



# HOW DID WE GET HERE?

## CDOT KNOWS THAT US 6 IN CLIFTON CAN BE IMPROVED Our community is growing and through traffic on the US 6 corridor in Clifton is increasing. By 2040 the average projected daily traffic east of I-70B is expected to increase by 48 percent.



## **Operations & Safety Concerns**

It's no secret that inadequate traffic operations along the US 6 corridor are creating delays for motorists. Because of this, there is also an increase in vehicular crashes and pedestrian conflicts – creating safety concerns from traffic congestion, lack of access control, and pedestrian activity.



## Lack of Adequate Multimodal Facilities

Despite having a demand for short walking and bicycling trips, there are almost no sidewalks through downtown and no bicycle facilities along the corridor.



# HOW DID WE GET HERE?

## SOME OF THE US 6 CORRIDOR POTENTIAL ISSUES

### Missing sidewalk connections



### Open drainage facilities



Poorly maintained sidewalk





Uncontrolled property access



### Utilities in sidewalk

### Narrow shoulders



### Overhead utility poles close to roadway



### Lack of bus stop connections







**US 6 CLIFTON** 

# HOW DID WE GET HERE?

## THE GOOD NEWS IS THAT WORK HAS ALREADY BEGUN

**CDOT completed a Planning and Environmental Linkages** (PEL) study in 2016 that examined the need for transportation improvements along the US 6 corridor through Clifton to improve:



Mobility & Reduce Congestion

The PEL study focused on the US 6 corridor, beginning at I-70B and ending just east of 33 Road.





Corridor And **Intersection Operations** 

Multimodal Facilities





### Safety for All Users

US 6 CLIFTON





Current US 6 Clifton Project Area

## STUDY & PROJECT AREA

PEL Traffic Study Roadways 



US 6 CLIFTON



# WHY DO A PEL STUDY?

## A PEL STUDY CAN LEAD TO A SEAMLESS DECISION-MAKING PROCESS

The US 6 Clifton PEL study was intended to provide the framework for the long-term implementation of transportation improvements as funding is available and is to be used as a resource for future National Environmental Policy Act (NEPA) documentation.



About the PEL Process The PEL process is an approach to transportation decision making that considers community, environmental, and economic goals early in the planning stage and carries them through project development.



## About the PEL Study Approach

The study approach identifies transportation issues and environmental concerns, which can be applied to make planning decisions and for planning analysis. PEL studies link planning to environmental issues and result in useful information that may be used to prepare a NEPA study and final design.



## WHAT WAS THE OUTCOME OF THE PEL STUDY?



## US 6 CORRIDOR IMPROVEMENTS WERE IDENTIFIED

The project team worked with stakeholders to analyze transportation issues, and explore a range of short- and long-term improvements to improve operational performance and safety, and potentially reduce congestion along the US 6 corridor.



## A PEL RECOMMENDED ALTERNATIVE WAS ESTABLISHED

The PEL included corridor design options as well as a Recommended Alternative that met the project goals to the highest degree while minimizing environmental and community impacts.



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# POST-PEL PROGRESS

## ADDITIONAL WORK HAS OCCURRED SINCE THE PEL STUDY COMPLETED







The PEL Recommended Alternative was re-screened CDOT produced two refined intersection design options that are based on the PEL Recommended Alternative. Each design was screened for a variety of factors including but not limited to:

+ Traffic Operations

An additional Traffic **Operations and Capacity Analysis** was conducted



+ Safety Improvements



A Right-of-Way **Impacts Analysis** was completed

+ Right-of-Way Impacts

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# DESIGN TRADE OFFS

## CDOT & THE COMMUNITY HAVE TO WEIGH DESIGN TRADE OFFS

## Access Control VS. **Traffic Operations** & Capacity



## Access Control VS. **Right-of-Way Impacts**



## **Traffic Operations** & Capacity VS.

## **Right-of-Way Impacts**

CAPACITY Ф **OPERATIONS** TRAFFIC





# WHERE ARE WE NOW?

## **CORRIDOR DESIGN OPTIONS ARE BEING PRESENTED TO THE PUBLIC**



## **CDOT** has completed Intersection Refinements

CDOT confirmed that the PEL Recommended Alternative provided the appropriate roadway elements. After refinement, two possible intersection types at 1st and 5th are being considered: 1: A design with a pair of traditional signalized intersections 2: A design with a pair of roundabouts



CDOT is recommending incorporation of the **Roundabouts Intersection Refinements** design based on its ability to improve traffic operations and safety as well as for the potential Right-of-Way advantages.





## INTERSECTION REFINEMENTS

## SIGNALS



## Features

- + Signalized intersections
- + Unprotected left turns
- + Wider Medians



## **Cross Section**

Between 1st St. & 5th St.

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## INTERSECTION REFINEMENTS

## ROUNDABOUTS



## Features

- + Roundabouts
- + Narrower Width
- + Continuous Medians



## **Cross Section**

Between 1st St. & 5th St.





# WHY ROUNDABOUTS?

## IMPROVE SAFETY, REDUCE CONGESTION, AND SAVE MONEY

\* Reported in the 2007 NCHRP Report 572: Roundabouts in the United States, National Cooperative Highway Research Program



## **Reduce Congestion**

- + Roundabouts typically have less delay
- + Efficient during peak hours and other times
- + With fewer stops and hard accelerations there is less idling reducing pollution and fuel use

## The Federal Highway Administration (FHWA) has identified roundabouts as a Proven Safety Countermeasure because of their ability to substantially reduce the types of crashes that result in injury or loss of life with a 35% reduction in total crashes.\*



### Save Money

+ Roundabouts often require no signal equipment to install, power, and maintain + Usually require less Right-of-Way than traditional intersections + Often less pavement needed



## HOW DOES TRAFFIC FLOW WORK IN A ROUNDABOUT?



## REDUCED CONFLICT POINTS

### TRADITIONAL INTERSECTION

### ROUNDABOUT





Potential vehicle conflict point

With roundabouts, head-on and high-speed right angle collisions are virtually eliminated

## INTEGRATED WALKING & BIKING



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# AREA ROUNDABOUTS

## **I-70 AND HORIZON DRIVE INTERCHANGE**



- + Gateway to area business district
- + Improved interchange operations
- + Artwork increases aesthetics
- + Pedestrian mobility

## **I-70 AND 24 ROAD** INTERCHANGE





- + Gateway to Mesa Mall
- + Improved interchange operations
- + Artwork increases aesthetics
- + Pedestrian mobility



## I-70 AND VAIL ROAD INTERCHANGE





- + Gateway to Vail community and Vail Mountain ski area
- + Improved interchange operations
- + Pedestrian mobility



## WHAT'S NEXT?



## October 12 Public Open House



Further Intersection Refinement

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## MORE ONLINE AT CODOT.GOV/PROJECTS/US6CLIFTONSTUDY

area

Speak to a member of the project team or call or email us





Visit the map table to get a detailed view of the project

Fill out a US 6 Clifton survey in person today or online



## TELLUS YOUR IDEAS





## Go online to leave a comment on our mapping tool



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