

# **Completing the Missing Link *Safely*:**



## **The Ballard Cycle Track Solution**

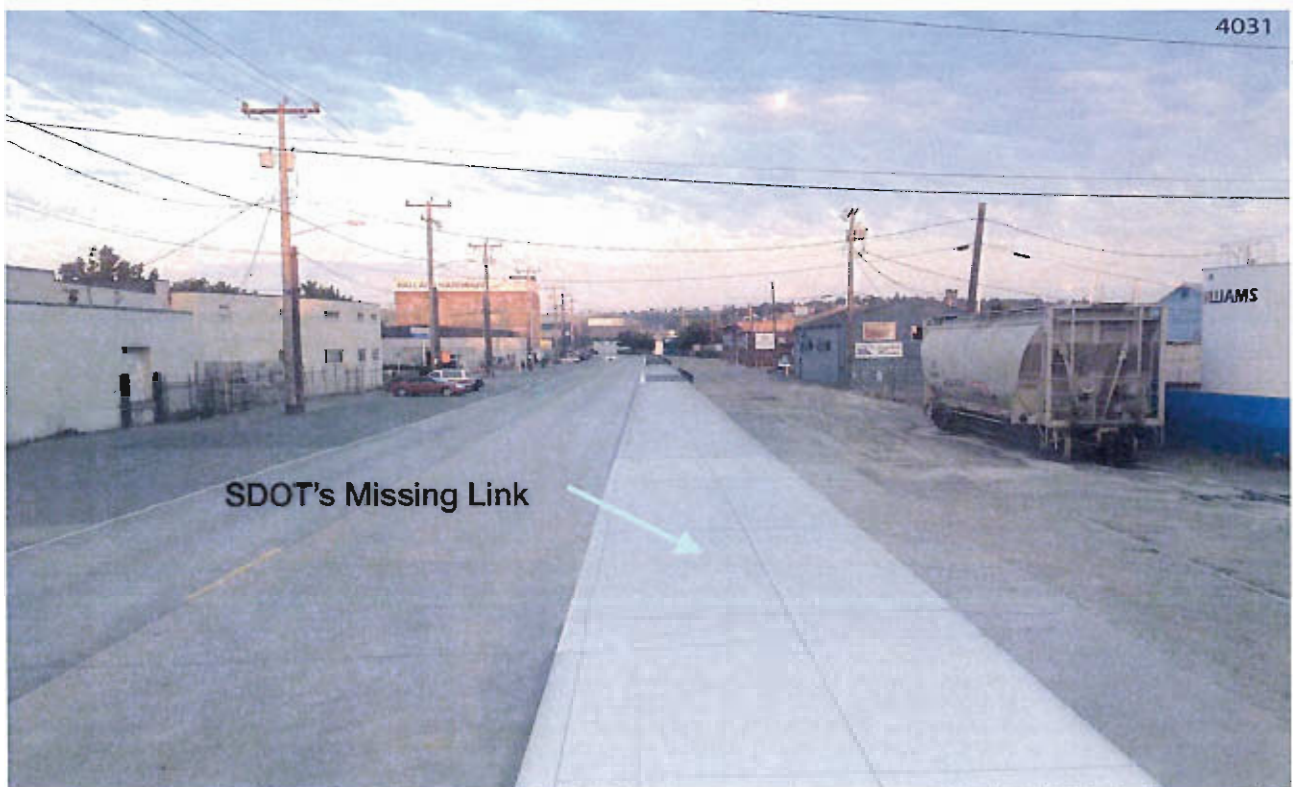
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### **A Safety White Paper**



## SDOT's Proposal:

Instead of a cycle track providing dedicated cycling infrastructure, the City of Seattle Department of Transportation (SDOT) proposes to complete the Missing Link by constructing a multiuser, two-way side path on one side of the road through the heart of Ballard's maritime and industrial district on NW 45th Street, Shilshole Avenue NW and "Not-54th Street." SDOT's proposed route is on a Major Truck Street prioritized for heavy truck traffic; puts trail users and cyclists in direct conflict with maritime and industrial traffic; and crosses 55 active driveways in 1.5 miles—*or one driveway every 144 feet.*

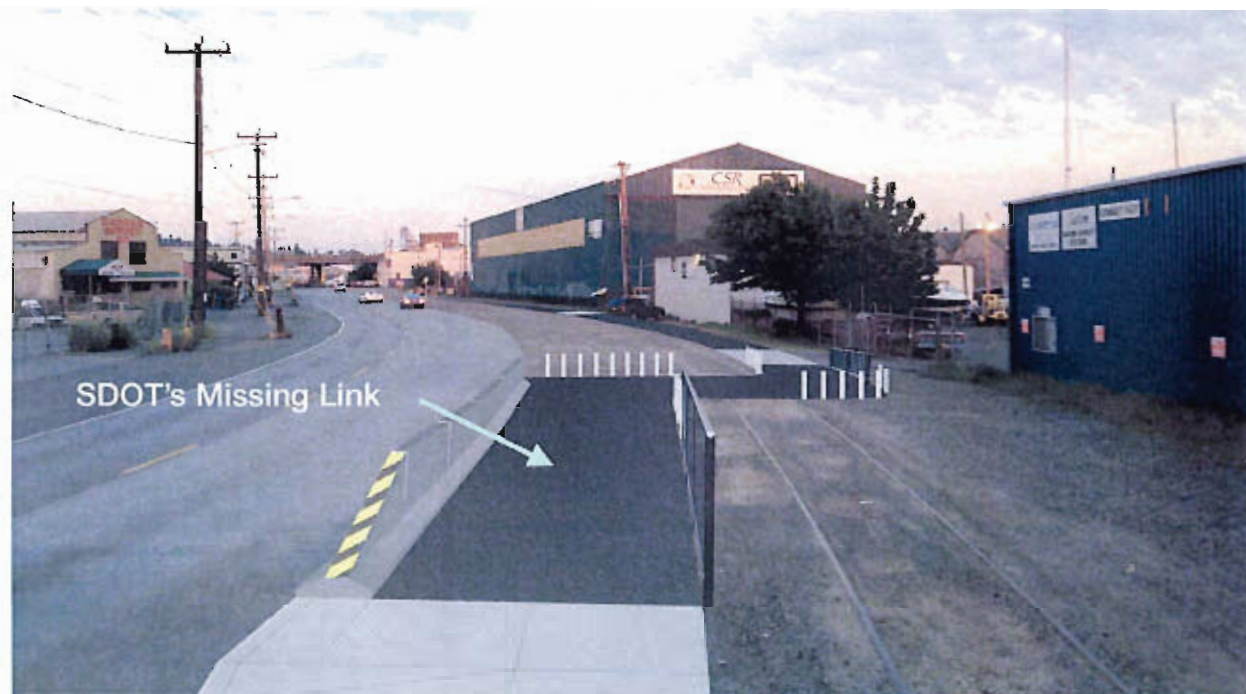


SDOT's Rendering of the Missing Link On Shilshole Avenue NW



SDOT's design provides no barrier or fence separating cyclists and pedestrians from trucks and cars traveling at 25 to 30 MPH on a Major Truck Street that carries approximately 14,000 vehicle trips per day. People using this trail would be separated only by a 2 ½ inch curb, without sufficient "shy" or safe distance between riders and fast moving vehicles. SDOT's Right-of-

Way Manual requires a minimum shy distance of 3' from the travelled portion of a street and a minimum shy distance of 2' feet from the traveled portion of a path. SDOT's Conceptual Trail Layout below shows only 1' of shy distance between the jersey barrier and travelled portion of Shilshole Avenue NW and 0' feet of shy distance between the trail and the jersey barrier on one side of the trail and the fence on the other side.



SDOT's Rendering of the Missing Link On Shilshole Avenue NW

This design creates numerous hazards by locating barriers and fences close to the active roadway, which fail, as a matter of long-standing Washington law, "to keep [the] public ways in a reasonably safe condition for the persons using them in a proper manner and exercising due care for their own safety."<sup>2</sup>



What these depictions fail to show is that there are 17 driveways on the Shilshole segment alone that cross SDOT's proposed trail. These driveways are crossed hundreds of times per day by concrete ready-mix trucks, large and small delivery trucks, 75'-long tandem fuel trucks, 18-wheeler long-haul delivery trucks, and short and long low-boy boat hauler trucks bringing boats and ships to Ballard from around the nation and the world. At Salmon Bay Sand & Gravel alone, concrete ready-mix

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trucks, other large trucks, and its customers' vehicles will cross this unprotected section of trail approximately 180 to 320 times per day.

SDOT's proposed trail layout also constrains 11 of the 17 driveways along Shilshole Avenue NW with either a fence, a jersey barrier, or both. This creates 37 places where trucks must avoid these obstacles. To do so, trucks will be forced to make illegal turning movements by crossing the centerline or driving over the curb.<sup>3</sup> SDOT, however, in a Technical Memorandum prepared to support its design, claims that so long as drivers follow the "Rules of the Road", the Missing Link will operate "safely."<sup>4</sup> The problem is that the "Rules of the Road" prohibit drivers from crossing the centerline or driving over curbs. SMC 11.53.020, RCW 46.61.100 and SMC 11.58.250.



SDOT's design makes it impossible for the trucks that actually use the driveways to do so legally. SDOT did not conduct a computerized "auto-turn" analysis to determine whether its assumptions were correct and whether drivers could actually enter or exit these driveways while still complying with the Rules of the Road. The Ballard Businesses, however, did. They spoke with every business owner along the Shilshole Segment to determine the actual size and types of trucks using the driveways and then used that information to conduct a computerized auto-turn analysis. That analysis established that under SDOT's design, the majority of trucks would be forced to make illegal turns, including 88% of small trucks, 70% of 40' trucks, 86% of 67' trucks, 100% of concrete trucks, 100% of cement trucks, 50% of fuel trucks and low-boy short trucks, and 100% of low-boy long trucks.<sup>5</sup>

SDOT's design for the Missing Link also fails the Chicagoland trail design rating criteria, which is used to determine whether a proposed location is suitable for a trail.<sup>6</sup> That methodology assigns 1 point to every residential driveway that crosses a trail, 2 points to every commercial driveway and minor street, and 4 points to every major street. The number of such crossings is determined for a given length of trail or proposed trail, and the resulting number is converted into a score per mile, **with the higher the score the higher the risk**. The Chicagoland methodology categorizes a trail segment with a score of 1 – 8 as low risk; between 8 and 16 as moderate risk; and any score over 16 points is high risk and a path is not recommended for that location. **Applying the Chicagoland methodology to the Shilshole Segment of SDOT's Missing Link design results in a score of 104—or, nearly six times above the Chicagoland “high risk” category.**

Because of these safety hazards, the City of Seattle's Hearing Examiner ordered SDOT to prepare an Environmental Impact Statement (EIS) to study the safety issues associated with this design since it puts trail users into direct conflict with heavy trucks and maritime and industrial traffic.

## The Ballard Cycle Track Solution:

The Ballard Cycle Track provides a safe, world-class solution to these problems. It would create one-way cycle tracks on both sides of the road right of way, providing fully separated, protected, and safe cycling facilities. It would redirect cyclists away from the heavy-truck, maritime and industrial portion of Ballard, and lead cyclists to the heart of Ballard's retail, dining and residential corridor, thereby removing cyclists from the inherent perils of cycling on a Major Truck Street.



Cycle Track on Leary Way NW

Separation can be achieved through a variety of treatments such as vertical grade changes, parking lanes and pavement markings, curbs, or landscaping, all of which can enhance the comfort and safety of bicycling on urban streets. It is imperative to separate cyclists from fast and heavy motor traffic because of a cyclist's vulnerability in comparison to motor traffic.<sup>7</sup> A fundamental principle of industrial safety is separating people from danger.<sup>8</sup> This is particularly important for vulnerable users like children, whose size, cognitive ability, and decision-making skills make it difficult to integrate them with traffic.<sup>9</sup> The concerns of safety and comfort make separation from traffic stress a critical factor in attracting people to cycling.



Cycle Track on Leary Way NW



Cycle Track on NW Market Street

The Ballard Cycle Track is a practical way to promote safety, decrease danger, and finish the Burke-Gilman Trail. Seattle is already embracing this design technology by building cycle tracks throughout the city because they are safer than “sharrows” or painted bike lanes.

Like Seattle, all of these other cities also are installing cycle tracks:<sup>10</sup>

- Alameda, CA
- Arlington, VA
- Atlanta, GA
- Austin, TX
- Beaverton, OR
- Bend, OR
- Birmingham, AL
- Boston, MA
- Boulder, CO
- Cambridge, MA
- Champaign, IL
- Charlotte, NC
- Chicago, IL
- Cincinnati, OH
- Decatur, GA
- Denver, CO
- Eugene, OR
- Evanston, IL
- Fairbanks, AK
- Hillsboro, OR
- Hoboken, NJ
- Indianapolis, IN
- Kansas City, MO
- Lincoln, NE
- Long Beach, CA
- Madison, WI
- Memphis, TN
- Milwaukee, WI
- Minneapolis, MN
- Missoula, MT
- Montreal, QC
- Nashville, TN
- New York, NY
- Newark, NJ
- Palms Springs, CA
- Philadelphia, PA
- Portland, OR
- Russellville, AR
- Salt Lake City, UR
- San Francisco, CA
- San Jose, CA
- Palms Springs, CA
- Philadelphia, PA
- Portland, OR
- Russellville, AR
- Salt Lake City, UR
- San Francisco, CA
- San Jose, CA
- Vancouver, BC
- Washington, DC
- Wichita, KS
- Woodburn, OR
- Salt Lake City, UR
- San Francisco, CA
- San Jose, CA
- Santa Monica, CA
- Springdale, AR
- Santa Monica, CA
- Somerville, MA
- Springdale, AR
- St Petersburg, FL
- Syracuse, NY
- Tigard, OR



Cycle track in New York, New York



Cycle track in Portland, Oregon

## Seattle Deserves A Safe Solution

The Ballard Cycle Track Solution offers a practical solution that comports with worldwide trends in bicycle infrastructure and the City of Seattle's own Vision Zero, which sets aggressive, yet achievable goals to eliminate traffic deaths and serious injuries by 2030.<sup>11</sup> The Vision Zero plan says "[c]ollisions are often the result of poor behaviors and unforgiving roadway designs. So we must approach the problem from multiple angles - street designs that emphasize safety predictability, and the potential for human error, coupled with targeted education and data-driven enforcement."<sup>12</sup>

Death and injury on the street is preventable with vigilant planning, community engagement with all interested parties, and smart design. SDOT's design for the Missing Link is poorly planned and unsafe, placing cyclists directly into conflict with heavy freight traffic on a Major Truck Street. It places people, cyclists and pedestrians alike, in the heart of an industrial corridor with unpredictable traffic moving in every direction. This location also is inconsistent with the City's efforts to draft and adopt a Freight Master Plan that will focus on "safe and reliable urban truck movements to support Seattle's maritime and manufacturing industry and our increasing demand for goods and services."<sup>13</sup> SDOT's design, on its face, does not work towards ensuring that "everyone, whether 8 or 80 years old, can get around comfortably and reliably."<sup>14</sup>

The Ballard Cycle Track Solution supports the Vision Zero goal by moving the Missing Link two blocks into a user-friendly and safer environment. The Ballard Cycle Track Solution is a win-win-win for the City of Seattle, cyclists, and Seattle's maritime and industrial businesses.



## REFERENCES

1. See Peter G. Furth, *Bicycling Infrastructure for Mass Cycling*, in *City Cycling 107*, (John Pucher and Ralph Bueller ed., 2012).
2. See *Brevio v. City of Aberdeen*, 15 Wn. App. 520, 527, 550 P.2d 1164 (1976). The City of Aberdeen erected a solid barrier within the shy distance, a mere 13 inches from the traveled portion of a street to protect a light standard. Two people were killed and two people seriously injured when their car struck this barrier. When the City was sued the trial court granted the plaintiffs a “directed verdict on the issue of breach of the City’s duty to maintain its public highways in a reasonably safe condition.” The City appealed, and the Court of Appeals affirmed, stating: “The city acted in total disregard for the safety of those using its public highways, and in so doing, failed as a matter of law “to exercise ordinary care to keep its public ways in a reasonably safe condition for persons using them in a proper manner and exercising due care for their own safety.”
3. See H’rg. Trns., Volume II, August 2, 2012, Pages 204-207.
4. See Dungho Chang, P.E., PTOE, City Traffic Engineer, Technical Review of Burke-Gilman Trail Along Shilshole Ave NW, April 23, 2012.
5. See H’rg. Trns., Vol. II, August 2, 2012, pages 204-207; see also Ballard Business Appellants, Exhibit A-254.14.
6. H’rg Trns., Volume II, August 1, 2012, Page 76.
7. See Peter G. Furth, *Bicycling Infrastructure for Mass Cycling*, in *City Cycling 107*, (John Pucher and Ralph Bueller ed., 2012).
8. *Id.*
9. *Id.* at 108.
10. See City of Cambridge, *Cycle Tracks: A Technical Review of Safety, Design, and Research* (June 2014).
11. City of Seattle, SDOT, and SPD, *Vision Zero, Seattle’s Plan to End Traffic Deaths and Series Injuries by 2030*, available at: <http://www.seattle.gov/visionzero>.
12. *Id.* at 6.
13. *Id.* at 17.
14. *Id.* at 25.