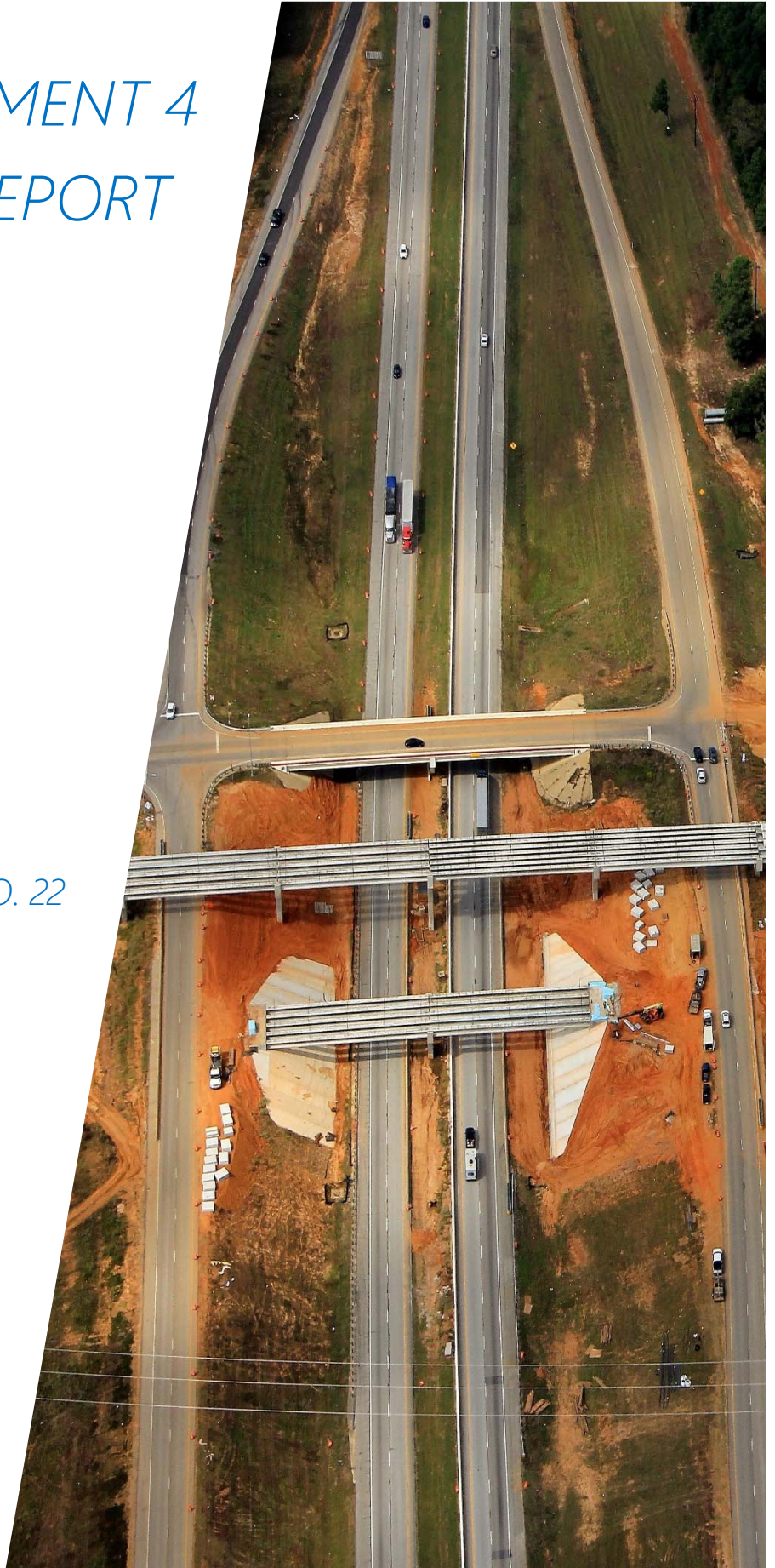


# *TOLL 49 SEGMENT 4 PROGRESS REPORT*



*APRIL 2018  
PROGRESS REPORT NO. 22*

**RS&H**





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**Construction Contractor**



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## 1.1 INTRODUCTION

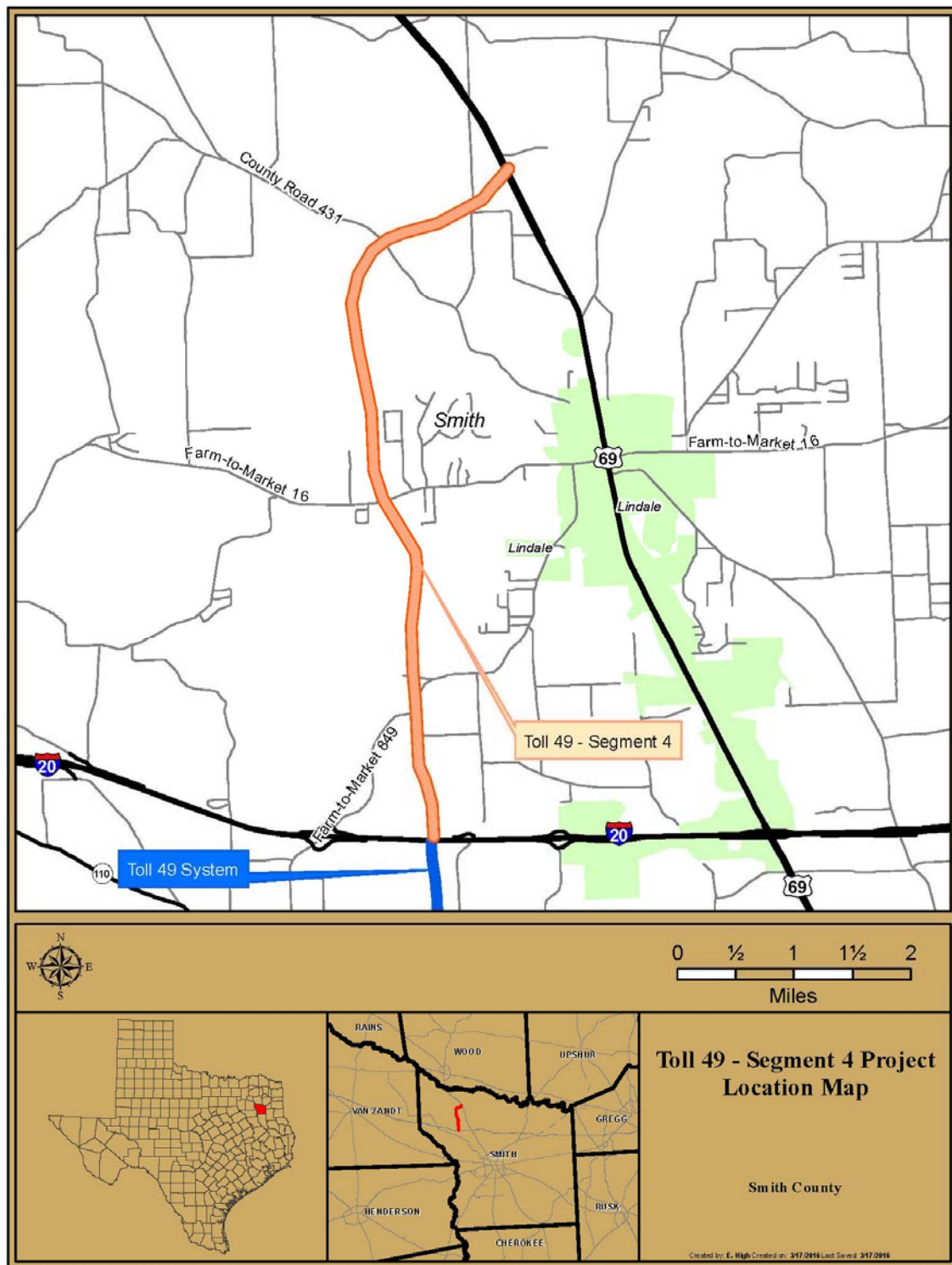
This report documents and describes the development and construction of the Toll 49 Segment 4 Project during the period from March 1, 2018 through April 1, 2018. This Project is being developed and constructed by the North East Texas Regional Mobility Authority ("the Authority"). The Segment 4 Project 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 parcel.

**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
209	12.47	15-Jul-16	Closed
210	0.84	15-Jul-16	Closed
213	39.13	NTP	Closed
214	9.95	NTP	Closed
215	36.64	NTP	Closed
The Authority has taken possession			
Parcel is accessible to Contractor			
Condemnation proceedings ongoing			
216	28.31	NTP	Closed
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
232	14.47	NTP + 60 Days	Closed
233	1.52	NTP + 60 Days	Closed
235	0.85	NTP + 60 Days	Closed



Parcel	Acreage	Estimated Acquisition	
		Date	Status
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	Relocation is complete
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 complete

### 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, resulting in limited Contractor access to the right-of-way during an archeological investigation. Final clearance of the site was received on December 1, 2017, at which time the Contractor was granted full access to resume construction activities at this location.

Three Change Orders have been executed to address delays associated with the archeological investigation. Change Orders No. 12 and 13 extended the project schedule by six months and increased the construction contract amount by approximately \$1.6 million for time related overhead expenses and earthwork demobilization and remobilization costs. Change Order No. 14 increased the not-to-exceed amount of the construction contract by \$2.7 million, with \$1.4 million representing a lump sum settlement payment to be paid to the Contractor if the February 6, 2019 Substantial Completion date is met. Should Substantial Completion occur after February 6, 2019, this \$1.4 million lump sum will decrease by \$15,000 per calendar day. The remaining \$1.3 million represents a not-to-exceed amount intended to cover costs associated with the increased erosion control activities required to maintain the project during the extended construction schedule. The erosion control costs in Change Order No. 14 do not account for costs associated with removal of sediment from outside the project ROW or additional seeding needed to establish ground cover.

## 1.4 PROGRESS PHOTOS

### 1.4.1 Earthwork

With the exception of minor earthwork activities such as grading for ditches and level up at pavement edges, only three major embankment and excavation areas are outstanding on the project. A short section of embankment work remains in the previously cleared archeological area. The Contractor continues embankment south of IH 20 for the northbound exit ramp to IH 20. The last major excavation will be performed at FM 849 once the realignment is complete. The Contractor is in the process of completing pavement tie-ins at this realignment.



Embankment at FM 849 tie-ins



Excavation near FM 16

### 1.4.2 Drainage Structures

The Contractor has completed construction of all major cross culverts and storm sewer. Ongoing drainage work includes construction of concrete rip rap for ditches, rock rip rap at outfalls, and general ditch grading. Concrete flume construction included work at CD-16, CD-17, and near Stevenson Branch in March.



Concrete rip rap flume near Culvert No.16,  
south of FM 849



Concrete rip rap south of Stevenson Branch



### 1.4.3 Bridge & Wall Structures

All bridge substructure and superstructure construction is complete. Remaining bridge work includes the grinding and grooving of deck surfaces on approximately half of the bridges. The construction of rip rap at bridge abutments throughout the project is nearly complete, with minor concrete work outstanding.



Concrete rip rap construction at the Northbound Ramp Bridge abutment at IH 20



Superstructure patching and sealing at the Northbound Ramp Bridge at IH 20

### 1.4.4 Erosion Control

The Contractor continued environmental control activities such as maintaining silt fence, soil retention blankets, and rock filter dams and efforts to repair and replace erosion controls damaged during recent weather events. The contractor has begun installing permanent seeding on backslopes. In March, permanent seeding was installed along the IH 20 corridor, in areas north and south of IH 20, and in areas near CR 431 and Stevenson Branch.



Topsoil and seeding south of IH 20



Topsoil and seeding south of existing FM 849

### 1.4.5 Subbase & Pavement

Cement treatment of subgrade and the placement of flexible base continued between the former archaeological site and CR 431. Four inches of asphalt pavement was placed for approximately two miles of mainlanes beginning at the Davis Branch Tributary Bridge and extending north to approximately halfway between FM 16 and CR 431. In addition, the first two inch layer of asphalt was placed on three of the four FM 16 ramps.



Flexible base installation between the CR 431 and Stevenson Branch bridges



Asphalt paving south of Davis Branch Bridge



Preparing for cement treatment of the subgrade south of Stevenson Branch



Primed flexible base north of FM 16 at the ramp tie-ins

## 1.5 PROGRESS NARRATIVE

The Contractor continued maintaining erosion control items including silt fence, rock filter dams, erosion control blankets, and placing temporary seed as needed to prevent erosion. Clearing and grubbing activities are complete. Three major earthwork tasks remain and include embankment at the former archeological area, embankment south of IH 20 for the northbound exit ramp to IH 20, and finally, excavation at FM 849 once traffic is switched to the realigned pavement. The Contractor has completed the earthwork, flexible base, and prime coat for the pavement tie-ins at FM 849.

The substructure and superstructure construction of all bridges on the project is complete. The only remaining bridge items are grinding and grooving the deck surfaces. Rip rap construction for bridge abutments is essentially complete at all bridge abutment locations with minor concrete work required at a few locations. All retaining wall construction is complete on the project. Construction of project culverts and storm sewer is complete. Grading and rip rap construction is still ongoing for drainage ditches throughout the Project.

Subgrade cement treatment is complete at all locations except for areas with outstanding earthwork, including the northbound exit ramp south of IH 20, a short section of mainlanes at existing FM 849, and at the former archaeological site. Flexible base has been placed almost everywhere the subgrade has been treated. Outstanding flexible base areas include a 1.5 miles section between the former archeological area and CR 4118 along with the three locations still lacking cement treatment as summarized above. Major pavement activities progressed in March, including the placement of two inches of asphalt for three of the four ramps at FM 16 and four inches of asphalt for the mainlanes from the Davis Branch Tributary bridge to the halfway point between CR 4118 and CR 431, covering approximately two miles.

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	85.73%
Earthwork	98.73%
Drainage	71.12%
Sub-base and Base Course	73.96%
Pavement	25.06%
Structures	99.86%
Pavement Markings and Signals	29.84%
Environmental	73.06%
Extra Work Items	58.63%
Change Orders	33.17%

## 1.6 FINANCIAL SUMMARY

Table 4 shows the overall financial status for the Toll 49 Segment 4 project through April 1, 2018. 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**

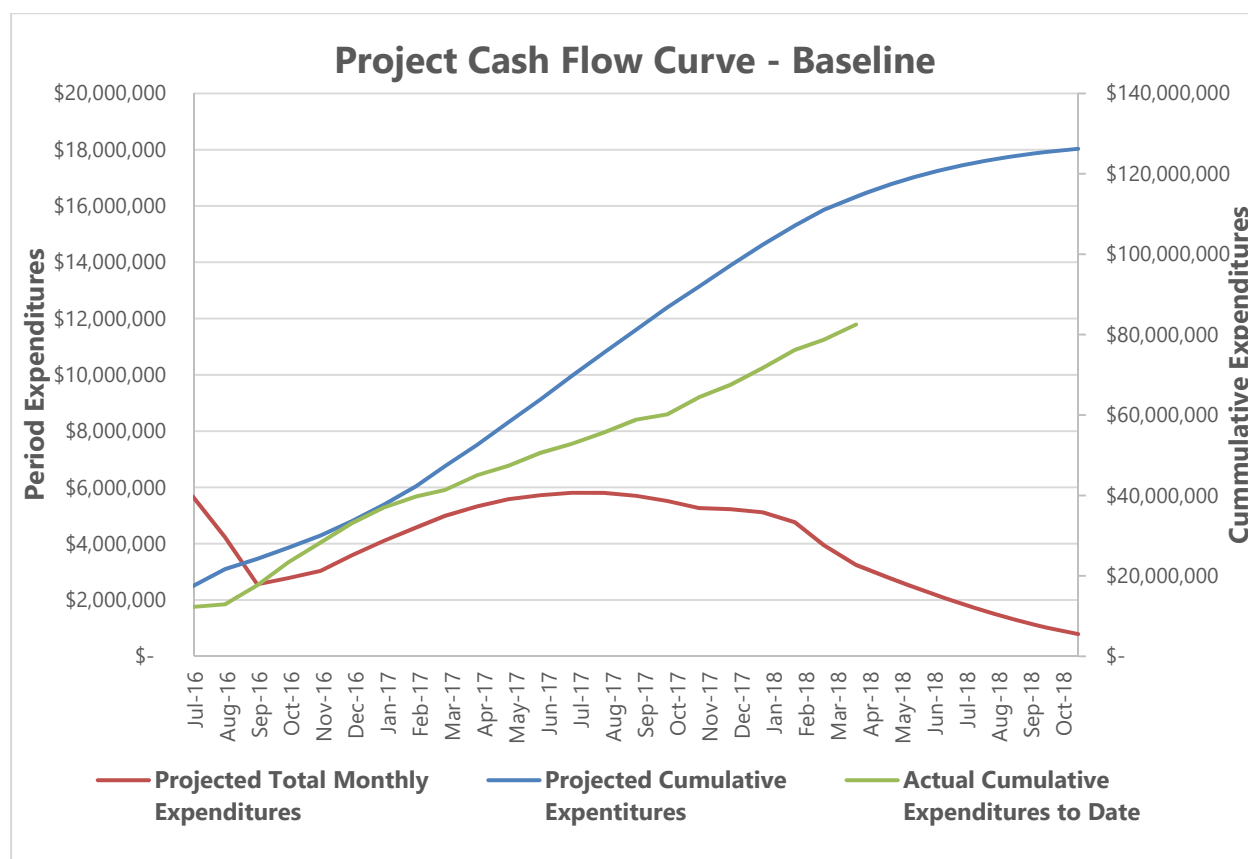
Project Description	Original Cost Estimate (\$)	Expenditures to Date (\$)	Estimated Remaining Cost (\$)	Estimate at Completion (\$)
Toll 49 Segment 4	\$126,220,000	\$82,519,635.76	\$43,700,364.24	\$126,220,000

*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 \$13.5 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" 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 <sup>1</sup>	\$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 <sup>2</sup>	\$4,389,160.65
Change Order No. 12 <sup>3</sup>	\$1,078,075.83
Change Order No. 13	\$493,609.77
Change Order No. 14	\$2,660,075.00
Change Order No. 15	\$24,838.18
Change Order No. 16	\$28,495.58
Change Order No. 17	\$50,000.00
Change Order No. 18	\$11,860.97
Change Order No. 19	\$100,000.00
Change Order No. 20	\$67,382.19
<b>Current Authorized Contract Amount:</b>	<b>\$78,511,010.76</b>
<b>Previous total of Contractor Payments:</b>	<b>\$54,951,559.31</b>
Amount Paid this Reporting Period:	\$3,368,252.10
<b>Total Amount Paid To-Date:</b>	<b>\$58,319,811.39</b>
Retainage withheld:	\$0.00
<b>Approved Amount for work completed (through Draw No. 20):</b>	<b>\$58,319,811.39</b>
<b>Amount remaining for work to be completed:</b>	<b>\$20,191,199.37</b>
<b>Total Percent of Budget Expended through March 31, 2018:</b>	<b>74.28%</b>

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

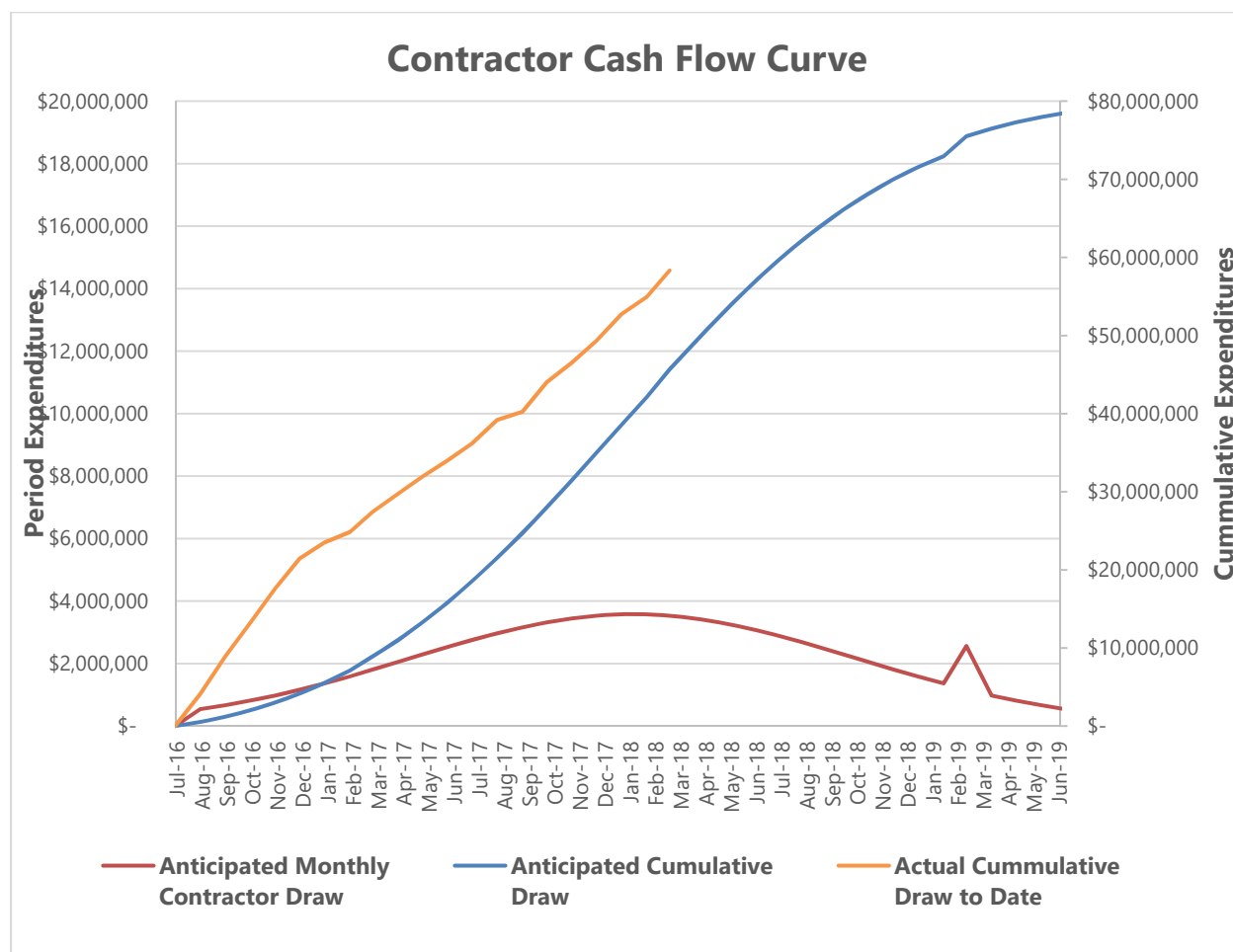
### 1.7.1 Summary of Change Orders This Reporting Period

During the reporting period, the NET RMA executed Change Orders No. 18, 19 and 20. Change Order No. 18 includes \$11,860.97 to address various minor drainage items including conflicts with existing pipes and ditches. Change Order No. 19 includes a not to exceed amount of \$100,000.00 to cover compensation for seeding activities and off-site sediment clean-up. Change Order No. 20 includes \$67,382.19 to compensate the Contractor for the use of on-road trucking. On-road trucking was necessary to complete earthwork after a delayed utility relocation within the Project right-of-way.

### 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 \$3,925,799.16 to DBE subcontractors, 5.71% of the original contract amount or 95.16% 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:

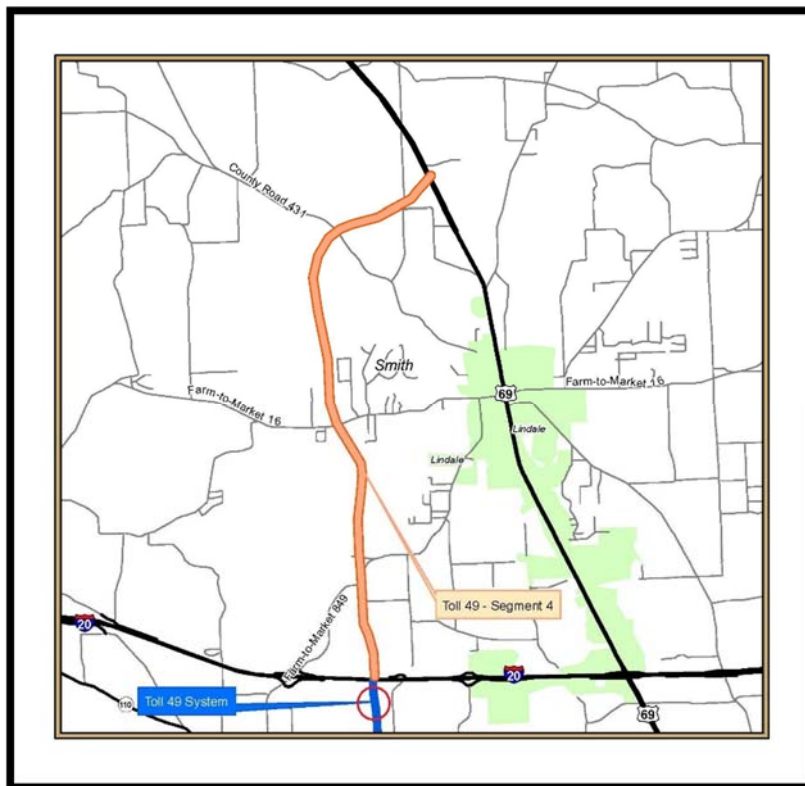
- » Submitted for and posted TCEQ Notice of Intent (NOI) for stormwater discharges. The NOI and large construction site notices are posted on the Contractor's Equal Employment Opportunity board in front of the field office to address accessibility concerns.
- » Implemented proper vegetation clearing 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 and is focused on repairing and replacing measures due to the rains experienced in mid-December of 2017.
- » 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 (APRIL 2018)*





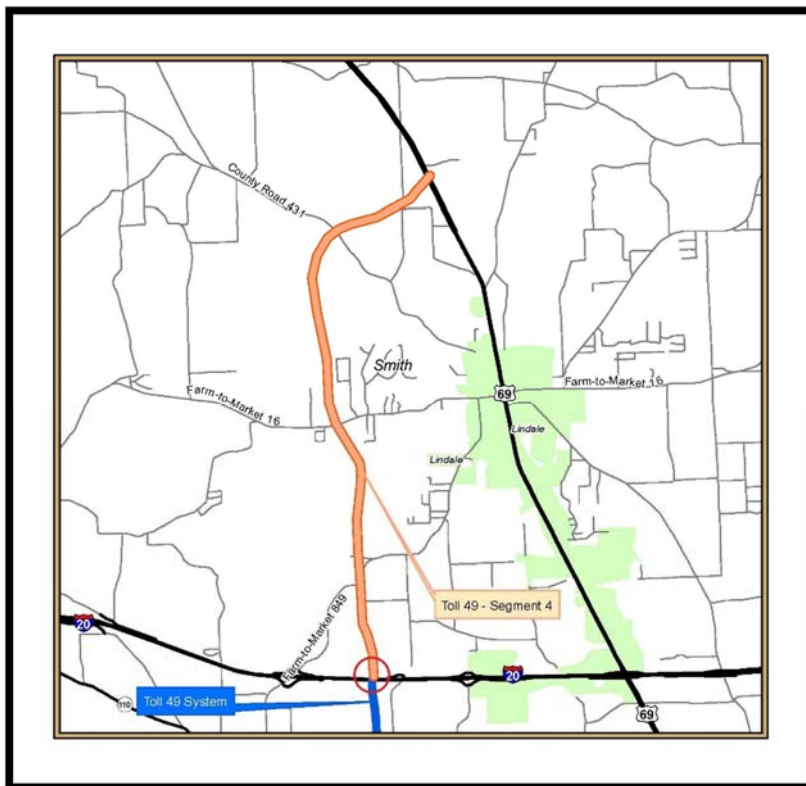
**FIGURE 5: PROJECT AREA SOUTH OF IH 20**







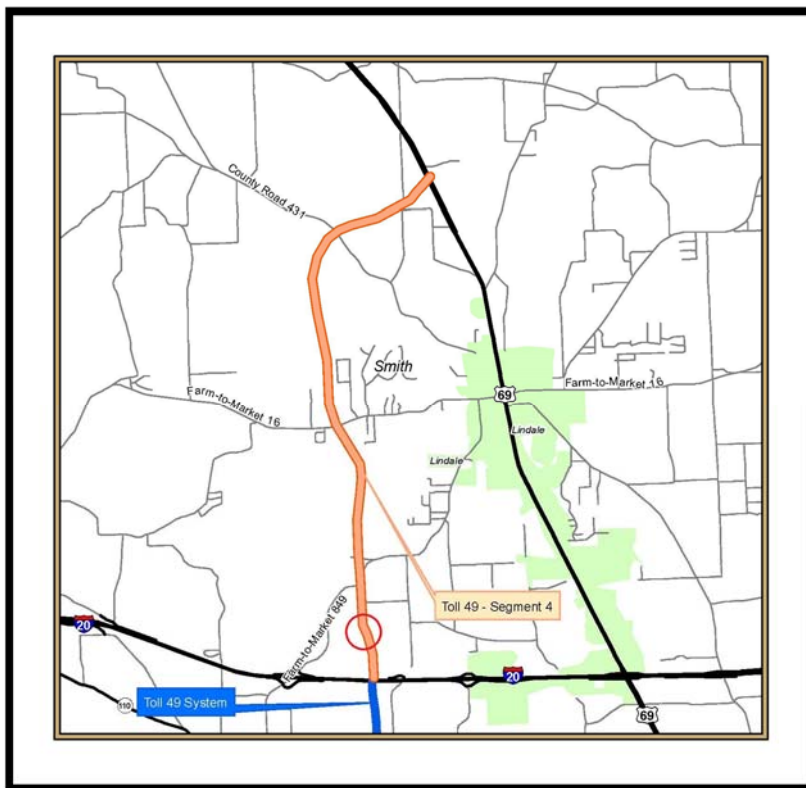
**FIGURE 6: PROJECT AREA AT IH 20**







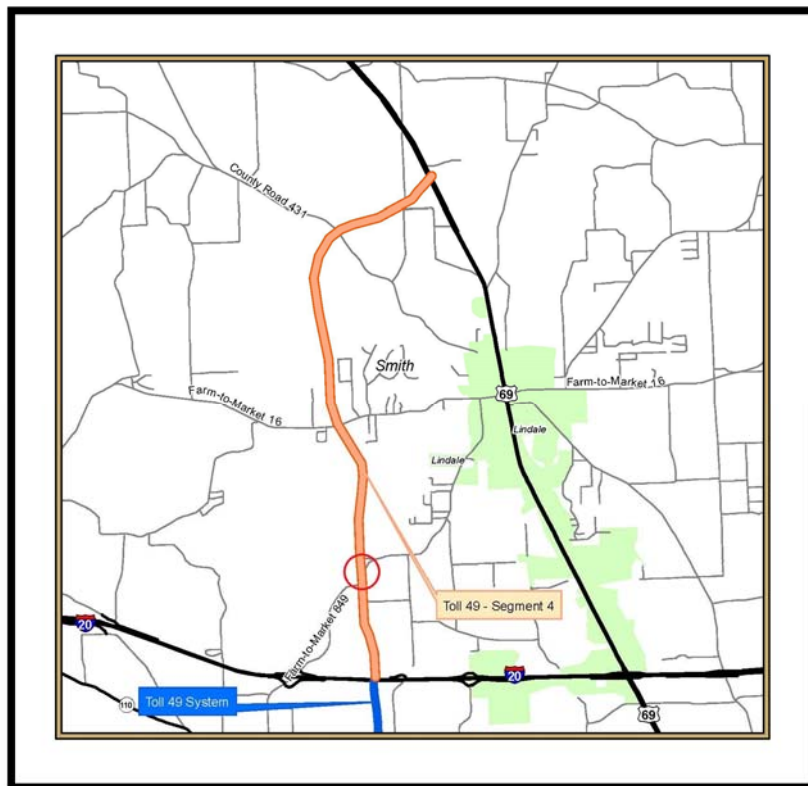
**FIGURE 7: PROJECT AREA BETWEEN IH 20 AND FM 849**







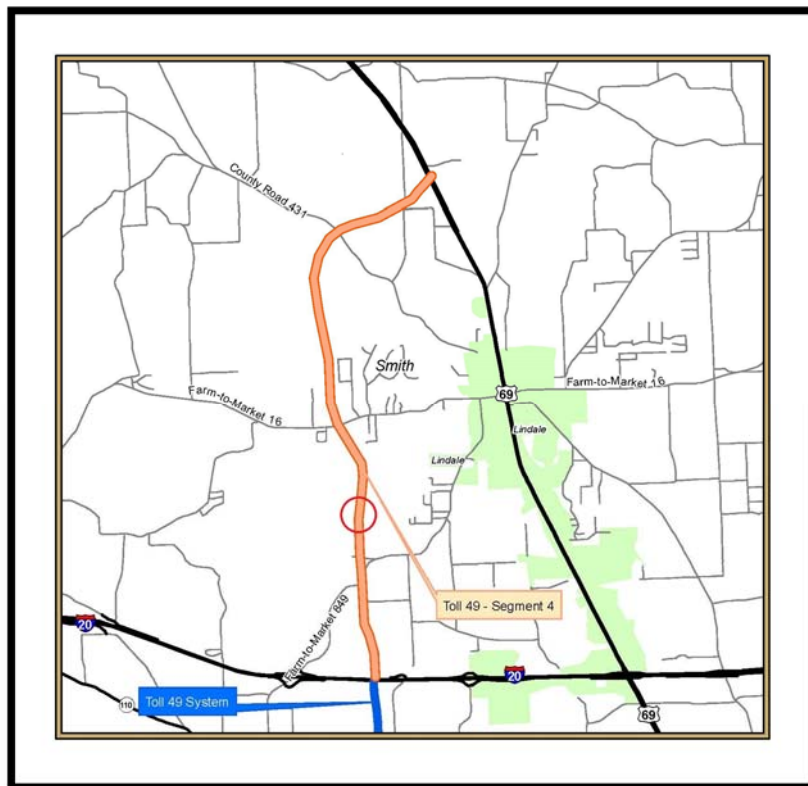
**FIGURE 8: PROJECT AREA AT EXISTING FM 849**







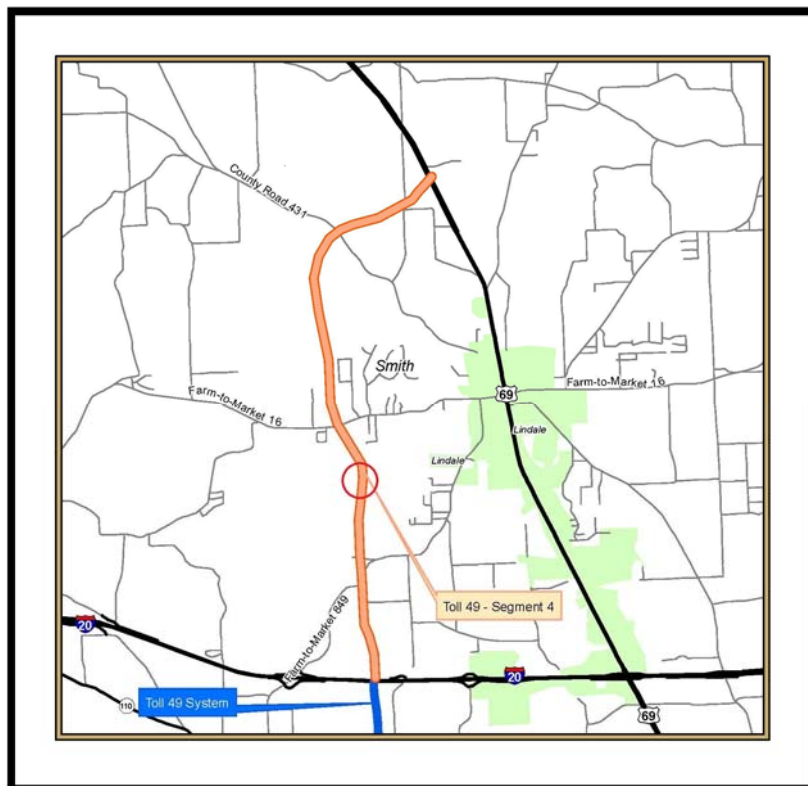
**FIGURE 9: PROJECT AREA DAVIS BRANCH TRIBUTARY**







**FIGURE 10: PROJECT AREA DAVIS BRANCH**







**FIGURE 11: PROJECT AREA BETWEEN DAVIS BRANCH AND FM 16**

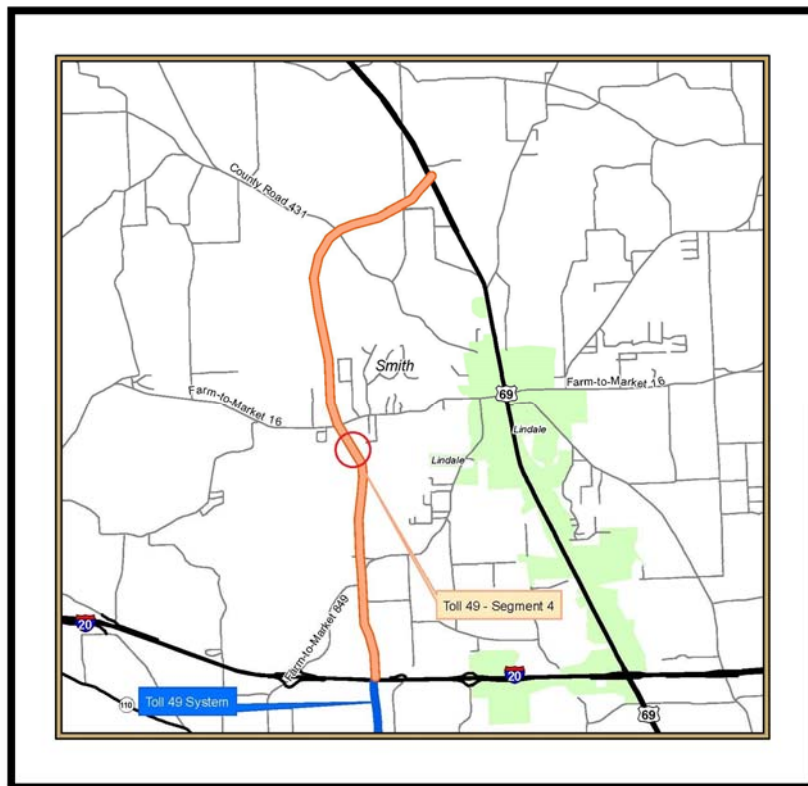
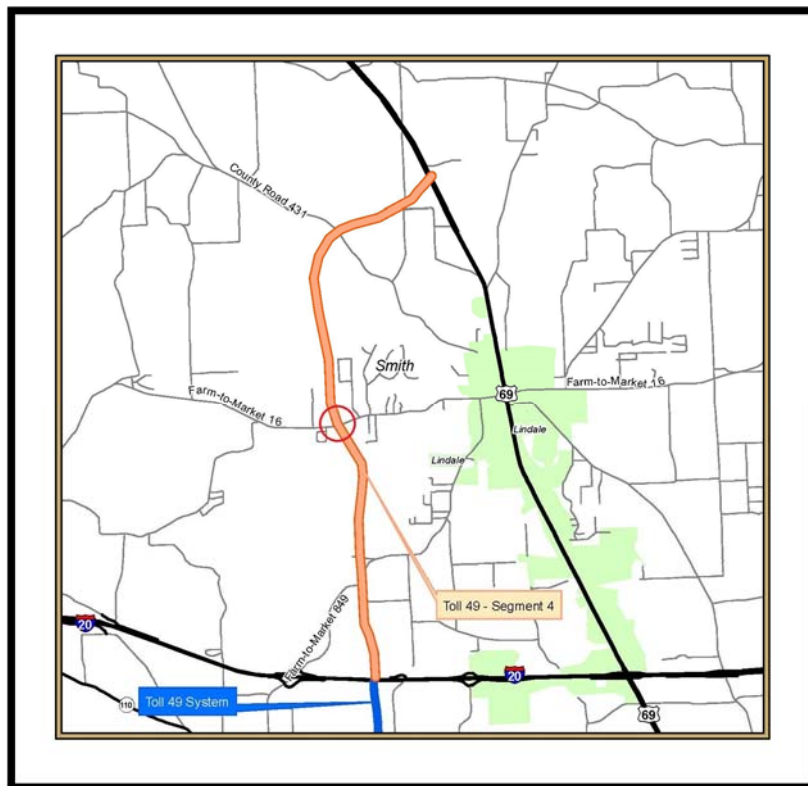






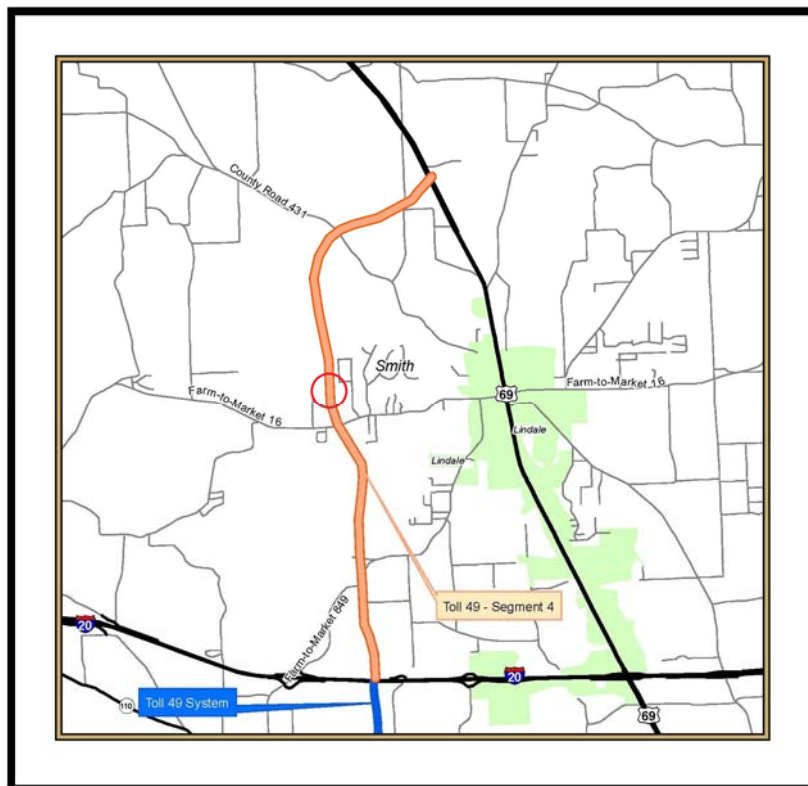
FIGURE 12: PROJECT AREA AT FM 16







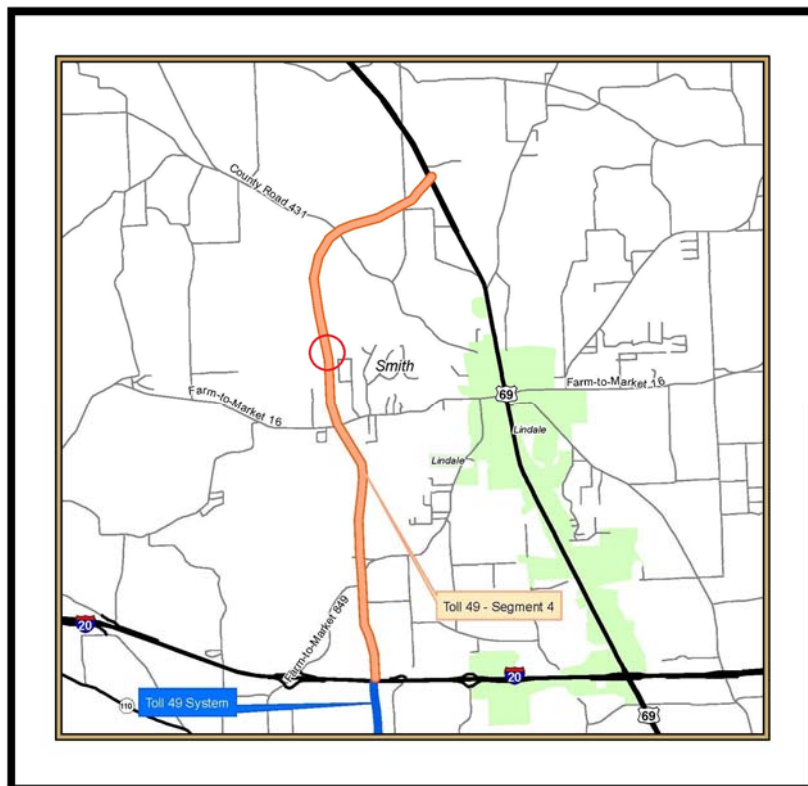
**FIGURE 13: QUARRIES NORTH OF FM 16**







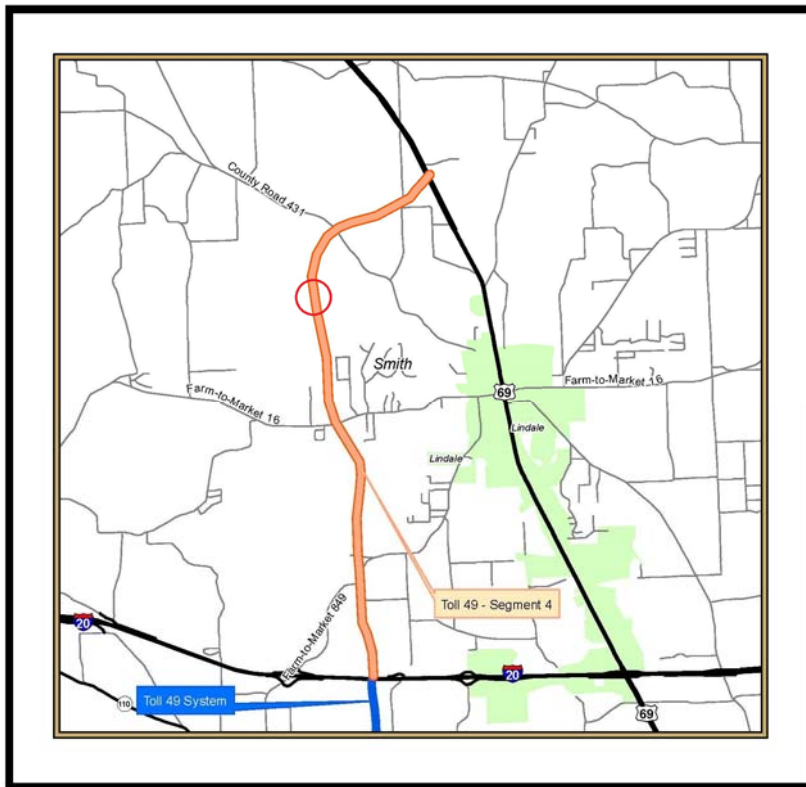
**FIGURE 14: PROJECT AREA NORTH OF THE FM 16 QUARRIES**







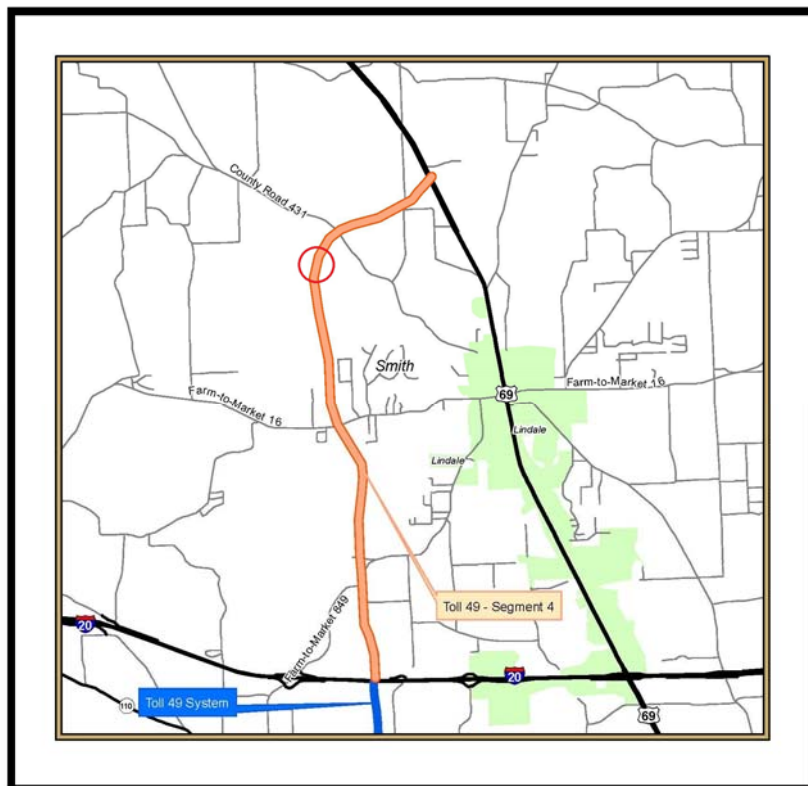
**FIGURE 15: PROJECT AREA BETWEEN FM 16 AND CR 341**







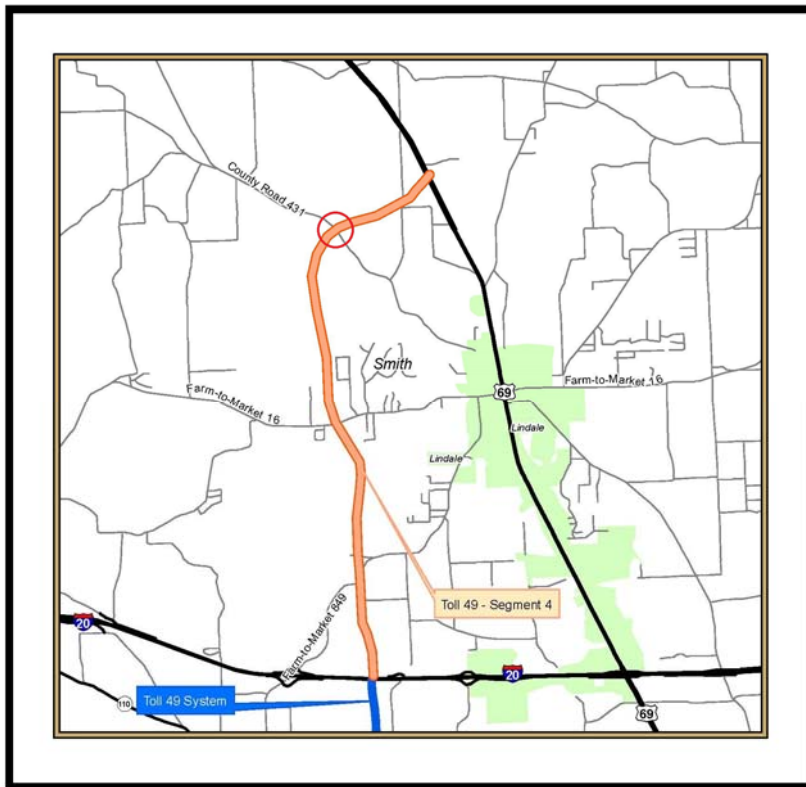
**FIGURE 16: PROJECT AREA SOUTH OF CR 431**







**FIGURE 17: PROJECT AREA AT CR 431**







**FIGURE 18: PROJECT AREA NORTH OF CR 431**

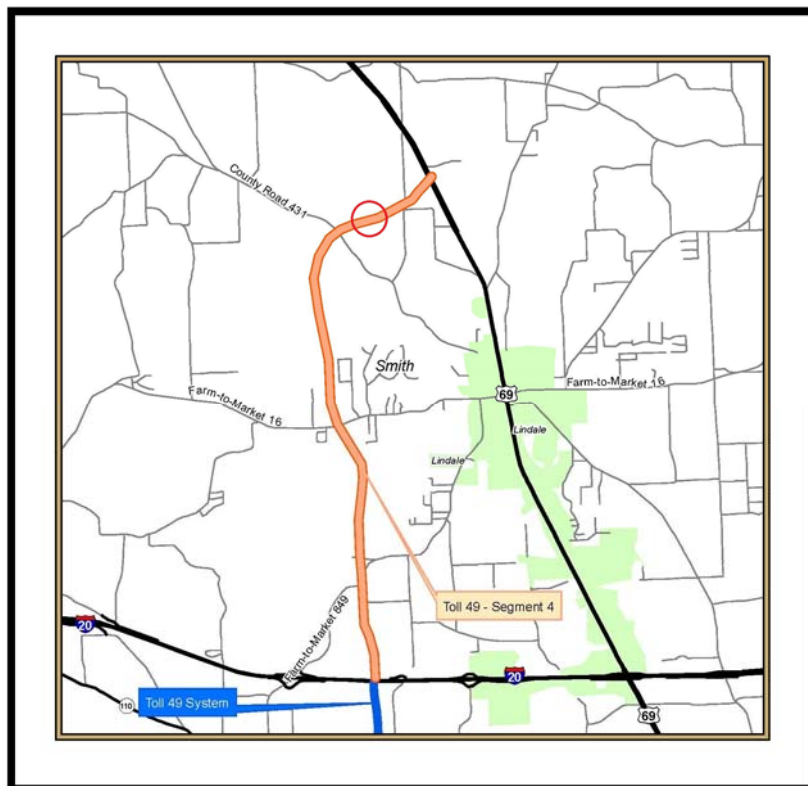
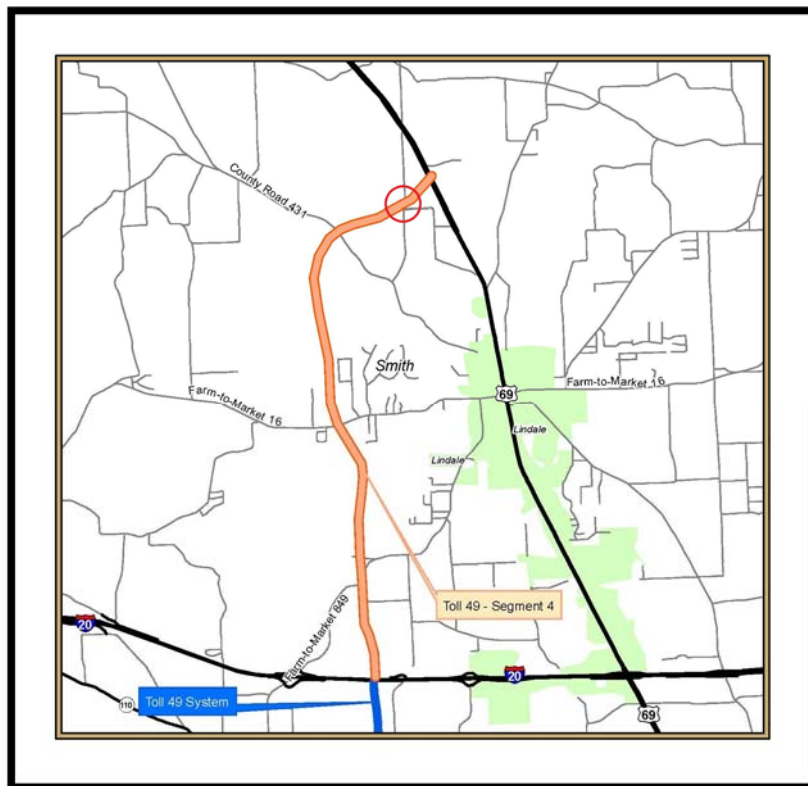






FIGURE 19: PROJECT AREA AT CR 4118







**FIGURE 20: PROJECT AREA AT US 69**

