Table 1
Ralston Avenue Improvements Matrix
Segment 1 – Ralston Avenue between US 101 and El Camino Real

Option	Auto	Bike	Pedestrian	Transit	Right of Way	Pros	Cons
Segment Options							
Option 1A – No Change to Ralston Ave							
Option 1B – Class II Bicycle Lanes on Ralston Ave through parking removal	-	+	o	o	o	• Minimal impact to vehicle travel times • Improves bicycle connectivity • Limited or no need for additional right-of-way	
Option 1C – Designate an alternative bicycle route on Masonic Way with no change to Ralston Ave	o	+	o	o	o	• No change to vehicle travel times • Improves bicycle connectivity • Primary bicycle facility would be located on a roadway with lower traffic volumes and speeds than Ralston Ave • Limited or no need for additional right-of-way • Enhanced crossing facilities to facilitate bicyclists who need to cross Ralston Ave to reach Masonic Way	• May increase bicycle travel distance • Requires eastbound-travelling bicyclists to cross Ralston Ave
Option 1D – Class III Bicycle Route on Ralston Ave	o	+	o	o	o	• Increased bicycle visibility • Marginal impact to vehicle traffic	• No separated bicycle facility • Bicyclists may not feel comfortable riding in a vehicle lane • Occasional impacts on vehicle travel speed • No physical improvements for pedestrian connectivity
Safety and Access Improvement Options							
Increased pedestrian crossing times and install high-visibility markings at Ralston Ave/Hiller St	-	o	+	+	o	• Added time to allow pedestrians to cross the street • Increases pedestrian visibility	• Increase in average vehicle delay at the intersection

Table 1
Ralston Avenue Improvements Matrix
Segment 1 – Ralston Avenue between US 101 and El Camino Real

Option	Auto	Bike	Pedestrian	Transit	Right of Way	Pros	Cons
						•	•
Enhanced pedestrian crossing at Ralston Ave/Elmer St, including HAWK beacon, refuge island and curb extensions	o	o	+	+	-	• Negligible impact to vehicle traffic • Increased pedestrian crossing visibility • Improves connectivity to transit service • When activated by a pedestrian, HAWK signals generally improve driver crosswalk compliance	• There may be instances where drivers need to come to a complete stop even if a pedestrian is not in the crosswalk • May require limited right of way acquisition
One-way off-street bicycle paths under the Caltrain overcrossing (between El Camino Real and Old County Rd)	o	+	-	o	o	• Provides bicyclists with an option to ride outside of the travel lanes	• Potential for conflicts between bicyclists and pedestrians
Green bicycle lanes on Ralston Ave where bicycle lanes cross the US 101 ramps	o	+	o	o	o	• Improves visibility and safety of bicycle lanes in conflict-prone areas	
Upgrade the following sections to have ADA-compliant curb ramps: • Ralston Ave/US 101 SB Ramps • Ralston Ave/Furlong St • Ralston Ave/Elmer St	o	o	+	o	o	• Provide enhanced access for persons with mobility impairments	

Note: + indicates a positive impact; - indicates a negative impact, o indicates no impact

Table 2
Ralston Avenue Improvements Matrix
Segment 2 – Ralston Avenue between El Camino Real and South Road

Option	Auto	Bike	Pedestrian	Transit	Right of Way	Pros	Cons
Segment Options							
Option 2A – No Change to Ralston Ave							
Option 2B – Class II bicycle lanes achieved with a road diet – three lanes (one through in each direction plus a center turn lane). Includes signalization of Ralston Ave/South Rd	-	+	o	-	-	• Improves bicycle connectivity • Limited or no need for additional right-of-way • Pedestrians may feel more comfortable with additional separation between • Traffic calming	• Decreased travel speeds and increased intersection vehicular delay • Transit vehicles would be affected by any increase in vehicle delay and travel time
Option 2C – Designate an alternative bicycle route on Emmett Ave while retaining existing configuration on Ralston Ave	o	+	o	o	o	• No change to vehicle travel times • Improves bicycle connectivity • Primary bicycle facility would be located on a roadway with lower traffic volumes and speeds than Ralston Ave • Limited or no need for additional right-of-way • Enhanced crossing facilities to facilitate bicyclists who need to cross Ralston Ave and/or El Camino Real to reach Emmett Ave	• Potential increases bicycle travel distance • Requires bicyclists to cross Ralston Ave and/or El Camino Real
Option 2D – Class III Bicycle Route on Ralston Ave	o	o	o	o	o	• Increased bicycle visibility • Marginal impact on vehicle traffic	• No separated bicycle facility • Bicyclists may not feel comfortable riding in a vehicle lane • Occasional impacts to vehicle travel speed
Safety and Access Improvement Options							

Table 2
Ralston Avenue Improvements Matrix
Segment 2 – Ralston Avenue between El Camino Real and South Road

Option	Auto	Bike	Pedestrian	Transit	Right of Way	Pros	Cons
Install high visibility crosswalk at Ralston Ave/El Camino Real, Ralston Ave/Sixth Ave, Ralston Avenue/Twin Pines Lane and Ralston Ave/South Rd	o	o	+	o	o	• Increases pedestrian crossing visibility • Negligible impact to vehicular traffic	
Adjust signal timing at Ralston Ave/El Camino Real to provide an early pedestrian release	-	o	+	-	o	• Gives pedestrians an opportunity to enter the crosswalk before opposing traffic receives a green light, thereby increasing pedestrian visibility	• Increases vehicle delay (including transit vehicle delay) when the pedestrian phase is activated

Note: + indicates a positive impact; - indicates a negative impact, o indicates no impact

Table 3
Ralston Avenue Improvements Matrix
Segment 3 – Ralston between South Road and Alameda de las Pulgas

Option	Auto	Bike	Pedestrian	Transit	Right of Way	Pros	Cons
Safety and Access Improvement Options							
No Change to Ralston Ave							
Convert South Road to be controlled with a traffic signal	+	+	o	o	o	• Limited or no need for additional right-of-way • Pedestrians would benefit from a controlled crossing of Ralston Ave at this location • Improved delay and queuing along Ralston Avenue	
Convert Notre Dame University Driveway to be controlled with a modern roundabout	-	+	o	o	-	• Improves bicycle connectivity • Pedestrians may feel more comfortable crossing at a roundabout compared to the existing configuration • Traffic calming • Improved access to the University • Potential for community art or a gateway element within the roundabout • Can be paired with restricting northbound left turn movements at Ralston Ave/Chula Vista Dr since drivers could make a U-turn movement at the roundabout	• Decreased travel speeds and increased intersection vehicular delay • Requires additional right of way • Potential for future increases in delay and queuing • Transit vehicles would be affected by any increase in vehicle delay and travel time
Convert Notre Dame University Driveway to be controlled with a traffic signal	-	+	o	o	o	• Limited or no need for additional right-of-way • Pedestrians would benefit from a controlled crossing of Ralston Ave at this location • Improved access to the University • Reduced delay for motorist exiting the University	• Decreased travel speeds and increased intersection vehicular delay on Ralston Ave • Transit vehicles would be affected by any increase in vehicle delay and travel time

Table 3
Ralston Avenue Improvements Matrix
Segment 3 – Ralston between South Road and Alameda de las Pulgas

Option	Auto	Bike	Pedestrian	Transit	Right of Way	Pros	Cons
Convert Notre Dame Ave to be controlled with a traffic signal	o	+	o	o	o	• Limited or no need for additional right-of-way • Pedestrians would benefit from a controlled crossing of Ralston Ave at this location • Reduced delay for motorist exiting the neighborhood	• No physical improvements for pedestrian connectivity • Decreased travel speeds and increased intersection vehicular delay on Ralston Ave • Transit vehicles would be affected by any increase in vehicle delay and travel time
Install high visibility crosswalks at the Ralston Ave crossing at: • South Rd • Notre Dame High School Entrances • Notre Dame Ave • Misty Lane-Avon St • Alameda de las Pulgas	o	o	+	+	o	• Increases pedestrian crossing visibility • Negligible impact on vehicular traffic	
Enhanced pedestrian crossing western Notre Dame High School entrance, including HAWK beacon	o	o	+	+	-	• Negligible impact to vehicle traffic • Increased pedestrian crossing visibility • Improves connectivity to transit service • When activated by a pedestrian, HAWK signals generally improve driver crosswalk compliance	• There may be instances where drivers need to come to a complete stop even if a pedestrian is not in the crosswalk • May require limited right of way acquisition
Sidewalk Gap Closure	o	+	+	+	-	• Improves pedestrian connectivity • No impact on vehicle traffic • Improves pedestrian connections to transit	• Requires right of way acquisition

Table 3
Ralston Avenue Improvements Matrix
Segment 3 – Ralston between South Road and Alameda de las Pulgas

Option	Auto	Bike	Pedestrian	Transit	Right of Way	Pros	Cons
Install high visibility crosswalk and curb extensions at Ralston Ave/Maywood Dr, retain the existing pedestrian activated flashing lights	o	o	+	+	o	• Improves pedestrian connectivity • Minimal impact on vehicle traffic • Improves pedestrian connections to transit	
Enhance crosswalk at Ralston Ave/Villa Lane including a center median refuge island	o	o	+	+	-	• Improves pedestrian connectivity • No impact on vehicle traffic	
Install ADA-compliant curb ramps at: • Ralston Ave/Notre Dame de Namur University • Ralston Ave/Chula Vista Dr • Ralston Ave/Notre Dame High School (both entrances) • Ralston Ave/Notre Dame Ave • Ralston Ave/Avon St • Ralston Ave/Maywood Dr						• Provide enhanced access for persons with mobility impairments	
Eliminate EB lane merge east of Alameda de las Pulgas with sharrow markings for bicyclists.	-	o	+	-	-	• Improves pedestrian crossing at Villa Ln • Improves pedestrian connections to transit	• Increases vehicle delay and travel time • Would require the lane drop to occur prior to the Alameda de las Pulgas intersection • Transit vehicles would be affected by any increase in vehicle delay and travel time

Note: + indicates a positive impact; - indicates a negative impact, o indicates no impact

Table 4
Ralston Avenue Improvements Matrix
Segment 4 – Ralston Avenue between Alameda de las Pulgas and SR 92

Option	Auto	Bike	Pedestrian	Transit	Right of Way	Pros	Cons
Segment Options							
Option 4A – No Change to Ralston Ave							
Option 4B – Bicycle lane and continuous sidewalk installation achieved with a road diet – one travel lane in each direction plus a center turn lane.	-	+	+	-	-	• Continuous bicycle lanes • Traffic calming • Continuous pedestrian facilities increasing connectivity • Improved pedestrian connections to transit	• Increased vehicle travel time • Increased vehicle delay • Transit vehicles would be affected by any increase in vehicle delay and travel time • Requires additional right of way for sidewalk installation
Option 4C – Install a two-way cycle track on the south side of Ralston Ave and continuous sidewalks on both sides. Achieved with a partial road diet – one EB lane and two WB lanes.	-	+	+	-	-	• Continuous bicycle facilities • Continuous pedestrian facilities increasing connectivity • Improved pedestrian connections to transit • Traffic calming	• Increased vehicle travel time and delay • Transit vehicles would be affected by any increase in vehicle delay and travel time • Requires WB traveling bicyclists to cross Ralston Ave to access the cycle track • Requires additional right of way for sidewalk installation
Option 4D – Install continuous sidewalks along Ralston Ave, but no modifications to the roadway.	o	o	+	o	-	• Continuous pedestrian facilities increasing connectivity • Improved pedestrian connections to transit • No impact to vehicle traffic	• No improved bicycle facility • Bicyclists may not feel comfortable riding in a vehicle lane • Requires additional right of way for sidewalk installation

Table 4
Ralston Avenue Improvements Matrix
Segment 4 – Ralston Avenue between Alameda de las Pulgas and SR 92

Option	Auto	Bike	Pedestrian	Transit	Right of Way	Pros	Cons
Safety and Access Improvement Options							
Install Traffic Signal at Ralston Ave/Tahoe Dr. Extend median on the eastern leg to force all Westbound turns into Ralston Middle School as U-turn movements at new Tahoe Dr traffic signal.	+	o	+	+	-	• Reduces delay turning to/from Tahoe Dr • Provide for protected pedestrian crossing • Improves pedestrian connectivity to transit • Would likely need little or no right of way • Removes the uncontrolled left-turn movement at the Ralston Middle School	• Increases overall intersection delay and travel time • Transit vehicles would be affected by any increase in vehicle delay and travel time • Middle School turn restrictions would increase turning traffic at Tahoe Drive • Middle School turn restrictions may not be compatible with the road diet
Ralston Ave/Pullman Ave-Lyall Way – install upgraded crosswalk and pedestrian activity warning lights	o	o	+	+	-	• Increased visibility of pedestrian crossing • Improves pedestrian connectivity to transit • Would likely need little or no right of way	• Pedestrian crossing would remain unprotected
Remove yield controlled right-turn movements at Ralston Ave/Cipirani Blvd	-	+	+	o	o	• Eliminates need for pedestrians to cross a yield controlled movement • Improves pedestrian connectivity to transit	• Increases delay for turning vehicles
Ralston Ave/Davis Dr – install upgraded crosswalk, and refuge island						• Increased visibility of pedestrian crossing • Improves pedestrian connectivity to Ralston Middle School • Improves pedestrian connectivity to transit • Would likely need little or no right of way	•

Table 4
Ralston Avenue Improvements Matrix
Segment 4 – Ralston Avenue between Alameda de las Pulgas and SR 92

Option	Auto	Bike	Pedestrian	Transit	Right of Way	Pros	Cons
Upgrade the following sections to have ADA-compliant curb ramps: • Ralston Ave/Cipriani Blvd • Ralston Ave/Davis Dr • Ralston Ave/Belmont Canyon Rd (both intersections) • Ralston Ave/Ralston Ranch Rd • Ralston Ave/Christian Dr • Ralston Ave/SR 92 EB Ramps	o	o	+	o	o	• Provide enhanced access for persons with mobility impairments	

Note: + indicates a positive impact; - indicates a negative impact, o indicates no impact