



Town of Indian Trail

Memo

TO: Mayor and Town Council

FROM: Scott J. Kaufhold, P.E., Director of Engineering and Public Works 

DATE: 8/14/12

COUNCIL DATE: 8/14/12

SUBJECT: Old Monroe Road Feasibility Study Fee Proposal

General Information:

The next step in planning for the widening of Old Monroe Road from Wesley Chapel Road westward involves producing a feasibility study as required by the NCDOT. The study will assess right-of-way needs, utility relocations, stream & wetland impacts, congestion management & relief, conformity with state transportation plans, and preliminary cost estimates. The proposed fee is \$32,750.58.

Staff recommends fee proposal.

Required Action:

Approval of fee proposal.

Attachments:

Old Monroe Road Feasibility Study Fee Proposal

TOWN OF INDIAN TRAIL
SR 1009 OLD MONROE ROAD FEASIBILITY STUDY

SCOPE OF WORK - DRAFT

PROJECT DESCRIPTION

NCDOT PDEA TIP project, U-4714, is to evaluate SR 1009 (John Street / Old Monroe Road) from SR 3448-3474 (Trade Street) to SR 1377 (Wesley Chapel – Stouts Road) and determine improvements for the corridor in order to improve traffic operations. The Town of Indian Trail is taking a proactive approach in evaluating South Fork Road to Wesley-Chapel Road and investigate how different 4-lane typical cross-sections (roadway, pedestrian, bicycle, and transit amenities) could impact the footprint of Old Monroe Road and the surrounding areas. The evaluation will develop a matrix to evaluate impacts to various issues for each of the different typical cross-sections. The evaluation will also develop conceptual cost estimates and determine the length of corridor improvements per various options in order for the Town of Indian Trail to determine how best to utilize their current bond referendum funds on improving Old Monroe Road.

WORK PROGRAM

Task 1: PROJECT MANAGEMENT

Meet with the Town of Indian Trail's Project Manager and NCDOT Division 10 to discuss/review practices and procedure as well as ensure clear communication on the project methodology, effective budget oversight and scheduling.

Task 2: DATA COLLECTION/INFORMATION BASE

The purpose of this phase will be to gather relevant background information on the operations of Old Monroe Road and the various cross-streets within the study corridor. The following data collections will be:

- 2.1 Accident data;
- 2.2 Vehicle Traffic;
 - a) Existing Traffic counts
 - b) Future traffic volumes, with approved growth rates per Town of Indian Trail and NCDOT
- 2.3 Review of related plans and studies including, but not limited to:

MUMPO 2030 and draft 2035 LRTP, other transportation improvements projects, Indian Trail Comprehensive Plan, Vision Plan, Parks and Greenways Plans, and Design Standards.

- 2.4 Identify up to 4 different 4-Lane typical cross-sections including number of through travel lanes, median, bicycle facilities, and pedestrian facilities.

Task 3: TRANSPORTATION ANALYSIS/MATRIX DEVELOPMENT

After information on the transportation network has been collected and analyzed and input from the town and possible stakeholders has been obtained, a matrix will be developed for the evaluation of various 4-lane typical cross-sections and their potential impacts.

- 3.1 Evaluation criteria will be developed in order to evaluate and rank each 4-lane typical cross-section by analyzing:
 - Right-of-Way
 - Utilities and Utility Relocations
 - Stream/wetland/floodplain crossings
 - Social Impacts/Environmental Justice
 - Congestion Management/Relief
 - Conformity with Local/State Transportation Plans (coordinate with U-4714 project)
 - Traffic Analysis on Old Monroe Road
 - Future Traffic Volumes
 - Project limits and cost options
- 3.2 Conduct the evaluation and rank each 4-lane typical cross-section utilizing GIS and developing conceptual engineering footprints, while also evaluating the impacts for symmetrical and asymmetrical widenings.

Task 4: CONCEPTUAL COST ESTIMATES AND CONSTRUCTABILITY LIMITS

STV/RWA will develop conceptual cost estimates per each 4-lane typical cross-section option and determine the limits of constructability per each option per the allocated funding associated with this project from the Town of Indian Trail's recent approved bond referendum.

- 4.1 Develop Conceptual Cost Estimates utilizing conceptual engineering plans that are developed using the typical-cross section footprints and overlaying the footprints onto GIS based mapping:

- Right-of-Way
- Utility Relocation
- Roadway improvements

4.2 Identify construction limits per 4-lane typical cross-section options

4.3 Develop Draft and Final Feasibility Report

STV/RWA - ESTIMATE OF ENGINEERING FEES

RWA Proposal or Job Number:
 Project Description/Location:
 Client:
 Study Assumptions:

2514189 Client Job Number:
 Old Monroe Road Feasibility Study
 Town of Indian Trail

STV to acquire crash data from NCDOT
 Indian Trail and/or Union County to provide GIS data and mapping files

Prepared By/Date:
 Reviewed By/Date:

SRS 8-9-12

Manhours by Classification

	PM	STP	TP	SE	EN	Tech	Total
Direct Labor Estimate:							
1. PROJECT MANAGEMENT	24						24
2. DATA COLLECTION/Information Base							
2.1 Accident data					4	6	10
2.2 Vehicle Traffic					8	12	20
2.3 Review of related plans			8				8
2.4 Identify upto four 4-Lane Typical Sections	4				16	20	40
3. TRANSPORTATION ANALYSIS/MATRIX DEVELOPMENT							
3.1 Develop evaluation criteria	4	8	16				28
3.2 Conduct evaluation process	6	16	20		14		56
4. CONCEPTUAL COST ESTIMATES AND CONSTRUCTABILITY LIMITS							
4.1 Develop Conceptual Cost Estimates	4			6	16	24	50
4.2 Identify constructability limits	6			6	16	32	60
4.3 Develop Draft and Final Feasibility Report	6	24	24		8		62
Manhour Totals:	0	54	56	68	12	82	366
Hourly Payroll Rate (uses lookup table):	\$0.00	\$48.00	\$30.68	\$23.00	\$32.87	\$27.09	\$25.58
Overhead Multiplier (including fees):	2.979	2.979	2.979	2.979	2.979	2.979	2.979
Billing Rate (including fees):	\$0.00	\$142.97	\$91.38	\$68.51	\$97.90	\$80.69	\$76.19
TOTAL DL + OH:	\$0.00	\$7,720.38	\$5,117.28	\$4,658.68	\$1,174.80	\$6,616.58	\$7,161.86

Direct Non-Salary Cost (DNSC) Estimate:

	UNITS	UNIT COST	ITEM COST
Travel to site (40 mi/trip), per vehicle-mile (10 trips)	400	\$0.555	\$222.00
Travel to Albemarle(80 mi/trip), per vehicle-mile		\$0.585	0.00
Ground Transport, per vehicle-trip		45.00	0.00
Lunch, per person per day (5 days x 2 people)		9.00	0.00
Lodging, per room-night (0 nights/0 people)		67.00	0.00
Newsletters (300 copies)			
- color photocopies, (8.5 x 11), per copy			0.00
- postage, per newsletter			0.00
Reports (35 copies)			
- b/w photocopies, (8.5 x 11), per copy	250	0.04	10.00
- color photocopies, (8.5 x 11), per copy	100	0.49	49.00
- b/w photocopies, (11 x 17), per copy		0.10	0.00
- color photocopies, (11 x 17), per copy		2.58	0.00
- report binding & cover, per report	20	1.00	20.00
- report tabs, per report		1.00	0.00
Bond Reproductions, per sheet		0.42	0.00
Paper Sepias, per sheet		3.00	0.00
Mylar Sepias, per sheet		10.00	0.00
Photographs, per roll (including development)		20.00	0.00
Long Distance Telephone, per minute		0.05	0.00
Facsimile, per minute			0.00
Overnight Postage, per package		20.00	0.00
Traffic Counter Rentals		\$250.00	0.00
TOTAL DNSC:			\$301.00

Summary	
TOTAL DL + OH:	\$32,449.58
FEE (0%):	0.00
TOTAL DNSC:	301.00
FEE (0%):	0.00
(SUBS):	0.00
FEE (0%):	0.00
COFC:	0.00
Grand Total:	\$32,750.58

* - rates are suggested; modify as needed

TOTAL DNSC: \$301.00 *Note: multiplier includes our overhead rate of 1.7:

(PM) Scot Sibert, AICP - Project Manager
 (STP) Russell Adams, AICP - Senior Transportation Planner
 (TP) Kathryn Curry - Transportation Planner
 (SE) Matt Bell, PE, PTOE - Senior Engineer/Designer
 (EN) Andrew Eagle, PE, PTOE - Engineer/Designer
 (Tech) Asmita Gharat - Engineer Technician