

TOLL 49 SEGMENT 4 PROGRESS REPORT



*SEPTEMBER 2017
PROGRESS REPORT NO. 15*

RS&H





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webber

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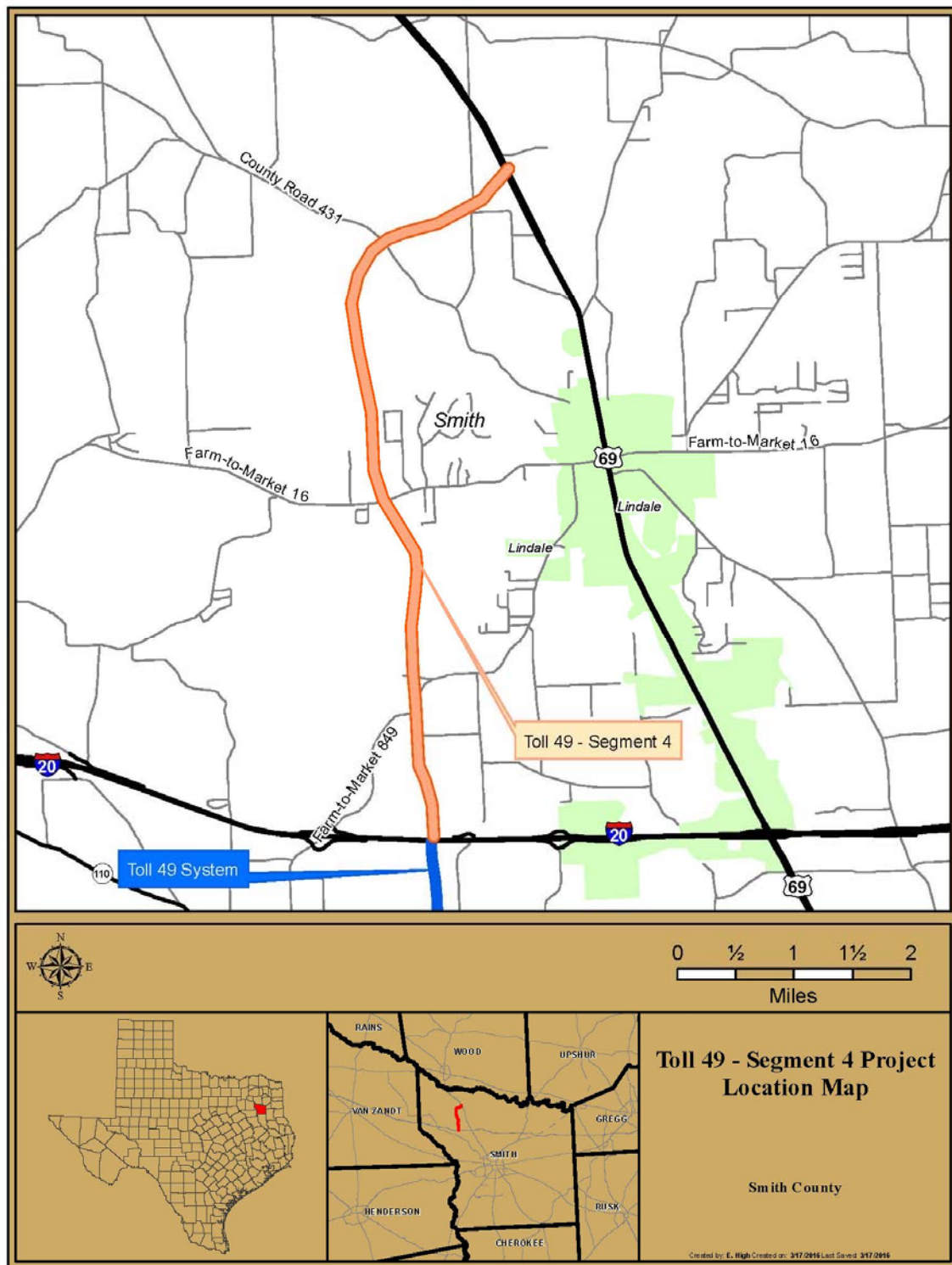
1.1 INTRODUCTION

This report documents and describes the development and construction of the Toll 49 Segment 4 Project during the period from August 1, 2017 through September 1, 2017. This Project is being developed and constructed by the North East Texas Regional Mobility Authority ("the Authority"). The Segment 4 Project is funded by Series 2016A Senior Lien bonds, and funds committed by the Federal Highway Administration (FHWA) and the Texas Department of Transportation (TxDOT).

1.2 PROJECT DESCRIPTION

The Segment 4 Project extends along new alignment from US 69 in the City of Lindale south to IH 20, north of the City of Tyler in Smith County, Texas. The Segment 4 Project connects with Toll 49 Segment 3B, extending Toll 49 by a length of approximately 6.6 miles. The Segment 4 Project consists of an interim two-lane access controlled tollway with grade separations at major cross streets, and toll collection facilities. The interim two-lane facility may be expanded to its ultimate four-lane configuration as traffic demand warrants and funding sources are identified in the future. The Segment 4 Project includes the construction of an at grade intersection at US 69, a diamond interchange including access ramps at FM 16, access ramps south of SH 110, and a three level interchange at IH 20. Continuous access/frontage roads will not be constructed as part of the Segment 4 Project.

FIGURE 1: Project Location Map



1.3 DEVELOPMENT ACTIVITIES

1.3.1 Right-of-Way

To date, the Authority has either acquired, or acquired access rights to, all forty-two project parcels. Condemnation proceedings are ongoing to complete acquisition of the final seven parcels.

TABLE 1: RIGHT-OF-WAY PARCEL STATUS

Parcel	Acreage	Estimated Acquisition	
		Date	Status
202	3.93	NTP	Closed
203	1.44	Acquired	Closed
204	0.73	NTP + 75 Days	Closed
205	0.52	NTP	Closed
206	2.42	NTP	Closed
207	0.40	NTP	Closed
208	7.03	NTP + 75 Days	Closed
			The Authority has taken possession Parcel is accessible to Contractor
209	12.47	15-Jul-16	Condemnation proceedings ongoing
210	0.84	15-Jul-16	Closed
			The Authority has taken possession Parcel is accessible to Contractor
213	39.13	NTP	Condemnation proceedings ongoing
214	9.95	NTP	Closed
215	36.64	NTP	Closed
			The Authority has taken possession Parcel is accessible to Contractor
216	28.31	NTP	Condemnation proceedings ongoing
217	8.39	NTP	Closed
218	5.61	NTP	Closed
219	21.01	NTP	Closed
220	1.35	NTP	Closed
221	5.69	NTP + 30 Days	Closed
222	2.46	NTP + 30 Days	Closed
223	0.13	NTP + 30 Days	Closed
224	0.17	NTP + 30 Days	Closed
225	0.04	NTP + 30 Days	Closed
226	11.63	NTP + 30 Days	Closed
227	3.18	NTP + 60 Days	Closed
229	22.23	NTP + 60 Days	Closed
230	3.22	NTP + 60 Days	Closed
231	4.25	NTP + 60 Days	Closed

Parcel	Acreage	Estimated Acquisition	
		Date	Status
232	14.47	NTP + 60 Days	Closed
233	1.52	NTP + 60 Days	Closed
235	0.85	NTP + 60 Days	Closed
236	9.71	NTP + 60 Days	Closed
237	0.41	NTP + 60 Days	Closed
238	22.66	NTP + 60 Days	The Authority has taken possession Parcel is accessible to Contractor
			Condemnation proceedings ongoing
239	1.04	NTP + 60 Days	The Authority has taken possession Parcel is accessible to Contractor
			Condemnation proceedings ongoing
240	13.39	NTP + 60 Days	The Authority has taken possession Parcel is accessible to Contractor
			Condemnation proceedings ongoing
241	0.36	NTP + 60 Days	Closed
242	11.04	NTP + 60 Days	Closed
243	9.16	NTP + 60 Days	Closed
244	19.14	NTP	Closed
245	5.81	NTP	Closed
246	0.10	NTP + 30 Days	Closed
247	0.07	NTP + 60 Days	The Authority has taken possession Parcel is accessible to Contractor
			Condemnation proceedings ongoing

1.3.2 Utilities

The Authority has initiated the adjustment of all of the privately-owned utilities impacted by the Segment 4 Project. Relocation design and construction is being performed by the utility owners with 100% reimbursement from the Authority. The Authority has executed relocation agreements with all eleven privately owned utilities impacted by the Segment 4 Project and has issued NTP for the relocation of these facilities.

Due to coordination and construction timeframes, the relocations for some utilities are not anticipated to be complete within the contract's estimated completion dates. It is not anticipated that these relocations will impact the Project critical path.

TABLE 2: UTILITY RELOCATION STATUS

Utility Company	Estimated Relocation Completion Date	Status
AT&T (SBC)	NTP+120	Relocation is complete
CenterPoint Energy	NTP+120	Relocation is complete
City of Lindale	N/A	Webber to relocate as part of construction
Crystal Systems Water	N/A	Webber to relocate as part of construction
East Texas Electric Cooperative	1-Jan-17	Relocation is ongoing
Enbridge	No conflict	No conflict identified, no relocation
Gulf South	NTP+90	Relocation ongoing
Lindale Rural WSC	N/A	Webber to relocate as part of construction
MHM Pipeline	Relocation will begin 2 weeks after clearing	Relocation is complete
Oncor Electric Delivery (Distribution)	NTP + 90 to 120 Days	Relocation is ongoing
Oncor Electric Delivery (Transmission)	1-Nov-16	Relocation is complete
Peoples Telephone Cooperative	NTP + 0 to 60 Days	Relocation is complete
SuddenLink	NTP + 150 Days	Relocation is ongoing
Wood County Electric	NTP +110 Days	Relocation is complete
Zayo	NTP +150 Days	Relocation is ongoing

1.3.3 Archeological Survey

During archeological survey undertaken in support of a utility relocation on the project, archeologists encountered a previously unrecorded archeological site within the project right of way. The archeological site is located on the northern end of the project and spans the entire width of the ROW. Following discovery of this site, the Authority enlisted the services of Hicks & Company to perform data recovery and mitigation at the site. Throughout the course of the archeological investigation, the Contractor has been allowed only limited access to the right-of-way near the archeological site. This limited access impeded earthwork activities, resulting in the demobilization of the earthwork contractor for a period of time during the months of December and January.

Access was restored to a northern portion of the site totaling approximately 39 acres in April 2017. Investigations are still underway in the southern portion of the site. With TxDOT and Texas Historical Commission approval in April, the Contractor cleared a 30' construction haul road along the eastern edge of the ROW through the 6 acre southern portion, further expanding access and allowing the transport of materials and construction equipment along the Project ROW.

The NET RMA has reviewed a time impact analysis submitted by the Contractor and is negotiating a potential schedule extension and cost increase associated with the delay. It is anticipated that the Change Orders associated with this time impact analysis will be executed in the month of September extending the

project schedule by six months and increasing the construction contract amount by approximately \$1.6 million for time related overhead expenses and earthwork demobilization and remobilization costs. The total impacts due to the archeological survey will not be fully quantified until all archeological investigations have been completed. Final clearance of the site is anticipated in the month of September.

1.4 PROGRESS PHOTOS

1.4.1 Earthwork

Clearing and grubbing activities are complete at all areas necessary within the project limits with the exception of the archeological site, to which the Contractor has limited access. Embankment activities are ongoing both north and south of FM 16 and major excavation activities also continue from CR 431 up to CR 4118. The Contractor is cutting to final grade on the south side of FM 849.



Embankment work south of FM 16



Shaping of side slopes at Davis Branch

1.4.2 Drainage Structures

The Contractor has completed construction of major cross culverts No. 5, 7-12 and 14-17 and has begun construction of the final major Culverts No. 18-19. Backfilling continues around culvert No. 16.



Culvert No. 19 wall forms south of IH 20



Construction of deck for Culvert No. 19 south of IH 20

1.4.3 Bridge & Wall Structures

The Contractor continues bridge work including installation of drilled shafts, columns, caps, beams, metal decking, abutments and guardrail at numerous bridge locations across the project. In addition, construction of all Mechanically Stabilized Earth (MSE) walls and cast-in-place (CIP) retaining walls is complete.



Construction of riprap at Long Brake Tributary bridge abutment



Cap construction and riprap forms on the north end of FM 16 bridge



Nighttime placement of main lane bridge beams over IH 20



Placement of concrete riprap IH 20 northbound ramp bridge abutment



Steel reinforcing bars for CR 4118 bridge deck



Concrete pour of CR 4118 bridge deck

1.4.4 Erosion Control

The Contractor continues environmental control activities such as performing sediment excavation and maintaining silt fence, soil retention blankets, and rock filter dams as needed throughout the project to prevent erosion. Topsoil, compost, and seeding is also ongoing at various locations.



Installation of topsoil on side slopes just south of CR 4118



Seeding and silt fence south of Stevenson Branch near Culvert No. 7

1.4.5 Subbase & Pavement

The Contractor continued pavement activities during the month of August, completing the placement of seal coat for the future FM 16 pavement and asphalt tie ins for the temporary FM 16 pavement. The Contractor also placed prime coat for a short portion of the Toll 49 main lanes north of IH 20.



Placement of seal coat on FM 16 pavement



Tie in pavement construction in preparation for FM 16 traffic switch

1.5 PROGRESS NARRATIVE

Clearing and grubbing activities are complete excluding the area affected by the archeological study. Excavation work continues from CR 4118 down to CR 431. Embankment activities are ongoing both north and just south of FM 16. Backfill is being placed at Culvert No. 16. Topsoil, compost, and seeding continues at sideslope areas south of Stevenson Branch, near Davis Branch, and south of CR 4118. The Contractor continues performing sediment excavation at various culvert locations and maintaining erosion control items including silt fence, rock filter dams, erosion control blankets, and temporary seed as needed to prevent erosion.

Drilled shaft work, construction of bridge columns and cap construction is ongoing at FM 16 and complete at all other bridge locations on the project. Footing placement is complete. The Contractor began the placement of bridge beams over the IH 20 main lanes for the IH 20 northbound ramp bridge and the IH 20 main lane bridge in the month of August and completed placement of beam on the Long Brake Tributary bridge. Placement of bridge deck panels was completed at the Stevenson Branch bridge, and the Contractor poured the concrete bridge deck for the CR 4118 and Stevenson Branch bridges. In addition, the Contractor continues pouring concrete riprap at numerous bridge abutments throughout the project.

All MSE and CIP retaining wall construction is complete on the project. Installation of major cross Culverts No. 5, 7-12 and 14-17 is complete and work is ongoing at major cross culverts No. 18 and 19 just south of IH 20.

The Contractor continued pavement activities in the month of August, completing the placement of prime coat for a short portion of the Toll 49 main lanes just north of the IH 20 bridge and placing the asphalt for the temporary pavement at FM 16. The Contractor completed the tie-ins to existing pavement and successfully switched traffic so that they can begin work on the remaining FM 16 bridge bent. No further traffic signal, gantry, or lighting work was completed in the month of July.

Table 3 below reflects construction progress based on the Contractor's schedule of values and approved construction draws.

TABLE 3: CONSTRUCTION PROGRESS

Construction Activity	Percent Complete
Mobilization	90.00%
Traffic Control	62.17%
Earthwork	83.82%
Drainage	46.24%
Sub-base and Base Course	15.59%
Pavement	6.53%
Structures	73.76%
Pavement Markings and Signals	16.55%
Environmental	44.47%
Extra Work Items	34.74%
Change Orders	6.12%

1.6 FINANCIAL SUMMARY

Table 4 shows the overall financial status for the Toll 49 Segment 4 project through September 1, 2017. The original budget established for the Project and the expenditures to date are provided. An estimated cost remaining and an estimate at completion are also provided.

TABLE 4: FINANCIAL STATUS SUMMARY

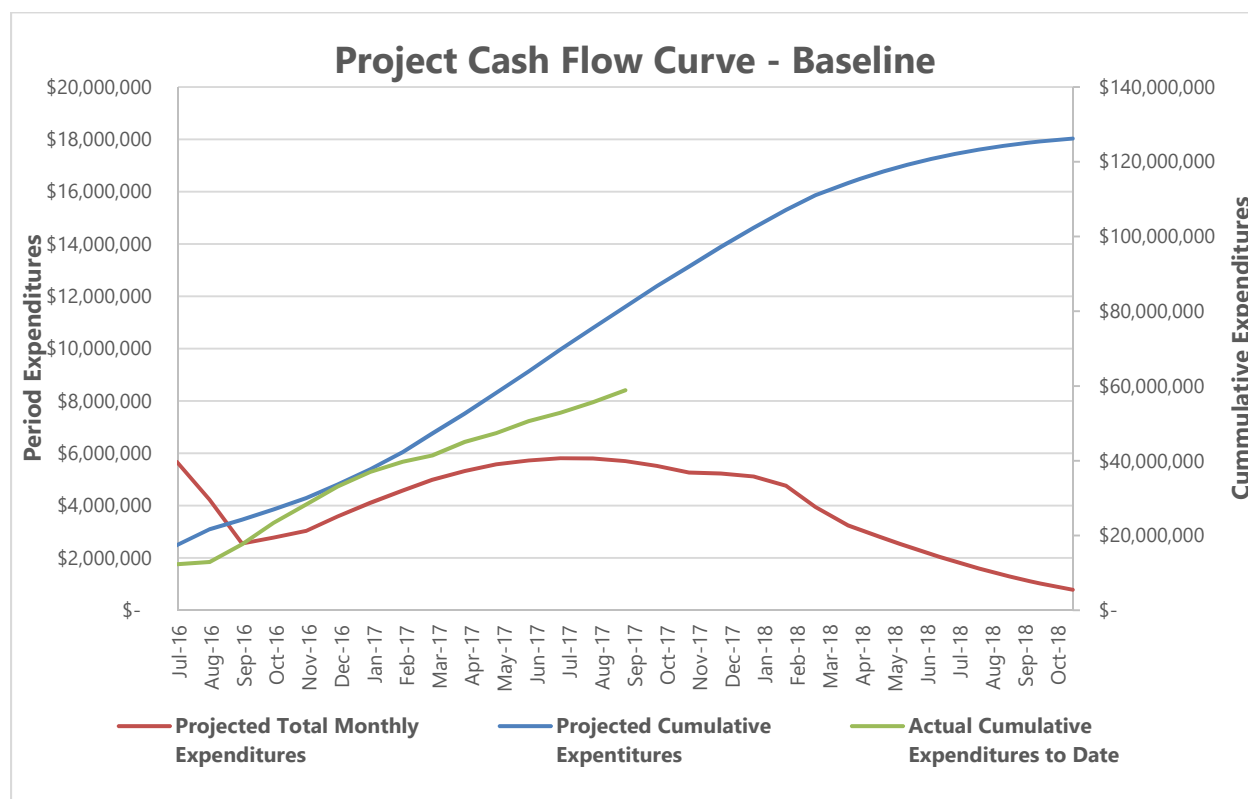
Project Description	Original Cost Estimate (\$)	Expenditures to Date (\$)	Estimated Remaining Cost (\$)	Estimate at Completion (\$)
Toll 49 Segment 4	\$126,220,000	\$58,860,194.74	\$67,359,805.26	\$126,220,000

Note: These costs include Traffic & Revenue studies costs, ROW survey and mapping costs, Final Engineering costs, Utility Relocation costs, Oversight costs, Construction (including GEC costs), and approximately \$18.5 million in remaining contingencies.

1.6.1 Project Cash Flow Curve – Baseline

Figure 2 summarizes the actual project costs to date through this reporting period in comparison to the projected project costs.

FIGURE 2: PROJECT CASH FLOW CURVE - BASELINE



Note: "Projected Cumulative Expenditures" include projected project expenditures and project contingencies.

1.7 CONSTRUCTION FINANCIAL STATUS

The following summary provides the financial status of the Project.

Original Contractor Amount:	\$68,760,000.00
<i>Authorized Changes (Change Order and/or Amendments):</i>	
Change Order No. 1 ¹	\$0.00
Change Order No. 2	\$26,247.38
Change Order No. 3	\$17,257.93
Change Order No. 4	\$156,926.00
Change Order No. 5	\$100,000.00
Change Order No. 6	\$34,276.66
Change Order No. 7	\$3,721.82
Change Order No. 8	\$4,231.40
Change Order No. 9	\$304,851.40
Change Order No. 10	\$200,000.00
Change Order No. 11	\$4,389,160.65
	<hr/>
Current Authorized Contract Amount:	\$73,996,673.24
Previous total of Contractor Payments:	\$36,185,311.15
Amount Paid this Reporting Period:	<hr/>
	\$2,995,807.11
Total Amount Paid To-Date:	\$39,181,118.26
Retainage withheld:	\$0.00
	<hr/>
Approved Amount for work completed (through Draw No. 13):	\$39,181,118.26
Amount remaining for work to be completed:	\$34,815,554.98
Total Percent of Budget Expended though August 31, 2017:	52.95%

Footnotes:

1. Change Order number 1 did not result in a change in price

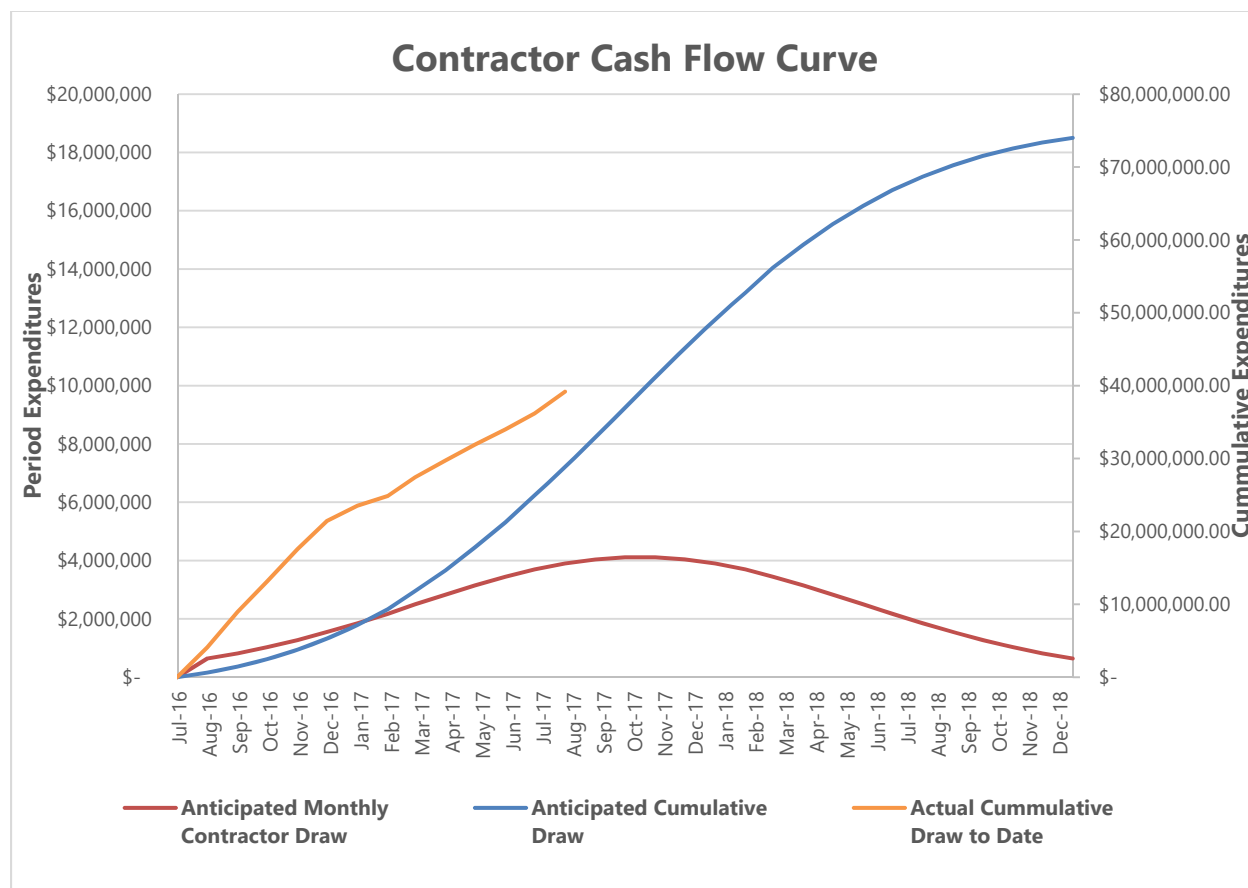
1.7.1 Summary of Change Orders This Reporting Period

Change Orders No. 9, 10, and 11 were executed during this reporting period, increasing the contract amount by \$304,851.40, \$200,000.00, and \$4,389,160.65, respectively. Change Order No. 9 added additional traffic control measures to ensure the safety of Contractor personnel and the traveling public. Change Order No. 10 contained various additional erosion control items. Change Order No. 11 widened the overall typical width of the roadway to include a four-foot flush median between the northbound and southbound lanes, and increased the pavement thickness. Change Order No. 11 also increased the contract duration by approximately two months to accommodate this additional work.

1.7.2 Contractor Cash Flow Curve

Figure 3 summarizes the actual Contractor draws to date through this reporting period in comparison to the projected Contractor draws.

FIGURE 3: CONTRACTOR CASH FLOW CURVE



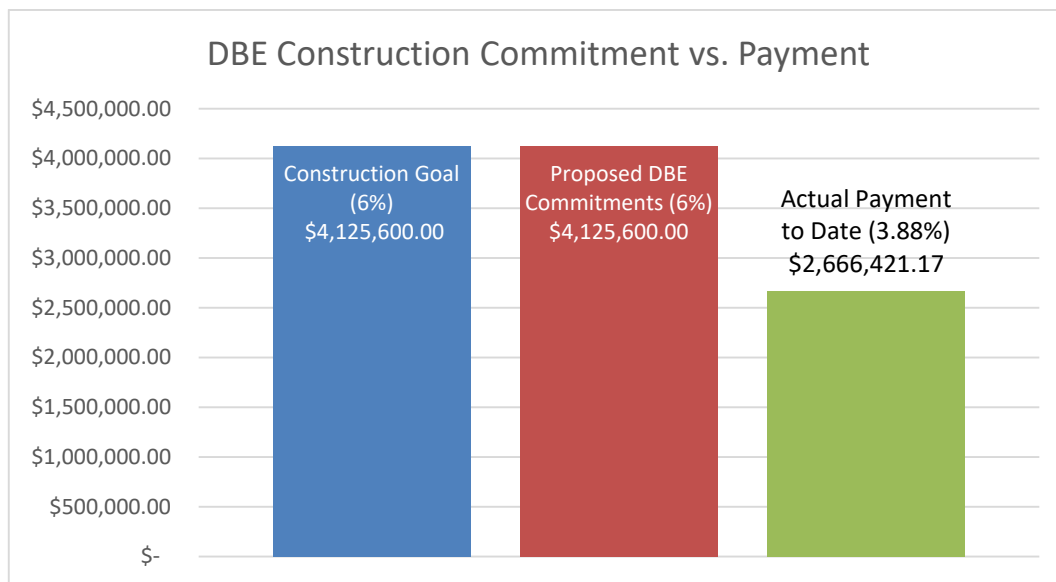
Note: Contractor Cash Flow Curve includes both price and schedule revisions associated with executed Change Orders.

1.8 DBE STATUS

The Contractor is required to meet the Disadvantage Business Enterprise (DBE) goal of 6% for the Segment 4 Project. The Contractor has proposed costs associated with DBE development work in the amount of \$4,125,600.00 which equals 6.00% of the original contract value. This represents approved subcontracts with the following firms: Rambo Contracting INC (culverts, inlets, headwalls, and wing walls), Texas Environmental Management (stormwater pollution prevent plans and erosion control), MCL Contracting (rebar tying), Buyers Barricade (advanced warning signs), South Texas Painting (painting), Odum Services LP (metal beam guard fence and guard rail), and A Brothers Milling (milling).

To date, the Contractor has made payments in the amount of \$2,666,421.17 to DBE subcontractors, 3.88% of the original contract amount or 64.63% of their commitment amount.

FIGURE 4: DBE STATUS



1.9 COMPREHENSIVE ENVIRONMENTAL PROTECTION PROGRAM

In accordance with the terms of the Environmental Record of Decision (ROD) and contract requirements, the Contractor was required to develop and implement a Comprehensive Environmental Protection Program (CEPP) applicable throughout the duration of construction to establish the approach, requirements and procedures to be employed to protect the environment. The Contractor's CEPP includes the following component parts:

- » Areas of Special Environmental Interest - Describes steps taken to prevent impacts to at risk, rare species and their habitat as well as historical resources including:
 - Educating employees to recognize these impacts
 - Identifying the areas where construction related activities are not to take place based on the relevant migratory bird timing windows
 - Keeping water work to a minimum and cleaning any equipment which must enter the water both prior and after to mitigate the spread of Zebra Mussels
 - If endangered/rare species or historical/archaeological/paleontological resources are encountered, ceasing working in the area and notifying the engineer or applicable agency for direction on any mitigation action required
- » Environmental Protection Measures include the following:
 - Erosion and sediment control measures
 - Preparation for seasonal shutdown
 - Protection of wildlife and wildlife habitat
 - Proper practices for clearing vegetation
 - Appropriate handling and storage of soil
 - Protection of wetlands, watercourses (streams), and riparian areas

- Air quality management
- Proper handling and storage of petroleum, oil, lubricant, and other chemicals
- Management of waste
- Constructing, operating, and reclaiming borrow excavations
- Operating concrete batch plants
- Well impacts and requirements
- Recycling program
- » Monitoring and Inspection efforts consist of:
 - Self-Regulatory inspection program
 - Construction Monitoring
 - Post construction monitoring
- » Energy Conservation measures including the following:
 - Reusing and recycling of construction materials
 - Maximizing the use of local materials to reduce hauling
 - Carpooling of workers to and from the jobsite
 - Regular maintenance of equipment to ensure proper working order
 - Reducing energy consumption by turning off equipment and vehicles when not in use
 - Minimizing stops and delays by efficient routing of trucks to and from the jobsite and utilizing off-peak travel times to maximize fuel efficiency
 - Minimizing the need for artificial light by scheduling construction during daytime hours to the extent practicable
 - Maintenance of traffic control plan that minimizes lengthy detours or delays for motorists.
- » The Environmental Protection Training Plan educates non-administrative employees to:
 - Recognize the overall importance of environmental issues
 - Recognize environmental impacts as they relate to construction
 - Know what actions to take to minimize impacts
- » The Communication Plan provides contact information for the Environmental Manager, Superintendent, Project Engineer and Project Manager

Per the CEPP, the contractor has conducted the following activities:

- » Submitted for and posted TCEQ Notice of Intent (NOI) for stormwater discharges. The NOI and large construction site notices are posted on the Contractor's Equal Employment Opportunity board in front of the field office to address accessibility concerns.
- » Implemented proper vegetation clearing practices including installing sediment and erosion control measures prior to beginning the clearing and grubbing work.
- » Minimized disturbance to aquatic resources during clearing and grubbing by installing silt fence between the construction site and watercourse to prevent sedimentation and equipment from encroaching on protected areas and installing temporary crossings to allow construction equipment to cross various tributary streams.
- » Focused on addressing several erosion control items identified in a March 20107 letter from TCEQ by installing additional rock filter dams, erosion control blankets, mulch, topsoil, and temporary

seeding on back and side slopes as construction progressed and performing silt excavation downstream of areas where erosion control measures were previously inadequate.

- » Is currently working with the Authority to develop a response to a TCEQ letter transmitted to the NET RMA August 2017. The letter included provisions and timeframes for completion of the following activities: removal of accumulated sediment at areas surring the project Site, evaluation of the effectiveness of the existing sediment and erosion controls, and evaluation of approprial soil stabilization measures. The response will include a construction plan to address in a timley manner all items noted the letter.
- » Reduced the amount of runoff at soil stockpile locations by reducing the grade of the stockpile side slopes.
- » Performed weekly inspections to ensure the measures are operating correctly.
- » Implemented the Environmental Protection Training Plan by providing staff access to the TxDOT Environmental Management System training website.
- » Avoided impacts to streams during construction until mitigation was secured.

APPENDIX A: AERIAL PHOTOGRAPHS (SEPTEMBER 2017)



FIGURE 5: PROJECT AREA SOUTH OF IH 20

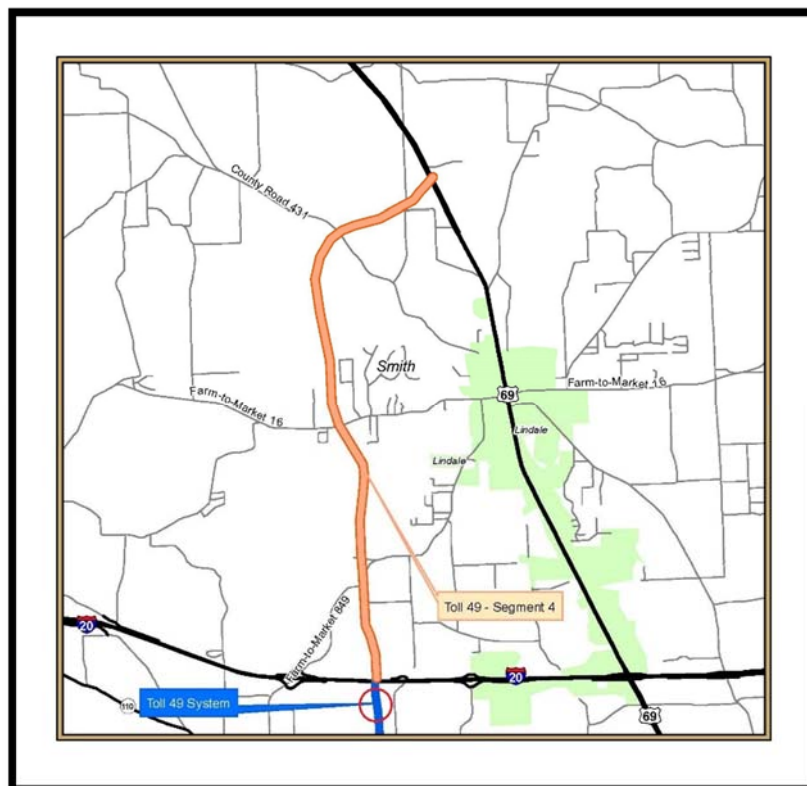




FIGURE 6: PROJECT AREA AT IH 20

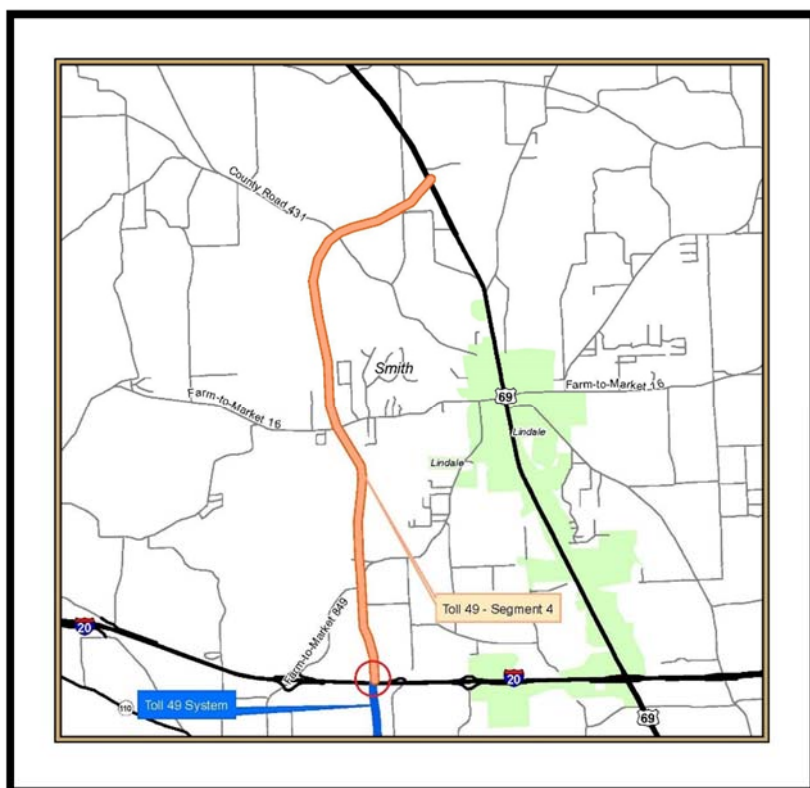




FIGURE 7: PROJECT AREA BETWEEN IH 20 AND FM 849

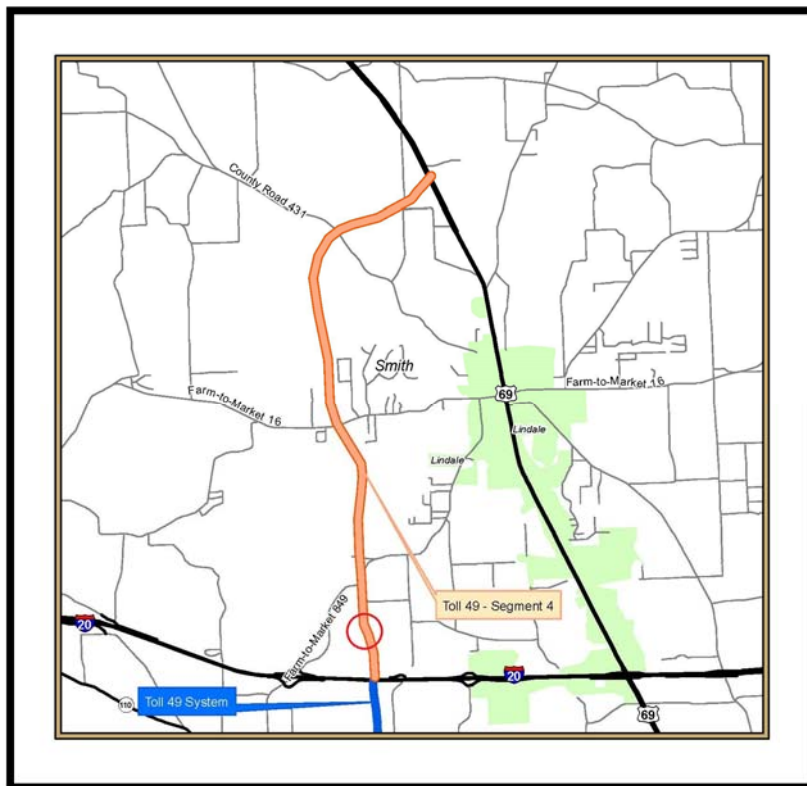




FIGURE 8: PROJECT AREA AT EXISTING FM 849

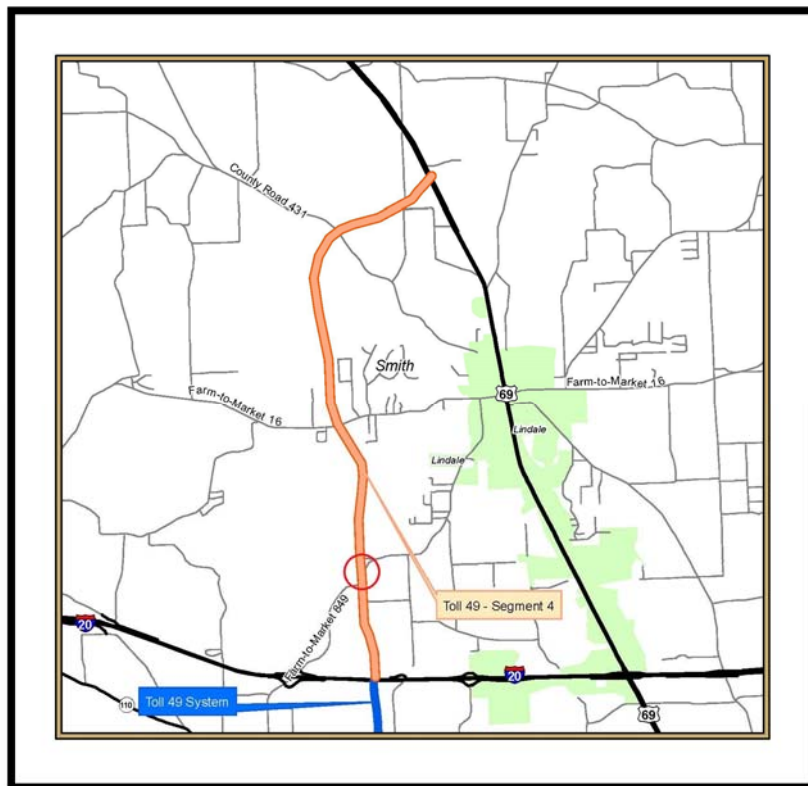




FIGURE 9: PROJECT AREA DAVIS BRANCH TRIBUTARY

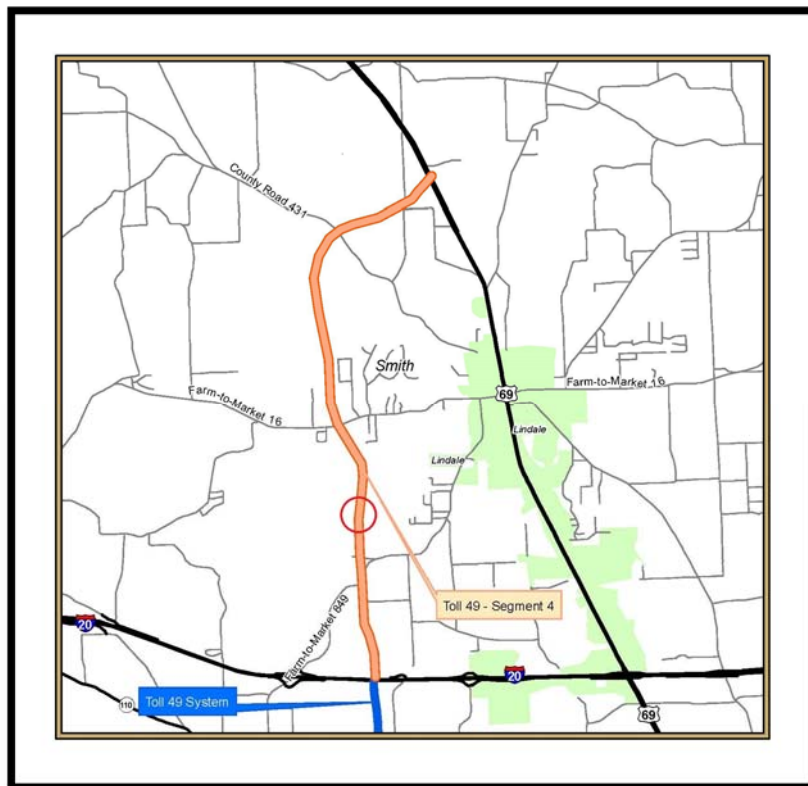




FIGURE 10: PROJECT AREA DAVIS BRANCH

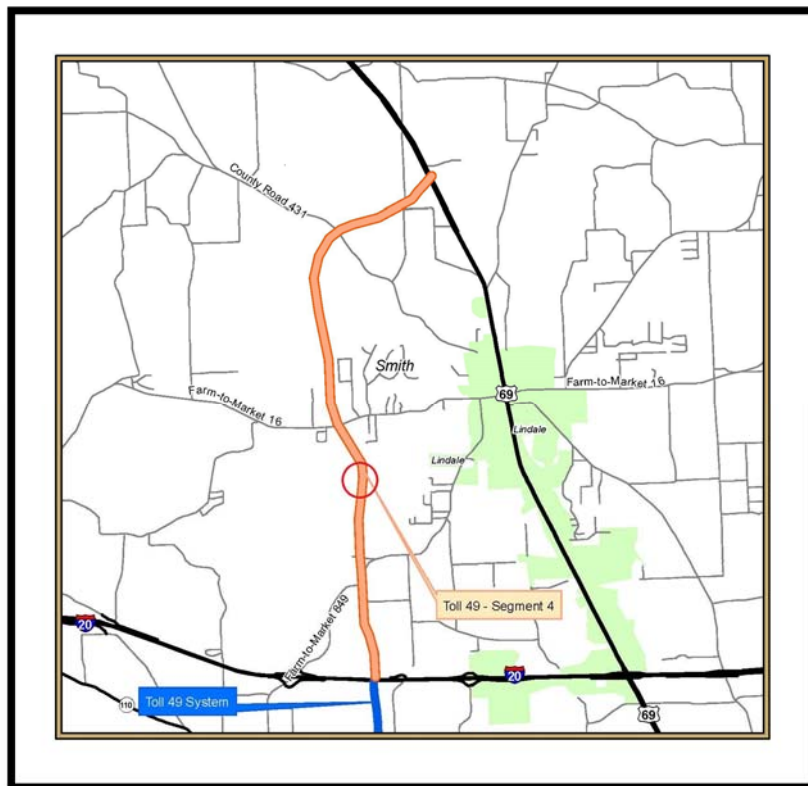




FIGURE 11: PROJECT AREA BETWEEN DAVIS BRANCH AND FM 16

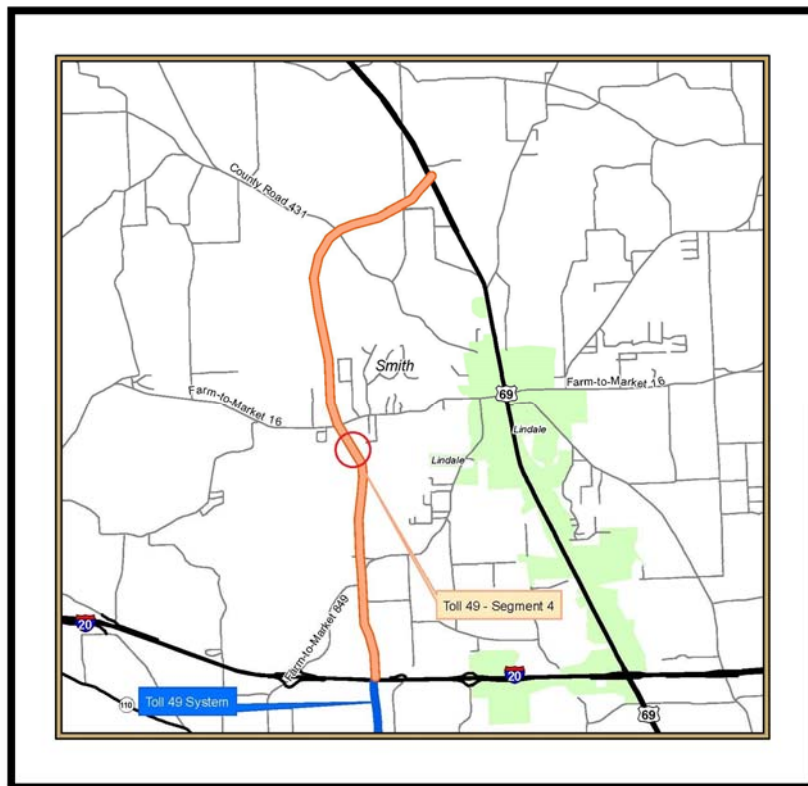




FIGURE 12: PROJECT AREA AT FM 16

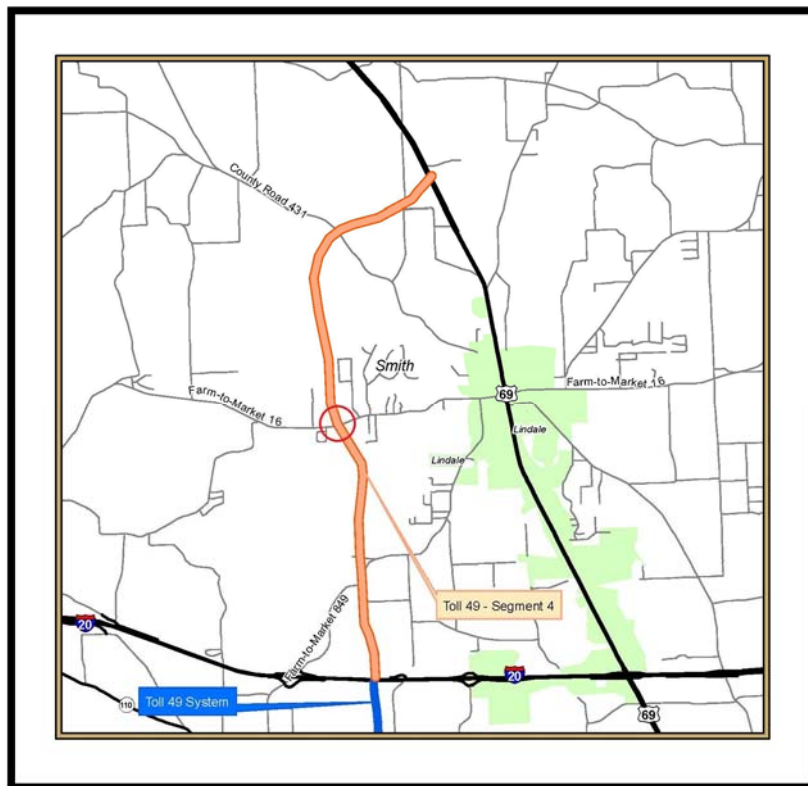




FIGURE 13: QUARRIES NORTH OF FM 16

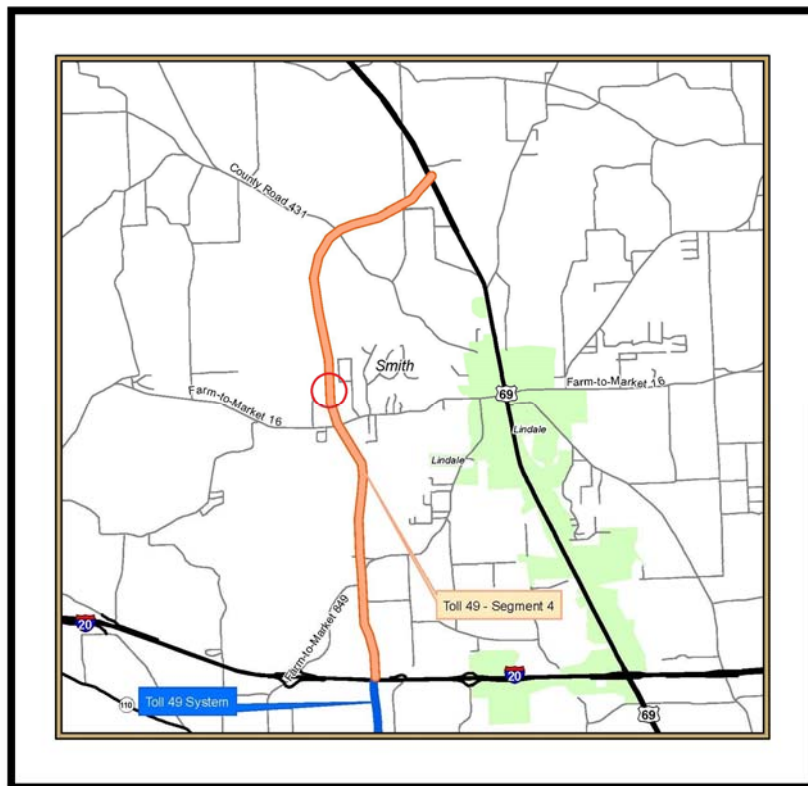




FIGURE 14: PROJECT AREA NORTH OF THE FM 16 QUARRIES

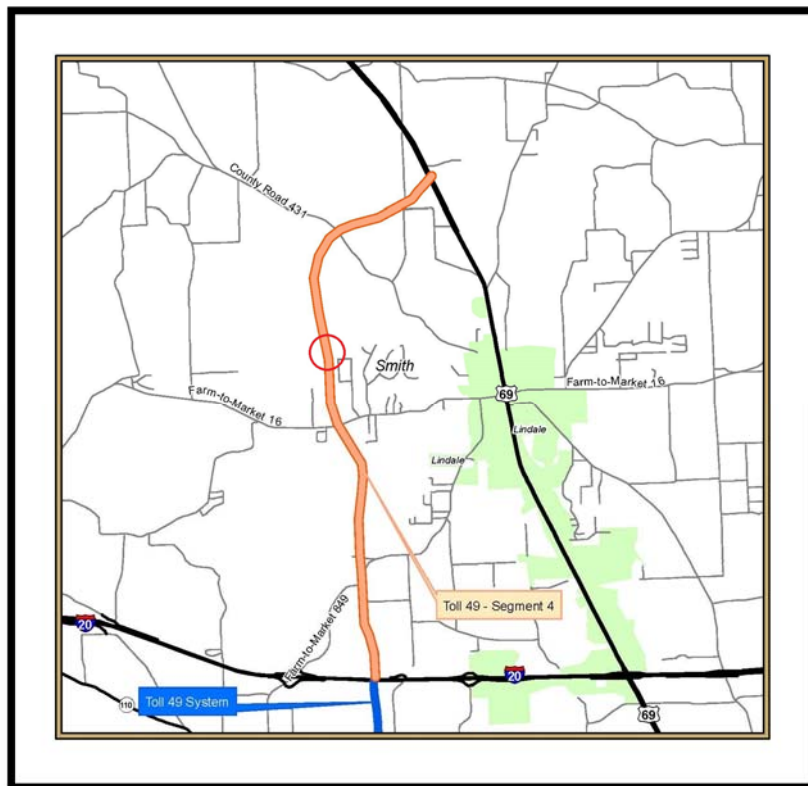




FIGURE 15: PROJECT AREA BETWEEN FM 16 AND CR 341

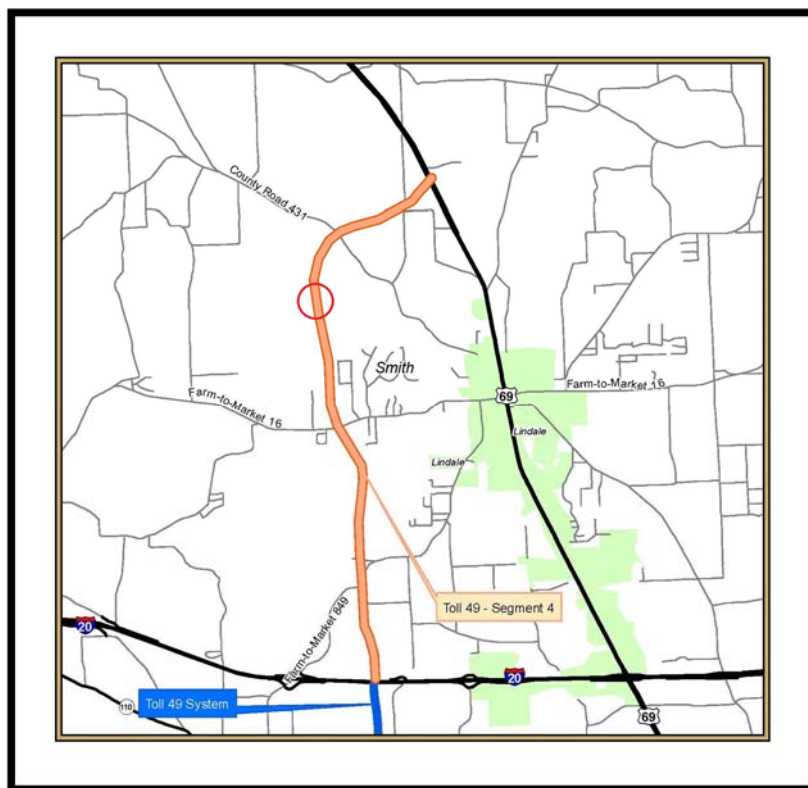




FIGURE 16: PROJECT AREA SOUTH OF CR 431

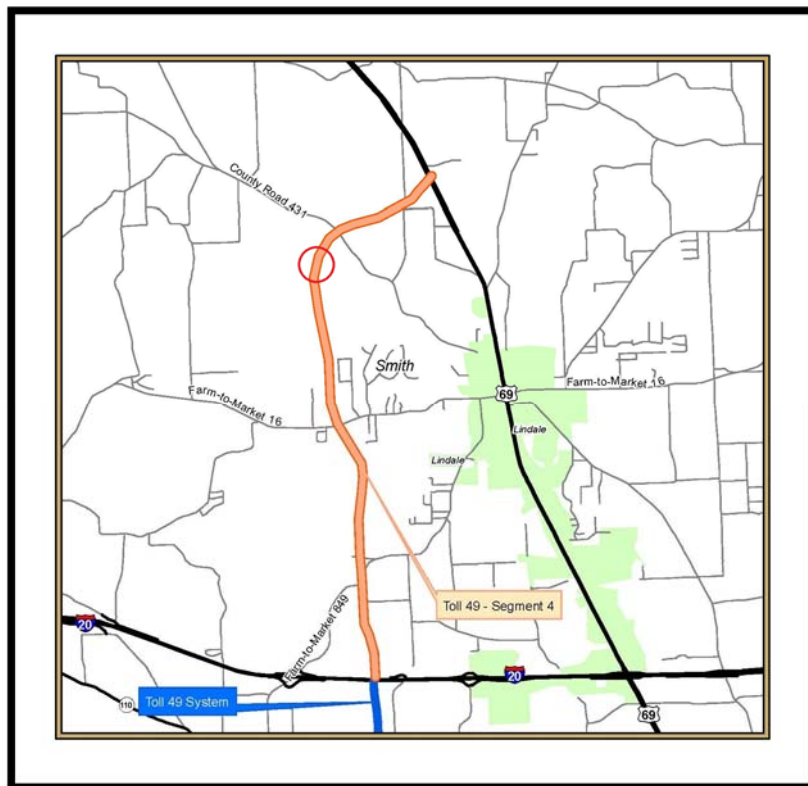




FIGURE 17: PROJECT AREA AT CR 431

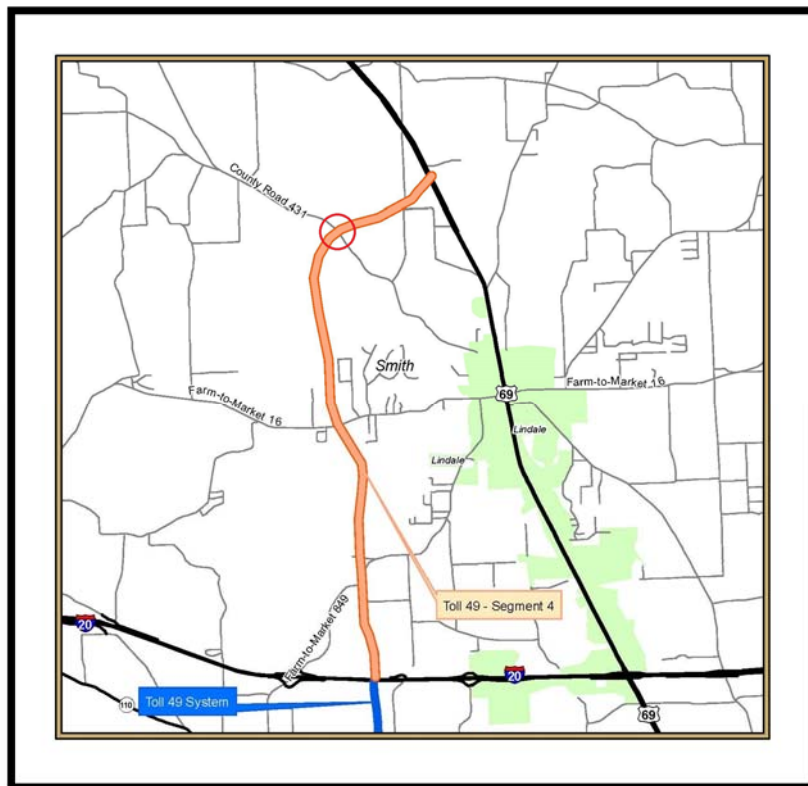




FIGURE 18: PROJECT AREA NORTH OF CR 431

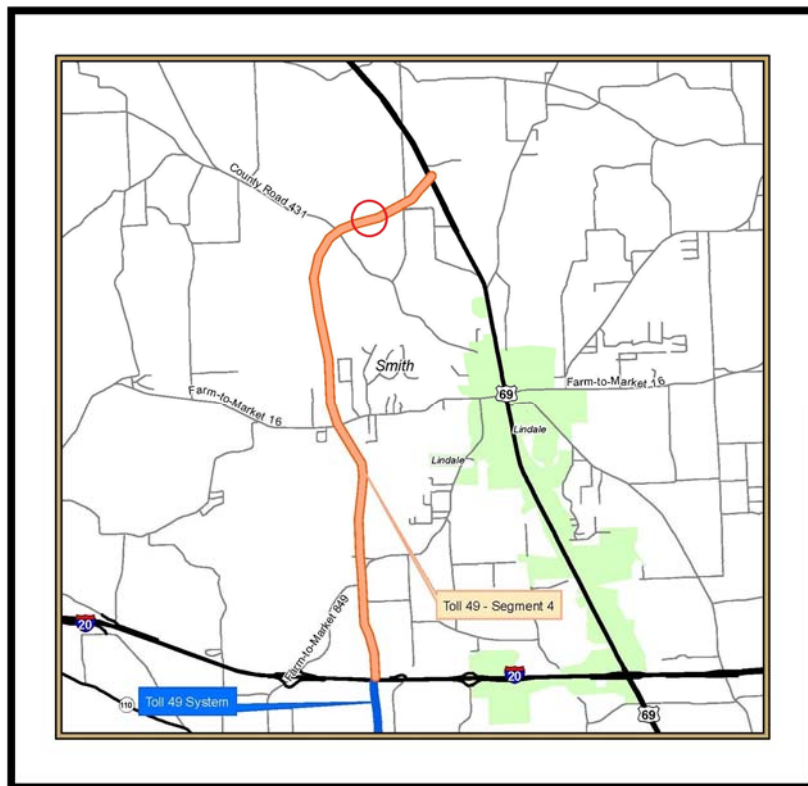




FIGURE 19: PROJECT AREA AT CR 4118

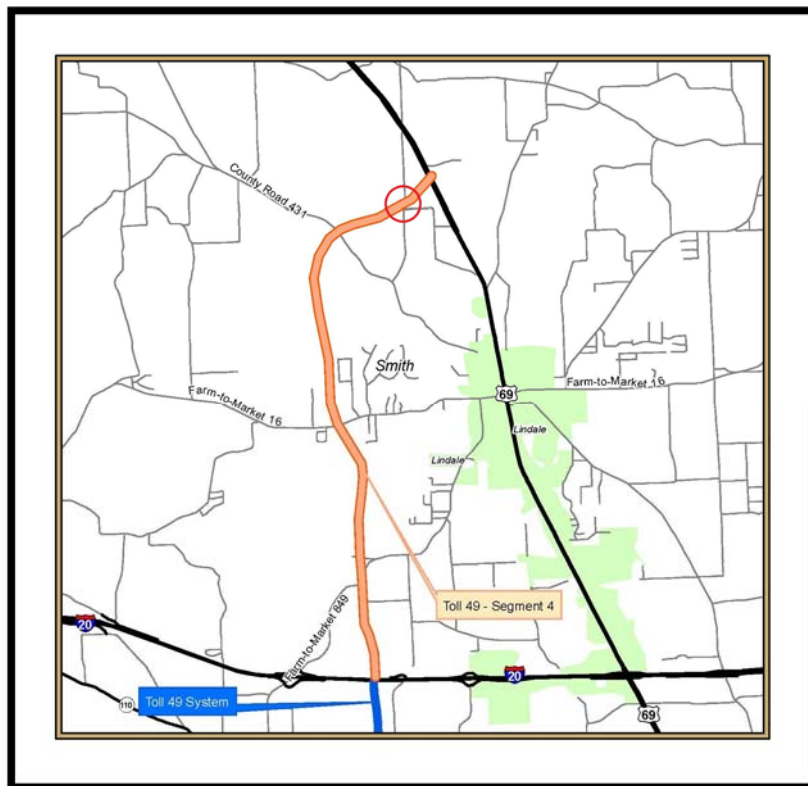




FIGURE 20: PROJECT AREA AT US 69

