

MEMORANDUM

DATE: October 7, 2010

TO: Donna Barhle, Lacey Rail Trail Environmental Committee

CC: Helen Henderson, Lacey Rail Trail Environmental Committee
Keith Riniker, PE, PTOE, Sabra, Wang & Associates, Inc.

FROM: O. Wayne Trautman, P.E., Sabra, Wang & Associates, Inc.

SUBJECT: NJDOT Railroad Avenue Extended, Lacey Twp., Ocean Co., New Jersey
CAFRA Permit Application 1512-08-0020.1
Construction Cost Estimate

SWA FILE No. 10-34.02

Introduction

This memorandum summarizes our approach to developing a construction cost estimate for the Railroad Avenue Extension project in Lacey Township, Ocean County, New Jersey. The construction cost estimate is included in Attachment A. This estimate is based on plans for the Railroad Avenue Extension project, dated September 12, 2008, as prepared by Edward R. Klump, P.E. from T& M Associates. It should be noted that in our opinion the plans are at a 30% (preliminary) design completion. At this level of design, there are still many factors left unconsidered and unevaluated. Therefore, a 20% contingency was applied in order to account for the rising costs as a project goes from preliminary design to final design.

The attached cost estimate is divided into 5 sections. The remaining sections of the memorandum explain our assumptions for each section. A summary of the costs by section are as follows:

1. Roadway Cost - \$14 Million
2. Utility Relocation - \$2.9 Million
3. Traffic Signals, Signing and Pavement Marking – \$0.5 Million
4. Right of Way - \$4.1 Million
5. Preliminary Items - \$2.5 Million

TOTAL APPROXIMATE COST - \$24 Million

Roadway Cost

Roadway Quantities were extrapolated from the T&M plans. Unclassified excavation was approximated based on the cross sections and profiles included in the Plans Set. Drainage items and paving items were estimated based on the typical sections and the items noted on the Plans.

Unit Prices were determined using the average weighted price from the *New Jersey Department of Transportation Capitol Contracts Bid Price History* from the list of project items awarded 01/01/2009 to 12/31/2009. Items not found in the Bid Price History were estimated based on past experience preparing planning costs. Structure costs were determined using similar structure with as-built costs.

Utility Relocation Costs

Design plans do not include utility relocations. Based on the limited research available at this time, Sabra, Wang & Associates (SWA) determined the major utility impacts would be an existing 36 inch sanitary sewer force main and the 20 inch high pressure gas main. The plans did not include storm drain profiles and SWA used the assumption that construction would be minimal depth. Due to the flat terrain of the project site, minimal flexibility would be allowable in the design process. Therefore, SWA assumed impacts to the existing utilities would occur at the storm drain pipe crossing. SWA assumed a distance of 100 feet each side of each crossing for the relocations.

Unit prices were determined using the average weighted price from the *New Jersey Department of Transportation Capitol Contracts Bid Price History* from the list of project items awarded 01/01/2009 to 12/31/2009.

Traffic Signal, Pavement Markings and Signing

Design plans did not include signals, pavement markings and signing. SWA assumed a new signal at the Route 9 intersection and a new signal at Lacey Road intersection. SWA assumed centerline double yellow pavement marking and edge single white for the length of the project. SWA assumed one (1) 48 inch by 48 inch sign every 200 feet the entire length of the project.

Unit prices for the signs and pavement markings were determined using the average weighted price from the *New Jersey Department of Transportation Capitol Contracts Bid Price History* from the list of project items awarded 01/01/2009 to 12/31/2009.

Right of Way

Per a phone conference with Ms. Donna Bahrle, she indicated that the Town has acquired the railroad Right of Way where the new roadway is located. Therefore no cost for Fee Simple Right of Way was included. However, it was noted that two existing structures are impacted along the roadway alignment and will require a Right of Way purchase for an improved site. Also, additional right of way areas are required to provide adequate site distance at intersecting streets. The proposed infiltration pond left of

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Station 35 +-00 will require an acquisition cost. A required area was measured, six (6) acres and included in the estimate. A revertible and/or construction easement area was assumed at a distance of fifteen (15) feet on each side of the roadway the length of the project.

Unit costs per square feet of right of way and easement were assumed.

Preliminary Items

Preliminary items are costs incurred by the Contractor prior to and in the early stages of construction and are not typically measured, but bid as lump sum items.