5] If a project is on the MPO's NON-regionally significant project list, it is not regionally significant. Each MPO may have different criteria for designating a project as regionally significant.

[6] If unsure about the nonattainment or maintenance status, it can be checked in multiple locations, including: the EPA Greenbook, the TCEQ website, or the applicable table in the Air Quality toolkit.

[7] Note the 1997 ozone standard was revoked by EPA.

[8] Area classifications can be either maintenance, marginal nonattainment, moderate nonattainment, serious nonattainment, severe nonattainment, or extreme nonattainment

[9] Most added capacity projects will not be exempt, whereas most non-added capacity projects will be exempt.

[10] Ultimately, the interpretation of what projects types meet these exemption criteria is under the purview of the federal lead agency. For example, although it could be interpreted to meet some of the exemption project types, a project changing from general purpose to managed lanes is NOT considered to be exempt from conformity.

[11] Grouped CSJ projects, by rule, must be exempt under these criteria.

[12] i.e., within a Metropolitan Planning Area (MPA)

☐ No – Continue to Step 8.

Step 8: Is the project design concept, scope and limits, conformity analysis year, and funding consistent with an approved[13] regional conformity analysis for an isolated rural area that meets the requirements of 40 CFR 93.109?

☐ Yes – **The project is consistent with an approved regional conformity determination that meets the requirements of 40 CFR 93.109 for isolated rural areas.** Proceed to Step 16.

☐ No **– STOP. The project is not consistent with a regional conformity determination for an isolated rural area. TxDOT will not take final action until the project is consistent with an approved regional conformity determination that meets the requirements of 40 CFR 93.109 for isolated rural areas.**

Do not sign this form. Please ensure that the project is included in and consistent with an approved regional conformity determination then reevaluate the project using this form.

Step 9: Are all of the project phases[14] for the entire project described in the environmental document included in the fiscally constrained portion of the MTP?

☒ Yes – Continue to Step 10.

☐ No **– STOP. The project was not included in the area's regional conformity determination, and, therefore, is not consistent with it.** The MTP needs to be amended to include this project and a new conformity determination needs to be made on the MTP before consistency can be determined for the project, or the project needs to be revised to be consistent with the existing MTP.

Consult with the district TP&D and MPO on how to proceed.

Step 10: Is at least one phase of the project beyond the NEPA study (corridor study) included in either the appropriate year of the conforming TIP[15] or in Appendix D (if will not be let within the timeframe of the TIP)?

☒ Yes – Continue to Step 11.

☐ No **– STOP. The project is not included in the conforming TIP and is therefore not consistent with it.** At least one phase of the project must be added to the conforming TIP before consistency can be determined.

Consult with the district TP&D and MPO on how to proceed.

[13] The consultation partners are responsible for approving regional conformity analyses.

[14] A project phase is a separate portion of a project such as: NEPA study, ROW acquisition, final design, construction, and/or partial construction.

[15] In Texas, a conforming TIP is one that has been included into the STIP, so projects must be in the STIP in order to show that they come from a conforming TIP.

Step 11: Are the current project limits the same[16] or do they fall within the project limits listed in the MTP and STIP?

☒ Yes – Continue to Step 12.

☐ No – **STOP. The project is not consistent with the conforming MTP and TIP**. Either the MTP and TIP, or the project needs to be revised before consistency can be **determined.**

Consult with the district TP&D and MPO on how to proceed.

Step 12: Is the activity being proposed the same as that in the MTP and STIP project description in both type[17] of facility and number[18] of lanes?

☒ Yes – Continue to Step 13.

☐ No – **STOP. The project is not consistent with the conforming MTP and TIP.** Either the MTP and TIP, or the project needs to be revised before consistency can be determined.

Consult with the district TP&D and MPO on how to proceed.

***Step* 13:** Does the project's ETC year fall between its identified conformity year[19] in the MTP and the previous conformity year identified in the MTP?

☐ Yes – Continue to Step 14.

☐ No – **STOP. The project is not consistent with the conforming MTP and TIP.** Either the MTP and TIP or the project needs to be revised before consistency can be determined.

Consult with the district TP&D and MPO on how to proceed.

☒ N/A – This project is non-regionally significant. Continue to Step 14.

Step 14: Is the estimated total project cost or the cost identified in the MTP greater than $1,500,000?

☒ Yes – Proceed to Step 15.

☐ No – Fiscal constraint requirements do not apply. This project is consistent with the currently conforming MTP and TIP. Proceed to Step 16.

---

[16] The limits are considered the same if the logical termini noted in the environmental document fall within the limits of the project noted in the MTP or the logical termini noted in the environmental document are not significantly greater (~1mile) than the limits noted in the MTP due to transition areas for safety or other factors required to be considered when establishing logical termini for environmental document purposes.

[17] The type of activity refers to the type of enhancement, such as: main lanes, frontage roads, HOV lanes, direct connectors, bridge replacement, etc…

[18] The number refers to the amount of each activity type, such as: number of main lanes or number of frontage lanes.

[19] For the purposes of this determination, the term conformity year is synonymous with the network analysis year for the MTP.

Step 15: Does the estimated project cost exceed what is contained in the MTP by more than 50%[20]?

☐ Yes – **STOP. The project is not consistent with the MTP and TIP because it is not fiscally constrained.** Either the MTP and TIP, or the project needs to be revised before consistency can be determined or a case-by-case decision will need to be made by FHWA.

Consult with the district TP&D and MPO on how to proceed.

☒ No – **This project is consistent with the currently conforming MTP and TIP**. Continue to Step 16.

Step 16: Is the project located in either a CO, $PM_{2.5}$, or PM_{10} nonattainment or maintenance area?[21]

☐ Yes – Continue to Step 17.

☒ No – **Hot-spot conformity requirements do not apply.** Proceed to Step 21.

Step 17: Is this a state or local project with NO federal funding and NO federal decision required?

☐ Yes – **Hot-spot conformity requirements do not apply.** Proceed to Step 21.

☐ No – **Hot-spot conformity requirements apply.** Request the local MPO to initiate a consultation call with the Consultation Partners.

Fill out the Hot-Spot Analysis Data for a Consultation Partner Decision Form to present the project data to the Consultation Partners for review prior to the consultation call.

Continue to Step 18.

Step 18: Did the consultation partners determine that this is a project of air quality concern (POAQC)?

☐ Yes – **A hot-spot analysis is required and must be approved by the consultation partners.**

Conduct a hot-spot analysis in accordance with the methodology approved by the consultation partners, and use the applicable EPA hot-spot guidance.

Continue to Step 19.

☐ No – **A hot-spot analysis is not required because the project is not a POAQC. The consultation partners made this determination on <insert date>.**

Proceed to Step 21.

[20] Multiply the MTP cost by 1.5. The current estimated total project cost should not exceed this amount.

[21] Note that this currently only applies to projects in El Paso.

Step 19: Does the approved hot-spot analysis verify that the project will not cause, contribute to, or worsen a violation of applicable CO, $PM_{2.5}$, or PM_{10} NAAQS or that the project will at least improve conditions from that of the no-build alternative?

☐ Yes – **The project is not anticipated to cause, contribute to, or worsen a violation of the applicable NAAQS.** Continue to Step 20.

☐ **No – STOP. The project, as it is currently presented, does not comply with conformity requirements because it is anticipated to cause, contribute to, or worsen a violation of the applicable NAAQS.**

Identify and get consultation partner agreement upon mitigation measures to offset project impacts to air quality. Reevaluate this project using this form once these mitigation measures have been identified and committed to.

Step 20: Have all the agreed upon mitigation measures as well as any applicable SIP control measures received a written commitment?

☐ Yes – Continue to Step 21.

☐ **No – STOP.**

Do not proceed until there are written commitments to implement all the agreed upon mitigation measures and any applicable SIP control measures. Reevaluate this project using this form once these commitments have been made in writing.

☐ N/A because no mitigation is required and there are no applicable SIP control measures which affect this project, Continue to Step 21.

Step 21: The transportation conformity evaluation is complete.

Attach applicable pages of the MTP and TIP, or the STIP, project schematics, typical sections, hot-spot analyses and determinations, and any conformity related public comment and response. Implement the following processing instructions as applicable.

☐ This is a regionally significant State-only project with no FHWA/FTA action required (the answer to Steps 3 is yes); therefore:

Submit this form to the ENV air specialist. If ENV concurs that all project level conformity requirements have been met, ENV shall sign the form below. Coordination with FHWA/FTA is not required.

Retain this form in the project file.

☒ This is a FHWA/FTA non-exempt project (the answer to Steps 2 and 4 is yes, and the answer to Steps 5 and 6 is no); therefore:

Submit this form to the ENV air specialist. After ENV air specialist review, ENV will coordinate this form with FHWA/FTA for a project level conformity determination. If FHWA/FTA agrees that all project level conformity requirements have been met, they shall sign the project level conformity determination line below. A project level conformity determination is not complete and project clearance cannot be given until FHWA/FTA signs this form.

Retain this form and any coordination with FHWA/FTA in the project file.

TxDOT ENV Transportation Conformity Validation Complete:

Project CSJ Numbers: 0718-02-045

Signature DocuSigned by: Timothy Wood C9CB724D35CE4BD...

Name: Timothy Wood

Title: Environmental Specialist

Date: 4/16/2018

FHWA/FTA Determination of the Project-level Conformity:

Signature BARBARA C MALEY Digitally signed by BARBARA C MALEY DN: c=US, o=U.S. Government, ou=FHWA FHWAAustinTX, ou=DOT FHWAAustinTX, cn=BARBARA C MALEY Date: 2018.04.16 14:33:25 -05'00'

Name: _____

Title: _____

Date: _____

Non-regionally Significant Roadways
Fort Worth District

MTP ID	TIP Code	Project Type	CSJ	Project	From	To	Description	YOE Total Project Cost	FFCS
NRSA1- FTW- 1	11177.0	Addition of lanes	0902-48-537	Euless-Grapevine Road	SH 360	Westport Parkway	Widen roadway - 2 lanes to 4 lanes undivided	$7,359,000	Minor Arterial
NRSA1- FTW- 2	11177.0	New roadway	0902-48-537	Euless-Grapevine Road	Westport Parkway	Mustang Drive	New roadway - 0 lanes to 4 lanes undivided		Minor Arterial
NRSA1- FTW- 4	11244.1	Addition of lanes & Reconstruct	0718-02-045	FM 156	US 81/287	Watauga Road (McElroy)	Reconstruct and Widen 2 Lane to 4 Lane Divided	$57,809,245	Minor Arterial
NRSA1- FTW- 5	11179.0	Addition of lanes	9902-48-900	Great Southwest Parkway	Sara Jane	Bardin Road	Widen roadway - 4 lanes to 6 lanes		Minor Arterial
NRSA1- FTW- 6	11166.0	Grade separation	0902-48-451	Henderson Street	Rio Grande	Peter Smith Road	Reconstruct grade separation & improve pedestrian tunnel by increasing vertical clearance with a deeper section		Minor Arterial
NRSA1- FTW- 7	11416.0	New roadway	0902-48-907	Bowman Springs Road	South of IH 20	At trib to Village Creek	Replace approach roadway & realignment for construction & right-of-way acquisition	$1,600,000	Minor Arterial
NRSA1- FTW- 8	52501.0	Addition of lanes	3372-01-010	FM 3391	IH 35W	East of CR 602	Widen roadway - 2 lanes to 6 lanes from IH 35W to Hurst Avenue and 2 lanes to 4 lanes from Hurst Avenue to CR 602	$31,246,242	Major Collector
NRSA1- FTW- 9	N/A	New roadway	0902-50-910	Colonial Drive	BU 67M	Woodard	Construct and connect Colonial as 2-lane divided with shoulders & turn lanes		Major Collector
NRSA1- FTW- 10	11539.1	Interchange/new roadway	1068-02-932	Center Street	At IH 30	None	New roadway - 4-lane divided bridge (Center Street extension)		Major Collector
NRSA1- FTW- 11	11763.0	Addition of lanes	0902-48-722	Chapel Creek Blvd.	At IH 30	None	Construct new 6-lane bridge with 4 thru lanes, 2 left turn lanes and a separate U-turn bridge to include right turn lanes, approaches , pedestrian improvements, signalization, lighting and retaining wall improvements	$12,255,150	Minor Arterial
NRSA1- FTW- 12	11736.0	Addition of lanes	0902-48-957	Longhorn Road	Old Decatur Road	BU 287	Widen roadway - 2 lanes to 6 lanes divided	$10,500,000	Major Collector
NRSA1- FTW- 13	11764.0	New roadway	0902-48-861	Old FM 426 (McKinney St.)	Beach Street	Old Denton Road and from Old Denton Road to US 377 via the IH 820 eastbound frontage road	0/2 to 2/4 lanes; Haltom Road intersection improvements; Old Denton Road from IH 820 to Haltom Road, 0/2 to 2 lanes; and North Backage Road from IH 820 to Haltom Road 0 to 2 lanes	$26,983,884	Major Collector
NRSA1- FTW- 14	11165.1 11165.2	Addition of lanes	0902-48-775	Dirks Road	At BNSF RR		Reconstruct bridge to accommodate the upgrade of Dirks Road to a 6-lane divided roadway	$8,952,500	Minor Arterial
NRSA1- FTW- 15	11342.0	New roadway	N/A	W 7th Street	University	Boland	New roadway - 0 lanes to 2 lane undivided		Major Collector

Source: North Central Texas Council of Governments

STIP Portal

Logged in as Tim Wood Log Out

Project Management | Reports | Support

Project Management > Area List > STIPs (M-DALLAS-FORT WORTH) > Revisions () > TIP Instances (Unassigned) > Highway Projects (Unassigned) > Project Details

Color Key: - Business rule violation - Value changed in current session - Different from DCIS or latest approved copy

Data

Statewide

TIP Revision: None

District: FORT WORTH

County: TARRANT

MPO: DALLAS-FORT WOF

Highway: FM 156

CSJ: 0718 - 02 - 045

TIP FY: 2017

Phase:
- Construction
- Engineering
  - Environmental
  - Engineering
- Right-of-Way
  - Acquisition
  - Utilities
- Transfer

Revision Date: 05/2017

Project Sponsor: TXDOT-FORT WORTH

MPO Proj Number: 11244.1

MTP Reference: NRSA1-FTW-4

City: FORT WORTH

Limits From: US 81/287

Limits To: WATAUGA ROAD (MCELROY)

Project Description: RECONSTRUCT AND WIDEN 2 LANE TO 4 LANE DIVIDED

P7 Remarks: REVISE FUNDING

Project History: PART OF REGIONAL 10-YEAR PLAN

NOX (Kg/D):	0.0000	
VOC (Kg/D):	0.0000	
PM10 (Kg/D):	0.0000	
PM2.5 (Kg/D):	0.0000	
CO (Lbs/D):	0.0000	

Total Project Cost Information

Prelim Engineering	$4,300,000	✓
ROW Purchase	$400,000	✓
Construction Cost	$53,109,245	
Const Engineering	$2,030,096	✓
Contingencies	$814,494	
Indirect Costs	$0	
Bond Financing	$0	
Potential Chg Ord	$0	
Total Project Cost	$60,653,835	
YOE Cost		
Toll		
TCM		

Authorized Funding by Category/Share

Category	Federal	State	Regional	Local	Local Contributions	Total
S102	$320,000	$80,000	$0	$0	$0	$400,000
Total	$320,000	$80,000	$0.00	$0.00	$0.00	$400,000

DISTRICT	MPO	COUNTY	CSJ	HWY	PHASE	CITY	YOE COST
FORT WORTH	DALLAS-FORT WORTH	TARRANT	0718-02-045	FM 156	R,ACQ	FORT WORTH	$ 400,000

LIMITS FROM: US 81/287
LIMITS TO: WATAUGA ROAD (MCELROY)
PROJECT SPONSOR: TXDOT-FORT WORTH
REVISION DATE: 05/2017
MPO PROJ NUM: 11244.1
FUNDING CAT(S):
PROJECT DESCR: RECONSTRUCT AND WIDEN 2 LANE TO 4 LANE DIVIDED
REMARKS P7: REVISE FUNDING
PROJECT HISTORY: PART OF REGIONAL 10-YEAR PLAN

TOTAL PROJECT COST INFORMATION

PRELIM ENG:	$ 4,300,000
ROW PURCH:	$ 400,000
CONST COST:	$ 53,109,245
CONST ENG:	$ 2,030,096
CONTING:	$ 814,494
INDIRECT:	$ 0
BOND FIN:	$ 0
POT CHG ORD:	$ 0
TOTAL COST:	$ 60,653,835

COST OF APPROVED PHASES $ 400,000

AUTHORIZED FUNDING BY CATEGORY/SHARE

CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL	LC	TOTAL
S102	$ 320,000	$ 80,000	$ 0	$ 0	$ 0	$ 400,000
TOTAL	$ 320,000	$ 80,000	$ 0	$ 0	$ 0	$ 400,000

TIP History

2017-2020 STIP 05/2017 Revision: Approved 08/22/2017

DISTRICT	MPO	COUNTY	CSJ	HWY	PHASE	CITY	YOE COST
FORT WORTH	DALLAS-FORT WORTH	TARRANT	0718-02-045	FM 156	R,ACQ	FORT WORTH	$ 575,696

DISTRICT	MPO	COUNTY	CSJ	HWY	PHASE	CITY	YOE COST
FORT WORTH	DALLAS-FORT WORTH	TARRANT	0718-02-045	FM 156	R,ACQ	FORT WORTH	$ 575,696

LIMITS FROM: US 81/287
LIMITS TO: WATAUGA ROAD (MCELROY)
PROJECT SPONSOR: TXDOT-FORT WORTH
REVISION DATE: 05/2017
MPO PROJ NUM: 11244.1
FUNDING CAT(S):
PROJECT DESCR: RECONSTRUCT AND WIDEN 2 LANE TO 4 LANE DIVIDED
REMARKS P7: REVISE SCOPE
PROJECT HISTORY: PART OF REGIONAL 10-YEAR PLAN

TOTAL PROJECT COST INFORMATION

PRELIM ENG:	$ 719,404
ROW PURCH:	$ 575,696
CONST COST:	$ 40,000,000
CONST ENG:	$ 2,084,150
CONTING:	$ 836,181
INDIRECT:	$ 0
BOND FIN:	$ 0
POT CHG ORD:	$ 0
TOTAL COST:	$ 44,215,431

COST OF APPROVED PHASES $ 575,696

AUTHORIZED FUNDING BY CATEGORY/SHARE

CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL	LC	TOTAL
S102	$ 464,077	$ 111,619	$ 0	$ 0	$ 0	$ 575,696
TOTAL	$ 464,077	$ 111,619	$ 0	$ 0	$ 0	$ 575,696

2017-2020 STIP — 05/2017 Revision: Administrative 11/01/2017

DISTRICT	MPO	COUNTY	CSJ	HWY	PHASE	CITY	YOE COST
FORT WORTH	DALLAS-FORT WORTH	TARRANT	0718-02-045	FM 156	R,ACQ	FORT WORTH	$ 400,000

LIMITS FROM: US 81/287
LIMITS TO: WATAUGA ROAD (MCELROY)
PROJECT SPONSOR: TXDOT-FORT WORTH
REVISION DATE: 05/2017
MPO PROJ NUM: 11244.1
FUNDING CAT(S):
PROJECT DESCR: RECONSTRUCT AND WIDEN 2 LANE TO 4 LANE DIVIDED
REMARKS P7: REVISE FUNDING
PROJECT HISTORY: PART OF REGIONAL 10-YEAR PLAN

TOTAL PROJECT COST INFORMATION

PRELIM ENG:	$ 4,300,000
ROW PURCH:	$ 400,000
CONST COST:	$ 53,109,245
CONST ENG:	$ 2,030,096
CONTING:	$ 814,494
INDIRECT:	$ 0
BOND FIN:	$ 0
POT CHG ORD:	$ 0
TOTAL COST:	$ 60,653,835

COST OF APPROVED PHASES $ 400,000

AUTHORIZED FUNDING BY CATEGORY/SHARE

CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL	LC	TOTAL
S102	$ 320,000	$ 80,000	$ 0	$ 0	$ 0	$ 400,000
TOTAL	$ 320,000	$ 80,000	$ 0	$ 0	$ 0	$ 400,000

2017-2020 STIP — 05/2017 Revision: Administrative 11/01/2017

DISTRICT	MPO	COUNTY	CSJ	HWY	PHASE	CITY	YOE COST
FORT WORTH	DALLAS-FORT WORTH	TARRANT	0718-02-045	FM 156	R,ACQ	FORT WORTH	$ 400,000

LIMITS FROM: US 81/287
LIMITS TO: WATAUGA ROAD (MCELROY)
PROJECT SPONSOR: TXDOT-FORT WORTH
REVISION DATE: 05/2017
MPO PROJ NUM: 11244.1
FUNDING CAT(S):
PROJECT DESCR: RECONSTRUCT AND WIDEN 2 LANE TO 4 LANE DIVIDED
REMARKS P7: REVISE FUNDING
PROJECT HISTORY: PART OF REGIONAL 10-YEAR PLAN

TOTAL PROJECT COST INFORMATION

PRELIM ENG:	$ 4,300,000
ROW PURCH:	$ 400,000
CONST COST:	$ 53,109,245
CONST ENG:	$ 2,030,096
CONTING:	$ 814,494
INDIRECT:	$ 0
BOND FIN:	$ 0
POT CHG ORD:	$ 0
TOTAL COST:	$ 60,653,835

COST OF APPROVED PHASES $ 400,000

AUTHORIZED FUNDING BY CATEGORY/SHARE

CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL	LC	TOTAL
S102	$ 320,000	$ 80,000	$ 0	$ 0	$ 0	$ 400,000
TOTAL	$ 320,000	$ 80,000	$ 0	$ 0	$ 0	$ 400,000

2017-2020 STIP — 07/2016 Revision: Approved 12/19/2016

DISTRICT	MPO	COUNTY	CSJ	HWY	PHASE	CITY	YOE COST
FORT WORTH	DALLAS-FORT WORTH	TARRANT	0718-02-045	FM 156	R,ACQ	FORT WORTH	$ 575,696

LIMITS FROM: US 81/287
LIMITS TO: WATAUGA ROAD (MCELROY)
PROJECT SPONSOR: TXDOT-FORT WORTH
REVISION DATE: 07/2016
MPO PROJ NUM: 11244.1
FUNDING CAT(S):
PROJECT DESCR: WIDEN 2 TO 4 LANE DIVIDED
REMARKS P7:
PROJECT HISTORY:

TOTAL PROJECT COST INFORMATION

PRELIM ENG:	$ 719,404
ROW PURCH:	$ 575,696
CONST COST:	$ 12,555,000
CONST ENG:	$ 660,677
CONTING:	$ 954,311
INDIRECT:	$ 923,480
BOND FIN:	$ 0
POT CHG ORD:	$ 0
TOTAL COST:	$ 16,388,568

COST OF APPROVED PHASES $ 575,696

AUTHORIZED FUNDING BY CATEGORY/SHARE

CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL	LC	TOTAL
S102	$ 464,077	$ 111,619	$ 0	$ 0	$ 0	$ 575,696
TOTAL	$ 464,077	$ 111,619	$ 0	$ 0	$ 0	$ 575,696

2015-2018 STIP — 07/2014 Revision: Approved 12/02/2014

DISTRICT	MPO	COUNTY	CSJ	HWY	PHASE	CITY	YOE COST
FORT WORTH	DALLAS-FORT WORTH	TARRANT	0718-02-045	FM 156	E,R	FORT WORTH	$ 1,295,100

LIMITS FROM: US 81/287
LIMITS TO: WATAUGA ROAD (MCELROY)
PROJECT SPONSOR: TXDOT-FORT WORTH
REVISION DATE: 07/2014
MPO PROJ NUM: 11244.1
FUNDING CAT(S):
PROJECT DESCR: WIDEN 2 TO 4 LANE DIVIDED
REMARKS P7: 1999 PARTNERSHIP PROGRAM (SUPP 4C FUNDS)
PROJECT HISTORY:

TOTAL PROJECT COST INFORMATION

PRELIM ENG:	$ 719,404
ROW PURCH:	$ 575,696
CONST COST:	$ 12,555,000
CONST ENG:	$ 660,677
CONTING:	$ 954,311
INDIRECT:	$ 923,480
BOND FIN:	$ 0
POT CHG ORD:	$ 0
TOTAL COST:	$ 16,388,568

COST OF APPROVED PHASES $ 1,295,100

AUTHORIZED FUNDING BY CATEGORY/SHARE

CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL	LC	TOTAL
S102	$ 464,077	$ 111,619	$ 0	$ 0	$ 0	$ 575,696
SBPE	$ 579,923	$ 139,481	$ 0	$ 0	$ 0	$ 719,404
TOTAL	$ 1,044,000	$ 251,100	$ 0	$ 0	$ 0	$ 1,295,100

2013-2016 STIP — 07/2012 Revision: Approved 11/01/2012

DISTRICT	MPO	COUNTY	CSJ	HWY	PHASE	CITY	YOE COST
FORT WORTH	DALLAS-FORT WORTH	TARRANT	0718-02-045	FM 156	E,R	FORT WORTH	$ 1,295,100

LIMITS FROM: US 81/287
LIMITS TO: WATAUGA ROAD (MCELROY)
PROJECT SPONSOR: TXDOT-FORT WORTH
REVISION DATE: 07/2012

PROJECT DESCR: WIDEN 2 TO 4 LANE DIVIDED

MPO PROJ NUM: 11244.1
FUNDING CAT(S): 7

REMARKS P7:

PROJECT HISTORY:

TOTAL PROJECT COST INFORMATION

PRELIM ENG:	$	719,404
ROW PURCH:	$	575,696
CONST COST:	$	11,835,596
CONST ENG:	$	660,677
CONTING:	$	954,311
INDIRECT:	$	923,480
BOND FIN:	$	0
POT CHG ORD:	$	0
TOTAL COST:	$	15,669,164

COST OF APPROVED PHASES
$ 1,295,100

AUTHORIZED FUNDING BY CATEGORY/SHARE

CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL	LC	TOTAL
7	$ 1,044,000	$ 251,100	$ 0	$ 0	$ 0	$ 1,295,100
TOTAL	$ 1,044,000	$ 251,100	$ 0	$ 0	$ 0	$ 1,295,100

Comment History

Time	User	Comment	Related Approval
2017/07/07 09:30:51	Barbara Maley		05/2017: Approved
2016/09/22 12:18:33	Barbara Maley		07/2016: Approved
2014/12/04 12:16:07	Lori Morel	TPP approval for FHWA, letter dated (12/2/2014)	07/2014: Approved
2014/11/03 13:08:57	Casey Dusza	All project information consistent w/ .pdf submittal.	
2013/03/01 10:40:58	Lori Morel	TPP approval for FHWA (11/01/12).	07/2012: Approved
2013/02/04 13:39:20	Lori Morel	TPC off by $1.00 (rounding error). Changed YOE to match .pdf TIP page submittal.	

STIP Portal

Texas Department of Transportation

Mon, Apr 16, 2018 12:44:57 PM

STIP Portal

Logged in as Tim Wood Log Out

Project Management | Reports | Support

Project Management > Area List > STIPs (M-DALLAS-FORT WORTH) > Revisions () > TIP Instances (Unassigned) > Highway Projects (Unassigned) > Project Details

Color Key: - Business rule violation - Value changed in current session - Different from DCIS or latest approved copy

Data

Statewide

TIP Revision: None

District: FORT WORTH

County: TARRANT

MPO: DALLAS-FORT WOF

Highway: FM 156

CSJ: 0718 - 02 - 045

TIP FY: 2018

Phase:
- [x] Construction
- [ ] Engineering
  - [ ] Environmental
  - [ ] Engineering
- [ ] Right-of-Way
  - [ ] Acquisition
  - [ ] Utilities
- [ ] Transfer

Revision Date: 11/2017

Project Sponsor: TXDOT-FORT WORTH

MPO Proj Number: 11244.1

MTP Reference: NRSA1-FTW-4

City: FORT WORTH

Limits From: US 81/287

Limits To: WATAUGA ROAD (MCELROY)

Project Description: RECONSTRUCT AND WIDEN 2 LANE TO 4 LANE DIVIDED

P7 Remarks: INCREASE FUNDING

Project History: PART OF REGIONAL 10-YEAR PLAN

NOX (Kg/D):	0.0000	
VOC (Kg/D):	0.0000	
PM10 (Kg/D):	0.0000	
PM2.5 (Kg/D):	0.0000	
CO (Lbs/D):		

Total Project Cost Information

Prelim Engineering	$4,300,000
ROW Purchase	$400,000
Construction Cost	$53,109,245
Const Engineering	$2,030,096
Contingencies	$814,494
Indirect Costs	$0
Bond Financing	$0
Potential Chg Ord	$0
Total Project Cost	$60,653,835
YOE Cost	
Toll	
TCM	

Authorized Funding by Category/Share

Category	Federal	State	Regional	Local	Local Contributions	Total
2M	$32,000,000	$8,000,000	$0	$0	$0	$40,000,000
7	$10,598,245	$2,511,000	$0	$0	$0	$13,109,245
Total	$42,598,245	$10,511,000	$0.00	$0.00	$0.00	$53,109,245

DISTRICT	MPO	COUNTY	CSJ	HWY	PHASE	CITY	YOE COST
FORT WORTH	DALLAS-FORT WORTH	TARRANT	0718-02-045	FM 156	C	FORT WORTH	$ 53,109,245

LIMITS FROM: US 81/287
LIMITS TO: WATAUGA ROAD (MCELROY)
PROJECT SPONSOR: TXDOT-FORT WORTH
REVISION DATE: 11/2017
MPO PROJ NUM: 11244.1
FUNDING CAT(S):
PROJECT DESCR: RECONSTRUCT AND WIDEN 2 LANE TO 4 LANE DIVIDED
REMARKS P7: INCREASE FUNDING
PROJECT HISTORY: PART OF REGIONAL 10-YEAR PLAN

TOTAL PROJECT COST INFORMATION

PRELIM ENG:	$ 4,300,000
ROW PURCH:	$ 400,000
CONST COST:	$ 53,109,245
CONST ENG:	$ 2,030,096
CONTING:	$ 814,494
INDIRECT:	$ 0
BOND FIN:	$ 0
POT CHG ORD:	$ 0
TOTAL COST:	$ 60,653,835

COST OF APPROVED PHASES $ 53,109,245

AUTHORIZED FUNDING BY CATEGORY/SHARE

CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL	LC	TOTAL
7	$ 10,598,245	$ 2,511,000	$ 0	$ 0	$ 0	$ 13,109,245
2M	$ 32,000,000	$ 8,000,000	$ 0	$ 0	$ 0	$ 40,000,000
TOTAL	$ 42,598,245	$ 10,511,000	$ 0	$ 0	$ 0	$ 53,109,245

TIP History

2017-2020 STIP 11/2017 Revision: Approved 02/27/2018

2017-2020 STIP — 11/2017 Revision: Approved 02/27/2018

DISTRICT	MPO	COUNTY	CSJ	HWY	PHASE	CITY	YOE COST
FORT WORTH	DALLAS-FORT WORTH	TARRANT	0718-02-045	FM 156	C	FORT WORTH	$ 53,109,245

LIMITS FROM: US 81/287
LIMITS TO: WATAUGA ROAD (MCELROY)
PROJECT SPONSOR: TXDOT-FORT WORTH
REVISION DATE: 11/2017
MPO PROJ NUM: 11244.1
FUNDING CAT(S):
PROJECT DESCR: RECONSTRUCT AND WIDEN 2 LANE TO 4 LANE DIVIDED
REMARKS P7: INCREASE FUNDING
PROJECT HISTORY: PART OF REGIONAL 10-YEAR PLAN

TOTAL PROJECT COST INFORMATION

PRELIM ENG:	$ 4,300,000
ROW PURCH:	$ 400,000
CONST COST:	$ 53,109,245
CONST ENG:	$ 2,030,096
CONTING:	$ 814,494
INDIRECT:	$ 0
BOND FIN:	$ 0
POT CHG ORD:	$ 0
TOTAL COST:	$ 60,653,835

COST OF APPROVED PHASES $ 53,109,245

AUTHORIZED FUNDING BY CATEGORY/SHARE

CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL	LC	TOTAL
2M	$ 32,000,000	$ 8,000,000	$ 0	$ 0	$ 0	$ 40,000,000
7	$ 10,598,245	$ 2,511,000	$ 0	$ 0	$ 0	$ 13,109,245
TOTAL	$ 42,598,245	$ 10,511,000	$ 0	$ 0	$ 0	$ 53,109,245

2017-2020 STIP — 05/2017 Revision: Approved 08/22/2017

DISTRICT	MPO	COUNTY	CSJ	HWY	PHASE	CITY	YOE COST
FORT WORTH	DALLAS-FORT WORTH	TARRANT	0718-02-045	FM 156	C	FORT WORTH	$ 40,000,000

LIMITS FROM: US 81/287
LIMITS TO: WATAUGA ROAD (MCELROY)
PROJECT SPONSOR: TXDOT-FORT WORTH
REVISION DATE: 05/2017
MPO PROJ NUM: 11244.1
FUNDING CAT(S):
PROJECT DESCR: RECONSTRUCT AND WIDEN 2 LANE TO 4 LANE DIVIDED
REMARKS P7: REVISE SCOPE; REVISE FUNDING
PROJECT HISTORY: PART OF REGIONAL 10-YEAR PLAN

TOTAL PROJECT COST INFORMATION

PRELIM ENG:	$ 719,404
ROW PURCH:	$ 575,696
CONST COST:	$ 40,000,000
CONST ENG:	$ 2,084,150
CONTING:	$ 836,181
INDIRECT:	$ 0
BOND FIN:	$ 0
POT CHG ORD:	$ 0
TOTAL COST:	$ 44,215,431

COST OF APPROVED PHASES $ 40,000,000

AUTHORIZED FUNDING BY CATEGORY/SHARE

CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL	LC	TOTAL
2M	$ 32,000,000	$ 8,000,000	$ 0	$ 0	$ 0	$ 40,000,000
TOTAL	$ 32,000,000	$ 8,000,000	$ 0	$ 0	$ 0	$ 40,000,000

2017-2020 STIP — 02/2017 Revision: Approved 05/18/2017

DISTRICT	MPO	COUNTY	CSJ	HWY	PHASE	CITY	YOE COST
FORT WORTH	DALLAS-FORT WORTH	TARRANT	0718-02-045	FM 156	C	FORT WORTH	$ 32,000,000

LIMITS FROM: US 81/287
LIMITS TO: WATAUGA ROAD (MCELROY)
PROJECT SPONSOR: TXDOT-FORT WORTH
REVISION DATE: 02/2017
MPO PROJ NUM: 11244.1
FUNDING CAT(S):
PROJECT DESCR: WIDEN 2 TO 4 LANE DIVIDED
REMARKS P7: INCREASE CONSTRUCTION FUNDING IN FY2018
PROJECT HISTORY:

TOTAL PROJECT COST INFORMATION

PRELIM ENG:	$ 719,404
ROW PURCH:	$ 575,696
CONST COST:	$ 32,000,000
CONST ENG:	$ 2,084,150
CONTING:	$ 836,181
INDIRECT:	$ 0
BOND FIN:	$ 0
POT CHG ORD:	$ 0
TOTAL COST:	$ 36,215,431

COST OF APPROVED PHASES $ 32,000,000

AUTHORIZED FUNDING BY CATEGORY/SHARE

CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL	LC	TOTAL
3LC	$ 0	$ 0	$ 0	$ 0	$ 19,445,000	$ 19,445,000
7	$ 10,044,000	$ 2,511,000	$ 0	$ 0	$ 0	$ 12,555,000
TOTAL	$ 10,044,000	$ 2,511,000	$ 0	$ 0	$ 19,445,000	$ 32,000,000

2017-2020 STIP — 07/2016 Revision: Approved 12/19/2016

DISTRICT	MPO	COUNTY	CSJ	HWY	PHASE	CITY	YOE COST
FORT WORTH	DALLAS-FORT WORTH	TARRANT	0718-02-045	FM 156	C	FORT WORTH	$ 12,555,000

LIMITS FROM: US 81/287
LIMITS TO: WATAUGA ROAD (MCELROY)
PROJECT SPONSOR: TXDOT-FORT WORTH
REVISION DATE: 07/2016
MPO PROJ NUM: 11244.1
FUNDING CAT(S):
PROJECT DESCR: WIDEN 2 TO 4 LANE DIVIDED
REMARKS P7:
PROJECT HISTORY:

TOTAL PROJECT COST INFORMATION

PRELIM ENG:	$ 719,404
ROW PURCH:	$ 575,696
CONST COST:	$ 12,555,000
CONST ENG:	$ 660,677
CONTING:	$ 954,311
INDIRECT:	$ 923,480
BOND FIN:	$ 0
POT CHG ORD:	$ 0
TOTAL COST:	$ 16,388,568

COST OF APPROVED PHASES $ 12,555,000

AUTHORIZED FUNDING BY CATEGORY/SHARE

CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL	LC	TOTAL
7	$ 10,044,000	$ 2,511,000	$ 0	$ 0	$ 0	$ 12,555,000
TOTAL	$ 10,044,000	$ 2,511,000	$ 0	$ 0	$ 0	$ 12,555,000

2015-2018 STIP — 07/2014 Revision: Approved 12/02/2014

DISTRICT	MPO	COUNTY	CSJ	HWY	PHASE	CITY	YOE COST
FORT WORTH	DALLAS-FORT WORTH	TARRANT	0718-02-045	FM 156	C	FORT WORTH	$ 12,555,000

LIMITS FROM: US 81/287
LIMITS TO: WATAUGA ROAD (MCELROY)
PROJECT SPONSOR: TXDOT-FORT WORTH
REVISION DATE: 07/2014
MPO PROJ NUM: 11244.1
FUNDING CAT(S): 7
PROJECT DESCR: WIDEN 2 TO 4 LANE DIVIDED
REMARKS P7: 1999 PARTNERSHIP PROGRAM (SUPP 4C FUNDS)
PROJECT HISTORY:

TOTAL PROJECT COST INFORMATION

PRELIM ENG:	$ 719,404
ROW PURCH:	$ 575,696
CONST COST:	$ 12,555,000
CONST ENG:	$ 660,677
CONTING:	$ 954,312
INDIRECT:	$ 923,480
BOND FIN:	$ 0
POT CHG ORD:	$ 0
TOTAL COST:	$ 16,388,569

COST OF APPROVED PHASES $ 12,555,000

AUTHORIZED FUNDING BY CATEGORY/SHARE

CATEGORY	FEDERAL	STATE	REGIONAL	LOCAL	LC	TOTAL
7	$ 10,044,000	$ 2,511,000	$ 0	$ 0	$ 0	$ 12,555,000
TOTAL	$ 10,044,000	$ 2,511,000	$ 0	$ 0	$ 0	$ 12,555,000

Comment History

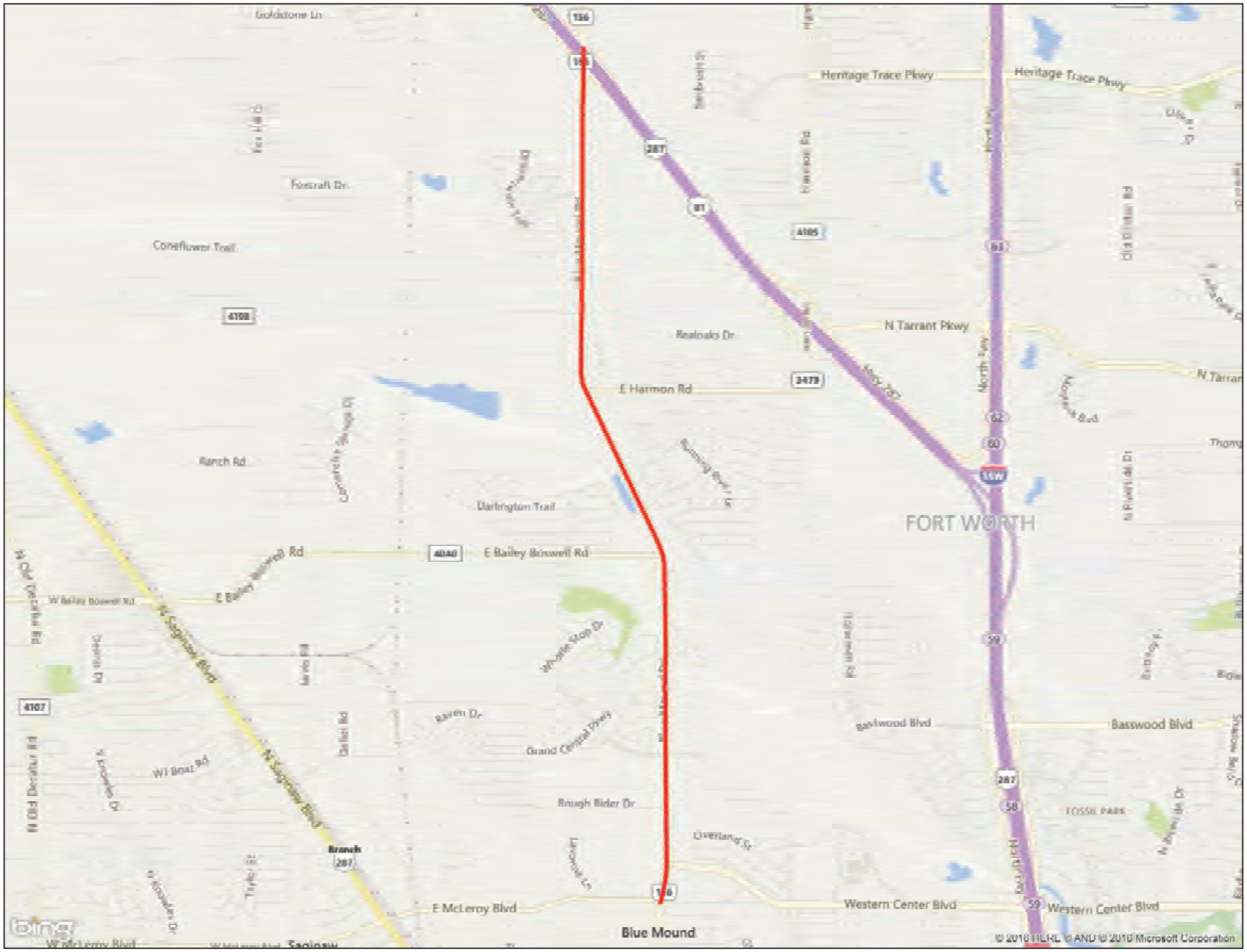
Time	User	Comment	Related Approval
2017/11/15 09:35:28	Barbara Maley		11/2017: Approved
2017/07/07 09:31:59	Barbara Maley		05/2017: Approved
2017/03/02 17:42:35	Barbara Maley		02/2017: Approved
2016/09/26 12:52:27	Barbara Maley		07/2016: Approved
2014/12/04 12:39:37	Lori Morel	TPP approval for FHWA, letter dated (12/2/2014)	07/2014: Approved
2014/11/10 07:53:23	Laura Perez	All project information consistent w/ .pdf submittal.	

STIP Portal

Texas Department of Transportation

Mon, Apr 16, 2018 12:46:02 PM

Date: 3/23/2016



Project Location Map

FM 156
From Wataugua Rd/McElroy to US 81/287
Tarrant County, TX
CSJ: 0718-02-045

Locator Map

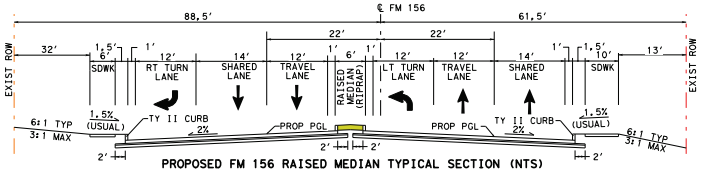
Key Features

Project Location

0 0.2 0.4 0.8 Miles

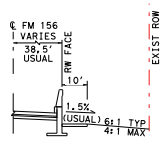
Texas Department of Transportation

DISCLAIMER:
This map is the product of the Texas Department of Transportation. It was produced with the intent that it be used for the review of the referenced data at the original plotted scale. There are no warranties made as to the fitness of this map for any unlisted purpose or reproduction at any other scale.



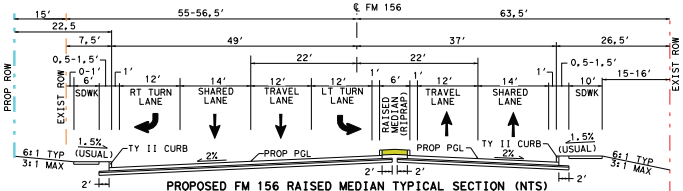
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION (NTS)

STATION 342+92.21 TO 347+01.45



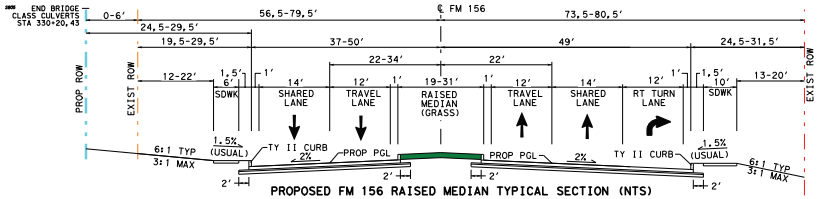
SB FILL WALL DETAIL (TY 2)

STATION 303+75 TO 313+50
STATION 314+25 TO 324+50
STATION 326+75 TO 342+00



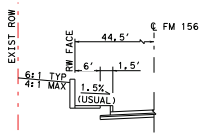
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION (NTS)

STATION 371+58.05 TO 372+81.00
STATION 374+81.00 TO 377+64.00



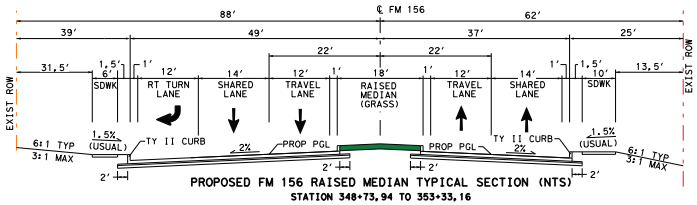
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION (NTS)

STATION 298+92.38 TO 303+18.33



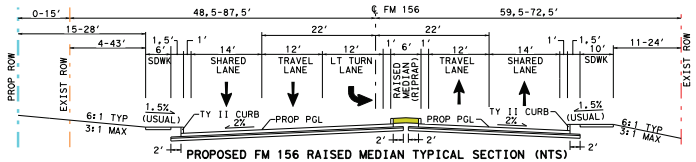
NB CUT WALL DETAIL

STATION 338+50 TO 340+00



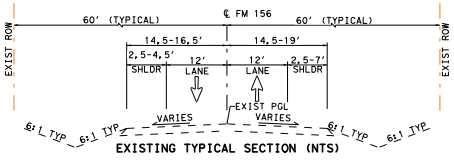
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION (NTS)

STATION 348+73.94 TO 353+33.16

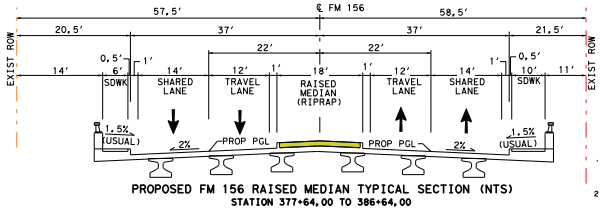


PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION (NTS)

STATION 303+18.33 TO 309+35.44
STATION 325+41.23 TO 331+51.95
STATION 356+51.02 TO 362+82.67
STATION 387+00.00 TO 392+11.86

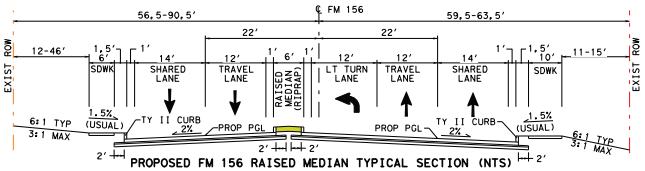


EXISTING TYPICAL SECTION (NTS)



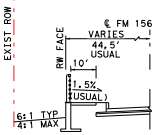
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION (NTS)

STATION 377+64.00 TO 386+64.00



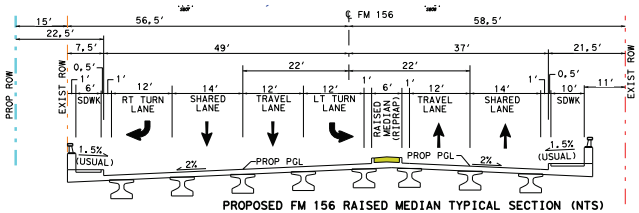
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION (NTS)

STATION 309+35.44 TO 312+30.50
STATION 313+36.00 TO 317+78.25
STATION 338+47.77 TO 342+92.21
STATION 365+03.37 TO 371+58.05
STATION 347+01.45 TO 348+73.94



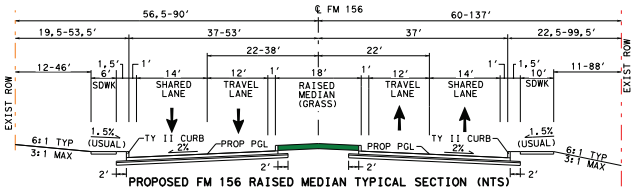
NB FILL WALL DETAIL (TY 1)

STATION 301+50 TO 305+00
STATION 307+25 TO 312+00
STATION 312+50 TO 317+50
STATION 318+25 TO 324+75
STATION 327+00 TO 336+75
STATION 369+25 TO 371+00
STATION 375+25 TO 377+75
STATION 386+75 TO 395+00



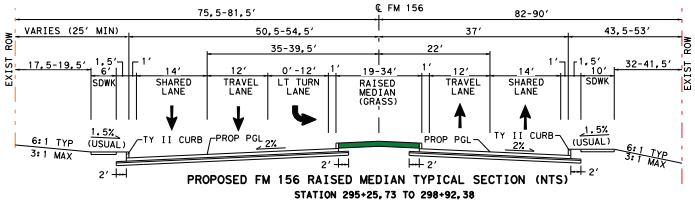
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION (NTS)

STATION 372+81.00 TO 374+81.00



PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION (NTS)

STATION 353+33.16 TO 356+51.02
STATION 312+30.50 TO 313+36.00
STATION 317+78.25 TO 325+41.23
STATION 331+51.95 TO 338+47.77
STATION 362+82.67 TO 365+03.37
STATION 386+64.00 TO 387+00.00
STATION 392+11.86 TO 395+00.00



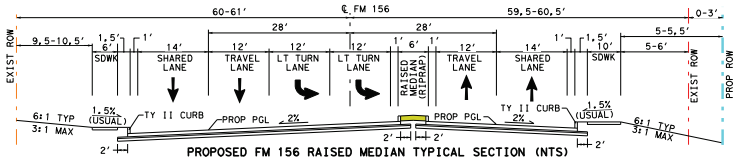
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION (NTS)

STATION 295+25.73 TO 298+92.38

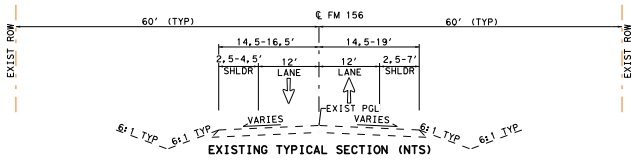
FIGURE 2 - 1
EXISTING & PROPOSED TYPICAL SECTIONS

FM 156 From US 81/US 287
to McLeroy Boulevard/Watauga Road

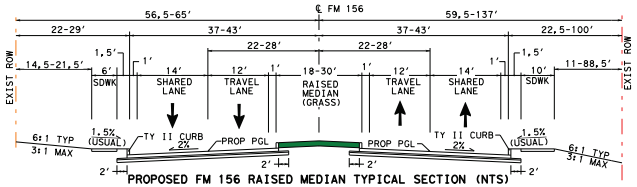
CSJ: 0718-02-045



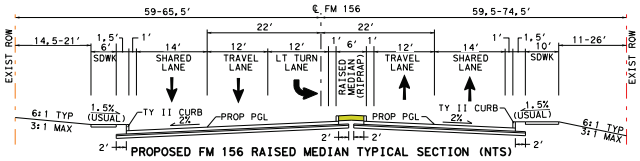
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION (NTS)
STATION 460+82.99 TO 465+00.00



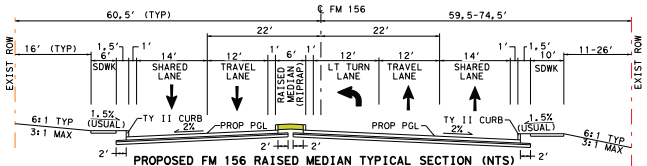
EXISTING TYPICAL SECTION (NTS)



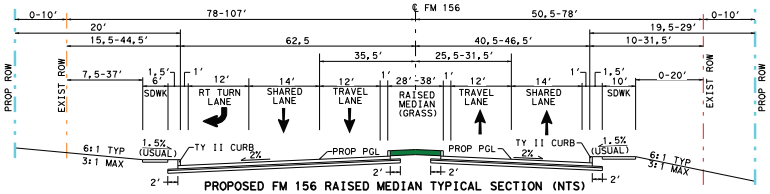
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION (NTS)
STATION 395+00.00 TO 409+11.32
STATION 423+74.25 TO 424+83.84
STATION 429+29.06 TO 432+40.98
STATION 441+52.02 TO 444+64.31
STATION 452+94.60 TO 455+00.00
STATION 477+31.63 TO 481+10.05



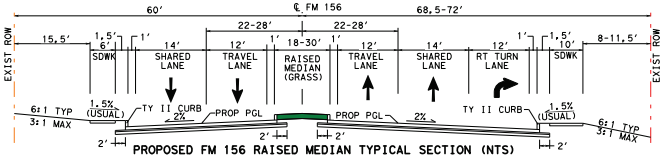
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION (NTS)
STATION 414+05.57 TO 423+74.25
STATION 436+97.85 TO 441+52.02
STATION 448+88.13 TO 452+94.60
STATION 467+20.18 TO 471+00.00
STATION 473+03.00 TO 477+31.63



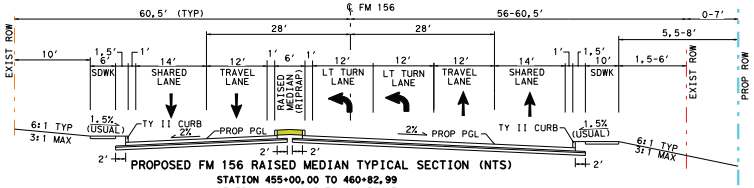
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION (NTS)
STATION 409+11.32 TO 414+05.57
STATION 424+83.84 TO 429+29.06
STATION 432+40.98 TO 436+97.85
STATION 444+64.31 TO 448+88.13



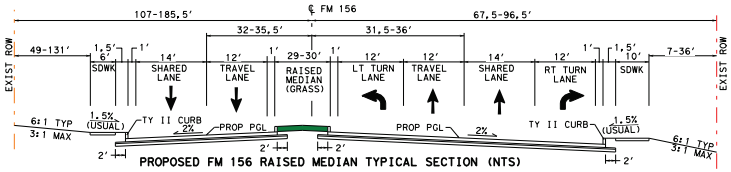
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION (NTS)
STATION 486+79.03 TO 490+48.50



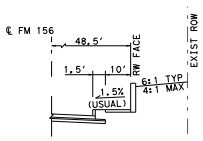
PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION (NTS)
STATION 465+00.00 TO 467+20.18
STATION 471+00.00 TO 473+03.00



PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION (NTS)
STATION 455+00.00 TO 460+82.99
STATION 481+10.05 TO 486+79.03

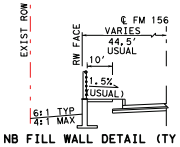


PROPOSED FM 156 RAISED MEDIAN TYPICAL SECTION (NTS)
~~STATION 456+00.00 TO 457+25.75~~



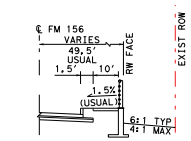
SB CUT WALL DETAIL

STATION 456+00 TO 456+25
STATION 457+00 TO 457+25



NB FILL WALL DETAIL (TY 1)

STATION 395+00 TO 413+50
STATION 415+00 TO 415+50
STATION 416+75 TO 417+50
STATION 427+50 TO 428+50
STATION 461+75 TO 462+25



SB FILL WALL DETAIL (TY 1)

STATION 395+00 TO 412+00
STATION 427+75 TO 429+00
STATION 461+50 TO 462+00

FIGURE 2 - 2
EXISTING & PROPOSED TYPICAL SECTIONS

FM 156 From US 81/US 287
to McLeroy Boulevard/Watauga Road

CSJ: 0718-02-045