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League of Bicycling Voters

Comments on COA Staff Recommendation for a "Downtown Bike Boulevard" Project

April 12, 2010

Comments on April 5 "Memorandum to Mayor, Council, Boards and Commissions"

Bicycle Boulevard is a street optimized for bicycles, accessible to motor vehicles, and attractive to bicyclists and pedestrians of all abilities. Unlike traditional bicycle lanes, traffic calming devices and place-making techniques are used to create a distinctive look and/or ambiance such that bicyclists become aware of the existence of the bike boulevard and motorists are alerted that the roadway is a bicycle route. The result is a more pedestrian and bicycle-friendly street where motor vehicles have access, share the road with bicyclists, travel at slower speeds, and may choose to use other near-by streets if through travel, rather than local access, is the goal. A Bicycle Boulevard does not change the capacity of the roadway, but rather the operating characteristics which favor local motor vehicle access, lower motor vehicle speeds, bicycle mobility, and pedestrian use. An approximate speed differential of no more than 15 mph between bicyclists and motorists is preferred. While there could be a reduction in through traffic volume, our local experience with traffic calming, as shown by an evaluation of Austin's Neighborhood Traffic Calming Program, has seen an average speed reduction of 19%, with no statistically significant change in traffic volumes.

LOBV: We feel the definition above supports a full bike boulevard on Nueces Street. Making Nueces a "place" and a key corridor for travel to downtown destinations was the original vision for the project and can be accomplished with the right plan. Planning in fear of traffic volumes and "responding to concerns" that auto capacity should be preserved (even though it appears that capacity isn't a problem), and that through auto traffic should be better accommodated, is not the way to address our city's goals.

1. Motor Vehicle Pressures on Nueces: While previous City plans recognize its importance to the bicycle network, proposed large-scale projects and related sub-area plans have evolved to indicate increased motor vehicle traffic pressure on Nueces (for example, its future planned extension to Cesar Chavez and the extension of 2nd Street to the Seaholm site). This could not be ignored and was studied more indepth in finalizing the recommendation for the implementation of Bicycle Route 31 through the downtown, specifically related to the use of traffic calming devices.

LOBV: While it is important to plan for what might be, we feel it is more important to plan for what will benefit the community and meet Austin's mobility, health and environmental goals. The "traffic pressure" noted is the exact reason for planning a bike boulevard on Nueces.

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2. Traffic Calming Tools: The available tool-box of traffic calming devices appropriate for both Nueces and Rio Grande was determined by an internal City staff review process along with relevant partner agency and emergency response personnel. While partial or semi diverters (diverters) and pinch-points are approved devices, there were limits to their location (diverters) and later to their appropriateness (pinch points) in this downtown context. For example, south bound diverters were not an option due to emergency response and Capital Metro needs and north bound diverters were also not an option between 8th and 11th street due to the operations of the Travis County Criminal Justice Center. The effect of possible traffic diversion onto Rio Grande St (Rio Grande), coupled with property/business owner concern with these devices also was considered.

LOBV: The appropriateness and benefits/drawbacks of partial diverters should have been thoroughly discussed with the community. COA staff stated early in the public process that the partial diverters were not part of the traffic calming "tool box," although the partial diverters were included for comment at the third community workshop and as part of the traffic study.

3. Rio Grande Possibilities: There was overwhelming interest during the public input process to consider a Rio Grande alignment. A re-evaluation of Rio Grande presented new, positive information with regard to the creation of a Bicycle Boulevard. First, southbound left turns from MLK are currently prohibited, resulting in lower vehicle volumes. To improve bicycle connectivity we have clearance for an innovative "bicycle only left turn bay" at the corner of MLK and Rio Grande. Second, Rio Grande currently carries 11% less traffic than Nueces and is more likely than Nueces to retain its Bicycle Boulevard characteristics into the future, as it has less future motor vehicle pressures by not having additional road connectivity and is likely to have less re-development. To reinforce this, the traffic study forecasted that by year 2020 Rio Grande will carry 24% less traffic than Nueces. Additionally, Rio Grande also experiences high bicycle use.⁹ Third, the existence of four schools (ACC, Khabele, St Martins, and Pease Elementary) invites traffic calming and bicycle and pedestrian improvements. We also explored the bicycle connections north of MLK and are studying the feasibility of a two-way bicycle facility on Rio Grande to continue the bicycle boulevard alignment through west campus. Lastly, to further improve bicycle connectivity, we determined that a new bicycle/pedestrian bridge connecting Rio Grande to the Lance Armstrong Bikeway/Shoal Creek Trail at 4th St is feasible.

LOBV: We dispute the assertion of "overwhelming interest," since the interest in a Rio Grande alignment was mainly confined to property owners and school officials there who are interested in traffic calming and safety improvements on the street, not the issue of where a bike boulevard would be best suited. While LOBV was supportive of studying improvements on Rio Grande, and indeed some bicyclists expressed an interest in a Rio Grande alignment, the vast majority of the bicycling community stood firm with the benefits and suitability of Nueces Street for the bike boulevard.

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Again, the "future motor vehicle pressures" and "re-development" should be a reason FOR building a bike boulevard on Nueces, not against it.

4. Bicycle Lanes for Nueces: The current traffic volumes on Nueces are near the high end of acceptable Bicycle Boulevard levels for beginner/child (B/C) bicyclists. This coupled with the future motor vehicle pressures on Nueces make a Bicycle Boulevard without diverters and reduced volumes not appropriate for B/C bicyclists. Therefore, bicycle lanes are the proper tool except close to the Travis County Criminal Justice Center, where there is high on-street parking demand (see Shared Lane Marking discussion below). Bicycle lanes are compatible with higher motor vehicles volumes and speeds. Because a goal of the project is to create a bicycle route suitable for all level and ages of bicyclists, we propose to install enhanced bicycle lanes (for example, colored lanes) for improved protection against "right hook" type of motor-vehicle/bicyclists collisions and for heightened awareness to the presence of bicyclists. Bicycle lanes on Nueces are a safer facility for all bicyclists than current conditions by providing dedicated space as some riders currently duck into empty parking spaces and/or ride in the "door zone" adjacent to parked cars. Lastly, bicycle lanes improve motor vehicle mobility by allowing the motor vehicle and bicyclists to ride side by side, whereby the motor vehicle speed is not limited by a bicyclists speed.

LOBV: While traffic volumes are an important consideration, more important is vehicle speeds and motorists' expectations and behavior while driving on a bike boulevard.

Bike lanes may be more compatible for higher auto volumes and speeds, but again, the staff recommendation is planning for that possibility on Nueces rather than planning to prioritize bicycle travel and make it more compatible for B/C bicyclists.

Colored bike lane would provide additional protection against right hooks, although the risk for those types of collisions is still a concern.

We dispute the notion that the bike lanes would be a "safer facility for all bicyclists than current conditions," since bike lanes will change the expectations for motorists so that "A" bicyclists riding outside of the bike lanes are harassed and told to "get in the bike lane."

While bike lanes may allow the "motor vehicle and bicyclists to ride side by side, whereby the motor vehicle speed is not limited by a bicyclists [sic] speed," we contend that the original vision of a bike boulevard is to allow bicyclists to ride side by side, not pressured by motor vehicle speed. (We realize that COA's comments are in reference to Nueces improvements with "bike boulevard" facilities on Rio Grande. Nevertheless, since our contention is that Nueces is the most suitable choice for a bike boulevard, designing these facilities to accommodate auto capacity and speed is not the appropriate stance.)

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5. Shared Lane Markings or "Sharrows" for Nueces: For portions of Nueces which serve the Travis County Criminal Justice Center (high on-street parking demand), shared lane markings or "sharrows" are the preferred tool for street segments where on-street parking and bicycle mobility must co-exist. The sharrow is proven to be an effective facility for this context¹⁰.

LOBV: While we approve of sharrows and their benefits, B/C bicyclists may still ride in the door zone on that segment of Nueces and risk injury.

6. Future Capital Improvement Projects for Nueces: There is a water line replacement and storm water system improvement project scheduled for spring 2011 and for future programming as funding becomes available (ideally within the next 10 years), respectively. During the public input process, the timeline for the water line project became firm, making any significant surface infrastructure improvements to Nueces not as attractive as Rio Grande.

LOBV: The bicycling community was well aware of the water projects and stated in the process that we are willing to wait for the water line project to install significant improvements. All streets are subject to disruptive projects in their lifetimes, and we feel it's more important to put the bike boulevard where the benefits will be the highest. It should be noted that we agree the improvements on Rio Grande would serve as an alternate route for bicyclists during the water projects.

7. Traffic Impact Analysis (TIA): The TIA indicated that any of seven possible alignments and forms would have no significant impact on traffic in the area. However, a phase II study indicated that a *Rio Grande Alignment w/out Diverters* is the best alignment based on a more detailed review of traffic engineering principals including, but not limited to motor vehicle safety and mobility, motor vehicle travel time, and bicycle and pedestrian mobility and safety. The Phase II study also recommends bicycle lanes and shared lane markings be considered for Nueces because it is "a vital asset to bicycle mobility in the downtown area."

LOBV: We find that the phase II study is written to support a conclusion by COA staff to put the key bike boulevard improvements on Rio Grande. While an argument can be made about impacts to bicycle/pedestrian safety on Rio Grande from a Nueces Bike Boulevard, why does this constitute a reason for putting the bike boulevard on Rio Grande if the bicycling community also favors traffic calming and pedestrian enhancements on that street? QUESTION: What would be the impact to traffic counts/auto mobility with significant traffic calming on both streets, and why was this question not thoroughly addressed in the Phase II study?

8. Grade: Throughout the public process the bicyclist stakeholders expressed concern over the northbound grade on Rio Grande versus that of Nueces. However, the total elevation change for both streets is almost identical. The staff recommendation addresses this concern by the addition of enhanced bicycle lanes on Nueces, starting at 13th Street and extending to MLK The grade on Rio Grande becomes a factor at about 14th Street, making the transition on 13th or 14th Streets (which are flat) available for bicyclists and would allow them to avoid or enjoy the

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grade. Bicycle connectivity to Guadalupe St or back to Rio Grande is possible by utilizing the bicycle lane installed on MLK in 2009.

LOBV: While the total elevation change may similar, as noted, the grade at various points is not. Why should bicyclists be forced from one facility (Rio Grande) to another (Nueces) to "avoid or enjoy the grade?"

9. Bicycle Network: Bicycle accommodations on both streets implement the City's bicycle network more completely than a Nueces only option, given that both streets experience a significant bicycle modal split. Connectivity to another planned signature bicycle facility on Rio Grande, north of MLK is captured in this staff recommendation, along with overall connectivity in the area to the Pfluger Bridge Master Plan for bicycle and pedestrian facilities, including the Lance Armstrong Bikeway, the Pfluger Bridge Extension, and the Bowie Underpass.

LOBV: Indeed, we feel that facilities on both streets are a marked improvement over just one street. But we feel that the improvements on Rio Grande shouldn't come at the expense of a true bike boulevard on Nueces. The connectivity to planned facilities north of Rio Grande is an issue worth discussion. But again, access to those facilities—cycle tracks, which by no means have received support yet from the bicycling community—could be accomplished via the MLK bike lanes referred to above.

Staff Recommendation (see Exhibit A):

The staff recommends that both Rio Grande Street and Nueces Street together, in the northwest district of the downtown, be designated as the Downtown Bicycle Boulevard with no traffic calming tools implemented on Nueces Street. The following recommends infrastructure and phasing for both Nueces and Rio Grande streets....

LOBV: We support the improvements proposed for Rio Grande, but again, not at the expense of a true bike boulevard and its benefits on Nueces. We have no objection to the concept of a "Downtown Bike Boulevard" and bicycle Route 31 on dual streets, but only with significant traffic calming also on Nueces.

We are willing to discuss any issues over the cost of the overall project with city staff.

· The Project Steering Committee (a nine member committee) reached consensus (minus 1 vote) on improvements to Rio Grande; their consensus recommendation was silent with regard to Nueces. The following is the statement which represents the Consensus (-1 member):
"Traffic calming on Rio Grande Street that imposes minimal impact on vehicular mobility, capacity, and parking and ensures safe and convenient passage for cyclists and pedestrians."
See Exhibit B for a statement from the Steering Committee facilitator.

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LOBV: The near consensus statement only was an agreement on the use of Rio Grande improvements. The LOBV representatives on the committee made it clear when agreeing to this statement that these improvements would not preclude a bicycle boulevard on Nueces, and in fact, the LOBV executive director stated that he would only be in favor of such improvements with a full bike boulevard on Nueces. The Project Steering Committee, in essence, did not agree on anything substantial with regard to implementation of a bike boulevard project. And quite noteworthy, none of the stakeholders who were opposed to the Nueces Bike Boulevard proposal could agree on ANY improvements on Nueces.

Comments on April 5, 2010, HDR Technical Memorandum

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TRAFFIC OPERATIONS STUDY

The overall results of the previous study indicate that none of the alternatives analyzed will have an appreciable differential traffic impact as compared to the No-Build (No Bicycle Boulevard) scenario. The study evaluated 72 intersections and the number of intersections operating at an unacceptable level of service was comparable under each of the scenarios analyzed as part of this study.

LOBV: This also is the determination from the first traffic study. It's quite clear that none of the alternatives proposed hinders mobility in any way, even with partial diverters.

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It should be noted that the study did not consider the impact of growth in bicycle traffic which is likely to reduce the proportion of motor vehicle traffic and improve traffic operations within the study area network. The City of Austin's Bicycle Master Plan (Ref. 4) estimates that bicyclists will constitute approximately 10% of all modes of travel in the central city by year 2020.

Assuming a 10% reduction in 2020 No-Build traffic volumes to account for growth in bicycles, 14 intersections would operate at an unacceptable LOS. As shown in Table 2, 18 intersections (listed in Table 7 of the previous report) operate at an unacceptable LOS under 2020 No-Build conditions if the above assumption is not made. The intersections that would likely improve from unacceptable to acceptable conditions due to the mode shift are listed below:

1. Nueces Street and 11th Street
2. Rio Grande Street and 6th Street
3. West Avenue and 2nd Street
4. West Avenue and 15th Street

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It should be noted that a 10% reduction in motor vehicle traffic will reduce the number of intersections operating at an unacceptable LOS under each of the bicycle boulevard alternatives, and will further reduce the operational difference between the No-Build and the bicycle boulevard alternatives.

LOBV: The study makes clear that mode shifts to bicycling have the potential to improve mobility at intersections. To be fair, we question if this really would be the case, since a shift will simply result in a bicycle trip versus an auto trip. Bicycles still have to navigate intersections.

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Each bicycle boulevard alternative has traffic calming tools that would affect parking differently. Partial-diverters, traffic circles, and speed cushions should have no affect on parking. Pinch-points with speed cushions and mid-block medians with speed cushions should each remove 6 total parking spaces (3 on each side of the roadway). The total parking impacts of the bicycle boulevard alternatives is shown in **Table 3**.

Scenarios	Nueces Street Parking Spaces		Rio Grande Street Parking Spaces	
	Total Existin g	Total Lost	Total Existin g	Total Lost
Bicycle Boulevard with Partial Diverters	217	30 (14%)	211	24 (11%)
Bicycle Boulevard without Partial Diverters	217	30 (14%)	211	24 (11%)
Bicycle Boulevard with Traffic Circles	217	0	211	0

LOBV: The analysis of parking loss seems to indicate about five facilities (pinch points and medians with speed cushions). The number of facilities, type and their placement has always been open for discussion with LOBV. However, we feel the analysis represents a fair analysis of the maximum impact on parking.

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Motor-Vehicle Mobility

Although a bicycle boulevard is expected to provide priority to bicycles, the impact to motor vehicle mobility should be minimal in order to provide a safe travel corridor for all road users. Motor vehicle mobility depends on accessibility to and from adjacent streets, vehicle

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maneuverability, driver expectancy, access to the shortest travel path, and roadway design consistency.

LOBV: While it is important to plan for automobile safety and accessibility, we question whether "access to the shortest travel path" and "roadway design consistency" are necessarily important on a boulevard intended to "provide priority to bicycles." We note that these attributes—shortest travel path and design consistency—are seriously lacking in the vast majority of bicycle facilities, even signature projects like the Lance Armstrong Bikeway.

It should be noted that the City of Austin has collected volume and speed data before and after installation of traffic calming measures in neighborhoods across the City. Based on the City's data, a 19% reduction in vehicle speeds has been documented with minimal reduction in vehicle volumes.

LOBV QUESTION: What is the 19% average reduction based on for a starting speed limit? Is it 30mph? In other words, if the speed limit is reduced to 25 mph on Nueces/Rio Grande, can we expect to see the same level of reduction?

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Bicycle Mobility

A bicycle boulevard route should be located on a route that reduces delays by being a direct and flat route if possible. If a bicycle boulevard is placed away from existing bicycle travel patterns, the bicycle boulevard may not be used by as many bicycles as a bicycle boulevard on an existing bicycle route. If the topography of a bicycle boulevard is hilly, bicyclists will use another route if available to avoid the hills. The previous report included bicycle counts of existing ridership. Comparing the two streets (Nueces Street and Rio Grande Street) for the bicycle boulevard alternatives, Nueces Street had 9% of its users traveling by bicycle, while Rio Grande Street experienced 5% of its users on bicycle. Looking at the topography of Rio Grande and Nueces Streets, the topography is similar, except between 14th Street and 17th Street. Between these streets, Nueces Street has an approximate grade of 2.5%, while Rio Grande Street has a 4% grade. For these reasons, the 2009 Austin Bicycle Plan (Ref. 4) places a bicycle boulevard on Nueces Street.

LOBV: This is a good summation of why we feel it's important to have the bike boulevard on Nueces. Additionally, we disagree with the overall assessment of grade, since there is still a higher grade on other portions of Rio Grande as well.

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In summary, with its existing bicycle route connections to other bicycle routes, and flatter topography, Nueces Street provides the preferred route for bicycle mobility. In general, traffic

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calming tools are desirable for bicycle mobility because they reduce travel speeds and/or cut through volumes. The No-Build alternative (No Bicycle Boulevard) does not provide the desired bicycle mobility, due to the requirement of bicycles to stop at many intersections.

LOBV: Agreed.

Bicycle Safety

It is important to review the affect of traffic calming tools to bicycle safety. The following summarizes the affect of each traffic calming tool to bicycle safety.

Speed Cushion – No effect because the cushions will be designed so that fire trucks can straddle them with both wheels. This allows cyclists to avoid the "bump" and stay on level ground.

LOBV: Some bicyclists have expressed concern with the negative impacts of speed cushions on bicyclists using bike trailers with kids. The possibility of tipping has been mentioned, or just jostling a young child. We note that some speed cushions have been built so that there is not only enough room for the bicyclist to ride on the flat portion of the street, but also for the trailer's wheel span to go over the lowest section of the tapered speed cushion. Since the median islands with speed cushions seem to provide twice as much potential in slowing traffic than median islands alone, we feel that the matter should be discussed to see what provides the best level of calming impact with relation to safety for bike trailers.

Partial-Diverter – While partial diverters will remove motor-vehicles from the roadway, partial diverters will make all northbound motor-vehicles turn left or right, creating potential conflicts with north-south bicycle travel. This increase in motor-vehicle turning movement traffic may affect bicycle safety. It should be noted that the reduction in traffic volumes downstream of the partial diverter and the presence of other traffic calming devices on the street could put these devices into context and mitigate this safety concern.

LOBV: Also mitigating this problem should be the idea that bicycle traffic will be encouraged to be in the lane, thus avoiding "right hooks" for cars forced to turn right. Although we agree, an increase in turns is something to consider when evaluating bicycle safety.

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Based on findings of the previous study, construction of a bicycle boulevard on Nueces Street will result in an increase in motor vehicle traffic on Rio Grande Street, which may adversely impact the safety of cyclists and pedestrians on Rio Grande Street. In addition, although Nueces Street is a designated bicycle route, Rio Grande Street has three schools along the corridor that are likely to attract higher levels of bicycle and pedestrian traffic than other land uses. A bicycle boulevard on Nueces Street will enhance bicycle mobility on Nueces Street, but is likely to adversely impact non-bicycle boulevard bicycle traffic as well as pedestrian safety on Rio Grande Street, due to the increase in motor vehicle volumes. Under 2020 traffic conditions, the

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increase in average traffic volumes on Rio Grande Street (between 19th Street/MLK Jr. Boulevard and 7th Street) due to construction of Bicycle Boulevard alternatives "2N" (Nueces Street with Partial-Diverter) or "3N" (Nueces Street without Partial-Diverter) is approximately 47% (540 to 795 vph) and 31% (540 to 710 vph), respectively. Based on the evaluation of bicycle safety impacts due to the proposed traffic calming measures discussed previously, the "Rio Grande Street without Partial-Diverter" bicycle boulevard alternative is the preferred alternative.

LOBV: While an argument can be made about impacts to bicycle/pedestrian safety on Rio Grande from a Nueces Bike Boulevard, why does this constitute a reason for putting the bike boulevard on Rio Grande if the bicycling community also favors traffic calming and pedestrian enhancements on that street? QUESTION: What would be the impact to traffic counts/auto mobility with significant traffic calming on both streets, and why was the answer to this question not presented in the Phase II report?

Additionally, we disagree with "... Rio Grande Street has three schools along the corridor that are likely to attract higher levels of bicycle and pedestrian traffic than other land uses." While the schools will be important destinations, the intent of the original Nueces Bike Boulevard was to provide a corridor for B/C bicyclists to downtown destinations.

With development/redevelopment and the proposed Seaholm changes, those land uses will generate a far higher demand for bicycle trips than the schools. Indeed, the very fact that nearly twice as many bicyclists use Nueces now for commuting and downtown area destinations indicates that the land use served by Nueces will attract more bicyclists than an alignment on Rio Grande.

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A "first response route" is any roadway that has a fire station and EMS station, and/or a hospital/trauma center on it, and is a major arterial street, or is a frequently used route that must be used to pass from one neighborhood to another neighborhood. Nueces Street is a first response route for Fire Station Number 2 located at the intersection of Nueces Street and MLK Jr. Boulevard. As a result, construction of a bicycle boulevard on Nueces Street is likely to have an adverse impact on the first response route. However, Rio Grande Street is not a first response route and none of the Rio Grande Street bicycle boulevard alternatives will have an impact on the first response route.

LOBV: We disagree with the idea that a Nueces alignment alone would have an "adverse impact" on the first response route. The biggest impediment to public safety response is auto traffic. Therefore, reduced auto trips could have a beneficial impact on response. While auto trips could be supplanted by bike trips, bicycles are much faster and more adept at moving aside for public safety vehicles. We agree some traffic calming facilities could impact response, which

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is why they were vetted with public safety stakeholders first. The Phase II traffic study appears to conflict with what is outlined in the first study:

"Based on information obtained from the City, traffic calming measures implemented in Austin have had minimal impact on emergency response services. Based on studies conducted by Fehr & Peers (Ref. 6), pinch-points can be designed to allow easy maneuverability for large vehicles like delivery trucks. Similarly, speed cushions can also be designed to allow emergency vehicles to cross the roadway without straddling over the speed cushions. The City of Austin has been working with local emergency service providers (Austin Fire Department, Austin Police Department, EMS, and the Travis County Sheriff's Office) and Capital Metro regarding the installation of traffic calming measures. Based on this coordinated effort, the design of the traffic calming measures will have to be approved by all emergency providers listed previously. In addition, the calming measures will not restrict driveway access to any properties along the bicycle boulevard.

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LOBV: With regard to travel time delays for motorists, we find all travel delays are acceptable and are in the range of 1-3.5 minutes, although we would like more details on how these delays are calculated.

It should be noted that the proposed "Nueces Street with Traffic Circles" (4N) and "Rio Grande Street with Traffic Circle" (4R) bicycle boulevard alternatives will require conversion of existing two-way stop to all-way yield control at four and five intersection locations, respectively. This will result in additional delays at these intersections for the northbound and southbound movements and hence, the travel time is more compared to the "Without Partial-Diverter" alternatives (3N and 3R).

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Based on the above findings, it is recommended that the bicycle boulevard be constructed on Rio Grande Street. Under 2020 No-Build traffic conditions, the average traffic volumes on Nueces Street and Rio Grande Street are approximately, 715 vph and 540 vph, respectively during the PM peak period. Based on the traffic volume projections, Rio Grande Street will service approximately 24% lower motor-vehicle volumes during the PM peak period compared to Nueces Street in year 2020, and the three schools along Rio Grande Street will not be impacted by traffic shifting off of the Nueces Street corridor. In addition, based on results summarized in **Table 4**, the "Rio Grande Street without Partial-Diversers" alternative is the most beneficial option, with minimal overall impact on transportation within the study area network.

It is recommended that if a bicycle boulevard is constructed along Rio Grande Street, the City should minimize the use of traffic circles and either consider 1) other traffic calming devices, or 2) use traffic circles in combination with other traffic calming devices. In addition, the City

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should coordinate with and consider site-specific factors related to existing schools during the design of the bicycle boulevard. While Rio Grande Street without partial diverters is the recommended bicycle boulevard alternative, it is important to note that Nueces Street is a vital asset to bicycle mobility in the downtown area and many of the existing bicyclists will still continue to use Nueces Street. Therefore, it is recommended that bicycle lanes and sharrows be installed on Nueces Street if a bicycle boulevard is installed on Rio Grande Street. Installing a bicycle boulevard on Rio Grande Street should attract new bicyclists who currently do not feel comfortable riding on the existing Nueces or Rio Grande Streets.

LOBV:

- 1) *We question why a "deterioration" of motor vehicle mobility alone would be the reason not to have partial diverters on Rio Grande.*
- 2) *We also object to the designation of partial diverters for Nueces having "significant deterioration" in automobile mobility, since the study's findings on travel time, intersection performance and other considerations don't point to that conclusion at all.*
- 3) *As noted previously, the benefits, topographic/connectivity suitability of Nueces should be a more compelling rationale for choosing a Nueces alignment, rather than noting the lower traffic volumes and impacts to bicyclists/pedestrians on Rio Grande. Additionally, as noted previously, there should be a more definitive look at the impacts of traffic calming on both streets presented as an option.*

PEASE ELEMENTARY SCHOOL

"Partnerships For Excellence: Children, Teachers, Parents"

1106 Rio Grande Avenue Austin, Texas 78701 (512) 414-4428

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March 11, 2010

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City of Austin, Public Works Department
Neighborhood Connectivity Division
P. O. Box 1088
Austin, TX 78767

Attn: Annick Beaudet, Project Manager

RE: Nueces Bike Boulevard Project

Dear Ms. Beaudet:


This letter is to inform you that Pease Elementary, the oldest continuously operating public school in Texas, supports the Nueces Bike Boulevard Project. However Pease, as represented by its Campus Advisory Council and its Parent-Teacher Association, prefers the proposed bike boulevard to be located on Rio Grande Street.

Rio Grande Street fronts the east side of Pease Elementary, and is a primary drop off and pick up point for our students. We feel that a bike boulevard on Rio Grande would be compatible with our use of the east side of our campus. We also feel it would increase the safety of our students, as well as the students at Austin Community College, the Khabele School and St. Martin's Lutheran School; which all have campuses that abut Rio Grande. In addition to improved safety, a bike boulevard on Rio Grande Street would provide an excellent and more tangible example of multiple and mixed modes of transportation for the students of all these schools.

We appreciate the solicitation of our input and the consideration of our recommendation.

Sincerely,


Jennifer Regalado,
Co-President Pease PTA


Armando Ybarra,
Parent Co-Chair, Pease Campus Advisory
Council


Bobbie Melder,
Co-President, Pease PTA



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www.originalaustin.org

9 February 2010

Annick C. Beaudet, AICP
Project Manager, Bicycle & Pedestrian Program
Department of Public Works
City of Austin, Texas 78767

RE: Original Austin NA Bicycle Boulevard support letter

Dear Ms. Beaudet, Mr. Lazarus, Mayor Leffingwell and City Council:

On 9 February 2010, at its regularly scheduled monthly meeting, the Board of Directors (BoD) of the Original Austin Neighborhood Association (OANA) voted unanimously to (1) unequivocally support the concept of a Bicycle Boulevard between Cesar Chavez Street to MLK Boulevard and continuing into the west UT Campus area, and (2) respectfully recommend to the City that the route of the boulevard be Rio Grande Street rather than Nueces Street.

Our recommendation of the Rio Grande Street option is based on the following:

- The Nueces Street option creates an uncertainty not only for the current development density along the street but also the success of future development of already approved projects along Nueces, especially the area between Cesar Chavez and West 6th Street.
- By locating the bike boulevard along Rio Grande Street, City resources can be allocated to complete several ongoing and much needed projects along the street such as the installation of a bike/pedestrian bridge at the south end of the street tying the boulevard into the Lance Armstrong Parkway and the Lake Ladybird and Shoal Creek trail system, and the installation of a traffic signal at the intersection of West 5th Street and Rio Grande Street.
- There are three active schools along Rio Grande Street, the Khabele School with 200 students, Pease Elementary with 240 students, and the ACC Rio Grande campus with over 7,000 students (ACC's long term goal for this campus is 11,000 students, with many of them being dually enrolled at UT). The bicycle boulevard would create a safer bicycle environment directly linking these schools to the UT Campus area.

In response to requests to consider Rio Grande Street as the bicycle boulevard, the City has come up with a plan to accomplish this vision without causing undo impact on traffic associated with or properties located along the street. There will be extensive uses of 12-foot traffic circles in intersections with the concurrent elimination of traffic calming devices envisioned on Nueces Street that resulted in the loss of on street parking spaces. The proposed Rio Grande Street plan would also fund a student drop off at Pease Elementary and the ACC Rio Grande campus thus creating a safe zone separating the student activity from the traffic.

The neighborhood association is committed to working with the City on this matter, and we are available to discuss this matter at your convenience.

Sincerely,

Original Austin NA, President

Board of Directors

Ted Siff, President
Mark Holzbach, Vice President
Albert Stowell, Treasurer
Blake Tollett, Secretary
Rick Hardin
Perry Lorenz
John Horton
JuanPablo Wright

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Austin Cycling Association

P.O. Box 5993

Austin, Texas 78763

Tax ID 74-2225661

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April 13, 2010

Dear Mayor Leffingwell and Council Members:

Austin Cycling Association supports the concept of a bicycle boulevard on Nueces Street, in principle, with the details to be specified in a collaborative effort between the city staff and the community. Similar traffic calming measures on the adjacent Rio Grande Street corridor should be provided in addition to the bicycle boulevard on Nueces Street.

The Street Smarts Task Force recommended a bike boulevard on Nueces Street, and both the recently approved Austin Bicycle Plan and the Downtown Austin Plan specify a bicycle boulevard on Nueces.

We also want to commend Annick Beaudet and the staff of the City of Austin Bike and Pedestrian Program for their hard work in implementing bicycle facilities and improvements in downtown Austin and across the city. Even in the face of intense opposition, we appreciate their focus and determination to help make Austin more bicycle-friendly.

The bicycle boulevard should have traffic calming measures that give priority to bicycle traffic by reducing the speed and volume of motor vehicle traffic. The bicycle boulevard should have stop signs removed along the corridor. Some examples of appropriate traffic calming measures include traffic circles, pinch points, raised crosswalks, traffic diverters, and speed cushions or speed humps.

Providing improvements for bicycles on Nueces Street will improve accessibility for novice bicyclists and children who might otherwise be discouraged from bicycle riding on city streets because of the volume and speed of motor vehicle traffic.

On behalf of the board and membership of the Austin Cycling Association, I want to thank you for your consideration and support of the bicycle community of Austin.

Sincerely yours,

Gilbert D. Martinez

President

Austin Cycling Association

The Austin Cycling Association (ACA) is a 501(c)(3) non-profit organization in existence for over 30 years. The ACA is dedicated to furthering bicycling access, safety, education, and enjoyment in central Texas by sponsoring weekly bike rides, training, informational programs and an annual charity bike ride – the Armadillo Hill Country Classic (AHCC). The AHCC benefits bicycle safety education and free helmets for kids.



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MEMORANDUM

TO: Mayor and Council, Boards & Commissions
FROM: Annick Beaudet, AICP, Program Consultant, Public Works Department
DATE: April 22, 2010
SUBJECT: Downtown Austin Alliance (DAA), Downtown Austin Neighborhood Association (DANA), and Austin Bicycle Advisory Council (BAC) Recommendation on Downtown Bicycle Boulevard Project

Please find below correspondence received from the DAA, DANA, and the BAC regarding the Bicycle Boulevard Project. **Note the DAA recommendation was made before the staff recommendation was released on April 6th, 2010. Staff will present the staff recommendation to the DAA on May 3rd, which may result in a new recommendation.**

The Downtown Austin Neighborhood Association (DANA) supports city staff's recommendation to enhance bicycle mobility on the Rio Grande and Nueces corridors. We recognize the challenges of balancing the passionate views of stakeholders on all sides of the issue and applaud the efforts of the Original Austin Neighborhood Association (OANA) leadership and city staff to find a compromise that will benefit downtown and the rest of Austin.

DANA recognizes the negative effects that reliance on motor vehicles has on our built environment, air quality, health, convenience, and sustainable economic prosperity. Accordingly, we support infrastructure that encourages other mobility options, including bicycles.

To make bicycle use a viable transportation mode, it must be safe, inviting, and pleasant for people of all ages. The staff proposal makes significant strides in this direction.

We believe the staff recommendation will improve bicycle mobility downtown by:

- 1. Reducing the number of stop signs along Rio Grande and Nueces, thereby reducing the amount of time and effort cyclists must expend to bike on the corridors.*
- 2. Discouraging motor vehicle through-traffic by using traffic circles, speed cushions, and slower speed limits to increase motor vehicle travel times.*
- 3. Placing dedicated (and some shared) bike lanes on portions of Nueces.*

It is unclear what the net impact of the reduction of stop signs and the new traffic calming mechanisms will be on motor

vehicle through-traffic. The removal of stop signs will tend to encourage through-traffic, but the new traffic calming mechanisms may more than offset this tendency. Going forward, we urge staff to monitor the through-traffic in the area and augment traffic calming if needed to discourage motor vehicle through-traffic. We also support any further enhancements to make Rio Grande and Nueces safe and inviting bike corridors.

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If you have any questions for us, please don't hesitate to let us know.

The BAC at their regularly scheduled April 15 meeting voted (6-3) in favor to support staff's recommendation.

The following is from the DAA:

Dear Council Member,

The Downtown Austin Alliance is aware that the Downtown Austin Plan calls for bicycle priority streets and shared lanes on secondary priority streets. We are supportive of the plan and street priority concept, which will encourage more bicycle use as part of the transportation mode mix.

However, we have serious concerns about the discouragement of vehicular traffic on Nueces Street between West Seventh Street and MLK Boulevard. Nueces Street is a very important part of the downtown street grid for several reasons:

- It provides good access to business and government offices in the Central Business District.
- When extended to Cesar Chavez Street, it will be the only street to run uninterrupted between West Campus and Cesar Chavez Street on the western side of downtown.
- It will serve as the major gateway to the Green Water Treatment Plant redevelopment.
- It will serve as an alternative route to businesses in the western part of downtown and will relieve congestion on Cesar Chavez.
- Nueces Street provides primary access to 195 parcels that contain more than 135 small businesses.
- Diminishing the vehicular capacity on Nueces Street could decrease the development potential and cause a decline in property values along the street.
- Nueces Street provides the primary access to downtown for Austin Fire Station No. 2 on MLK Boulevard.

The Downtown Austin Alliance has no objection to the sharing of the street for motor vehicles and bicycles. Our concern is with the methods proposed for discouraging motor vehicle use of Nueces. The unintended consequences would include disruption of our street grid, heavier traffic on parallel streets, and a loss of redevelopment opportunities and the potential to increase the tax base.

We need to achieve safer passage for cyclists in a way that doesn't impact the neighborhood's economic viability and potential for growth. The Downtown Austin Alliance will not be able to support anything less.

Sincerely,

David Bodenman, Chair

Please contact me at 974-6505 should you need further clarification or information.



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MEMORANDUM

TO: Mayor and Council; Boards & Commissions
FROM: Howard Lazarus, Acting Assistant City Manager
DATE: April 5, 2010
SUBJECT: Nueces Bicycle Boulevard – Staff Recommendation
ATTCH: Downtown Bicycle Boulevard Layout
CC: Rob Spillar, Director, Austin Transportation Department
Robert Hinojosa, Acting Public Works Director
Mike Curtis, Division Manager, Neighborhood Connectivity Division
Annick Beaudet, Bicycle Program Manager

The purpose of this memorandum is to state and explain the final staff recommendation for the Nueces Bicycle Boulevard Capital Improvement Project (CIP). This staff recommendation represents a solution which is responsive to a wide array of public input and variables; and which maintains the goal of the project. The goal of the project is to preserve and enhance bicycle mobility into, from, and within the downtown area.

Background:

The importance of Nueces Street (Nueces) to the local bicycle network dates back to the late 1990's where the bicycle mobility opportunity afforded by the segment of Nueces from 3rd Street to Martin Luther King Jr. Blvd (MLK) is identified in certain City planning documents. The 1998 Bicycle Master Plan identified this street segment as the downtown portion of Bicycle Route 31, with a recommendation of bicycle lanes. The City's Great Street Plan further solidified its importance to the local bicycle network by labeling it as a "local access bicycle street". More recently the draft Downtown Austin Plan (DAP) and the update to the Bicycle Master Plan (BMP) recommended that rather than traditional bicycle lanes, the appropriate bicycle accommodation for the street be a "Bicycle Boulevard" for these reasons:

1. A bicycle boulevard facility would retain the most on-street parking.
2. The downtown location of this bicycle route and its connection to the Lance Armstrong Bikeway warrants a bicycle facility appropriate for all ages and levels, as well as the opportunity for creating a downtown "destination". Such a facility would contribute to the downtown specific goals of the DAP¹, as well as the more

¹Downtown Austin Plan, Issues & Opportunities by District, Northwest District, Pg. 3,
http://www.ci.austin.tx.us/downtown/downloads/district_analysis_report_1-27-10_core-nw.pdf

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broad goals of the Family and Children's Task Force Report², Climate Protection Plan³, 2007 Street Smarts Task Force⁴, and Health and Human Services Department goals.

3. There is a need to preserve and enhance the bicycle mobility between the Austin Community College (ACC) and The University of Texas (UT) campuses.

4. Traffic growth on Nueces is limited by the current "ring of congestion" on arterials adjacent to the Central Business District (CBD). A key finding of the Central Austin Circulation Study⁵ is that "...the arterial roadways serving the Central Business District (CBD) are at capacity and have a limited ability to move additional vehicles into and out of the CBD." Therefore, the provision of sustainable transportation choices will be key to future mobility to, from and within the CBD. A signature north/south bicycle facility in downtown Austin will complement the east/west Lance Armstrong Bikeway to enhance mobility for existing bicycle users and assure Austin residents transportation choices in the CBD into the future.

5. Existing land uses are predominantly "appointment-oriented", making the use of a bicycle boulevard and the local motor vehicle access focus appropriate.

6. The bicycle boulevard will also provide connectivity to the Pfluger Bridge Master Plan bicycle/pedestrian facilities (the Pfluger Bridge Extension and the Bowie Underpass), which combined with the connection to the Lance Armstrong Bikeway mentioned previously, provide an impressive implementation of the planned bicycle network for this area.

A Bicycle Boulevard is a street optimized for bicycles, accessible to motor vehicles, and attractive to bicyclists and pedestrians of all abilities. Unlike traditional bicycle lanes, traffic calming devices and place-making techniques are used to create a distinctive look and/or ambiance such that bicyclists become aware of the existence of the bike boulevard and motorists are alerted that the roadway is a bicycle route. The result is a more pedestrian and bicycle-friendly street where motor vehicles have access, share the road with bicyclists, travel at slower speeds, and may choose to use other near-by streets if through travel, rather than local access, is the goal. A Bicycle Boulevard does not change the capacity of the roadway, but rather the operating characteristics which favor local motor vehicle access, lower motor vehicle speeds, bicycle mobility, and pedestrian use. An approximate speed differential of no more than 15 mph between bicyclists and motorists is preferred. While there could be a reduction in through traffic volume, our local experience with traffic calming, as shown by an evaluation of Austin's Neighborhood Traffic Calming Program, has seen an average speed reduction of 19%, with no statistically significant change in traffic volumes.

Bicycle Boulevards exist throughout the country⁶, and take a different, context-sensitive form in each location. Best practices for bicycle boulevards recommend low speed limits and an average daily traffic no higher than 4,000⁷ trips per day. Additionally, measures to achieve traffic volumes in the range of 1500 per day are preferred⁷. All bicycle boulevards across the country have a combination of both traffic calming devices and site specific place making that make the bicycle boulevard unique and responsive to its respective location, with the common theme of enhancing bicycle mobility. With an average daily traffic of 3,400 motor vehicles per day and high bicycle use⁸, Nueces today does meet most of the criteria for the implementation of a Bicycle Boulevard. However, after further research and public input, it was determined by staff that Rio Grande Street should be considered as part of Bicycle Route 31 and that the Bicycle Boulevard would be more appropriate for application to both streets with a different, context sensitive, implementation for each street. The following considerations went into the staff recommendation:

² Families and Children Task Force Report, Pg. iii, 12, 22, 34, http://www.ci.austin.tx.us/council/downloads/factf_report.pdf

³ City of Austin Central Austin Mobility Study, Executive Overview, http://www.ci.austin.tx.us/acpp/downloads/acppplan_overview.pdf

⁴ City of Austin Resolution No. 20080424-063

⁵ City of Austin Central Austin Circulation Study Executive Overview, Pg. 2,

http://www.ci.austin.tx.us/transportation/downloads/central_austin_circulation_study_final_8-3-09.pdf

⁶ Albuquerque, NM; Eugene & Portland, OR; Palo Alto, Berkeley, San Luis Obispo, Emeryville, CA; Minneapolis, MN; Wilmington, NC

⁷ Fundamentals of Bicycle Boulevard Planning & Design, Alta Planning, <http://www.ibpi.usp.pdx.edu/media/BicycleBoulevardGuidebook.pdf>

⁸ The 2010 bicycle modal split at the pm peak hour traffic is 9%

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1. **Motor Vehicle Pressures on Nueces:** While previous City plans recognize its importance to the bicycle network, proposed large-scale projects and related sub-area plans have evolved to indicate increased motor vehicle traffic pressure on Nueces (for example, its future planned extension to Cesar Chavez and the extension of 2nd Street to the Seaholm site). This could not be ignored and was studied more in-depth in finalizing the recommendation for the implementation of Bicycle Route 31 through the downtown, specifically related to the use of traffic calming devices.
2. **Traffic Calming Tools:** The available tool-box of traffic calming devices appropriate for both Nueces and Rio Grande was determined by an internal City staff review process along with relevant partner agency and emergency response personnel. While partial or semi diverters (diverters) and pinch-points are approved devices, there were limits to their location (diverters) and later to their appropriateness (pinch points) in this downtown context. For example, south bound diverters were not an option due to emergency response and Capital Metro needs and north bound diverters were also not an option between 8th and 11th street due to the operations of the Travis County Criminal Justice Center. The effect of possible traffic diversion onto Rio Grande St (Rio Grande), coupled with property/business owner concern with these devices also was considered.
3. **Rio Grande Possibilities:** There was overwhelming interest during the public input process to consider a Rio Grande alignment. A re-evaluation of Rio Grande presented new, positive information with regard to the creation of a Bicycle Boulevard. First, southbound left turns from MLK are currently prohibited, resulting in lower vehicle volumes. To improve bicycle connectivity we have clearance for an innovative "bicycle only left turn bay" at the corner of MLK and Rio Grande. Second, Rio Grande currently carries 11% less traffic than Nueces and is more likely than Nueces to retain its Bicycle Boulevard characteristics into the future, as it has less future motor vehicle pressures by not having additional road connectivity and is likely to have less re-development. To reinforce this, the traffic study forecasted that by year 2020 Rio Grande will carry 24% less traffic than Nueces. Additionally, Rio Grande also experiences high bicycle use.⁹ Third, the existence of four schools (ACC, Khabele, St Martins, and Pease Elementary) invites traffic calming and bicycle and pedestrian improvements. We also explored the bicycle connections north of MLK and are studying the feasibility of a two-way bicycle facility on Rio Grande to continue the bicycle boulevard alignment through west campus. Lastly, to further improve bicycle connectivity, we determined that a new bicycle/pedestrian bridge connecting Rio Grande to the Lance Armstrong Bikeway/Shoal Creek Trail at 4th St is feasible.
4. **Bicycle Lanes for Nueces:** The current traffic volumes on Nueces are near the high end of acceptable Bicycle Boulevard levels for beginner/child (B/C) bicyclists. This coupled with the future motor vehicle pressures on Nueces make a Bicycle Boulevard without diverters and reduced volumes not appropriate for B/C bicyclists. Therefore, bicycle lanes are the proper tool except close to the Travis County Criminal Justice Center, where there is high on-street parking demand (see Shared Lane Marking discussion below). Bicycle lanes are compatible with higher motor vehicles volumes and speeds. Because a goal of the project is to create a bicycle route suitable for all level and ages of bicyclists, we propose to install enhanced bicycle lanes (for example, colored lanes) for improved protection against "right hook" type of motor-vehicle/bicyclists collisions and for heightened awareness to the presence of bicyclists. Bicycle lanes on Nueces are a safer facility for all bicyclists than current conditions by providing dedicated space as some riders currently duck into empty parking spaces and/or ride in the "door zone" adjacent to parked cars. Lastly, bicycle lanes improve motor vehicle mobility by allowing the motor vehicle and bicyclists to ride side by side, whereby the motor vehicle speed is not limited by a bicyclists speed.
5. **Shared Lane Markings or "Sharrows" for Nueces:** For portions of Nueces which serve the Travis County Criminal Justice Center (high on-street parking demand), shared lane markings or "sharrows"

⁹ The 2010 bicycle modal split at the pm peak hour is 5%

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are the preferred tool for street segments where on-street parking and bicycle mobility must co-exist. The sharrow is proven to be an effective facility for this context¹⁰.

6. **Future Capital Improvement Projects for Nueces:** There is a water line replacement and storm water system improvement project scheduled for spring 2011 and for future programming as funding becomes available (ideally within the next 10 years), respectively. During the public input process, the timeline for the water line project became firm, making any significant surface infrastructure improvements to Nueces not as attractive as Rio Grande.
7. **Traffic Impact Analysis (TIA):** The TIA indicated that any of seven possible alignments and forms would have no significant impact on traffic in the area. However, a phase II study indicated that a *Rio Grande Alignment w/out Diverters* is the best alignment based on a more detailed review of traffic engineering principals including, but not limited to motor vehicle safety and mobility, motor vehicle travel time, and bicycle and pedestrian mobility and safety.¹¹ The Phase II study also recommends bicycle lanes and shared lane markings be considered for Nueces because it is "a vital asset to bicycle mobility in the downtown area."
8. **Grade:** Throughout the public process the bicyclist stakeholders expressed concern over the northbound grade on Rio Grande versus that of Nueces. However, the total elevation change for both streets is almost identical¹¹. The staff recommendation addresses this concern by the addition of enhanced bicycle lanes on Nueces, starting at 13th Street and extending to MLK. The grade on Rio Grande becomes a factor at about 14th Street, making the transition on 13th or 14th Streets (which are flat) available for bicyclists and would allow them to avoid or enjoy the grade. Bicycle connectivity to Guadalupe St or back to Rio Grande is possible by utilizing the bicycle lane installed on MLK in 2009.
9. **Bicycle Network:** Bicycle accommodations on both streets implement the City's bicycle network more completely than a Nueces only option, given that both streets experience a significant bicycle modal split. Connectivity to another planned signature bicycle facility on Rio Grande, north of MLK is captured in this staff recommendation, along with overall connectivity in the area to the Pfluger Bridge Master Plan for bicycle and pedestrian facilities, including the Lance Armstrong Bikeway, the Pfluger Bridge Extension, and the Bowie Underpass.

Process:

The first mention of the designation of Nueces as a bicycle route dates back to the late 1990's with the process which created the 1998 Bicycle Master Plan and the 2000 Great Streets Plan. Subsequent to that, the Downtown Austin Plan and Bicycle Master Plan public input process began in 2007, lasting approximately two years and including numerous public meetings and public hearings. In November 2009, with the completion of the Lance Armstrong Bikeway (LAB) nearing, City staff decided to begin the implementation of Route 31 through the downtown (Nueces) because of its important connection to the LAB. Notification was sent to area stakeholders to announce the project and request input from them on the design of the project. From December 2009 through January 2010, the City held three public input meetings at Pease Elementary. The meetings were well attended by all stakeholders, bicyclists and property/business owners alike. During that time City staff collected input through phone calls, e-mails and written comments on materials provided at the public input meetings. Additionally, a project steering committee was formed with representatives of a broad range of stakeholders.

Additional public awareness is necessary when going from "Plan" to "Project". The process for this CIP was designed to inform all stakeholders about the project and allow sufficient time to gain input on how to design the project to meet all stakeholder needs; especially those who may not have been involved with the previous planning processes (1998 Bicycle Master Plan, Great Street Plan, Downtown Austin Plan, 2009 Bicycle Master

¹⁰ Effects of Shared Lane Markings on Bicyclist and Motorist Behavior along Multi-Lane Facilities, University of Texas Center for Transportation Research

¹¹ From 4th St to MLK Nueces has 94 feet of elevation change and Rio Grande has 114 feet

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Plan). The result of the process is a better project, which design is unique and responsive to detailed public input and community needs.

Staff Recommendation (see Exhibit A):

The staff recommends that both Rio Grande Street and Nueces Street together, in the northwest district of the downtown, be designated as the Downtown Bicycle Boulevard with no traffic calming tools implemented on Nueces Street. The following recommends infrastructure and phasing for both Nueces and Rio Grande streets:

Infrastructure Recommendations:

1. Rio Grande - 4th St to MLK:

Segment	Recommendation
4 th St to MLK	Street resurfacing; 25 mph speed limit; spot ADA improvements; install shared lane pavement markings; install regulatory and place making signs as appropriate; tree planting as feasible; minimal parking modification as needed related to installation of traffic calming devices
4 th St & Rio Grande	Install a new hike and bike bridge over Shoal Creek to the Lance Armstrong Bikeway/Shoal Creek Hike and Bike Trail
5 th St & Rio Grande	Install a new traffic signal
5 th St to 6 th St	Convert angle parking to back-in angle parking (reverse angle parking)
11 th St to 12 th St	Install inset drop off/pick up zone for Pease Elementary; re-route Capital Metro Bus #3 if feasible
11 th to MLK	Re-route Capital Metro Bus No. 3 as per Capital Metro Service Plan 2020
12 St to 13 th St	Install inset drop off/pick up zone for Austin Community College
7 th St to MLK	Install traffic calming devices (an array of traffic circles, medians with speed cushions, speed cushions, and pedestrian curb-extensions); Implement "green streets" storm water treatment vegetation with traffic calming devices as feasible; minimal parking restrictions as needed
MLK & Rio Grande	Install "bicycle left only bay" for southbound bicyclists at the intersection of MLK, Jr. and Rio Grande

2. Nueces - 3rd St to MLK:

Segment	Recommendation
3 rd St to MLK	Install regulatory and place-making signs as appropriate; 25 mph speed limit if feasible
3 rd St to 7 th St	Install a Great Streets cross-section with includes Great Streets sidewalks, motor vehicle lanes, and enhanced bicycle lanes
7 th St to 13 th St	Install shared lane markings "sharrows"; remove some north/south stop signs if feasible
13 th St to MLK	Modify on-street parking to one-side of the street only and install enhanced bicycle lanes

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Phasing:

- Rio Grande recommendations to begin construction in Fall/Winter 2010, with exception of the bus re-routing which timeline will be determined in coordination with Capital Metro. Details of project progression to be determined with input from local stakeholders.
- Nueces recommendations 3rd to 7th to be implemented as Great Streets project implemented by private development and/or the City of Austin.
- Nueces Street recommendations 7th to MLK to be installed with the upcoming water line project, at the final stages of that project, projected for Spring 2012.

Cost: The staff recommendation for the Downtown Bicycle Boulevard construction is estimated to be approximately \$670,000. Cost increases above the original Nueces only plan includes a new bicycle and pedestrian bridge over Shoal Creek, a new traffic signal at 5th St and Rio Grande, and parking/mobility flow improvements (construction of inset drop off/pick up zones) for both modes through the Pease Elementary and ACC areas. Source of funding is bond specific funding for bicycle plan implementation.

Additional Comments:

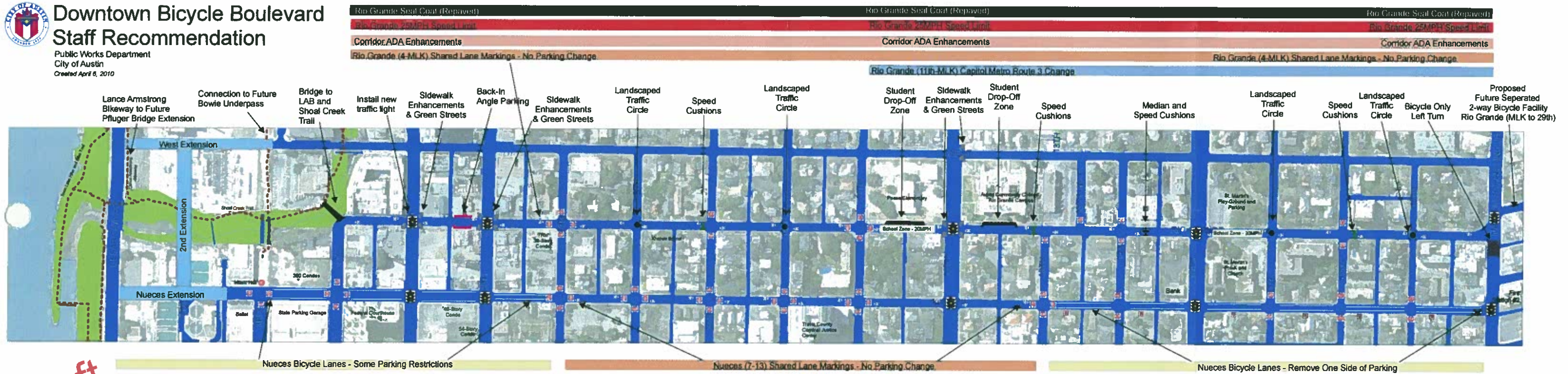
- The size of the traffic circles to be determined by size of emergency response vehicles, engineering judgment, and stakeholder input.
- The enhanced lanes and shared lane marking installation may be subject to approval by the Federal Highway Administration prior to installation. If color is used, specific color to be decided by engineering judgment and stakeholder input.
- Determination of what side the on-street parking will remain on Nueces, 13th to MLK, will be determined by engineering judgment related to motor vehicle and bicycle mobility and safety and stakeholder input.
- The Green Streets pilot project will be a partnership between the City Public Works and Watershed Protection Departments.
- The City Bicycle Master Plan will be amended to add Rio Grande Street from 4th St to MLK as part of Bicycle Route 31.
- Pending the results of the economic study, this staff recommendation could be subject to change prior to presentation to the City Council on May 13th, 2010.
- The Project Steering Committee (a nine member committee) reached consensus (minus 1 vote) on improvements to Rio Grande; their consensus recommendation was silent with regard to Nueces. The following is the statement which represents the Consensus (-1 member): "Traffic calming on Rio Grande Street that imposes minimal impact on vehicular mobility, capacity, and parking and ensures safe and convenient passage for cyclists and pedestrians." See Exhibit B for a statement from the Steering Committee facilitator.
- This recommendation is DRAFT pending input from the City Boards and Commissions process.

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Downtown Bicycle Boulevard Staff Recommendation

Public Works Department
City of Austin
Created April 6, 2010



Draft
Pending input from
Boards and Commissions

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Date		Description		Amount	
1/1/74		Balance b/d		100.00	
1/2/74		Bank of America		50.00	
1/3/74		First National		25.00	
1/4/74		Wells Fargo		75.00	
1/5/74		Chase		125.00	
1/6/74		Bank of America		150.00	
1/7/74		First National		200.00	
1/8/74		Wells Fargo		300.00	
1/9/74		Chase		400.00	
1/10/74		Bank of America		500.00	
1/11/74		First National		600.00	
1/12/74		Wells Fargo		700.00	
1/13/74		Chase		800.00	
1/14/74		Bank of America		900.00	
1/15/74		First National		1000.00	
1/16/74		Wells Fargo		1100.00	
1/17/74		Chase		1200.00	
1/18/74		Bank of America		1300.00	
1/19/74		First National		1400.00	
1/20/74		Wells Fargo		1500.00	
1/21/74		Chase		1600.00	
1/22/74		Bank of America		1700.00	
1/23/74		First National		1800.00	
1/24/74		Wells Fargo		1900.00	
1/25/74		Chase		2000.00	
1/26/74		Bank of America		2100.00	
1/27/74		First National		2200.00	
1/28/74		Wells Fargo		2300.00	
1/29/74		Chase		2400.00	
1/30/74		Bank of America		2500.00	
1/31/74		First National		2600.00	
2/1/74		Wells Fargo		2700.00	
2/2/74		Chase		2800.00	
2/3/74		Bank of America		2900.00	
2/4/74		First National		3000.00	
2/5/74		Wells Fargo		3100.00	
2/6/74		Chase		3200.00	
2/7/74		Bank of America		3300.00	
2/8/74		First National		3400.00	
2/9/74		Wells Fargo		3500.00	
2/10/74		Chase		3600.00	
2/11/74		Bank of America		3700.00	
2/12/74		First National		3800.00	
2/13/74		Wells Fargo		3900.00	
2/14/74		Chase		4000.00	
2/15/74		Bank of America		4100.00	
2/16/74		First National		4200.00	
2/17/74		Wells Fargo		4300.00	
2/18/74		Chase		4400.00	
2/19/74		Bank of America		4500.00	
2/20/74		First National		4600.00	
2/21/74		Wells Fargo		4700.00	
2/22/74		Chase		4800.00	
2/23/74		Bank of America		4900.00	
2/24/74		First National		5000.00	
2/25/74		Wells Fargo		5100.00	
2/26/74		Chase		5200.00	
2/27/74		Bank of America		5300.00	
2/28/74		First National		5400.00	
2/29/74		Wells Fargo		5500.00	
3/1/74		Chase		5600.00	
3/2/74		Bank of America		5700.00	
3/3/74		First National		5800.00	
3/4/74		Wells Fargo		5900.00	
3/5/74		Chase		6000.00	
3/6/74		Bank of America		6100.00	
3/7/74		First National		6200.00	
3/8/74		Wells Fargo		6300.00	
3/9/74		Chase		6400.00	
3/10/74		Bank of America		6500.00	
3/11/74		First National		6600.00	
3/12/74		Wells Fargo		6700.00	
3/13/74		Chase		6800.00	
3/14/74		Bank of America		6900.00	
3/15/74		First National		7000.00	
3/16/74		Wells Fargo		7100.00	
3/17/74		Chase		7200.00	
3/18/74		Bank of America		7300.00	
3/19/74		First National		7400.00	
3/20/74		Wells Fargo		7500.00	
3/21/74		Chase		7600.00	
3/22/74		Bank of America		7700.00	
3/23/74		First National		7800.00	
3/24/74		Wells Fargo		7900.00	
3/25/74		Chase		8000.00	
3/26/74		Bank of America		8100.00	
3/27/74		First National		8200.00	
3/28/74		Wells Fargo		8300.00	
3/29/74		Chase		8400.00	
3/30/74		Bank of America		8500.00	
3/31/74		First National		8600.00	
4/1/74		Wells Fargo		8700.00	
4/2/74		Chase		8800.00	
4/3/74		Bank of America		8900.00	
4/4/74		First National		9000.00	
4/5/74		Wells Fargo		9100.00	
4/6/74		Chase		9200.00	
4/7/74		Bank of America		9300.00	
4/8/74		First National		9400.00	
4/9/74		Wells Fargo		9500.00	
4/10/74		Chase		9600.00	
4/11/74		Bank of America		9700.00	
4/12/74		First National		9800.00	
4/13/74		Wells Fargo		9900.00	
4/14/74		Chase		10000.00	
4/15/74		Bank of America		10100.00	
4/16/74		First National		10200.00	
4/17/74		Wells Fargo		10300.00	
4/18/74		Chase		10400.00	
4/19/74		Bank of America		10500.00	
4/20/74		First National		10600.00	
4/21/74		Wells Fargo		10700.00	
4/22/74		Chase		10800.00	
4/23/74		Bank of America		10900.00	
4/24/74		First National		11000.00	
4/25/74		Wells Fargo		11100.00	
4/26/74		Chase		11200.00	
4/27/74		Bank of America		11300.00	
4/28/74		First National		11400.00	
4/29/74		Wells Fargo		11500.00	
4/30/74		Chase		11600.00	
5/1/74		Bank of America		11700.00	
5/2/74		First National		11800.00	
5/3/74		Wells Fargo		11900.00	
5/4/74		Chase		12000.00	
5/5/74		Bank of America		12100.00	
5/6/74		First National		12200.00	
5/7/74		Wells Fargo		12300.00	
5/8/74		Chase		12400.00	
5/9/74		Bank of America		12500.00	
5/10/74		First National		12600.00	
5/11/74		Wells Fargo		12700.00	
5/12/74		Chase		12800.00	
5/13/74		Bank of America		12900.00	
5/14/74		First National		13000.00	
5/15/74		Wells Fargo		13100.00	
5/16/74		Chase		13200.00	
5/17/74		Bank of America		13300.00	
5/18/74		First National		13400.00	
5/19/74		Wells Fargo		13500.00	
5/20/74		Chase		13600.00	
5/21/74		Bank of America		13700.00	
5/22/74		First National		13800.00	
5/23/74		Wells Fargo		13900.00	
5/24/74		Chase		14000.00	
5/25/74		Bank of America		14100.00	
5/26/74		First National		14200.00	
5/27/74		Wells Fargo		14300.00	
5/28/74		Chase		14400.00	
5/29/74		Bank of America		14500.00	
5/30/74		First National		14600.00	
5/31/74		Wells Fargo		14700.00	
6/1/74		Chase		14800.00	
6/2/74		Bank of America		14900.00	
6/3/74		First National		15000.00	
6/4/74		Wells Fargo		15100.00	
6/5/74		Chase		15200.00	
6/6/74		Bank of America		15300.00	
6/7/74		First National		15400.00	
6/8/74		Wells Fargo		15500.00	
6/9/74		Chase		15600.00	
6/10/74		Bank of America		15700.00	
6/11/74		First National		15800.00	
6/12/74		Wells Fargo		15900.00	
6/13/74		Chase		16000.00	
6/14/74		Bank of America		16100.00	
6/15/74		First National		16200.00	
6/16/74		Wells Fargo		16300.00	
6/17/74		Chase		16400.00	
6/18/74		Bank of America		16500.00	
6/19/74		First National		16600.00	
6/20/74		Wells Fargo		16700.00	
6/21/74		Chase		16800.00	
6/22/74		Bank of America		16900.00	
6/23/74		First National		17000.00	
6/24/74		Wells Fargo		17100.00	
6/25/74		Chase		17200.00	
6/26/74		Bank of America		17300.00	
6/27/74		First National		17400.00	
6/28/74		Wells Fargo		17500.00	
6/29/74		Chase		17600.00	
6/30/74		Bank of America		17700.00	
7/1/74		First National		17800.00	
7/2/74		Wells Fargo		17900.00	
7/3/74		Chase		18000.00	
7/4/74		Bank of America		18100.00	
7/5/74		First National		18200.00	
7/6/74		Wells Fargo		18300.00	
7/7/74		Chase		18400.00	
7/8/74		Bank of America		18500.00	
7/9/74		First National		18600.00	
7/10/74		Wells Fargo		18700.00	
7/11/74		Chase		18800.00	
7/12/74		Bank of America		18900.00	
7/13/74		First National		19000.00	
7/14/74		Wells Fargo		19100.00	
7/15/74		Chase		19200.00	
7/16/74		Bank of America		19300.00	
7/17/74		First National		19400.00	
7/18/74		Wells Fargo		19500.00	
7/19/74		Chase		19600.00	
7/20/74		Bank of America		19700.00	
7/21/74		First National		19800.00	
7/22/74		Wells Fargo		19900.00	
7/23/74		Chase		20000.00	
7/24/74		Bank of America		20100.00	
7/25/74		First National		20200.00	
7/26/74		Wells Fargo		20300.00	
7/27/74		Chase		20400.00	
7/28/74		Bank of America		20500.00	
7/29/74		First National		20600.00	
7/30/74		Wells Fargo		20700.00	
7/31/74		Chase		20800.00	
8/1/74		Bank of America		20900.00	
8/2/74		First National		21000.00	
8/3/74		Wells Fargo		21100.00	
8/4/74		Chase		21200.00	
8/5/74		Bank of America		21300.00	
8/6/74		First National		21400.00	
8/7/74		Wells Fargo		21500.00	
8/8/74		Chase		21600.00	
8/9/74		Bank of America		21700.00	
8/10/74		First National		21800.00	
8/11/74		Wells Fargo		21900.00	
8/12/74		Chase		22000.00	
8/13/74		Bank of America		22100.00	
8/14/74		First National		22200.00	
8/15/74		Wells Fargo		22300.00	
8/16/74		Chase		22400.00	
8/17/74		Bank of America		22500.00	
8/18/74		First National		22600.00	
8/19/74		Wells Fargo		22700.00	
8/20/74		Chase		22800.00	
8/21/74		Bank of America		22900.00	
8/22/74		First National		23000.00	
8/23/74		Wells Fargo		23100.00	
8/24/74		Chase		23200.00	
8/25/74		Bank of America		23300.00	
8/26/74		First National		23400.00	
8/27/74		Wells Fargo		23500.00	
8/28/74		Chase		23600.00	
8/29/74		Bank of America		23700.00	
8/30/74		First National		23800.00	
8/31/74		Wells Fargo		23900.00	
9/1/74		Chase		24000.00	
9/2/74		Bank of America		24100.00	
9/3/74		First National		24200.00	
9/4/74		Wells Fargo		24300.00	
9/5/74		Chase		24400.00	
9/6/74		Bank of America		24500.00	
9/7/74		First National		24600.00	
9/8/74		Wells Fargo		24700.00	
9/9/74		Chase		24800.00	
9/10/74		Bank of America		24900.00	
9/11/74		First National		25000.00	
9/12/74		Wells Fargo		25100.00	
9/13/74		Chase			