

Admin
List of Technical Questions Regarding Facilities within KATS MPO
Released to KATS

July 28, 2014

The intention of these questions is to ultimately provide interested parties with information useful to understanding some of the major roads and related facilities in our greater community. Those providing answers are kindly encouraged to make them available to the Kalamazoo Area Transportation Study (KATS) and the general public in a timely manner.

We understand that some of the questions may be difficult or impossible to answer for a variety of reasons. In such cases, it will help the reader if a brief explanation is provided as to why this may be so.

Thanks is given to all those participating in the effort to create and refine the questions, and thanks is given in advance to all those who participate in providing the answers.

Inventory

1. How many miles of federal aid eligible roads are in the entire KATS Planning Area?

[KATS: There are approximately 2000 lane miles of federal aid eligible roads in the KATS Planning area.](#)

2. How many miles of those same roads are within the KATS Adjusted Census Urban Boundary (ACUB)?

[KATS: There are approximately 1150 lane miles of federal aid eligible roads within the KATS ACUB. This is a rough approximation, due to the recent adoption of the ACUB and it being deployed into our system.](#)

3. How many miles of roads within the entire ACUB already have at least one of the following?

- a) sidewalk (on one or both sides)

- b) shared use path

- c) four foot shoulders

[KATS: KATS is currently updating its inventory of sidewalks and four foot shoulders on federal aid eligible roads. There are approximately 50 miles of shared use paths along federal aid roads.](#)

4. Within the ACUB, estimate to what extent each of the Act 51 agencies currently have Federal Aid eligible roads that meet at least one of the following criteria:

- a) sidewalk (on one or both sides)

- b) shared use path

- c) four foot shoulders

KATS: KATS does not track this information. However, it is estimated that the Cities and Villages have a majority of their federal aid roads in compliance. The Road Commissions do not.

5. How many miles of Federal Aid roads within the ACUB already have the following?
a) four foot paved shoulder

KATS: KATS is currently updating its inventory of this data.

- b) three foot paved shoulder plus one foot of gravel shoulder
c) two foot paved shoulder plus two feet of gravel shoulder
d) one foot paved shoulder plus three feet of gravel shoulder
e) no paved shoulder plus gravel shoulder
f) no shoulder

KATS: (b-f) KATS does not collect this data.

6. How many bridges are within the ACUB that qualify for Federal aid through KATS?7. How many of those bridges lack any of the following?

- a) four foot shoulders (but do have sidewalks on both sides of the bridge)
b) sidewalks on both sides of the bridge (but lack four foot shoulders)
c) both four foot shoulders and sidewalks on both sides of the road

KATS: There are approximately 171 Bridges (structures with unique ID's) within the KATS Planning Area, 93 of which are within the ACUB. This includes highway structures.

KATS is currently collecting sidewalk and shoulder data on bridges.

Costs

8. Generally speaking, what is the cost per mile of adding:
a) one additional foot of paved shoulder on each side of the road (assuming the existing shoulder is 3 ft paved + 1 ft gravel)?
b) an additional two feet (assuming the existing shoulder is 2 ft paved+ 2 ft gravel)
c) an additional three feet (assuming the existing shoulder is 1 ft paved+ 3ft gravel)
d) an additional four feet (assuming only a 4 ft of gravel shoulder)

KATS: Varies by agency, location and existing conditions. Typically \$3/square foot for a paved shoulder.

9. Generally speaking, what is the cost per mile of adding a new sidewalk on each side of the road?

KATS: Typically most projects in the TIP are well less than one mile in length. Typical cost for both sides has been \$260,000/mile but can vary by agency, location and existing conditions.

10. Review the following items (drawn from the list of benefits of paved shoulders mentioned by AASHTO at <http://www.walkable.org/assets/downloads/22%20Reasons%20for%20Paved%20Shoulders.pdf>) and quantify those that can be quantified:

a) what is the lifespan (or other fair measure, such as the length of time between major repaving projects, etc.) of a road with four foot paved shoulders, vs. roads without paved shoulders?

KATS: Many factors impact the lifespan of a roadway. Wide shoulders generally increase the lifespan of the roadway. Due to the many other factors that impact the pavement lifespan, it is difficult to quantify. However, the link provided has many great examples of reason for wide paved shoulders.

b) what are typical required annual costs to mow the shoulders or otherwise maintain a mile of road without shoulders, vs. the comparable annual required costs to maintain a mile of road with four foot shoulders?

KATS: KATS does not track maintenance costs such as mowing.

11. What is the typical annual cost to maintain a mile of sidewalk in “good” condition?

KATS does not track maintenance costs; typically sidewalk maintenance is the responsibility of the adjacent property owner.

12. Generally speaking, what is the cost per mile for adding a shared use path to one side of the road?

KATS: Typically a shared use path would not be built on the side of the road. Not including right-of-way, a detached shared use path costs approximately \$430,000/mile per www.pedbikesafe.org (FHWA site)

13. Generally speaking, what is the cost per mile for resurfacing the following?

a) two lane road KATS – approx. \$320,000 for 3” mill and fill

b) four lane road KATS – approx. \$640,000 for 3” mill and fill

Budgets

14. Over the past few years what is the percent of road project dollars that have actually been:

a) allocated to non-motorized?

KATS: KATS does not track line item amounts within projects. If the project is only programmed with Transportation Alternative/Enhancement funds, KATS has the ability to identify the amount, for example approximately \$1.4 million is identified in FY 2014 for a variety of non-motorized facilities within the area.

b) actually spent on non-motorized?

KATS: KATS does not program (allocate) funding unless the project is anticipated to be built. If, for whatever reason, a project is unable to be built within the FY, KATS reallocates the money.

15. In 2018-2020 what is the percentage reasonably expected to be allocated toward non-motorized facilities if projects awarded for Federal Aid in the ACUB must include at least one of the following: a) sidewalk (on one or both sides); b) shared use path; c) four foot shoulders?

KATS: KATS has not programmed any funds for FY 2018 through FY 2020, with the exception of Congestion Mitigation and Air Quality funds.

16. Within the ACUB, but excluding the cities and villages, what is the budget typically allocated to Federal Aid projects vs. non-Federal Aid projects?

KATS: KATS is not able to answer this question for the Act 51 agencies.

17. Are Act 51 agencies independently audited to find out what percent of their budget has been spent on non-motorized?

KATS: KATS is not able to answer this question for the Act 51 agencies.

18. What is a reasonable estimate (if precise figures are not available) of the percent of KATS project budgets in 2010-2013 that was spent on new non-motorized facilities? If it is not possible to estimate these figures for 2010-2013, pick another reasonable three year project window to estimate.

KATS: Approximately \$1.4 million of directly related funding (Alternatives/Enhancement) is identified in FY 2014. KATS does not track road projects for their non-motorized line item(s) BUT almost all FY 14 projects have a nonmotorized element, averaging 15% of project cost.

19. Does KATS allocate Federal aid funding to routine annual road maintenance projects such as filling potholes?

KATS: No, KATS does not fund maintenance activities. Act 51 funds, local unit contributions, millage, assessments, etc. are available for maintenance activities.

Funding

20. What is the percentage of the various funding sources for roads within the KATS ACUB?

KATS: Funding is not limited to the ACUB but applicable to the entire study area. Funding varies slightly by FY. KATS prioritizes and allocates the approximate annual amounts listed below:

Transportation Alternatives Program: \$243,000

Congestion Mitigation Air Quality: \$900,000

Surface Transportation Funding: \$2,900,000

National Highway Performance Program: \$525,000

21. What are the major categories of funding for road projects (such as annual maintenance, resurfacing, major restructuring/geometric changes, etc.), and, what is a fair estimate of the allocation of funding for each category by the major Act 51 agencies in the KATS MPO over a five year (or comparably long term, “typical”) period?

KATS: KATS is not able to answer this question for the Act 51 agencies.

22. Annually, about how many projects for major roads within the entire ACUB typically:

- a) get implemented
- b) apply for Federal funding through KATS
- c) are awarded Federal funding through KATS?

KATS: answer to a) – c) is 10-15 non-trunkline projects.

23. Annually, about how many dollars for major road projects within the entire ACUB typically are:

- a) spent on implementation
- b) applied for, as Federal funding through KATS
- c) awarded Federal funding through KATS?

KATS: KATS does not track Act 51 funds; see answers to #20 and #26

24. Describe the extent to which the current KATS funding process can “divert” money that could be spent in areas outside the ACUB, to non-motorized within the ACUB, or the extent KATS otherwise allows such “outside ACUB” funds to be diverted to such projects “inside the ACUB?”

KATS: The rural and urban areas have separate funding sources.

25. If it can be assumed for the sake of a hypothetical example that on some projects, the percent of a project’s budget allocated to non-motorized is 2%, and assuming that 1% of the project budget is already “funded” through the existing tax allocation, to what extent would the local funding entity need to “make up the difference” by reducing necessary pressing maintenance needs, such as pothole repair and chip-sealing? Where would the money come from, in this hypothetical example?

KATS: KATS is not involved in local agency priority setting or budgeting process.

26. Annually, about how many projects for major roads within the entire ACUB typically:

- a) get implemented
- b) apply for Federal funding through KATS

KATS- During the last TIP development (FY 14-17), approximately 70 projects applied for funding.

- c) are awarded Federal funding through KATS?

KATS-During the last TIP development, 27 projects were awarded funding. Over time, that number has changed (TIP Amendments). These projects include road construction and transit projects.

27. Annually, about how many dollars for major road projects within the entire ACUB typically:

- a) are spent on implementation
- b) are applied for, as Federal funding through KATS
- c) are awarded Federal funding through KATS?

KATS: KATS, by law, completes a four year Transportation Improvement Program. KATS allocates only certain federal aid funds (see question 20) and does not allocate or track local funds for roads.

Federal Aid Qualifications

28. To what extent are trails and shared paths that are not in the right of way relevant to cost considerations within KATS?

KATS: KATS considers all viable means to help create a multi-modal transportation system.

29. Does the Kalamazoo River Valley Trail qualify for federal aid? What percent of the KRVT is paid for by private funds such as donations?

KATS: The KRVT does qualify for federal funding. It has received federal Enhancement funding in the past. The amount of match (private dollars) has varied over the years, from as much as 50% to 60%, to as little as the minimum 20%

30. Are Act 51 agencies obligated to seek Federal Aid funding for projects? If not, what is the source of funding for those projects that do not receive Federal Aid, and, are such projects obligated to meet KATS criteria for projects?

There is no obligation by Act 51 agencies to seek Federal Aid funding for projects.

Additional sources of funding include state and local funding sources. Projects utilizing state and local funding are not required to meet KATS criteria for projects.

31. Describe KATS' current system for scoring/prioritizing projects (or reference/link to a document that does so, if publicly available), and whether current bylaws etc., permit that system to be changed, if, hypothetically speaking, the Policy Committee voted to require projects to meet criteria that are not currently in place?

PROJECT PRIORITIZATION PROCESSES

Federal Surface Transportation Funding Program (STP)

The complete KATS TIP Project Prioritization Process may be viewed online at:
<http://katsmpo.files.wordpress.com/2012/10/project-prioritization-process-december-2013.pdf>

Any revisions to the KATS Prioritization Process require Policy Committee approval before implementation. Suggested revisions to the process will be presented to the members of the Technical Committee for a recommendation prior to inclusion on the Policy Committee agenda as an action item.

DEFINITIONS

ADT (Average Daily Traffic):

- Count must be within 3 years of project.
- Count totals/divisions may need revision

Existing Condition:

- PASER for Roads, data is already collected and maintained by KATS staff
- If a roadway has more than one rating for the length of the project, the worst condition will be used.

Local Planning Description:

- Project conforms with either local land use plan, corridor plan, Complete Streets plan, water and sewer master plan, or other locally supported planning document

Environmental Justice:

- Project is located within, or directly adjacent to, an Environmental Justice area defined in the KATS Metropolitan Transportation Plan

Safety:

- Project has a three year crash history that exceeds KATS adopted thresholds

Commercial Corridors of Significance:

- Corridor is identified within the KATS Freight Plan

Prioritization Process Factors

Factor	Measure	Points Available
ADT (Average Daily Traffic)	ADT / 1000, rounded	Up to 25
Condition- PASER	PASER (Pavement Surface Evaluation and Rating) 0-2 5 points 3-4 20 points	Up to 25

5-6 10 points
 7-10 0 points
 100% Preserve +5 points

Local Planning and Economic Development	Identified in Local Planning Efforts 5 points will be assigned up to a maximum of 15 for every capital, master plan and economic development plan that the project supports	Up to 15
Environmental Justice	Project located in identified EJ area	10
Safety	Project has a three year crash history that exceeds KATS adopted thresholds	5
	Project corrects the above Identified safety issues	10
Commercial Corridors Of Significance	Projects is on a corridor identified in KATS Freight Plan	10
		Total: 100

32. Describe in general terms the planning document or process that indicates how non-motorized investments (e.g., four foot shoulders, sidewalks on both sides of the road, shared use paths) fit within the KATS regional transportation network?

KATS: KATS, by law, is required to develop a multi-modal transportation plan. Title 23 Section 217 (g):

(g) Planning and Design.—

(1) In general.— Bicyclists and pedestrians shall be given due consideration in the comprehensive transportation plans developed by each metropolitan planning organization and State in accordance with sections 134 and 135, respectively.

Bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation facilities, except where bicycle and pedestrian use are not permitted.

(2) Safety considerations.— Transportation plans and projects shall provide due consideration for safety and contiguous routes for bicyclists and pedestrians. Safety considerations shall include the installation, where appropriate, and maintenance of audible traffic signals and audible signs at street crossings.

33. The American Association of State Highway and Transportation Officials (AASHTO) states:

“All roads, streets, and highways, except those where bicyclists are legally prohibited, should be designed and constructed under the assumption that they will be used by bicyclists. Therefore, bicyclists’ needs should be addressed in all phases of transportation planning, design, construction, maintenance and operations. All modes of transportation, including bicycles, should be jointly integrated into plans and projects at an early stage so that they function together effectively.” To what extent does this AASHTO policy factor into the current KATS project scoring/prioritization process?

KATS: The AASHTO policy statement is not considered in the prioritization process.

34. Is it within KATS’ purview (say, under the auspices of a technical non-motorized committee) to establish a system to prioritize available funding to, for example, rank potential projects or to establish an investment threshold? Would the technical committee or the policy committee be better suited to create such a system based upon factors such as urbanized density and the proximity of residences to destinations such as commercial areas, schools, libraries, or recreational areas; ranking of routes that do not have significant use by a wide range of pedestrians due to high traffic volume and high speed; and/or routes that have more/significant excess capacity for motorized vehicles and can be reconfigured?

KATS: KATS will look to prioritize projects through the non-motorized portion of the Metropolitan Transportation Plan. Policy Committee, Technical Committee, and the public will all provide input and guidance on how those projects are prioritized.

Planning and Timing

35. For how many years in advance does KATS and the other local Act 51 agencies who depend on federal aid for road funding actually plan their projects?

KATS: KATS develops the Transportation Improvement Program (TIP) every 3 years. The TIP covers a 4 year program, so there is a one year overlap between TIPs. Local agencies develop a 5-10 year CIP.

36. Provide an example of how a project budget be as much as 20% non-motorized when the funding allocation to non-motorized is 1%?

KATS : 20% is the threshold identified in the draft Complete Streets Policy. Most of KATS funding is flexible for different mode choices. The referenced 1% is a State ACT 51 requirement.

37. What accounting code is used to code non-motorized projects so as to permit an accounting of its allocation at all?

KATS: Local agencies maintain their own project accounting.

38. On projects not granted Federal aid, in a given 3-5 year period within the ACUB, what percent of Federal Aid township road miles (that is, those making use of the Kalamazoo County Road Commission as their Act 51 Agency) include non-motorized facilities in the projects, and, what is the typical percent of their budgetary allocation?

KATS: KATS does not track local funding of individual projects on the federal aid system, only inventory after project is completed.

39. On projects that are granted Federal aid, in a given 3-5 year period within the ACUB, what percent of Federal Aid township road miles (that is, those making use of the Kalamazoo County Road Commission as their Act 51 Agency) include non-motorized facilities in the projects, and, what is the typical percent of their budgetary allocation?

KATS: KATS does not track line items within the Transportation Improvement Program.

40. If, hypothetically speaking, Federal Aid eligible road projects were all required to meet at least one of the criteria listed below, at the current rate of project completion, how many years would it take before all of the projects met these criteria?

- a) sidewalk (on one or both sides)
- b) shared use path
- c) four foot shoulders

KATS: Further study and analysis would be necessary to make this projection given the aforementioned inventory currently underway, the prioritization process, and the ongoing nature of the CIPs of the various Act 51 agencies.

41. If projects in the ACUB were required to have at least a minimum non-motorized component (e.g., one of the following: four foot shoulders, sidewalks on both sides of the road, shared use path on one side of the road) if they were not already present, what is a reasonable estimate of the percent of the budget for non-motorized that would need to be added to the existing 2014-2017 project budgets to immediately approve them, if they are not already included in the existing project budgets?

42. List the Act 51 agencies in the KATS MPO that have:
- a) non-motorized or Complete Streets type of policies/ordinances

Act 51 agencies with a Complete Streets Policy:

Village of Paw Paw

Act 51 agencies with a Non-motorized Policy or Ordinances:

- b) non-motorized or comparable plans

Act 51 agencies with a Non-motorized (or comparable) Plan:

City of Kalamazoo, City of Portage

43. Do other MPOs have Complete Streets Policies? Please list some, with links to their policies.

To Name a Few:

Twin Cities Area Transportation Study (TwinCATS)

http://www.swmpc.org/downloads/walk_and_roll_draft_complete_streets_policy_final_6182012.pdf

Washtenaw Area Transportation Study (WATS)

http://static.squarespace.com/static/524e0929e4b093015db69c07/t/52714e1fe4b093a68b39c286/1383157279310/Complete_Streets_Plan.pdf

Indianapolis Metropolitan Planning Organization

http://www.indympo.org/Plans/MultiModalPlanning/Documents/Complete%20Streets/IMPO%20FINAL%20Complete%20Streets%20Policy_March%202014.pdf

44. What is the current rate of usage of roads and their right of ways by various classes of motorized and non-motorized users? To what extent does KATS use data from sources such as http://www.pedbikeinfo.org/data/factsheet_general.cfm to answer this question and questions like it?

KATS: KATS uses national statistics to determine an estimated non-motorized use. KATS is currently updating the Travel Demand Model to estimate non-motorized use.

45. What is the expected change in population within the ACUB (based on whatever time projection period is available from respected sources of information)?

KATS is currently working on its next Metropolitan Transportation Plan, which will include updated populations projections through 2045. The KATS 2035 Metropolitan Transportation Plan includes population projections (pg 26-31).

46. What does the State of Michigan (or other respected source of non-motorized and motorized) data, show about the long term trends for these major user classes of users? Describe other relevant facts that pertain to long term trends, such as whether Governor Snyder has declared that he wants the State of Michigan to become known as a “trail state.” Is it correct that the State of Michigan has found that bicycle tourism is the fastest growing form of tourism in the State? To what extent can we predict that the demographic trends found in articles such as <http://www.peopleforbikes.org/blog/entry/bike-use-is-rising-among-the-young-but-it-is-skyrocketing-among-the-old> apply to Southwest Michigan?

KATS: refer to the recently released report: *Community and Economic Benefits of Bicycling in Michigan*. This report is Phase I of a two-phase project that explains the economic benefit bicycling has on Michigan's local and statewide economies. The 2014 report finds that bicycling provides an estimated \$668 million per year in economic benefit to Michigan's economy, including employment, retail revenue, tourism expenditure, and increased health and productivity.
http://www.michigan.gov/documents/mdot/MDOT_CommAndEconBenefitsOfBicyclingInMI_465392_7.pdf

List compiled and reviewed by:

Jeff Hepler
Tom Hohm
Greg Milliken
Larry Hummel
Ken Schippers
John Zull

Paul Selden, editor