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DEPARTMENT OF PUBLIC WORKS
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919.560.4326 • fax 919.560.4316
www.durhamnc.gov

- Engineering
- Stormwater Services
- Street Maintenance
- Transportation

September 4, 2008

Subject: American Tobacco Trail – Phase E
Pedestrian Bridge over I-40 & Trail
Drop-In Information Meeting

Dear interested Stakeholder:

I am writing to you because you were on our initial mailing list or you have attended any of our other two Community meetings and left contact information. The City of Durham, Department of Public Works, cordially invites you to attend our information meeting to discuss the planned pedestrian crossing of I-40 for the American Tobacco Trail near Fayetteville Road. This meeting will differ from the other meetings as there will be no formal presentation. Instead it will be an informal "drop in" type meeting and we will be available to answer your questions. All information will be provided in advance in this mailing. The attached summary chronicles our public involvement and provides our staff recommendation. In addition I have provided an updated schedule illustrating where we are with the overall project. If you are unable to attend the meeting and have questions I will be happy to answer questions by telephone, E-mail, or appointment.

ATT Drop-In Information Meeting:

Date: September 17, 2008

Time: 5:00 to 7:00 PM

Place: Durham City Hall, 1st Floor Council Chambers

Should you have any questions regarding this meeting, please contact R. Lee Murphy, PE, Special Projects Engineer, City of Durham at (919) 560-4326 ext. 230, or via E-mail at lee.murphy@durhamnc.gov.

Very truly yours,

R. Lee Murphy, PE

(over)

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Summary of Public Involvement and Staff Recommendation

The firm of Parsons Brinkerhoff (<http://www.pbworld.com/>) teamed with Steven Grover & Associates (<http://www.stevengrover.com/>) and City staff conducted two public Informational meetings in November 2007 and April 2008.

Public Involvement

The first meeting in November of 2007 was attended by approximately 120 interested citizens including elected officials and advocacy groups. The primary purpose of this meeting was to educate, provide information, and to set the stage for public input. An overview with project goals, constraints, issues and the correlation between thorough up-front work were presented. A slide show followed to provide an overview of the many varieties, types, and styles of pedestrian bridges found in the United States and other Countries. Why certain bridges are suitable for a specific site and the criterion that play a role in selection were discussed. The theme of "What makes a certain Bridge successful" was discussed. At the conclusion of the slide show a community participation handout was distributed. This was followed by a one hour open question and answer session. The meeting lasted over 2 hours and was well received.

The second meeting in April of 2008 was well attended by approximately 100 citizens. A summary of the issues identified from the feedback from the November 2007 meeting was provided. That followed with a presentation of how those issues played a role in the bridge selection process. Topics included; Key factors driving design, providing connections, Technical issues, design options removed, and viable design options. The viable options presented were; the Prefabricated truss, Low Profile Arch, and the Cable-stayed Pylon Bridge. Models and 3-D images were displayed and the bridges were discussed in great detail. A question and answer session followed. A handout was provided to solicit feedback. The intent of the handout was to provide specific citizen recommendations for bridge type.

Over 90 recommendations for the bridge type were received. The Cable-stayed Pylon Bridge and the Low Profile Arch received the majority of interest in equal numbers. The Prefabricated truss received little interest.

Staff Recommendation:

Based on the construction cost and the long term maintenance cost and issues, City staff will be recommending the Low Profile Arch. Details concerning the recommendation are as follows:

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Comparison of Maintenance Issues

The initial construction cost of the cable stayed bridge is \$ 1,900,000 compared to the Low Profile Arch at \$ 1,700,000. In relative terms the Low Profile Arch is estimated to cost about 89% the cost of the Cable Stayed Bridge. In addition, this type of construction is unusual in this area and when contractors are not experienced with a certain type of construction the costs can be even higher.

With respect to the maintenance issues, the City does not have many bridges and most maintenance is done by contract. This will be the only bridge that crosses an interstate that the City owns and maintains. Both bridges have a concrete superstructure which is relatively maintenance free. The Cable Stayed Bridge would be unique to our area and local firms would not be well versed in maintenance techniques. The Low Profile Arch is a concrete structure that will have maintenance requirements similar to other concrete bridges common to our area.

Low Profile Arch

Except for the middle third of the span, the pathway slab and the arch ribs are not in contact, leaving no obstruction to inspection, cleaning, painting and any remedial actions. Inspectors and maintenance forces can also walk on top of the arch ribs for visual inspections of the ribs and the concrete underdeck. For the most part, inspection and maintenance of the low-profile arch alternative is not much different from a conventional interstate bridge.

Cable Stayed Bridge

The Cable stayed superstructure is quite shallow from abutment to abutment. Inspection, cleaning and painting of the superstructure without interruption to highway traffic would require a rolling scaffold suspended underneath the superstructure. Such a rolling scaffold will also need maintenance and protection from vandals when not in use. The tower and the upper end to the cable anchors will need periodic inspection, cleaning, and maintenance. A man-lift will be needed for this activity. Water-tightness of the nested layers of corrosion protection is vital to the longevity of the stay cables. Periodic inspection of the stay cables is important to look for signs of moisture intrusion. This inspection should be performed by trained personnel especially when inspecting the grease protected region of the cable sockets. Recharging of the sockets with the protective grease is often needed. Periodic inspection of the stay cables along their free length and at the point of entry to the lower anchorages is necessary. This would include the removal and replacement of any vandal-protective pipe or jacketing to gain access to the lower anchorages of the stay cables. For major structures, some form of stay cable vibration testing is often done after construction with some degree of monitoring performed intermittently throughout the life of the structure. The need for this maintenance and testing might be unnecessary given the short length of the stay cables on this bridge.