# UNM/CNM-Travel-Demand Management-Study Management-Study











### Context

Cooperative Venture Between CNM, UNM, City of Albuquerque Bernalillo County & MRCOG

The Study Is Divided Into Two Phases

Phase I: Discovery/Identification of Potential Solutions

Phase II: Evaluation of Solutions/Implementation Plan

Goal: Develop and sustain functional transportation and land use patterns by managing the use of land and demand for travel within, to and from the UNM/CNM area.

### What We Have Done

Lots of Data & Analysis

Most Sources Confirm Findings/Trends in other Sources

Survey, ABQ Ride Data, Populations, Accessibility Travel Demand Model, Traffic Counts, Utilization, Parking, Other Universities

Will Go through Background and Observations So Far

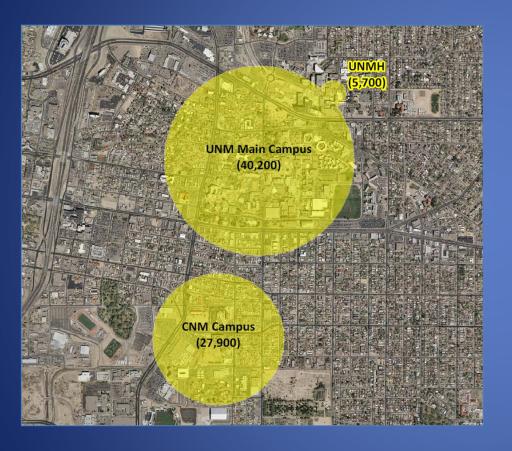
Then Discuss Where We Are Headed

Happy to Follow Up & Talk Details If Anyone Is Interested

#### **Public Comment**

- July 14<sup>th</sup> public meeting(s) 46 attendees
- 10 Submitted via email and hardcopy
- Variety of topics, most dealt with specific issues
- Common themes
  - Better transit service
  - Better bike / ped connections
  - Concerns about traffic through neighborhoods

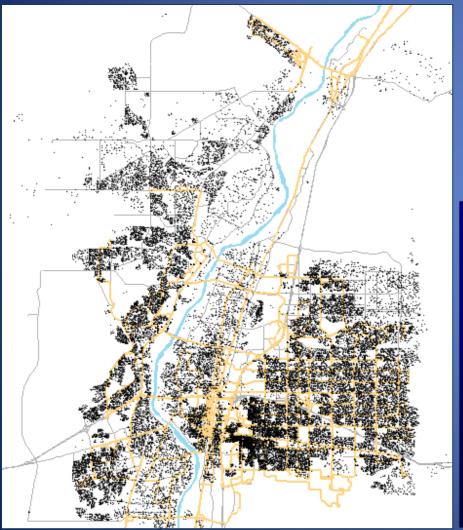
## Population



#### Daytime Population at UNM and CNM

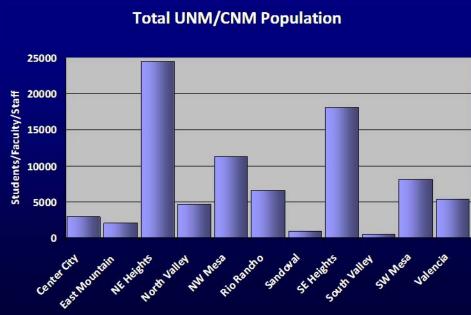
- Daytime populations at UNM and CNM are about comparable.
- While not everybody necessarily appears every day and at the same time, total population in area is 74,000
  - By far, the largest activity center in Albuquerque
- UNM:
  - 30,500 students
  - 9,800 faculty/staff
- UNMH:
  - 5,700 staff
- CNM:
  - 27,900 students/faculty/staff

## Population – Distribution

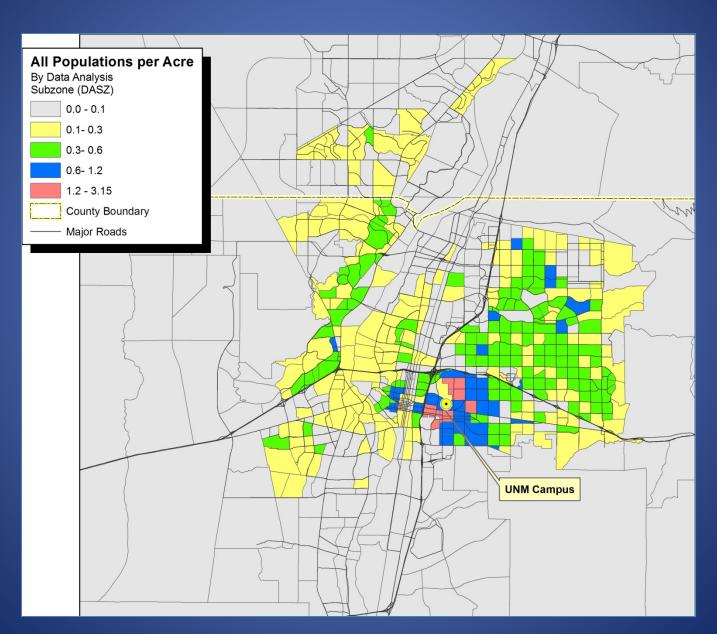




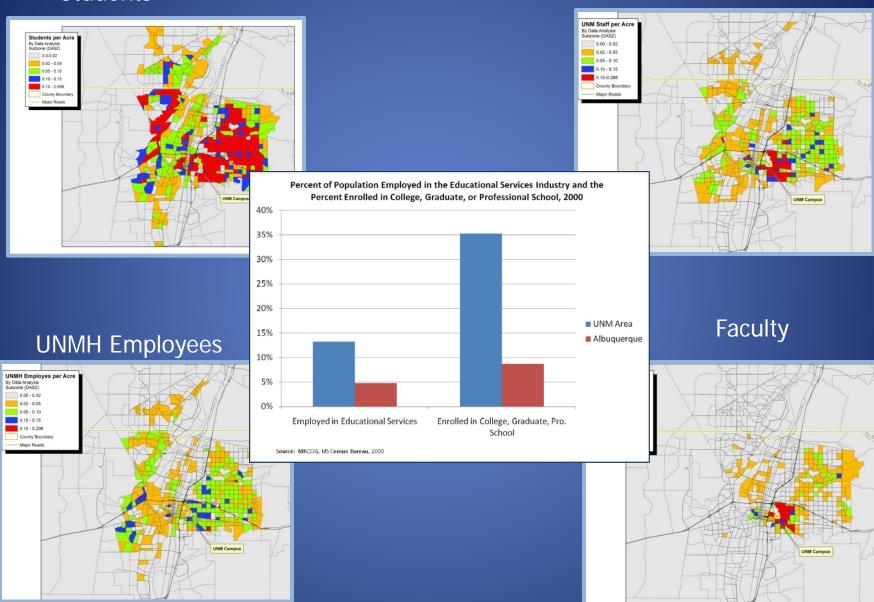
- ~74,000 Student, Faculty and Staff
- Fairly uniform regional distribution



## Population – Distribution - UNM



## Population – Distribution Students



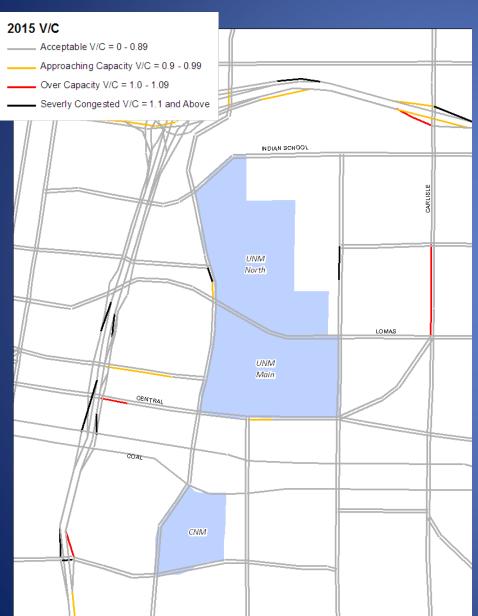
Staff

## Population – Distribution

DISTRIBUTION OF STUDENTS AND FACULTY / STAFF BY									
DISTANCE FROM DESITINATION									
DISTANCE PROMIDESTITIVATION									
	UNM								
	Students			CNM Fac. /					
Distance from	(excluding	UNM Faculty /		Staff /					
Destination	dorm)	Staff	UNMH	Students					
1 mile	5.5%	2.3%	1.3%	2.5%					
2 miles	9.6%	10.4%	5.1%	3.6%					
3 miles	7.3%	8.5%	5.6%	4.5%					
4 miles	5.4%	4.7%	6.8%	5.1%					
5 miles	5.8%	5.2%	7.1%	7.5%					
6 miles	7.6%	6.7%	9.0%	9.0%					
7 miles	10.8%	8.7%	10.5%	11.9%					
8 miles	11.2%	9.1%	11.3%	11.6%					
9 miles	10.5%	9.5%	9.9%	8.9%					
10 miles	8.8%	7.0%	6.4%	6.1%					
Over 10 miles	17.5%	27.9%	26.9%	29.3%					
	100.0%	100.0%	100.0%	100.0%					

#### **Expected Traffic Conditions around Campuses**

- Ran MRCOG traffic forecasting model for the year 2015 to determine expected traffic conditions on streets approaching the campuses
- Streets in the university district expected to be approaching or over capacity by 2015
- Many Are Already Congested



2015 AM V/C (volume-to-capacity)

- Congestion expected on each north/south arterial approaching university district
  - University
  - Carlisle
  - Girard
- Approaching capacity conditions on each east/west arterial approaching university district
  - Lomas
  - ML King
  - Central
  - Lead/Coal



#### 2015 PM V/C (volume-to-capacity)

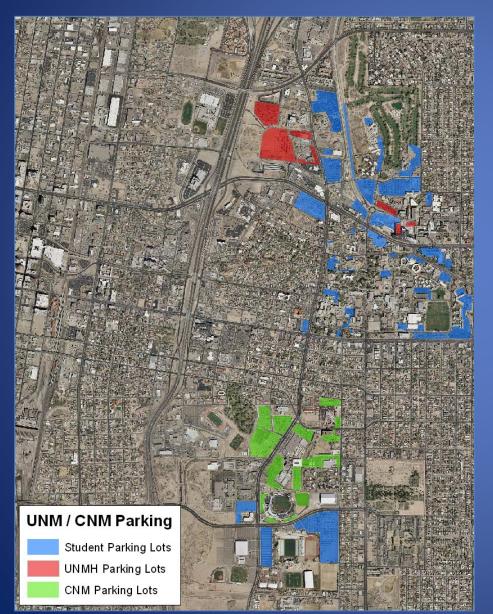
- Similar results seen earlier for the AM peak period
- All major arterials will operate over capacity on some sections in the university district
- Some streets will be approaching capacity in the off-peak direction

- 2015 System VMT = 24,354,972
- 2015 System VHT = 689,962
- 2015 System VHD = 240,946
- CNM VMT: 0.284 million
- UNM VMT: 1.012 million (Model) 960,000 (Survey)
- Total University/CNM VMT: 1.297 million
- 5.32% of all VMT in the Region
- Good Reason to Believe CNMs VMT is Higher Then Projected



- These are Year 2015 fifteen minute contours via auto from UNM main campus
  - Central/Yale
- 15 Min. of travel time using shuttles to access the parking lots is added
- Illustrates that virtually the entire region resides within 60 minutes of campus

## Parking



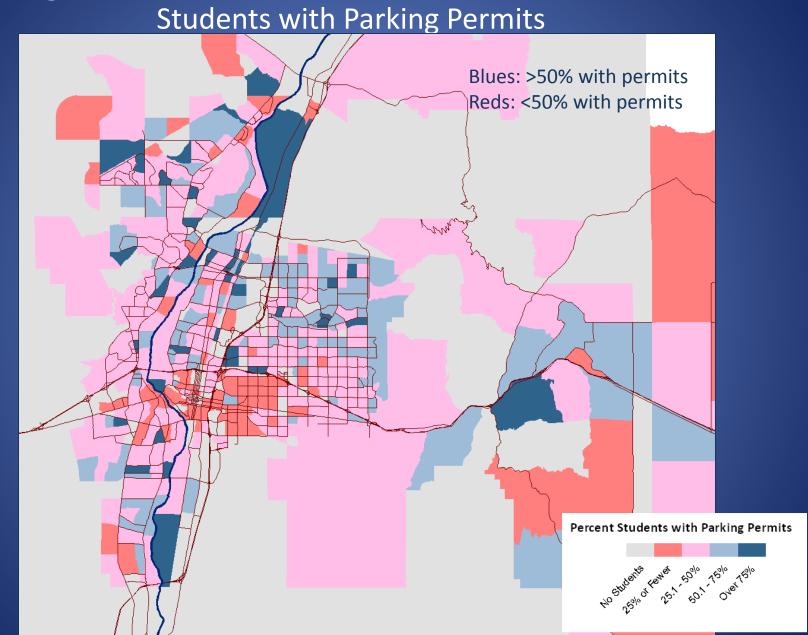
#### UNM/UNMH

- 38 UNM Student Parking Lots
- 7 UNMH Parking Lots
- All UNM and UNMH lots require a permit
- \$124 \$1,600 annually
- ~12,700 permits
- No Increase In Fees Since 2008

#### CNM

- 8 General Parking Lots 2,500 spaces
- 6 Paid Parking Lots 1,400 spaces
- \$43 per term (\$129/year)
- ~2,800 permits

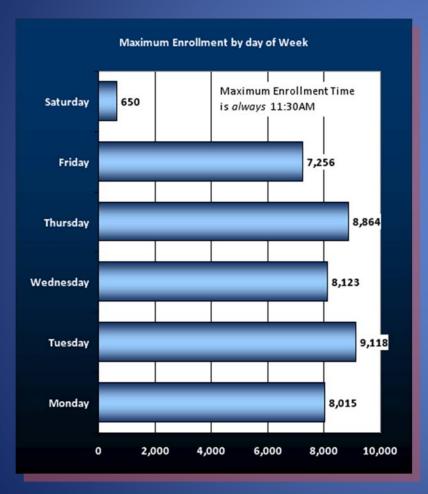
Parking

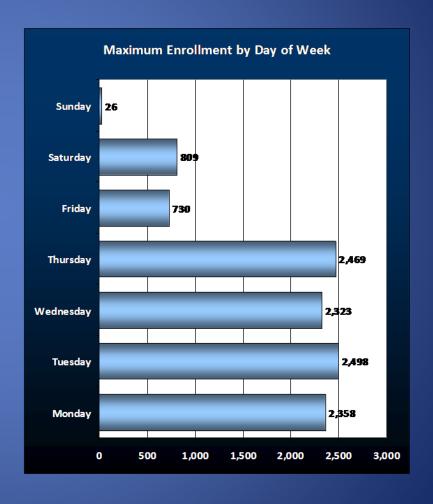


## Utilization – Day of Week

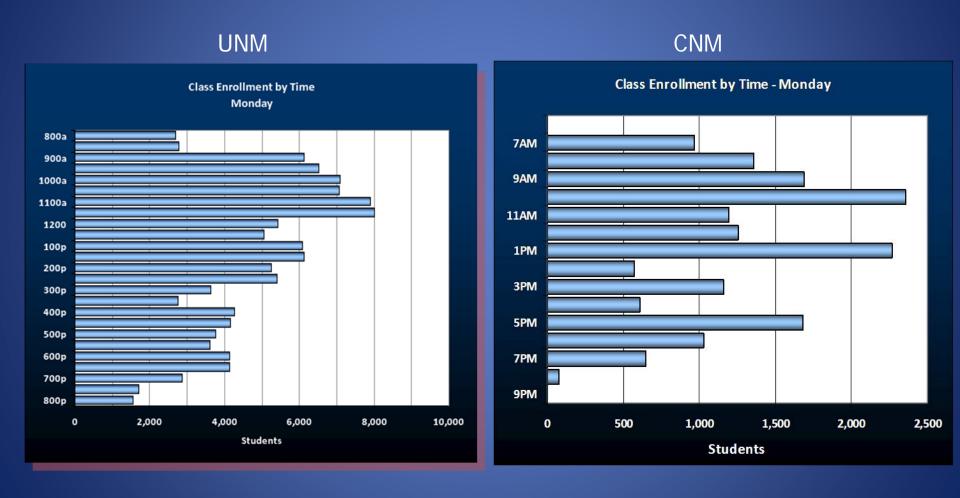
**UNM** 

CNM





## Utilization – Time of Day



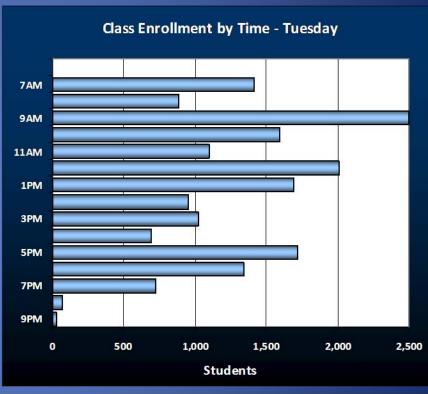
Peak Combined Loadings 10 and 11 a.m. 9,200 - 9,400 Students

## Utilization – Time of Day

**UNM** 



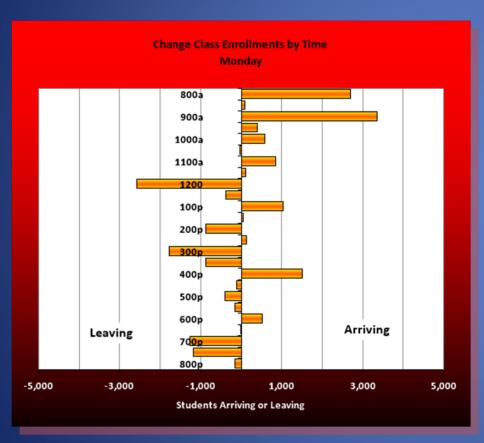
**CNM** 

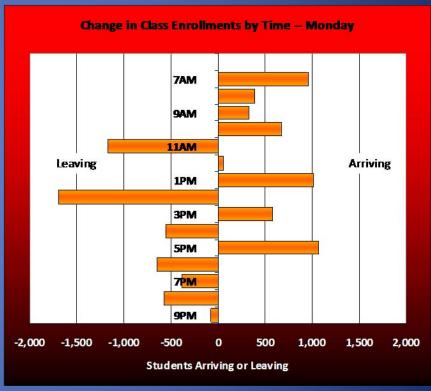


## Utilization – Time of Day

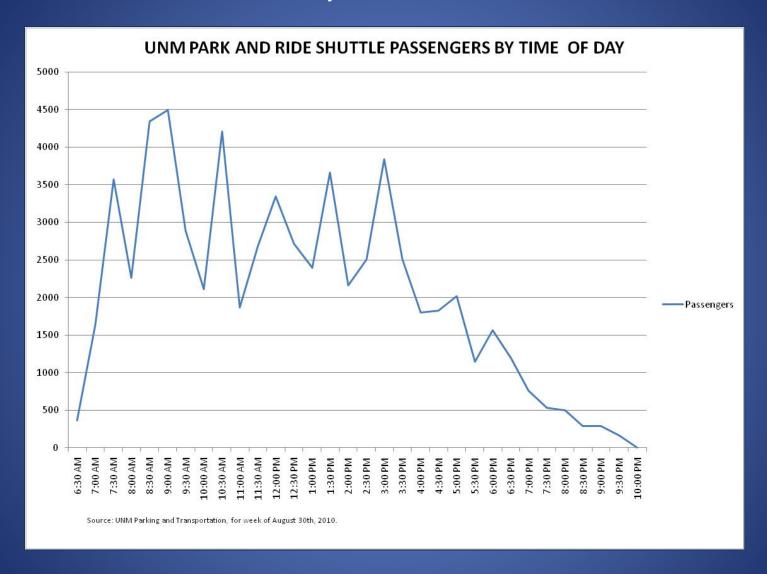
UNM

CNM



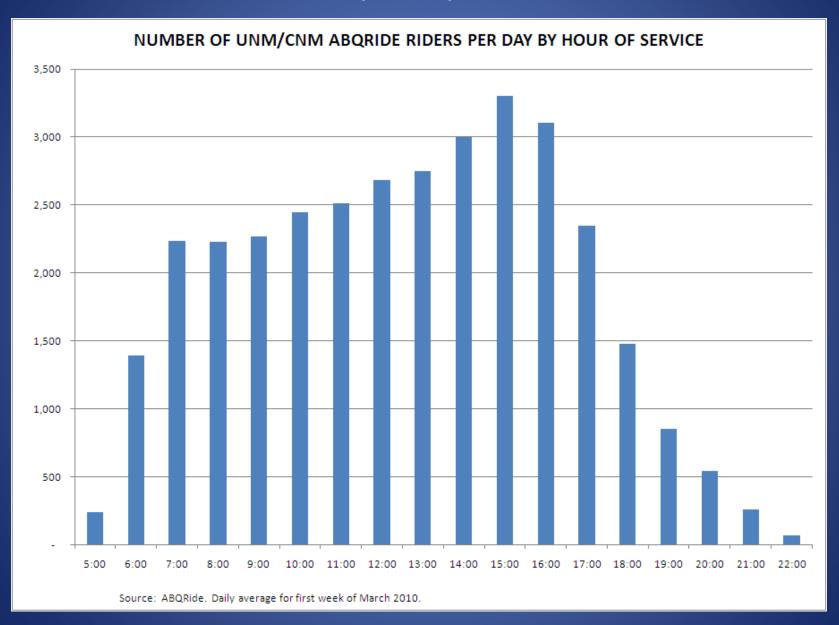


## Utilization – Time of Day - Shuttles

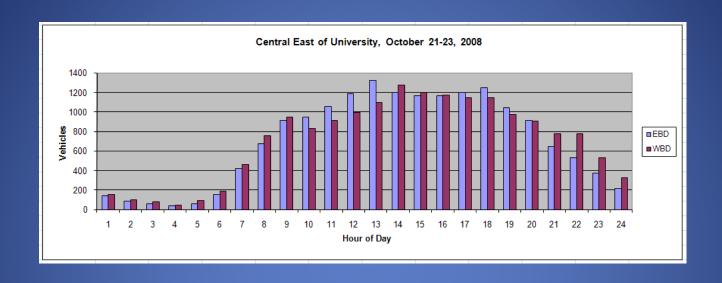


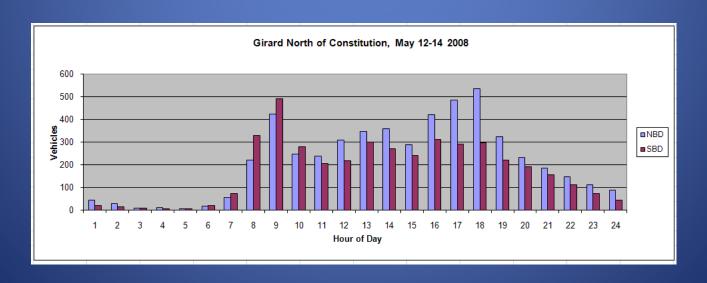
Heavy Usage 8 - 11 a.m. and 1:30, 3:00 p.m.

## Utilization – Time of Day - City Transit



## Utilization – Time of Day – Traffic Counts

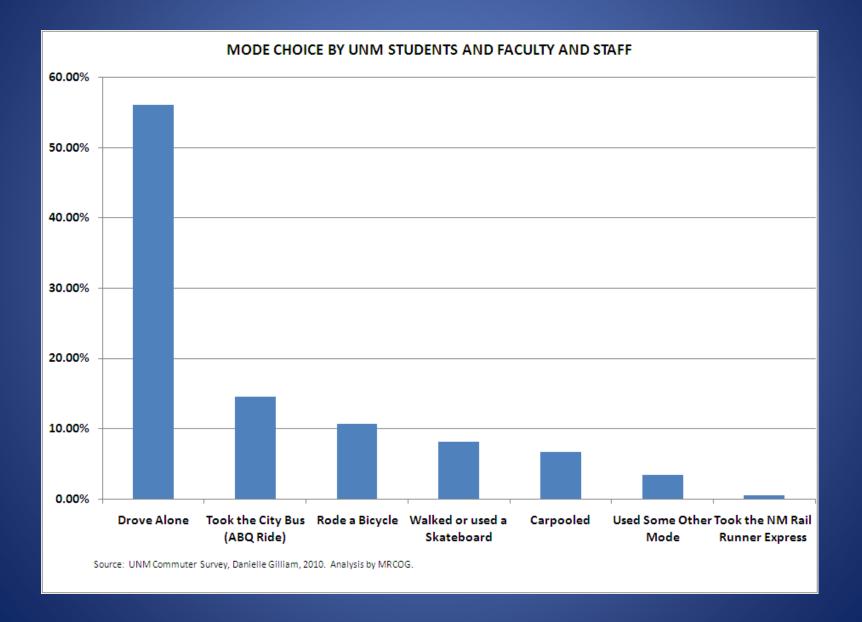




## UNM / CNM Travel Demand Management Study *Mode Choice*

## Main Modes of Travel

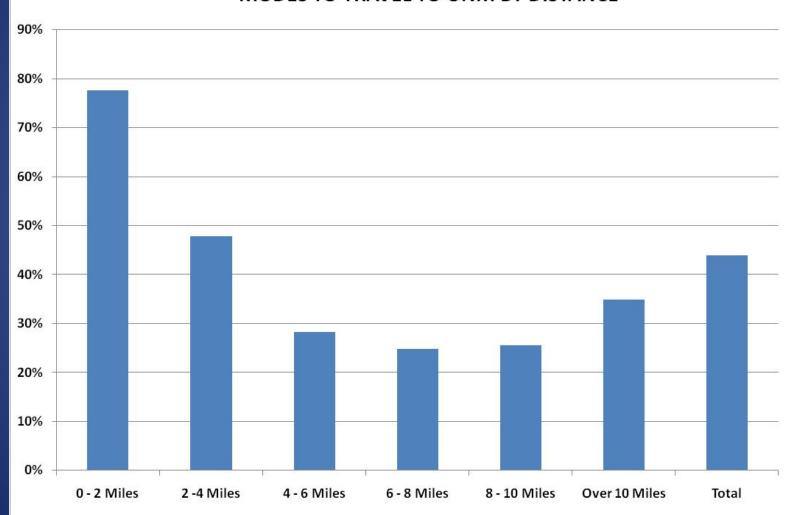
- Single Occupancy Vehicle
- Bus
- Walk
- Bicycle
- Carpool
- Rail Runner
- Other



## Mode Choice – UNM Survey

	TRA	ANSPORTATIO	N MODE BY	STUDENT, FA	CULTY AND	STAFF STATU	ıs	
	Number							
	Drove					NM Rail		
	Alone	<b>ABQRide</b>	Bike	Carpooled	Walked	Runner	Other	Total
Student	627	175	120	77	97	22	38	1,156
Staff	221	32	19	27	11	9	12	331
Faculty	106	12	10	10	12	6	6	162
Total	954	219	149	114	120	37	56	1,649
	Percent							
	Drove					NM Rail		
	Alone	ABQRide	Bike	Carpooled	Walked	Runner	Other	Total
Student	54.2%	15.1%	10.4%	6.7%	8.4%	1.9%	3.3%	100.0%
Staff	66.8%	9.7%	5.7%	8.2%	3.3%	2.7%	3.6%	100.0%
Faculty	65.4%	7.4%	6.2%	6.2%	7.4%	3.7%	3.7%	100.0%
Total	57.9%	13.3%	9.0%	6.9%	7.3%	2.2%	3.4%	100.0%
Source: UNM	Commuter Survey, [	Danielle Gilliam,	2010.					

## PERCENT OF UNM FACUTLY / STAFF AND STUDENTS USING ALTERNATIVE MODES TO TRAVEL TO UNM BY DISTANCE



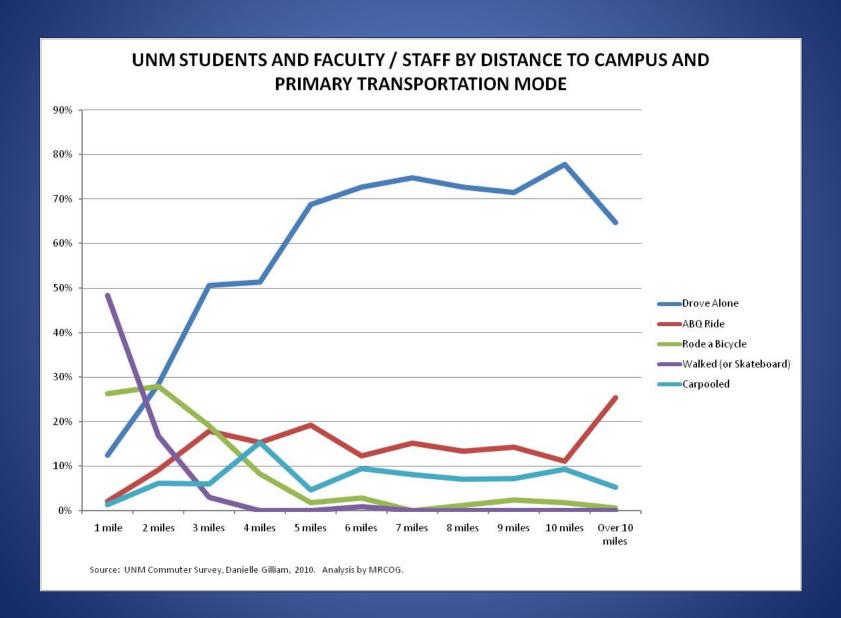
Source: UNM Commuter Survey, Danielle Gilliam, 2010. Analysis by MRCOG.

## Mode Choice – UNM Survey

## DISTANCE BETWEEN HOME AND UNM MAIN CAMPUS BY PRIMARY MODE FOR UNM STUDENTS AND FACULTY / STAFF

Top two primary modes by distance category are highlighted									
	Walked (or Skateboard)	Rode a Bicycle	ABQ Ride	Drove Alone	Carpooled	Other	NM Rail Runner	Total	Alternative Mode
1 mile	51%	28%	2%	13%	1%	4%	1%	100%	87%
2 miles	17%	28%	9%	29%	6%	10%	1%	100%	71%
3 miles	3%	20%	18%	52%	6%	1%	0%	100%	48%
4 miles	0%	9%	16%	53%	16%	7%	0%	100%	47%
5 miles	0%	2%	20%	71%	5%	3%	0%	100%	29%
6 miles	1%	3%	12%	73%	9%	1%	1%	100%	27%
7 miles	0%	0%	15%	76%	8%	0%	0%	100%	24%
8 miles	0%	1%	14%	75%	7%	3%	1%	100%	25%
9 miles	0%	2%	14%	72%	7%	4%	0%	100%	28%
10 miles	0%	2%	11%	78%	9%	0%	0%	100%	22%
Over 10 miles	0%	1%	26%	65%	5%	2%	1%	100%	35%
Source: UNM Com	nmuter Survey, D	anielle Gillia	m, 2010. Anal	ysis by MRCOG					

## **Mode Choice**



	TRANSPORTATION MODE BY STUDENT, FACULTY AND STAFF STATUS								
	Number								
	Drove					NM Rail			
	Alone	ABQRide	Bike	Carpooled	Walked	Runner	Other	Total	
Student	627	175	120	77	97	22	38	1,156	
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Student	54.2%	15.1%	10.4%	6.7%	8.4%	1.9%	3.3%	100.0%	
Staff	66.8%	9.7%	5.7%	8.2%	3.3%	2.7%	3.6%	100.0%	
Faculty	65.4%	7.4%	6.2%	6.2%	7.4%	3.7%	3.7%	100.0%	
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Source: UNM	Commuter Survey,	Danielle Gillian	n, 2010.						

Average monthly ridership (FY 2010)

UNM 73,452

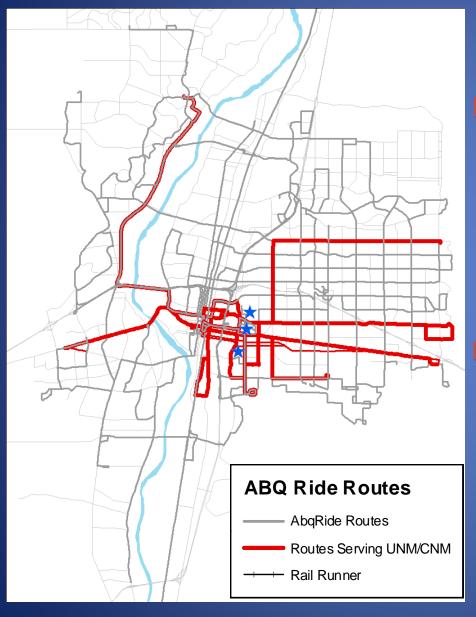
CNM <u>69,860</u>

143,312 (15.4 % of ABQRide total)

Total ridership (FY 2010):

1,719,741 up 39% from 2009

**CNM Ridership Suprising** 

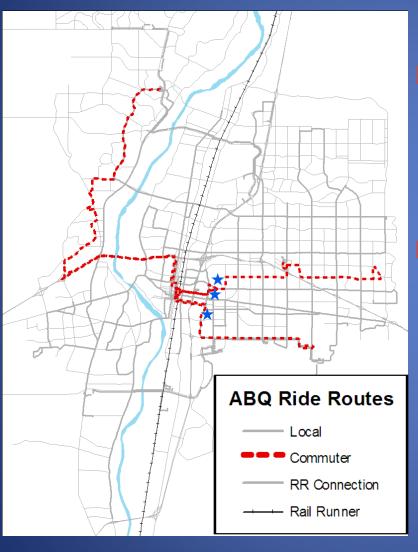


#### 8 Routes serving UNM:

- 3 on Lomas (5, 11, 790)
- 3 on Central (66, 766, 777, 790)
- 1 on University (16/18)
- 1 on Grand (50)

#### 3 Routes serving CNM:

- 1 on University (16/18)
- 1 on Lead/Coal (97)
- 2 on Yale (50)



- 2 Routes serving UNM:
  - **2** on Lomas (12, 92)
  - 1 to Dane Smith Hall (92)

- 1 Routes serving CNM:
  - 1 on University (317)

#### **UNM Routes**

		Peak	Midday	Span of	Service
Route	Street	Headway	Headway	Start	End
5	Lomas/Montgomery	25	25	605a	935p
11	Lomas	20	20	619a	901p
16/18	CBD/Gibson Circulator	45	45	619a	539p
50	MLK/Yale	30	30	647a	813p
66	Central	15	15	600a	1025p
766	Central/Uptown	15	15	540a	900p
777	Central/Tramway	15	15	550a	910p
790	Coors/Lomas	7-15*	20	615a	949p

<sup>\*</sup> varies

#### CNM Routes

		Peak	Midday	Span of Service	
Route	Street	Headway	Headway	Start	End
16/18	CBD/Gibson Circulator	45	45	619a	539p
50	MLK/Yale	30	30	647a	813p
97	Lead/Coal/Zuni	60	60	614a	644p

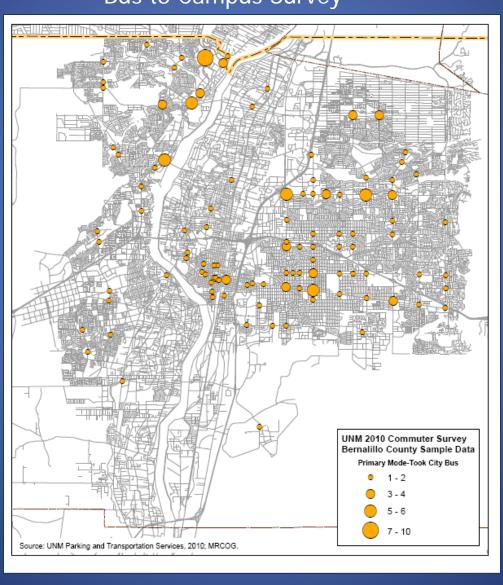
#### UNM Services:

- Pretty good headways 15-25 min or better, all daylong
- Adequate span-of-service running past 9 PM for the most part

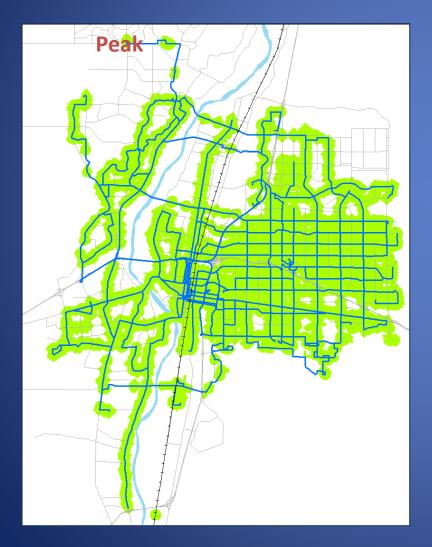
#### CNM Services:

- Nowhere nearly as good as at UNM
- Long headways
- Out of service in late afternoon/early evening

## Bus to Campus Survey

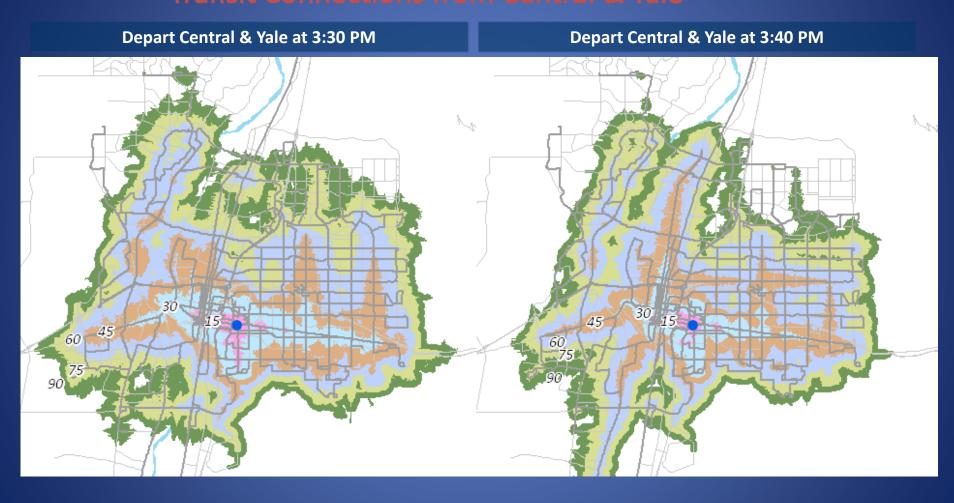


#### 3/8 Mile Walking Buffers around AbqRide Stops

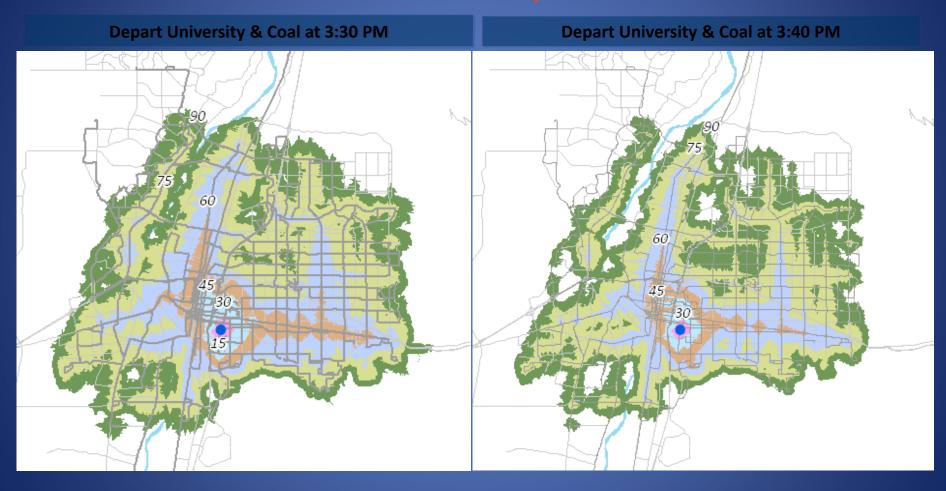




## **Transit Connections from Central & Yale**

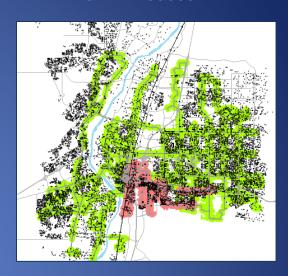


### Transit Connections from University & Coal



percentages of market with bus access									
	UNMH	UNM F/S	<b>UNM Students</b>	CNM*	Total				
direct route	11%	24%	23%	8%					
connetion	38%	46%	40%	47%					
presentce of acc	ess varies b	y time of day	due to commute	r schedules of	some bus				
includes travel re	equiring 2 o	or more and t	ime consuming co	nnections					
* includes 16/18	transfer								

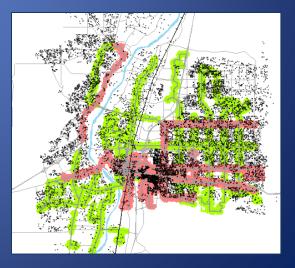
#### **CNM Access**



#### **UNM Faculty & Staff Access**



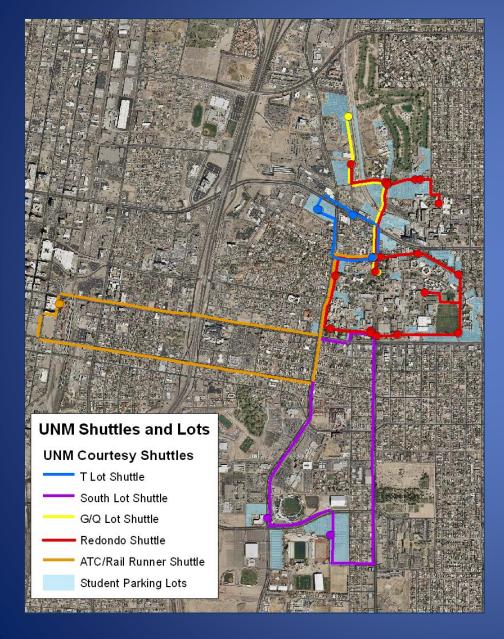
#### **UNM Student Access**



Top 10 UNM / CNM Riders by Route Sorted by Number of UNM / CNM Riders										
	(First week of March 2010)									
Rank	Route	UNM	CNM	UNM / CNM Total	Total Rider	% UNM / CNM				
1	66	2,582	4,274	6,856	53,762	13%				
2	766	3,946	2,524	6,470	28,314	23%				
3	790	5,477	844	6,321	10,181	62%				
4	777	2,892	1,972	4,864	21,216	23%				
5	5	1,706	1,438	3,144	15,493	20%				
6	11	1,688	844	2,532	14,864	17%				
7	8	340	931	1,271	14,140	9%				
8	1618	290	973	1,263	5,070	25%				
9	141	307	903	1,210	11,925	10%				
10	140	235	657	892	9,606	9%				
	All others	2,018	4,281	6,299	59,519	11%				
	Total	21,481	19,641	41,122	244,090	17%				

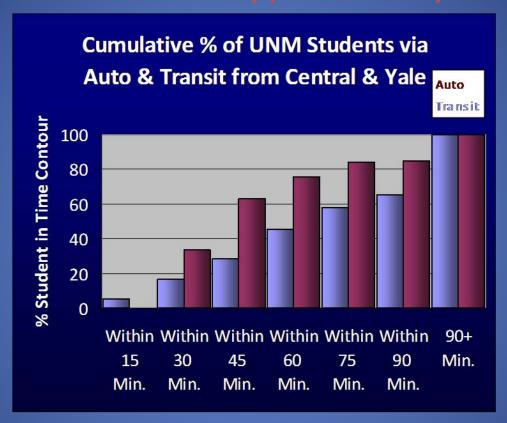
24.5 K On Four Routes (60% of all ridership)

7-8K Riders Per Day



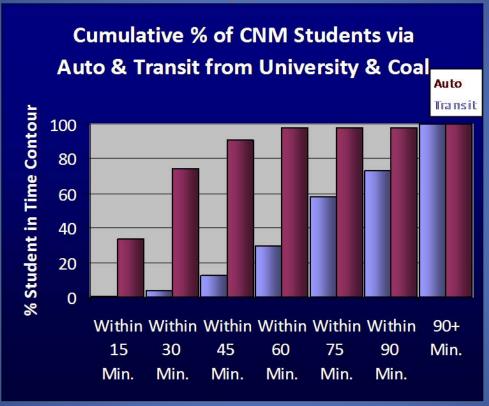
- 5 shuttles routes oriented to serve the student parking lots and Rail Runner connection
- ATC Shuttle: 4 trips
  - 2 AM @ 6:25 and 7:30
  - 2 PM @ 3:45 and 5:05
- 3 Lot shuttles (T,G/Q,South)
  - 6:30AM 10PM (M-Th)
  - 6:30AM 7PM (F)
- Redondo shuttle
  - 6:30AM 7PM M-F
  - 5 minute headways
  - System Carries 1.7 2.0
     Million Riders Annually
  - 8-10K a Day!

#### **UNM Accessibility (Auto vs Transit)**



- Only 5 % of population within 15 min. of campus via transit
- ☐ 17% of student population within 30 min. of campus via transit
- 63% of population within 45 min. of campus via auto
- ☐ 15 min. travel time to parking lots is implied





- Only 4 % of population within 30 min. of campus via transit
- ☐ 75% of population within 30 min. of campus via auto

# Percent UNM Population with Parking Permits UNM Routes

		UNM	UNM	UNM	UNM
		Students	Students	Faculty/Staff	Faculty/Staff
		w/in 3/8ths	outside	w/in 3/8ths	outside 3/8ths
Route	Street	mi.	3/8ths mi.	mi.	mi.
5	Lomas/Montgomery	38.01%	32.36%	51.85%	48.51%
11	Lomas	31.43%	32.77%	42.02%	49.18%
16/18	CBD/Gibson Circulator	14.18%	34.40%	34.85%	50.02%
50	MLK/Yale	8.21%	33.73%	23.81%	49.32%
66	Central	14.45%	34.21%	32.75%	49.95%
766	Central/Uptown	12.48%	34.26%	31.48%	50.02%
777	Central/Tramway	12.66%	34.13%	30.53%	49.81%
790	Coors/Lomas	22.12%	33.38%	33.70%	49.43%
Total		25.12%	34.92%	42.78%	50.62%

Mode Choice - Cycling

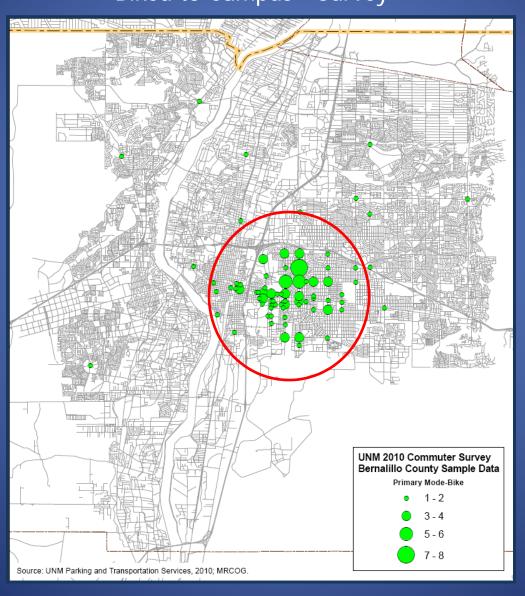
	TRANSPORTATION MODE BY STUDENT, FACULTY AND STAFF STATUS											
	Number											
	Drove					NM Rail						
	Alone	ABQRide	Bike	Carpooled	Walked	Runner	Other	Total				
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Student	54.2%	15.1%	10.4%	6.7%	8.4%	1.9%	3.3%	100.0%				
Staff	66.8%	9.7%	5.7%	8.2%	3.3%	2.7%	3.6%	100.0%				
Faculty	65.4%	7.4%	6.2%	6.2%	7.4%	3.7%	3.7%	100.0%				
Total	57.9%	13.3%	9.0%	6.9%	7.3%	2.2%	3.4%	100.0%				
Source: UNM	Commuter Survey, D	anielle Gilliam,	2010.									

	TRANSPORTATION MODE BY DISTANCE OF TRAVEL										
	< 1 Mile	1 - 5 Miles	6 - 10 Miles	11 - 20 Miles	21 - 25 Miles	> 26 Miles	Total				
Drove Alone	1.1%	19.2%	30.6%	30.4%	8.8%	9.9%	100.0%				
ABQRide	1.4%	26.9%	25.6%	28.8%	11.4%	5.9%	100.0%				
Bike	22.8%	69.1%	6.0%	1.3%	0.7%	0.0%	100.0%				
Walked	59.2%	39.2%	1.7%	0.0%	0.0%	0.0%	100.0%				
Carpooled	2.6%	22.8%	29.8%	24.6%	8.8%	11.4%	100.0%				
NM Rail Runner	0.0%	0.0%	2.7%	8.1%	13.5%	75.7%	100.0%				
Other	7.1%	44.6%	23.2%	12.5%	7.1%	5.4%	100.0%				
Total	7.6%	26.9%	24.7%	23.8%	7.8%	9.2%	100.0%				
Source: UNM Commu	ter Survey, Danie	lle Gilliam, 2010	. Analysis by MR	COG.							

Mode Share Is Respectable But Drops Dramatically As Distance Increases

# Mode Choice - Cycling

Biked to Campus - Survey



# Mode Choice - Walk

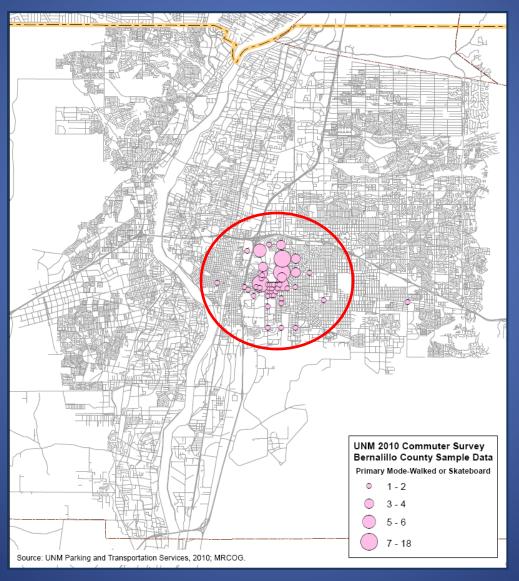
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	Number									
	Drove					NM Rail				
	Alone	ABQRide	Bike	Carpooled	Walked	Runner	Other	Total		
Student	627	175	120	77	97	22	38	1,156		
Staff	221	32	19	27	11	9	12	331		
Faculty	106	12	10	10	12	6	6	162		
Total	954	219	149	114	120	37	56	1,649		
	Percent									
	Drove					NM Rail				
	Alone	<b>ABQRide</b>	Bike	Carpooled	Walked	Runner	Other	Total		
Student	54.2%	15.1%	10.4%	6.7%	8.4%	1.9%	3.3%	100.0%		
Staff	66.8%	9.7%	5.7%	8.2%	3.3%	2.7%	3.6%	100.0%		
Faculty	65.4%	7.4%	6.2%	6.2%	7.4%	3.7%	3.7%	100.0%		
Total	57.9%	13.3%	9.0%	6.9%	7.3%	2.2%	3.4%	100.0%		
Source: UNM	Commuter Survey, D	anielle Gilliam, 2	010.							

		TRANSPORTA	TION MODE B	Y DISTANCE O	F TRAVEL		
	< 1 Mile	1 - 5 Miles	6 - 10 Miles	11 - 20 Miles	21 - 25 Miles	> 26 Miles	Total
Drove Alone	1.1%	19.2%	30.6%	30.4%	8.8%	9.9%	100.0%
ABQRide	1.4%	26.9%	25.6%	28.8%	11.4%	5.9%	100.0%
Bike	22.8%	69.1%	6.0%	1.3%	0.7%	0.0%	100.0%
Walked	59.2%	39.2%	1.7%	0.0%	0.0%	0.0%	100.0%
Carpooled	2.6%	22.8%	29.8%	24.6%	8.8%	11.4%	100.0%
NM Rail Runner	0.0%	0.0%	2.7%	8.1%	13.5%	75.7%	100.0%
Other	7.1%	44.6%	23.2%	12.5%	7.1%	5.4%	100.0%
Total	7.6%	26.9%	24.7%	23.8%	7.8%	9.2%	100.0%
Source: UNM Commu	ter Survey, Danie	lle Gilliam, 2010	. Analysis by MR	COG.			

60% of those who walk live within 1 mile of campus Over 90% within 2 miles

# Mode Choice - Walk

### Walked to Campus - Survey



## **Mode Choice**

# DISTRIBUTION OF STUDENTS AND FACULTY / STAFF BY MODE DISTANCE FROM DESITINATION

	UNM				
	Students			CNM Fac. /	
	(excluding	UNM Faculty /		Staff /	
Distance	dorm)	Staff	UNMH	Students	Total
Walking Distance	3,117	1,446	314	1,457	6,334
Biking Distance	5,741	2,936	920	3,768	13,365
Beyond	14,953	8,399	3,974	20,290	47,616
			Percent		
Walking Distance	15.1%	12.8%	6.4%	6.1%	10.4%
Biking Distance	27.7%	25.9%	18.8%	15.7%	21.9%
Beyond	72.3%	74.1%	81.2%	84.3%	78.1%

#### **Mode Choice - Observations**

Very High Rates of Alternative Mode Usage If:

Within 3-4 miles of Campus

On or Near a Direct Transit Route with Good Service Throughout the Day

DISTRIBUTION OF STUDENTS AND FACULTY / STAFF BY MODE DISTANCE FROM DESITINATION								
Distance	UNM Students (excluding dorm)	UNM Faculty / Staff	UNMH	CNM Fac. / Staff / Students	Total			
Walking Distance	3,117	1,446	314	1,457	6,334			
Biking Distance	5,741	2,936	920	3,768	13.365			
Beyond	14,953	8,399	3,974	20,290	47,616			
	Percent							
Walking Distance	15.1%	12.8%	6.4%	6.1%	10.4%			
Biking Distance	27.7%	25.9%	18.8%	15.7%	21.9%			
Beyond	72.3%	74.1%	81.2%	84.3%	78.1%			

Key For Future Actions Is the 78.1% (47,616 people) That Live Beyond 4 Miles And Are Outside of Good Transit Service

# Some Things To Think About

Increasing On or Near Campus Populations

More Housing
Neighborhood Circulators
Bike and Pedestrian Improvements
Planning/Incentives

Increasing Population On or Near Good Transit Routes

More Routes
Better Connections
Exclusive Connections
More Housing On Routes
Planning/Incentives
On Campus Circulation

Reducing Peak Auto Loadings (Demand Reduction)

Utilization
On Line Classes
Pricing
Preferred Parking
On Campus Permits
Coordinated Work Class Schedules

# Some Things To Think About

Containing & Directing Auto Demand

Focused Parking and Access/Egress
Park & Ride
Improve Non Neighborhood Connections
Traffic Calming
On Campus Circulation
Congestion Pricing
Car Free Areas
ITS

Institutional Coordination (UNM/CNM/City/County/MRCOG)

UNMH/UNM/CNM Parking & Transit
Uniform Fees & Incentives
Coordinated Work/Class Schedules
Surveys & Marketing
Planning, Zoning, & Development
Coordinated Transit Service
Coordinated Infrastructure Improvements
TOD

# Where We Are Headed

**Public Meetings** 

More Analysis

Findings & Recommendations