

Transportation Committee

For the Metropolitan Council meeting of December 8, 2021

Subject: Southwest Light Rail Transit (Green Line Extension) Civil Construction Change Order – Kenilworth Sheet Pile Installation, Contract Number 15P307A

Proposed Action

That the Metropolitan Council (Council) authorize the Regional Administrator through the Southwest Light Rail Transit (SWLRT) Council Authorized Representative to negotiate and execute a change order for Contract 15P307A with Lunda McCrossan Joint Venture (LMJV) in an amount not to exceed \$3,671,582.67.

Summary of Discussion

Metro Transit SWLRT Project Director Jim Alexander presented this item. Zeran asked why there continues to be cost overruns and asked if there was a plan to mitigate the soil conditions. Alexander responded that sheet pile delays and the need for this change order were brought to Council Members' attention earlier this year when the Secant Pile Wall was added to the Project. The sheet piles serve as the support of excavation to allow the tunnel to be built within the excavated area. It was determined during design that a press-in pile method be used to install the sheet piles due to concerns with vibrations with nearby properties. Alexander stated that as the work got underway the sheet piles, which are up to 65 feet in length, did not go in as easily as originally intended. This required the contractor to use a supporting method to assist sheet pile installation by drilling ahead of the sheet piles with an auger as the sheets were pushed into the ground with the press-in piler; as a result, settlement was observed at the ground surface adjacent to the sheet piles. This required the Project Team to reassess the approach as such settlement was determined to be unacceptable where the sheet piles were planned immediately adjacent to residential structures. This unforeseen condition led to delays in sheet pile installation. Out of an abundance of caution it was determined that an alternative support of excavation method be used for an approximately 500-foot segment of the roughly one-half mile long tunnel where it runs immediately adjacent to the residential structures. The alternative support method consists of a Secant Pile Wall, in which the Council approved a change order earlier this year.

Zeran asked if the press and pile is a new or unproven technology and if going forward if there is a way to mitigate the vibration and noise pollution to get this in without a cost overrun. Alexander responded that the technology has been in use around the world for several years. It was also noted that all of the sheet piles have since been now installed.

Cummings encouraged all Council members to tour this segment of the line as it gives an in depth understanding of the challenges working in the corridor which is so narrow. The abundance of caution is reflected in taking these extra, while expensive, steps. Cummings thanked project staff for their work on mitigating the challenges while being fiscally responsible.

Ferguson asked where we are at for total funding for the project; and do we have enough funding to complete the project. Alexander responded that recently \$200M was added to the project from Hennepin County, bringing the total budget to \$2.2B. With the two significant issues (unforeseen conditions in the Kenilworth corridor related to the tunnel construction and the introduction of the corridor protection wall) there will be a delay in the overall project schedule, which will require additional funding. Alexander added that we are working with the contractors to update the Civil and Systems construction schedule to account for the Corridor Protection Barrier and Secant Pile Wall. The updated schedules will inform the revenue service date, which will in turn inform what additional budget is needed.

Motion by Cummings, seconded by Fredson. Motion carried.

Transportation Committee

Meeting date: November 22, 2021

For the Metropolitan Council meeting of December 8, 2021

Subject:	SWLRT (Green Line Extension) Civil Construction Change Order – Kenilworth Sheet Pile Installation, Contract Number 15P307A
District(s), Member(s):	All
Policy/Legal Reference:	FM14-1a Procurement Procedure; FM14-2 - Expenditures for the Procurement of Goods and Services Greater than \$2,500,000
Staff Prepared/Presented:	Wes Kooistra, General Manager, (612) 349-7510 Nick Thompson, Deputy GM Capital Programs (612) 349-7507 Jim Alexander, SWLRT Project Director, (612) 373-3880 Joan Hollick, SWLRT Deputy Project Director, (612) 373-3820
Division/Department:	Metro Transit / Green Line Extension Project Office

Proposed Action

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Background

The Kenilworth corridor is a densely populated portion of the project with freight rail and residential buildings close to the LRT tunnel construction site. During the Project's design phase, it was decided to prescribe the contractor's method of installing the support of excavation (SOE), which consists of sheet piles, by using a press-in pile method to install the sheets that minimizes potential vibration impacts to adjacent buildings. This determination was made based on the Project's Final Environmental Impact Statement.

Numerous unforeseen obstructions were encountered during sheet pile installation which impacted the contractor's planned schedule to install the sheets and required the contractor to modify its installation approach which included pre-drilling, resequencing sheet pile installation, work stoppages to install and evaluate additional monitoring, and a work stoppage to assess ground settlement concerns and develop an alternative plan to install an SOE system where the tunnel extends adjacent to a ten-story condominium building and parking ramp (CICA structures).

The cost of this change order is for the additional labor and equipment time to install the sheet piles for the tunnel.

Rationale

Change orders exceeding \$2.5 million require Council approval.

Thrive Lens Analysis

Livability: The Green Line Extension will increase the region's prosperity as it will provide access to 80,900 forecasted jobs and a new transportation option for

55,800 forecasted residents within ½ mile of the planned new stations in addition to the 145,300 forecasted jobs and 35,600 forecasted residents in downtown Minneapolis.

Prosperity: The Green Line Extension reflects strategic investment in regional infrastructure that will promote economic competitiveness and create prosperity for the region.

Funding

The work for this change order is a Southwest LRT Project (61001) eligible cost. Funds for the work are available in the Project budget. This work is included in the Council's authorized capital budget.

Small Business Inclusion

The DBE goal established for this contract is 16%. As of work completed through September 30, 2021, LMJV is achieving 21.8% DBE participation.

Known Support / Opposition

There is no known opposition to this action.