

TOLL 49 SEGMENT 4 PROGRESS REPORT



*DECEMBER 2017
PROGRESS REPORT NO. 18*

RS&H





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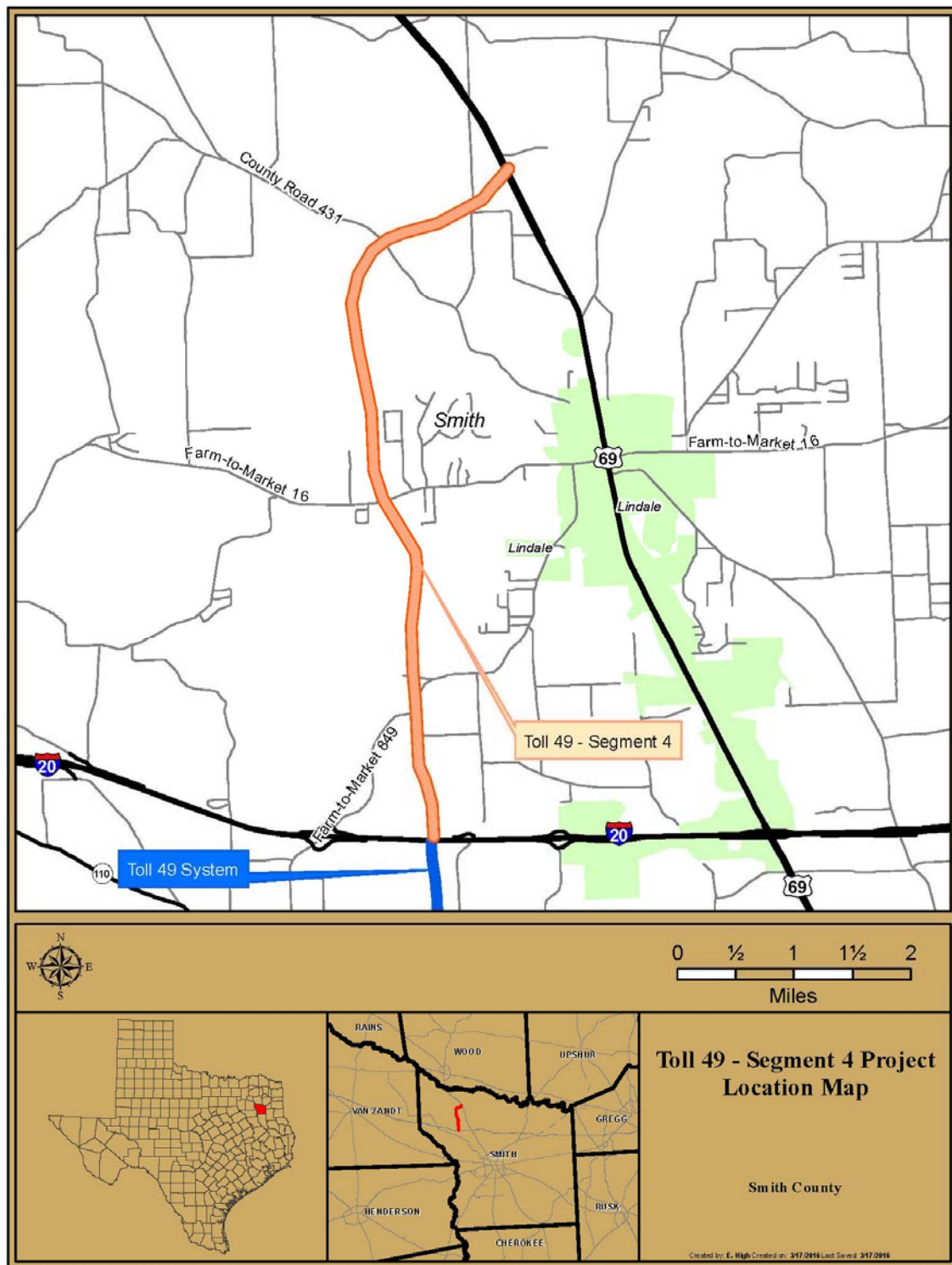
1.1 INTRODUCTION

This report documents and describes the development and construction of the Toll 49 Segment 4 Project during the period from November 1, 2017 through December 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 three 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	Closed
239	1.04	NTP + 60 Days	Closed
240	13.39	NTP + 60 Days	Closed
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	Closed

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	Relocation is complete
East Texas Electric Cooperative	1-Jan-17	Relocation is complete
Enbridge	No conflict	No conflict identified, no relocation
Gulf South	NTP+90	Relocation is complete
Lindale Rural WSC	N/A	Relocation is complete
MHM Pipeline	Relocation will begin 2 weeks after clearing	Relocation is complete
Oncor Electric Delivery (Distribution)	NTP + 90 to 120 Days	Relocation is complete
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 complete
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 in July of 2016, archeologists encountered a previously unrecorded archeological site within the project right of way. The archeological site was located on the northern end of the project and spanned the entire width of the ROW. Throughout the course of the archeological investigation, the Contractor has been allowed only limited access to the right-of-way near the archeological site, impeded earthwork activities, and resulted in the demobilization of the earthwork contractor during late 2016 and early 2017.

Access was restored to a northern portion of the site totaling approximately 39 acres in April 2017. 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 remaining six acre southern portion, further expanding access and allowing the transport of materials and construction equipment along the Project ROW.

In October 2017, the NET RMA board approved two Change Orders, No. 12 and 13, associated with a time impact analysis 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. Final clearance of the site was received on December 1, 2017 and the Contractor has been granted full access to resume construction activities at this location. The NET RMA is currently negotiating an additional Change Order with the Contractor to address the total impacts of the

archeological survey. This Change Order will address potential increased costs and impacts to the construction schedule due to the archeological delay.

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 now has access. The Project's major embankment and excavation activities are nearly complete with work outstanding at the newly cleared archeological area and at FM 16 and SH 110 ramps and on the south side of IH 20. The Contractor also performs the fine grading for pavement layers just ahead of the cement treatment of subgrade.



Embankment south of IH 20



Embankment for the southbound ramp north of FM 16

1.4.2 Drainage Structures

The Contractor has completed construction of all major cross culverts. Reinforced concrete pipe and drop inlets are being installed for stormsewer project-wide. At this time, construction of these smaller drainage structures is nearly complete from IH 20 to Davis Branch, and the Contractor is working from Davis Branch north toward US 69.



Drop inlets installation south of FM 16



Reinforced concrete pipe south of FM 16

1.4.3 Bridge & Wall Structures

All bridges are complete except for the IH 20 main line overpass. In November, the Contractor completed installation of the concrete bridge rail on nine of the ten project bridges. On the IH 20 main lane overpass, the Contractor is currently installing the permanent metal decking and deck panels in preparation for the installation of the concrete deck on the remaining spans. The construction of rip rap at bridge abutments throughout the project also continues.



Rip rap installation at Stevenson Branch bridge abutment



Installing deck panels and overhangs on IH 20



Installation of guardrail on FM 849 bridge approach



Concrete bridge rail installation on CR 431 bridge

1.4.4 Erosion Control

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



Rock filter dam maintenance at Cross Culvert No. 8, between Stevenson Branch and FM 16



Silt fence maintenance at Davis Branch

1.4.5 Subbase & Pavement

The Contractor has placed flexible base from IH 20 to Davis Branch Tributary (working south to north). On the north side of the project, flexible base activities have resumed starting at CR 4118 working towards CR 431. The first four inches of asphalt pavement from US 69 down to CR 4118 was completed in late 2016, but the rest of the northern side of the project was delayed due to the archaeological site. Prime coat and asphalt activities are following the placement of flexible base. The prime coat has been placed from IH 20 to FM 849 and the first four inches of asphalt is completed at the north bound ramp from IH 20, and for a portion of the main lines working north.



Cement treated subgrade north of FM 16



Flex base installation north of FM 849



Installation of flex base north of IH 20



Placement of the first four inches of asphalt for the north bound ramp from IH 20

1.5 PROGRESS NARRATIVE

Clearing and grubbing activities are complete excluding the area affected by the archeological study. Excavation and embankment continues at the cleared section of the archaeological site, south of IH 20, and at the remaining ramps areas including SH 110 and FM 16. The Contractor continues maintaining erosion control items including silt fence, rock filter dams, erosion control blankets, and temporary seed as needed to prevent erosion.

All bridges on the project are complete with the exception of the IH 20 main lane overpass. For this remaining bridge, the concrete deck is about halfway complete, and the contractor is installing overhangs, permanent metal decking, and deck panels in preparation for the installation of the remaining deck.

All MSE and CIP retaining wall construction is complete on the project. All major cross culvert construction for the main lanes is also complete, and the contractor is working on installation of storm sewer structures at cross streets including reinforced concrete pipes and drop inlets. In addition, the Contractor continues placing concrete rip rap at various bridge abutments and drainage ditch locations throughout the Project.

The contractor has placed flexible base from IH 20 to Davis Branch Tributary. Prime coat and asphalt activities are following the placement of flexible base. Prime coat is complete from IH 20 to FM 849, and placement of the first four inches of asphalt pavement is done for the north bound entrance ramp from IH 20 and for a portion of the main lanes working north towards FM 849. On the north side of the project, earthwork from CR 4118 to CR 431 is almost complete, allowing for flexible base activities to resume. The contractor picked up where they left off in late 2016 due to the archaeological site, starting flexible base activities from CR 4118 to CR 431.

In November, the contractor also resumed work on the lighting and gantry infrastructure, installing conduit and service poles for FM 16's southern access ramps and for the roadway lighting between FM 849 and IH 20.

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	73.42%
Earthwork	96.36%
Drainage	58.04%
Sub-base and Base Course	21.20%
Pavement	8.32%
Structures	88.18%
Pavement Markings and Signals	22.71%
Environmental	68.50%
Extra Work Items	56.63%
Change Orders	17.75%

1.6 FINANCIAL SUMMARY

Table 4 shows the overall financial status for the Toll 49 Segment 4 project through December 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

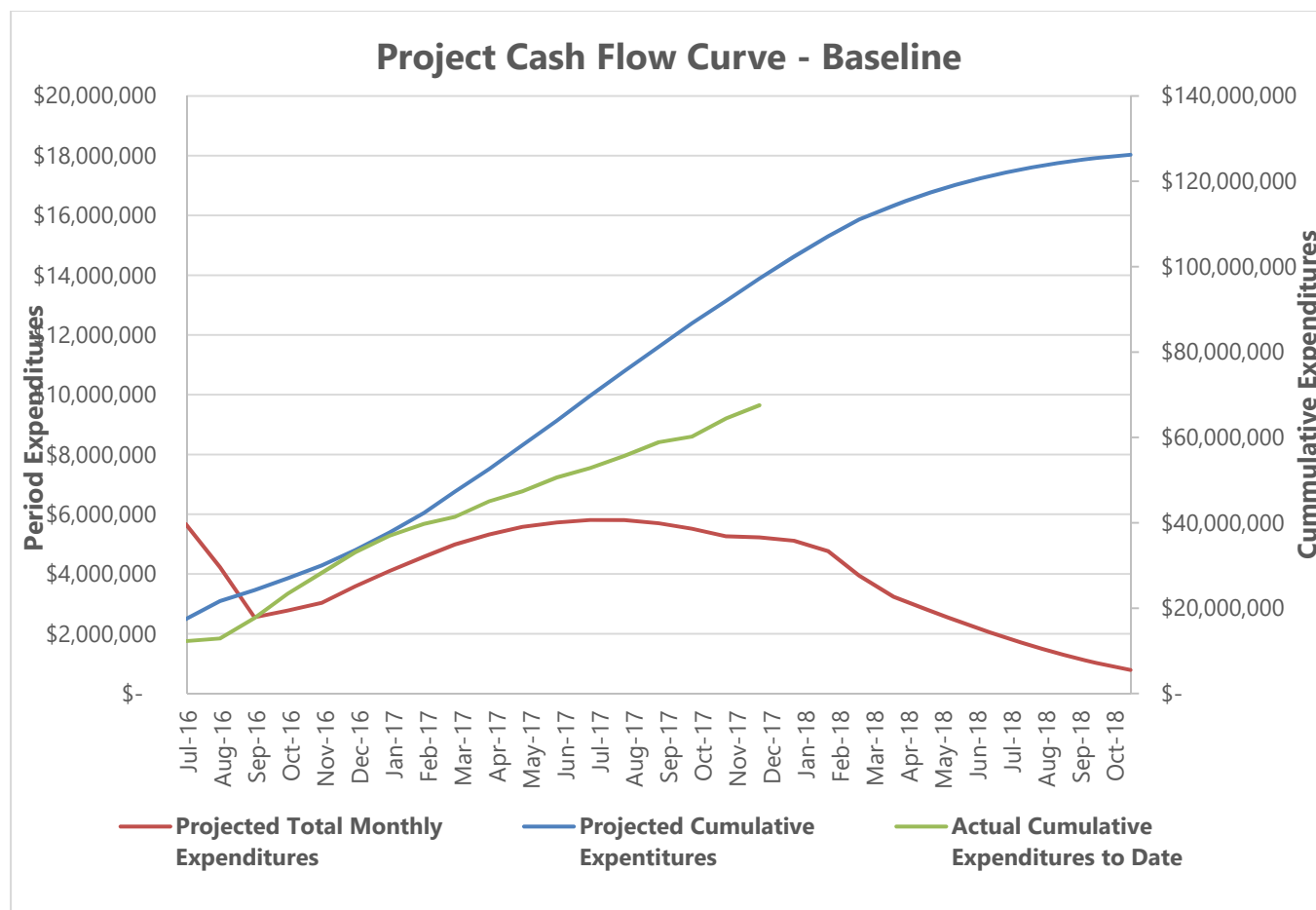
Project Description	Original Cost Estimate (\$)	Expenditures to Date (\$)	Estimated Remaining Cost (\$)	Estimate at Completion (\$)
Toll 49 Segment 4	\$126,220,000	\$67,526,336.49	\$58,693,663.51	\$126,220,000

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 \$16.6 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" includes both 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 ²	\$4,389,160.65
Change Order No. 12 ³	\$1,078,075.83
Change Order No. 13	\$493,609.77
	<hr/>
Current Authorized Contract Amount:	\$75,568,358.84
Previous total of Contractor Payments:	\$44,019,117.45
Amount Paid this Reporting Period:	<hr/> \$2,508,163.14
Total Amount Paid To-Date:	\$46,527,280.59
Retainage withheld:	<hr/> \$0.00
Approved Amount for work completed (through Draw No. 16):	\$46,527,280.59
Amount remaining for work to be completed:	\$29,041,078.25
Total Percent of Budget Expended though November 30, 2017:	61.57%

Footnotes:

1. Change Order No. 1 did not result in a change in price
2. Change Order No. 11 included a 56 day time extension
3. Change Order No. 12 included a 179 day time extension

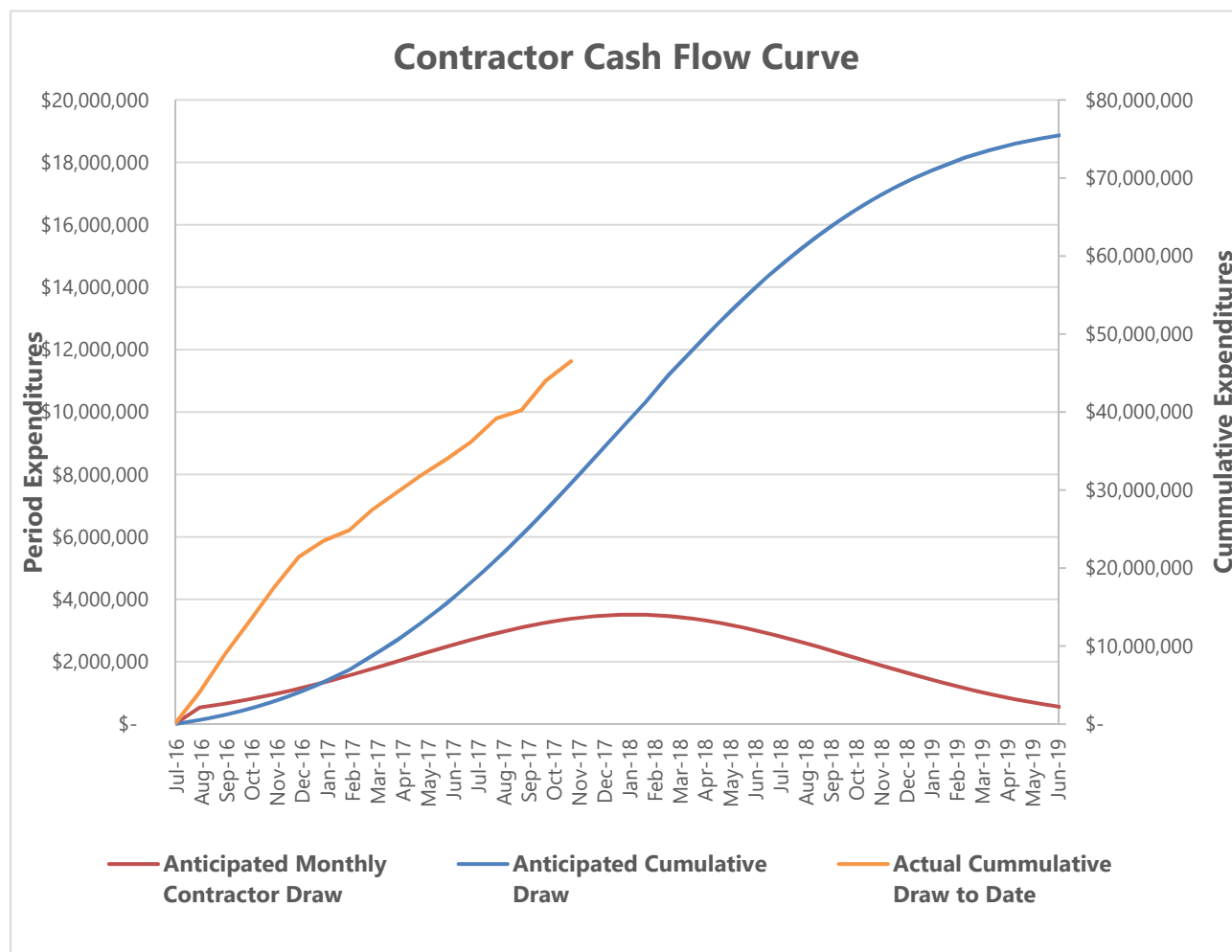
1.7.1 Summary of Change Orders This Reporting Period

There were no Change Orders executed during the reporting period.

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 approved Change Orders.

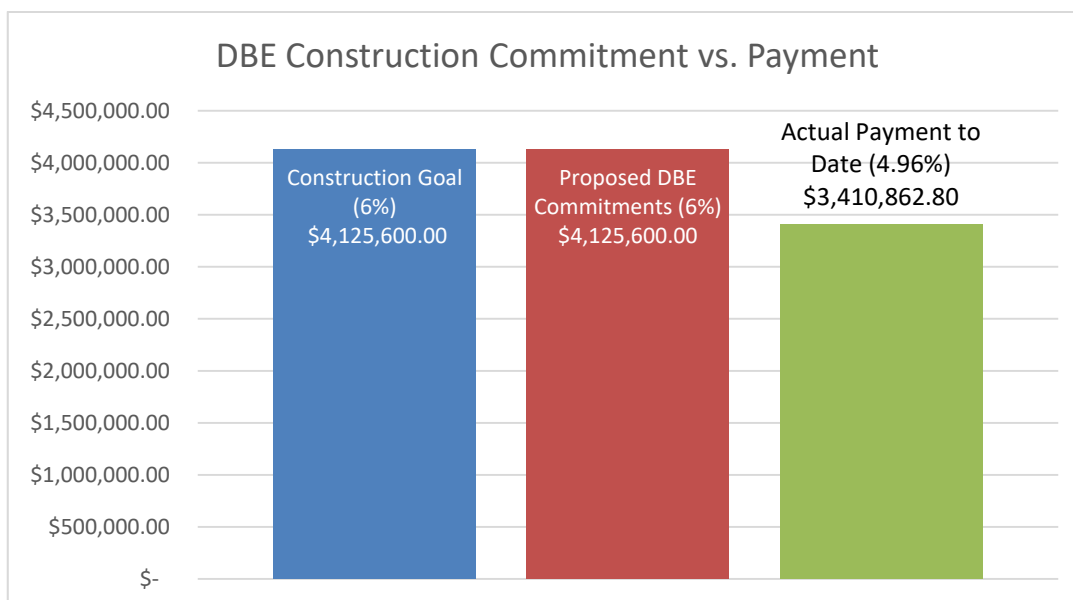
1.8 DBE STATUS

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 \$3,410,862.80 to DBE subcontractors, 4.96% of the original contract amount or 82.68% 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 2017 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.
- » Continues the maintenance and repair of erosion control measures throughout the jobsite to ensure continued TCEQ compliance.
- » 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 (DECEMBER2017)



FIGURE 5: PROJECT AREA SOUTH OF IH 20

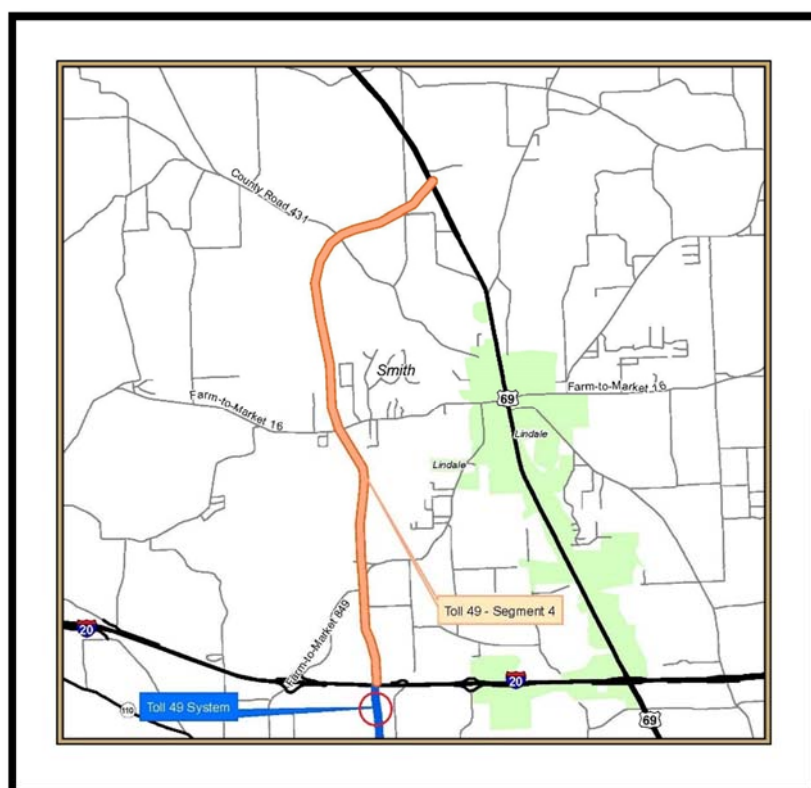




FIGURE 6: PROJECT AREA AT IH 20

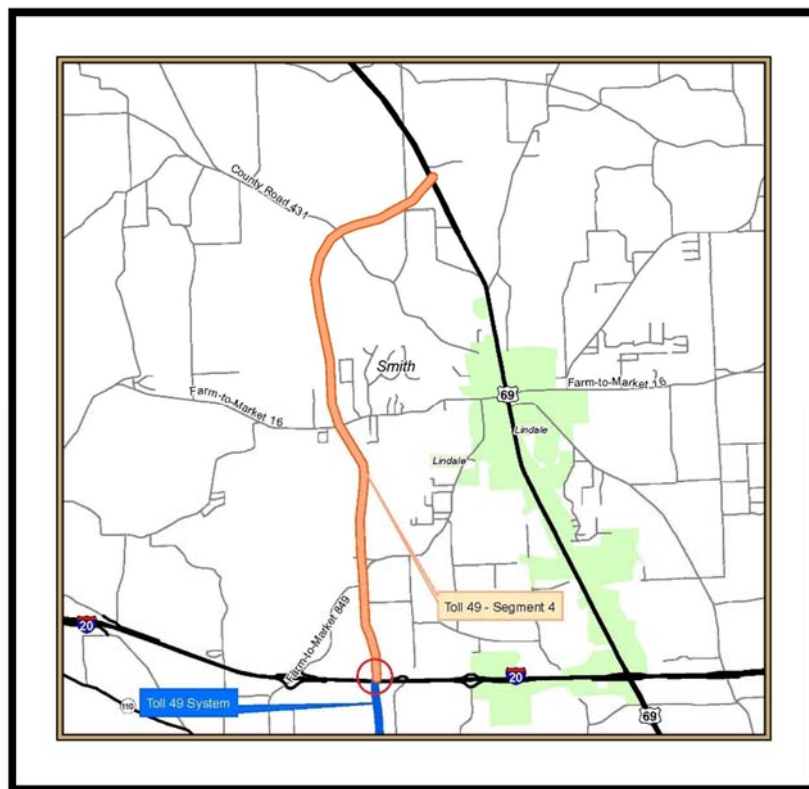




FIGURE 7: PROJECT AREA BETWEEN IH 20 AND FM 849

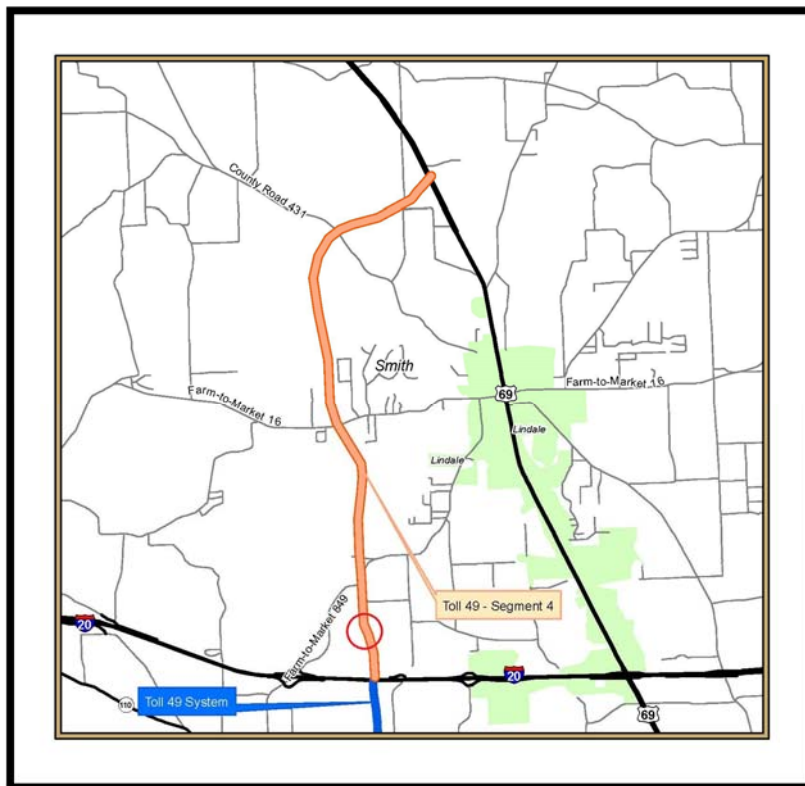




FIGURE 8: PROJECT AREA AT EXISTING FM 849

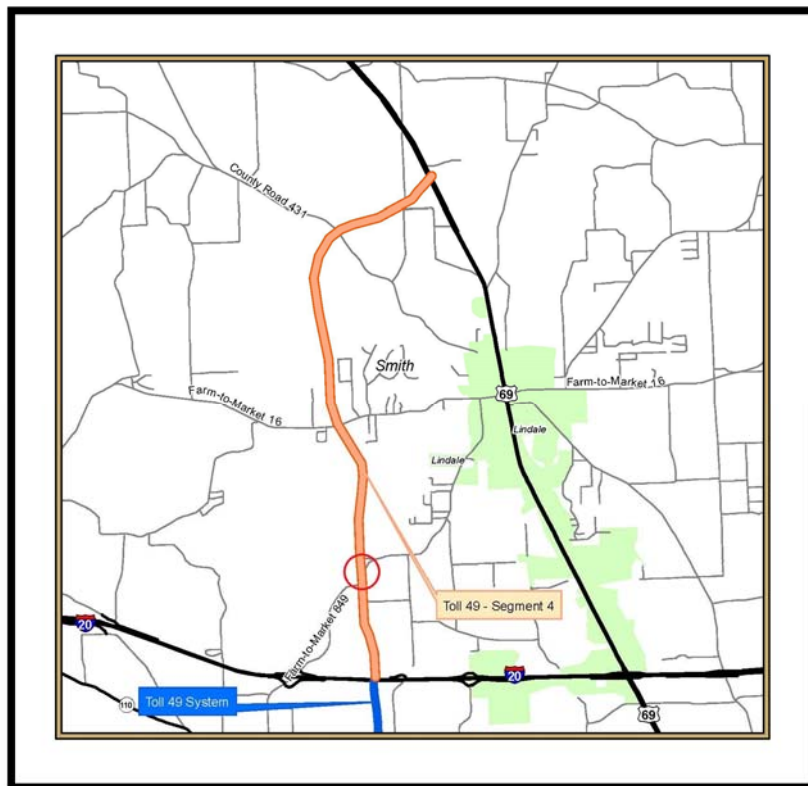




FIGURE 9: PROJECT AREA DAVIS BRANCH TRIBUTARY

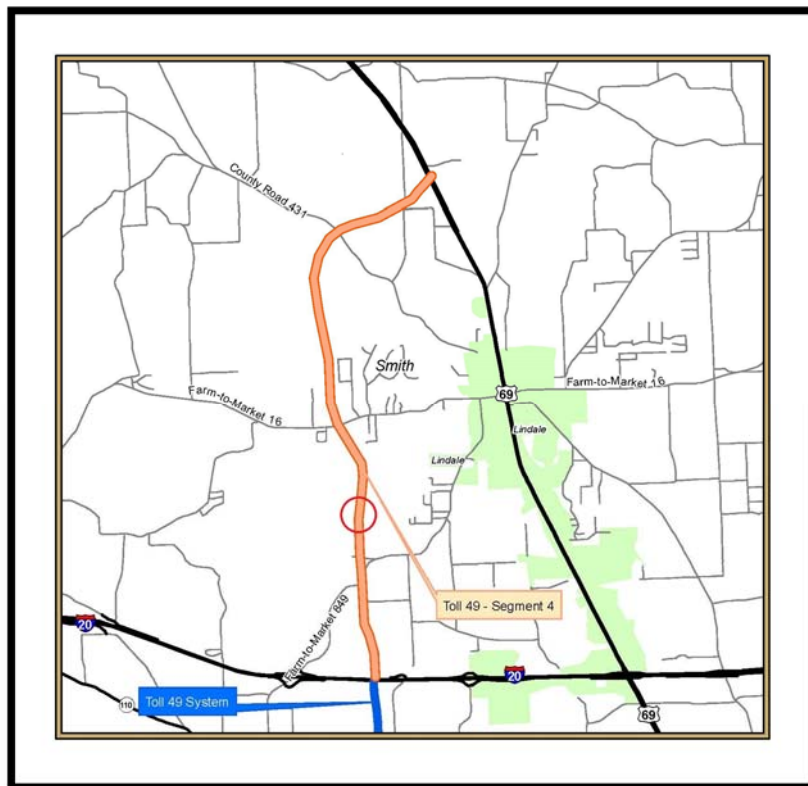




FIGURE 10: PROJECT AREA DAVIS BRANCH

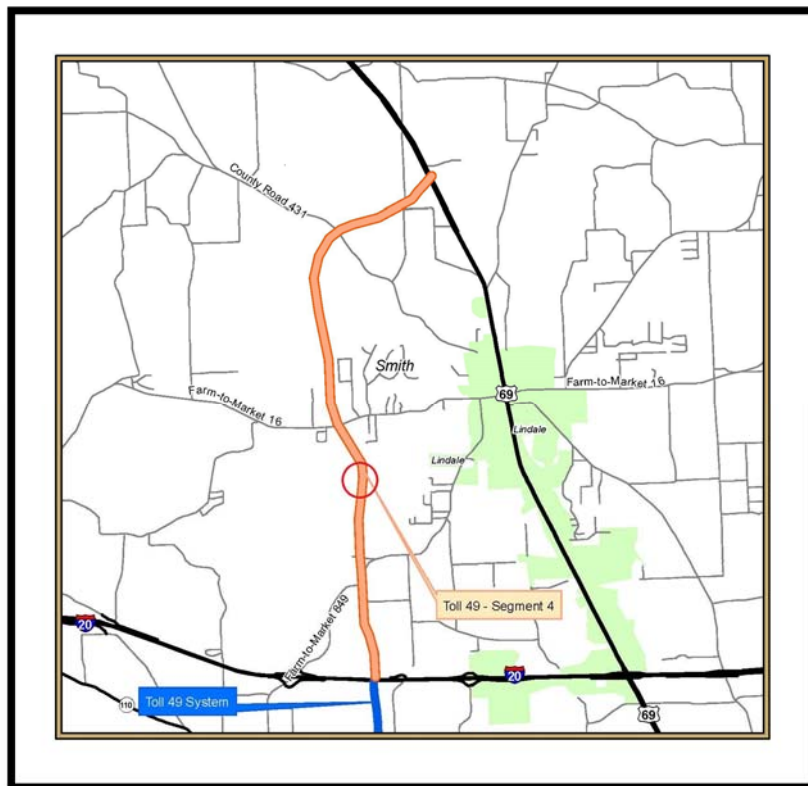




FIGURE 11: PROJECT AREA BETWEEN DAVIS BRANCH AND FM 16

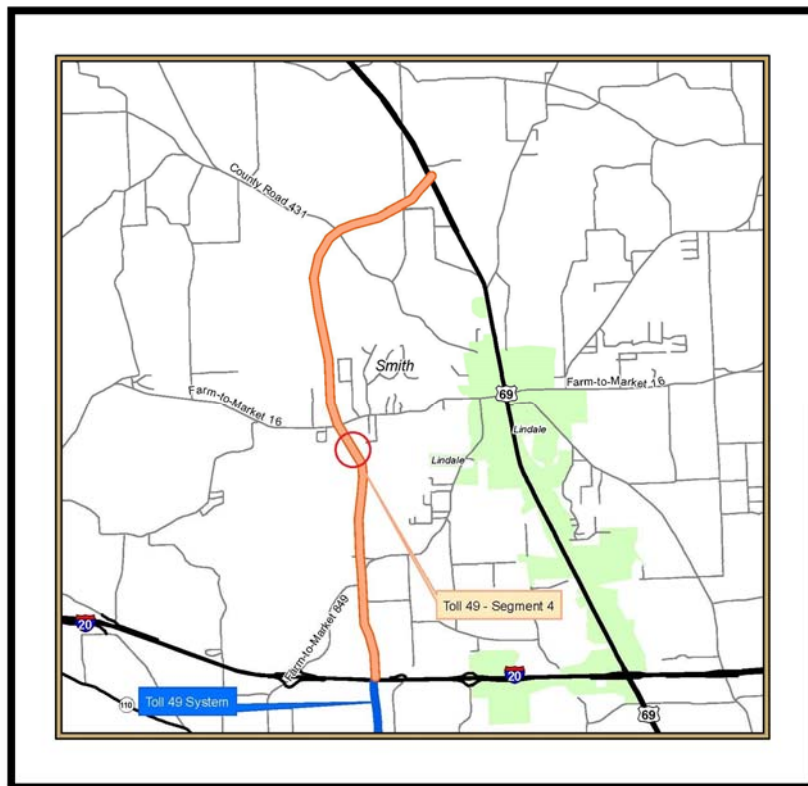




FIGURE 12: PROJECT AREA AT FM 16

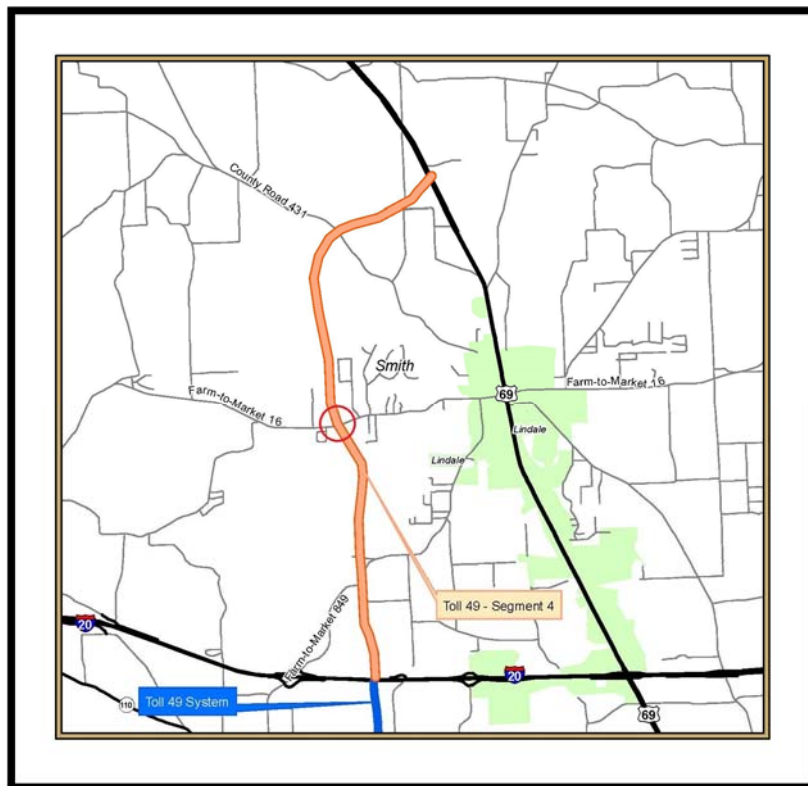




FIGURE 13: QUARRIES NORTH OF FM 16

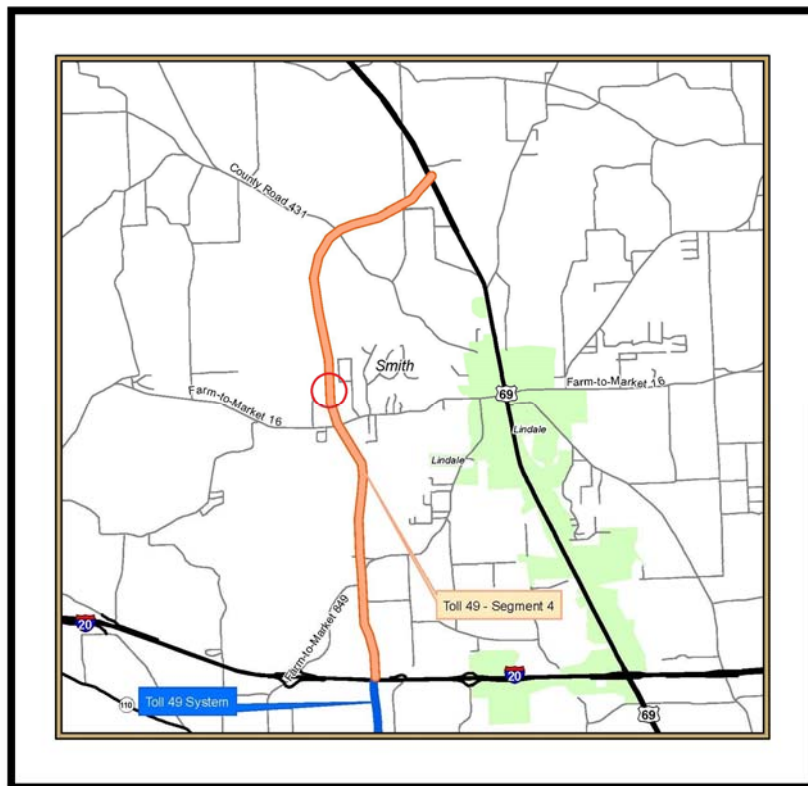




FIGURE 14: PROJECT AREA NORTH OF THE FM 16 QUARRIES

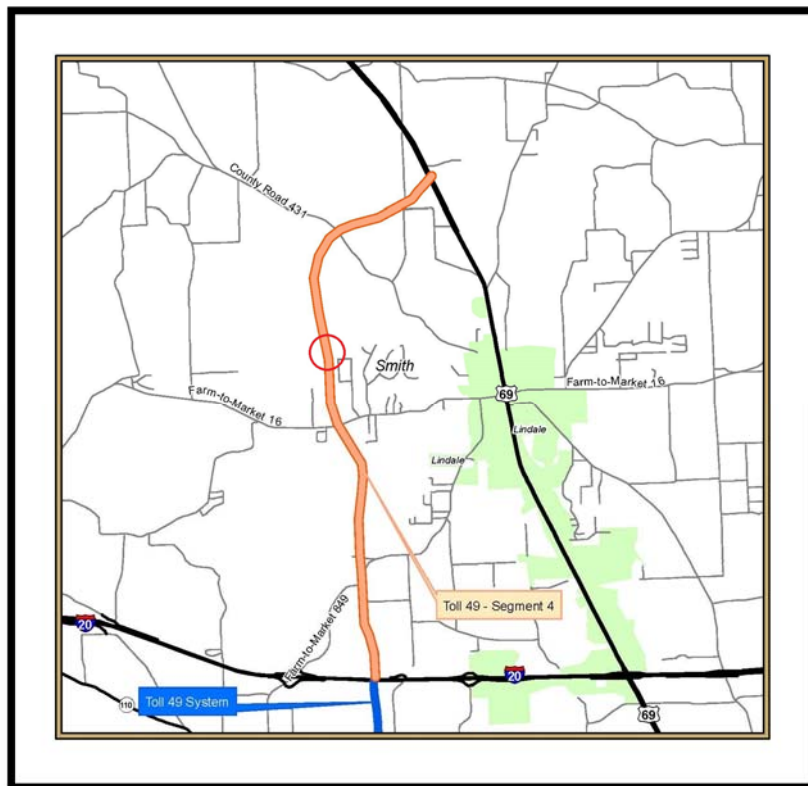




FIGURE 15: PROJECT AREA BETWEEN FM 16 AND CR 341

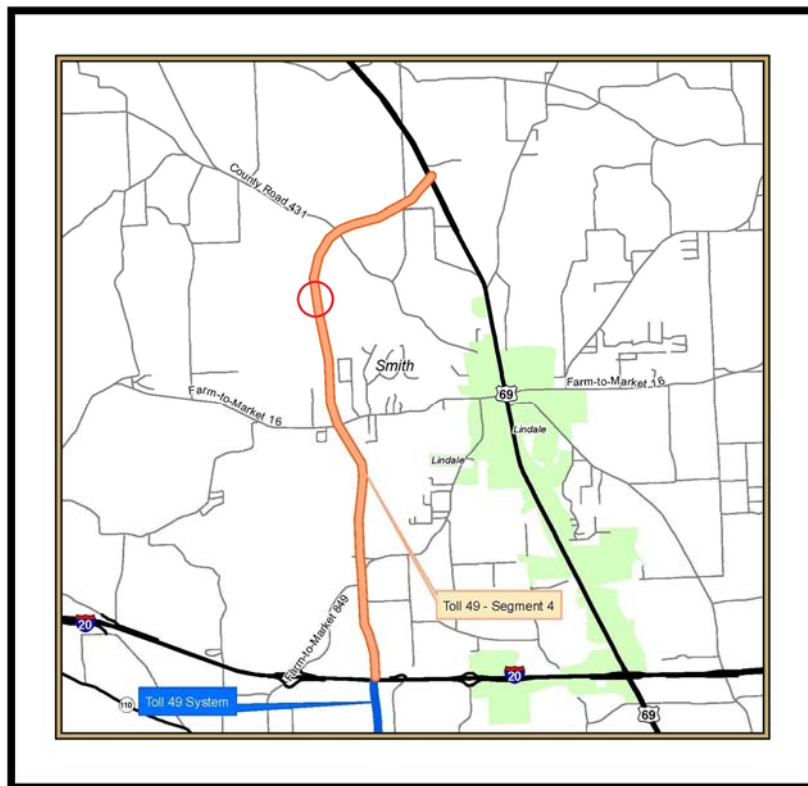




FIGURE 16: PROJECT AREA SOUTH OF CR 431

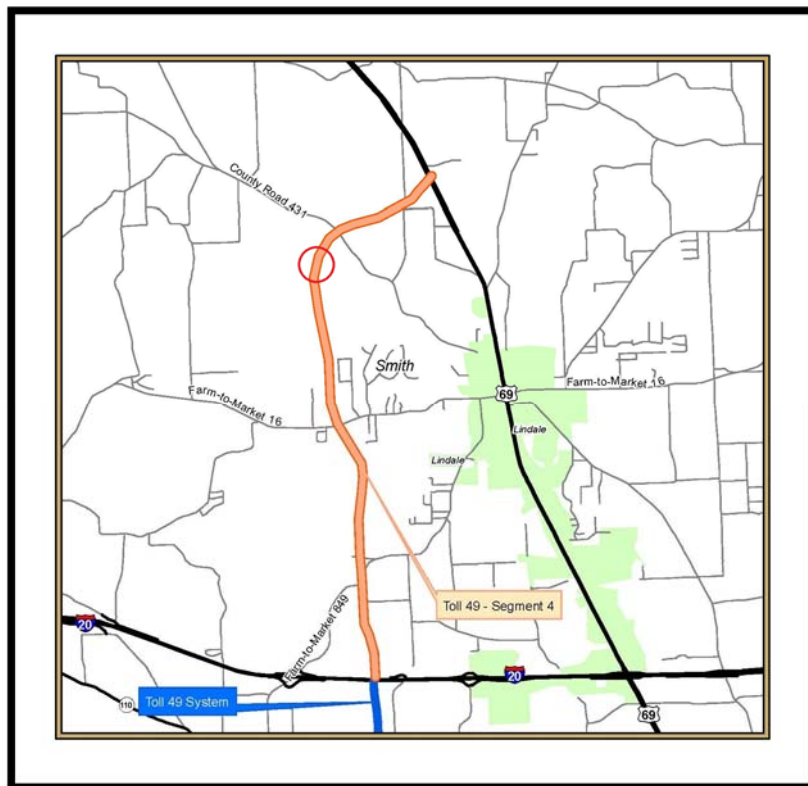




FIGURE 17: PROJECT AREA AT CR 431

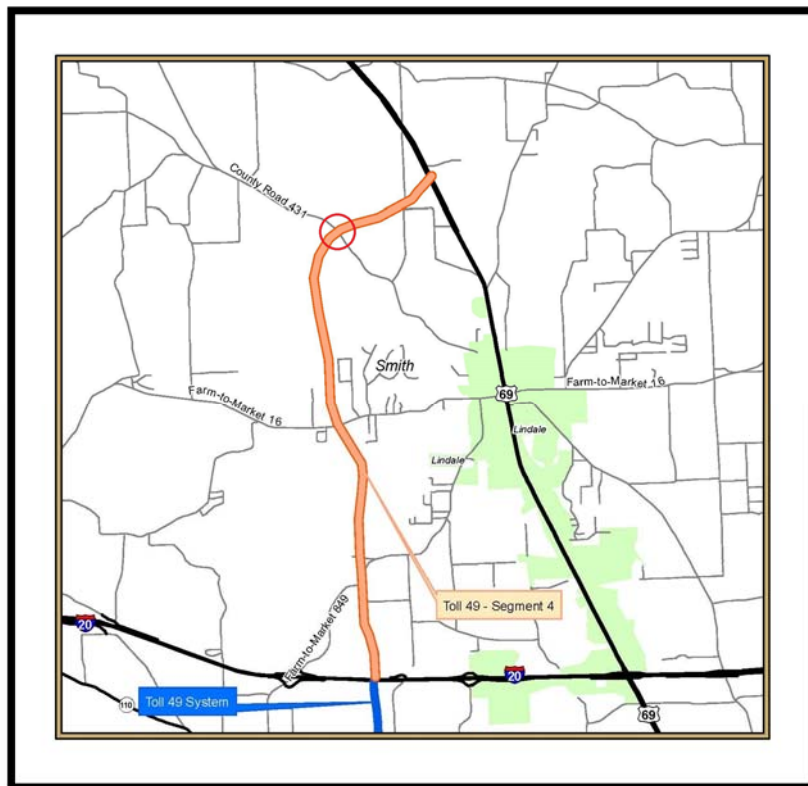




FIGURE 18: PROJECT AREA NORTH OF CR 431

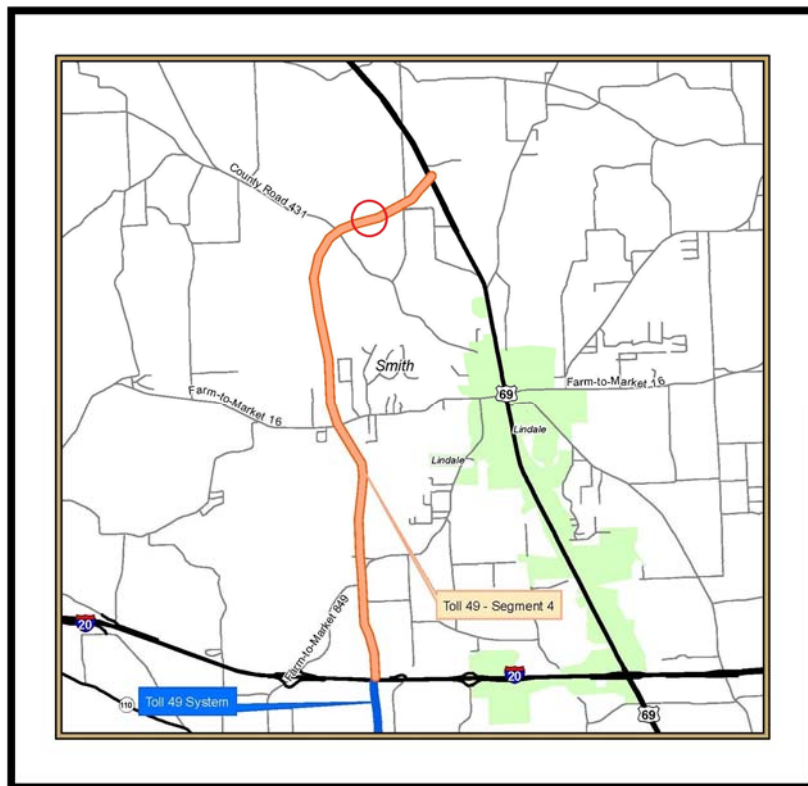




FIGURE 19: PROJECT AREA AT CR 4118

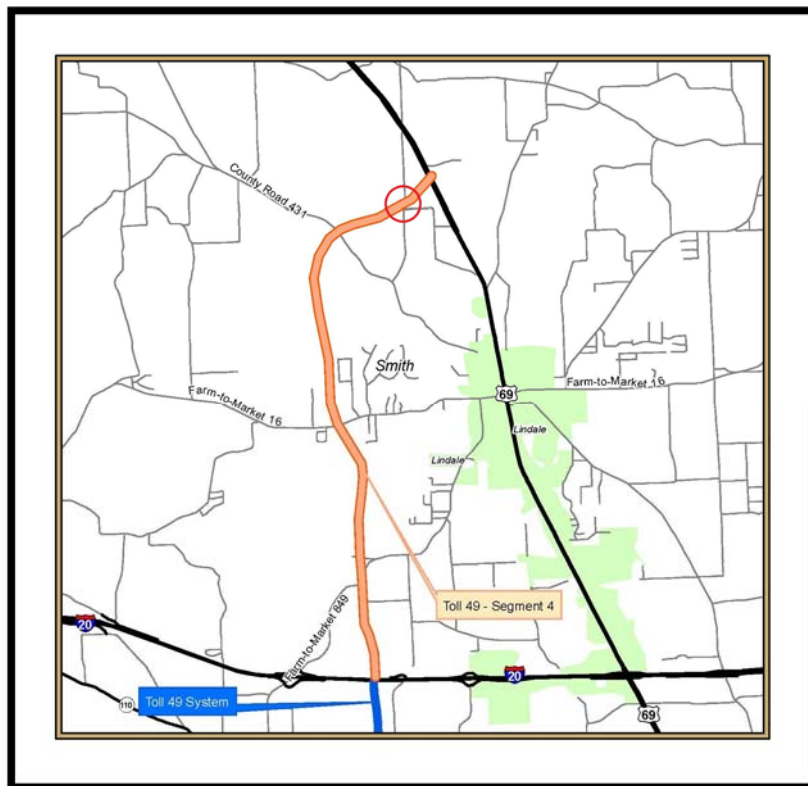




FIGURE 20: PROJECT AREA AT US 69

