

NH 111 CORRIDOR AND WALL STREET EXTENSION STUDY

EXHIBIT 1

SCOPE OF WORK

(From Rockingham Planning Commission/NHDOT Contract
Revised December 10, 2008)

I. BACKGROUND

The NH Route 111 Corridor and Wall Street Extension Study is a Town of Windham feasibility study to determine the feasibility of and develop conceptual plans for three interrelated projects as described below. The study will conduct the required feasibility analyses, develop conceptual plans and carry out related services as outlined in Section II. The study is cooperative effort between the Town, the Rockingham Planning Commission and the NH Department of Transportation. The consultant team selected to conduct the study is led by McFarland-Johnson, Inc. (MJ). The firm was selected by the Project Advisory Committee through an open, competitive process involving the Town, RPC and NHDOT and overseen by the RPC.

- A. Wall Street Extension: The Town of Windham has identified the potential for Wall Street to serve as a new connector road between NH 111 and North Lowell Road and Londonderry Road, which would significantly improve traffic circulation in the center of Town. Wall Street is presently a short dead end commercial access road off NH 111 located about 1.3 miles west of the I-93 Exit 3 interchange (see Figure 2).

North Lowell Road, a two lane Class II State Secondary Highway, is one of the most heavily traveled roads in the Town of Windham (2004 AADT volume for No. Lowell Road near the was 5200 cars per day, up from 4500 in 2001). The road is currently 22 to 24 feet in width with a poorly defined gravel shoulder. It is hilly with very limited sight distance in many segments. It serves to connect residential areas in Derry, Londonderry and northern Windham to NH 111 and thence to I-93. As these areas have grown and alternative routes to I-93 have become congested, this travel pattern has become popular, resulting in high volumes and congestion on these secondary roads. Because No. Lowell Road connects to NH 111 at the Town Center, this increase in traffic has had a particularly harmful effect in the community. Town officials expect this problem to become significantly worse during and after the expansion of I-93.

The existence of the proposed connector should result in the diversion of most the traffic whose origin or destination is between NH 111 east of Wall Street, (including I-93) and No. Lowell and Londonderry Roads north of the connector. It can be expected, therefore, to improve the through-traffic congestion affecting the town center and result in significant benefits in traffic circulation and efficiency.

The primary objective for this part of the study is to develop the rationale, (purpose and need), feasibility, conceptual layout and cost estimate of the construction of the extension. The outcome, if determined to be feasible and necessary, will be recommended for inclusion as a project-specific element to the Rockingham MPO's Long Range Transportation Plan and TIP.

- B. NH 111 Corridor Study: The segment of NH 111 from I-93 west to So. Lowell Road will undergo significant changes in operation and traffic volume with the widening of I-93 and reconstruction

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of the Exit 3 interchange. Significant changes in development and traffic volumes are expected on this segment over the next twenty years. In addition, reconstruction plans for Exit 3 call for the relocation of a section of NH 111 just west of the interchange, which will require careful integration with the bypassed segment. Given these circumstances the Town and the NHDOT want to evaluate roadway improvement needs. This portion of the study would identify and develop conceptual plans for future roadway and intersection improvements in this segment, develop an access management plan and identify access management facility needs.

- C. NH 111 Relocation -- Windham Village Center: As the third element of the overall study, the Town seeks to develop a feasibility analysis and conceptual plan for relocating a one (1) mile section of NH 111 beginning just east of the NH 111/ So. Lowell Road intersection and ending at an undefined point between the Post Office and NH 111 / Wall Street intersection. The purpose of this relocation is to allow the full development of the Windham Village Center in accordance to the Town's Master Plan and without the need to accommodate a major east west arterial through its center. The Town acknowledges that the relocation of 111 is a long term objective that many not be constructed from some years to come. However, the feasibility and appropriate path of a future relocated 111 need to be determined in the present so that it can be planned for as development in the Village Center proceeds (see Figure 3).

II. TASK DESCRIPTIONS

The project will include all required project elements and tasks to each of the three major components of the study as generally described in A., B. and C. above. The following sections include more detailed descriptions of the scope of work expected to be conducted in order to carryout for this study as a whole.

While the RPC will be the party with overall responsible for carrying out the project, responsibility for carrying out the project tasks will be divided between the Planning Department of the Town of Windham, RPC staff and the Consultant team led by McFarland-Johnson, Inc. (MJ), as indicated.

The study area (Figure 2) encompasses the area on the east bounded by I-93, on the south by NH 111 (including the southerly extent of the Village Center District), on the west by a line extending approximately from So. Lowell/NH111 intersection to Jackman Road, and from there east to I-93.

TASK	RESPONSIBLE PARTY
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1.0 Public Involvement:	
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| A. Establish/Support Project Advisory Committee | |
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(RPC lead with Town and Consultant Support)

Establish Project Advisory committee to meet during the project period to provide regular progress reports and to solicit feedback from members regarding study design and execution. RPC staff will organize and notice these meetings. Potential advisory committee members include representatives from the Selectmen, Planning Department, RPC staff, NHDOT District V, NHDOT Planning, and others as determined by the Town. It is anticipated that this committee

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will meet up to six times during the study to provide input to staff and consultants on the scope and progress and recommendations of the study.

B. Conduct Public Informational Meetings *(RPC lead with Town and Consultant Support)*

Four (4) public information meetings are anticipated during the project period at which public presentations will be made regarding study methods, findings and recommendations of the study or its sub-elements, and to receive public input. RPC staff will organize and moderate these meetings; Town Planning Department staff will provide public notification for the meeting in an appropriate manner. The Consultant will be primarily responsible for meeting content and documentation. These meetings are expected at the following intervals:

- Combined project kickoff/existing conditions report;
- Proposed interim recommendations and Wall Street Extension assessment;
- Windham Village Center / NH 111 Relocation Feasibility assessment
- Project results and long range recommendations

C. Local Official Meetings *(Town with RPC and Consultant Support)*

Attend local board meetings to present draft study results to local officials (regularly scheduled, or special joint meeting of Board of Selectmen, Planning Board, and Conservation Commission, others as appropriate) prior to preparation of final draft. Town staff will make necessary arrangements for these meetings.

Assumptions:

- It is assumed that there will be no more than two meetings with public officials and that no more than two MJ staff members will be needed at any of the project meetings (Advisory, Information, or Local Officials). Subconsultant participation has been assumed as follows: RSG – 3 meetings, CRJ – 5 meetings, and PPS – 3 meetings (in addition to Placemaking Workshop).

2.0 Existing Conditions Analysis: Base Mapping, Environmental and Land Use *(Consultant)*

A. Develop Study Area Base Maps

1. Planimetric base map from Town base map¹ (2005 digital orthophotography at 0.5 foot ground pixel resolution (GPR) to include roads, water and other prominent physical features
2. Base map with tax parcel map overlay (available from the Town), including road rights of way.

Assumptions:

- The project will be developed in English units.

¹ Flown: April 2005; Photo Scale: 1"=600' in Color; Mapping Scale and Accuracy Standards: 1"=100' Scale Pixel Resolution: 6-inch

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- No additional survey is required. Source data for project base mapping will be supplied by the Town in AutoCAD or Arc-View/Geodatabase format.

B. Environmental Constraints

1. Wetlands (Town inventory supplemented with field mapping as needed)
2. Floodplains (100 and 500 year)
3. Elevation (2 foot contour or better derived from Town base map DEM)
4. Endangered & threatened species (Natural Heritage Inventory)
5. Historic and Public Recreation Sites
6. Others as identified by project need

Assumptions:

- Environmental coordination and evaluation effort is incorporated into the pertinent tasks. It is assumed one meeting will be held with the resource agencies as part of one of the NHDOT monthly meetings. All environmental analysis and resource identification will be done at a macro-scale and will not include detailed analyses for any resource. The RPC will provide GIS data available as part of its standard GIS map set; Town of Windham will provide copies (electronic if available) of existing natural resource maps and/or delineations conducted by the Town.

C. Land Use - Digitized overlay map of existing land use from aerial photography (available from RPC in geodatabase format); Town parcel data and Assessor's records.

Assumptions:

- The Town of Windham will provide all Land Use and Zoning information and data including future projections.

D. Zoning – As needed, digitized overlay map of existing zoning district boundaries with appropriate zone designations

3.0 Existing Conditions Analysis: Traffic and Operations

(Consultant)

A. Traffic Volumes

- Adjusted Average Daily Traffic volumes at appropriate locations on the following roads: NH111 ; No. Lowell Rd.; So. Lowell Rd.; Londonderry Rd., Wall Street.
- Turning Movements at all major intersections
- Vehicle Classification on NH111 and No. Lowell Rd.

B. Inventory Pavement and Roadway Conditions

C. Highway Capacity Analysis

- Existing Intersection Operational Conditions
- Existing Segment Operational Conditions
- Vehicle Speeds

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- D. Accident Locations
 - Accident data collection and analysis
 - Identification of hazardous intersections and road segments.
- E. Circulation & Operational Issues
 - Travel pattern identification and analysis
 - Alternative route evaluation (for Wall Street Extension)
- F. Existing Highway Deficiencies
 - Level of Service analysis for intersections and highway segments
 - Signal Warrant analyses, as needed
 - Safety deficiencies
 - Access management deficiencies

Assumptions:

- The project design year will be 2030

4.0 Wall Street Extension Feasibility & Conceptual Design *(Consultant)*

- A. Identify and evaluate extension alignment alternatives, including a no-build alternative, that appear most feasible based upon:
 - roadway geometry
 - constructability
 - potential property and neighborhood impacts
 - environmental assessment

Assumptions:

- As many as three alternatives will be investigated for the Wall Street Extension. No detailed design is required for any of the alternatives.

5.0 Short-term Project Recommendations

- A. Wall Street Extension: Based on results of Task 4, prepare conceptual design, environmental assessment and cost estimates for an extension connecting Wall Street and No. Lowell Road. Prepare project proposal detail, including maps and plans and associated documentation for presentation to local officials, property owners, MPO and NHDOT officials, and for submission for project selection through the MPO process. ***(Consultant)***
- B. Roadway Improvements: Prepare conceptual plans and diagrams of recommended interim improvements for other road segments and intersections where opportunities exist to better accommodate current and near-term traffic conditions and correct safety and access deficiencies utilizing low cost improvements. ***(Consultant)***
- C. Access Management: Prepare conceptual plans and diagrams of recommended access management improvements which could be incorporated into specific interim or short term improvement projects recommended. ***(Consultant with assistance from the Town)***

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- D. Land Use and Zoning: Develop specific recommendations for short term changes in zoning ordinances, subdivision and site plan regulations, and non-regulatory measures necessary or advisable to plan for near term development and to implement access management standards. **(Town)**

6.0 Projected Future Conditions:

- A. Land Use and Development **(Town to supply future land use assumptions)**
- Assumed utilization of undeveloped land
 - Known or expected major traffic generators
 - Village Center District Conceptual Plan buildout
- B. Future Year Traffic Volumes **(Consultant)**
- Traffic model output
 - Local and regional growth trends
 - Alternative mode assumptions
- C. Future Year Traffic Conditions and Deficiencies **(Consultant)**
- Level of service analysis for key intersections and segments
 - Identification of deficiencies

7.0 Long Range Recommendations:

- A. NH 111 Village Center Relocation: Identify and evaluate and recommend relocation alternatives based upon: **(Consultant)**
- roadway geometry
 - environmental assessment
 - potential property and neighborhood impacts
 - consistency with Village Center Concept Plan (Figure 3)
 - cost of construction
- B. Conceptual Roadway Plans **(Consultant)**
- Intersection conceptual plans
 - Roadway-typical cross-section design by segment
 - TSM recommendations, including signal coordination
 - Access management facilities
 - Bicycle and Pedestrian facility recommendations
 - Landscaping and Aesthetic enhancement recommendations
- Assumptions:
As many as three alternatives will be investigated for the relocated NH 111 Corridor. No detailed design is required for any of the alternatives.
- C. Preliminary Construction Cost Estimates **(Consultant)**
- based on unit costs and ROW estimates
- D. Project Prioritization **(Advisory Committee and Consultant)**
- consultant recommendations

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- as determined by Study Advisory Committee
- project recommendations to be submitted to the Rockingham MPO

- E. Access Management Plan **(Town and Consultant)**
 - Facility recommendations
 - Regulatory Recommendations
 - Draft Memorandum of Understanding between Windham and NHDOT regarding access design and driveway permitting process

- F. Project Financing Alternatives Report **(Consultant)**
 - Public/Private options
 - Betterment district
 - Other

Assumptions:

- A detailed funding plan will not be developed for each project component. The Project Financing Alternative report will outline strategies for the funding of each component of the project.

8.0 Document Preparation

- Technical Memos; Draft & Final Reports (see below) **(Consultant)**
- Study Advisory Committee and Public Meeting Summaries **(Consultant)**

Assumptions:

- All report documents will submitted in hardcopy and electronic form, however, no submission of electronic plan files other than as PDF files will be required.

9.0 Project Management/Coordination/Administration **(RPC)**

- RPC/Town/Consultant coordination meetings
- NHDOT status meetings
- Invoice process and accounting

III. PRODUCTS

The following products will be considered the minimum deliverables for this project for which the consultant will be responsible. All products will be produced in both hardcopy and electronic document form , however, no submission of electronic plan files other than as PDF files will be required:

- Corridor base maps and resource analysis maps
- Summaries of Study Advisory Committee and Public information meetings
- Technical Memoranda as necessary summarizing results of major tasks
- Conceptual plan diagrams (digital files) of existing and recommended future intersection and road segment configurations, road extensions and relocations
- Public presentation materials
- Short term project recommendations report, including Wall Street Extension Feasibility Report
- Draft report incorporating all components of Task II, Sections 1-7
- Final Report & Executive Summary of recommendations

TOTAL COST SUMMARY

Windham, NH
New Hampshire 111 Corridor and Wall Street Extension Study



FIRM	COST
McFARLAND-JOHNSON, INC.	\$ 136,733.00
CAROL R. JOHNSON & ASSOCIATES, INC.	\$ 26,896.01
RESOURCE SYSTEMS GROUP, INC.	\$ 28,047.87
PROJECT FOR PUBLIC SPACES	\$ 37,767.15
TOTAL CONSULTANT PROJECT COST	\$ 229,444.03
TOWN OF WINDHAM, NH	\$ 26,856.00
TOTAL PROJECT COST	\$ 256,300.03