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Report to Mayor and City Council

Tuesday, June 09, 2020

Discussion

SUBJECT:

UPDATE ON DOMINGUEZ CHANNEL BIKE PATH PROJECTS PHASE I AND PHASE II (CITY COUNCIL)

I. SUMMARY

The City received a grant from the Los Angeles County Metropolitan Transportation Authority (Metro) for the design and construction of a Bike Path along the Dominguez Channel. The first phase was to extend the bike path along the east side of the channel from Main Street to Avalon Boulevard, where it would connect to Phase II, which would continue to the southeast.

However, the preliminary design of Phase I has demonstrated that construction of the bike path along the original alignment is impractical due to the insufficient funds to construct a bridge over a ravine at the Victoria Golf Course that prevents a continuous path along the east side of the channel. (Exhibit 3 is a Google Maps shot of the confluence of the ravine and the Channel.) An alternate alignment was researched and considered, but will require some additional construction, plus an easement and maintenance agreement with the LA County Parks and Recreation Division; however, it may reduce the cost of the project to where current Metro funding may be sufficient.

The City also received a grant from Metro for the design and construction of the Phase II

Bike Path along the Dominguez Channel, which was anticipated to extend to 223rd Street. Based on the initial field survey, however, the construction of a bike path along the original alignment that daylighted at 223rd Street was found to be impractical as well, due to the existing railroad tracks intersecting the proposed bike path. Given the City's experience on Project 919 with UPRR, the track owner, and with the CPUC, which regulates at-grade rail crossings, it was concluded that the most practical approach to completing Phase II was that the scope of work be reduced and the project be shortened to avoid the conflicting railroad intersection.

These bike paths are part of an overall active transportation system the City is endeavoring to implement, including bike lanes on City streets. Two bike lane projects, Project No. 1451 and Project No. 1452, received approved from the City Council on March 4, 2020 for two design contracts with KOA, Inc. to prepare Plans, Specifications & Estimates (PS&E) and are moving forward. Project No. 1534 (Santa Fe Bike Lane) has received a grant for design, which is nearing completion.

Staff is presenting this item to inform the City Council of the status of the design and the grants for the Bike Path Projects and to seek direction on moving forward with these projects.

II. RECOMMENDATION

1. AUTHORIZE staff to proceed with the design and construction of Bike Path along the proposed alternate route with the understanding that staff may later request additional funding if the cost to complete the design and construction is determined to be higher than the available funds.

III. ALTERNATIVES

1. DO NOT AUTHORIZE staff to proceed with the design and construction of Bike Path; however, Metro will de-obligate the funding granted to the city.
2. TAKE another action the City Council deems appropriate consistent with the requirements of the law.

IV. BACKGROUND

Over the past several years, Carson has sought grants to fund much-needed improvements in the community. One such grant is the Net Toll Revenue Re-Investment Grant from Metro that can be used for a bike path along the access road of the Dominguez Channel. Staff envisioned a bike path that would connect from an existing bike path on Main Street, where it intersects the Dominguez Channel near the Goodyear Blimp site, and would continue southerly to 223rd Street. The concept was divided into two phases due to

the grant's limitations: the first phase connects the existing bike path to where Avalon Boulevard intersects the Dominguez Channel and Phase II would have continued further south to 223rd Street. Based on the limitations described above, however, it is now proposed that Phase II instead only extend to Carson Street.

Phase I, from Main Street to Avalon Blvd, will expire in a year (June 2021) and is for \$1.25 million. Phase II extends from Avalon to 223rd Street and expires in January 2022, and is for \$1.3 million.

Once the grants were awarded, staff began discussions on the design concepts with Los Angeles County Department of Public Works (LACDPW), since proposed improvements are along its flood control channel (Dominguez Channel). The City retained the services of LACDPW to prepare the Preliminary Design Concept (PDC) for the project that analyzes right of way issues, engineering design, and cost. The PDC's most significant findings were the estimated cost of design and construction.

The east side of the Dominguez Channel was more preferable than the west side because the existing bike path at the Main Street intersection was also on the east side. At the conceptual stage, there were essential elements that had to be considered by staff, as follows:

<i>Phase I Main Street to Avalon Blvd</i>	
Physical Challenge	Design Challenge
Undercrossing at Main Street	Requires construction of Retaining Wall
230-ft wide Ravine abutting the Victoria Golf Course	Requires construction of a bridge
Path around open drainage culvert	Requires a construction of a retaining wall or pedestrian-type bridge over culvert
<i>Phase II Avalon Blvd to Carson Street</i>	
Physical Challenge	Design Challenge
Ingress/Egress at Avalon Blvd and proximity to 405 Freeway entrance/exits create safety concerns at street level	Necessary to connect Phase I and Phase II under Avalon Blvd simultaneously to not force riders into heavily conflicted area
No undercrossing due to interfering infrastructure	New Traffic Signal at 213 th St
Railroad Crossing	Safety concerns crossing the railroad. Modify design to eliminate need for at-grade crossing
223 rd Street/Wilmington/405 Freeway	Safety concerns of path to/from ingress/egress location due to high volume of traffic. Modify design to eliminate this leg of the bike path.

Vignettes of the design challenges shown with the recommended alignments are contained in a PDF document included as Exhibit 2.

These issues were analyzed further in the PDC, which also contained the design and construction cost estimates, as follows:

<i>LACDPW PDC ESTIMATES with Phase I Bridge</i>			
Phase & Project Location	Design	Construction	Total
Phase I Main Street Blvd	\$1,095,000	\$5,722,400	\$6,817,400
Phase II Avalon Blvd Street	\$635,000	\$1,298,000	\$1,933,000

The Ravine

The majority of the estimated cost for Phase I was due to the design and construction of a bridge over the 230-ft wide ravine adjacent to the golf course. This ravine disconnects sections of the proposed bike path. In addition, there are required retaining walls at some intersections. The estimated design and construction cost of \$6,817,400 is significantly higher than the available Metro funding of \$1.259M, and proceeding with the construction of the bike path along the original alignment would require a large cash contribution from the City and is not recommended at this time. Therefore, the original Phase I alignment along the Channel from Main to Avalon was abandoned in favor of an alternative alignment.

Phase I Alternative Alignment

Because of the high cost of design and construction of a bridge over the ravine, the proposed alternate route would place the bikers on city streets (Main Street, Martin Luther King, Jr. Boulevard, and Avalon Blvd). Part of the route is on LA County Parks & Recreation's access road that leads to the maintenance road on the levee, and then returns to the Dominguez Channel back to Avalon. Improvements to the access/maintenance road and use of this road for the benefit of the City will require an easement or agreement between LACFCD and the City of Carson. Metro is supportive of the alternate route. However, in initial discussions with the County, Metro indicated that it may have concerns relating to safety of the bike path with respect to the users of the golf course, specifically with the trajectory of golf balls onto the bike path. Netting could be required by LA County, which could be very costly as well. The fate of the golf course could change, too, if the Carol Kimmelman Tennis facility, and the remainder development by Plenitude Development, stay on track and get developed.

The alternate route also has to accommodate both northbound and southbound directions of travel. Certain points along the alternate path may be conducive for the users of the bike path as their direction of travel coincides with the direction of traffic, but the same points may also be a hazard to the user's direction of travel if they are travelling in the opposite direction relative to the direction of traffic. To address such issues, additional safety features and traffic devices may be required to be added to existing roadway infrastructure.

Technical Issues in Phase I Alternative

One new issue that arises from the Phase I Alternative Alignment would be the path around the existing open drainage culvert immediately south of Del Amo Blvd. Construction of a

retaining wall on top of an existing culvert drainage structure would be necessary to retain the embankment of a southerly portion of the Del Amo Blvd bridge abutment. Staff has selected one of the on-call engineering consultants to handle the task order of preparing and obtaining approval(s) of the preliminary design (feasibility study) from LACDPW. The Consultant will also present a pre-fabricated pedestrian bridge as an option in-lieu of the retaining wall. Constructability of either the retaining wall or the pre-fab pedestrian bridge is anticipated to be costly due to the limited access to/from the work area.

The rough estimate for design costs of Phase I would depend on which option is chosen. The table below shows (in No. 1 and No. 2) the different costs for solutions over the box culvert, which is necessary in the Alternative Alignment, and #A and #B show the estimated costs of two different bridges over the ravine, which have been rejected as too costly.

Estimated Construction Cost of Project Elements	
Option Number and Description	Cost*
<i>No. 1 - Retaining Wall abutting Del Amo Blvd</i>	<i>\$245K</i>
<i>No. 2 - Bridge Over Culvert Drainage</i>	<i>\$765K</i>
<i>#A 275-ft. Bridge Over Ravine (straight)</i>	<i>\$8.5M</i>
<i>#B 175-ft Bridge Over Ravine (angled)</i>	<i>\$2.1M</i>
<i>*Excludes all other costs such as traffic improvements and paving</i>	

Compare these costs with the total Metro funding amount of \$1.259M for design and construction. Staff met with Metro to discuss solutions to the design and funding issues related to this project and extension of the funding agreement. (It was extended to June 8, 2021.) Unfortunately, Metro indicated it is unable to increase the amount of the grant. Therefore, should the city proceed with the design and construction of this project, any cost in excess of the available \$1.259M Metro funds will be the responsibility of the city.

It should be noted that even if with the new lapse date, work on Phase I will only be able to proceed if *all* of the following are satisfied:

- LA County Parks & Recreation's grant of easement and a maintenance agreement for access to the golf course maintenance access road.
- The construction of a retaining wall on top of the existing box culvert or a pre-fab bridge over the culvert is determined to be feasible.
- The available funding of \$1.259M is sufficient to cover the design and construction cost of bike path along the proposed alternate route.

Phase II Project

Phase 2 has its own challenges. Phase II should be constructed simultaneously with Phase I to allow an undercrossing below Avalon Blvd and provide users a safer path of travel in this area. Should Phase I not come to fruition, ingress/egress at Avalon Blvd could pose a hazard to users due to the geometrics of the street being adjacent to the 405 freeway interchange as well as the high volume of vehicles on this major street corridor

(Avalon Blvd).

As users approach the 213th Street crossing, an undercrossing may not be possible due to interfering infrastructure such as a drainage outlet and utility structure, and a street grade crossing would be the only alternative to the undercrossing. Having such a crossing may require a controlled intersection device, such as a new traffic signal, to provide a safer path of travel for the users.

The Carson Street crossing would be the terminus point (or beginning) of the bike path. It will connect to future bike lanes on Carson Street, as designated by the City's Bike Path Master Plan. This point may or may not require a new traffic signal depending on the design details of the ingress/egress.

Design Process

In 2018, the City's former Traffic Engineer (lead person/project manager) ended his tenure with the City of Carson, which meant these grants and other projects were spread among the remaining staff. As a way of moving the projects forward, staff was able to solicit three on-call Civil Engineering firms through a Request for Qualifications (RFQ) process, and Council awarded on-call services contracts in 2019. At the end of 2019, staff issued task orders to one of the on-call consultants relating to preliminary design of Phase I, and the proposal for the design task order for Phase II is still being reviewed by staff.

Considering the too many unknowns, at this point there is not a cost estimate to give the City Council a definitive idea how much additional funding is needed, if any. Phase II, by shortening it to Carson Street instead of 223rd Street, is a relatively simpler project than Phase I, though the undercrossing at Avalon Boulevard and potential signalization at 213th Street would be expensive. Phase I has the potential expense of the retaining walls, tricky geometry where it connects to Main Street, a negotiation of easement/maintenance agreement with the County, and its share of the Avalon undercrossing, all of which will be challenging in a one-year timeframe. The City Council is requested to authorize staff to proceed with the design and construction, and staff will advise if additional funding is necessary to complete the project.

V. FISCAL IMPACT

At this point, the design cost is covered by the Metro grants. Council will make a decision when design and cost estimating is complete to make a local contribution to complete the project, if any is needed.

VI. EXHIBITS

Exhibit 1. Bike Path Design Map Pg. 7

Exhibit 2. Bike Path Presentation Pg. 8-19

Exhibit 3. Victoria Golf Course Ravine Pg. 20

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