



## **POLICY COMMITTEE MEETING**

Wednesday, September 15, 2010 10:00 A.M. – 12:00 P.M.  
State of Alaska DOT & PF, 2301 Peger Road, Main Conference Room

1. Call to Order
2. Introduction of Members and Attendees
3. Public Comment Period (3 minute limit)
4. Approval of the September 15, 2010 Agenda
5. Approval of the August 18, 2010 Minutes
6. Committee Reports
  - a. FMATS' Coordinator's Report with Action Items
7. Old Business
  - a. Status of the North Pole Road-Rail Crossing Project Funding
  - b. PM<sub>2.5</sub> Transportation Conformity Determination (Action Item)
8. New Business
  - a. Safe Routes to School Grant
9. Public Comment Period (3 minute limit)
10. Other Issues
11. Informational Items
  - a. Obligation Plan Update
12. Adjourn

Next Scheduled Policy/Technical Committee Meeting, 10:00 a.m., Wednesday, October 20, 2010 at the DOT&PF Main Conference Room

Fairbanks Metropolitan Area Transportation System  
**POLICY COMMITTEE**  
State of Alaska, DOT&PF, Main Conference Room  
2301 Peger Road Fairbanks, Alaska 99701  
Meeting Minutes – August 18, 2010

**1. Call to Order**

Chair Steve Titus called the meeting to order at 10:00 a.m.

**2. Introduction of Members and Attendees**

The following were present:

- \* FMATS Policy Committee members
- \*\* FMATS Staff members
- \*\*\* FMATS Technical Committee members

<b>Name</b>	<b>Representing</b>
* Steve Titus, P.E.	DOT&PF, Regional Director
* Mayor Terry Strle (absent)	City of Fairbanks
* Mayor Luke Hopkins (absent)	Fairbanks North Star Borough
* Mayor Doug Isaacson (absent)	City of North Pole
* Guy Sattley	Fairbanks North Star Borough Assembly
* Chad Roberts	Fairbanks City Council
* Alice Edwards (absent)	ADEC, Air Quality Division
Cindy Heil (by telecom for Alice Edwards)	ADEC, Air Quality Division
** Margaret Carpenter	DOT&PF, Transportation Planner
** Todd Boyce	FNSB Planning
*** Donna Gardino	FMATS, Coordinator
*** Ethan Birkholz	DOT&PF Chief of Planning & Support Services
*** Joan Hardesty	ADEC, Air Quality Division
*** Bob Pristash (for Mayor Strle)	City of Fairbanks, Public Works
*** Mike Schmetzer	City of Fairbanks, Engineering
*** Bill Butler (for Mayor Isaacson) (10:14am)	City of North Pole
Jerry Colp	City of Fairbanks, Engineering
Jeff Jacobsen (for Mayor Hopkins)	Fairbanks North Star Borough
Janet Brown	DOT&F Regional Pre-Const. Engineer
Maureen Carey (10:26am)	DOT&PF Construction, Engineering
Nancy DeWitt	Fountainhead Antique Auto Museum
Gene Salzman	Resident of Taku Subdivision
Rodney B. Rutherford	Resident
Jo Schlotfeldt	DOT&PF

**3. Public Comments:** Nancy DeWitt, Historian of the Fountainhead Antique Auto Museum, spoke about Robert Sheldon's pioneering involvement in early transportation and numerous civic and professional activities in Alaska. She told the committee about the campaign started to push for naming the new bridge in downtown Fairbanks for Robert Sheldon. She is working on a resolution for the Fairbanks City Council and/or the FNSB Assembly.

**4. Approval of the August 18, 2010 Agenda**

- **MOTION:** To approve the August 18, 2010 agenda. (Jacobsen/Sattley)  
Approved. No opposition.

**5. Approval of July 21, 2010 Minutes**

- **MOTION:** To approve the July 21, 2010 minutes (Sattley/Roberts).

**Comments:** Mr. Sattley asked about the format in the minutes of the comments after a motion. After discussion, it was determined to place the comments after the motion, before the listing of the vote of approval or opposition. This will be changed in future minutes.

- **Vote on the motion.** Approved. No opposition.

## 6. Committee Reports

### a) FMATS Staff Report / Technical Committee Action Items

Ms. Gardino referenced the complete report in the packet and discussed the highlights.

- The second Interagency Consultation for the PM 2.5 Transportation Conformity was held August 2, 2010, progressing to the December 14, 2010 deadline. The draft will be reviewed on September 1 at 2pm with all the agencies. The conformity determination will be presented to the Policy Committee on September 15 for approval before going out for 30 day public comment.
- Worked on successful negotiations on the Safe Routes to Schools Grant. Revised notice to proceed will come from DOT Headquarters.
- Ms. Gardino met with the Fairbanks North Star Borough on projects they are considering nominating to the STIP. They will bring three projects to Margaret Carpenter for consideration by DOT for inclusion in the STIP.
- TIP Amendment #2 conformity approval was received. Still waiting for approval on the Long Range Plan conformity, without which projects cannot be programmed.
- Staff reviewed the Bikeways map; the consultant is incorporating the changes.
- Preventive Maintenance 2011 planning meeting conducted on 8/17.
- Obligation report was updated.
- Coordinator's budget is ready for approval.

### b) Preventive Maintenance Subcommittee Report

The subcommittee decided to do surface approach upgrades in the Badger Road area in North Pole that abut DOT owned facilities. There are 38 approaches in 14 different service areas the Borough has identified. Surface treatments and mill and pave projects will be done for both the City of North Pole and City of Fairbanks. The lists need to be sent to DOT by August 25. Estimates will be developed, and match and maintenance agreements can be done. Starting next fiscal year, DOT can begin work on the environmental documents. There is \$860,000 in the TIP for preventive maintenance construction in 2011.

Included in the meeting packet was an action item from the Technical Committee. The Technical Committee approved funding to bring the Wendell ADA project up to the low bid amount.

## 7. Old Business

### a) Status of North Pole Road-Rail Crossing Project Funding

The \$1 million has been transferred to the FRA for the environmental assessment in the North Pole area. Mr. Titus said this was a monumental effort from DOT, Headquarters, Federal Highways and Ms. Gardino to make this happen.

### b) 2011-2012 UPWP

The FY2011-2012 FMATS Unified Planning Work Program is included in the meeting packet. Ms. Gardino attached changes to the document received during the public comment period. The only comments received were from the Borough regarding Task 200.

- **Motion:** To approve the FY11-12 Unified Planning Work Program. (Sattley/Jacobson)

**Comments:** Mr. Sattley reiterated his objection to the document from the last Policy Committee meeting, which was noted in the minutes. He again said the language regarding livability and other items such as greenhouse gases, public health, etc. does not belong in the document.

- **Vote on the motion:** Six approved; one opposed. (Sattley) Motion carries.

## 8. New Business

### a) Tanana Loop/Alumni Drive Round-about / North Tanana Drive Extension

Chancellor Rogers was out of town and unable to attend the meeting. This topic will be rescheduled as an agenda item at a future meeting.

### b) PM2.5 Transportation Conformity Determination Status Update

Ms. Gardino said the meeting is scheduled for September 1. The final determination will be presented at the October Policy Committee meeting for approval. Deadline for approval by FHWA and FTA is December 14. She said she wanted to get interagency input early and keep them involved throughout the process.

### c) 23<sup>rd</sup> Avenue Improvements Change Order

Information was included in the meeting packet. Bob Pristash said 23<sup>rd</sup> Avenue was built in two phases; first was utility work and the second was the street reconstruction. During the first phase they found the storm drain in worse condition than they had thought and roughly half was replaced from Lathrop to just past Cowles Street. This change order would replace the rest of the storm drain system from just past Cowles Street to Cushman Street. During excavation, the storm drain system was found to have grade problems, corrosion and is made of corrugated steel pipe. The plan is to replace it with smooth plastic pipe. He recommends doing this as it would cut down maintenance costs and protect the future road.

Ms. Gardino said the bid on this recently awarded project came in \$388,000 low so there is still money left in the project. This would leave \$220,000 to use next year on a project. The City has \$150,000 from the HUD grant to pay for half of the change order.

- **Motion:** To approve the PH4 increase on the 23<sup>rd</sup> Avenue Improvements Project in the amount of \$323,493 of which \$168,423 would come from the FMATS allocation, \$5,070 would be 381 funding to cover the ICAP on the CDBG funding and \$150,000 would come from the City's CDBG grant. (Sattley/Roberts)

**Comments:** Mr. Sattley asked about the pipe size and the age of the system. Mr. Pristash said it is 30 year old 18" corrugated metal pipe, typical of the installations that age. The plastic pipe with a smooth liner will have higher velocity, less friction. Mr. Roberts asked a procedural question regarding the change order numbering.

- **Vote on the motion:** Approved. No opposition.

### d) LED Street-light Conversion Project

The total is \$985,922. There is a compliance issue with the streetlight poles. Mr. Pristash told the committee the contract calls for swapping out high pressure sodium and putting in LED lights. A state electrical inspector told the contractor the city streetlight system is not meeting the National Electrical Safety Code because it is not properly grounded. The system has been in place for 50 years and has never had a problem with grounding. Many of the streetlights are on GVEA poles and under their jurisdiction. Where there is a separate pole for just a streetlight, it is not under the GVEA umbrella. This is a \$1 million change order but it is not known at this point if the system has to be grounded and if there is a violation, and what authority this electrical inspector has over the system. We could consider a separate project to ground the system. It seems we are getting a little ahead of ourselves to approve a \$1 million change order.

Mr. Titus said the process is: the electrical inspector writes up a violation to the construction contractor who is then under a timeline and has penalties if he does not comply to fix this issue. The inspector interprets the code and writes the violation. The designer of record is the City of Fairbanks. Mr. Titus

asked if the city has found if this issue is in fact a violation and where it lies under the NEC or Safety Code as it doesn't sound like a conclusion has been reached due to City or other research.

Mr. Titus introduced Maureen Carey, a project manager for DOT who is managing the contract for the construction. The contractor gets the violation. The effort between DOT and the City is to determine if there really is a violation. The contractor has a contract to do X which is in the contract. Evidently this work is not in there. For him to comply with the citation, the contract needs to be changed.

Ms. Carey said they have been working with the City and with an electrical engineer for the other portion of the project. An electrical engineer is helping research this issue. Today, the state electrical inspector said there is a likely exemption if the City has a standard operating practice and the maintenance manual states only authorized personnel have authority to go up on the poles to change out the light fixtures. If that is the case or if there is something they need to do to amend the city's maintenance manual in order to make it clearly stated that only licensed electricians are allowed to go up and change out fixtures, then the poles do not need to be changed to ground them. That would lower the change order by about \$600,000. This applies to the all the poles except for metal poles which would have to be grounded. There are up to 240 metal poles which may or may not be grounded. It would take about \$212,000 to ground the metal poles. It would take a week or two to test all the poles from the ground. The worst case scenario would take about \$250,000 which would include engineering and ICAP.

Mr. Titus wanted to clarify this comes at a very poor time in the fiscal year. The next Policy Committee meeting is in September, too late to get this into FHWA to obligate the money. That causes a lot of problems and would not happen this fiscal year. The TIP and obligation plan are already in line.

Mr. Sattley suggested this discussion be separated into two pieces. What we need to do today and what we need to do second. He asked what is involved in grounding these lights. Mr. Pristash said this system is a tri-plex feed, two wires are electrified and one is a neutral. To ground these lights, a wire is run or the mast arm is used to ground the fixture to that third conductor; run a wire from the cabinet to the neutral. The neutral is considered a ground. Each individual pole can be grounded with a grounding rod, like GVEA has on each pole.

Mr. Sattley asked how far along is the project. Ms. Carey said of the 1767 luminaries, 85% of them are completed now and it will be finished by end of next week. This includes North Pole's 200 lights.

Mr. Pristash said a wire has to be run through the mast arm to the neutral and seal it with the bushings, etc., but it may not be required.

Mr. Sattley asked if the city designed it and DOT administered the contract. What do the contract and bid documents say about grounding? The load center has to be grounded, but it doesn't say anything about the poles.

Ms. Carey said there is one standard drawing in the bid documents showing existing poles with everything grounded. That is the implication this is what our existing poles look like. There is a picture of a pole with a grounding rod and properly grounded. That is what the contractor has to assume, that is what they are bidding on. That is the standard drawing in terms of compliance.

Mr. Sattley asked if there is something different about the LED heads from the high pressure sodium lights, electrically speaking. If the old ones have worked for 50 years and not been grounded, is there something different about the new ones that would require grounding? Mr. Pristash said they use less power, less electrical current. It could affect some different things.

Mr. Butler asked if the whole head has to be changed or just the light.

Ms. Carey said for the exemption to go through, anyone on the pole touching any portion of it would have to be an authorized, licensed electrician. She didn't know if that would be a conflict for North Pole, it would have to be looked at. Mr. Butler said North Pole has an authorized person, but not a licensed electrician.

Mr. Jacobsen asked if the previous system was not grounded but the drawing indicated they were so the bid went out and the contractor assumed it was just a matter of connecting the wires - if they needed to be connected. Mr. Pristash said he would have to look at it, but he thought when they went from aerial to underground or underground to aerial, it showed grounding would be done there. He didn't know if it showed every pole was supposed to be grounded, he would have to look at the drawings.

Mr. Jacobsen asked about the status of DOT light poles and if they are all properly grounded and changed out statewide, are these requirements being applied statewide. Ms. Carey said DOT falls under the exemption where only licensed, authorized personnel are allowed to change out the fixtures. The metal poles are grounded.

Mr. Titus said the problem is there appears to be a violation, possibly enforceable by the state electrical inspector and a change order has to be authorized.

Mr. Sattley asked if the violation is against the city or DOT. Mr. Titus said the contractor has the ticket. These violations get passed on up to the owner, which in this sense, is FMATS, because we are funding it. We have to approve the money to issue a change order, before we can obligate the money. The City is the owner, the designer of record. The funding comes through FMATS, administered by DOT, designed by the City of Fairbanks, which is typical of the projects we do within the city. We need to authorize an amount of money to use for a change order for the contractor. Whether we will have to execute that change order is still up in the air and takes further discussion between DOT, the City and the state to make sure we can get the contractor off the hook as there are some contractual issues there.

Mr. Jacobsen asked where these funds would come from to authorize a change order. Ms. Gardino said she would take the funds from University Avenue for this project then offset with state GO funds.

Mr. Jacobsen asked if a change order not to exceed \$300,000 would cover this project. Ms. Carey said she thought they could work something out with the City of Fairbanks with their standard operating practices for maintenance and be able to get that exemption. Her guess at this point is \$300,000 would cover it.

Mr. Jacobsen said the City of North Pole does not have a licensed electrician. Ms. Carey said that would be something where we would have to use most of this money to go towards grounding in North Pole.

Mr. Titus said a remedy would be to contract that out to a licensed contractor. Mr. Butler said they could issue something formal in writing that documents that city resolution. Mr. Jacobsen said there is an additional budgetary issue for North Pole when they have already budgeted manpower to change out their lights in-house, to now go out of that system - they can't reduce their wages for their city employees because they are not changing out lights, to pay for a contractor to change out lights for a project that was not designed by them. It would be better to not obligate North Pole to spend annual funds they were not anticipating to have to do, by grounding their lights appropriately so they are made whole.

Mr. Sattley said the bids came in really low, almost \$2 million under what was expected. He said he is reluctant to authorize a change order for the low bidder who may indeed have decided this was an area he could ignore on the designs or drawings or could claim there was some ambiguity in the drawings. He asked about the difference between a change order with the existing contractor for \$300,000 or doing it as a separate bid.

Mr. Titus said if the code interpretation is correct there was nothing in the contract for the contractor to do as it relates to grounding, therefore he did not modify his bid. The low bid was because of the emerging technology related to LED. It is not necessarily a grounding issue. It is not that the contractor decided to leave out the grounding and know he was going to get paid for it later. As far as putting another contractor out there, we have the ability to do that. If it is more than a million dollars, we need to be creative. For \$300,000 the contractor already there can pick up the code issues. A number of costs could be saved that way.

Mr. Pristash said for \$1 million, it is worth considering re-bidding, but for \$300,000 – it may not even be that. We may find out that if the manual is rewritten, there may not be a problem, other than grounding the metal poles, which may be a cheaper cost because of grounding at the base.

Mr. Titus said since we do not have the completed staff work today, it is difficult to make a hard dollar decision. He is looking towards authorizing \$300,000. The designer of record and DOT can move forward with electrical engineers and the state electrical inspector to try to mitigate that damage.

Mr. Sattley asked how many problem poles out of the 1787. Ms. Carey said there are 240 metal poles but does not know how many are properly grounded.

Mr. Butler asked if this has to be repaired immediately. Ms. Carey said the contractor faces fines and legal liability until everything is clarified. The contractor has until August 28 to respond formally as to how it is being taken care of, what will happen, what exemptions might be. He will then put that liability onto the contracting agency, DOT. We would not be able to close out the contract. This exemption allows the electrical administrator to sign off - if we can make it very clear for him and the inspector.

Mr. Roberts asked about the next Technical Committee meeting, which can commit up to \$250,000. Ms. Gardino said the next meeting will not be held until October, but if necessary, a meeting could be held sooner. The Technical Committee could commit up to 20% of the original contract amount, for this bid up to \$240,000. Mr. Roberts asked if we could learn more and the Technical Committee could deal with it. Ms. Gardino said we need at least 6 weeks with obligations. August 15 was the day for the final paperwork. University Avenue was pulled back from obligation submission so the funding was available.

- **Motion:** To approve an LED Streetlight Project Change Order in an amount not to exceed \$300,000. (Jacobsen/Pristash) No opposition. Approved.

#### **e) North Pole Interchange Pedestrian Facilities**

Mr. Butler said a maintenance agreement was signed by Mayor Jacobsen in 2006 for this particular project which recognized the need for pedestrian facilities. Now it is pushed out until 2014. He asked about the Pedestrian Facilities project in North Pole and why it is not going forward until so far out. He understands the funding is available for it from the Garvee Bond. He asked what the real issue is that prevents this project from going forward on one of the higher speed roads within the city where there are pedestrians.

Janet Brown said she just spoke with Al Beck, the manager on the project. They have a new environmental analyst on the project and they are working on it now. It wasn't worked on for a year or two so it is good North Pole is championing this project. A public meeting will be held this winter on the process. It takes a year or two for environmental, then acquiring ROW will take some time, that is why it was scheduled for 2014. The shoulders are going to be left out there for pedestrians and bike riding. They are trying to come up with other options to minimize ROW acquisition. Basically, they will add the sidewalks. The North Star Fire Chief told her fatalities and major accidents have been resolved since the interchange project was completed.

Mr. Butler said he has walked the shoulders; they are not truly shoulders on St. Nicholas. 4-Wheelers have knocked down the shoulders so they can be walked on. He does not consider it a safe pedestrian facility. Ms. Brown said it is not wonderfully safe, she is saying the process takes time. For some reason it was not prioritized and North Pole was expecting it.

Mr. Jacobsen said he was concerned because when the Richardson Highway Interchange Project as part of the Garvee Bonds was looked at, a lot of initial design of the project was scaled back to fit the scope of the Garvee Bond allocation. The North Pole community spoke up about changing traffic patterns in a residential community where all the interchange on/off traffic was going to be forced through St. Nicholas Drive for that side of town. This was going to impact the community which had no sidewalks. Now there are mothers out there with strollers, walking along a highway that had local traffic now being impacted with an increased volume of traffic. North Pole understood we would be getting sidewalk facilities as part of that safety concern, not only on the part of St. Nicholas Drive, but also on the other side of the Richardson Highway. At the Liberty subdivision on the other side, the shoulder was widened as a part of the construction project so they would have safe passage. Then back on the city side, we are looking at 8 years after the project was completed that we might be getting pedestrian facilities. How do we avoid this happening in the future? We signed a maintenance agreement, expedited the process, committed and jumped through the hoops DOT forced on the community in order to get this project prioritized. We did everything that was expected of us. Now, to find out it was not a priority that somebody didn't work on it for a couple years. How do we avoid that? If we did everything we were supposed to do, how does this body or any community know something is not happening when they have done all their committed responses? How do we know we need to champion it if we thought we had by signing the maintenance agreement. It was a big issue to forward fund this agreement.

Mr. Butler said DOT went to North Pole two years ago to tour the city and look at their sidewalks with the idea of combining two existing pedestrian projects with that one that could be bid at a lower price. So two years ago, we were led to believe this was going to occur.

Mr. Birkholz said DOT restructured that project with city-wide sidewalks and other pedestrian facilities to expedite one of the projects. Unfortunately, DOT has had a lot of employee turn-over the last few years and this project slipped through the cracks. It was not prioritized as well as it should have been.

Ms. Gardino said she should have dogged it, but she was under the impression it was moving. She missed it when it slipped.

Mr. Titus said everybody has some potential blame in this, but to keep in mind FMATS was not put together when the issue was going on. There was not a coordinator like there is today. Donna Gardino, the FMATS coordinator, is now a champion for all the projects in the TIP. We will try to make sure it moves forward now.

Mr. Jacobsen asked if there is any way to expedite it moving forward as a way of recognition that this shouldn't have slipped, that there was an in-house situation with turnover that DOT can re-allocate extra resources and fast track it in-house. Mr. Titus said DOT has that message. In the environmental process, you can't put twice the people on it to do the job, it still has time constraints. The message has been sent and heard and DOT will react to that.

#### **f) Coordinator's Office FFY11 Budget Approval**

A draft budget was included in the meeting packet. Ms. Gardino noted the differences in the budget and new significant items. Paper, toner supplies, advertising and Bikeways map printing costs were increased. The current year budget was also included in the packet.

- **Motion:** To approve the FFY11 Coordinator's Office Budget. (Sattley/Roberts).

**Comments:** Mr. Sattley asked questions on the current year costs. Mr. Butler said including the budgets from other previous years would be helpful.

- **Vote on the motion:** Approved. No opposition.

**g) STIP Nominations**

Ms. Gardino said there is a call for nominations for the STIP. If there are any non-FMATS projects to nominate, these are due September 13. Turn them in to Margaret Carpenter at DOT&PF to help with the nomination process. Resolutions of support from organizations, or if a project is in the long range plan can both help improve the score.

Mr. Roberts asked about the nominations process. Mr. Birkholz explained the steps a project goes through for scoring. Ms. Gardino said the Borough had three ideas for projects: Rosie Creek Road to Chena Ridge to Becker Ridge, Lower Goldmine Trail and the Fairbanks to North Pole pedestrian/bike path.. Mr. Roberts said people have asked for a bike trail along Chena Ridge. Mr. Titus said projects for the STIP do not have to be from within the MPO area.

**9. Public Comments** Gene Salzman, resident of Taku Subdivision, spoke about the LED Streetlight project. The light outside his home has been out for 3 weeks, but he has watched the contractor remove the meter, install it on another pole, then put the original meter back on the original pole. This has been happening throughout the neighborhood and was told because it was due to a load center issue. Ms. Carey explained the load center issues are being worked on with the contractor relocating them for best efficiency with resolution within a week to four weeks. Mr. Salzman said he is going to the City Council meeting and plans to talk with the mayor.

**10. Other Issues** None

**11. Informational Items**

**a) Obligation Plan Update**

Ms. Gardino reported FMATS funding is currently 73% obligated. College Road will be obligated by Tuesday. University Avenue will be sent today. The LED will need a revised change order to go in this week. There are no foreseeable blocks for obligating the funds.

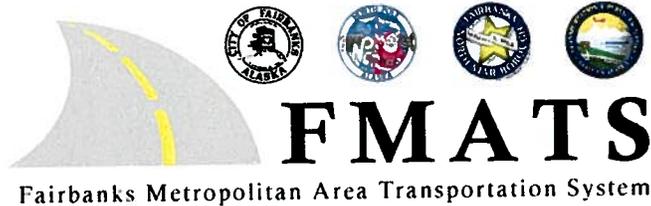
**12. Adjourn**

- **Motion to Adjourn** (Roberts/Butler) Approved. Adjourned at 11:31am.

**Next Scheduled Policy Committee Meeting, 10:00 a.m., Wednesday, September 15, 2010 at DOT&PF Main Conference Room.**

Approved: \_\_\_\_\_  
Steve Titus, P.E., Chair  
FMATS Policy Committee

Date: \_\_\_\_\_



## September 2010 FMATS Staff Report

### Meetings

- Attended the Technical Committee Meeting and Policy Committee Meeting, prepared and reviewed meeting minutes
- Prepared all meeting packets for Technical/Policy Committee Meetings
- Attended pre-Policy committee meetings with the City of Fairbanks, FNSB and State
- Prepared all meeting backup documentation for the September meetings
- Posted ads on the State's online public notice system, the Fairbanks North Star Borough's online Public notice system, requested newspaper advertisements, and placed Public Service Announcements on the radio for both the routine Policy and Technical Committee meetings
- Prepared all Title VI reports for August
- Attended the Transportation Subcommittee weekly meeting: topics included the Alaska Airman's Association
- Conducted a third Interagency Consultation for the Conformity Determination on the TIP and the Metropolitan Transportation Plan (PM<sub>2.5</sub>) and distributed the document for interagency comment
- Completed negotiations with the consultant on the Safe Routes To School Grant and held a kick-off meeting with the consultant
- Met with the City of Fairbanks and the FNSB staff to discuss their STIP nomination priorities
- Met with DOT & PF Design and the City of Fairbanks regarding the Cushman/Barnette/Gaffney project and how best to proceed

### Correspondence and Communication

- Received FHWA/FTA MTP and Conformity Approval
- Provided clarification on TIP Amendment #2 to FHWA and DOT & PF Headquarters
- Received approval of the UPWP
- Compiled and forwarded the following data to the SRTS consultant: sign, sidewalk and lighting inventories, accident and AADT data for routes around the schools

### Filing

- Filed all meeting items and correspondence

### Organization

- Reviewed several applications for the Transportation Planner/Assistant Position

### Public Outreach

### Agency Relationships

- Worked with DOT & PF, DEC, FTA, FHWA, FNSB and EPA regarding the PM<sub>2.5</sub> transportation conformity determination

- ✚ Worked with DOT & PF to fund pending change orders

**Strategic Planning**

- ✚ Developed the scope of work and evaluation criteria for the FMATS Non-Motorized Transportation Plan and reviewed the RFP

**Short-Range and Tactical Planning**

- ✚ Reviewed another iteration of the Bikeways Map and provided comments to the consultant

**Funding**

- ✚ Obligation report is up to date and all projects are on track to be obligated; \$26 remains on the offset list

**Legislation**

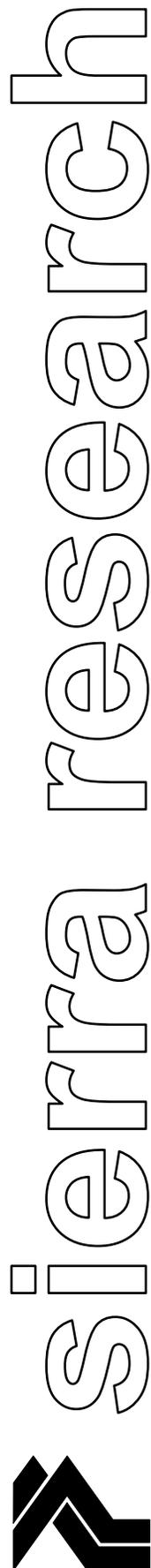
**Finance**

- ✚ Forwarded the FFY11 Approved Budget to DOT & PF and the City of Fairbanks Finance Department

Submitted by:

Donna J. Gardino  
Donna J. Gardino

9/9/10  
Date



DRAFT

**Draft PM<sub>2.5</sub> Conformity Analysis  
for the Federally Approved  
2010–2013 FMATS  
Transportation Improvement  
Program (TIP):  
Amendment #2 and  
2010–2035 Metropolitan  
Transportation Plan (MTP)**

prepared for:

**Fairbanks Metropolitan Area  
Transportation System**

September 2010

prepared by:

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DRAFT REPORT

**Draft PM<sub>2.5</sub> Conformity Analysis for the Federally Approved 2010–2013  
FMATS Transportation Improvement Program (TIP):  
Amendment #2 and  
2010–2035 Metropolitan Transportation Plan (MTP)**

prepared for:

Fairbanks Metropolitan Area Transportation System

September 2010

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**Draft PM<sub>2.5</sub> Conformity Analysis for the Federally Approved 2010–2013  
FMATS Transportation Improvement Program (TIP):  
Amendment #2 and  
2010–2035 Metropolitan Transportation Plan (MTP)**

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## 1. EXECUTIVE SUMMARY

This report presents the PM<sub>2.5</sub> Conformity Analysis for the federally approved 2010–2013 FMATS Transportation Improvement Program (TIP): Amendment #2 and 2010–2035 Metropolitan Transportation Plan (MTP). The Fairbanks Metropolitan Area Transportation System (FMATS) is the designated Metropolitan Planning Organization (MPO) for the urbanized portion of the Fairbanks North Star Borough, including the cities of Fairbanks and North Pole, Alaska, and is responsible for regional transportation planning.

The 2010–2013 FMATS Transportation Improvement Program (TIP): Amendment #2 and 2010–2035 Metropolitan Transportation Plan (MTP) and corresponding carbon monoxide (CO) conformity analysis was approved by FHWA and FTA on August 5 and August 27, 2010, respectively. The TIP: Amendment #2 and MTP have been financially constrained in accordance with the requirements of 40 CFR 93.108 and consistent with the U.S. DOT metropolitan planning regulations (23 CFR Part 450). A discussion of financial constraint and funding sources is included in the TIP and RTP documents.

EPA designated the Fairbanks nonattainment for the 2006 PM<sub>2.5</sub> standard, effective December 14, 2009. Conformity for the PM<sub>2.5</sub> standard applies one year after the effective date (December 14, 2010). EPA published the Transportation Conformity Rule PM<sub>2.5</sub> and PM<sub>10</sub> Amendments on March 24, 2010; the rule became effective on April 23, 2010\* (EPA, 2010a). This PM amendments final rule amends the conformity regulation to address the 2006 PM<sub>2.5</sub> national ambient air quality standard (NAAQS). This analysis demonstrates that the criteria specified in the federal transportation conformity rule for a conformity determination are satisfied by the TIP and MTP. A finding of conformity for the 2010–2013 FMATS Transportation Improvement Program (TIP): Amendment #2 and 2010–2035 Metropolitan Transportation Plan (MTP) is therefore supported. The Draft PM<sub>2.5</sub> Conformity Analysis was approved by FMATS on <Insert Date>.

Consultation occurred in July and August 2010 on the proposed methodology for the PM<sub>2.5</sub> conformity analysis for the 2010 TIP/MTP; models, associated methods, and assumptions for use in regional emissions analyses; and the basic steps for completing the conformity demonstration.

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\* U.S. Environmental Protection Agency, 2010. 40 CFR Part 93. “Transportation Conformity Rule PM<sub>2.5</sub> and PM<sub>10</sub> Amendments; Final Rule.” Federal Register, March 24, 2010, Vol. 75, No. 56, p. 14260.

The applicable Federal criteria or requirements for conformity determinations, the conformity tests applied, the results of the conformity assessment, and an overview of the organization of this report are summarized below.

FHWA has developed a Conformity Checklist (included in Appendix A) that contains the required items to complete a conformity determination. Appropriate references to these items are noted on the checklist.

## 1.1 Conformity Tests

The conformity tests specified in the Federal transportation conformity regulation are (1) the emissions budget test, and (2) the interim emission test. If there is no approved air quality plan for a pollutant for which the region is in nonattainment or no emission budget has been found to be adequate for transportation conformity purposes, the interim emission test applies.

Conformity may be demonstrated if the emissions from the proposed transportation system are either less than or no greater than the 2008 motor vehicle emissions in a given area (see Section 93.119). PM<sub>2.5</sub> nonattainment areas may also elect to use the “build-no-greater-than-no-build test.” Conformity is demonstrated if the emissions from the proposed transportation system (“build” scenario) are less than or equal to emissions from the existing transportation system (“no-build” scenario).

The rule allows PM<sub>2.5</sub> nonattainment areas to choose between the two interim emissions test each time that they determine conformity before adequate or approved PM<sub>2.5</sub> SIP budgets are established. However, the same test must be used for each analysis year in a given conformity determination. Fairbanks chooses to use the “no-greater-than-2008 emissions test.”

## 1.2 Results of the Conformity Analysis

A regional emissions analysis was conducted to meet the PM<sub>2.5</sub> conformity requirements. All analyses were conducted using the latest planning assumptions and emissions models. The major conclusions of the FMATS Conformity Analysis are outlined below.

- The total regional vehicle-related emissions (PM<sub>2.5</sub> and NO<sub>x</sub>) associated with implementation of the TIP/MTP for the analysis years 2015, 2025, and 2035 contained in the federally approved 2010 conformity analysis have been estimated and are less than or no greater than the 2008 baseline motor vehicle emissions for the 2006 PM<sub>2.5</sub> standard. Appendix D contains the PM<sub>2.5</sub> Conformity Results Summary for the Fairbanks nonattainment area. The interim conformity emissions tests for PM<sub>2.5</sub> standard are therefore satisfied.

- Consultation has been conducted in accordance with federal requirements, which are incorporated into ADEC's Conformity Regulations.\*

### 1.3 Report Organization

Following this Executive Summary, Section 2 provides an overview of the applicable PM<sub>2.5</sub> conformity rule and requirements, including approach to meet requirements and the conformity analysis years. Section 3 contains a discussion of the latest planning assumptions, transportation modeling, and air quality modeling used to estimate regional emissions estimates. Section 4 provides an overview of the interagency consultation conducted by FMATS. The results of the conformity analysis for the TIP/MTP are provided in Section 5.

Consultation documentation and other related information are contained in the appendices. FHWA's checklist for conformity documentation is provided in Appendix A. Appendix B contains a listing of transportation projects and Appendix C contains the transportation modeling documentation. Appendix D provides spreadsheets documenting the PM<sub>2.5</sub> conformity analysis. Appendix E includes copies of consultation correspondence. Comments received on the conformity analysis and responses made as part of the public involvement process are included in Appendix F.

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\* State of Alaska Environmental Conservation Regulation, Title 18, Chapter 50. Air Quality Control. Article 7. Conformity (18 AAC 50.700 – 18 AAC 50.720)

## 2. PM<sub>2.5</sub> CONFORMITY REQUIREMENTS

The criteria for determining conformity of transportation programs and plans under the federal transportation conformity rule (40 CFR Parts 51 and 93) and the applicable PM<sub>2.5</sub> conformity tests for the Fairbanks nonattainment areas are summarized in this section. The 2010 Conformity Analysis for the 2010 Transportation Improvement Programs (TIP): Amendment #2 and the Metropolitan Transportation Plans (MTP) is being revised to include these criteria and tests.

FMATS is the designated Metropolitan Planning Organization (MPO) for Fairbanks, Alaska. As a result of this designation, FMATS prepares the TIP, MTP, and associated conformity analyses. The 2010–2013 FMATS Transportation Improvement Program (TIP): Amendment #2 and 2010–2035 Metropolitan Transportation Plan (MTP) and corresponding CO conformity analysis were approved by FHWA and FTA on August 5, 2010 and August 27, 2010, respectively.

Presented first is a review of the development of the applicable conformity regulation and requirements and the analysis years for this Draft PM<sub>2.5</sub> Conformity Analysis.

### 2.1 Background

EPA published the Transportation Conformity Rule PM<sub>2.5</sub> and PM<sub>10</sub> Amendments on March 24, 2010; the rule became effective on April 23, 2010.\* This PM amendments final rule amends the conformity regulation to address the 2006 PM<sub>2.5</sub> national ambient air quality standard (NAAQS). The final PM amendments rule also addresses hot-spot analyses in PM<sub>2.5</sub> and PM<sub>10</sub> and carbon monoxide nonattainment and maintenance areas.

EPA's nonattainment area designations for the 2006 PM<sub>2.5</sub> standard became effective on December 14, 2009. Conformity for a given pollutant and standard applies one year after the effective date of EPA's initial nonattainment designation. Therefore, conformity for the 2006 PM<sub>2.5</sub> standard will begin to apply on December 14, 2010 for Fairbanks, Alaska.

In accordance with the conformity rule, the interagency consultation process is being used for conducting regional emissions analyses and demonstrating conformity for the PM<sub>2.5</sub> standard. The conformity demonstrations were completed in August 2010. Public review of the PM<sub>2.5</sub> conformity demonstration occurred in September, followed by MPO

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\* U.S. Environmental Protection Agency, 2010. 40 CFR Part 93. "Transportation Conformity Rule PM<sub>2.5</sub> and PM<sub>10</sub> Amendments; Final Rule." Federal Register, March 24, 2010, Vol. 75, No. 56, p. 14260.

approval in October 2010. The PM<sub>2.5</sub> conformity demonstration for the 2010 TIP/MTP will be submitted to FHWA by November 1, 2010, for FHWA/FTA to issue approvals by December 14, 2010.

## 2.2 PM<sub>2.5</sub> Conformity Regulation Requirements

Before an adequate or approved SIP budget is available, conformity is generally demonstrated with interim emission tests. Conformity may be demonstrated if the emissions from the proposed transportation system are either less than or no greater than 2008 motor vehicle emissions in a given area (see Section 93.119).

The 2008 baseline year emissions level must be based on the latest planning assumptions available for the year 2008, the latest emissions model, and appropriate methods for estimating travel and speeds as required by the conformity regulation.

PM<sub>2.5</sub> nonattainment areas may also elect to use the “build-no-greater-than-no-build test.” Conformity is demonstrated if the emissions from the proposed transportation system (“build” scenario) are less than or equal to emissions from the existing transportation system (“no-build” scenario).

The rule allows PM<sub>2.5</sub> nonattainment areas to choose between the two interim emissions test each time that they determine conformity before adequate or approved PM<sub>2.5</sub> SIP budgets are established. However, the same test must be used for each analysis year in a given conformity determination. Fairbanks chooses to use the “no-greater-than-2008 emissions test.”

The regional emissions analyses in PM<sub>2.5</sub> nonattainment areas must consider directly emitted PM<sub>2.5</sub> motor vehicle emissions from tailpipe, brake wear, and tire wear. EPA’s on-road mobile source emissions model MOVES quantifies emissions from these sources. Since MOVES was chosen for use in this conformity analysis, this requirement is satisfied.

Prior to adequate or approved PM<sub>2.5</sub> SIP budgets, re-entrained road dust and construction-related fugitive dust from highway or transit projects will only be included in the regional emissions analyses if EPA or Alaska Department of Environmental Conservation (ADEC) has determined that it is a “significant contributor” to the PM<sub>2.5</sub> regional air quality problem. Until a significance finding is made, PM<sub>2.5</sub> areas can presume that re-entrained road dust is not a significant contributor and not include road dust in the PM<sub>2.5</sub> transportation conformity analysis prior to the SIP. In addition, construction-related dust emissions are not to be included in any PM<sub>2.5</sub> conformity analyses before adequate or approved PM<sub>2.5</sub> SIP budgets are established. ADEC has indicated the significance determination will be made as part of the SIP process. As a result, the Fairbanks PM<sub>2.5</sub> conformity analysis will not include re-entrained road dust or construction-related fugitive dust from transportation projects.

In addition, prior to the submission of a SIP, NOx emissions must be considered, unless both ADEC and EPA make a finding the NOx is not a “significant contributor” to the PM<sub>2.5</sub> air quality problem. Conversely, VOC, SOx, and ammonia emissions do not have to be considered in conformity, unless either ADEC or EPA makes a finding that on-road emissions of any of these precursors is a “significant contributor” to the area’s PM<sub>2.5</sub> air quality issues. ADEC will make the significance determinations as part of the SIP process. As a result, the PM<sub>2.5</sub> conformity analysis will address only the precursor NOx.

Table 2-1 summarizes PM<sub>2.5</sub> and NOx emission estimates for the 2008 baseline year. These emission estimates were calculated by running EPA’s MOVES model as explained in Section 3.4 using transportation modeling outputs for the Fairbanks PM<sub>2.5</sub> nonattainment area described in Section 3.3.

<b>Table 2-1</b> <b>2008 Baseline Vehicle Emissions</b> <b>(tons per average winter day)</b>	
PM <sub>2.5</sub>	NOx
0.43	5.40

### 2.3 PM<sub>2.5</sub> Conformity Analysis Years

Nonattainment areas that do not have any adequate or approved budgets are not required to demonstrate conformity and perform a regional emissions analysis for their attainment year. Under Section 93.119(g)(1) of the conformity rule, nonattainment areas using interim emission tests are required to perform a regional emissions analysis for the following years:

- A year no more than 5 years beyond the year in which the conformity determination is made (e.g., 2015);
- The last year of the transportation plan’s forecast period (e.g., 2035); and
- Any additional years within the time frame of the transportation plan so that analysis years are no more than 10 years apart (e.g., 2025).

Regional emissions will be estimated for the horizon years 2015, 2025, and 2035 in the PM<sub>2.5</sub> conformity analysis, in accordance with the conformity rule requirements.

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### **3. LATEST PLANNING ASSUMPTIONS AND MODELING**

The Clean Air Act states that “the determination of conformity shall be based on the most recent estimates of emissions, and such estimates shall be determined from the most recent population, employment, travel, and congestion estimates as determined by the MPO or other agency authorized to make such estimates.”

According to the conformity regulation, the time the conformity analysis begins is “the point at which the MPO or other designated agency begins to model the impact of the proposed transportation plan or TIP on travel and/or emissions.” The conformity analysis and initial transportation modeling began in May 2010.

The 2010 TIP/MTP and corresponding CO conformity analysis was federally approved August 5, 2010 and August 27, 2010 respectively. However, for this PM<sub>2.5</sub> conformity determination, the transportation model needed to be expanded for the larger nonattainment area. As part of this process there are:

- No revisions to TIP/MTP, including no additions or deletions of regionally significant projects;
- No changes in the design concept and scope of existing regionally significant projects;
- No revisions that delay or accelerate the completion of regionally significant projects across conformity analysis years; and
- No changes to the time frame of the transportation plan.

Since conformity applies to the nonattainment area, new transportation projects within the donut area have been included. Donut areas are geographic areas outside a metropolitan planning area boundary, but inside the boundary of a nonattainment area that contains any part of the metropolitan area.

#### **3.1 Latest Planning Assumptions**

There have been no official updates to the socioeconomic projections used by the FMATs transportation models since the 2010 Conformity Analysis. In accordance with Section 93.110 of the federal conformity rule, the most recent estimates of population and employment projections that have been officially approved by the Metropolitan Planning Organization were used.

### 3.2 Transportation Modeling

The FMATs travel demand forecasting model was updated to reflect the larger PM<sub>2.5</sub> nonattainment area. The model calibration was updated accordingly. (See 8/20/10 memorandum from Ming S. Lee regarding “FMATs Travel Demand Model Baseline Calibration Report for PM<sub>2.5</sub> Conformity Analysis” included in Appendix C.) The report documents the calibration of the 2008 baseline model. The updated model includes a truck traffic component and driving speeds calibrated to speed data collected via GPS-equipped floating car method.

### 3.3 Traffic Estimates

A new 2035 MTP traffic projection was prepared using the updated transportation model noted above. (See the 8/20/10 memorandum from Ming S. Lee regarding “FMATs 2035 Long Range Transportation Plan Traffic Projection Report for PM<sub>2.5</sub> Conformity Analysis” included in Appendix C.) The report highlights the three major components involved in projecting traffic conditions: household projection, employment projection, and the 2035 MTP network modification for the PM<sub>2.5</sub> nonattainment area.

A summary of the travel estimates for the FMATs transportation modeling area employed in the Conformity Analysis is presented in Table 3-1. It shows that travel between 2008 and 2025 is forecast to increase by 29% at an annual rate of 0.9%. Morning peak period travel is forecast to grow more rapidly than any other period of the day. While passenger vehicle travel is forecast to grow more rapidly than truck travel, the split between these two classes is stable with the 92%/8% split in 2008 and a 93%/7% split in 2035.

<b>Table 3-1</b>			
<b>VMT Estimates in the Base and Horizon Years by</b>			
<b>Daily Period and Key Vehicle Categories</b>			
<b>Period</b>	<b>2008</b>	<b>20035</b>	<b>% Change</b>
<b>Daily Period<sup>a</sup></b>			
AM Peak (AM)	119,473	181,953	52.3
PM Peak (PM)	370,535	488,418	31.8
Off-Peak (OP)	1,281,379	1,637,574	27.8
<b>Vehicle Type</b>			
Passenger VMT	1,771,387	2,307,945	30.3
Truck VMT	154,754	175,873	13.6
<b>Total VMT</b>	<b>1,926,141</b>	<b>2,483,818</b>	<b>29.0</b>

<sup>a</sup> VMT by daily period was only developed for the passenger vehicle fleet; truck VMT was only modeled on a daily basis.

### 3.4 Vehicle Emissions Modeling

Model Used – Vehicle emissions associated with the proposed MTP were estimated for the Fairbanks modeling area were estimated using EPA’s MOVES (Motor Vehicle Emission Simulator). The analysis was based on the MOVES2010 version released in December 2009, coupled with an updated version of the underlying MOVES Database released in May 2010.

MOVES is the successor to EPA’s MOBILE series of on-road vehicle emissions models. It can be used to estimate exhaust and evaporative emissions as well as brake and tire wear emissions from all types of on-road vehicles. Compared to MOBILE6.2, MOVES incorporates substantial new emissions test data and accounts for changes in vehicle technology and regulations as well as improved understanding of in-use emission levels and the factors that influence them.

EPA designed MOVES using a fundamentally different software platform and user interface than used by MOBILE6.2. To ease users’ migration from MOBILE to MOVES EPA has also released a series of spreadsheet-based “Conversion Tools” to restructure MOBILE6 inputs into the framework required by MOVES. Since this analysis included the development of new up-to-date Fairbanks vehicle fleet characterizations based on latest available vehicle registrations and other data, these MOBILE6 to MOVES conversion tools were not directly used. However, their underlying methodologies were preserved in developing the necessary MOVES inputs “from scratch” and are carefully discussed later in this sub-section.

Section 93.111 of the conformity regulation requires the use of the latest emission estimation model in the development of conformity determinations. The use of MOVES clearly satisfies this requirement. EPA\* has given MPOs a two-year grace period that extends until March 2012 to allow agencies to use either MOBILE6.2 or MOVES for regional conformity analyses. During interagency consultation, an agreement was reached to use MOVES instead of MOBILE6.2 because it incorporates broader, more detailed and more recent test data, including representation of ambient temperature effects below 20°F, a key consideration for a wintertime Fairbanks emissions analysis.

Modeling Approach – The basic approach in applying MOVES to calculate vehicle emissions associated with the MTP was based on MOVES technical modeling guidance developed by EPA† for use in SIP and regional conformity analyses.

In accordance with that guidance, MOVES was executed for the six-month (October through March) winter season that corresponds to the period in which violations of the ambient PM<sub>2.5</sub> standard may occur in Fairbanks. Per EPA’s guidance, MOVES was also

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\* Federal Register, Volume 75, No. 401, March 2, 2010.

† “Technical Guidance on the Use of MOVES2010 for Emission Inventory Preparation in State Implementation Plans and Transportation Conformity,” U.S. Environmental Protection Agency, Office of Transportation and Air Quality, EPA-420-B-10-023, April 2010.

executed on an hourly time-scale to more accurately reflect diurnal variations in travel and ambient conditions that can affect vehicle emissions.

For SIP and conformity analysis, MOVES must be executed using the County Domain/Scale option. (MOVES can also be executed in National Scale and Project Scale modes.) For regional conformity analyses using MOVES County Scale option, EPA's guidance essentially directs users to input a detailed series of data that replace nationwide-based default values with vehicle fleet, travel activity and other parameters that represent the county or region being modeled.

MOVES was executed for the Fairbanks, Alaska geographic area to produce estimates of PM<sub>2.5</sub> and NO<sub>x</sub> crankcase and exhaust emissions (including extended idling). Brake and tire wear emissions for PM<sub>2.5</sub> were also included.

Discussions of the development of the detailed MOVES inputs in accordance with EPA's MOVES regional conformity guidance are presented below.

(Beyond the detailed MOVES inputs presented in this sub-section as well as Appendix D, electronic versions of the complete package of MOVES run files, input data files and outputs can be supplied upon request.)

Vehicle Fleet Inputs – Outputs from the transportation modeling runs described earlier in Section 3.3 as well as data from several other sources were used to develop the vehicle fleet-related inputs to the MOVES model runs. Each of these fleet-related MOVES inputs are described separately below. (The names of the individual inputs within MOVES are listed in parentheses.)

*Vehicle Populations (Source Type Population & Age Distribution)* – Vehicle registrations from the Alaska Department of Motor Vehicles (DMV) and recent Alaska Parking Lot Survey data conducted by ADEC provided the basis for the vehicle fleet populations and age distributions used to model the Fairbanks vehicle fleet with MOVES. The DMV data were obtained through ADEC from a “dump” of the statewide registration database as of May 2010. The DMV database includes vehicle make, model, model year, Vehicle Identification Number (VIN), registration status and expiration date.

Using a VIN decoding tool, information such as gross vehicle weight, vehicle type and fuel type were determined in order to classify each vehicle into one of the thirteen MOVES Source Types. Table 3-2 shows the summation of vehicles by their sourceTypeID as determined from the VIN decoder and DMV data.

The DMV registration data also identified the model year of the vehicle, which enabled distributions of populations by vehicle age\* to be calculated for each Source Type and input to MOVES. For the three light-duty passenger vehicle types (11-motorcycles,

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\* Vehicle age in years was simply calculated by subtracting the model year from 2010, the calendar year in which the DMV database obtained.

Source Type ID	Source Type Description	Vehicle Population
11	Motorcycle	4,234 <sup>a</sup>
21	Passenger Car	25,441
31	Passenger Truck	50,102
32	Light Commercial Truck	6,309
41	Intercity Bus	98
42	Transit Bus	53
43	School Bus	372
51	Refuse Truck	34
52	Single Unit Short-haul Truck	1,100
53	Single Unit Long-haul Truck	103
54	Motor Home	1,898
61	Combination Short-haul Truck	694
62	Combination Long-haul Truck	526
<b>Total Vehicle Fleet</b>		<b>90,964</b>

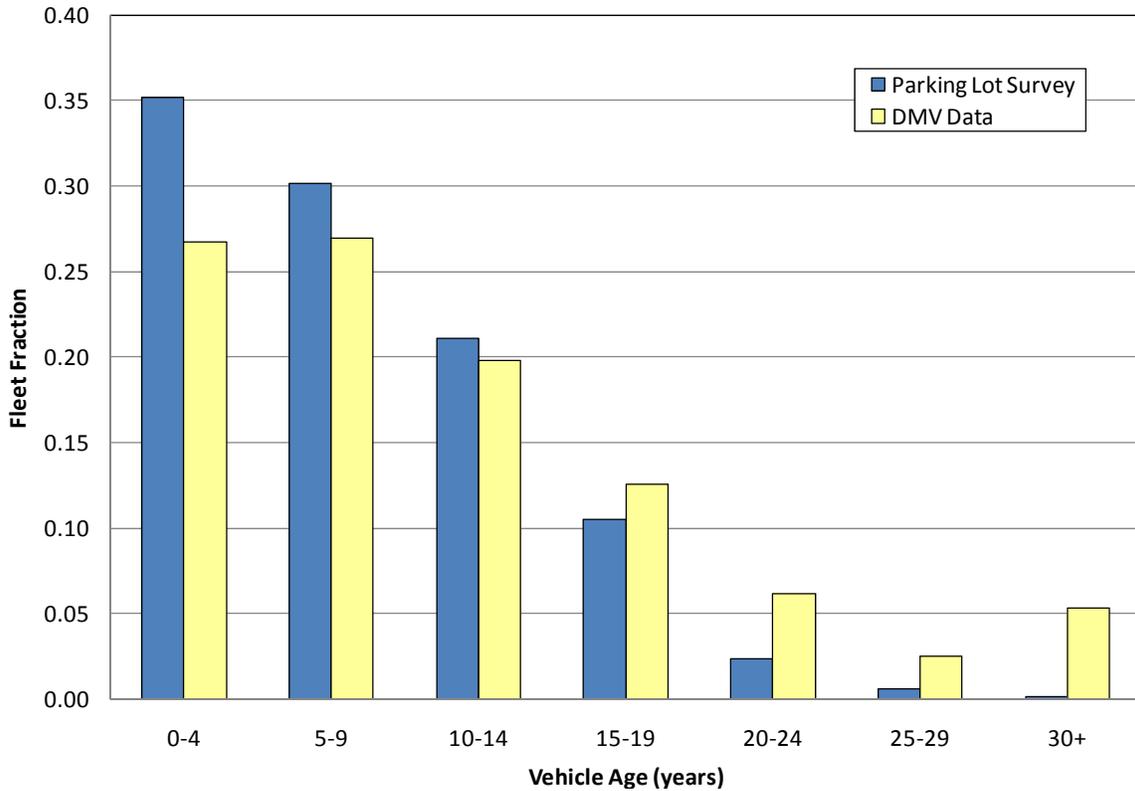
<sup>a</sup> As explained later, motorcycle activity in Fairbanks during the winter months was assumed to be zero.

21-passenger cars and 31-passenger trucks), vehicle age distributions from winter parking lot surveys conducted by ADEC in Fairbanks during January and February 2009 were used instead of those based on DMV registrations. This is because in both these 2009 surveys as well as similar parking lot surveys conducted earlier by DEC in 2005 and 2000 it was found that during harsh winter conditions in Fairbanks, older passenger vehicles are driven less.

Figure 3-1 compares the vehicle age fractions (by age group) for light duty passenger cars in Fairbanks developed from the DMV registrations and the Parking Lot Surveys. As Figure 3-1 clearly shows, vehicle fractions in the newer groups (< 15 years) from the Parking Lot Surveys are distinctly higher than from the DMV registrations. This pattern is reversed for the older vehicle groups (15 or more years old).

Another expected finding from the Fairbanks parking lot surveys is that motorcycles are simply not operated during cold wintertime conditions. Although motorcycles make up roughly 5% of the Fairbanks registered vehicle fleet as shown earlier in Table 3-1, only a single motorcycle was identified in the entire sample of over 8,500 vehicles from the 2009 Fairbanks surveys (which represents 0.01% of the survey sample).

**Figure 3-1  
Comparison of DMV and Survey-Based Vehicle Age Distributions of  
Passenger Cars in Fairbanks**



Thus, for Source Type categories 11 (motorcycles), 21 (passenger cars) and 31 (passenger trucks), vehicle age distributions were based on the Parking Lot Survey data to reflect well-documented winter season shifts toward greater use of newer vehicles in the passenger car and passenger truck fleets as well as non-use of motorcycles during winter months. These survey-based winter seasonal adjustments for Fairbanks have been employed in wintertime emission inventories developed in previous CO SIPs and transportation conformity determinations that have been approved by EPA and FHWA.

For the remaining MOVES source type categories (32 and above), age distributions were based on the DMV registration data for Fairbanks. Appendix D contains a detailed table showing the vehicle age distributions developed for each of the MOVES source types using either the DMV or Parking Lot Survey data as described above. These age distributions developed for the 2008 Baseline fleet were also assumed to apply for future fleets in the 2015, 2025 and 2035 modeling runs.\*

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\* Although new vehicle sales nationwide have decreased during the last two or three years due to rising fuel prices and the economic recession, it is difficult to forecast when new vehicle sales return to previous levels. Thus, although the baseline fleet inputs used in the analysis reflect recent depressed sales patterns, the future year fleets do as well. This constant age distribution assumption over time avoids the problem of

*Gasoline vs. Diesel-Fueled Vehicle Fractions (AVFT Strategies)* – MOVES provides users the ability to override its default nationwide based travel splits between different fuels and technologies. These Alternative Vehicle Fuel and Technology (AVFT) inputs are supplied to MOVES through the Strategies panel in the user interface, not the County Data Manager.

In order to account for differences in splits between gasoline- and diesel-fuel vehicles in the Fairbanks fleet compared to the U.S. as a whole, fuel fraction tables by source type and model year were also constructed using the DMV VIN decoded data described earlier. Not surprisingly, the MOVES default splits between gasoline and diesel vehicles was not representative of the Fairbanks fleet. Generally speaking, gasoline fractions were found to be lower in Fairbanks than the nationwide-based MOVES defaults (and diesel fractions were commensurately higher).

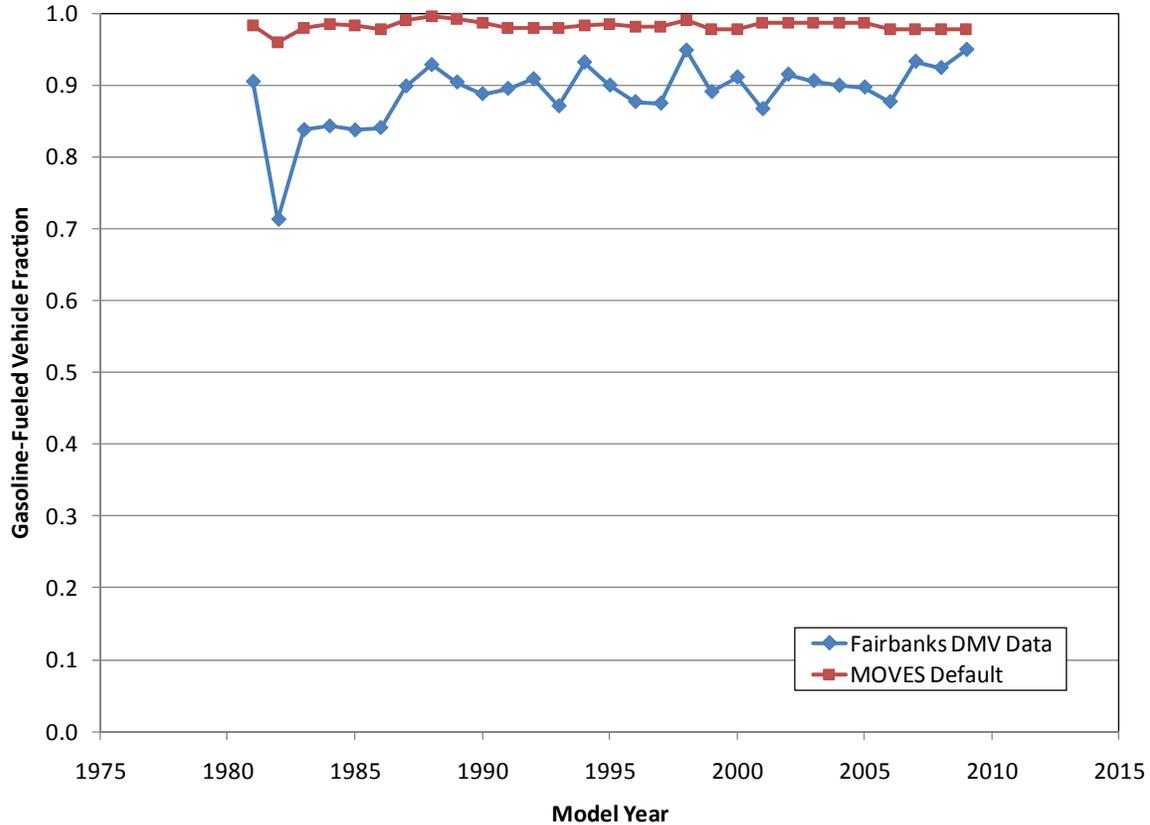
This is illustrated in Figure 3-2, which compares the gasoline vehicle fractions by model year for passenger trucks (MOVES Source Type 31) from the Fairbanks DMV data against the default fractions contained in MOVES. As seen in Figure 3-2, actual gasoline vehicle fractions for passenger trucks in Fairbanks are roughly 10% lower than the MOVES defaults (meaning diesel fractions are roughly 10% higher). Modest differences were also observed for some of the commercial vehicle categories as well.

As illustrated by the range of model years compared in Figure 3-2, DMV VIN decoder-based gasoline vs. diesel vehicle fractions were only available for model years 1981 through 2009 (the VIN decoder only operates on 1981 and later models). In setting up the AVFT fuel split input to MOVES, the fuel fractions must be specified by model year, not vehicle age. For earlier model years prior to 1981, the MOVES default fractions were used. For model years 2010 and later, the DMV-based fuel type fractions from model year 2009 were generally assumed to remain constant in future model years except in the passenger truck category where the MOVES defaults reflect a modest increase in diesel penetration in future model years. For passenger trucks in model years 2010 and later, the MOVES defaults were used.

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under-representing emissions in future years due to shifts toward increased new vehicle fractions that cannot be predicted with any certainty. If new vehicle sales return to earlier historical levels, the constant age distribution assumption reflected in this analysis will be conservative (i.e., it will understate future fleet emission reductions).

**Figure 3-2  
Comparison of Passenger Truck Gasoline-Fuel Vehicle Fractions by Model Year  
Fairbanks DMV Data vs. MOVES Defaults**



*Travel Activity (Vehicle Type VMT)* – Estimates of VMT over the expanded transportation modeling network (covering the entire PM<sub>2.5</sub> nonattainment area) from the TransCAD travel model link output files were processed and input to MOVES through the “Vehicle Type VMT” input within the County Data Manager. The Vehicle Type VMT input must be in units of VMT per year, not VMT per day. The annual VMT must also be supplied by “HPMS Vehicle Type” which is essentially an aggregated version of the thirteen-category MOVES Source Type scheme. Since states are required to provide periodic travel (i.e., VMT) estimates to FHWA via the Highway Performance Monitoring System (HPMS), EPA has designed MOVES to accept VMT input by these HPMS Vehicle Type categories.

Table 3-3 below shows the mapping of Source Type to HPMS Vehicle Type categories. It also shows how the Fairbanks baseline vehicle populations shown earlier in Table 3-2 were aggregated into the HPMS Vehicle Type categories.

Source Type ID	Source Type Description	HPMS VehType ID	HPMS Vehicle Type Description	2008 Baseline Vehicle Popn.
11	Motorcycle	10	Motorcycles	4,234
21	Passenger Car	20	Passenger Cars	25,441
31	Passenger Truck	30	Other 2 axle-4 tire vehicles	<b>50,102</b>
32	Light Commercial Truck			<b>6,309</b>
41	Intercity Bus	40	Buses	523
42	Transit Bus			
43	School Bus			
51	Refuse Truck	50	Single Unit Trucks	3,135
52	Single Unit Short-haul Truck			
53	Single Unit Long-haul Truck			
54	Motor Home			
61	Combination Short-haul Truck	60	Combination Trucks	1,220
62	Combination Long-haul Truck			
<b>Total Vehicle Fleet</b>				<b>90,964</b>

The green and tan cell shading in Table 3-3 shows where the separate Passenger Vehicle VMT and Truck VMT outputs from the TransCAD transportation model were allocated. Passenger VMT applies to Source Types 11, 21, and 31 (shown in green) and Truck VMT applies to the remainder of the fleet covering Source Types 32 and above (and shown in tan).

These allocations were assumed based on a review of the FHWA Vehicle Classification Count scheme\* used by ADOT&PF to collect volume counts by individual vehicle classification and which the separate travel model estimates of Passenger Vehicle and Truck VMT were based (see Appendix C). This FHWA vehicle classification scheme is listed below:

Single Unit

- Class 01: Motorcycles
- Class 02: Automobiles, Automobiles with trailers
- Class 03: Pick up Trucks, Pick up Trucks with Trailers
- Class 04: Buses (2 or 3 axles)
- Class 05: Delivery Trucks, Recreational Vehicles, Dump Trucks (2 axles, 6 Tires)
- Class 06: Dump Trucks, Recreational Vehicles (3 axles)
- Class 07: Concrete Trucks, Fuel or Propane Delivery Trucks (4 or more axles)

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\* “2006, 2007, 2008 Annual Traffic Volume Report, Northern Region,” State of Alaska Department of Transportation and Public Facilities, 2009.

### Single Trailer

- Class 08: Tractor/Truck with Trailer (2 axles, 6 tires)
- Class 09: Tractor/Truck with Trailer (3axles)
- Class 10: Tractor/Truck with Trailer (4 or more axles)

### Multi- Trailer

- Class 11: Tractor/Truck with 2 Trailers (5 axles)
- Class 12: Tractor/Truck with 2 or more Trailers (6 axles)
- Class 13: Tractor/Truck with 2 or more Trailers (7 or more axles)

The separate Truck VMT travel model outputs correspond to FHWA Class 04 and higher vehicles. Comparing this FHWA scheme to the Source Type scheme in MOVES indicates that FHWA Class 04 and higher closely represents MOVES Source Types 32 and higher. (See Table 3-2 for a listing of the Source Type categories.)

As highlighted by the boldface populations in the rightmost column of Table 3-4 this split of Passenger and Truck VMT from the travel model outputs falls within HPMS Vehicle Type category 30, which contains both passenger and light commercial trucks. Thus in developing the HPMS Vehicle Type VMT inputs to MOVES, separate allocations of Source Types 31 and 32 within HPMS Vehicle Type 30 were maintained until the end of the calculations.

The next step in calculating the HPMS Vehicle Type VMT inputs consisted of extracting average annual mileage per vehicle by HPMS Vehicle Type categories from MySQL database\* underlying the MOVES model. This was done by dividing annual VMT by HPMS Vehicle Type category in the MOVES database table *HPMSVTypeYear* (for the MOVES default baseline year of 1999) by MOVES default vehicle populations (also for the model's 1999 base year) contained in the *SourceTypeYear* table after the Source Type populations were allocated into the corresponding HPMS Vehicle Type categories.

Table 3-4 shows these data from the MOVES database and the calculated annual mileage per vehicle by HPMS Vehicle Type category.

It is important to note that the MOVES base year 1999 data and resulting annual mileage per vehicle by HPMS Vehicle Type is only used to develop relative scaling factors by HPMS Vehicle Type to apply to the actual the Passenger VMT and Truck VMT estimates from the Fairbanks travel model runs. The Fairbanks travel model VMT cannot simply be allocated to the HPMS scheme based on vehicle populations because the annual mileage driven per vehicle differs significantly across some of the HPMS Vehicle Type categories (ranging from 2,540 miles/year for motorcycles to 70,116 miles/year for combination trucks). Thus, the relative differences in annual mileage between HPMS Vehicle Type categories were used to scale the 2008 Baseline Fairbanks vehicle populations by HPMS category shown earlier in Table 3-3 to annual VMT values. These

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\* The MOVESDB20100515 version of the database was used. This was the latest version released by EPA at the time of the conformity analysis.

HPMS Vehicle Type ID	HPMS Vehicle Type Description	Source Type Categories Contained	Base Year Annual VMT (millions)	Base Year Vehicle Population	Avg. Annual Mileage (per vehicle)
10	Motorcycle	11	10,600	4,173,870	<b>2,540</b>
20	Passenger Car	21	1,568,640	130,163,000	<b>12,051</b>
30	Other 2 axle-4 tire vehicles	31,32	900,735	76,296,500	<b>11,806</b>
40	Buses	41,42,43	7,657	732,189	<b>10,458</b>
50	Single-Unit Trucks	51,52,53,54	70,274	5,726,791	<b>12,271</b>
60	Combination Trucks	61,62	132,358	1,887,707	<b>70,116</b>

values were then normalized so that when summed across HPMS categories, they matched the total VMT from the travel model outputs and preserved the travel model splits between Passenger and Truck VMT.

A detailed table showing these calculations is supplied in Appendix D.

Table 3-5 presents the resulting annual VMT by HPMS Vehicle Type category inputs supplied to MOVES for the 2008 Baseline and 2035 MTP scenarios and the 2015 and 2025 analysis years. In the absence of travel model outputs for 2015 and 2025, MOVES annual VMT inputs for those years were developed by linear interpolation of the 2008 and 2035 VMT by HPMS Source Type. (The highlighted columns in Table 3-5 represent those analysis years (2008 and 2035) for which travel model outputs were available.)

At the bottom of Table 3-5, total fleet VMT is shown on both an annual and average day basis, the latter for comparison to the travel model daily VMT outputs summarized earlier in Table 3-1.

HPMS Vehicle Type ID	HPMS Vehicle Type Description	2008 Baseline	2015	2025	2035 MTP
10	Motorcycle	7,649,556	8,250,277	9,108,450	9,966,623
20	Passenger Car	218,116,400	235,245,122	259,714,726	284,184,329
30	Other 2 axle-4 tire vehicles	441,417,511	475,192,070	523,441,441	571,690,811
40	Buses	1,514,681	1,568,272	1,644,830	1,721,388
50	Single-Unit Trucks	10,653,764	11,030,704	11,569,190	12,107,675
60	Combination Trucks	23,689,696	24,527,859	25,725,235	26,922,611
<b>Total Vehicle Fleet – Annual VMT</b>		<b>703,041,608</b>	755,814,304	831,203,871	<b>906,593,437</b>
<b>Total Vehicle Fleet – Daily VMT</b>		<b>1,926,141</b>	2,070,724	2,277,271	<b>2,483,818</b>

It should also be noted that the SourceType population inputs described earlier for the 2008 Baseline year were calculated for the other analysis years (2015, 2025 and 2035) by scaling the VMT for each analysis year in Table 3-5 against the actual 2008 baseline vehicle populations presented earlier in Tables 3-2 and 3-3. In other words, the VMT growth over time reflected in Table 3-5 was also applied to future vehicle populations. (This approach assumed that the annual mileage per vehicle was constant across all analysis years.)

Other MOVES Inputs – The remaining MOVES modeling inputs representing the Fairbanks PM<sub>2.5</sub> nonattainment area included seasonal, daily and diurnal travel fractions, travel activity by speed range (or bin) and roadway type, freeway ramp fractions, ambient temperature profiles, I/M program inputs and fuel specifications. Each of these inputs were supplied to MOVES to represent Fairbanks specific conditions through the model's County Data Manager Importer and are discussed separately below.

*Monthly, Day-of-Week and Hourly VMT Fractions* – In conjunction with annual VMT by HPMS Vehicle Type, MOVES also requires inputs of monthly, weekday/weekend and hourly travel fractions. Based on data assembled by ADOT&PF from seasonal traffic counts, traffic within the FMATS modeling area exhibits a seasonal variation such that roughly 94% of annual average daily travel occurs on average winter days (with 106% occurring on average summer days). These seasonal variations were incorporated into the MonthVMTFraction input table.\*

Day-of-week fractions were set to assume that travel levels are the same on weekends as weekdays. In the absence of a weekend or seven-day travel model, this is a reasonable assumption.

Hourly VMT fractions were defined based on diurnal trip percentages used to support the travel model development and validation that are listed in Appendix C.

*Travel by Speed Bin and Roadway Type (Average Speed Distribution & Road Type Distribution)* – Link-level TransCAD model output files from the transportation modeling performed by Dr. Lee were processed to prepare these two sets of MOVES inputs for each analysis year.

The roadway type classification scheme employed in MOVES consists of the following five categories:

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\* As noted earlier, motorcycle activity was assumed to be zero during winter monthly. Initially this was handled by setting the monthly VMT fractions to zero for October through March in this MonthVMTFraction input table. However, it was discovered that MOVES produced inconsistent activity and emissions outputs when these values were zeroed. As a workaround until EPA releases an updated version of the model that corrects this apparent bug, monthly activity for motorcycle was set to the same values of the rest of the fleet, but the motorcycle emissions were simply excluded from tabulations of the MOVES output results.

1. Off-Network;
2. Rural, Restricted Access;
3. Rural, Unrestricted Access;
4. Urban, Restricted Access; and
5. Urban, Unrestricted Access.

The “Off-Network” category is used by MOVES to represent engine off evaporative or starting emissions that occur off of the travel network. For SIP and regional conformity analysis, EPA’s MOVES guidance indicated that the user must supply Average Speed Distribution and Road Type Distribution inputs for the remaining on-network road types (2 through 5), but direct MOVES to calculate emissions over all five road types. In this manner, starting and evaporative emissions are properly calculated and output.

The first of the two sets of inputs, Average Speed Distributions, consists of time-based\* (not distance-based) tabulations of the fractions of travel within each of MOVES’ sixteen speed bins (at 5 mph-wide intervals) by road type and hour of the day. These inputs were calculated from the TransCAD link outputs by time of day. The TransCAD outputs consisted of travel times, average speeds and vehicle volumes for each link in the expanded modeling network for each of three daily periods:

- 1) AM Peak (7-9 AM);
- 2) PM Peak (3-6 PM); and
- 3) Off-Peak (9 AM -3 PM, plus 6 PM -7 AM).

Spreadsheet calculations were performed on the TransCAD link outputs to calculate time-based travel (multiplying link travel time by vehicle volume to get vehicle hours traveled or VHT) across all links. The link VHT was then allocated by MOVES road type and average speed bin. (The link classification scheme employed in the TransCAD modeling could easily be translated to the MOVES Rural/Urban and Limited/Unlimited Access road types.) Normalized speed distributions (across all sixteen bins) were then calculated for each road type and time of day period and formatted for input into MOVES.

MOVES allows these Average Speed Distribution inputs to be specified separately by Source Type (i.e. vehicle category). Thus, individual distributions were developed from Passenger VHT and Truck VHT tabulations of the TransCAD outputs. The Passenger VHT was available for each of the three modeling periods. Truck VMT was only available on a single daily basis. (As stated earlier, Passenger activity was applied to MOVES Source Types 11, 21 and 31, while Truck activity was applied to categories 32 and higher.)

Appendix D contains tabular summaries of the normalized average speed distribution inputs developed from the 2008 and 2035 TransCAD outputs. (Distributions for 2015 and 2025 were interpolated from the 2008 and 2035 outputs.)

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\* MOVES requires Average Speed Distribution inputs on a time-weighted basis and Road Type Distribution inputs on a distance-weighted basis.

Similar spreadsheet calculations were also performed to tabulate distance-based (i.e., VMT-based) Road Type Distribution inputs to MOVES. The resulting tabulations and normalized Road Type distributions are also provided in Appendix D. (Road type distributions for 2015 and 2025 were similarly interpolated from the 2008 and 2035 TransCAD outputs.)

*Freeway Ramp Fractions (Ramp Fraction)* – MOVES uses default values of 8% (or 0.08) to represent the fraction of time-based limited access roadway travel (Road Types 2 and 4) that occur on freeway ramps. Fairbanks-specific ramp fraction values were tabulated from the TransCAD link level outputs and were supplied to MOVES in the Ramp Fraction input section of the County Data Manager to override the nationwide-based defaults.

These Fairbanks ramp travel fractions are presented below in Table 3-6 as tabulated from the 2008 and 2035 travel model outputs. As shown in Table 3-6, the Fairbanks ramp fractions in urbanized area are higher than the default value, reflecting the fact that shorter freeway lengths (with resulting higher ramp fractions) are driven in Fairbanks compared to the nationwide-based defaults.

<b>Table 3-6 Fairbanks Ramp Fraction Inputs</b>				
Daily Ramp Travel Fractions	Fraction of Time-Based Limited Access Travel on Ramps			
	2008 Baseline		2035 MTP	
	Rural	Urban	Rural	Urban
	0.064	0.196	0.068	0.177

*Ambient Temperature Profiles (Meteorology Data)* – Monthly average diurnal (i.e. hour-by-hour) ambient temperature and humidity profiles compiled by EPA for each county in the U.S. and contained in MOVES’ default database were used for the emission modeling runs. According to EPA guidance, these ambient meteorology data profiles were compiled from 30 years (1971-2000) of daily temperature and humidity data. The profiles for Fairbanks (ZoneID=20900) are based on the station at the Fairbanks International Airport. The ambient temperatures range from +31.8°F in October (Hour 16) down to -16.1°F in January (Hour 5). Relative humidity (used in the NOx emission calculations) ranged from 48% to 82%.

Profiles for each of the six winter months modeled (October through March) were exported from the MOVES database and input via the County Data Manager.

*I/M Program Data (I/M Programs)* – Inspection and Maintenance (I/M) program characteristics for the Fairbanks I/M program stored by EPA in the MOVES database were used to represent the existence of the I/M Program during the 2008 Baseline year.

Since the Fairbanks I/M program was terminated at the end of 2009, the “Use I/M Program” input element to MOVES for the future analysis years 2015, 2025 and 2035 was set from “Yes” to “No” to account for the elimination of the program by these years.

According to EPA’s MOVES documentation, I/M emission benefits are only assumed for HC, CO and NOx. No I/M benefits for particulate emissions are assumed in MOVES.

*Fuel Specifications (Fuel Supply)* – EPA has developed detailed fuel specifications (e.g., RVP, oxygen content, sulfur content, etc.) for different gasoline and diesel fuel blends used in each county of the U.S. and loaded these specifications into the *FuelFormulation* and *FuelSupply* tables in the MOVES default database. (The first of these tables identifies the detailed properties of a specific fuel blend, the second table identifies which state and county of the U.S. and the calendar year that it applies to. Semi-annual fuel survey data collected by the Alliance of Automobile Manufacturers (AAM) were reviewed to confirm whether the default fuel properties for Fairbanks defined in MOVES were correct. 2008 winter retail gasoline data for Fairbanks from the AAM surveys indicated that sulfur and oxygen contents in MOVES reasonably matched measured levels.

However, Fairbanks diesel blends are not included in the AAM surveys. MOVES assumed diesel fuel sulfur content of 43 ppm in 2008 through 2011 and 11 ppm in 2012 and later years. These sulfur levels are believed to be reasonably representative of those required under Alaska’s Ultra Low-Sulfur Diesel (ULSD) regulation.

Thus MOVES default gasoline and diesel fuel specifications for Fairbanks were used in the analysis.

State Implementation Plan Measures – At this point, the PM<sub>2.5</sub> SIP and no vehicle-related PM<sub>2.5</sub> control measures have been adopted. This analysis does however account for all committed CO control measures and their impact on PM<sub>2.5</sub> and precursor emissions.

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## 4. CONSULTATION PROCEDURES

The requirements for consultation procedures are listed in section 93.105 of the transportation conformity rule under section 93.105. Consultation is necessary to ensure communication and coordination among air and transportation agencies at the local, state and federal levels on issues that would affect the conformity analysis such as the underlying assumptions and methodologies used to prepare the analysis. Section 93.105 of the conformity rule notes that there is a requirement to develop a conformity SIP that includes procedures for interagency consultation, resolution of conflicts, and public consultation as described in paragraphs (a) through (e). Section 93.105(a)(2) states that prior to EPA approval of the conformity SIP, “MPOs and State departments of transportation must provide reasonable opportunity for consultation with State air agencies, local air quality and transportation agencies, DOT and EPA, including consultation on the issues described in paragraph (c)(1) of this section, before making conformity determinations.”

Section 93.112 of the conformity regulation requires documentation of the interagency and public consultation requirements according to Section 93.105. A summary of the interagency consultation and public consultation conducted to comply with these requirements is provided below. Interagency consultation on the PM<sub>2.5</sub> Conformity Analysis for the TIP/MTP is documented in Appendix E. The responses to comments received as part of the public comment process are included in Appendix F.

### 4.1 Interagency Consultation

In July 2010, an interagency consultation meeting (and conference call) was conducted to review the PM<sub>2.5</sub> conformity requirements, latest planning assumptions and scheduled. A follow-up interagency consultation meeting (and conference call) was conducted in August 2010 to provide a status update, as well as discuss recommendations for the use of MOVES and the no-greater-than-2008 baseline test. Another interagency consultation meeting was held at the beginning of September to present the results of the transportation and emissions modeling, the results of the conformity analysis to discuss the schedule for report preparation and the review process. Interagency call notes are included as part of the consultation record in Appendix E.

The Draft PM<sub>2.5</sub> Conformity Analysis for the Federally approved 2010-2013 FMATs TIP: Amendment #2 and MTP will be released in September 2010 for a 30-day public

comment period, followed by Board adoption in October 2010. Federal approval of the PM<sub>2.5</sub> Conformity Analysis is anticipated by December 14, 2010.

## 4.2 Public Consultation

In general, agencies making conformity determinations shall establish a proactive public involvement process that provides opportunity for public review and comment on a conformity determination for TIP/MTP. In addition, all public comments must be addressed in writing.

On May 19, 2010, FMATS approved its Public Participation Plan. The purpose of this revision was to ensure that FMATS meets the requirements of SAFETEA-LU (Safe, Accountable, Flexible, Efficient, Transportation Equity Act, A Legacy for Users), the current Surface Transportation Bill. One of the requirements is that government spending on transportation becomes more transparent to State and Local Officials, as well as the public.

The Plan defines a process for providing citizens, affected public agencies, representatives of public transportation employees, freight shippers and transportation services, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled and other interested parties with meaningful and measurable opportunities to be involved in the transportation planning process. In general, the TIP/MTP and corresponding conformity analysis is the subject of a public notice and 30 day review period prior to adoption, A public meeting is also conducted prior to adoption and all public comments are responded to in writing. The responses to comments will be incorporated into the final report and listed in Appendix F.

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## 5. TIP AND MTP CONFORMITY

The principal requirements of the federal transportation conformity rule for TIP/MTP assessments are as follows:

1. Before emission budgets are available, the TIP and MTP must pass an interim emissions budget (FMATs chose to use the “no-greater-than-2008 emissions test”);
2. The latest planning assumptions and emission models must be employed;
3. The TIP and MTP must provide for the timely implementation of transportation control measures (TCMs) specified in the applicable air quality implementation plans; and
4. Consultation procedures must be followed.

The final determination of conformity for the TIP/MTP is the responsibility of the Federal Highway Administration and the Federal Transit Administration.

The previous sections and the appendices present the documentation for all of the requirements listed above for conformity determinations except for the conformity test results. Prior sections have also addressed the updated documentation required under the federal transportation conformity rule for the latest planning assumptions.

This section presents the results of the PM<sub>2.5</sub> conformity tests, satisfying the remaining requirement of the federal transportation conformity regulation. The applicable conformity tests were reviewed in Section 2. For each test, the required emissions estimates were developed using the transportation and emission modeling approaches required under the federal transportation conformity rule and summarized in Section 3. The results are summarized below, followed by a more detailed discussion of the findings for each pollutant. Table 5-1 presents results for PM<sub>2.5</sub> and NO<sub>x</sub> (for the 2006 24-hour standard) in tons per winter day for each of the horizon years tested.

In accordance with the Transportation Conformity Rule, if a 2006 PM<sub>2.5</sub> area does not have adequate or approved budgets, it must use one of the interim tests. Conformity may be demonstrated if the emissions from the proposed transportation system are either less than or no greater than the 2008 motor vehicle emissions in a given area. For the PM<sub>2.5</sub>

conformity determination, FMATs chose to use the “no-greater-than-2008 emissions test” for the analysis years 2015, 2025, and 2035.

The 2008 baseline year emissions were estimated using the latest emissions model consistent with the conformity methodology. Both PM<sub>2.5</sub> exhaust and NOx exhaust were estimated for a winter average day, which was used for the 24-hour standard. The modeling results for all analysis years indicated that PM<sub>2.5</sub> and NOx exhaust emission for each “build” scenario are equal to or less than the 2008 base year emissions estimates. The TIP/MTP therefore satisfies the interim conformity emissions tests for the 2006 PM<sub>2.5</sub> standard.

As all requirements of the Transportation Conformity Rule have been satisfied, a finding of conformity for the new 2006 PM<sub>2.5</sub> standard is supported for the Federally Approved 2010 Transportation Improvement Program and Metropolitan Transportation Plan.

<b>Table 5-1 PM<sub>2.5</sub> Conformity Test Results</b>				
<b>Year</b>	<b>PM<sub>2.5</sub> (tons per day)</b>	<b>PM<sub>2.5</sub> Emissions ≤ Base Year</b>	<b>NOx (tons per day)</b>	<b>NOx Emissions ≤ Base Year</b>
2008 Base Year	0.43	-	5.40	-
2015	0.27	Yes	2.82	Yes
2025	0.20	Yes	1.54	Yes
2035	0.19	Yes	1.42	Yes

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FMATS TIP OBLIGATION STATUS REPORT - FFY10

9.9.10

FMATS ALLOCATION TOTALS

FMATS ALLOCATIONS	PHASE	AMOUNT	FFY10 OBLIGATIONS	PERCENT OBLIGATED
FMATS CTP & TRAAK ALLOCATION	All	\$9,682.9	\$5,967.6	62%
FMATS CMAQ ALLOCATION	All	\$6,685.0	\$6,685.0	100%
FMATS GRANDFATHER STIP ALLOCATION	All	\$5,337.5	\$5,337.5	100%
DEOBLIGATIONS	All	\$5,435.6	\$3,447.8	63%
<b>TOTAL</b>		<b>\$27,141.0</b>	<b>\$21,437.9</b>	<b>79%</b>

CTP/TRAAK FUNDING

AKSAS	CTP/TRAAK	PHASE	OBLIGATION DATE ESTIMATE	TIP AMOUNT	FFY10 OBLIGATIONS	PERCENT OBLIGATED	COMMENTS
62164	College Road Rehabilitation	2	08.01.10	\$400.0	\$25.5	6%	sent 8.23.10
63784	Gillam Way Upgrades	2	08.01.10	\$300.0	\$0.0	0%	to HQ 8.4.10
62317	Illinois Street Reconstruction (Grandfather)	4	8.12.10	\$5,337.5	\$5,337.5	100%	Sent to HQ 7.27.10
62317	Illinois Street Reconstruction	2	08.01.10	\$337.5	\$0.0	0%	to HQ 8.11.10
62317	Illinois Street Reconstruction	7	08.01.10	\$559.3	\$0.0	0%	to HQ 8.11.10
63158	Nordale Road Pavement Rehabilitation	4	04.19.10	\$2,909.0	\$2,909.0	100%	
65199	Phillips Field Road Upgrade	4	8.16.10	\$315.6	\$315.6	100%	Sent to HQ 7.28.10
76717	Preventive Maintenance Program	2	12.21.09	\$55.0	\$55.0	100%	
76717	Preventive Maintenance Program	4	8.1.10	\$1,795.3	\$1,795.3	100%	obligated 4.19.10 for \$261.9; obligated 443.9 5.24.10; obligated \$522.9 on 5.24.10; 63.9 on 7.1.10; signal project 8.4.10
63289	South Cushman: Mitchell to Sanduri	2	12.21.09	\$43.0	\$43.0	100%	
63768	Birch Hill Bicycle Path	2	9.8.10	\$400.0	\$400.0	100%	sent 7.22.10
60745	23rd Avenue Improvements	4	6.7.10	\$260.0	\$260.0	100%	
60747	Leasure Subdivision	4	8.1.10	\$500.0	\$0.0	0%	Sent 8.2.10
63213	University Avenue Widening	7	8.1.10	\$1,521.3	\$0.0	0%	sent 8.19.10
77198	FMATS Coordinator's Office	8	12.17.09	\$164.2	\$164.2	100%	includes M381
	<b>TOTALS</b>			<b>\$14,897.7</b>	<b>\$11,305.1</b>	<b>76%</b>	
	<b>Less Grandfathered Funding</b>			<b>5,337.5</b>	<b>5,337.5</b>		
	<b>CTP/TRAAK TOTALS</b>			<b>\$9,560.2</b>	<b>\$5,967.6</b>		

FMATS TIP OBLIGATION STATUS REPORT - FFY10

9.9.10

**DEOBLIGATED FUNDING**

AKSAS	DEOBLIGATIONS	PHASE	OBLIGATION DATE STATUS	TIP AMOUNT	FFY10 OBLIGATIONS	Percent Obligated	COMMENTS
60434	Cowles Street Upgrades	4	02.02.10	\$82.0	\$81.4	99%	
25556	North Pole Road/Rail Crossing Reduction		8.1.10	\$1,000.0	\$1,000.0	100%	Transfer complete 8.10.10
63745	FMATS Non-Motorized Transportation Plan	8	9.8.10	\$100.0	\$100.0	100%	Sent to HQ 7.14.10
63135	LED Street Light Conversion	2	1.26.10	\$25.0	\$25.0	100%	
63135	LED Street Light Conversion	4	7.1.10	\$215.4	\$215.4	100%	
63559	LED Street Light Conversion	2	7.2.10	\$150.0	\$150.0	100%	
63559	LED Street Light Conversion	4	8.25.10	\$300.0	\$0.0	0%	processed by HQ 8.25.10
63102	Illinois Street Reconstruction	7	8.1.10	\$1,092.7		0%	processed by HQ 8.18.10
65199	Phillips Field Road Upgrades	4	5.17.10	\$130.0	\$129.7	100%	
65199	Phillips Field Road Upgrades	4	8.16.10	\$139.6	\$139.6	100%	Sent to HQ 7.28.10
76717	Preventive Maintenance	2	12.21.09	\$105.0	\$105.0	100%	
76717	Preventive Maintenance Program	4	8.17.10	\$80.0	\$80.0	100%	sent 7.26.10
76717	Preventive Maintenance	4	7.20.10	\$64.0	\$42.8	67%	
63727	South Cushman: 15th to Mitchell	2	7.7.10	\$700.0	\$700.0	100%	
63289	South Cushman: Mitchell to Sanduri	2	6.15.10	\$248.0	\$248.0	100%	Request sent 6.8.10
63213	University Avenue Widening	7	8.1.10	\$146.4		0%	Processed by HQ 8.18.10
61175	Van Horn Road Rehabilitation	4	3.16.10	\$107.1	\$107.1	100%	
63158	Nordale Road Pavement Rehabilitation	4	4.19.10	\$2.9	\$2.9	100%	
62023	North Pole Citywide Pavement Rehabilitation	4	8.3.10	\$215.8	\$215.8	100%	Sent to HQ 7.20.10
60827	Wendell ADA Improvements	2	4.28.10	\$90.1	\$90.1	100%	
60827	Wendell ADA Improvements	4	7.31.10	\$229.5			Processed by HQ 8.5.10
60669	North Pole Bike Path and Rehab Connections	2	04.28.10	\$15.0	\$15.0	100%	
60747	Leasure Subdivision	7	8.1.10	\$165.0		0%	Sent 8.2.10
<b>DEOBLIGATION TOTALS</b>				<b>\$5,403.5</b>	<b>\$3,447.8</b>	<b>64%</b>	

FMATS TIP OBLIGATION STATUS REPORT - FFY10

9.9.10

**CMAQ FUNDING**

AKSAS	CMAQ	PHASE	OBLIGATION DATE STATUS	TIP AMOUNT	FFY10 OBLIGATIONS	PERCENT OBLIGATED	COMMENTS
63494	L RTP Conformity/Modeling Analysis	8	2.3.10	\$160.0	\$160.0	100%	
63151	Curb Corner Upgrades	2	6.2.10	\$35.0	\$35.0	100%	
24756	Bus Shelters	all		\$400.0	\$400.0	100%	
62094	Low Sulfur Fuels Impacts Study	2		\$90.0	\$90.0	100%	
63720	Fairbanks Fine Particulate Matter Planning and Control	all	7.1.20	\$6,000.0	\$6,000.0	100%	
<b>CMAQ TOTALS</b>					<b>\$6,685.0</b>	<b>100%</b>	

**EARMARK FUNDING**

AKSAS	EARMARKS	PHASE	OBLIGATION DATE STATUS	TIP AMOUNT	FFY10 OBLIGATIONS	PERCENT OBLIGATED	COMMENTS
60745	23rd Avenue Improvements	4	5.15.10	\$2,940.4	\$2,940.4	100%	did not use 1702 funding
60747	Leasure Subdivision	2	12.29.09	\$90.0	\$90.0	100%	
62023	North Pole Citywide Pavement Rehabilitation	2	7.31.10	\$769.2	\$769.2	100%	
63282	FMATS Sign Replacement Project	4	7.30.10	\$973.6	\$0.0	0%	Sent to HQ 8.10.10
<b>EARMARK TOTALS</b>					<b>\$4,803.2</b>	<b>79%</b>	