

**CITY OF KIRKLAND****Public Works Department****123 Fifth Avenue, Kirkland, WA 98033 425.587.3800****www.kirklandwa.gov**

MEMORANDUM

To: Transportation Commission

From: Daniel Rawlings, Transportation Engineer
Joel Pfundt, Transportation Manager

Date: April 21, 2022

Subject: CKC/Eastrail Crossing Study at 132nd Ave NE

Staff Recommendation:

It is recommended that the Transportation Commission receive a briefing and provide input on the CKC/Eastrail Crossing Study at 132nd Ave NE.

Background:

The Eastrail is the 42-mile multi-use corridor that connects the cities of Renton, Bellevue, Kirkland, Woodinville, Redmond and Snohomish. Converted from a former railroad line, the Eastrail will provide new opportunities for non-motorized travel and other amenities across the Eastside once it is fully complete.

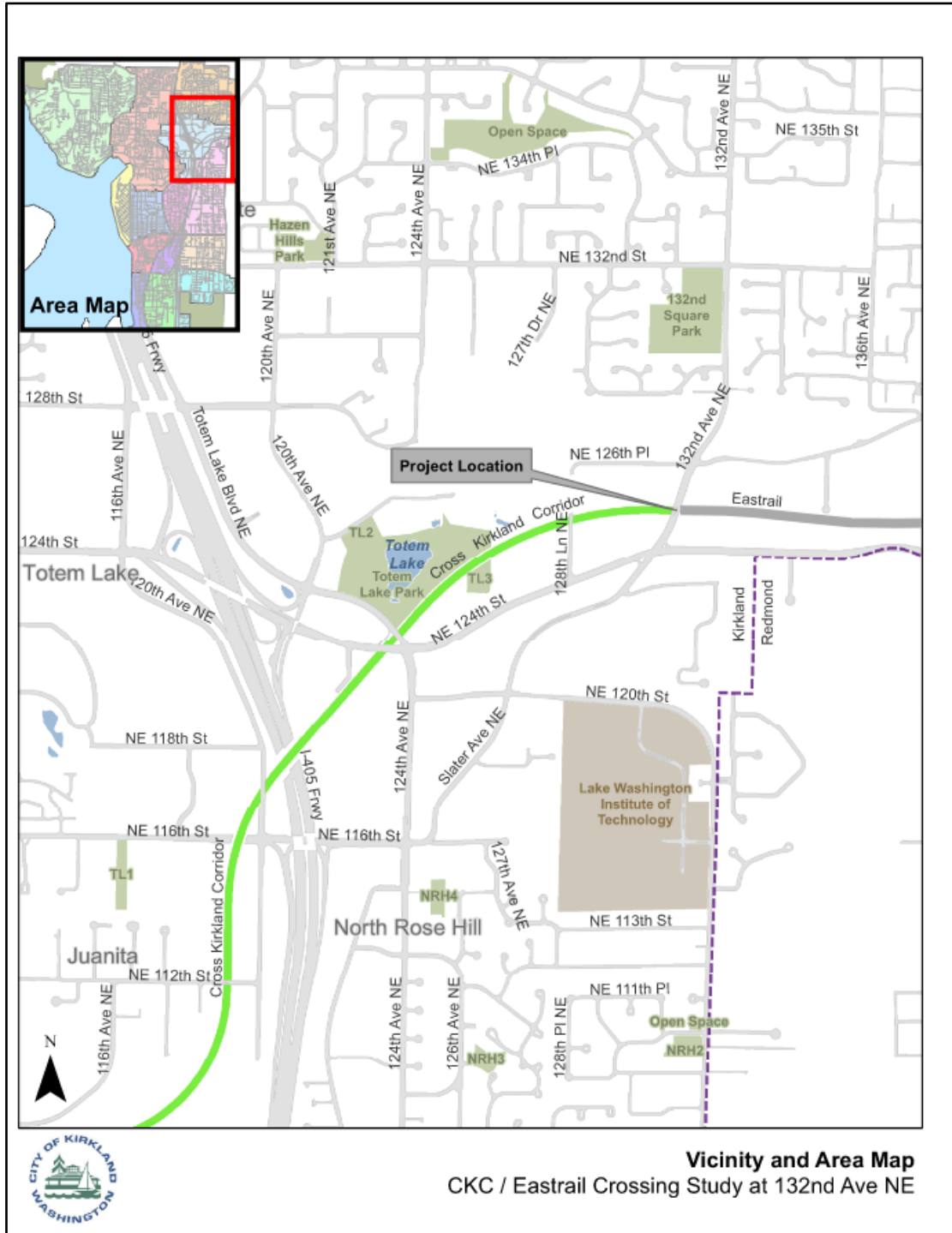
The Eastrail has about 13 miles currently open; some of these segments include the Cross Kirkland Corridor (CKC) and the Redmond Central Connector (RCC). A new section of the Eastrail that connects Kirkland to Woodinville will open later in 2022. This new Eastrail section will begin at the north end of the CKC at 132nd Ave NE and continue north to 139th Ave NE/ Willows Road to the Willows Road Connector which connects to the Redmond Central Connector and will continue north to NE 145th St in Woodinville. Once this new section of Eastrail is completed, there will still be one missing piece connecting the CKC to the Eastrail: the crossing of 132nd Ave NE. When the new section of Eastrail opens, trail users will have to temporarily cross 132nd Ave NE at the NE 124th St intersection (located approximately 350 feet to the south of the CKC/Eastrail).

The City faces the challenge of providing a crossing that not only promotes safety and functionality for the trail users but minimizes impacts to vehicular traffic. The CKC/Eastrail Crossing Study at 132nd Ave NE will address this challenge through the study of at-grade and grade-separated trail crossings of 132nd Ave NE.

The Transportation Commission received a briefing on this project on February 23, 2022 which outlined the project approach and schedule, data collection, project constraints, and preliminary goals and screening criteria. Some of this information is included in this memo as a reminder of these elements of the project.

Study Area:

The study area focuses on the CKC and Eastrail near 132nd Ave and on 132nd Ave/Slater Ave between NE 124th St and NE 126th Pl.



Scope of Work:

The stated goal of this Study is to identify a preferred crossing concept for implementation. Both at-grade and grade-separated alternatives are being analyzed. The final recommendation will likely be in the form of a short-term and long-term solution.

In summary, this Study will:

- Collect traffic data, data on critical areas, and basemapping to assist in establishing the baseline conditions, development of alternatives, and provide information for screening of alternatives.
- Develop existing and baseline traffic forecasts and operations conditions analysis within the study area to support alternative development and screening.
- Establish the goals, evaluation criteria, methodology, and measures of effectiveness for the screening of alternatives.
- Develop four different crossing design concepts. These will include two at-grade crossing concepts (one at-grade concept within existing curb lines and one at-grade concept with re-channelization) and two grade-separated crossing concepts (one tunnel and one bridge).
- Conduct a final screening analysis resulting in the recommendation of a short-term and long-term solution.

Currently, the screening criteria, scoring, and the crossing concepts are being finalized. Following feedback from the Transportation Commission and City Council, final documentation will then be prepared.

Crossing Concepts:

Parametrix will present in more detail on crossing concepts currently under evaluation and will also discuss benefits and issues with each of the crossing alternatives. For at-grade concepts, these include a signalized trail crossing that can be constructed within existing curb lines with channelization improvements (Attachment 1) and a signalized trail crossing that includes capacity improvements for the NE 124th St & Slater Ave intersection (Attachment 2). The channelization improvements depicted in Attachment 1 include adding a northbound buffered bike lane from NE 124th St to the crossing and reducing the crossing distance by one lane. The capacity improvements depicted in Attachment 2 would include adding a second southbound left-turn lane and a second southbound receiving lane for the NE 124th St & Slater Ave intersection. This concept would also be future compatible with the option that can be built within existing curb lines. For grade-separated concepts, these include a bridge and a tunnel option (Attachments 3 and 4). Both options would completely separate trail users from vehicle traffic, however, both would also be more costly and have greater construction impacts than the at-grade options.

Screening Criteria:

Parametrix will also discuss the screening criteria for evaluating these alternatives. Screening criteria currently include:

- Improvements to Nonmotorized Connections (user comfort, intuitiveness of crossings and connections)
- Fitting Context (aesthetics and scale relative to context of surroundings)
- Minimizing Impacts (effects on traffic operations, traffic safety, utilities, critical areas, etc.)
- Feasibility (cost to construct, schedule, long-term maintenance, etc.)

Schedule (2022):

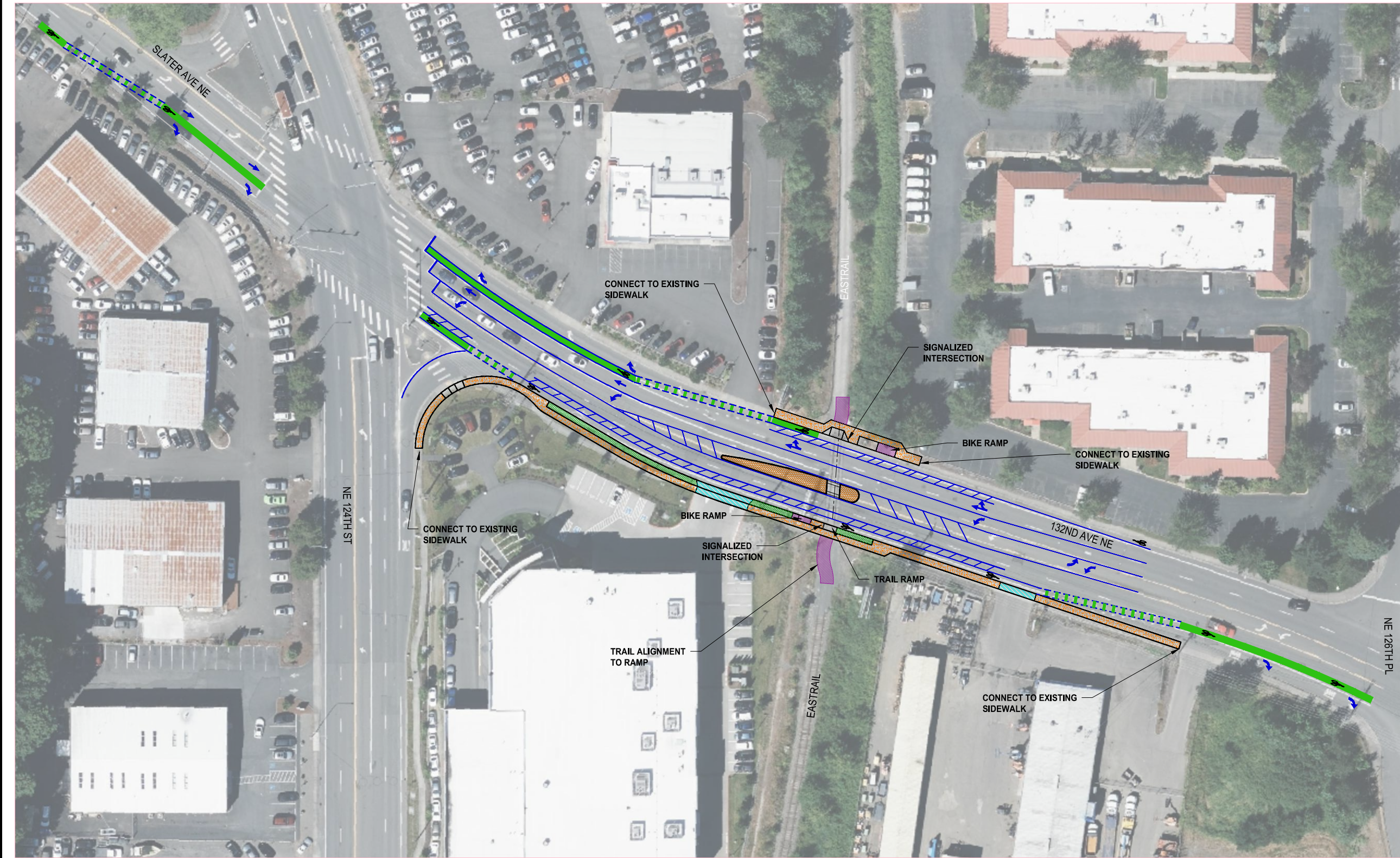
- January – February: Compose project framework, collect data, and establish baseline conditions.
- February – April: Alternative development, traffic analysis, layout preferred concepts, and final screening.
- April – May: Develop draft and final report for Council review.









Attachment 1 – At-Grade Alternative 1

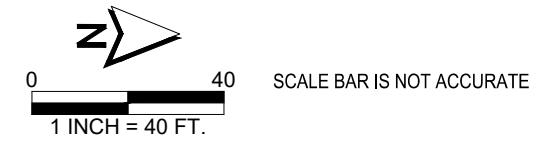
Attachment 2 – At-Grade Alternative 2

Attachment 3 – Bridge Concept

Attachment 4 – Tunnel Concept

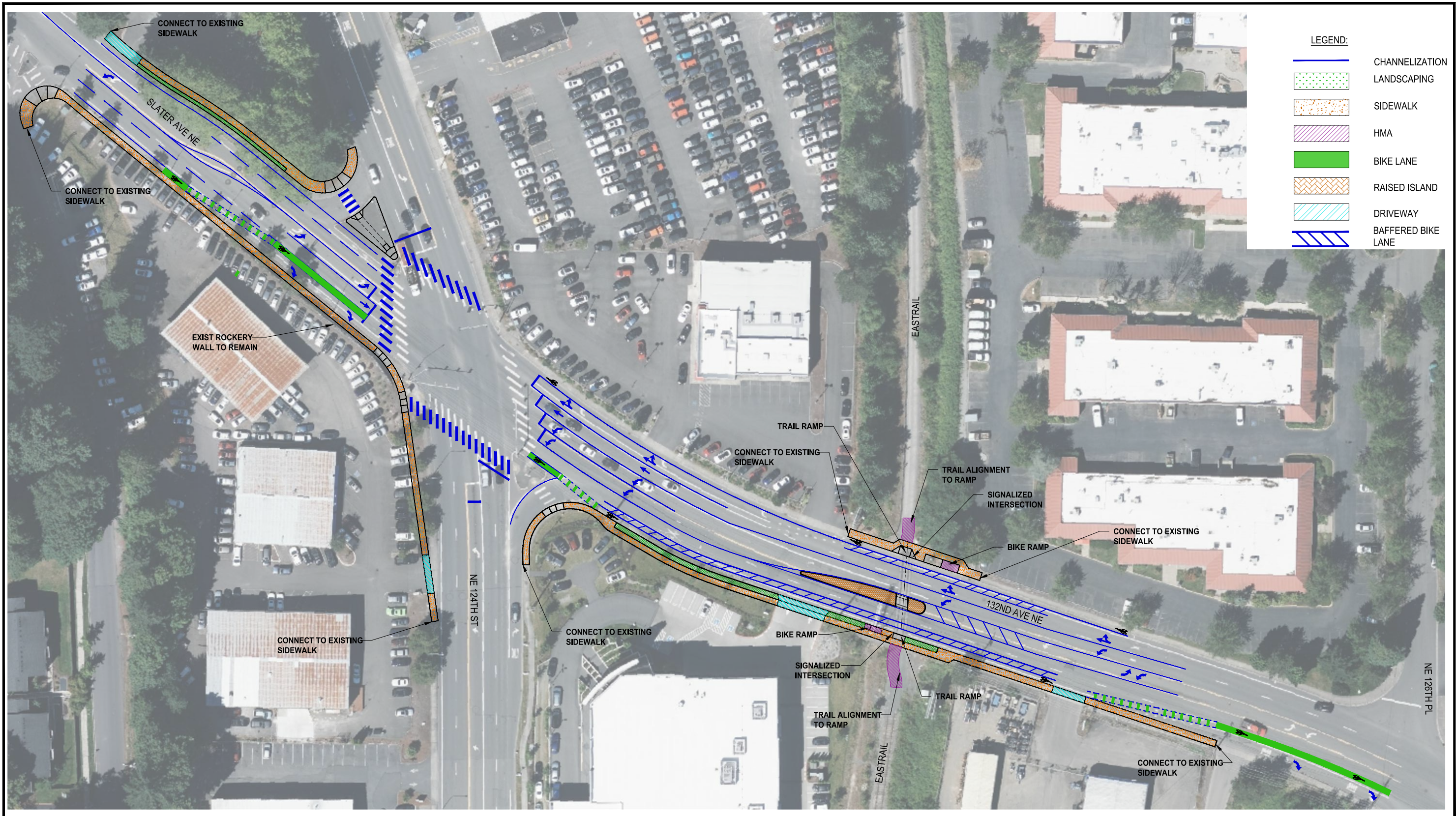


- LEGEND:**
-  CHANNELIZATION
 -  LANDSCAPING
 -  SIDEWALK
 -  HMA
 -  BIKE LANE
 -  RAISED ISLAND
 -  DRIVEWAY
 -  BUFFERED BIKE LANE

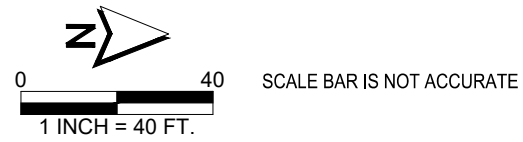


ALTERNATIVE 1
FIGURE 1 OF 2

CITY OF KIRKLAND
NE 124TH ST/SLATER/132ND AVE NE

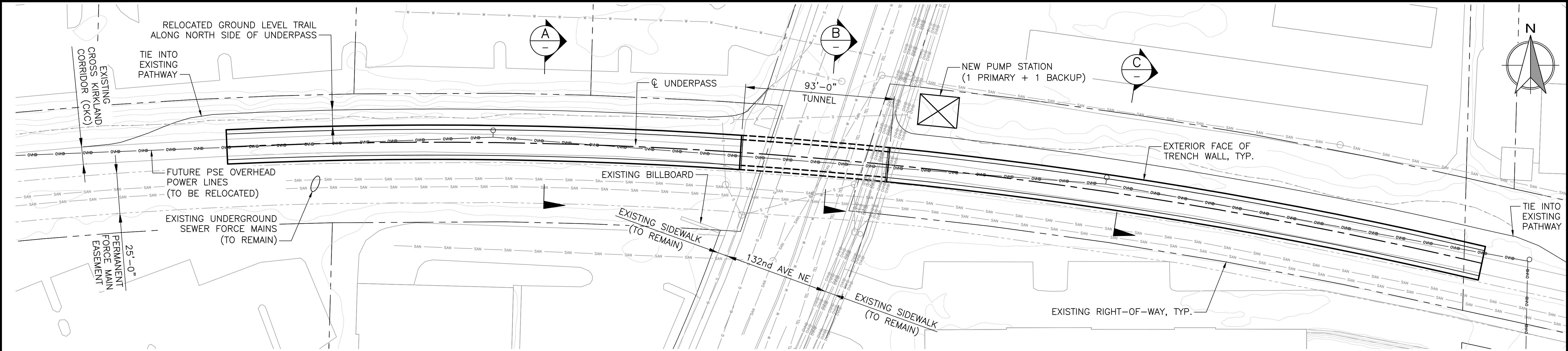


Parametrix DATE: April 26, 2022 FILE: SLATER-132ND_ALT2_4-12-2022

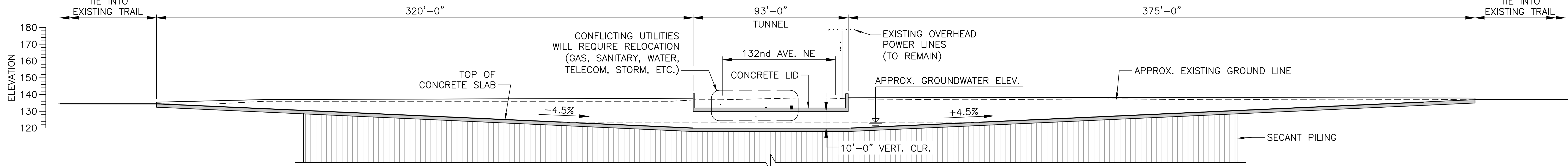


ALTERNATIVE 2
FIGURE 2 OF 2

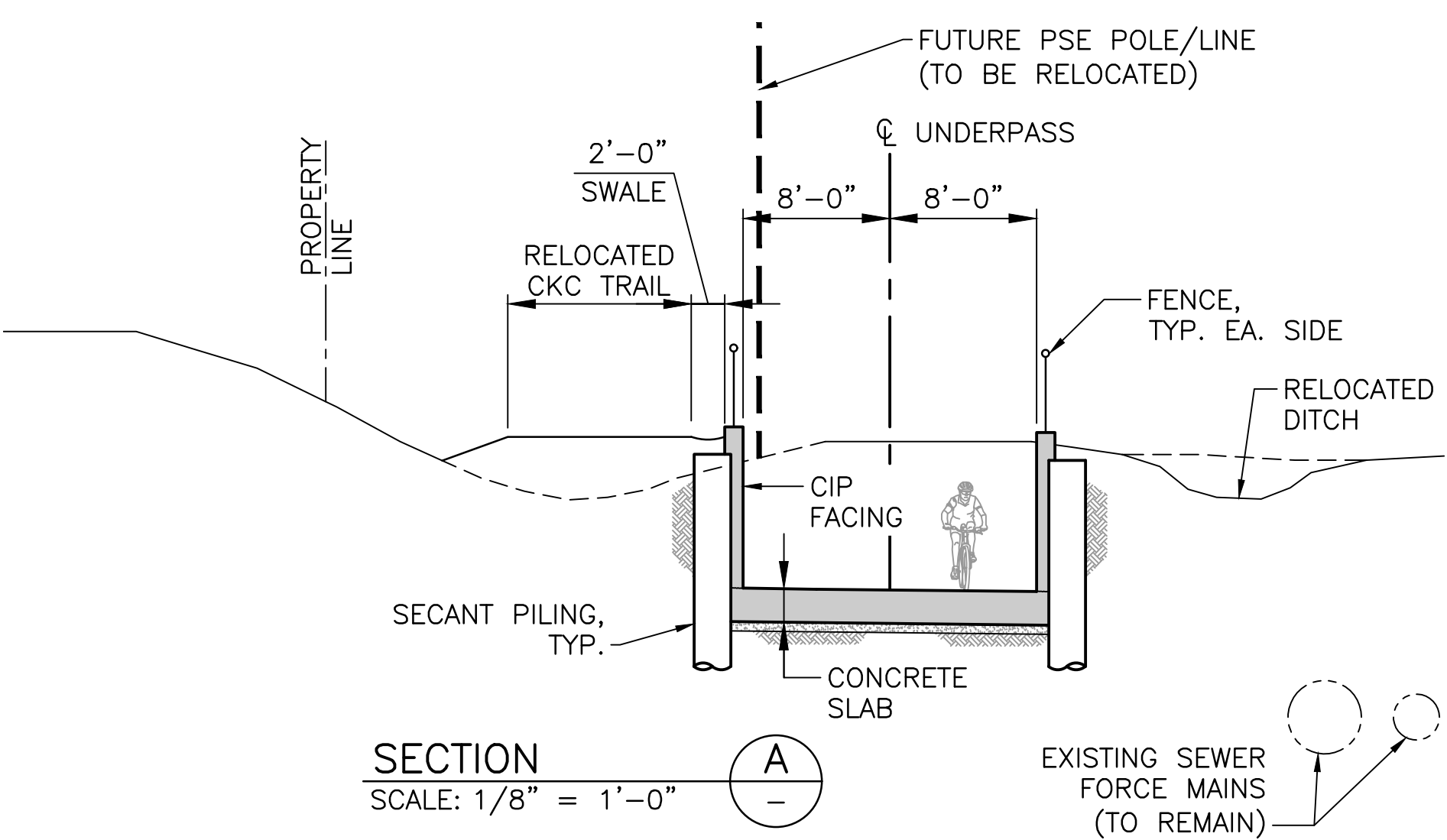
CITY OF KIRKLAND
NE 124TH ST/SLATER/132ND AVE NE



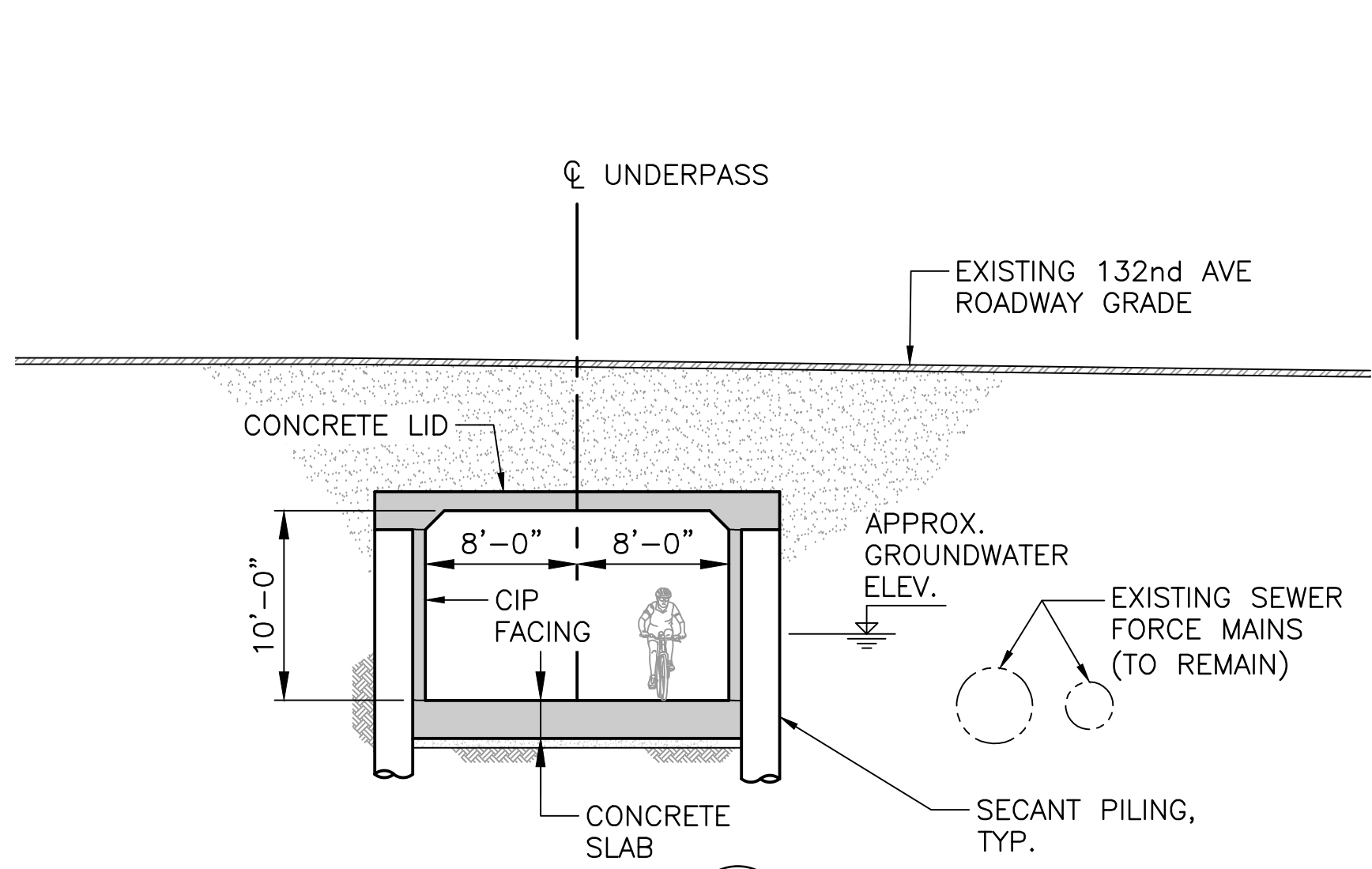
PLAN
SCALE: 1" = 40'



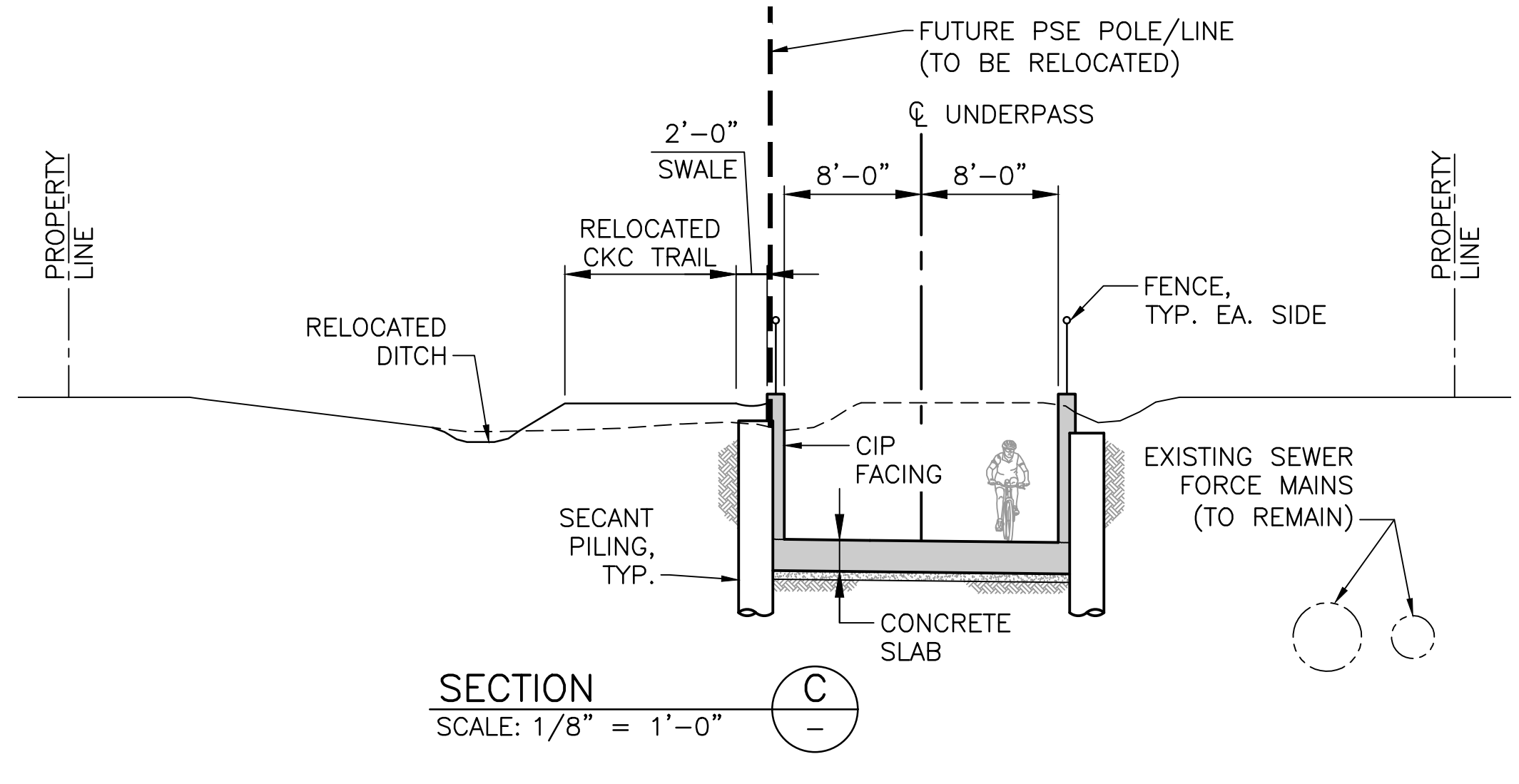
PROFILE ALONG CL BRIDGE
SCALE: 1" = 40'



SECTION
SCALE: 1/8" = 1'-0" A



SECTION
SCALE: 1/8" = 1'-0" B



SECTION
SCALE: 1/8" = 1'-0" C

PRELIMINARY
FOR DISCUSSION PURPOSES ONLY

REVISIONS			
REV	DATE	DESCRIPTION	BY

PREPARED UNDER THE DIRECTION OF

ENGINEER OF RECORD

DATE



STRUCTURAL
DESIGN

DESIGNED: S. VALDOVINOS DATE: 2022-03-23
DRAWN: S. VARNEY DATE: 2022-03-23
CHECKED: S. VALDOVINOS DATE: 2022-03-23



CITY OF KIRKLAND
CKC/EASTRAIL CROSSING STUDY
AT 132nd AVE NE
GENERAL ARRANGEMENT
UNDERPASS OPTION

SCALE: AS SHOWN	
FILENAME:	
PROJECT No: 32100520	
SHEET: S-02	REV: