

Rock Run Underpass Feasibility Study



WILMAPCO PAC
October 21, 2024



Project Goals & Objectives

- Create an attractive, cohesive, and balanced Master Plan
- Integrate land use and transportation
- Identify multi-modal improvements and diversify mode share
- **Make corridor more pedestrian & bike friendly**
- Improve access management & connectivity
- Consider Transportation Demand Management (TDM) and Transportation Improvement District (TID) strategies
- Integrate streetscape, wayfinding, & branding
- Preserve existing neighborhoods
- Develop implementation strategies



Concord Pike Corridor Master Plan

Poll Results from 4/1/20 Workshop

#6 What is your level of comfort with the proposed changes to zoning if the impact to motor vehicle delay is similar?

| Comfortable | Neutral | Somewhat | Uncomfortable |
|-------------|---------|----------|---------------|
| 27% | 27% | 30% | 16% |

#7 Do you think a small amount of additional delay for motorists is acceptable to provide more safe and comfortable crossings for pedestrians?

| No | Yes | Unsure |
|-----|-----|--------|
| 13% | 80% | 6% |

#8 How likely would you be to walk to destinations along Concord Pike and in surrounding neighborhoods if low stress connections were implemented?

| Likely | Somewhat | Not Likely |
|--------|----------|------------|
| 44% | 38% | 18% |

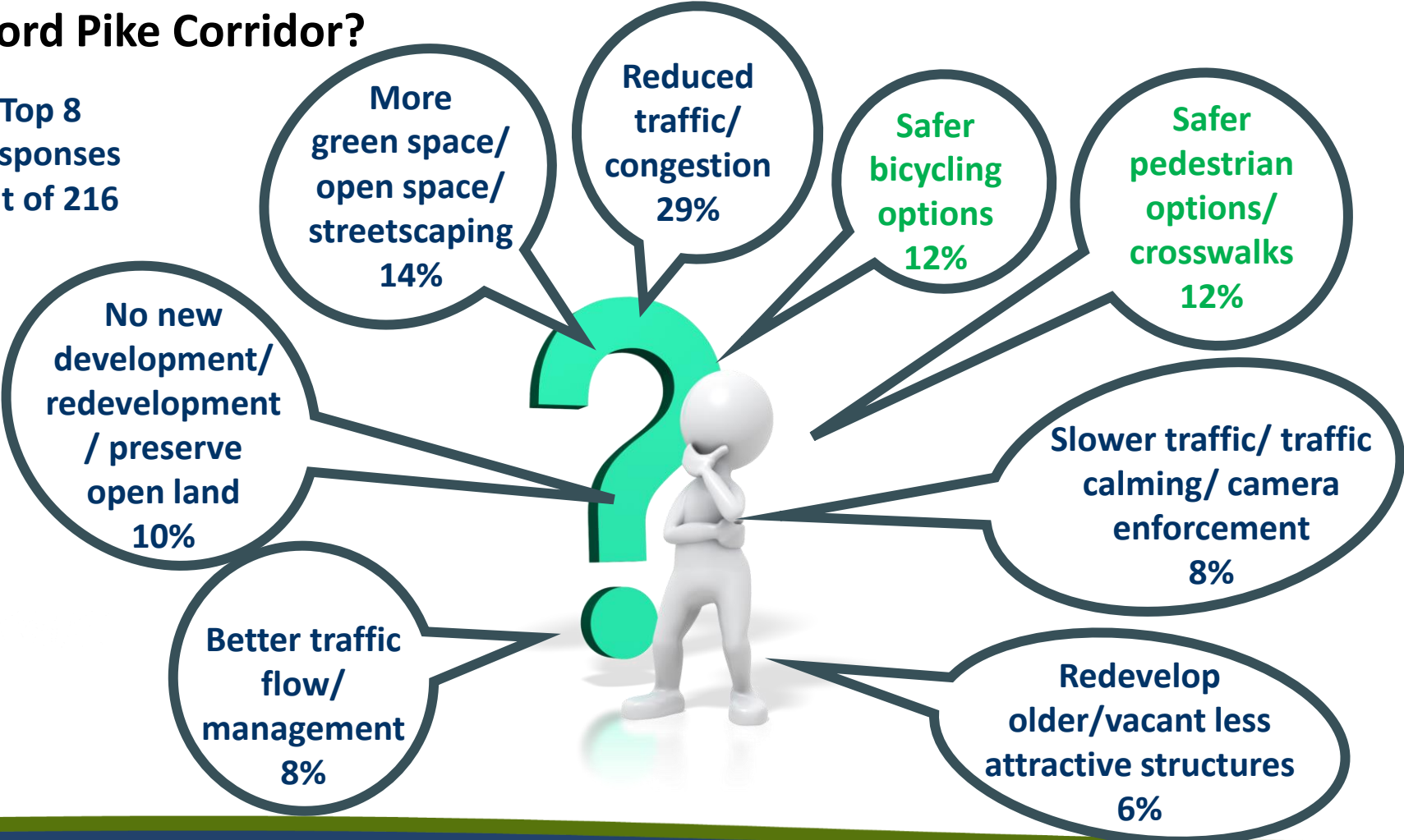
#9 How likely would you be to bike to destinations along Concord Pike and in surrounding neighborhoods if low stress connections and better bicycle parking facilities were implemented?

| Likely | Somewhat | Not Likely |
|--------|----------|------------|
| 38% | 29% | 34% |

Online Survey Results

Common Themes: What could improve your quality of life in the Concord Pike Corridor?

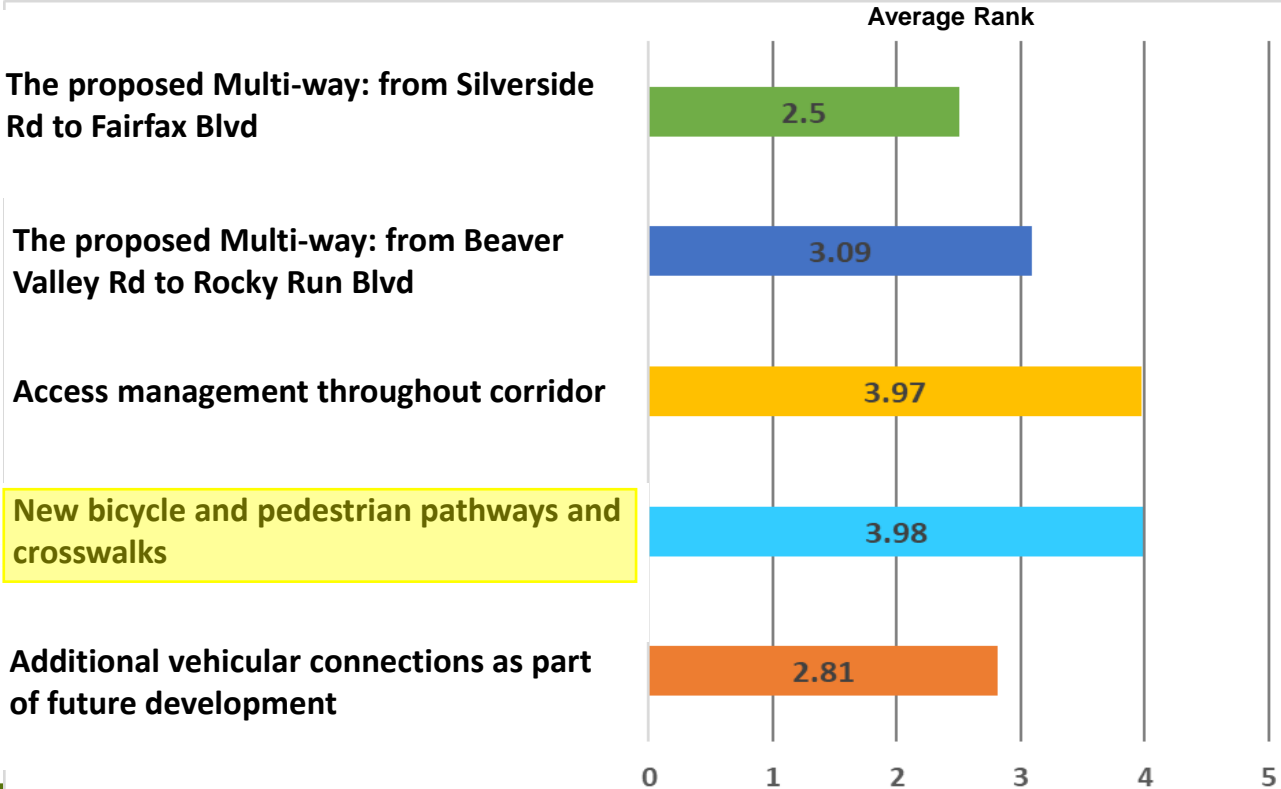
Top 8 Responses out of 216



Online Survey Results

Q6 What should be further explored in this master plan? Please rank the following:

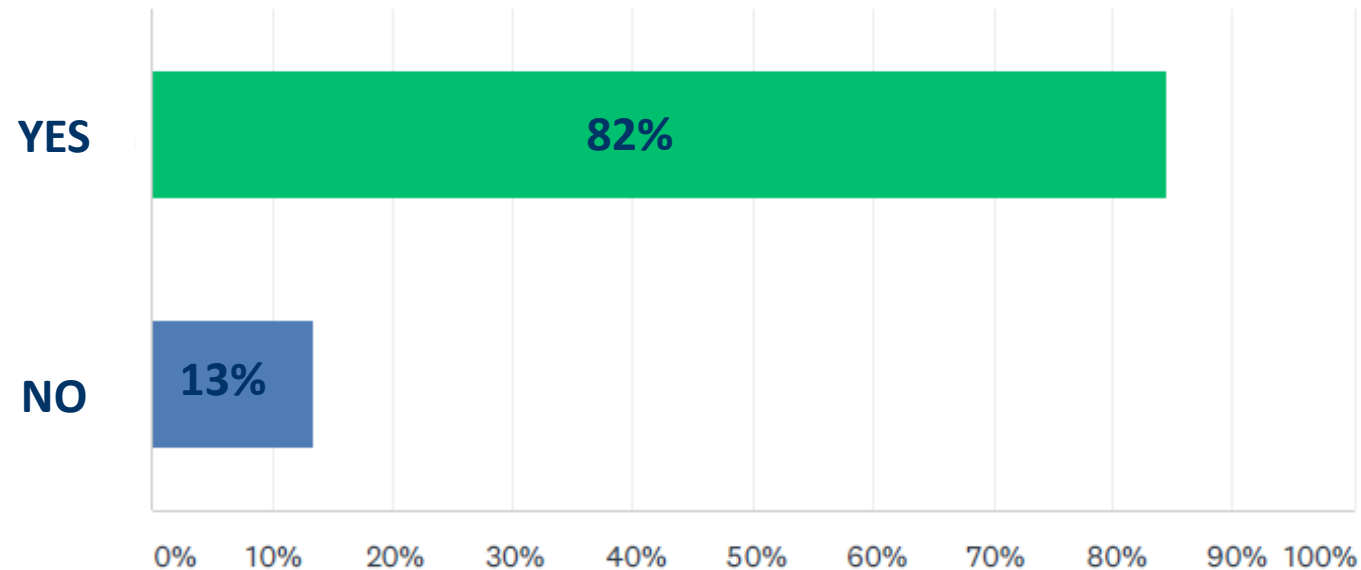
Answered: 97 Skipped: 93



Online Survey Results

Q7 Do you think a small amount of additional delay for motorists (15-20 seconds) is acceptable to provide more safe crossings for pedestrians?

Answered: 97 Skipped: 93



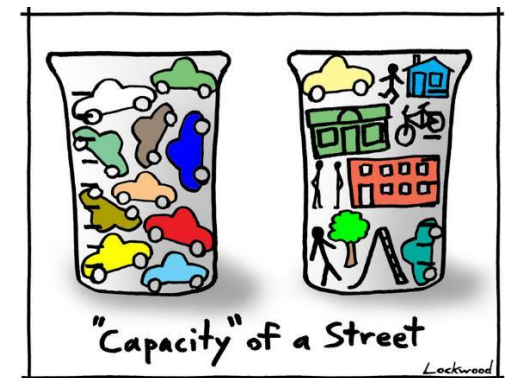
Vision for the Corridor & Our Approach

What We Have Heard

- Create more walkable environments, both in between the businesses on Concord Pike and to/within surrounding neighborhoods
- Establish strategies to reduce speeding and relieve heavy traffic
- Incorporate additional pedestrian and bicycle trails and crossings

We are Taking a Multimodal Approach

- Considers all modes: Walking, Taking the Bus, Biking, and Driving
- The capacity or value of a street is more than the number of cars – it can also encourage pedestrian activity, enhance connections to surrounding land uses, and support economic vitality.



Recommendations: Walking & Biking

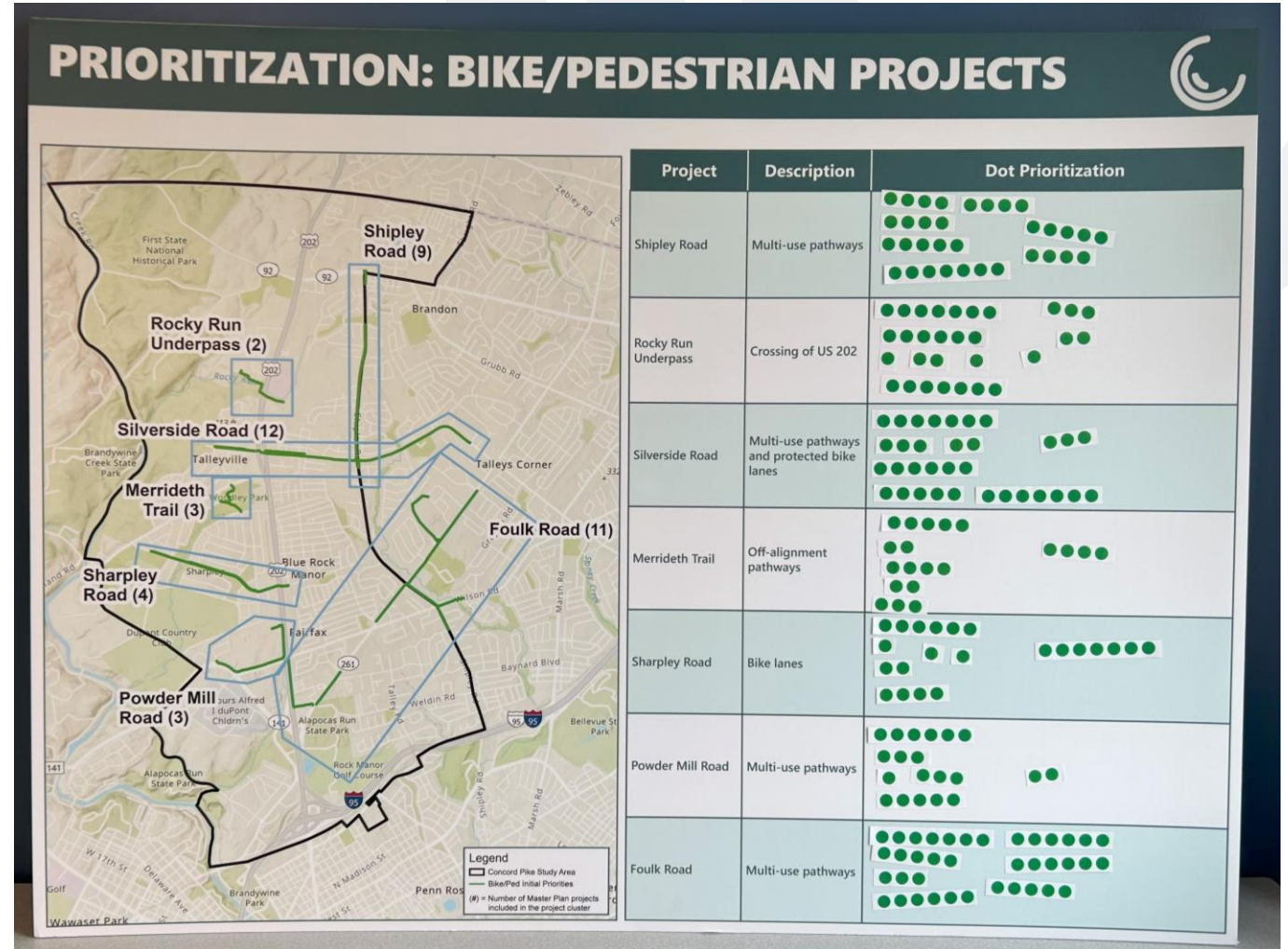
- New shared-use paths along side streets and within Neighborhoods, with Wayfinding Signage Improvements
- Opportunities to connect to existing path and park trail system
- Explore the feasibility of Bike/Ped overpass (or underpass)
- Continue Coordination with DelDOT on Level of Traffic Stress (LTS) analysis
- Pedestrian Improvements at intersections



CONCORD PIKE MONITORING COMMITTEE: 2023 PRIORITIZATION EXERCISE

Bike/Pedestrian Priorities:

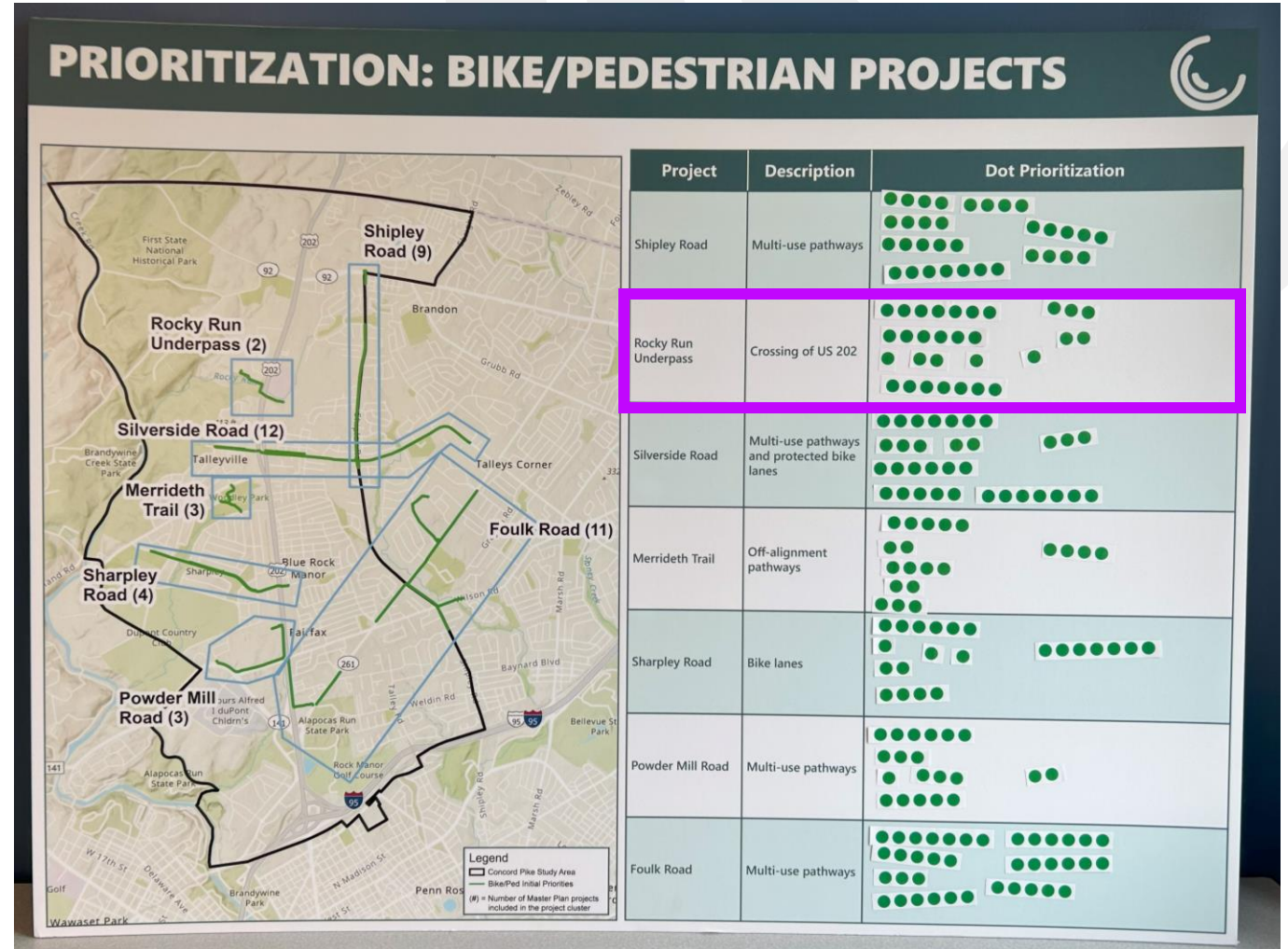
- Foulk Road multi-use pathways
- Silverside Road multi-use pathways and protected bike lanes
- Shipley Road multi-use pathways
- Rocky Run underpass



CONCORD PIKE MONITORING COMMITTEE: 2023 PRIORITIZATION EXERCISE

Bike/Pedestrian Priorities:

- Foulk Road multi-use pathways
- Silverside Road multi-use pathways and protected bike lanes
- Shipley Road multi-use pathways
- Rocky Run underpass



CULVERTS 101

Generally, culverts serve two purposes

- Support loads from above (roadway, traffic)
- Transport the water below



BR 1-024

PRELIMINARY HYDRAULICS CHECK – BR 1-024

- DeIDOT's Bridge Section performed a preliminary check to determine whether one cell of the culvert could be repurposed
 - Structure is currently in **Good** condition
 - Initial results indicate one cell of the existing culvert could be closed
- Preliminary check was not a full model of reconfiguring the culvert to accommodate a pedestrian underpass
 - Project would need to be initiated by another DeIDOT Section
 - DeIDOT Bridge Section will continue to provide technical support

REDIRECTING WATER

- Would need to physically block water from entering area to be used for pedestrians



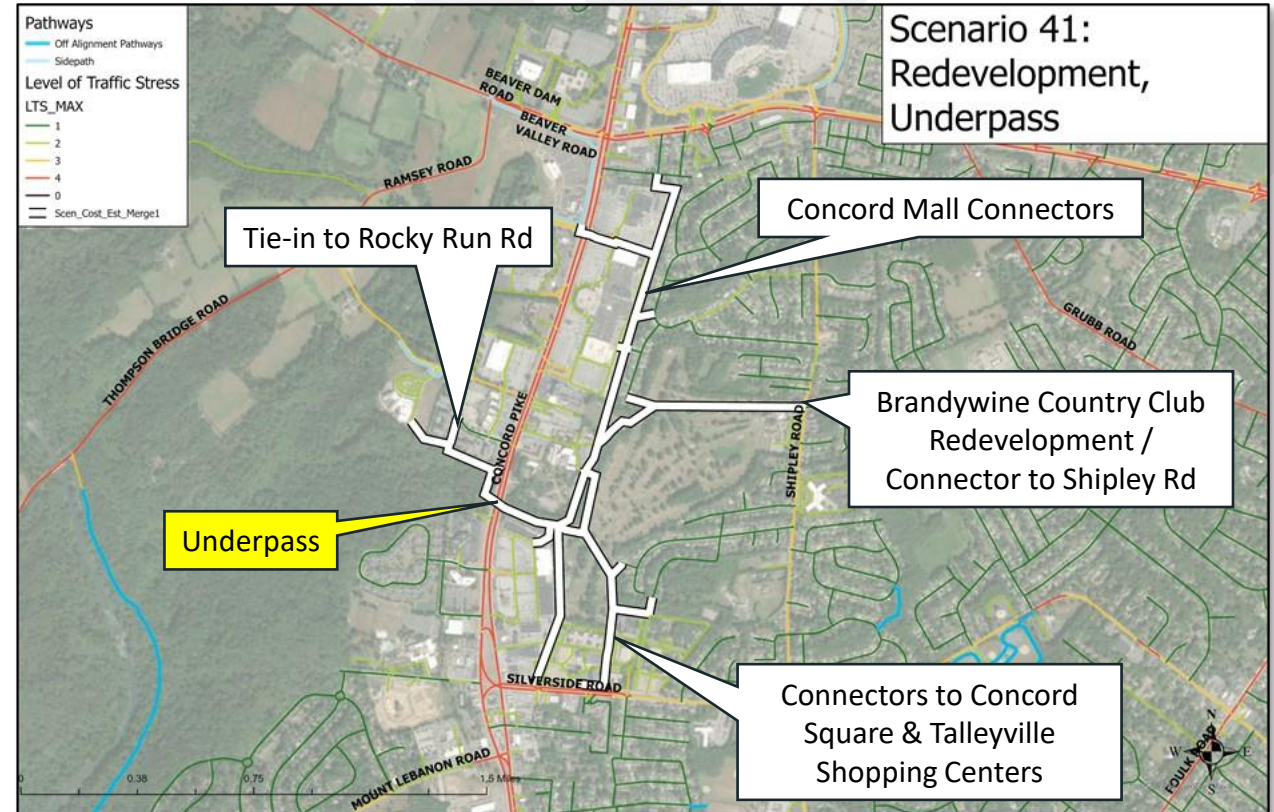
REDIRECTING WATER

- Includes drainage from the roadway above



VALUE OF PROPOSED UNDERPASS – CONNECTIVITY

- As a standalone project, underpass ranked #44 (of 55 projects evaluated)
- **Value relies on connectivity to other parts of network**
- When combined with other connectors, overall scenario was #3 high-value scenario



COORDINATION WITH MULTIPLE PROPERTY OWNERS



- Woodlawn Trustees / First State National Historical Park
- Widener University
- Brandywine Country Club Redevelopment (Capano)
- Concord Square Shopping Center
- Talleyville Shopping Center
- Brandywine Commons / Marriott / Holiday Inn

ADA REQUIREMENTS

Both the underpass and connections must be accessible and usable by people with disabilities. Consider:

- Slopes/grades
- Widths
- Transitions
- And more



ADA REQUIREMENTS

Both the underpass and connections must be accessible and usable by people with disabilities. Consider:

- Slopes/grades
- Widths
- Transitions
- And more



Not Optional: Required under the ADA Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG)

ADDITIONAL SAFETY & SECURITY CONSIDERATIONS

- Pedestrian lighting
- Surveillance
- Bigger storm events – what happens downstream with Brandywine River



Inside BR 1-024

Example pedestrian lighting in shared-use path underpass in North Carolina



QUESTIONS?

