

Alternative 1: Seven Auto Travel Lanes (Pre-Interim Project Condition)		
Metric	Score (1-5)	Discussion
Support: Assessment of community preference	1	OakDOT has received very few requests to replicate the seven lane configuration north of 29th Street.
Utilization: More people walking and biking along the corridor	1	Bike and pedestrian numbers on Telegraph were about 50% lower with the seven lane street design in 2013 than after the interim project in 2016.
Safety #1: Prevention of collisions, with a focus on preventing fatalities and severe injuries	1	Bike and pedestrian collision rates were higher before the project. Telegraph Avenue between 20th Street and 29th Street was the third least safe corridor for walking and second least safe corridor for biking citywide, per our High Injury Network (2012 -2016).
Safety #2: Perceptions of safety	1	In 2017, 63% of pedestrians and 79% of bicyclists reported feeling safer on Telegraph Avenue after installation of the interim project.  Vehicle travel speeds were higher on Telegraph Avenue before the interim project, and only 22% of drivers yielded to pedestrians prior to the interim project. Both factors can contribute to a more intimidating pedestrian environment. Generally, biking on multi-lane arterial streets without a bike lane tend to feel less safe for people biking.
Transit: Facilitate transit operations and access	2	The seven auto lane street configuration north of 29th Street provides a good baseline comparison. Transit operations are still effective north of 29th Street; however, buses pull in and out of traffic to enter and exit bus stops, which can lead to transit delays and potential conflicts with autos and bikes.  Passenger waiting areas are shared with the sidewalk space, which provides less space for waiting or alighting the bus than the alternatives with bus boarding islands (Options 2 - 5).
Commercial operations: Convenient commercial and passenger loading	5	Telegraph Avenue merchants and the KONO BID have consistently indicated that on-street parking adjacent to the curb is the most convenient for commercial operations and short-term passenger loading, as in the seven auto lane design alternative. Illegal double parking, when it does occur, provides less of an impact on vehicle operations with the seven lane configuration, given the excess capacity.
Vitality: Support and increase business activity	2	Prior to the installation of the pilot project, sales tax revenue was lower than after the interim project; however, economic and land use trends may have contributed to sales tax revenues after 2016.  Fewer people walked and biked along Telegraph Avenue in 2013, which may have contributed to a potentially less active retail environment.
Accessibility: Convenience for people with disabilities	4	The Mayors Commission for People with Disabilities has indicated a preference for on-street parking adjacent to the curb, as in the seven lane configuration.  Crossing seven lanes without intermediate pedestrian safety islands, which are provided in the interim project, can pose more of a barrier for people with disabilities.
Aesthetics: Attractive aesthetically	2	The plastic posts associated with the interim project are not universally beloved for their aesthetic value. The seven auto lane design alternative removes the plastic posts.  Seven auto lanes of uninterrupted asphalt may not be aesthetically pleasing for all.
Special Events: Facilitate First Friday and other similar events	5	The full street closure of First Fridays began and grew under the seven auto lane configuration.
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Alternative 2: Interim Protected Bike Lanes (Existing Condition)		
Metric	Score (1-5)	Rationale
Support: Assessment of community preference	2	The interim project was intended to be temporary and has been a challenge to maintain over the last four years leading to frustration from all parties, including bicycle and pedestrian advocates, merchants, and residents.
Utilization: More people walking and biking along the corridor	4	The number of people walking and biking on Telegraph Avenue doubled between 2013 (pre-project) and 2016 (post-interim project). In 2017, over half the bicyclists surveyed reported more frequent travel on Telegraph since the interim project was installed. However, we have heard reports from Bicycle Pedestrian Advisory Commission members and other community members that people do not feel safe and so avoid riding on the interim protected bike lanes.
Safety #1: Prevention of collisions, with a focus on preventing fatalities and severe injuries	4	While the number of collisions involving people walking and biking has increased in the 3.5 years after the interim project was installed compared to the 3.5 years prior to the interim project, collision rates have not kept pace with the increase in utilization. The number of people walking and biking (utilization) increased by over 100% during that period, but collisions have increased by 33%. Relying on reported collisions is limited imperfect, as not all Oaklanders call the police or report collisions. It's unlikely hesitation to report collisions has increased since the interim project.  Beyond reported collisions, the interim project design has contributed to more drivers yielding to pedestrians crossing the street (22% in 2014; 74% in 2019), which makes the street safer. Eight-five percent of drivers now travel 24 mph (or lower) through KONO; compared to 29 mph before the interim project. Higher speeds increase the likelihood of being involved in a crash and the severity of injuries sustained in a crash.
Safety #2: Perceptions of safety	3	In a 2017 survey of 500 people on Telegraph Avenue between 20th Street and 29th Street, 63% of pedestrians and 79% of bicyclists felt safer on Telegraph Ave.  OakDOT has received steady feedback regarding numerous near-misses and safety concerns from BPAC, Councilmembers, merchants, and residents, including concerns related to poor visibility, chaotic on-street parking and loading, and turning conflicts.
Transit: Facilitate transit operations and access	4	Buses currently stop in the travel lane, resulting in less weaving behavior and more efficient transit operations compared to the seven auto lane alternative.  OakDOT staff have observed and AC Transit operators report that many riders prefer not to wait on the floating plastic boarding islands, suggesting the islands are not fully embraced. The plastic boarding islands also lack signage, shelters, trash cans, or seating.
Commercial operations: Convenient commercial and passenger loading	2	The Telegraph Avenue business community has indicated that fewer travel lanes and the protected bike lane have led to fewer places to park and load. Telegraph Avenue merchants and the KONO BID have consistently indicated that on-street parking adjacent to the curb is the most convenient for commercial operations and short-term passenger loading.  The continuous center turn lane added by the interim project has created an informal loading area for delivery drivers.
Vitality: Support and increase business activity	3	Prior to the COVID-19 pandemic, sales tax revenue increased after the interim protected bike lane was installed in 2016. These increases, however, are dependent on many factors and cannot be attributed to the bike lane project.  Sixty-six percent of twenty-eight businesses surveyed by the BID in May 2019 reported the interim bike lane had no impact on sales.  Some merchants and the KONO BID have indicated that the interim protected bike lane has been bad for business.
Accessibility: Convenience for people with disabilities	2	The protected bike lane interim project upgraded some curb ramps and parking spaces to comply with ADA and provided painted pedestrian safety zones to reduce the street crossing width.  Accessibility experts prefer the accessible parking adjacent to the curb.
Aesthetics: Attractive aesthetically	2	Some neighbors and business owners have complained about the aesthetics of the temporary project and associated maintenance.
Special Events: Facilitate First Friday and other similar events	3	Accommodating the same number of vendors within the existing First Friday footprint requires modifications and likely reductions to the space per vendor. However, expanding the existing layout (onto side streets or additional blocks on Telegraph) to accommodate future growth of First Fridays is feasible. No data indicate diminished attendance at or success of First Fridays since the interim project was introduced in 2016.

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Alternative 3: Permanent Protected Bike Lanes (Concrete Curbs, Current Grant Funded Project)		
Metric	Score (1-5)	Rationale
Support: Assessment of community preference	4	<p>In May 2019, the KONO BID conducted an online survey of 191 KONO merchants, residents and shoppers. A plurality of respondents rated the interim project as positive for the district, and a majority said that a protected bike lane (29%) or raised cycle track (37%) would work best for KONO.</p> <p>In December 2020, the City of Oakland conducted a survey wherein 80% of respondents preferred a protected bike lane to buffered bike lane. Survey respondents were not representative of the KONO community and were over twice as likely to be white and ten times more likely to be under 65. Self-selection bias and survey fatigue, not to mention a number of pressing local, regional, and national crises in the fall of 2020, may have also have impacted the reach and representation of the survey.</p> <p>Community leaders, represented by the Northgate Neighborhood Crime Prevention Council and KONO BID, have expressed their communities' strong desire for buffered bike lanes.</p>
Utilization: More people walking and biking along the corridor	4	<p>Typically, protected bike lanes attract more riders than other types of bicycle facilities, per the experience of other North American cities, including Washington, D.C.; Austin, TX, Chicago, IL; Portland, OR; and San Francisco, CA.<sup>1</sup> Protected bike lanes are designed to appeal to people of all ages and all abilities, including children and older adults. On Telegraph Avenue between 20th St and 29th St, staff have fielded reports that people do not feel safe riding with their children and avoid bicycling on Telegraph Avenue. The quantitative data show that the number of people biking and walking on Telegraph Avenue doubled between 2013 (pre-project) and 2016 (post-interim project).</p>
Safety #1: Prevention of collisions, with a focus on preventing fatalities and severe injuries	5	<p>OakDOT expects the permanent protected bike lane to yield similar safety benefits as the interim project. While the number of collisions involving people walking and biking has increased in the 3.5 years after the interim project was installed compared to the 3.5 years prior to the interim project, collision rates have not kept pace with the increase in utilization. The number of people walking and biking (utilization) increased by over 100% during that period, but collisions have increased by 33%. Relying on reported collisions is limited imperfect, as not all Oaklanders call the police or report collisions. It's unlikely hesitation to report collisions has increased since the interim project.</p> <p>Beyond reported collisions, the interim project design has contributed to more drivers yielding to pedestrians crossing the street (22% in 2014; 74% in 2019), which makes the street safer. Eighty-five percent of drivers now travel 24 mph (or lower) through KONO; compared to 29 mph before the interim project. Higher speeds increase the likelihood of being involved in a crash and the severity of injuries sustained in a crash.</p> <p>Research in large Canadian cities of Montreal, Toronto and Vancouver finds that the presence of permanent protected bike lanes are associated with the lowest risk for collisions<sup>2</sup></p>
Safety #2: Perceptions of safety	4	<p>Permanent, concrete separation between the bike and parking lanes, along with better visibility at intersections, may address the safety concerns expressed by some stakeholders and improve perceptions of safety compared to the interim project. The permanent project physically enforces parking restrictions approaching intersections to improve sight lines and minimize conflicts between people walking and biking and vehicles turning left or right. The permanent protected bike lane may not eliminate all vehicle parking in the bike lane and visibility concerns.</p>
Transit: Facilitate transit operations and access	5	<p>Permanent concrete boarding islands will provide similar transit operational benefits as the interim project and may increase the appeal of waiting for the bus on the boarding island and not in the pedestrian through zone.</p>
Commercial operations: Convenient commercial and passenger loading	3	<p>The Telegraph Avenue business community has indicated that fewer travel lanes has led to fewer places to park and load. Telegraph Avenue merchants and the KONO BID have consistently indicated that on-street parking adjacent to the curb is the most convenient for commercial operations and short-term passenger loading.</p> <p>The permanent project also enhances curb management and adds load zones to the side streets intersecting Telegraph, which can both ensure parking and loading is available when needed.</p>
Vitality: Support and increase business activity	3	<p>The permanent protected bike lane's effect on business activity may be similar to the interim project's impact. Prior to the COVID-19 pandemic, sales tax revenue increased after the interim protected bike lane was installed in 2016. These increases, however, are dependent on many factors and cannot be attributed to the bike lane project.</p> <p>Sixty-six percent of twenty-eight businesses surveyed by the BID in May 2019 reported the interim bike lane had no impact on sales. Some merchants have indicated that the interim protected bike lane has been bad for business. It's unclear whether or how a permanent protected bike lane would impact this assessment.</p> <p>Studies find that while people who bike to stores tend to purchase less in a single visit, they return more often, spending as much or more each month than the average customer who arrives by car.<sup>3</sup></p>
Accessibility: Convenience for people with disabilities	3	<p>The permanent protected bike lane project will create wider parking access aisles to facilitate easier entering and existing vehicles, especially with a mobility device. The permanent project also ensures all curb ramps meet ADA requirements and provides pedestrian safety islands to facilitate crossing Telegraph Avenue.</p> <p>Accessibility experts prefer the accessible parking adjacent to the curb.</p>
Aesthetics: Attractive aesthetically	4	<p>Ongoing maintenance will be minimized and plastic post debris will be eliminated with the permanent protected bike lane. The additional concrete separation may provide a location for plantings, if desired.</p>
Special Events: Facilitate First Friday and other similar events	3	<p>Accommodating the same number of vendors within the existing First Friday footprint requires modifications and likely reductions to the space per vendor. However, expanding the existing layout (onto side streets or additional blocks on Telegraph) to accommodate First Fridays is feasible.</p>
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<sup>1</sup> "Lessons from the Green Lanes: Evaluating Protected Bike Lanes in the U.S." 2014. [https://pdxscholar.library.pdx.edu/cengin\\_fac/144/](https://pdxscholar.library.pdx.edu/cengin_fac/144/)

<sup>2</sup> "Route Infrastructure and the Risk of Injuries to Bicyclists: A Case-Crossover Study" 2012. <https://ajph.aphapublications.org/doi/full/10.2105/AJPH.2012.300762?journalCode=ajph> and "Risk of injury for bicycling on cycle tracks versus in the street" 2011. <https://injuryprevention.bmj.com/content/17/2/131>

<sup>3</sup> "Business Cycles: Catering to the Bicycling Market," TR News 280, 2012: 26-32. <http://bit.ly/16WKfe3>; "Reallocation of road space," NZ Transport Agency research report 530, 2013. <http://bit.ly/167iGIQ>; and "Bike Lanes, On-Street Parking and Business: A Study of Bloor Street in Toronto's Annex Neighbourhood," 2009. <http://bit.ly/18hToAY>; from "Protected Bike Lanes Mean Business" 2014. [https://b.3cdn.net/bikes/123e6305136c85cf56\\_0tm6vjeuo.pdf](https://b.3cdn.net/bikes/123e6305136c85cf56_0tm6vjeuo.pdf)

Alternative 4: Enhanced Buffered Bike Lanes (Protected Major Intersections and Bus Stops)		
Metric	Score (1-5)	Rationale
Support: Assessment of community preference	4	Online surveys indicate a strong preference for protected bike lanes. Community leaders and the business community have expressed a strong preference for buffered bike lanes.
Utilization: More people walking and biking along the corridor	3	As this design alternative is not present on Telegraph Avenue, it's difficult to gauge this option's impact on the number of people walking and biking. Some people have expressed to OakDOT that they would be more likely to bicycle on Telegraph with buffered bike lanes compared to protected bike lanes, while others have indicated that they would be less likely and would not feel as safe riding with their families on Telegraph Avenue with buffered bike lanes as they do with protected bike lanes. Staff anticipate that without active curb management, vehicle parking in the bike lane may compromise bike utilization under Alternative 4, compared to Alternatives 2, 3, and 5.
Safety #1: Prevention of collisions, with a focus on preventing fatalities and severe injuries	2	Unlike for the seven auto lane and protected bike lane alternatives, Telegraph Avenue collision data are not available for this design alternative. Especially at the offset intersections along Telegraph between 20th and 29th Streets, buffered bike lanes could enhance the visibility of bicyclists in the bike lane, thus potentially reducing the number of collisions between turning motorists and people bicycling on Telegraph.  Without active curb management (as in option 5), people may tend to park vehicles in the bike lane more often than today, which could lead to more conflicts and safety concerns despite an 11' buffer.
Safety #2: Perceptions of safety	3	OakDOT has heard from stakeholders, including BPAC, bicyclists, residents and business owners, that buffered bike lanes would make people feel safer, especially at off-set intersections, intersections without signal control, and along short block lengths.  OakDOT has also heard from stakeholders who would feel less safe bicycling between moving vehicles and parked cars, and some people are concerned about even more cars parked in the bike lane (without effective curb management).
Transit: Facilitate transit operations and access	5	Permanent concrete boarding islands will provide similar transit operational benefits as the interim project and may increase the appeal of waiting for the bus on the boarding island and not in the pedestrian through zone.
Commercial operations: Convenient commercial and passenger loading	3	Telegraph Avenue merchants and the KONO BID have consistently indicated that on-street parking adjacent to the curb is the most convenient for commercial operations and short-term passenger loading.  To provide adequate intersection visibility, the buffered bike lane design alternatives will likely have fewer total parking spaces than the seven auto lane alternative. And without curb management, loading and short-term parking spaces may not be available when needed.
Vitality: Support and increase business activity	3	While no sales tax revenue data is available for this alternative, unlike the others, the KONO BID and majority of business owners on the corridor have indicated that the buffered bike lane alternative would be better for business.  Without active curbspace management, parking may not be available when patrons arrive, which could detract from business vitality.
Accessibility: Convenience for people with disabilities	4	The Mayors Commission for People with Disabilities has indicated a preference for on-street parking adjacent to the curb, as in the seven lane configuration.  Crossing seven lanes without intermediate pedestrian safety islands, as in the interim project, can be more of a barrier for people with disabilities.
Aesthetics: Attractive aesthetically	3	This design alternative avoids plastic posts, which have been a reported eyesore, but not does provide additional space for potential landscaping.
Special Events: Facilitate First Friday and other similar events	4	This alternative would be compatible with First Fridays events since its configuration allows for First Fridays vendors to locate in the bike facility. Bus boarding islands and protected intersections would minimally decrease the amount of right-of-way available for vendors.

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**Alternative 5: Enhanced Buffered Bike Lanes (Protected Major Intersections and Bus Stops) and  
Curb Management (Demand-responsive parking and loading management in effect evenings & weekends)**

<b>Metric</b>	<b>Score (1-5)</b>	<b>Rationale</b>
Support: Assessment of community preference	4	Online surveys indicate a strong preference for protected bike lanes. Community leaders and the business community have expressed a strong preference for buffered bike lanes.
Utilization: More people walking and biking along the corridor	4	As this design alternative is not present on Telegraph Avenue, it's difficult to gauge this option's impact on the number of people walking and biking. Some people have expressed to OakDOT that they would be more likely to bicycle on Telegraph with buffered bike lanes compared to protected bike lanes, while others have indicated that they would be less likely and would not feel as safe riding with their families on Telegraph Avenue with buffered bike lanes as they do with protected bike lanes. Staff expect ridership numbers to be similar, or slightly higher, under Alternative 5 than the protected bike lane alternatives (2 and 3). Active curb management is anticipated to keep the bike lane accessible.
Safety #1: Prevention of collisions, with a focus on preventing fatalities and severe injuries	5	Unlike for the seven auto lane and protected bike lane alternatives, Telegraph Avenue collision data are not available for this design alternative. Especially at the relatively frequent, offset intersections along Telegraph between 20th and 29th Streets, buffered bike lanes could enhance the visibility of people using the bike lane, thus potentially reducing the number of collisions between turning motorists and people bicycling on Telegraph. Curb management associated with this design alternative minimizes the risk of double parking and conflicts in the bike lane, thereby significantly improving safety above alternative 4 (buffered bike lanes without curb management).
Safety #2: Perceptions of safety	4	OakDOT has heard from stakeholders, including BPAC, bicyclists, residents and business owners, that the buffered bike lane would make people feel safer, especially at off-set intersections, intersections without signal control, and along short block lengths. Curb management associated with this design alternative may enhance perceptions of safety by reducing incidents of double parking.  OakDOT has also heard from stakeholders who would feel less safe bicycling between moving vehicles and parked cars, and some people are concerned about even more cars parked in the bike lane.
Transit: Facilitate transit operations and access	5	Permanent concrete boarding islands will provide similar transit operational benefits as the interim project and may increase the appeal of waiting for the bus on the boarding island and not in the pedestrian through zone.
Commercial operations: Convenient commercial and passenger loading	4	Telegraph Avenue merchants and the KONO BID have consistently indicated that on-street parking adjacent to the curb is the most convenient for commercial operations and short-term passenger loading. With curb management, even on nights and weekends, loading and short-term parking spaces will be more available when needed, which could enhance the convenience of loading and parking, increase the number of patrons at businesses, and improve the safety of the bike lane.  To provide adequate intersection visibility, the buffered bike lane design alternatives will likely have fewer total parking spaces than the seven auto lane alternative
Vitality: Support and increase business activity	4	While no sales tax revenue data is available for this alternative, unlike the others, the KONO BID and majority of business owners on the corridor have indicated that the buffered bike lane alternative would be better for business. Curb management can also help ensure parking and loading is available when needed.
Accessibility: Convenience for people with disabilities	4	The Mayors Commission for People with Disabilities has indicated a preference for on-street parking adjacent to the curb, as in the seven lane configuration.  Crossing seven lanes without intermediate pedestrian safety islands, as in the interim project, can be more of a barrier for people with disabilities.
Aesthetics: Attractive aesthetically	3	This design alternative avoids plastic posts, which have been a reported eyesore, but not does provide additional space for potential landscaping.
Special Events: Facilitate First Friday and other similar events	4	This alternative would be compatible with First Fridays events since its configuration allows for First Fridays vendors to locate in the bike facility. Bus boarding islands and protected intersections would minimally decrease the amount of right-of-way available for vendors.

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