



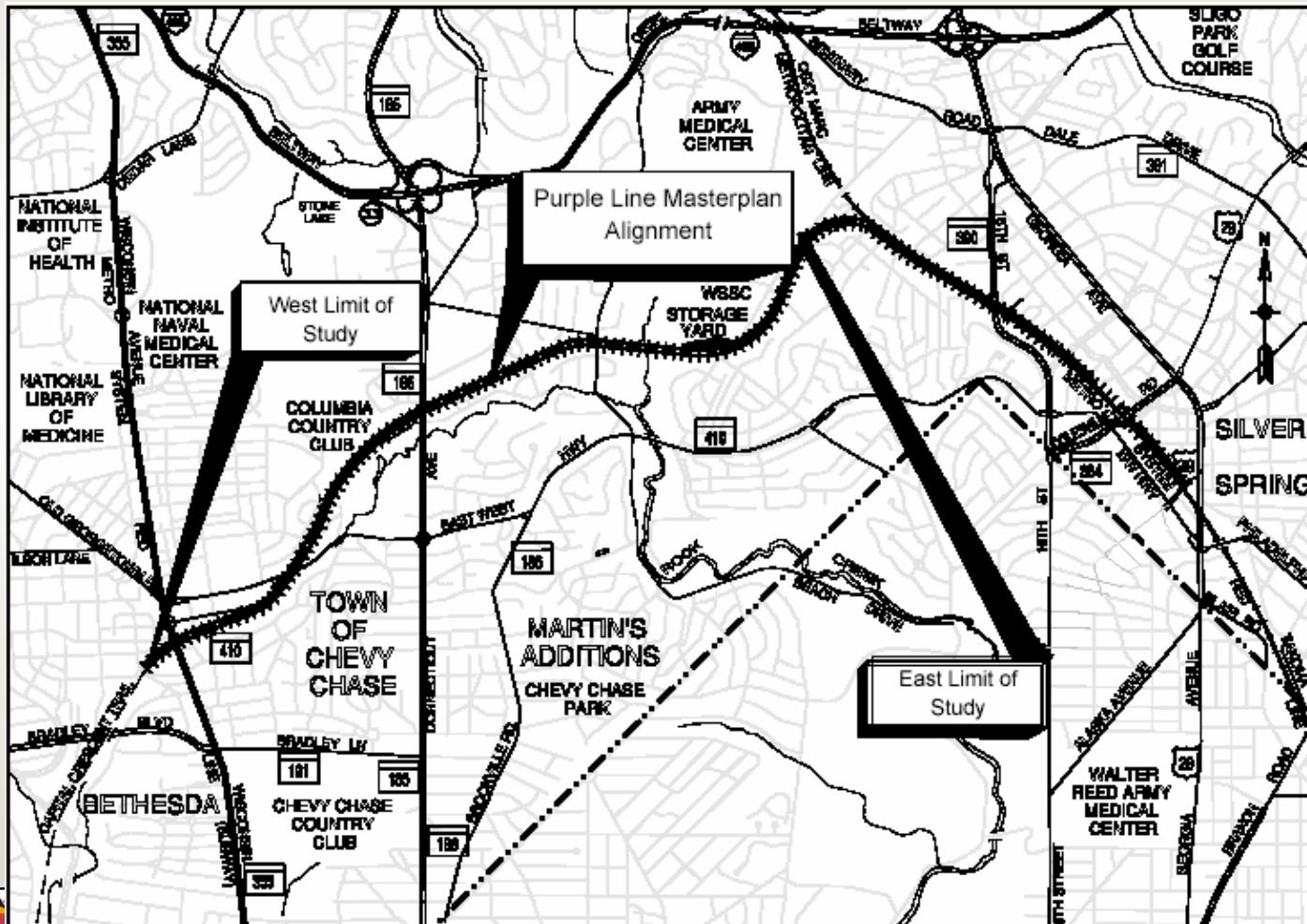
Maryland Transit Administration

Master Plan Alignment Trail Analysis

Purple Line

- Master Plan Alignment
- Rails With Trails
- Case Studies
- Trail Analysis
- Recommendations

Purple Line



Master Plan Alignment - STA 300+00 to 398+50

Stations	Description	R-O-W Width	Characteristics
300+00 to 315+00	Beginning of the project (Woodmont Ave.) to Pearl St.	32'	Under Apex and Air Rights Buildings
315+00 to 348+00	Pearl St. past MD 410 until beginning of Columbia Country Club	66'	<u>North Side:</u> Businesses & Residential <u>South Side:</u> Residential
348+00 to 398+50	Columbia Country Club past Connecticut Ave to 900' west of Jones Mill Road	100'	Golf Course, Businesses, & Residential

Master Plan Alignment – STA 398+50 to 436+00

Stations	Description	R-O-W Width	Characteristics
398+50 to 411+00	900' west of Jones Mill Rd to 200' east of Jones Mill Rd	90'	Residential
411+00 to 427+00	200' east of Jones Mill Rd over Rock Creek to 900' east of Rock Creek	225'	Park
427+00 to 436+00	900' east of Rock Creek to vicinity of Brookville Rd	66'	Industrial & Residential

Master Plan Alignment – STA 436+00 to 465+00

Stations	Description	R-O-W Width	Characteristics
436+00 to 465+00	Vicinity of Brookville Rd past Lyttonsville PI until 500' east of Stewart Ave	60'	Industrial

Purple Line

Rails With Trails (RWT) - *Background*



Traction Line, *Morristown, NJ*

The Traction Line Recreational Trail is a paved, multi-use path for bicycling, walking, and jogging located in the Morristown National Historic Park

- *Definition* – Pedestrian pathways constructed on, or adjacent to, active railroad rights-of-way
- The Georgetown Branch Railroad right-of-way was purchased in 1988 by Montgomery Co. under the Rails With Trails Act

RWT provide direct transportation links independent from the roadway system.

Rails With Trails - *Background*

- 1996 - 37+ active RWT & 60+ proposed
(in 2002 - 7 active LRT RWT & 6 proposed)
- 1997 - Federal Railroad Administration (FRA) hosted forums to identify issues associated with RWT
- Key Aspects Identified:
 - ✓ Planning Process
 - ✓ Design Issues
 - ✓ Safety Issues
 - ✓ Railroad and Trail Operations and Management

Several studies were published following the forums and conferences regarding the safety and general operation of RWT.

Rails With Trails - *Benefits*



Blackstone River Trail, *Rhode Island*

The Blackstone Valley Bike path serves commuters as well as the region's premiere multi-use recreational facility.



- Provides trails that are characterized by a continuous separation from motor vehicle traffic & frequent access points with increased levels of safety & security
- Offer scenic qualities, connectivity to a variety of land uses, recreational opportunities, and context-sensitive solutions and aesthetics
- Provide long distance, off-road connections between points of interest and economic development opportunities
- Supports community enhancement

Rails With Trails - *Safety*

- 1997 - Rails-to-Trails Conservancy published *RWT: Sharing Corridors for Transportation and Recreation*

Summarized, it states:

Trails are “compatible with active railroads, even high-speed and high-frequency/density mainline tracks”.



**Issaquah Valley Historic
Trolley, Issaquah, WA**
Tracks are 25-30' from trail, with a
proposed max speed of 25 mph

Rails With Trails - *Safety*

- 2000 Study Update:
 - ✓ RWT - *“just as safe as other trails”*
 - ✓ RWT - *“....may serve to keep people from walking on active rail tracks.”*
 - ✓ Wide range of successful designs exist



**Edinburgh Tram
Roseburn Corridor
Edinburgh, Scotland**

Rails With Trails - *Safety*



MetroLink Bike Trail, *St. Louis, MO*

Tracks are approx. 12' from trail,
with 7 minute headways &
max speed of 55 mph

According to *Rails-To-Trails: A Progress Report*
(by Carolyn E. Cook of the Railroad
Commission of TX)

***“The more separation
between the trail and the
rails, the better ...”***

Rails With Trails – *Interesting Facts*

- Longest length of rail next to trail: 22 mi (Railroad Trail, MI)
- Shortest length of rail next to trail: 0.2 mi (Watts Tower Crescent Greenway, CA)

- Fastest Trains: 150 mph (Southwest Corridor Park Trail, MA)
- Slowest Trains: 5 mph (West Orange Trail, FL)

- Closest to tracks: 2 ft (Railroad Trail, MI)
- Furthest from tracks: 100 ft (several trails)

**Rails-with-Trails Design, Management, and Operating Characteristics of 61 Trails Along Active Rail Lines, by Rails-to-Trails Conservancy*

Rails With Trails - *Design Guidelines*

- ❑ No required design specifications by a national organization
- ❑ The Purple Line incorporated recommended design guidelines from the U.S. DOT *Rails-With-Trails; Lessons Learned; August 2002*

Schuylkill River Trail – *Case Study*

Norristown, PA



- **Design**

- ✓ 4 mile trail connecting Philadelphia with Valley Forge
- ✓ Approx. 20 freight and commuter rail trains each day
- ✓ 10-12 feet wide asphalt trail
- ✓ Varying setback distance with 10ft min
- ✓ Train speeds 20-40 mph

- **Issues**

- ✓ Some trespassing in area adjacent to trail but is not trail related

- **Benefits**

- ✓ Overall a success as it is regularly used as a passage to/from points of interest (ie Conshohocken, Norristown, and downtown Philadelphia)

Cottonbelt Trail – *Case Study*

Dallas, TX



■ Design

- ✓ 10 miles long; used for tourist excursions, weekend dinner trips, and about 2 freight trains each day
- ✓ Maintains a 25 foot setback between the track and trail
- ✓ Train speeds do not exceed 30 mph
- ✓ Track is adjacent to residential areas

■ Benefits

- ✓ A DART official noted benefits in terms of reduced costs of right-of-way maintenance
- ✓ A law enforcement official noted the trail's popularity

Seattle Waterfront/ Elliot Bay Trails – Case Study

Seattle, WA

■ Design

- ✓ 0.8 mile long trail; Seattle Metro Transit operates 2 trolleys/hr with max speed of 15 mph
- ✓ Supports nearly 1 million annual users
- ✓ 8-10 ft. wide trail with a setback distance of 8 feet between the track and trail controlled by a split rail fence

■ Issues

- ✓ Officials report few significant problems with trespassing or vandalism



Trail Analysis – Objective 1

Evaluate the Trail Location on the North Versus the South Side of the Transitway.

Influenced by 2 factors:

1. Maintaining the trail 3-4' above the trackbed to provide vertical separation, while trying to follow existing topography of the land

Benefits:

- ✓ Improves aesthetics
- ✓ Minimizes retaining wall heights; reduces construction costs
- ✓ Minimizes environmental and construction impacts
- ✓ Creates greater comfort level for trail users when trains pass
- ✓ Limits pedestrian trackbed crossings to the designated crossings

2. Providing access to many residents

Trail Analysis – Objective 1 Results

STATIONS	DESCRIPTION	NORTH VS SOUTH	LENGTH
300+00 to 315+00	Beginning of the project (Woodmont Ave.) to Pearl St.	South	0.3 miles
315+00 to 404+00	Pearl St. through Columbia Country Club, past Connecticut Ave. until 400' west of Jones Mill Rd.	North	1.7 miles
404+00 to 465+00	Over Rock Creek until the study area limit, 500' east of Stewart Ave.	South	1.2 miles

Trail Analysis – *Objective 2*

Evaluate the Possibility of Increasing the Separation Between the Trail and the Trackbed

Goal:

- Setback of 25' (centerline of track to inside edge of trail) resulting in about a 10' wide planting area

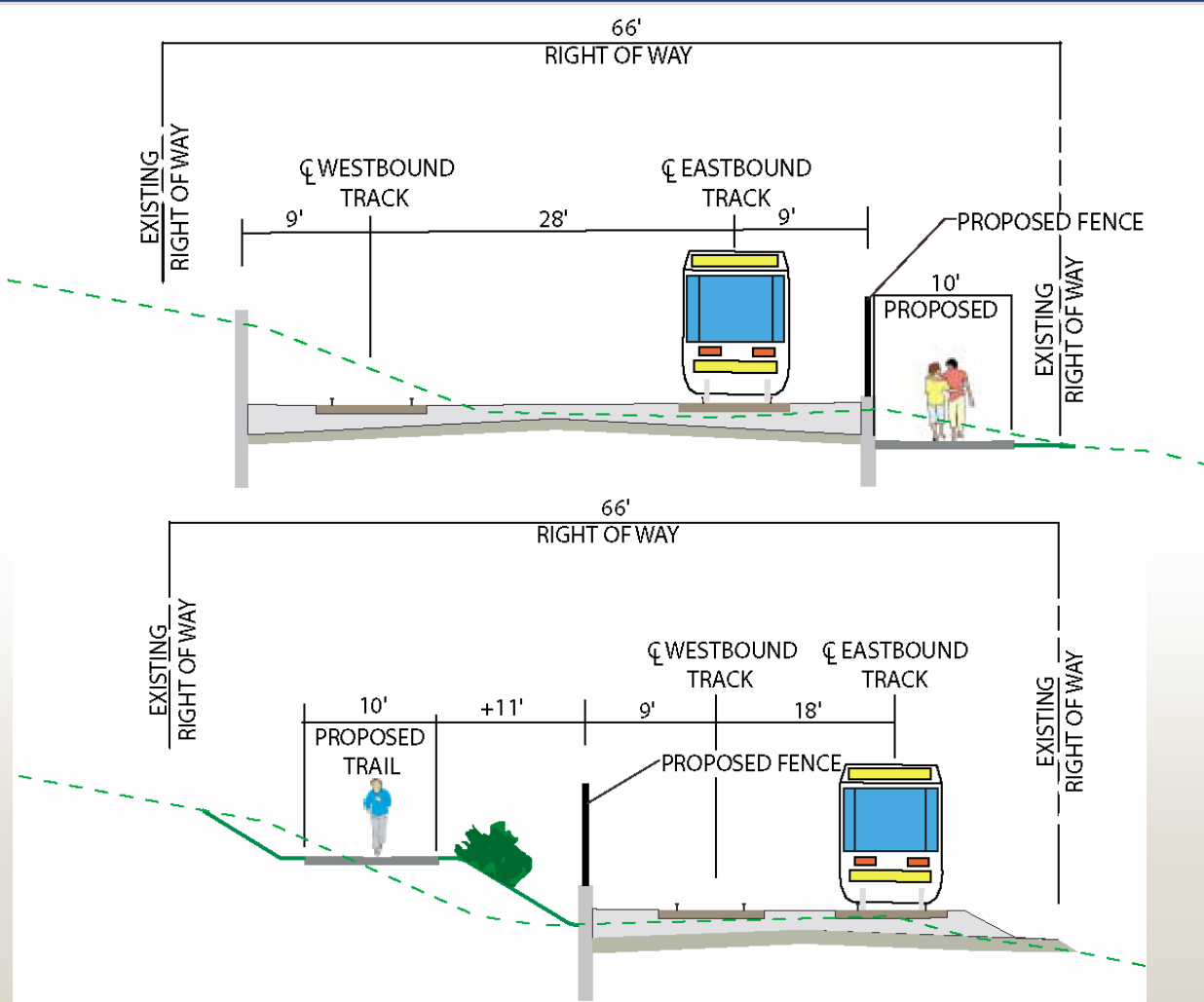
Planting Area Benefits:

- Acts as a screen or buffer between the trail and trackbed
- Improves the aesthetics of the trail

Trail Analysis - *Recommendations*

- The proposed location of the trail (*combination of north and south side of trail*) be adopted
- The trail and trackbed's horizontal and vertical alignments be revised to increase the horizontal separation wherever possible

STA 332+00 (near MD 410 East West Hwy)



Current Design

- Trail on south side
- Trail lower than track
- No planting area btwn track and trail

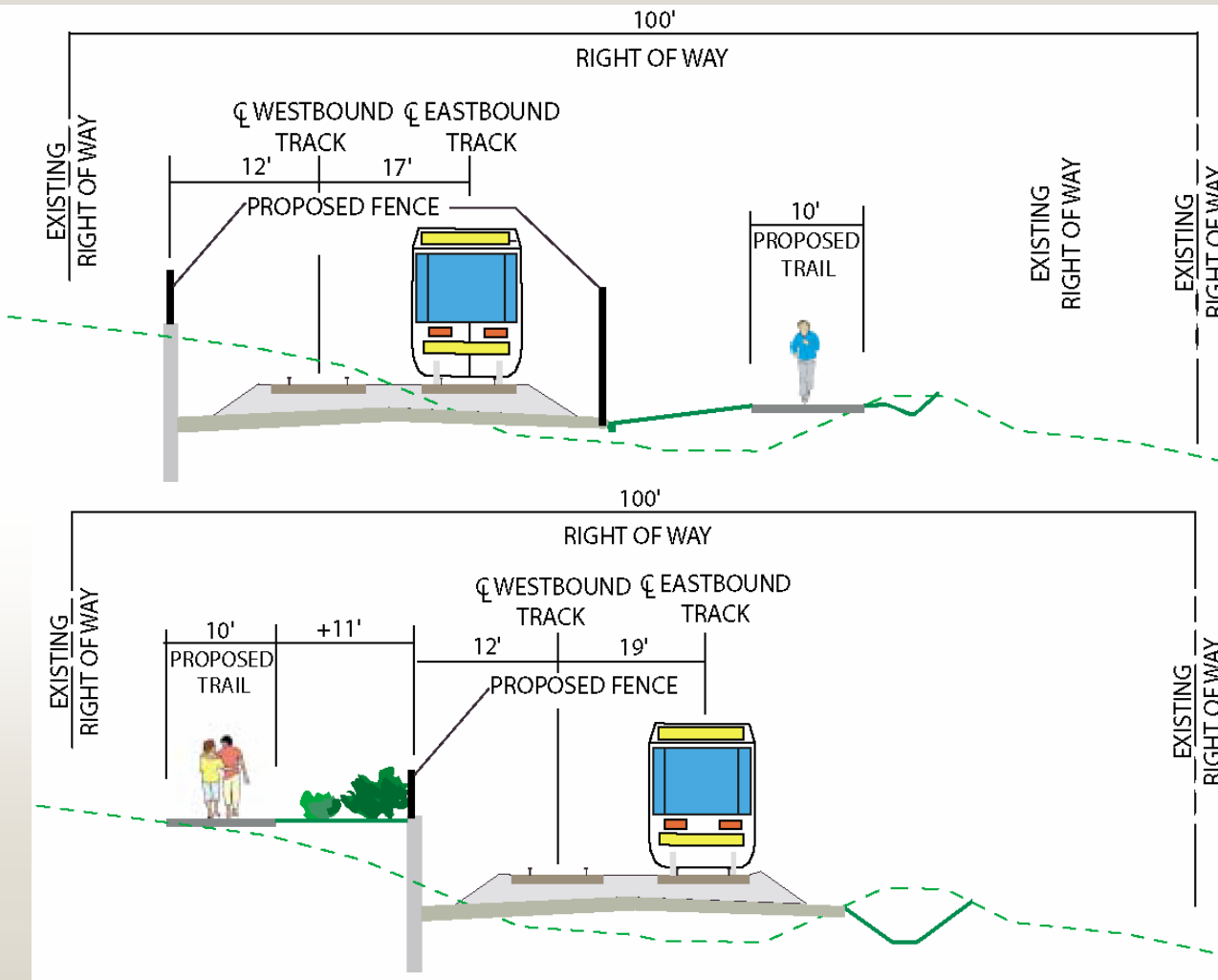
Proposed Design

- Trail on north side
- Trail higher than track
- 11' planting area btwn track and trail

STA 332+00 (near MD 410 East West Hwy)



STA 357+00 (adjacent to Columbia Country Club)



Current Design

- Trail on south side
- Trail lower than track
- 12' planting area btwn track and trail

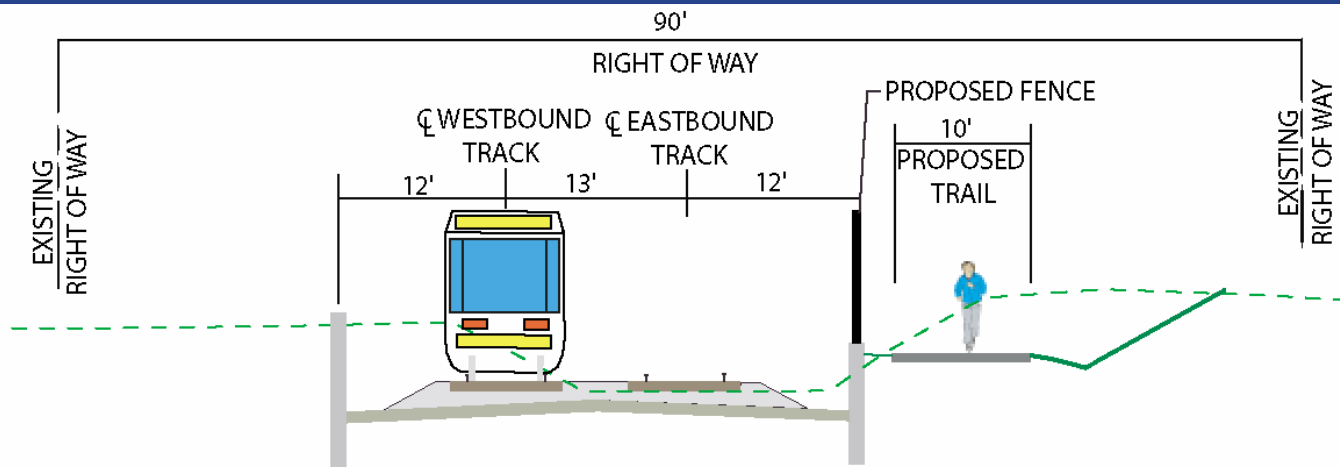
Proposed Design

- Trail on north side
- Trail higher than track
- 12' planting area btwn track and trail

STA 357+00 (adjacent to Columbia Country Club)

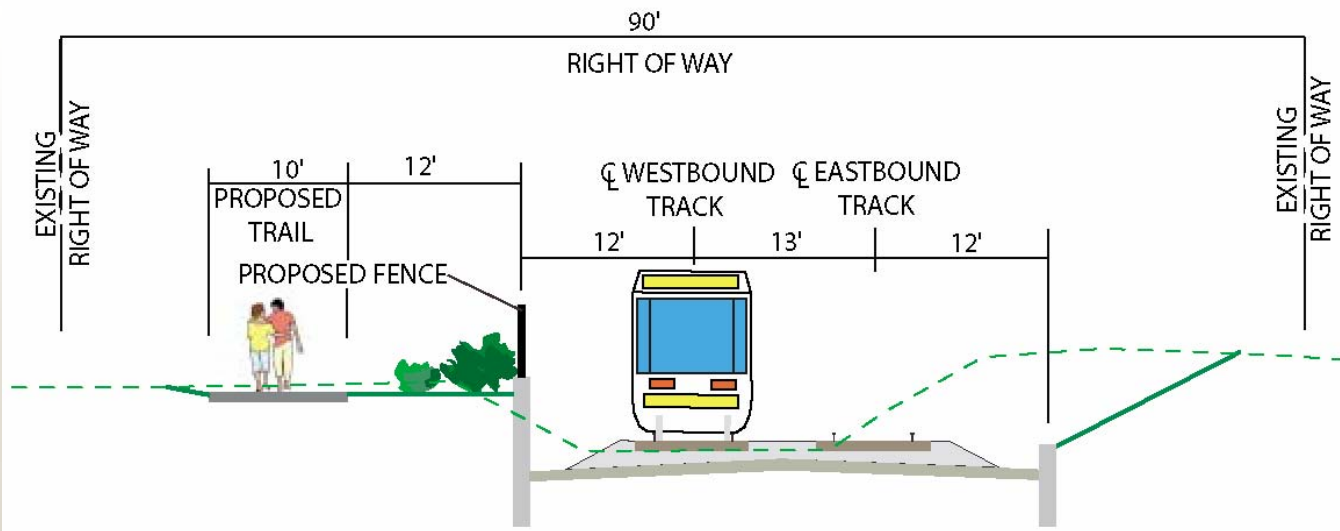


STA 401+00 (typical section west of Jones Mill Rd)



Current Design

- Trail on south side
- Trail higher than track
- 0'-2' planting area btwn track and trail



Proposed Design

- Trail on north side
- Trail higher than track
- 12' planting area btwn track and trail

Advantages

Advantages:

- A more naturalistic environment
- A buffer/screen between the trail and track
- Minimizes retaining wall heights resulting in reduced construction costs
- Creates greater comfort level for trail users
- Increases safety by preventing trail users from crossing trackbed except at designated crossings
- Improves trail experience

Disadvantages

Disadvantages:

- Residences on the south side of the trackbed would lose their current direct access to the trail
- The Transitway would be closer to the residences on the south side

Conclusions

- ❑ RWT can be a benefit to the entire community

- ❑ The recommended guidelines by USDOT were implemented in the Purple Line Trail Analysis

- ❑ Recommended Trail Alignment
 - ❑ Combination of north and south side of trail
 - ❑ Increase distance between rail & trail

Purple Line