

# Mira Mesa Community Plan Update: Mobility II

## **Planning Department**

June 17, 2019

5:30 pm to 6:50 pm – Mira Mesa Library

Image: Google Earth

# SD Planning Department – Mobility Presentation Outline

- 1. Community Plan Update/Recap 5 minutes
- 2. Mobility Process, Method, and Analysis 5 minutes
- 3. Mobility Opportunities and Preliminary Concepts 40 minutes
  - Pedestrian Network
  - Bike Network
  - Transit Network
  - Vehicular Network
- 4. Next Steps 5 minutes
- 5. Discussions 20 minutes



## Plan Update Recap

www.PlanMiraMesa.org

#### Mira Mesa Plan Update Schedule



#### Mira Mesa Plan Update Schedule



Online Tool

TECHNICAL STUDY (Mobility, Land Use and Urban Design)

www.PlanMiraMesa.org

#### Mira Mesa Plan Update Phase I Documents

#### **Nov. 2018**

#### Jan. 2019

#### Oct/Nov(18)/Feb 2019







#### Community Atlas: Existing Conditions Report

#### Phase I Community Engagement Report

## Reports available @ www.PlanMiraMesa.org

#### Draft Goals & Policies

- Sustainability & Climate Action
- Conservation & Open Space
- Public Facilities
- Parks & Recreation

#### Early Findings - Work Commute & Traffic Planning Department

- 34,737 workers\* live in Mira Mesa
- 75,610 workers\* commute into Mira Mesa everyday
- 21 percent of workers\* live in the community
- 79 percent worked outside the community

#### Mira Mesa Workers Inflow/Outflow Analysis



directionality of worker flow between home and employment locations.

Employed and Live

in Selection Area

Employed in Selection Area, Live Outside

Live in Selection Area,

Employed Outside

#### **Early Findings - Worker Commute**

- Workers commute from all over the region
- About 10 percent (8,319) of employees commute from three ZIP Codes immediately north of planning area (92130, 92129, 92127)



Source: OntheMap and Mira Mesa Community Atlas

# Dianning Department

## **Recent and Upcoming Technical Studies**



## **Today's Presentation**



Mira Mesa CPU Mobility

# **Community Input**



#### **Community Priorities**

#### **Online Survey All Rankings**



### **Community Priorities by Comments**

Theme	Code	Description	Total Comments	Total Percent			
Mahilitar	Active	Improve Transit, Bike and Walk Facilities	149	23.2%	1		
Mobility	Auto	Improve Vehicular Travel	113	17.6%	2		
Land Use & Urban Design	Lu	Better Land Use and Urban Design		11.2%	4		
	Hu	Improve Housing Affordability	99	15.4%	3		
Housing	No Homeles:	Don't Built Anymore Housing Tackle Homeless	24 11	3.7% 1.7%			
Parks and Recreation	Park	Better Parks and Recreation	65	10.1%	5		
	No Park	No New Park, Maintain Existing Park	1	0.2%			
Public Facilites	Public	Invest in Public Facilities	21	3.3%			
Francisco	Grow	More Business Development	17	2.6%			
Economy	No Grow	No More Business Development	3	0.5%			
Sustainabilty	Green	Take Climate Action and Conserve Nature25		3.9%			
Other	Value	What's Special about Mira Mesa	13	2.0%			
	Z_Other	General Comment	29	4.5%			
			642	100.0%			

# SD Planning Department Community Priorities by Comments – Walk Issues

## Comments Analyzed in the Existing Mobility Conditions

- 91 Total Comments
  67 Comments Analyzed (White Highlight)
  - Safer Crossings
  - Lighting Maintenance → Streets Division
  - Access near Schools and Senior Center



# SD Planning Department Community Priorities by Comments – Bike Issues

## Comments Analyzed in the Existing Mobility Conditions

- 98 Total Comments
  91 Comments Analyzed (White Highlight)
  - Potholes  $\rightarrow$  Streets Division
  - Miramar College
  - Canyons/Trails → Parks
     Planning & Open Space



# SD Planning Department Community Priorities by Comments – Transit Issues

## Comments Analyzed in the Existing Mobility Conditions

#### • 102 Total Comments

- Bus frequencies
- Buses stuck in congestion
- Improve bus stops & locations
- Trolley Station



# SD Planning Department Community Priorities by Comments – Drive Issues

## Comments Analyzed in the Existing Mobility Conditions

#### • 450 Total Comments

- Road condition → Streets
   Division
- Heavy traffic on streets and freeways
- Signal timing





**Draft Vision** 

# Vibrant employment centers, eclectic community villages, and active neighborhoods.







## **Draft Guiding Principles**

#### MOBILITY

- A transportation network ensures safe, accessible, and efficient travel.
- Convenient, frequent, and userfriendly transit network.
- Comfortable neighborhoods for people walking and biking, with continuous sidewalks and bicycle paths, a variety of routes, and good access to schools, parks, shopping, jobs, transit, and villages.





#### **State Policies**

## **CA Climate & Energy Policies**

- Carbon Neutral by 2045 (1)
- 5 million zero-emission vehicles by 2030 (2)
- All-electric public bus fleet by 2040 (3)
- 100% Clean Electric Power by 2045 (Statewide) (4)
- Net-Zero Energy Use (5)
  - Residential building by 2020
  - Commercial building by 2030



Image: Shutterstock

## Planning Depart<u>ment</u>

## City of San Diego Climate Action Plan

## **Mobility Measures**

- 50% reduction in GHG emission by 2035
- Increase Walking, Bicycling, and Transit
- Reduce Vehicle Miles Travels
- Shift to Electric Vehicles



#### Pounds CO2 (or equivalents) per passenger-mile

\*Aircraft emissions are the most variable. Use an online calculator, such as Atmosfair.com, to estimate the climate impacts of your flight.





## Mobility Process, Methodology and Analysis





#### **Mobility Planning Process - Documents**









**Mobility Analysis** 

# **PERFORMANCE MATRIX**

PERFORMANCE MEASURE	*** * ***	010 010 010		♠ᠲ
DEMAND	<ol> <li>Pedestrian Priority Model (PPM)</li> <li>Peak period pedestrian counts</li> <li>Census-based mode share data</li> <li>Pedestrian route typology</li> </ol>	<ol> <li>Bicycle Demand Model (BDM)</li> <li>Peak period bicycle counts</li> <li>Census-based mode share data</li> </ol>	<ol> <li>Existing transit ridership information</li> <li>Census-based mode share data</li> <li>Potential demand based on census-based population density data</li> <li>Potential demand based on LODES employment density data</li> </ol>	Existing peak period turning movement counts and daily volume counts
QUALITY	Pedestrian Environment Quality Evaluation	Bicycle Level of Traffic Stress (LTS)	Station Quality - Presence of Amenities; Service Quality - Transit Speeds	<ol> <li>Roadway level of service</li> <li>Roadway travel time speed data</li> <li>Intersection level of service</li> <li>Freeway level of service</li> <li>Freeway ramp capacity</li> </ol>
CONNECTIVITY	<ol> <li>Pedestrian network and sidewalk inventory data</li> <li>Walkshed ratio evaluation</li> </ol>	<ol> <li>Low-stress connectivity evaluation</li> <li>Bikeshed ratio evaluation</li> </ol>	Quality Walk and Bicycle Ratios from Major Transit Stops*	VMT
SAFETY	Historic Pedestrian Collisions (5-Yr)	Historic Bicycle Collisions (5-Yr)	Historic Bicycle Collisions near a Transit Station/Stop (5-Yr)	Historic Auto Collisions (5-Yr)

#### **Mobility Analysis**



#### **Study Area**

Intersections: 92

Roadway Segments: **144** 

Pedestrian Crossings at: **<u>133</u>** intersections

#### **Mobility Analysis**



#### **Peak Hour Turning Movement Counts**



# Department

#### **Fallow Railway**

#### **Contacted Property Owner:**

- Plans to keep rail for existing and future rail operations
- Areas without rail could be purchased from property owner





#### **Carroll Canyon Road Extension**

#### Alignment Study

- City will study potential alignments of the cemetery segment of CC Road
- (red box)



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## **Mobility Networks: The Balancing Act**





## We will walk through:

- 1. Potential networks for each major mode type
  - Pedestrians
  - Bicycles
  - Transit
  - Vehicles
- 2. Goals of each modal network
- 3. Example of implementation tools and locations

## Looking to get feedback on:

- Are goals in line with expectations?
- General preferences on the network
- How to prioritize conflicting network needs





Roadway width to meet all needs: 132'Right-of-way width = 152'



Source: StreetMix

#### Person Throughput



Hourly Capacity of a Car-Oriented Street







 Hourly Capacity of a Multimodal Street

 1
 8,000/h
 x2
 16,000 people/h

 1
 7,000/h
 x1
 7,000 people/h

 1
 6,000/h
 x1
 6,000 people/h

 1
 1,100/h
 x1
 1,100 people/h

x1 Opeople

#### Source: @VisionZeroCA

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# **Pedestrian Network**

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# Planning Department Pedestrian Opportunity and Constraint Areas



#### **Existing Conditions**

#### • Demand:

Retail, schools, parks, high-density housing

#### Safety

8 intersections with pedestrian concerns

Quality

**Connectivity** Missing/asphalt sidewalks

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## **Proposed Pedestrian Network Goals**

#### Goals for Proposed Pedestrian Enhancements:

- Spot treatments –safety countermeasures
- Reduced crossing distances
- Address gaps in network
- First- and last-mile connections





- Quality connections to schools, parks, transit stations
- District-level pedestrian interaction
- Connect land uses that create desire lines
- Regional connectivity to adjacent communities
- Reduce conflicts between pedestrians and vehicles

#### **Pedestrian Toolkit**

#### Curb Extensions

- Reduces crossing distance
- Enhances visibility
- Encourage slower speeds
- Where parking exists
- Where mid-block crossings
   exist



Potential Locations:

- Camino Ruiz
- Black Mountain Rd
- Westview Pkwy
- Pacific Heights Blvd
- Westonhill Dr



Major (N-S) does not have parking (Camino Ruiz, Black Mtn Rd)



Major (N-S) has parking (Westview, Pacific Heights Blvd, Westonhill Dr)

#### **Pedestrian Toolkit**

#### Lead Pedestrian Intervals

- Reduces Pedestrian-vehicle collisions as much as 60%<sup>1</sup>
- Enhances visibility
- 3-7 second head start
- Where heavy turning traffic conflicts with pedestrians during permissive phases

#### **Potential Locations:**

- Mira Mesa Blvd high ped demand areas
- Calle Cristobal high ped demand areas
- Camino Ruiz / Capricorn Way
- Camino Ruiz / Reagan Rd
- Miramar Rd transit stop crossings



5<sup>th</sup> Avenue and University Avenue (Hillcrest)

Source: "Safety Effectiveness of Leading Pedestrian intervals Evaluated by a Before-After Study with Comparison Groups"
#### **Pedestrian Toolkit**

# Rectangular Rapid Flashing Beacons

- Enhances visibility for pedestrians at mid-block crossing
- Where mid-block crossing occurs and yield rates are low
- Where pedestrian volumes fluctuate such as near schools

**Potential Locations:** 

- San Ramon Dr / Pagoda Way
- Gold Coast Dr / Baroness Ave
- Montongo St / Goleta Rd



Parkdale Ave & Bendigo Rd (Challenger Middle School)

# **Pedestrian Toolkit**

## **Close Sidewalk Gaps**

- Where feasible
- Where desire lines are not served

#### **Potential Locations:**

- Carroll Rd (Pacific Heights Blvd to Fenton Rd
- Camino Ruiz (Jade Coast Rd to Carroll Canyon Rd)
- Activity Rd (N side)
- Miramar Rd (Widen N side)

	CITY OF SAN DIEGO, CALIFORNIA COUNCIL POLICY	CURREN
SUBJECT: POLICY NO.: EFFECTIVE DATE:	INSTALLATION OF PEDESTRIAN SEPARATI 800-01 January 16, 1975	ON STRUCTURE
PURPOSE:		
The purpose of the po structures.	olicy is to establish minimum criteria for the installa	tion of pedestrian separatio
GENERAL:		
When justified and pr	operly designed, a pedestrian separation structure m	ay achieve these results:
	traffic movement. num safety and minimum delay for pedestrians and afety more economically.	vehicles.
<u>JUSTIFICATION</u> : Only those locations structures.	meeting the following warrants should be consider	red for pedestrian separatio
WARRANTS:		
A. Unsignalized Loca	ations	
	pedestrian separation structure at an unsignalized cr of the following conditions are met:	ossing of a major street ma
<ol> <li>Minor street voltage</li> <li>Pedestrian voltage</li> </ol>	olume exceeds 3,000 vehicles in a continuous four-l- olume is less than 125 vehicles in the same continu lume crossing the major street exceeds 300 in the ld under 12 years of age is the equivalent of 2.5 p	ious four-hour period. same continuous four-hou
<ol> <li>There is no exits</li> <li>The 85 percent</li> <li>It is feasible to vicinity of the</li> <li>The area is suft</li> <li>An economic a</li> </ol>	isting or programmed traffic signal within 750 feet of title speed of vehicle on the major street exceeds 30 o o physically prohibit pedestrians from crossing the r proposed structure. Istantially developed and the traffic patterns and vol analysis indicates that for a ten-year period, a pedesl we than a traffic signal.	miles per hour. najor street in the immediat umes are stabilized.
B. Signalized Intersec	ction	
	pedestrian separation structure at or adjacent to a si he following conditions are met:	gnalized intersection may b
<ol> <li>Street width, e</li> </ol>	existing or planned, exceeds 78'.	
1. Succi wida, c		



# **Bicycle Network**

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# **Bicycle Opportunity and Constraint Areas**



# **Proposed Bicycle Network Goals**

#### Goals for Proposed Bike Network:

- Low-stress bike routes to schools, parks, and retail
- Intersection treatments on major corridors and crossings
- Traffic volume and speed management on minor corridors
- Minimal parking removal
- Eliminate bike lanes that abruptly end
- Consider short-haul and longhaul routes
- Provide local trips and regional connectivity



Source: Ryan Martinson

# **Existing Bicycle Network**



# Proposed Bicycle Network



## **Proposed Bicycle Network**



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# Proposed Bicycle Network



#### **Proposed Bicycle Network**



# Proposed Bicycle Network



# **Proposed Bicycle Network**



Class IV – One-Way Cycle Track

Potential Locations:

- Mira Mesa Blvd (Scranton Rd to Schilling Ave / Caminito Alvarez)
- Calle Cristobal
- Black Mountain Rd
- Miramar Rd (W of Carroll Rd)



Class IV – Two-Way Cycle Track

Potential Locations:

- Miramar Road (S Side) (E of Carroll Rd)
- Montongo St (W Side)
- Carroll Canyon Rd
- Vista Sorrento (W Side)
- Westview Pkwy (Galvin Ave to Hillery Dr)
- Capricorn Way (Black Mountain Rd to Westview Pkwy)



#### Class I – Multi-Use Path

Potential Locations:

- Trail connection from Flanders to Camino Santa Fe
- Rails to trails between breweries in Southern industrial area
- Connection from Dabney Dr to Parkdale Ave parallel to Mira Mesa Blvd
- Activity Road
- Connection from Santa Arminta Ave to Acama St (trail / bridge)

# **Proposed Bicycle Network**



Class II – Bike Lane

#### Potential Locations:

- Camino Ruiz
- Westview Parkway
- Pacific Heights Blvd
- Galvin Ave
- Mira Mesa Blvd (Schilling to Black Mountain Rd)



#### Class III – Bike Route

**Potential Locations:** 

- Aquarius Dr
- Capricorn Way
- Flanders Dr
- Westmore Rd / Marbury Ave
- Gold Coast Dr
- Hillery Dr
- Alcamo Rd
- Scranton Rd / Barnes Canyon Rd
- Trade St, Trade Pl, Arjons Dr,
  - Miralani Dr Www.PlanMiraMesa.on

# **Bicycle Toolkit**

#### **Bike Intersection Treatments**



#### Bike Box

- Enhances visibility
- Prevents right-hook scenario
- Bikes get ahead of queued traffic during red time
- Provides protection for pedestrians



Bend Out & Two-Stage Left-Turn Box Bend out:

- Reduces right-hook conflict
- Enhances visibility (peds and bikes)
   Two-Stage Left-Turn Box
- Improves comfort for left turns



#### Protected Intersection

- Reduces crossing distance
- Enhances visibility
- Encourage slower speeds
- Where parking exists

<u>Tradeoff</u>: Eliminates exclusive right-turn lanes and right-turn on red

# **Bicycle Toolkit**

Bike Intersection Treatments

Potential Locations:

- Mira Mesa Blvd / Pacific Heights Blvd
- Mira Mesa Blvd / Camino Ruiz
- Camino Ruiz / Capricorn Way
- Camino Ruiz / Reagan Rd
- Camino Santa Fe / Flanders Dr
- Black Mtn Rd / Hillery Dr
- Black Mtn Rd / Gemini Ave

ESA BLVD



RA MESA BLVD



# **Transit Network**





# Transit Opportunity and Constraint Areas

COUNTY OF



**Planning Department** 

#### **Existing Conditions**

#### • Demand:

1 major transit station; top 10 stops on Mira Mesa Blvd and Black Mtn Rd

• Safety

7 intersections with ped/bike concerns near transit stops

- Quality
   Low quality
   amenities
- Connectivity Little to no quality connections for peds or bikes

# **Proposed Transit Network Goals**

#### Opportunities / Considerations for Proposed Transit Network

- Mobility hubs
- Bus Rapid Transit line along Carroll Canyon Road
- Transit signal priority
- Anticipate proposed regional transit planning projects:
  - Aerial skyway stations
  - Sorrento Valley Station relocation
- Bus-only lanes / Flexible lanes
- Improve underperforming routes
- Improve transit stops
- Quality first- and last-mile connections



Source: Busandcoach.travel

# SANDAG's Five Big Moves

#### 5 BIG MOVES

Transportation technology is evolving and changing how we travel daily. Embracing these innovations, the 5 Big Moves will enhance connectivity, increase sustainability, and improve quality of life. The 2021 Regional Plan will synchronize the 5 Big Moves to deliver a fully integrated, world class transportation system.

#### **COMPLETE CORRIDORS**



#### The backbone of a complete transportation system that leverages technology, pricing, and connectivity to repurpose how both highways and local roads are used

Complete Corridors increase safety, capacity, and efficiency; provide dedicated space for high-speed transit and other pooled services; manage demand in real-time; and maximize use of existing roadways. Local roads are designed and operated to equally accommodate all users, including transit, bikes, and pedestrians.



TRANSIT LEAP

A complete network of high-capacity, high-speed, and high-frequency transit services that incorporates new transit modes and improves existing services

These routes will connect travelers to their homes, jobs, and other major destinations as fast or faster than driving.



#### Places of connectivity where a variety of travel options converge to deliver a seamless travel experience

Mobility Hubs are aligned with the Transit Leap and offer numerous shared mobility services, enhanced bike and pedestrian infrastructure, and supporting amenities that work for every traveler and trip, all in the heart of the communities where people live, work, and play.



#### On-demand, shared, electric vehicles that connect to transit and travel between Mobility Hubs along the network of Complete Corridors

Diverse vehicles — including micromobility, like bikes and scooters, microtransit, and rideshare provide personalized solutions for different types of trips and environments. In the future, driverless vehicle fleets will communicate to each other and surrounding infrastructure to make safe and timely connections.

NEXT OS



#### The "brain" of the transportation system

An integrated platform that will make all of the strategies work together by connecting users, transportation service providers, and infrastructure to orchestrate more efficient movement of people and goods. This holistic approach enables realtime data exchange for seamless multimodal travel, more accessible and cost-effective travel with a single payment and ticket, and dynamic pricing and incentives to balance network performance. This regional system manages supply and demand, drives system-wide optimization, and facilitates increased use of existing transportation systems to achieve desired goals around climate, environment, safety, and mobility.

# Transit Toolkit

#### Mobility Hubs

**Potential Locations:** 

- Miramar College Transit Station
- Mira Mesa Blvd / Camino Ruiz
- Black Mountain Rd / Activity Rd
- Genetic Center Dr / Sequence Dr
- Lusk Blvd / Pacific Center Blvd
- Sorrento Valley Station
- Carroll Canyon Rd



REGIONAL MOBILITY HUB IMPLEMENTATION STRATEGY



www.PlanMiraMesa.org

Source: SANDAG Mobility Hubs

sandiego.gov

# Transit Toolkit

# Transit Signal Priority

Source: NACTO



Source: MTO Transit-Supportive Guidelines

**Potential Locations:** 

- Mira Mesa Blvd
- Miramar Road
- Black Mountain Road
- Hillery Drive WB left turns to Miramar College Transit Station

## Transit Toolkit

#### Stop Enhancements

**Potential Locations:** 

- Black Mtn Rd (S of Mira Mesa Blvd)
- Barnes Canyon Rd
- Gold Coast Dr
- Lusk Blvd
- Miramar Rd (E of Camino Ruiz)



Source: SDMTS

# Planning Department Skyway & Sor

# Skyway & Sorrento Valley Coaster Relocation

Sorrento Valley Skyway Feasibility Study



SAND	AG
Prepared by:	
<b>WSP</b>	PARSONS

Prepared for:

FINAL REPORT: January 2017 Project Report For I-5/Sorrento Valley Road Interchange Improvements

Preparation/Revision Date: January 2015

Prepared for: City of San Diego Department of Public Works 525 B Street, Suite 750 San Diego, CA 92101 619-533-4207

> Prepared by: Richard Leja AECOM 7807 Convoy Court San Diego, CA 92111 858-268-8080



The gondola from Union Station to Dodger Stadium would cost \$125 million. Rendering: Aerial Rapid Transit Technologies

#### Proposed Skyway in Los Angeles (2019)

Sorrento Valley Skyway Feasibility Study (2017) I-5/Sorrento Valley Road Interchange Improvements (2015)



# **Vehicle Network**

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Topic



#### **Existing Conditions**

#### • Demand:

Major arterials and cut-through traffic on residential roads

#### Safety

10 intersections with 25+ collisions in 5year period; 3 Fatal Fifteen intersections

#### Parking

Employment center roadways experience high (>85%) utilization

# **Travel Time**

#### Mira Mesa Boulevard (Eastbound)





# **Parking Utilization**



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# **Proposed Vehicle Network Goals**

#### Goals for Proposed Vehicle Network

- Adaptive signal timing corridors
- Spot improvements
- Prioritize vehicles on key corridors
- Accommodate new land uses
- Traffic calming for residential roadways
- Parking management

"Adding highway lanes to deal with traffic congestion is like loosening your belt to cure obesity." – Lewis Mumford in 1955.





#### Vehicle Toolkit

# Adaptive Signal Timing

**Potential Locations:** 

- Mira Mesa Blvd
- Miramar Road



Source: Movingtobarcelona.com



Source: Michael DeMocker, NOLA.com

# Vehicle Toolkit

# Flex Lanes

#### **Potential Locations:**

- Mira Mesa Blvd
- Miramar Rd

#### Possibilities:

- Parking part day & Travel part day
- Carpool part day & General part day
- Carpool / HOV only
- Shared Micro-transit and bike lanes



Source: SANDAG Mobility Hubs



## Vehicle Toolkit



Source: NACTO

#### Traffic Diverters

Potential Locations:

- Capricorn Dr (at Pegasus Ave and Westonhill Dr)
- Aquarius Dr / Santa Arminta Ave (at Avenita Del Gato)
- Gold Coast Dr (at Camino Ruiz and/or Westonhill Dr)



Source: Kimley-Horn and Associates

#### Neighborhood Traffic Circles

Potential Locations:

- Capricorn Dr (Zapata Ave, Bootes St)
- Aquarius Dr (Westhill Dr)
- Westview Pkwy (if road dieted)
- Montongo (at New Salem St)
- Westmore Rd / New Marbury St (at Reagan Rd, San Blais Cir, Hillery Dr)
- Gold Coast Dr (at Empress Ave, San Ramon Dr, Londonberry Ave)
- Hillery Dr (Westonhill Dr, Greenford Dr)

#### **Curbside Management**





# **Next Steps**

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#### Mira Mesa Plan Update Schedule



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**Next Steps** 



**Next Steps** 





# For more information please visit:

# www.PlanMiraMesa.org

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June 17, 2019

5:30 pm to 6:50 pm – Mira Mesa Library

Image: Google Earth