

ADOT Planning Assistance for Rural Areas
Kingman Area Transportation Study Update

Contract T0849U0001
Purchase Order PG TD 0448
Task Assignment TPD14-10

TAC Meeting No. 3
August 24, 2010
310 N. 4th Street, Kingman, AZ
1:00 p.m. – 3:30 p.m.

ATTENDANCE

Technical Advisory Committee (TAC)

Justin Feek, *ADOT MPD (ADOT
Project Manager)*

Rob Owen, *City of Kingman Public
Works (Local Project Manager)*

Ken Paetz, *ADOT Kingman District*

Mick Hont, *ADOT Kingman District*

Greg Henry, *City of Kingman
Engineering*

Gary Jeppson, *City of Kingman
Development Services*

Tom Duranceau, *City of Kingman
Development Services*

Rusty Cooper, *City of Kingman Police
Department*

Bennett Bratley, *Mohave County
Economic Development*

Bob Riley, *Kingman Airport Authority*

Consultant Staff in Attendance

Bryan Patterson, *Kimley-Horn and Associates, Inc. (Project Manager)*

Michael Grandy, *Kimley-Horn and Associates, Inc.*

Dan Hartig, *Ayres Associates*

Amy Rosar, *KDA Creative*

Kristin Bornstein, *KDA Creative*

MEETING SUMMARY

Justin Feek, ADOT Project Manager, opened the meeting and thanked all for their attendance. After reviewing the meeting agenda with the TAC, Bryan Patterson, the Kimley-Horn Project Manager, briefly reviewed the current and future needs identified in Working Paper No. 1 – Existing and Future Conditions. Amy Rosar summarized the input received at the July 12 Open House. Dan Hartig presented the results of the TAC survey that was sent out to the TAC a few weeks prior to the meeting. The input received from the public meeting and the TAC survey responses was used to help develop draft goals, objectives, and evaluation criteria, which Dan presented to the TAC.

Kristin Bornstein, Amy, and Dan then facilitated a working session with the TAC to refine the goals, objectives, and evaluation criteria and provide the consultant team with input on what kinds of proposed

improvements should be considered. A packet containing background information was distributed to the TAC to provide more detailed information for use during the working session (see attached).

Discussion and comments from the working session included the following:

Draft Goals

Should the goals and objectives consider demographics and needs of users?

Should the goals be prioritized?

- Consider adding sustainability to Goal #2
- Consider adding “support grant applications” to Goal #4
- Flexibility in plan to respond to changing conditions. Be responsive to requirements when applying for grants. This should be considered in Goals 2 and 4.
- Bike and pedestrian transit are not independent. When we build new routes, these needs will be considered. The future of transportation improvements is the accommodation of multiple modes.
- Include an integrated land use plan in the goals and then define it more with an objective.
- There needs to be adequate access to population and business centers, with a minimum of two for safety, mobility, redundancy, etc.
- Address handicap accessibility with sidewalks and ramps either as a goal or an objective.
- Traffic interchanges (TIs) that are planned and not yet funded would help economic development. This should be incorporated into Goal #5.
- New TIs are expected to encourage growth to the north and will increase the need for east-west connectivity. Consider the impacts of not building TIs.
- Consider existing and future utility corridors.

Draft Objectives

Roadways

- A Level of Service (LOS) C goal is aggressive and can be expensive. Should LOS D be considered?
 - ADOT aims for a LOS C or better on the state system.
 - LOS C is preferable, but this depends on a number of factors such as cost of necessary improvements, alternative routes, adjacent land uses, etc.
 - LOS is important to have established prior to discussions with developers.
 - LOS for bike and pedestrian facilities is more difficult to achieve

Transit

- Plan for 30-minute headways.

Rail

- Rail issues are linked with land use.
 - Public Safety issue downtown
 - Consider Airfield Avenue grade-separated crossing
 - Possible land use or policy objective
- Support and accommodate passenger and high speed rail service.
- Objective is not to impede future opportunities, but to support and accommodate passenger and freight service.

Emergency services

- Be careful about increasing speed limits where there are multiple conflict points.
- Emergency services will be supportive of additional grade-separated railroad crossings.

Safety

- Need to prioritize safety improvements at high-crash locations. Medians and roundabouts can alleviate cross conflicts.

Right of way

- Needs may apply to each mode like safety.

Draft Evaluation Criteria:

- Benefit of sales tax and economic opportunities (near term/and long term)
- Dependency on other projects and cumulative efforts
- Impact on properties not just businesses

Miscellaneous:

- In reference to a comment received at the public meeting; ADOT standards do not favor narrowing roads for bike lanes.
- Transportation is for commerce, commuting, recreation, and all uses.
- Consider a sustainability objective.
- Land use objectives? Cross-access between parcels.
- The community is dealing with a lot of developers and the plan needs to support that effort.
- Consider a sustainability objective.

After the working session was finished, Bryan wrapped up the meeting by reviewing the next steps in the project schedule and thanking all for their participation and input. The next TAC meeting will be scheduled in October to discuss recommended transportation system improvements. The second open house will be scheduled in November.



Kingman Area Transportation Study Update

ADOT MPD Task Assignment 14-10
PGTD 0448
Contract # T08-49-U0001

Background Information For TAC Meeting #3 August 24, 2010

Prepared by:



Kimley-Horn
and Associates, Inc.

In association with:
Ayres Associates Inc.
KDA Creative

Prepared for:
ARIZONA DEPARTMENT OF TRANSPORTATION
CITY OF KINGMAN

August 2010
091374035

TAC Meeting #3 – Background Information

July 12 Open House Comments

- Need safe bicycle facilities along existing roadways
- Improve local transit system
- Relieve congestion on north-south corridors
- Develop business districts with connectivity
- Identify right-of-way needs early
- Improve business access points on Stockton Hill Road

TAC Survey Responses

1. *What do you see as the biggest transportation issue right now in and around the Kingman area?*
 - Congestion on Stockton Hill Road
 - Connection of the parkway from KAA to I-40.
 - The lack of major arterial through ways
 - Barriers that I-40 and BNSF pose to cross town and public safety access
 - Limited access to the area east of the BNSF tracks
 - Congestion on West Beale (truck stop area)
 - Right turn lane from West Beale to EB I-40
 - Lack of facilities for alternative modes
 - No comprehensive traffic signal and traffic management plan
 - Cross traffic hazards on Rt 66 in the Armour Ave area
 - Need a RR crossing in the vicinity of Louise or Airfield
 - Access management
 - Need upgraded arterial street system
 - Signal timing could be balanced better

2. *What transportation issues do you think we will face 20 years from now in and around the Kingman area?*

- Improved access north and south and new access to the east of Hwy 66
- Attempt to be proactive versus reactive.
- Efficient and sufficient major arterial traffic ways connecting Kingman in an east/west direction. All existing major traffic lanes are north/south. City growth is easterly, with no real traffic way beyond I-40.
- Lack of access management
- Growth in the Kingman area and the region in general will cause increased congestion on I-40 and major arterials in Kingman, specifically Stockton Hill Road and Airway Avenue
- Need for alternative modes of travel
- Strategies to reduce auto trips

3. *What can be done now to prepare for the future (20 years from now)?*

- Get the residents to pass a City property tax
- Involvement of community, political bodies and governmental agencies to formulate objective planning and evaluation
- Develop strategic plan and begin right of way acquisition process
- Even with lack of funding for construction, future projects should be planned, prioritized, and designed
- Funding of improvements is critical. Creative methods to fund projects before they are required is essential. Waiting for the problem to develop and then addressing funding will only make traffic matters worse
- Support land use policies that de-emphasize auto use – emphasize systems management
- Roundabouts instead of signals
- Increase arterial speed limits
- Additional TI's, additional RR crossings
- Retime traffic signals

4. *If alternative modes of transportation were convenient and completely incorporated into the transportation system, which would you most likely use? (Check all that apply)*

- Bus (4 responses) Walk (3 response) Bike (4 responses)
- Other: None – distance precludes walking and biking (also safety) and the bus routes are/will always be limited due to market and time issues
- Other: Pedestrian walk/bike paths would be useful

5. *If you had \$100 to spend on transportation improvements, how much would you spend on each of the following? (total should equal \$100)*

\$9 \$10 & \$20 & \$20 & \$5 & 5_Bike paths/lanes

\$8 \$20 & \$20 & \$5 & 10_Transit

\$14 \$5 & \$30 & \$50 & 10_Freeway Interchanges/Crossings

\$7 \$10 & \$20 & \$5 & 10_Sidewalks

\$23 \$20 & \$50 & \$20 & \$20 & \$25 & 25_Roadway Widening

\$26 \$20 & \$100 & \$30 & \$20 & \$10 & 10_Railroad Crossings

\$9 \$5 & \$50 & 10_Traffic Signals

\$4 \$10 & 20_Roundabouts

Additional Comments: new interchanges should not be a priority; traffic management should be top priority, one new TI in next 20 years, new rail crossing and SHR

***Bold \$** value represents average of all responses. Individual response amounts are shown in parentheses.*

Transportation Plan Draft Goals

GOAL 1: *Provide a balanced, multimodal transportation system that supports the safe and efficient movement of people and goods.*

GOAL 2: *Develop a plan that builds on the character of the community, is sensitive to the environment, and enhances the quality of life today and in the future.*

GOAL 3: *Provide an open, objective, and credible process for planning and developing a transportation system that complies with state and federal regulations and is responsive to the community.*

GOAL 4: *Develop a plan that can be funded and that reflects responsible use of public funds.*

GOAL 5: *Provide a transportation system to support planned economic development and vitality.*

Transportation Plan Draft Objectives

Roadways

- Complete surface street grid network
- Provide freeway access on east side of railroad tracks
- Provide more grade-separated railroad crossings
- Develop access management policies and plans
- Attain LOS XX or better on all roadways

Transit

- Provide XX-minute headways
- Attain XX% coverage of population within 0.25 miles of transit stop
- Attain LOS XX or better

Bicycles

- Clearly-defined, continuous bicycle network
- LOS XX or better on arterials and collectors

Pedestrians

- Clearly-defined, continuous pedestrian network
- LOS XX or better on arterials and collectors

Aviation

- Provide adequate access to airport

Rail

- Eliminate conflicts
- Minimize noise

Draft Evaluation Criteria

- Cost
- Right-of-way impacts
- Impacts to existing buildings
- Engineering challenges
- Accessibility
- Network continuity
- Level of service/delay
- Availability and frequency of transit service
- Safety
- *Environmental impacts*



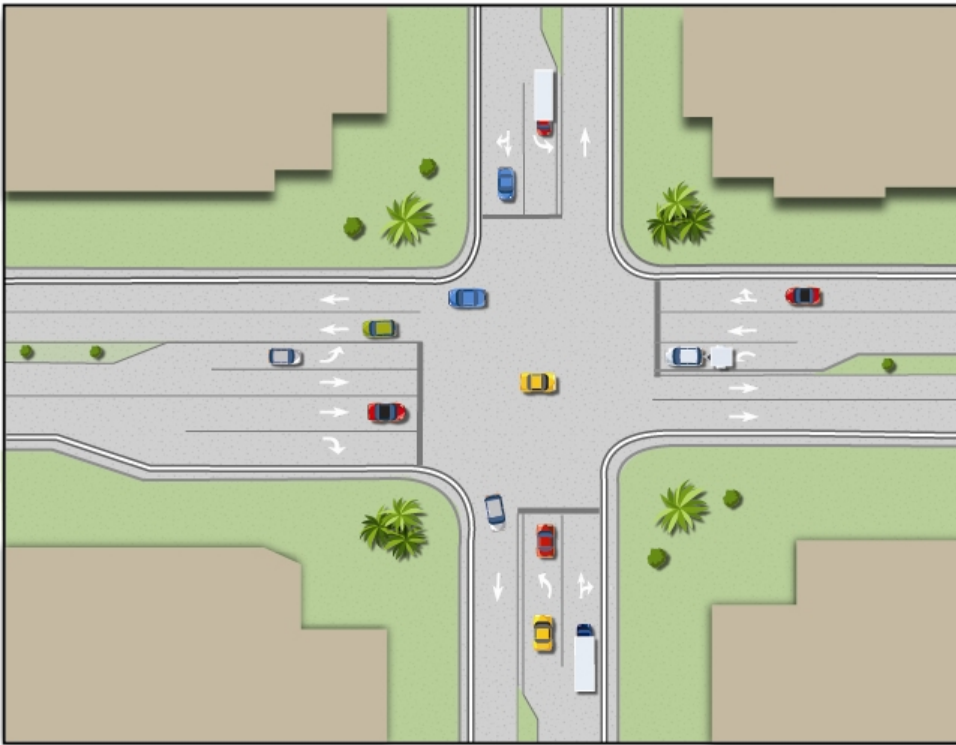
Complete Streets

A complete street is one that provides facilities and amenities for various transportation modes within the public right of way. When a system of complete streets exists, residents will be encouraged to use other modes rather than just the automobile.

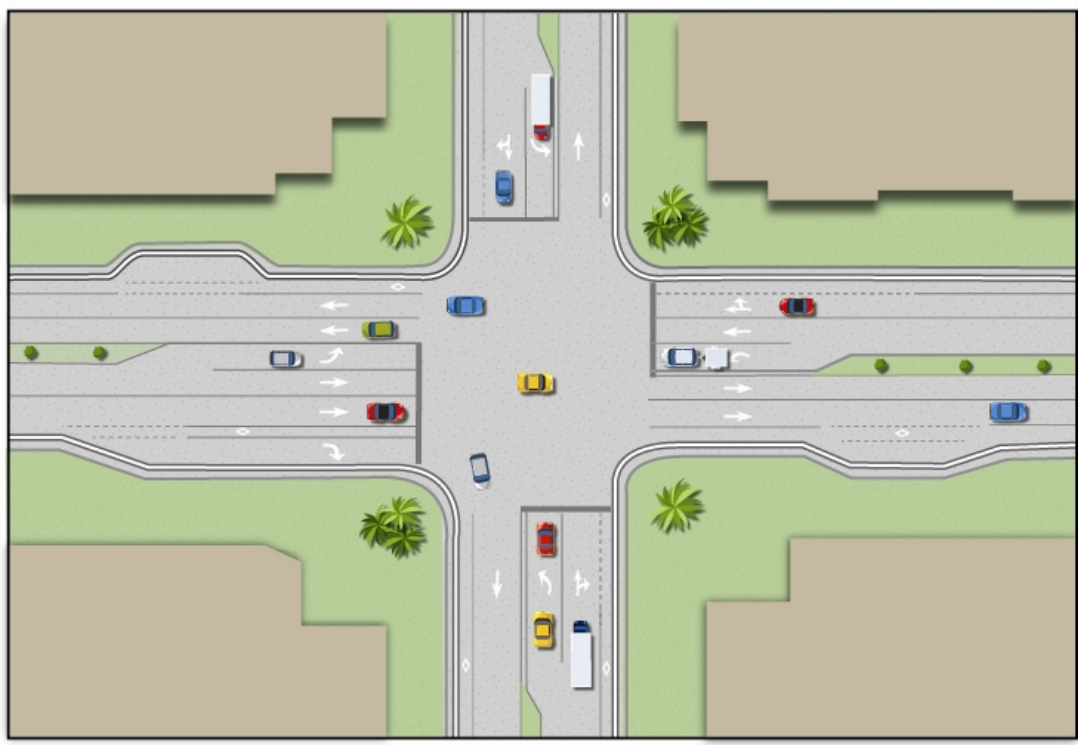
Benefits of Complete Streets

- *Provide functionality for all modes*
- *Promote safety*
- *Encourage more walking and bicycling*
- *Can help ease transportation woes*
- *Promote sustainability*

The graphics on the following page present a comparison of the traditional street that just provided for automobiles to one that is bike, ped, and transit friendly.

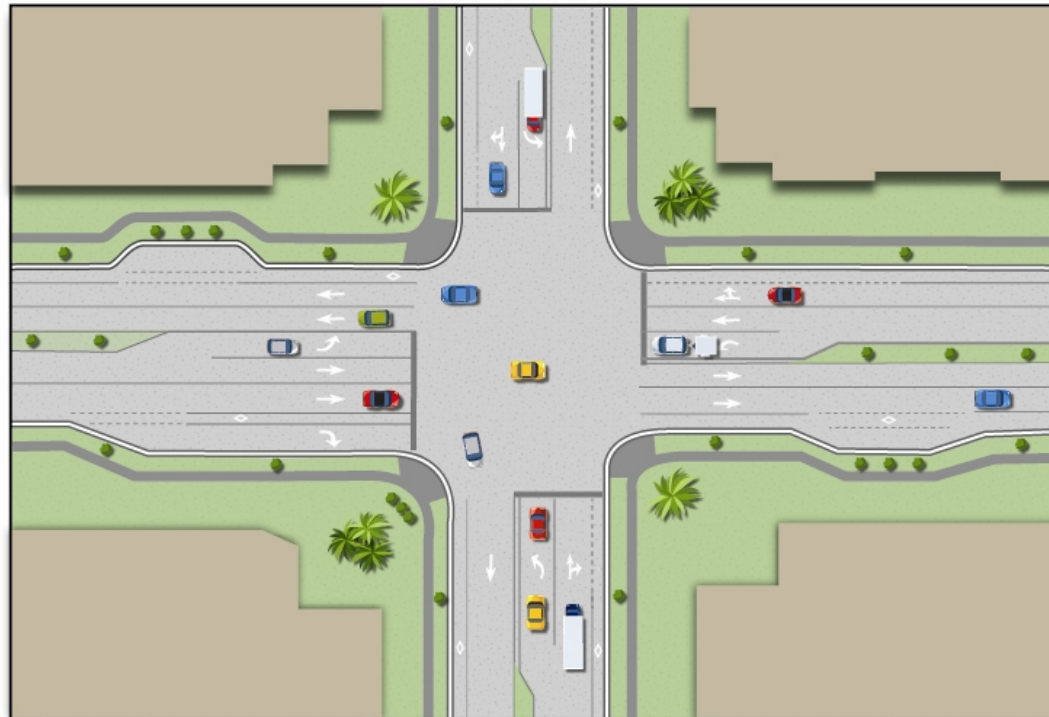


Traditional Intersection



Bike & Transit Friendly Intersection

Not To Scale



Bike, Pedestrian, & Transit Friendly Intersection

Not To Scale

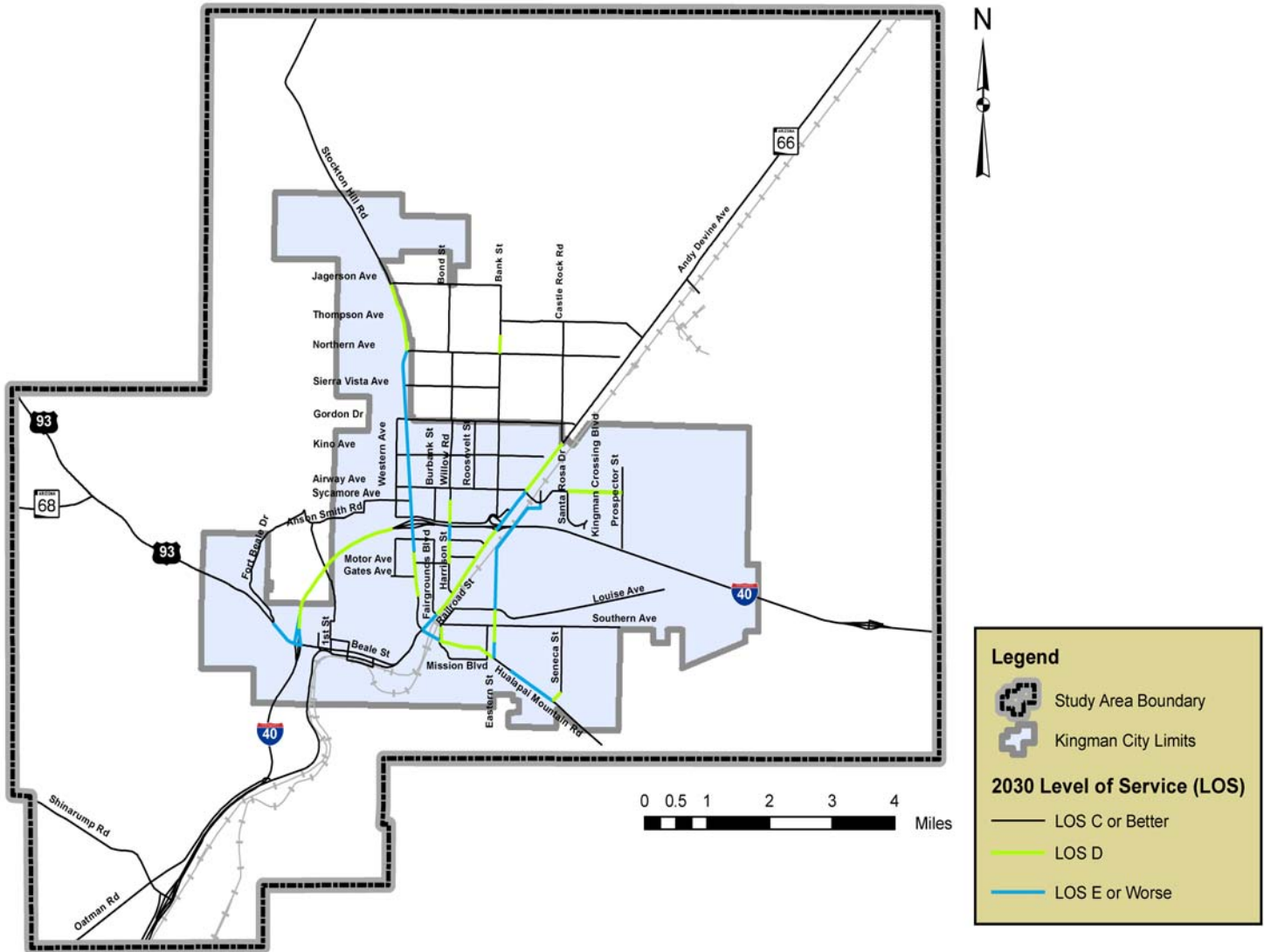
Roadway Level of Service Measures

Daily Volume Thresholds for Roadway LOS C and LOS D

Type of Roadway	Number of Through Lanes	Maximum Daily Volume for LOS C	Maximum Daily Volume for LOS D
Collector/Arterial with no left-turn lanes	2	9,000	12,300
Collector/Arterial with left-turn lanes	2	11,200	15,400
Collector/Arterial with no left-turn lanes	4	19,500	24,500
Collector/Arterial with left-turn lanes	4	24,700	31,100
Collector/Arterial with raised medians and left-turn lanes	4	26,000	32,700
Arterial with left-turn lanes	6	38,300	46,700
Arterial with raised medians and left-turn lanes	6	40,300	49,200
Uninterrupted flow highway	2	13,800	19,600
Uninterrupted flow highway	4	47,800	61,800
Freeway	4	52,000	67,200
Freeway	6	81,700	105,800

Source: FDOT 2002 Quality/Level of Service Handbook, analysis by Kimley-Horn and Associates, Inc.

2030 Roadway LOS C and LOS D





Transit Level of Service Measures

Service Frequency LOS: Urban Scheduled Transit Service

LOS	Headway (min)	Veh/h	Comments
A	<10	>6	Passengers don't need schedules
B	10-14	5-6	Frequent service, passengers consult schedules
C	15-20	3-4	Maximum desirable time to wait if bus/train missed
D	21-30	2	Service unattractive to choice riders
E	31-60	1	Service available during hour
F	>60	<1	Service unattractive to all riders

Hours of Service* LOS

LOS	Hours per Day	Comments
A	19-24	Night or owl service provided
B	17-18	Late evening service provided
C	14-16	Early evening service provided
D	12-13	Daytime service provided
E	4-11	Peak hour service/limited midday service
F	0-3	Very limited or no service

**Fixed route: number of hours per day when service is provided at least once an hour*

Service Coverage LOS

LOS	% Transit-Supportive Area/ Covered Area
A	90.0-100.0
B	80.0-89.9
C	70.0-79.9
D	60.0-69.9
E	50.0-59.9
F	<50.0

Transit-Supportive Area: The portion of the area being analyzed that has a household density of at least 3 units per acre or an employment density of at least 4 jobs per acre.

Covered Area: The area within 0.25 miles of local bus service or 0.5 miles of a busway or rail station where pedestrian connections to transit are available from the surrounding area.

Transit/Auto Travel Time LOS

LOS	Travel Time Difference (min)	Comments
A	<=0	Faster by transit than by automobile
B	1-15	Nearly as fast by transit as by automobile
C	16-30	Tolerable for choice riders
D	31-45	Round-trip at least an hour longer by transit
E	46-60	Tedious for all riders; may be best possible in small cities
F	>60	Unacceptable to most riders

Non-Motorized (Bicycle/Pedestrian) Level of Service Measures

Non-Motorized Level of Service Rating

LOS	Rating Points
A	>17
B	>14-17
C	>11-14
D	>7-11
E	>3-7
F	3 or less

Bicycle Level of Service Rating System

Category	Subcategory	Points
Facility	Roadway outside lane width of 12'	0
	Roadway outside lane width of 12'-14'	5
	Roadway outside lane width >14'	6
	Off-street/parallel alternative facility	4
Conflicts	Driveways & side streets	-1
	Barrier free	0.5
	No on-street parking	1
	Roadway medians present	0.5
	Unrestricted sight distance	0.5
	Intersection Implementation	0.5
Speed Differential	>30 MPH	0
	25-30 MPH	1
	15-20 MPH	2
Motor Vehicle LOS	LOS = E, F, or 6+ travel lanes	0
	LOS = D, & < 6 travel lanes	1
	LOS = A, B, C, & < 6 travel lanes	2
Maintenance	Major or frequent problems	-1
	Minor or infrequent problems	0
	No problems	2
Multimodal or Travel Demand Mgmt. Options	No support	0
	Support exists	1

Pedestrian Level of Service Rating System

Category	Subcategory	Points
Facility	Not continuous or non-existent	0
	Continuous on one side	4
	Continuous on both sides	6
	Min. 5' wide & barrier-free	2
	Min. 5' wide & with barriers	1
	Off-street/parallel alternative facility	1
Conflicts	Driveways & side streets	-1
	Pedestrian signal delay 40 sec. or less	0.5
	Reduced turn conflict implementation	0.5
	Crossing width 60' or less	0.5
	Posted speed	0.5
	Roadway medians present	1
Amenities	Buffer not less than 3.5'	1
	Benches or pedestrian-scale lighting	0.5
	Shade trees	2
Motor Vehicle LOS	LOS = E, F, or 6+ travel lanes	0
	LOS = D, & < 6 travel lanes	1
	LOS = A, B, C, & < 6 travel lanes	2
Maintenance	Major or frequent problems	-1
	Minor or infrequent problems	0
	No problems	1
Multimodal or Travel Demand Mgmt. Options	No support	0
	Support exists	1

Alternate Modes Current LOS Examples

- KATS – LOS E for transit
- Stockton Hill Rd – LOS C for bicycles and pedestrians
- Andy Devine Ave – LOS D for bicycles and pedestrians
- Northern Ave – LOS E for bicycles and pedestrians

Western Regional and Statewide Framework Study Recommendations for Improvements by 2050

Route	Limits	Improvement
I-40	McConnico TI to Jct US 93 South	Widen to 6 lanes
I-40	Between the two US 93 interchanges	Widen to 8 lanes
US 93	I-40 to SR 68	Widen to 6 lanes
SR 66	I-40 to Valle Vista	Widen to 4 lanes
SR 66	Beale Street to I-40	Widen to 6 lanes
Hualapai Mountain	East of Eastern St to east of Seneca St	Widen to 4 lanes
Stockton Hill	Rt. 66 to Northern Ave	Widen to 6 lanes
Stockton Hill	Northern Ave to Jagerson Ave	Widen to 6 lanes
Stockton Hill	Jagerson Ave to 7.5 miles north	Widen to 4 lanes
Northern Avenue	Stockton Hill Rd to SR 66	Widen to 4 lanes
Bank Street	Gordon Drive to Grace Neal Parkway	Widen to 3 lanes
Grace Neal Parkway	Stockton Hill Rd to SR 66	New Roadway
Mohave Drive (now Rancho Santa Fe Parkway)	Hualapai Mountain Road to proposed I-40 interchange	New Roadway
Interstate Freeway (I-11)	Along US 93 alignment	Upgrade
US 93/I-40 Interchange	-	Reconstruct
Bus Service to Bullhead City	-	Initiate
Bus Service to Lake Havasu City	-	Initiate
Local Bus Service Improvements	-	Initiate
Passenger Rail along I-40	-	Initiate
Transit Center in Kingman	-	Construct
High-Speed Passenger Rail to Phoenix and Las Vegas	-	Initiate

Review of 2005 KATS Recommendations

FREEWAY CROSSINGS

- I-40/US93 Direct Ramps - yes
- Fairgrounds - re-evaluate
- Kingman Crossing TI - yes
- Rancho Santa Fe TI - re-evaluate
- Stockton Hill TI - yes

WIDEN TO FOUR LANES

- Stockton Hill - yes
- Harrison/Willow - yes
- Beverly - re-evaluate
- Bank: Gordon to Beverly - complete
- Bank: Northern to Grace Neal - re-evaluate
- Northern - completed
- Eastern - re-evaluate
- Louise - no
- Hualapai Mtn. - yes

WIDEN TO SIX LANES

- US 93 - re-evaluate
- Rt. 66 - re-evaluate
- Stockton Hill - yes
- Airway - no



FIGURE 4

Impacts of 2005 Plan

What are the impacts if the major recommendations from the 2005 plan are implemented?

- Direct connect ramps from I-40 to US 93 may eliminate need to reconstruct Beale interchange
- Fairbanks/Burbank crossing of I-40 may eliminate need to widen Harrison/Willow
- Kingman Crossing TI may eliminate need to widen Eastern

Sample Proposed Roadway Improvements

If assume LOS D or better is criteria and implement directional ramps at I-40/US 93 and Kingman Crossing Blvd TI with connections to the north and south, only remaining LOS E or worse segments in 2030 are:

- Stockton Hill Rd from Northern to Chicago (needs 6 lanes)
- Andy Devine Ave from Airway to I-40 (needs 6 lanes)
- Eastern St from Karen Ave to Hualapai Mtn Rd (needs 4 lanes and/or traffic signal at Eastern/Hualapai Mtn Rd)
- Hualapai Mtn Rd from Ridgeview to Seneca (needs 4 lanes)