

Appendix C: Interagency Consultation

Metrolina Regional TIP Transportation Conformity Meeting

June 29, 2021, 3 pm Conference Call (Microsoft TEAMS)

Attendees:

CDOT – Anna Gallup, Martin Kinnamon, Alex Riemondy
CRMPO – Phil Conrad
CRTPO – Neil Burke, Travis Johnson
EPA – Josue Borrero, Sarah Larocca, Dianna Myers, Richard Wong
FHWA – Loretta Barren, George Hoops
GCLMPO – Randi Gates
Mecklenburg Co. – Megan Green
NCDAQ – Brian Phillips, Jill Vitas
NCDOT -Andy Bailey, Phyllis Jones

Meeting objective:

EPA released the SIP amendment for public comment, and the comment period ends July 23. If no comments are received the process could be completed 60ish-days after July 23, but if comments are received it could add an additional 30-days to the process. Anticipated completion is the end of September or the end of October. With all the steps in between; drafting the report, MPOs release documents for public review, MPO boards take action, 30-day agency review, FHWA action April. The MPOs MTP expires in March 2022, conformity lapse.. We don't anticipate any problems with this short delay.

Is there a need to proceed with the TIP process or fold the TIP project changes into the MTP process and process one conformity process?

The MPOs discussed the upcoming STIP changes that could have 2 million dollars in impacts on project costs.

The MPOs indicated they do not want to proceed with this round of STIP changes, if it means they will have to complete an additional conformity process for additional STIP changes. It is expected that NCDOT will present the new STIP changes over the summer.

Anna asked that Loretta prepare a draft schedule for the MTP process.

Loretta agreed to prepare a draft schedule for the MTP process, and to contact David Wasserman and discuss when NCDOT will likely release the additional STIP changes.

Loretta spoke with David Wasserman after the meeting, regarding upcoming STIP changes. David does not believe detailed STIP changes will be available to include in a conformity process that begins in 2020.

David will contact the MPOs to discuss any pressing NCDOT projects that might need to be included in the conformity process.

Based on the above information from David and our discussion today, I suggest we proceed to incorporate the ongoing STIP changes into the MTP conformity process with a planned kick-off in September.

**Metrolina Region Transportation Conformity Process
Agenda
August 26, 2021**

Welcome and Introductions

SIP Amendment Approval Process – EPA

The comment period ended

No comments were received.

New budgets become final and approved for use after September

MTP and TIP amendments

Deadline for amendments – last Item N to be included – NCDOT will provide the Item N handout for Oct. in September and it will be approved on Oct. 7, so we could consider any amendment up to Oct. in this process.

Deadline to submit changes to Model Team – Anna, when is the deadline that you would prefer to get project changes?

Modelling Process – timeframe (Oct/Nov)- CDOT

MOVES Modelling process – timeframe – (Nov/Dec)-NCDAQ

Transportation Conformity Analysis Report – Primary Responsibility

Available for public/agency review and comment – Dec/Jan

MPO adoption Schedule

CRMPO –

Approval to release for public comment - Oct/Nov 2021

Board Action -

GCLMPO –

Approval to release for public comment - Nov/Dec 2021

Board Action -

CRTPO –

Approval to release for public comment – Nov/Dec 2021

Board Action –

Public Comment Period Begins -

TCPCP – Previous comments have been incorporated and will be forwarded for agency review

**Transportation Conformity Process Schedule
2050 Metropolitan Transportation Plan**

EPAs public comment period ends – July 23, 2021

Without public comments – 60-day process – September 23, 2021

With public comments – 90-day process – Oct 23, 2021

MTP Transportation Conformity Process

CDOT conducts RTDM – 45-day process – October – November 2021

NCDAQ completes Moves modelling – November -December 2021

Draft Conformity Determination Report is completed– January 2021

Drafter - Phil

MPOs plan to release draft Conformity Determination Report

CRMPO Board meeting– October/November 2021

CRTPO Board meeting- November 2021

GCLMPO Board meeting- November 2021

Public Comment Period begins – 30-days – January/February 2022

Final MPO board action to Conformity Process –

CRMPO Board Meeting – March 2022

CRTPO Board Meeting – March 2022

GCLMPO Board Meeting -March 2022

Federal agency 30-day review – April 1 – May 2, 2022

USDOT approval - April/May 2022

From: Barren, Loretta (FHWA) [mailto:Loretta.Barren@dot.gov]

Sent: Thursday, August 26, 2021 4:20 PM

To: Josue Ortiz Borrero <OrtizBorrero.Josue@epa.gov>; Alex Riemondy <alex.riemondy@ci.charlotte.nc.us>; Andy Bailey <jabailey@ncdot.gov>; Anna Gallup <agallup@charlottenc.gov>; Bob Cook <rwcook@charlottenc.gov>; Brian Phillips <brian.phillips@ncdenr.gov>; Dianna Myers <myers.dianna@epa.gov>; Dominique Boyd <dlboyd1@ncdot.gov>; Heather Hildebrandt <hjhildebrandt@ncdot.gov>; Hoops, George (FHWA) <George.Hoops@dot.gov>; Jill Vitas <jill.vitas@ncdenr.gov>; Joey Huang <joe.y.huang@ncdenr.gov>; Julio Parades <juliop@cityofgastonia.com>; Martin Kinnamon <mkinnamon@ci.charlotte.nc.us>; Megan Green <megan.green@mecklenburgcountync.gov>; Melton, Boyd (FTA) <Keith.Melton@dot.gov>; Neil Burke <nburke@charlottenc.gov>; pconrad mblsolution.com <pconrad@mblsolution.com>; Phyllis Jones <pdjones@ncdot.gov>; Randi Gates <randig@cityofgastonia.com>; Richard Wong <wong.richard@epa.gov>; Sarah Larocca <larocca.sarah@epa.gov>; Sheila Blanchard <sheila.blanchard@ncdenr.gov>; Tammy Manning <tammy.manning@ncdenr.gov>; Todd Paisley <todd.paisley@ncdenr.gov>; Travis Johnson <travis.johnson@charlottenc.gov>; Wasserman, David S (dswasserman@ncdot.gov) <dswasserman@ncdot.gov>

Subject: Metrolina Kickoff Meeting Notes August 2021

Good afternoon,

Please review the attached meeting notes from our Kickoff today. I have also attached the revised TCPCP for review and comment. Please provide your comments on these documents by September 15.

If you have any questions, please contact me.

Loretta Barren

Air Quality, Planning and Environment Specialist

919-747-7025

Loretta.barren@dot.gov

Metrolina Region Transportation Conformity Process
Notes
August 26, 2021

Welcome and Introductions

Attendees

CDOT – Anna Gallup, Alex Riemondy, Martin Kinnamon

CRMPO – Phil Conrad

CRTPO – Neil Burke, Bob Cook, Jason Johnson

EPA – Dianna Myers, Sarah LaRocca, William Carnright, Joshue Ortiz

FHWA – Loretta Barren, George Hoops

GCLMPO – Randi Gates, Julio Parades

Mecklenburg Co. Air Quality – Megan Green

NCDAQ – Brian Phillips, Sheila Blanchard, Jill Vitas

NCDOT – Heather Hildebrandt, Phyllis Jones, Andy Baily, Dominique Boyd, Roger Castillo, David Wasserman

Rocky River RPO – Lee Snuggs

SIP Amendment Approval Process – EPA

The comment period ended on July 23, 2021.

No public comments were received.

New budgets will become final and approved for use on September 24, 2021.

MTP and TIP Amendments

The MPOs and NCDOT have agreed that the October Item N will be the last set of amendments to be included in the modelling process. NCDOT has provided the October Item N handout to the MPOs. This Item N will be approved at the October NCBOT meeting. The MPOs have agreed to review the October Item N and provide any adjustment to the Anna as soon as possible. Any other project changes (modifications) that NCDOT has provided in the Item N can be approved by the MPO based on their public involvement plan.

Anna Gallup would prefer that any additional changes be submitted to the Model Team by no later than mid-September to ensure modelling can begin in mid-October. If modelling can begin sooner, Anna will start the process earlier and provide the data to NCDAQ earlier.

Modelling Process Timeframe

CDOT would like to begin the modelling process by no later than mid-October.

MOVES Modelling process timeframe

Loretta Barren previously confirmed that NCDAQ would complete the MOVES modelling by December of 2021. She will confirm with Todd Paisley and Tammy Manning that this timeframe takes into account the holiday season.

Transportation Conformity Determination Report

Phil Conrad, CRMPO volunteered to draft the conformity determination report. Phyllis Jones will send a copy of the last report to Phil for use and update as part of this process. The Conformity Determination Report should be available for public/agency review and comment in January.

MPO adoption Schedule

CRMPO: Approval to release CDR/MTP for public comment – January 2022
Public Comment period – February 2022
Final Board Action – March 2022

GCLMPO: Approval to release CDR/MTP public comment – January 2022
Public Comment period – February 2022
Final Board Action – March 2022

CRTPO: Approval to release CDR/MTP for public comment – November 2021
Public comment period January – February 2022
Board Action – March 2022

Based on the MPOs scheduled board approvals of their MTPs, Federal Action would occur in the April/May timeframe. This would result in the MPOs MTPs being in a conformity lapse from March 19 until FHWA approval the MTPs since the prior MTPs were approved March 19, 2018.

TCPCP

Previous comments have been incorporated into TCPCP and will be forwarded to agencies for a final review.

Actions

1. Loretta Barren will review and work with MPOs to ensure that all amendments are included in the conformity modeling process.
2. David Wasserman will check to see if there will be any anticipated project impacts during the conformity lapse which is anticipated to extend from March until FHWA approval of the MTPs.
3. Loretta Barren will send Todd Paisley and Tammy Manning the modeling schedule for additional review.
4. Phil Conrad has volunteered to draft the conformity determination report (CDR).
5. Phyllis Jones will send the previous CDR to Phil Conrad.

Metrolina Region Conformity Discussion
September 30, 2020

Attendees:

David Hooper, RFATS; Alex Riemondy, CDOT; Mark Kinnamon, CDOT; Randi Gates, GCLMPO; Leslie Coolidge, SC DHEC; Anna Gallup, CDOT; Catherine Mahoney, CRTPO; Dianna Myers, EPA; Andy Bailey, NCDOT; Dominique Boyd, NCDOT; Sarah Larocca, EPA; Phil Conrad, CRMPO; Shelia Blanchard, NCDAQ; Phyllis Jones, NCDDOT; Jill Vitas, NCDAQ; Yolanda Morris, FHWA-SC, Suzette Morales, FHWA-NC; Loretta Barren, FHWA-NC; Richard Wong, EPA; Brian Phillip, NCDAQ; Tammy Manning, NCDAQ; Samuel Christmas, SC DHEC; George Hoops, FHWA-NC

Purpose - To discuss the upcoming conformity process schedules and concerns for SC and NC MPOs

The RFATS MTP conformity process is about to get underway. Anna Gallup should have model runs completed mid to late October. The model runs will utilize the latest planning assumptions from all 4-MPOs, and have a 2050 horizon year. The MTP process should be complete by June 2021.

NCDOT has proposed TIP amendment changes impacting CRTPO (approx. 15 projects), CRMPO (approx. 2 projects) and GCLMPO (approx. 3 projects). There remains the potential for additional changes in future TIPs that could impact transportation conformity.

Anna was concerned about having and using 2-different models. The current model has a 2045 horizon year and coincides with all the current 2045 MTPs. The RFATS model will have a 2050 horizon year and is updated with the latest SE data from all 4-MPOs. The NC MPOs have adopted new SE data but have not used it for modelling purposes. Dianna, explained that based on the conformity regulation the MPOs would need to use the latest and available SE data for transportation conformity. Based on that discussion it was determined that the updated 2050 model would become the official and only model for the region.

Loretta explained that the NC MPOs are in a SIP revision process to increase budgets. Dianna stated that the SIP revision is an 18-month process, and will require an approval from EPA, adequacy is not an option. She further stated that, she would work with us as much as possible on the approval date. She will coordinate internally and let us know the schedule.

Loretta ask Phil and Randi if they wanted to move forward with their TIP amendments, since SIP budgets are not a concern for their areas. Randi indicated there was no urgency, so she would recommend waiting. Phil wanted to think further about it. He also asked, if a test model run could be conducted to see if CRTPO could pass without budget changes. Anna, indicated she could do the model runs but would need assistance from NCDAQ for the Moves process. Tammy stated that further discussions with Todd Paisley with NCDAQ would be needed.

Next Steps:

1. Anna will move forward with the RFATS transportation conformity process, including the NC amendments as a test.
2. Anna will contact Randi and Tammy with NCDAQ to discuss running the Moves model for the NC test runs

3. Anna will contact Loretta when test runs are complete, so that at least a conference call can be scheduled to discuss next steps
4. Dianna Myers will let us know the NC SIP revision schedule

From: Myers, Dianna [mailto:Myers.Dianna@epa.gov]

Sent: Monday, March 29, 2021 10:44 AM

To: Barren, Loretta (FHWA) <Loretta.Barren@dot.gov>; Burke, Neil <nburke@ci.charlotte.nc.us>; Catherine Mahoney <cmahoney@ci.charlotte.nc.us>; Bob Cook <rwcook@charlottenc.gov>; pconrad mblsolution.com <pconrad@mblsolution.com>; Randi Gates <randig@cityofgastonia.com>; Jane Love <janel@cityofgastonia.com>; Paredes, Julio <juliop@cityofgastonia.com>; Andy Bailey <jabailey@ncdot.gov>; Dominique Boyd <dboyd1@ncdot.gov>; Jones, Phyllis Denise <pdjones@ncdot.gov>; Heather Hildebrandt <hjildebrandt@ncdot.gov>; todd.pasley <todd.pasley@ncdenr.gov>; Vitas, Jill B <Jill.Vitas@ncdenr.gov>; Gallup, Anna <Anna.Gallup@charlottenc.gov>; Larocca, Sarah <Larocca.Sarah@epa.gov>; Brian Phillips <brian.phillips@ncdenr.gov>; Heather Hildebrandt <hjildebrandt@ncdot.gov>; Wong, Richard <Wong.Richard@epa.gov>

Cc: Hoops, George (FHWA) <George.Hoops@dot.gov>; Morales, Suzette (FHWA) <omojojadavwe.morales@dot.gov>

Subject: RE: Metrolina Kick-off Meeting

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Loretta,

Please see EPA's comments on the Pre-consensus Plan. Let me know if you have any additional questions.

Dianna B. Myers
Regional Transportation Conformity Contact
Air Regulatory Management Section-ARD
US Environmental Protection Agency
Phone-(404) 562-9207 Fax-(404) 562-9019
Email-myers.dianna@epa.gov

From: Barren, Loretta (FHWA) <Loretta.Barren@dot.gov>

Sent: Monday, March 1, 2021 8:02 AM

To: Burke, Neil <nburke@ci.charlotte.nc.us>; Catherine Mahoney <cmahoney@ci.charlotte.nc.us>; Bob Cook <rwcook@charlottenc.gov>; pconrad mblsolution.com <pconrad@mblsolution.com>; Randi Gates <randig@cityofgastonia.com>; Jane Love <janel@cityofgastonia.com>; Paredes, Julio <juliop@cityofgastonia.com>; Andy Bailey <jabailey@ncdot.gov>; Dominique Boyd <dboyd1@ncdot.gov>; Jones, Phyllis Denise <pdjones@ncdot.gov>; Heather Hildebrandt <hjildebrandt@ncdot.gov>; Pasley, Todd <todd.pasley@ncdenr.gov>; Vitas, Jill B <Jill.Vitas@ncdenr.gov>; Myers, Dianna <Myers.Dianna@epa.gov>; Gallup, Anna <Anna.Gallup@charlottenc.gov>; Larocca, Sarah <Larocca.Sarah@epa.gov>; Brian Phillips <brian.phillips@ncdenr.gov>; Heather Hildebrandt <hjildebrandt@ncdot.gov>

Cc: Hoops, George (FHWA) <George.Hoops@dot.gov>; Morales, Omojojadavwe (FHWA) <omojojadavwe.morales@dot.gov>

Subject: Metrolina Kick-off Meeting

Hello everyone,

First, let me apologize for not sending these files earlier. You will find attached the schedule and the Pre-Analysis Consensus Plan.

Today, we will review the process before us, the schedule and the consensus plan.

If you have any questions, please let me know.

Loretta

Loretta W. Barren | Air Quality, Planning and Environment Specialist
Federal Highway Administration | North Carolina Division Office
P: 919.747.7025 | E: loretta.barren@dot.gov

Metrolina Area Transportation Conformity:
Pre-Analysis Consensus Plan (8-Hour Ozone)

September 8, 2021

**Prepared Cooperatively Between the
Charlotte Regional Transportation Planning Organization, Cabarrus Rowan Metropolitan
Planning Organization, the Gaston Cleveland Lincoln Metropolitan Planning Organization and
the Rocky River Rural Planning Organization
North Carolina Department of Transportation
and the
Federal Highway Administration**

**Metrolina Area Transportation Conformity:
Pre-Analysis Consensus Plan
September 8, 2021**

The Charlotte Regional Transportation Planning Organization (CRTPO) and the North Carolina Department of Transportation (NCDOT-representing rural portions of the Metrolina maintenance area are proposing the following plan and procedures to conduct a transportation conformity analysis. This plan is being submitted to the interagency consultation partners for soliciting consensus before commencement of a full-scale transportation conformity analysis. The plans and procedures may be revised as the MPO's and NCDOT proceed with the analysis. After consensus is reached; notification of changes will be made to the interagency consultation partners.

Metrolina Area MPOs (*for this conformity process*):

- ❑ Charlotte Regional Transportation Planning Organization (CRTPO)
- ❑ Cabarrus Rowan Metropolitan Planning Organization (CRMPO)
- ❑ Gaston Cleveland Lincoln Metropolitan Planning Organization (GCLMPO)

Donut Areas:

- ❑ Rural portion of Union county outside of the MPO area

The following pollutants will be included in this conformity determination:

- 1997 8-Hour Ozone - No regional emissions analysis per 40 CFR 93.109(c).
- ❑ 2008 8-Hour Ozone

Metropolitan Transportation Plan (MTP) and Metropolitan Transportation Improvement Program (MTIP)

1. Existing Land Use and Demographics: For CRTPO, CRMPO, GCLMPO and rural (donut) Union County

Staff collected data as outlined in Attachment A. An economist was contracted to produce population, household, and employment estimates in five-year increments from 2010 to 2050 using

a top down approach. The Regional partners then applied local knowledge to finalize the county totals in their areas and produce the Traffic Analysis Zone (TAZ) level base year data. CRMPO also applied local knowledge to produce their TAZ level projections. CRTPO and GCLMPO used the Metrolina CommunityViz Model v2.0 as a base year data management tool and applied the model to develop TAZ level projections. The Metrolina CommunityViz Model was developed under contract to the Centralina Council of Governments and City Explained, Inc.

Data sources include the following:

- 2018 Census **Estimates**
- 2014-2018 American Community Survey, North Carolina Office of State Budget and Management 2018 data and projections;
- NCSTM Gen 4 SE data for P6.0;
- 2018 InfoUSA employment data;
- Institute of Transportation Engineers Trip Generation Manual, Ninth Edition;
- 2010 Public Use Microdata Sample (PUMS) data;
- Bureau of Economic Analysis (BEA) data;
- area school system data;
- building permit data;
- tax data;
- zoning; and
- land use plans

2. MTP Model Validation (Base) Year:
2018

TIP Years: 2020-2029

4. MTP Horizon Year: 2050

5. MTP Travel Demand Intermediate Years: 2025, 2035, and 2045

6. Transportation Conformity Analysis Years (2008 8-Hour Ozone)

The Tables below summarize transportation conformity analysis methods and years for the different parts of the Metrolina non-attainment/maintenance areas. Specific conformity year information is listed in the following tables:

2008 O3 Maintenance SIP

| County | Area model status | Area emissions budget status | Emissions analysis source | Emission comparison years | | |
|---|-------------------|------------------------------------|---------------------------|-----------------------------|----------------|------------------------|
| | | | | 2026 ² (modeled) | 2035 (modeled) | 2045 Horizon (modeled) |
| Charlotte Region TPO-Rocky River RPO MVEB (all of Mecklenburg and portions of Union and Iredell County in the maintenance area) | Modeled all | 2008 8-Hour Ozone Maintenance Plan | MRM ¹ | O3 | O3 | O3 |
| Cabarrus Rowan MPO (portions of Cabarrus and Rowan County in the maintenance area) | Modeled all | 2008 8-Hour Ozone Maintenance Plan | MRM ¹ | O3 | O3 | O3 |
| Gaston Cleveland Lincoln MPO (portions of Gaston and Lincoln County in the maintenance area) | Modeled all | 2008 8-Hour Ozone Maintenance Plan | MRM ¹ | O3 | O3 | O3 |

1. The base year of the MRM is 2018
2. 2026 is a SIP MVEB for NOx and VOC

Additional table notes and explanations:

County:

- 2008 Ozone: The Metrolina area is maintenance for the 2008 Ozone Standard which consists of 1 whole county and 6 partial counties (Mecklenburg (CRTPO), Union (CRTPO-partial), Union (RRRPO-donut), Gaston (GCLMPO-partial), Cabarrus (CRMPO-partial) Rowan (CRMPO-partial), Lincoln (GCLMPO partial) and Iredell (CRTPO-partial).

**Note: a donut area is an area outside the MPO boundary but within the non-attainment/maintenance area.*

Model Status: Mecklenburg, Union, Cabarrus, Rowan, Gaston, and Lincoln, plus one partial county (Iredell) are completely within the Metrolina Regional Model (MRM) boundary.

Emissions analysis years:

- 2008 8-hour Ozone Standard Maintenance SIP: 2026 (modeled) 2035 (modeled) 2045 (modeled) & 2050 (modeled)

Emission analysis source: The VMT and speeds for the regional emissions analysis (REA) will be derived from the MRM.

Emission Comparison Years:

- Motor Vehicle Emissions Budget Test
 - **2008 8-Hour Ozone Maintenance SIP:** (Gaston-partial, Mecklenburg, Cabarrus-partial, Rowan-partial, Union-partial, Lincoln-partial, and Iredell-partial, 2026 (modeled-compare to 2026), 2035 (modeled- compare to 2026 MVEB), 2045 (modeled-compare to 2026 MVEB), and 2050 (modeled-compare to 2026 MVEB)

List of Specific Conformity Years

2008 8-Hour Ozone Maintenance SIP

Horizon: 2045

a. 2008 8-Hour Ozone Maintenance SIP MVEB Years: 2026

b. Emission comparison years (NOx and VOC): 2026 (modeled), 2035, 2045 & 2050

7. Non-attainment / Maintenance Counties:

- 2008 8 Hour Ozone Maintenance Area: Gaston Co. (partial), Mecklenburg Co., Cabarrus Co. (partial), Rowan Co.(partial), Union Co.(partial), Lincoln (partial), and Iredell Co. (partial)

8. Land-Use Demographics Projections/Forecast:

Land-use demographic projections for the region were developed using both a top-down and bottom-up approach.

An economist was contracted to develop regional and county level population, household, and employment projections for 5-year increments from 2010 to 2050 through a top-down forecasting approach. The economist's forecasting model is based on the metropolitan growth of 43 mid-sized US regions and calibrated to trends and capture rates in the Metrolina region over the past 40 years. Refer to the *METROLINA REGIONAL DEMOGRAPHIC AND ECONOMIC DATA AND*

DATA FORECASTS (DRAFT REPORT), December 12, 2012, by Stephen J. Appold, PhD for more detailed information. MPO and RPO staff also reviewed county level projections from the sources referenced previously in this section and then applied local knowledge reflecting current local policies and plans to finalize county-level control totals for 2025, 2035, 2045, and 2050.

TAZ level 2025, 2035, 2045, and 2050 population, household, and employment data was projected for CRTPO and GCLMPO through a top-down /bottom-up forecasting approach using the Metrolina CommunityViz Model v2.0. CRMPO applied local knowledge through a manual process to allocate projected data to the TAZ level. For both approaches, data inventoried for the base year was used as quantitative inputs to the process of deriving projections. Qualitative inputs to the projections to both processes include future land use plans, building permits data, transportation plans and other capital improvements plans (such as water and sewer extensions and schools construction), and other factors limiting development (such as soils, floodplains, and water supply watershed regulations). Refer to the Metrolina CommunityViz Model v2.0 Technical Summary Document, September 2, 2020, by Matt Noonkester, AICP, City Explained, Inc. for detailed information.

9. Travel Demand Model: Metrolina Regional Model (MRM)

The regional travel demand model is a simplified tour-based model developed for a 2-state, 12-county (9 whole, 3 partial) region (refer to **Attachment B**). The modeling area encompasses 4 MPOs and 1 RPOs.

As described previously, a multitude of land use and demographic data was collected as input into the model. Additional data collected includes transit and highway network data as well as multiple travel surveys. Transit data collected includes routes, headways, and travel times. Refer to Attachment C for the highway network data dictionary. Following is a list of the travel surveys completed:

- 2001 (Freeway) and 2013 (non-freeway and freeway) External Travel Survey;
- 2018 Passive Origin Destination Data;
- 2012 Household Travel Survey;
- 2013 On-board Transit Survey of Express and Local Buses and South Corridor Light Rail Transit (LRT) Survey and Counts;
- 2018 HERE Speed Data; and
- 2017-2019 Vehicle Classification Counts

10. Mode Split / Mode Choice:

The nested logit mode-choice model is structured similar to the Houston-Galveston Area Council’s regional travel model. Nesting and mode constants were developed using CATS’s on-board ridership survey conducted in 2013.

Transit paths include in-vehicle travel time, out-of-vehicle time (walking / driving and waiting), transfers, and direct cost (fare, parking). Four trip purposes are modeled. For the Home-Based Work, Home-Based-Other, and Home-Based University trip purposes, the potential transit Council’s regional travel model. Nesting and mode constraints were developed using CATS’s on-board ridership survey conducted in 2013.

Walk, drive, and drop-off approaches are handled in the nesting structure. Parking is provided at selected suburban stations.

The mode choice model was developed under contract with AECOM Consult

11. Local Street Count & VMT Estimate:

Vehicle miles of travel (VMT) – the sum of the distance that each vehicle travels during a specified period (day, year, etc.) – is the most typical measure of the level of travel in an area. Like most statistics, it is still impossible to actually measure. To do so, *all* vehicles would have to be monitored all day. The most common method of estimating VMT uses traffic counts. We have a large count database from CDOT, NCDOT, and SCDOT including counts from 2000 – 2019. Each count will be factored to the base year 2018. Average Daily Traffic volumes will be factored to Average Weekday volumes. The adjusted base-year weekday counts are then aggregated by County and functional class. The average (mean) volume for each county / functional class will be multiplied by the number of road miles to obtain VMT. For future year estimates, the travel demand model, calibrated to the base year counts and VMT, will provide VMT for thoroughfares (VMT = assigned volume * length).

Local streets make up 60%-70% of the roadway miles, but a much smaller fraction of VMT. Most serve to accumulate traffic from neighborhoods. The bulk of the trip is then made on thoroughfares (that are modeled). Few local streets are included in the model. Counts are sporadic and usually concentrated on local streets experiencing traffic problems. Many of the local streets are represented by zonal centroid connectors in the model. We will use the centroid connectors times 2 to better approximate actual local VMT. VMT derived with this method compares favorably with local VMT estimated using street miles and assumed volumes. The centroid method provides a better method of relating VMT to high growth TAZs.

12. Rural (Donut) Area Projects

The rural areas do not develop long range transportation plans like the MPOs. The rural area projects that are included in the conformity regional emissions analysis (REA) come from the State TIP. It is NCDOT's position that projects that are in the State TIP and have right of way or construction phases scheduled in the first seven years should be included in the REA. In addition, for rural areas adjacent to an MPO the MPO may extend projects outside their boundary to a logical terminus. The MPO may include the portion outside of their MPO boundary in the financial element of their MTP.

13. VMT Adjustments:

No VMT adjustments are used.

14. Motor Vehicle Emissions Budgets

Three ozone maintenance areas are included within the seven-county Metrolina area:

a. 2008 8-Hour Ozone NAAQS Maintenance Area.

The Charlotte-Gastonia-Salisbury, North Carolina Marginal Nonattainment Area for the 2008 8-hour ozone NAAQS was redesignated as attainment on July 28, 2015 with an effective date of August 27, 2015. The maintenance plan was revised, with modifications to the NOx and VOC MVEBs, with an effective date of October 15, 2015. The maintenance area consists of 1 whole county and 6 partial counties (Mecklenburg (CRTPO), Union (CRTPO-partial), Union (RRRPO-donut), Gaston (GCLMPO-partial), Cabarrus (CRMPO-partial) Rowan (CRMPO-partial), Lincoln (GCLMPO partial) and Iredell (CRMPO-partial). Motor vehicle emissions budgets (MVEBs) were established for three sub-areas within the Metrolina area which are generally defined by MPO jurisdictional boundaries. The MVEBs are show in the table below.

| NOx Budgets: 2008 8-hour Ozone NAAQS | | | | |
|---|------------------|---|-------------|-------------|
| Budget Area | MVEB Year | Comparison Years & MVEB (kg/day) | | |
| | | 2026 | 2035 | 2045 |
| Cabarrus Rowan MPO | 2026 | 4903 | 4903 | 4903 |
| Gaston Cleveland Lincoln MPO | 2026 | 3768 | 3768 | 3768 |
| Mecklenburg Union MPO/ Rocky River RPO | 2026 | 12,241 | 12,241 | 12,241 |

| VOC Budgets: 2008 8-hour Ozone NAAQS | | | | |
|---|------------------|---|-------------|-------------|
| Budget Area | MVEB Year | Comparison Years & MVEB (kg/day) | | |
| | | 2026 | 2035 | 2045 |
| Cabarrus Rowan MPO | 2026 | 4,888 | 4,888 | 4,888 |
| Gaston Cleveland Lincoln MPO | 2026 | 3,472 | 3,472 | 3,472 |
| Mecklenburg Union MPO/ Rocky River RPO | 2026 | 11,943 | 11,943 | 11,943 |

15. Control Strategies: Emission reduction credits will be taken for the following on-road mobile SIP commitments or Federal programs. Currently there are no TCMs in the Metrolina Area SIPs.

| <u>Strategy</u> | <u>Methodology/Approach</u> |
|---|---|
| <i>I/M Program</i> | <i>Accounted for in the MOVES model</i> |
| <i>Tier 2/Tier 3 vehicle's Emission Standards</i> | <i>Accounted for in the MOVES model</i> |
| <i>Low Sulfur Gasoline and Diesel fuels</i> | <i>Accounted for in the MOVES model</i> |
| <i>Heavy Duty Vehicle Rules 2004 and 2007</i> | <i>Accounted for in the MOVES model</i> |
| <i>Low RVP Gasoline</i> | <i>Accounted for in the MOVES model</i> |
| <i>On board vapor recovery</i> | <i>Accounted for in the MOVES model</i> |

16. MOVES Model Settings: The following model-input parameters will be used in the conformity analysis.

- **2008 Eight Hour Ozone Standard Maintenance Area*:** Cabarrus (partial), Gaston (partial), Lincoln (partial), Mecklenburg, Rowan (partial), Union (partial) and Iredell (partial)

MOVES Model (MOVES2014a)

MOVES Model Settings: The following MOVES model-input parameters will be used in the conformity analysis performed by DAQ.

| Parameter | Details | Data Source |
|--|---|--------------------|
| a. <i>Emissions Model Version(s):</i> | (MOVES2014b) or latest | |
| b. <i>Emission Model Runs:</i> | Typical Summer Weekday (NOx and VOC) | |
| c. <i>Evaluation month:</i> | July (NOx and VOC) | |
| d. travel periods | Time Periods: VMT and speeds modeled for 4 daily (see item #24 below) will be processed according to USEPA guidance to generate hourly speed and VMT distribution data in the required MOVES input formats. | |
| e. <i>Pollutants Reported:</i> | NOx, VOC | |
| f. <i>Emissions Budget Years:</i> | 2008 NAAQS: 2026 (NOx and VOC) | |
| g. <i>Emissions Analysis Years:</i> | 2008 NAAQS: 2026, 2035, 2045, and 2050 | |
| h. <i>Temperature and Relative Humidity:</i> | 2008 NAAQS: July 2014 monthly average 24-hour temperature and relative humidity profiles from the Charlotte-Douglas International Airport (KCLT). | |
| i. <i>Vehicle Classes:</i> | 13 | |

- j. **VMT mix:** Statewide mix based on 2017 data using the method in the August 2004 USEPA Guidance.
- k. **Speed Distribution:** Regional Model MRM22v1.0
- l. **Source type (vehicle type) age distribution:** The latest available 2017 (may use 2018 if available) vehicle registration data provided by NCDOT, which also includes a breakdown of the number of vehicles by model year, will be used to create the required source type age distribution input file for each county. As per EPA guidance, the source type age distribution will not be projected for future years.
- m. **I/M Program:** The following I/M program parameters will apply: compliance rate = 96%, waiver rate = 5% with an exemption for vehicles from the 3-year latest model years.
- n. **RVP:** July 9.0 psi for all counties
- o. **Source Type (vehicle type) Population:** Vehicle population estimates will be developed for each future modeling year based on the latest available 2016 vehicle registration data provided by NCDOT. This data includes the total number of registered vehicles by county, divided into nine source type categories. The data will first be reorganized into thirteen source type categories (i.e. passenger cars, light commercial trucks, combination long-haul trucks, etc.) as required for MOVES2014a. These source type population estimates will then be projected for each required modeling year, using the same base and future year-county human population data that were used in the TDM model, according to the following formula:

$$\text{Total Vehicle Population}_{\text{future year}} = \text{Total Vehicle Population}_{\text{base year}} * \left(\frac{\text{Human Population}_{\text{future year}}}{\text{Human Population}_{\text{base year}}} \right)$$

- p. **Strategies:** None

17. Emissions analysis units, conversion factors, significant figures, rounding and truncating conventions:

Units= Kilograms or Grams

Grams to tons conversion factor= Divide x grams by 907184.7 to get tons

Round to 2 decimal places

18. CMAQ Projects: Not Applicable

19. Regionally Significant Projects (Federal and Non-Federal): Not Applicable

20. List of Exempt Projects and Non-Regionally Significant Projects (Federally Funded):
Not Applicable

21. Conformity Schedule: (A draft conformity schedule has been developed and is provided as an attachment to this document)

22. Conformity Determinations: Four organizations will be responsible for making conformity determinations in two distinctive parts of the Metrolina non-attainment/maintenance areas:

- i. The CRTPO within its metropolitan area boundary (MAB) -all of Mecklenburg County and parts of Union and Iredell County
- ii. The CRMPO within its metropolitan area boundary (MAB) – parts of Cabarrus and Rowan County
- iii. The GCLMPO within its metropolitan area boundary (MAB) – parts of Gaston and Lincoln County
- iv. The NCDOT for the rural areas are comprised of the parts of Union County that are outside of any MPO MAB

Each of these responsible organizations must make a conformity determination for its respective area to ensure all areas will be designated in conformity.

The following resolutions will be needed for this conformity process:

- CRTPO/CRMPO/GCLMPO
 - 2050 MTP adoption
 - 2020-2029 TIP amendment adoption
 - Conformity Determination for the 2050 MTP
 - Conformity Determination for the 2020-2029 amended TIP
- NCDOT Conformity Determination for the donut area of Union County

23. Other

- Any reference to York County in this document has been removed since EPA has made the 8-hour ozone designations. Although a portion of York County, South Carolina was designated as part of the bi-state Charlotte 8-hour ozone nonattainment area, they are allowed to demonstrate transportation conformity independent of the North Carolina portion of this nonattainment area. Therefore, the planning assumptions and methodologies used for the York County, South Carolina portion of this nonattainment area is reflected in a separate transportation conformity determination that is generated by the Rock Hill-Fort Mill Area Transit Study Metropolitan Planning Organization.
- The techniques used for this conformity process are the following:
 - VMT and speed will be done for 4 times of day (the 4 times of days are summed for the regional emissions analysis)
 - 6:30 am - 9:30 am
 - 9:30 am - 3:30 pm
 - 3:30 pm - 6:30 pm
 - 6:30 pm - 6:30 am
 - For the MOVES modeling component, the times of day will consist of whole hours and are as follows:
 - 6:00 am – 9:00 am
 - 9:00 am - 3:00 pm
 - 3:00 pm - 6:00 pm
 - 6:00 pm - 6:00 am

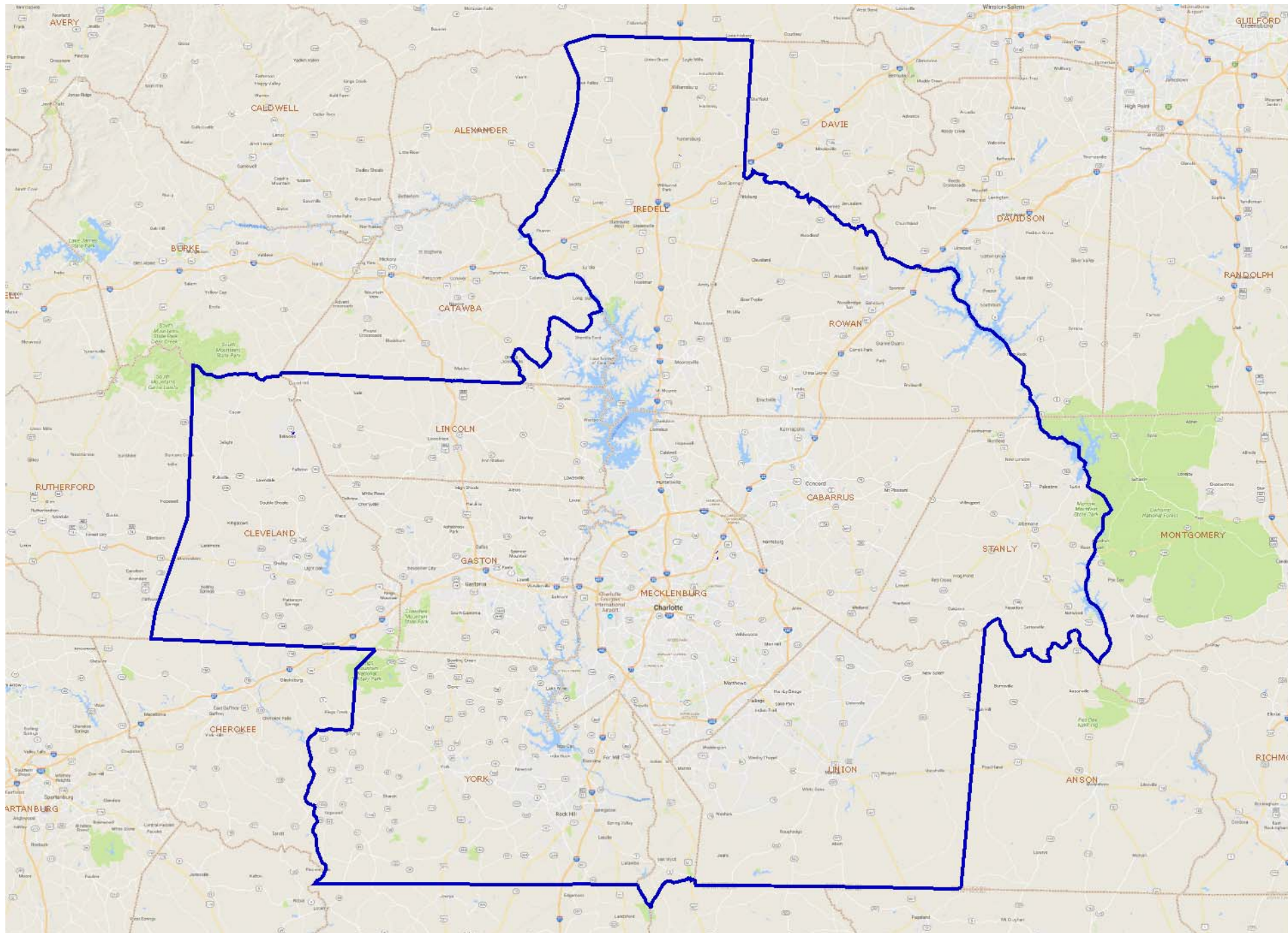
ATTACHMENT A

MRM18v1.0 SE Data Dictionary

Data Fields:

| | |
|-------------------|--|
| TAZ | Modeled Traffic Analysis Zone |
| HH | Number of households in TAZ |
| POP | Total population in TAZ |
| POP_HHS | Household population in TAZ |
| POP_GRP | Group quarters population in TAZ |
| MED_INC | Median HH income in TAZ |
| LOIND | Number of manufacturing, industrial, warehouse, rail transportation, water transportation, pipeline transportation, wholesale, and utilities employees based on NAICS |
| HIIND | Number of construction, communication, waste management, postal service, air transportation, and truck transportation employees based on NAICS |
| RTL | Number of retail employees based on NAICS |
| HWY | Number of highway retail employees based on NAICS |
| LOSVC | Number of low visitor service employees based on NAICS |
| HISVC | Number of high visitor service employees based on NAICS |
| OFFGOV | Number of office and government employees base on NAICS |
| EDUC) | Number of school, college, and university employees based in NAICS |
| STU_K8 schools | Number of pupils enrolled in public or private kindergarten, elem., and middle schools |
| STU_HS | Number of pupils enrolled in public or private high schools |
| STU_CU | Number of pupils in public or private colleges and universities |
| TOTEMP | Total number of employees (sum of LOIND, HIIND, RTL, HWY, LOSVC, HISVC, OFFGOV, and EDUC fields) |
| DORM | A "1" entered in this field indicates there are dorms located in the TAZ |
| STCNTY) | State and County FIPS code |
| AREA | GIS calculated TAZ area (square miles) |
| SEQ | Sequential TAZ numbering system needed for the mode split model |
| AREA_LU | Partner reported area (square miles) of TAZ less the area of bodies of water |
| DISTRICT | TAZs grouped into sub-county "districts" (used in the 2002 and 2010 SE employment data reconciliation processes); STCNTY concatenated with sequenced numbers (ie. Cabarrus County has 4 sub-county districts: 1, 2, 3, and 4) – refer to attached Metrolina TAZ Sub-County Regions mapping |

Attachment B



| Field | FIELD_NAME | TYPE | WIDTH | DEC | Value | Description | Source | Notes |
|-------|------------|------|-------|-----|-------|--|--------------------|----------------------------------|
| 1 | ID | Int | 10 | | | TransCad ID | TransCad | |
| 2 | Length | Real | 10 | 2 | | Length (miles) | TransCad | |
| 3 | Dir | Int | 2 | | | Direction code | Model Team | |
| | | | | | 1 | One way - A to B | | |
| | | | | | 0 | Two way | | |
| | | | | | -1 | One way - B to A | | |
| 4 | Anode | Int | 6 | | | A node number | TransCad ID | |
| 5 | Bnode | Int | 6 | | | B node number | TransCad ID | |
| 6 | StrName | Char | 20 | | | Street name | Model Team | |
| 7 | Secondnam | Char | 20 | | | Secondary street name | DOT | |
| 8 | A_CrossStr | Char | 20 | | | Crossing str name at A node | Model Team | |
| 9 | B_CrossStr | Char | 20 | | | Crossing str name at B node | Model Team | |
| 10 | funcnl | Int | 8 | | | Model functional class | Model Team | |
| | | | | | 1 | Freeway | | |
| | | | | | 2 | Expressway | | |
| | | | | | 3 | Class II major tfare | | |
| | | | | | 4 | Major tfare | | |
| | | | | | 5 | Minor tfare | | |
| | | | | | 6 | Collector street | | |
| | | | | | 7 | Local Street | | |
| | | | | | 8 | Ramp to surface street | | |
| | | | | | 9 | Freeway-freeway ramp | | |
| | | | | | 22 | HOV 2+ / Busway | | |
| | | | | | 23 | HOV 3+ / Busway | | |
| | | | | | 24 | HOT 2+ / Busway | | |
| | | | | | 25 | HOT 3+ / Busway | | |
| | | | | | 30 | Transit Only - Rail | | |
| | | | | | 40 | Transit Only - Busway | | |
| | | | | | 82 | Hwy to HOV 2+ / HOT2+ | | |
| | | | | | 83 | Hwy to HOV 3+ / HOT 3+ | | |
| | | | | | 84 | Transit Only - connect to Tran | | |
| | | | | | 90 | Centroid connector | | |
| | | | | | 92 | Centroid conn to transit sta | | |
| | | | | | | Add 900 for links not in current network | | |
| | | | | | 900+ | | | |
| 11 | fedfunc | Char | 2 | | | Federal functional class | State DOTs | |
| | | | | | IU | Urban Interstate | | |
| | | | | | IR | Rural Interstate | | |
| | | | | | FU | Urban other freeway | | |
| | | | | | PU | Urban Principal arterial | | |
| | | | | | PR | Rural Principal arterial | | |
| | | | | | MU | Urban Minor arterial | | |
| | | | | | MR | Rural Minor arterial | | |
| | | | | | CU | Urban collector | | |
| | | | | | CM | Rural - Major collector | | |
| | | | | | CR | Rural - Minor collector | | |
| | | | | | LU | Urban - Local street | | |
| | | | | | LR | Rural - Local street | | |
| | | | | | HO | HOV | | |
| | | | | | TR | Transit only | | |
| 12 | fedfunc_AQ | Char | 5 | | | Air quality functional class | Model Team | Fedfunc - not mileage restricted |
| | | | | | | County + fedfunc concatenated | | Non-attainment area only |
| 13 | AQ_2008NA | Char | 1 | | | Y or N | Model Team | In 2008 NAAQ NA area or not |
| 14 | Co_fedfun | Char | 5 | | | County + fedfunc concatenated | Model Team | Fedfunc - not mileage restricted |
| 15 | lanes | Int | 2 | | | Total number of lanes | calc | Field check |
| 16 | lanesAB | Int | 1 | | | Trunk no. of lanes A to B | Calc / field check | lanes / 2 (field check odd nos.) |
| 17 | lanesBA | Int | 1 | | | Trunk no. of lanes B to A | Calc / field check | lanes / 2 (field check odd nos.) |
| 18 | factype | Char | 1 | | | Facility type | Field check | |
| | | | | | F | Freeway | | |
| | | | | | E | Expressway | | |
| | | | | | R | Ramp | | |
| | | | | | D | Divided - no median breaks | | |
| | | | | | M | Divided - median breaks only | | |
| | | | | | B | Divided - left turn bays | | |
| | | | | | T | Undivided - left turn bays | | |
| | | | | | C | Undivided - continuous left | | use in checking odd no. of lanes |
| | | | | | U | Undivided - no left provision | | |
| 19 | SpdLimit | Int | 8 | | | Speed limit (MPH) | Field check | Use in link speed calc |

| Field | FIELD_NAME | TYPE | WIDTH | DEC | Value | Description | Source | Notes |
|-------|-------------|------|-------|-----|-------|---|-------------|--|
| 20 | SpdLimitRun | Int | 8 | | | Speed limit (MPH) adjusted in future for area type | calc | Use in link speed calc |
| 21 | parking | Char | 1 | | | On-street parking | Field check | Use in link speed / cap calc |
| | | | | | Y | Parking allowed | | |
| | | | | | N | Parking not allowed | | |
| | | | | | A | No parking in AM peak | | |
| | | | | | P | No parking in PM peak | | |
| | | | | | B | No parking in peak | | |
| 22 | pedactivity | Char | 1 | | | Pedestrian activity | Field check | Use in link speed / cap calc |
| | | | | | H | High pedestrian activity | | |
| | | | | | M | Medium pedestrian activity | | |
| | | | | | L | Low pedestrian activity | | |
| | | | | | X | Pedestrians prohibited | | |
| 23 | developden | Char | 1 | | | Development density | Field check | Use in link speed / cap calc |
| | | | | | H | High development density | | |
| | | | | | M | Medium development density | | |
| | | | | | L | Low development density | | |
| | | | | | X | Roadside development prohibited | | |
| 24 | drivewayden | Char | 1 | | | Driveway density | Field check | Use in link speed / cap calc |
| | | | | | H | High driveway density | | |
| | | | | | M | Medium driveway density | | |
| | | | | | L | Low driveway density | | |
| | | | | | X | Driveways prohibited | | |
| 25 | landuse | Char | 1 | | | Land Use | Field check | Use in link speed / cap calc |
| | | | | | D | Center city | Model team | Consider shifting to numeric |
| | | | | | R | Residential | | |
| | | | | | C | Commercial | | |
| | | | | | I | Industrial | | |
| | | | | | O | Open | | |
| | | | | | X | Roadside development prohibited | | |
| 26 | areatp | Char | 1 | | | Area Type | Calculated | Use in link speed / cap calc |
| | | | | | 1 | CBD | | start w/ partners |
| | | | | | 2 | Fringe | | |
| | | | | | 3 | Urban | | |
| | | | | | 4 | Suburban | | |
| | | | | | 5 | Rural | | |
| 27 | A_LeftLns | Int | 1 | | | No. of left turn lanes at A node | Field check | Use in A intersection delay / capacity calc |
| 28 | A_ThruLns | Int | 1 | | | No. of through lanes at A node | Field check | Use in A intersection delay / capacity calc |
| 29 | A_RightLns | Int | 1 | | | No. of right turn lanes at A node | Field check | Use in A intersection delay / capacity calc |
| 30 | A_control | Char | 1 | | | Control at A node | Field check | Use in A intersection delay / capacity calc |
| | | | | | T | Through | | |
| | | | | | L | Signal (light) | | |
| | | | | | S | Stop | | |
| | | | | | F | Four way stop (all appr. stop) | | |
| | | | | | Y | Yield | | |
| | | | | | R | Round about | | |
| 31 | A_prohibit | Char | 1 | | | Prohibitions at A node | Field check | Field check on turn lanes included "X" - assign here |
| | | | | | N | No prohibitions | | |
| | | | | | L | No left | | |
| | | | | | R | No right | | |
| | | | | | T | No through | | |
| | | | | | C | No turns | | |
| 32 | B_LeftLns | Int | 1 | | | No. of left turn lanes at B node | Field check | Use in B intersection delay / capacity calc |
| 33 | B_ThruLns | Int | 1 | | | No. of through lanes at B node | Field check | Use in B intersection delay / capacity calc |
| 34 | B_RightLns | Int | 1 | | | No. of right turn lanes at B node | Field check | Use in B intersection delay / capacity calc |
| 35 | B_control | Char | 1 | | | Control at A node | Field check | Use in B intersection delay / capacity calc |
| | | | | | T | Through | | |
| | | | | | L | Signal (light) | | |
| | | | | | S | Stop | | |
| | | | | | F | Four way stop (all appr. stop) | | |
| | | | | | Y | Yield | | |
| | | | | | R | Round about | | |

| Field | FIELD_NAME | TYPE | WIDTH | DEC | Value | Description | Source | Notes |
|-------|------------|------|-------|-----|-------|--------------------------------------|-------------|---|
| 36 | B_prohibit | Char | 1 | | | Prohibitions at B node | Field check | Field check on turn lanes |
| | | | | | N | No prohibitions | | included "X" - assign here |
| | | | | | L | No left | | |
| | | | | | R | No right | | |
| | | | | | T | No through | | |
| | | | | | C | No turns | | |
| 37 | alpha | Real | 10 | 2 | | Alpha - V/C delay function | Model team | Calibration |
| 38 | beta | Real | 10 | 2 | | Beta - V/C delay function | Model team | Calibration |
| 39 | Count | Char | 1 | 0 | | 2000 Count | Model team | Y or N |
| 40 | AAWT00 | Int | 10 | | | 2001 Count | calc | Calibration check |
| 41 | CNTAAWT05 | Int | 10 | | | Count for calibration | calc | Calibration check |
| 42 | CNTAAWT10 | Int | 10 | | | 2010 Count | calc | Calibration check |
| 43 | CNTAAWT11 | Int | 10 | | | 2011 Count | calc | Calibration check |
| 44 | CNTAAWT12 | Int | 10 | | | 2012 Count | calc | Calibration check |
| 45 | CNTAAWT13 | Int | 10 | | | 2012 Count | calc | Calibration check |
| 46 | CNTAAWT14 | Int | 10 | | | 2012 Count | calc | Calibration check |
| 47 | CNTAAWT15 | Int | 10 | | | 2012 Count | calc | Calibration check |
| 48 | Calib10 | Int | 10 | | | Count for 2010 Calibration | calc | Count for 2010 calibration/validation (accounts for data collected ranging from 2010 to 2013) |
| 49 | Calib15 | Int | 10 | | | Count for 2015 Calibration | calc | Count for 2010 calibration/validation (accounts for data collected ranging from 2013 to 2015) |
| 50 | CntSrc00 | Char | 3 | | | Source of 2000 AAWT | Model team | |
| | | | | | CW | Charlotte AAWT | | |
| | | | | | SW | State AAWT | | |
| | | | | | SD | State AADT(fac) | | |
| | | | | | I1 | Interpolated 1 year between counts | | |
| | | | | | I2 | Interpolated 2 year between counts | | |
| | | | | | I3 | Interpolated 3 year between counts | | |
| | | | | | FU | Growth factor up | | |
| | | | | | FD | Growth factor down | | |
| 51 | CntSrc02 | Char | 3 | | | Source of 2002 AAWT | Model team | |
| | | | | | CW | Charlotte AAWT | | |
| | | | | | SW | State AAWT | | |
| | | | | | SD | State AADT(fac) | | |
| | | | | | I4 | Interpolated 1 year between counts | | |
| | | | | | I5 | Interpolated 2 year between counts | | |
| | | | | | I6 | Interpolated 3 year between counts | | |
| | | | | | FU | Growth factor up | | |
| | | | | | FD | Growth factor down | | |
| 52 | CntSrc05 | Char | 3 | | | Source of 2005 AAWT | Model team | |
| | | | | | CW | Charlotte AAWT | | |
| | | | | | SW | State AAWT | | |
| | | | | | SD | State AADT(fac) | | |
| | | | | | I1 | Interpolated 1 year between counts | | |
| | | | | | I2 | Interpolated 2 year between counts | | |
| | | | | | I3 | Interpolated 3 year between counts | | |
| | | | | | FU | Growth factor up | | |
| | | | | | FD | Growth factor down | | |
| 53 | CntSrc10 | Char | 3 | | | Source of Calib10 | Model team | |
| | | | | | CW | Charlotte AAWT | | |
| | | | | | SW | State AAWT | | |
| | | | | | SD | State AADT(fac) | | |
| | | | | | I4 | Interpolated 1 year between counts | | |
| | | | | | I5 | Interpolated 2 year between counts | | |
| | | | | | I6 | Interpolated 3 year between counts | | |
| | | | | | FU | Growth factor up | | |
| | | | | | FD | Growth factor down | | |
| 54 | MTK05 | Int | 10 | | | 2005 Medium Truck Count | calc | Calibration check |
| 55 | MTK10 | Int | 10 | | | 2010/11/12 Medium Truck Count | calc | Calibration check |
| 56 | MTK15 | Int | 10 | | | 2015/14/13 Medium Truck Count | calc | Calibration check |
| 57 | HTK05 | Int | 10 | | | 2005 Heavy Truck Count | calc | Calibration check |
| 58 | HTK10 | Int | 10 | | | 2010/11/12 Heavy Truck Count | calc | Calibration check |
| 59 | HTK15 | Int | 10 | | | 2015/14/13 Heavy Truck Count | calc | Calibration check |

| Field | FIELD_NAME | TYPE | WIDTH | DEC | Value | Description | Source | Notes |
|-------|-------------|------|-------|-----|-------|---|--------------------|---|
| 60 | Scrln | Int | 10 | | | Screenline Identification | Model team | use w/ aawt05 |
| | | | | | 1 | NS (RR Wilkinson / N. Tryon) | | |
| | | | | | 2 | CSX RR (Monroe Road) | | |
| | | | | | 3 | Long Creek | | |
| | | | | | 4 | NS RR (Albemarle Road) | | |
| | | | | | 5 | South Meck | | |
| | | | | | 6 | Mallard Creek | | |
| | | | | | 7 | Briar Creek Sugar Creek | | |
| | | | | | 8 | NS RR (South Boulevard) | | |
| | | | | | 9 | NS RR (westside) | | |
| | | | | | 10 | Catawba River | | |
| | | | | | 11 | Eastern N-S (Eastern Iredell, Meck, and Union Co. lines) | | |
| | | | | | 12 | Northern E-W (N. Gaston, Meck, Cabarrus, and Stanly Co. lines) | | |
| | | | | | 13 | I-85 | | |
| | | | | | 14 | Southern E-W (Southern Gaston, Meck, and Cabarrus County lines) | | |
| | | | | | 15 | I-77 | | |
| | | | | | 16 | Western N-S (W.Gaston Co. line & split between York and Rock Hill) | | |
| | | | | | 17 | US 74 (Union County) | | |
| | | | | | 18 | US 321 (North Carolina) | | |
| | | | | | | Not screen line | | |
| 61 | TMCcode_ab | Char | 10 | 0 | | Cross reference to Inrix TT data segments - AB direction | Inrix Data | Cross Reference |
| 62 | TMCcode_ba | Char | 10 | 0 | | Cross reference to Inrix TT data segments - BA direction | Inrix Data | Cross Reference |
| 63 | TT RTE | Int | 8 | | | Inrix Route | Inrix Data | |
| 64 | TT_KEY_AB | Int | 8 | | | Inrix Route AB direction | Inrix Data | |
| 65 | TT_KEY_BA | Int | 8 | | | Inrix Route BA direction | Inrix Data | |
| 66 | State | Int | 2 | | | State FIPS code | Model team | |
| | | | | | 37 | North Carolina | | |
| | | | | | 45 | South Carolina | | |
| 67 | County | Int | 3 | 0 | | County FIPS code | Model team | |
| | | | | | 25 | Cabarrus | | |
| | | | | | 35 | Catawba | | |
| | | | | | 45 | Cleveland | | |
| | | | | | 71 | Gaston | | |
| | | | | | 97 | Iredell | | |
| | | | | | 109 | Lincoln | | |
| | | | | | 119 | Mecklenburg | | |
| | | | | | 159 | Rowan | | |
| | | | | | 167 | Stanly | | |
| | | | | | 179 | Union NC | | |
| | | | | | 57 | Lancaster | | |
| | | | | | 91 | York | | |
| | | | | | 999 | External station | | |
| 68 | TAZ | Real | 8 | | | TAZ number | area type model | |
| 69 | locclass1 | Int | 8 | | | Locally assigned functional class | MPO | modified July 5, 06 (CDOT) |
| | | | | | 1 | Freeway | | |
| | | | | | 2 | Expressway | | |
| | | | | | 3 | Class II major tfare | | |
| | | | | | 4 | Major tfare | | |
| | | | | | 5 | Minor tfare | | |
| | | | | | 6 | Collector street | | |
| | | | | | 7 | Local Street | | |
| | | | | | 8 | Ramp to surface street | | |
| | | | | | 9 | Freeway-freeway ramp | | |
| 70 | locclass2 | Int | 8 | | | Local class system | MPO | e.g. Corridor ID |
| 71 | reverselane | Int | 6 | | | No. of reversible lanes | Model team | Additional reversible lanes |
| 72 | reversetime | Char | 1 | | | Time period - reversible lanes | Model team | |
| 73 | SPfreeAB | Real | 10 | 2 | | Composite (link + intersection) free speed A to B (MPH) | Capspd | Length / (TTfreeAB / 60) |
| 74 | SPfreeBA | Real | 10 | 2 | | Composite (link + intersection) free speed B to A (MPH) | Capspd | Length / (TTfreeBA / 60) |
| 75 | SPpeakAB | Real | 10 | 2 | | Composite (link + intersection) congested speed A to B (MPH) | Capspd | Length / (TTpeakAB / 60), NOT UPDATED IN FEEDBACK |

| Field | FIELD_NAME | TYPE | WIDTH | DEC | Value | Description | Source | Notes |
|-------|------------|----------------|-------|-----|-------|---|------------------|---|
| 76 | SPpeakBA | Real | 10 | 2 | | Composite (link + intersection) congested speed B to A (MPH) | Capspd | Length / (TTcongestBB / 60), NOT UPDATED IN FEEDBACK |
| 77 | TTfreeAB | Real | 10 | 2 | | Composite (link + int) travel time free speed A to B (min) | Capspd | Network characteristics * lookups |
| 78 | TTfreeBA | Real | 10 | 2 | | Composite (link + int) travel time free speed B to A (min) | Capspd | Network characteristics * lookups |
| 79 | TTpeakAB | Real | 10 | 2 | | Composite travel time congested speed A to B (min) | Capspd | TTfreeAB * lookup (initial), NOT UPDATED IN FEEDBACK |
| 80 | TTpeakBA | Real | 10 | 2 | | Composite travel time congested speed B to A (min) | Capspd | TTfreeBA * lookup (initial), NOT UPDATED IN FEEDBACK |
| 81 | TTlinkFrAB | Real | 10 | 2 | | Travel time A to B - free speed - link factors only (min) | Capspd | Link characteristics * lookups |
| 82 | TTlinkFrBA | Real | 10 | 2 | | Travel time B to A - free speed - link factors only (min) | Capspd | Link characteristics * lookups |
| 83 | TTlinkPkAB | Real | 10 | 2 | | Travel time A to B - congested speed - link factors only (min) | Capspd | TTlinkfreeAB * congestion factor lookup |
| 84 | TTlinkPkBA | Real | 10 | 2 | | Travel time B to A - congested speed - link factors only (min) | Capspd | TTlinkfreeBA * congestion factor lookup |
| 85 | IntDelFr_A | Real | 10 | 2 | | A node intersectino delay - free speed (min) | Capspd | Intersection characteristics (A node) * lookups (Seconds) |
| 86 | IntDelFr_B | Real | 10 | 2 | | B node intersection delay - free speed (min) | Capspd | Intersection characteristics (B node) * lookups (Seconds) |
| 87 | IntDelPk_A | Real | 10 | 2 | | A node intersection delay - congested (min) | Capspd | Intersection characteristics (A node) * lookups (Seconds) |
| 88 | IntDelPk_B | Real | 10 | 2 | | B node intersection delay - congested (min) | Capspd | Intersection characteristics (B node) * lookups (Seconds) |
| 89 | capPk3hrAB | Real | 10 | 2 | | Peak 3 hour total capacity (link + intersection) A to B (tot veh) | Capspd | cap1hrAB * peak fac |
| 90 | capPk3hrBA | Real | 10 | 2 | | Peak 3 hour total capacity B to A | Capspd | cap1hrBA * peak fac |
| 91 | capMidAB | Real (8 bytes) | 10 | 2 | | Midday total capacity A to B | Capspd | cap1hrAB * midday fac |
| 92 | capMidBA | Real (8 bytes) | 10 | 2 | | Midday total capacity B to A | Capspd | cap1hrBA * midday fac |
| 93 | CapNightAB | Real (8 bytes) | 10 | 2 | | Night total capacity A to B | Capspd | cap1hrAB * night fac |
| 94 | CapNightBA | Real (8 bytes) | 10 | 2 | | Night total capacity B to A | Capspd | cap1hrBA * night fac |
| 95 | cap1hrAB | Real | 10 | 2 | | One hour link capacity A to B | Capspd | Lane, intesection characteristics * lookups |
| 96 | cap1hrBA | Real | 10 | 2 | | One hour link capacity B to A | Capspd | Lane, intersection characteristics * lookups |
| 97 | TTPkEstAB | Real | 10 | 2 | | Time/distance impedance - free speed A to B | Capspd | A(Length) + B(TTfreeAB) |
| 98 | TTPkEstBA | Real | 10 | 2 | | Time/distance impedance - free speed B to A | Capspd | A(Length) + B(TTfreeBA) |
| 99 | TTPkPrevAB | Real | 10 | 2 | | Congested travel time A to B previous assignment | Capspd, feedback | Round 2 feedback spd |
| 100 | TTPkPrevBA | Real | 10 | 2 | | Congested travel time B to A previous assignment | Capspd, feedback | Round 2 feedback spd |
| 101 | TTPkAssnAB | Real | 10 | 2 | | Congested travel time A to B current assignment | Capspd, feedback | Final feedback speed |
| 102 | TTPkAssnBA | Real | 10 | 2 | | Congested travel time B to A current assignment | Capspd, feedback | Final feedback speed |
| 103 | TTpkLocAB | Real | 10 | 2 | | Local bus travel time - congested speed A to B | Capspd | Lookup, capped at 90% of peak speed travel time A to B |
| 104 | TTpkLocBA | Real | 10 | 2 | | Local bus travel time - congested speed B to A | Capspd | Lookup, capped at 90% of peak speed travel time B to A |
| 105 | TTpkXprAB | Real | 10 | 2 | | Express bus travel time - congested speed A to B | Capspd | Lookup, capped at 90% of peak speed travel time A to B |
| 106 | TTpkXprBA | Real | 10 | 2 | | Express bus travel time - congested speed B to A | Capspd | Lookup, capped at 90% of peak speed travel time B to A |
| 107 | TTPkNStAB | Real | 10 | 2 | | Non-stop bus travel time - congested speed A to B | Capspd | =TTPkAssnAB or guideway speed with no stops |
| 108 | TTPkNStBA | Real | 10 | 2 | | Non-stop bus travel time - congested speed B to A | Capspd | =TTPkAssnBA or guideway speed with no stops |

| Field | FIELD_NAME | TYPE | WIDTH | DEC | Value | Description | Source | Notes |
|-------|-------------|------|-------|-----|-------|--|--------------|--|
| 109 | TTpkSkSAB | Real | 10 | 2 | | Skip stop bus travel time - congested speed A to B | Capspd | =TTPkAssnAB or guideway speed with skip stops |
| 110 | TTpkSkSBA | Real | 10 | 2 | | Skip stop bus travel time - congested speed B to A | Capspd | =TTPkAssnBA or guideway speed with skip stops |
| 111 | TTfrLocAB | Real | 10 | 2 | | Local bus travel time - free speed A to B | Capspd | Lookup, capped at 90% of free speed travel time A to B |
| 112 | TTfrLocBA | Real | 10 | 2 | | Local bus travel time - free speed B to A | Capspd | Lookup, capped at 90% of free speed travel time B to A |
| 113 | TTfrXprAB | Real | 10 | 2 | | Express bus travel time - free speed A to B | Capspd | Lookup, capped at 90% of free speed travel time A to B |
| 114 | TTfrXprBA | Real | 10 | 2 | | Express bus travel time - free speed B to A | Capspd | Lookup, capped at 90% of free speed travel time B to A |
| 115 | TTFrNStAB | Real | 10 | 2 | | Non-stop bus travel time - free speed A to B | Capspd | =TTFreeAB or guideway speed with no stops |
| 116 | TTFrNStBA | Real | 10 | 2 | | Non-stop bus travel time - free speed B to A | Capspd | =TTFreeAB or guideway speed with no stops |
| 117 | TTfrSkSAB | Real | 10 | 2 | | Skip stop bus travel time - free speed A to B | Capspd | =TTFreeAB or guideway speed with skip stops |
| 118 | TTfrSkSBA | Real | 10 | 2 | | Skip stop bus travel time - free speed B to A | Capspd | =TTFreeAB or guideway speed with skip stops |
| 119 | PkLocLUAB | Real | 10 | 2 | | Local bus lookup travel time - peak A to B | Capspd | Lookup, NO capping |
| 120 | PkLocLUBA | Real | 10 | 2 | | Local bus lookup travel time - peak B to A | Capspd | Lookup, NO capping |
| 121 | PkXprLUAB | Real | 10 | 2 | | Express bus lookup travel time - peak A to B | Capspd | Lookup, NO capping |
| 122 | PkXprLUBA | Real | 10 | 2 | | Express bus lookup travel time - peak B to A | Capspd | Lookup, NO capping |
| 123 | TTwalkAB | Real | 10 | 2 | | Walk travel time A to B | Capspd | Len * 20 (3 MPH), 9999 for func1 1,2,8,9, 20-89, Non-directional |
| 124 | TTwalkBA | Real | 10 | 2 | | Walk travel time B to A | Capspd | Len * 20 (3 MPH), 9999 for func1 1,2,8,9, 20-89, Non-directional |
| 125 | TTbikeAB | Real | 10 | 2 | | Bike travel time A to B | Capspd | 7 MPH, 9999 for func1 1,2,8,9, 20-89, Directional |
| 126 | TTbikeBA | Real | 10 | 2 | | Bike travel time B to A | Capspd | 7 MPH, 9999 for func1 1,2,8,9, 20-89, Directional |
| 127 | ImpPkAB | Real | 10 | 2 | | Peak Impedance A to B | Capspd | TTPeakAB * 0.6 + length * 0.4 |
| 128 | ImpPkBA | Real | 10 | 2 | | Peak Impedance B to A | Capspd | TTPeakBA * 0.6 + length * 0.4 |
| 129 | ImpFreeAB | Real | 10 | 2 | | Off-peak Impedance A to B | Capspd | TTFreeAB * 0.6 + length * 0.4 |
| 130 | ImpFreeBA | Real | 10 | 2 | | Off-peak Impedance B to A | Capspd | TTFreeBA * 0.6 + length * 0.4 |
| 131 | TollAB | Real | 10 | 2 | | Toll for link (cents) | Macro | |
| 132 | TollBA | Real | 10 | 2 | | Toll for link (cents) | Macro | |
| 133 | HOTAB | Real | 10 | 2 | | Managed Lane Toll for link (cents) | Macro | |
| 134 | HOTBA | Real | 10 | 2 | | Managed Lane Toll for link (cents) | Macro | |
| 135 | Mode | Int | 10 | | | Flag for non-transit links to be included in transit network | Model Team | Flagged with a value of 1 |
| 136 | BRT_Flag | Int | 10 | | | | | |
| 137 | datestamp | Int | 8 | | | Date stamp | Model team | |
| 138 | Level | Int | 10 | | | Cross-reference to old networks | Model team | |
| 139 | themecode | Int | 8 | | | | Model team | |
| 140 | TOLL_PRJID | Int | 8 | | | Cross-reference to tolls.bin | Model team | |
| 141 | HOT_PRJID | Int | 8 | | | Cross-reference to tolls.bin | Model team | |
| 142 | ITS_Code | Int | 8 | | | AQ off-model code | Model team | currently not used |
| 143 | ITS_Segment | Int | 8 | | | AQ off-model code | Model team | currently not used |
| 144 | UrbanRural | Char | 1 | | | MOVES code | calc from AT | U or R |
| 145 | RoadTypeAQ | Int | 2 | | | MOVES code | Model team | |
| 146 | projnum1 | Int | 4 | | | Project number ID, project 1 | Model team | Project ID - network creation |
| 147 | dir_prj1 | Int | 2 | | | future dir code, project 1 | Plan | |
| | | | | | 1 | One way - A to B | | |
| | | | | | 0 | Two way | | |
| | | | | | -1 | One way - B to A | | |

| Field | FIELD_NAME | TYPE | WIDTH | DEC | Value | Description | Source | Notes |
|-------|-------------|------|-------|-----|-------|---|---------------|-------------------------------|
| 148 | funcl_prj1 | Int | 3 | | | future funcl, project 1 | Plan | |
| | | | | | 1 | Freeway | | |
| | | | | | 2 | Expressway | | |
| | | | | | 3 | Class II major tfare | | |
| | | | | | 4 | Major tfare | | |
| | | | | | 5 | Minor tfare | | |
| | | | | | 6 | Collector street | | |
| | | | | | 7 | Local Street | | |
| | | | | | 8 | Ramp to surface street | | |
| | | | | | 9 | Freeway-freeway ramp | | |
| | | | | | 22 | HOV 2+ / Busway | | |
| | | | | | 23 | All-Pay Managed Lanes | | |
| | | | | | 24 | HOT 2+ (2+ free, all others pay) | | |
| | | | | | 25 | HOT 3+ (3+ free, all others pay) | | |
| | | | | | 30 | Transit Only - Rail | | |
| | | | | | 40 | Transit Only - Busway | | |
| | | | | | 82 | Hwy to HOV 2+ | | |
| | | | | | 83 | Hwy to HOV 3+ | | |
| | | | | | 84 | Transit Only - connect to Tran | | |
| | | | | | 90 | Centroid connector | | |
| | | | | | 92 | Centroid conn to transit sta | | |
| | | | | | | Add 900 for links not in project network | | |
| | | | | | 900+ | | | |
| 149 | InsAB_prj1 | Int | 1 | | | future lanes A to B, project 1 | Plan | |
| 150 | InsBA_prj1 | Int | 1 | | | future lanes B to A, project 1 | Plan | |
| 151 | facttypprj1 | Char | 1 | | | future facility type, project 1 | Plan | |
| | | | | | F | Freeway | | |
| | | | | | E | Expressway | | |
| | | | | | R | Ramp | | |
| | | | | | D | Divided - no median breaks | | |
| | | | | | M | Divided - median breaks only | | |
| | | | | | B | Divided - left turn bays | | |
| | | | | | T | Undivided - left turn bays | | |
| | | | | | C | Undivided - continuous left | | |
| | | | | | U | Undivided - no left provision | | |
| 152 | Acntl_prj1 | Char | 1 | | | future control at A, project 1 | Plan | |
| | | | | | T | Through | | |
| | | | | | L | Signal (light) | | |
| | | | | | S | Stop | | |
| | | | | | F | Four way stop (all appr. stop) | | |
| | | | | | Y | Yield | | |
| | | | | | R | Round about | | |
| 153 | Aprhb_prj1 | Char | 1 | | | future prohibitions at A, proj 1 | Plan | |
| | | | | | N | No prohibitions | | |
| | | | | | L | No left | | |
| | | | | | R | No right | | |
| | | | | | T | No through | | |
| | | | | | C | No turns | | |
| 154 | Aleft_prj1 | Int | 1 | | | future Left turn Ins at A, proj 1 | Plan, est | |
| 155 | Athru_prj1 | Int | 1 | | | future thru lanes at A, proj 1 | Plan, est | |
| 156 | Arite_prj1 | Int | 1 | | | future right turn Ins at A, proj 1 | Plan, es+1159 | |
| 157 | Bcntl_prj1 | Char | 1 | | | future control at B, project 1 | Plan | |
| | | | | | T | Through | | |
| | | | | | L | Signal (light) | | |
| | | | | | S | Stop | | |
| | | | | | F | Four way stop (all appr. stop) | | |
| | | | | | Y | Yield | | |
| | | | | | R | Round about | | |
| 158 | Bprhb_prj1 | Char | 1 | | | future prohibitions at B, proj 1 | Plan | |
| | | | | | N | No prohibitions | | |
| | | | | | L | No left | | |
| | | | | | R | No right | | |
| | | | | | T | No through | | |
| | | | | | C | No turns | | |
| 159 | Bleft_prj1 | Int | 1 | | | future Left turn Ins at B, proj 1 | Plan, est | |
| 160 | Bthru_prj1 | Int | 1 | | | future thru lanes at B, proj 1 | Plan, est | |
| 161 | Brite_prj1 | Int | 1 | | | future right turn Ins at B, proj 1 | Plan, est | |
| 162 | projnum2 | Int | 4 | | | Project number ID, project 2 | Model team | Project ID - network creation |

| Field | FIELD_NAME | TYPE | WIDTH | DEC | Value | Description | Source | Notes |
|-------|-------------|------|-------|-----|-------|---|------------|-------------------------------|
| 163 | dir_prj2 | Int | 2 | | | future dir code, project 2 | Plan | |
| | | | | | 1 | One way - A to B | | |
| | | | | | 0 | Two way | | |
| | | | | | -1 | One way - B to A | | |
| 164 | funcl_prj2 | Int | 3 | | | future funcl, project 2 | Plan | |
| | | | | | 1 | Freeway | | |
| | | | | | 2 | Expressway | | |
| | | | | | 3 | Class II major tfare | | |
| | | | | | 4 | Major tfare | | |
| | | | | | 5 | Minor tfare | | |
| | | | | | 6 | Collector street | | |
| | | | | | 7 | Local Street | | |
| | | | | | 8 | Ramp to surface street | | |
| | | | | | 9 | Freeway-freeway ramp | | |
| | | | | | 22 | HOV 2+ / Busway | | |
| | | | | | 23 | HOV 3+ / Busway | | |
| | | | | | 30 | Transit Only - Rail | | |
| | | | | | 40 | Transit Only - Busway | | |
| | | | | | 82 | Hwy to HOV 2+ | | |
| | | | | | 83 | Hwy to HOV 3+ | | |
| | | | | | 84 | Transit Only - connect to Tran | | |
| | | | | | 90 | Centroid connector | | |
| | | | | | 92 | Centroid conn to transit sta | | |
| | | | | | 900+ | Add 900 for links not in project network | | |
| 165 | InsAB_prj2 | Int | 1 | | | future lanes A to B, project 2 | Plan | |
| 166 | InsBA_prj2 | Int | 1 | | | future lanes B to A, project 2 | Plan | |
| 167 | facttypprj2 | Char | 1 | | | future facility type, project 2 | Plan | |
| | | | | | F | Freeway | | |
| | | | | | E | Expressway | | |
| | | | | | R | Ramp | | |
| | | | | | D | Divided - no median breaks | | |
| | | | | | M | Divided - median breaks only | | |
| | | | | | B | Divided - left turn bays | | |
| | | | | | T | Undivided - left turn bays | | |
| | | | | | C | Undivided - continuous left | | |
| | | | | | U | Undivided - no left provision | | |
| 168 | Acntl_prj2 | Char | 1 | | | future control at A, project 2 | Plan | |
| | | | | | T | Through | | |
| | | | | | L | Signal (light) | | |
| | | | | | S | Stop | | |
| | | | | | F | Four way stop (all appr. stop) | | |
| | | | | | Y | Yield | | |
| | | | | | R | Round about | | |
| 169 | Aprhb_prj2 | Char | 1 | | | future prohibitions at A, proj 2 | Plan | |
| | | | | | N | No prohibitions | | |
| | | | | | L | No left | | |
| | | | | | R | No right | | |
| | | | | | T | No through | | |
| | | | | | C | No turns | | |
| 170 | Aleft_prj2 | Int | 1 | | | future Left turn Ins at A, proj 2 | Plan, est | |
| 171 | Athru_prj2 | Int | 1 | | | future thru lanes at A, proj 2 | Plan, est | |
| 172 | Arite_prj2 | Int | 1 | | | future right turn Ins at A, proj 2 | Plan, est | |
| 173 | Bcntl_prj2 | Char | 1 | | | future control at B, project 2 | Plan | |
| | | | | | T | Through | | |
| | | | | | L | Signal (light) | | |
| | | | | | S | Stop | | |
| | | | | | F | Four way stop (all appr. stop) | | |
| | | | | | Y | Yield | | |
| | | | | | R | Round about | | |
| 174 | Bprhb_prj2 | Char | 1 | | | future prohibitions at B, proj 2 | Plan | |
| | | | | | N | No prohibitions | | |
| | | | | | L | No left | | |
| | | | | | R | No right | | |
| | | | | | T | No through | | |
| | | | | | C | No turns | | |
| 175 | Bleft_prj2 | Int | 1 | | | future Left turn Ins at B, proj 2 | Plan, est | |
| 176 | Bthru_prj2 | Int | 1 | | | future thru lanes at B, proj 2 | Plan, est | |
| 177 | Brite_prj2 | Int | 1 | | | future right turn Ins at B, proj 2 | Plan, est | |
| 178 | projnum3 | Int | 4 | | | Project number ID, project 3 | Model team | Project ID - network creation |

| Field | FIELD_NAME | TYPE | WIDTH | DEC | Value | Description | Source | Notes |
|-------|-------------|------|-------|-----|-------|---|-----------|-------|
| 179 | dir_prj3 | Int | 2 | | | future dir code, project 3 | Plan | |
| | | | | | 1 | One way - A to B | | |
| | | | | | 0 | Two way | | |
| | | | | | -1 | One way - B to A | | |
| 180 | funcl_prj3 | Int | 3 | | | future funcl, project 3 | Plan | |
| | | | | | 1 | Freeway | | |
| | | | | | 2 | Expressway | | |
| | | | | | 3 | Class II major tfare | | |
| | | | | | 4 | Major tfare | | |
| | | | | | 5 | Minor tfare | | |
| | | | | | 6 | Collector street | | |
| | | | | | 7 | Local Street | | |
| | | | | | 8 | Ramp to surface street | | |
| | | | | | 9 | Freeway-freeway ramp | | |
| | | | | | 22 | HOV 2+ / Busway | | |
| | | | | | 23 | HOV 3+ / Busway | | |
| | | | | | 30 | Transit Only - Rail | | |
| | | | | | 40 | Transit Only - Busway | | |
| | | | | | 82 | Hwy to HOV 2+ | | |
| | | | | | 83 | Hwy to HOV 3+ | | |
| | | | | | 84 | Transit Only - connect to Tran | | |
| | | | | | 85 | Walk Only - connect to Tran | | |
| | | | | | 90 | Centroid connector | | |
| | | | | | 92 | Centroid conn to transit sta | | |
| | | | | | | Add 900 for links not in project network | | |
| | | | | | 900+ | | | |
| 181 | InsAB_prj3 | Int | 1 | | | future lanes A to B, project 3 | Plan | |
| 182 | InsBA_prj3 | Int | 1 | | | future lanes B to A, project 3 | Plan | |
| 183 | facttypprj3 | Char | 1 | | | future facility type, project 3 | Plan | |
| | | | | | F | Freeway | | |
| | | | | | E | Expressway | | |
| | | | | | R | Ramp | | |
| | | | | | D | Divided - no median breaks | | |
| | | | | | M | Divided - median breaks only | | |
| | | | | | B | Divided - left turn bays | | |
| | | | | | T | Undivided - left turn bays | | |
| | | | | | C | Undivided - continuous left | | |
| | | | | | U | Undivided - no left provision | | |
| 184 | Acntl_prj3 | Char | 1 | | | future control at A, project 3 | Plan | |
| | | | | | T | Through | | |
| | | | | | L | Signal (light) | | |
| | | | | | S | Stop | | |
| | | | | | F | Four way stop (all appr. stop) | | |
| | | | | | Y | Yield | | |
| | | | | | R | Round about | | |
| 185 | Aprhb_prj3 | Char | 1 | | | future prohibitions at A, proj 3 | Plan | |
| | | | | | N | No prohibitions | | |
| | | | | | L | No left | | |
| | | | | | R | No right | | |
| | | | | | T | No through | | |
| | | | | | C | No turns | | |
| 186 | Aleft_prj3 | Int | 1 | | | future Left turn Ins at A, proj 3 | Plan, est | |
| 187 | Athru_prj3 | Int | 1 | | | future thru lanes at A, proj 3 | Plan, est | |
| 188 | Arite_prj3 | Int | 1 | | | future right turn Ins at A, proj 3 | Plan, est | |
| 189 | Bcntl_prj3 | Char | 1 | | | future control at B, project 3 | Plan | |
| | | | | | T | Through | | |
| | | | | | L | Signal (light) | | |
| | | | | | S | Stop | | |
| | | | | | F | Four way stop (all appr. stop) | | |
| | | | | | Y | Yield | | |
| | | | | | R | Round about | | |
| 190 | Bprhb_prj3 | Char | 1 | | | future prohibitions at B, proj 3 | Plan | |
| | | | | | N | No prohibitions | | |
| | | | | | L | No left | | |
| | | | | | R | No right | | |
| | | | | | T | No through | | |
| | | | | | C | No turns | | |
| 191 | Bleft_prj3 | Int | 1 | | | future Left turn Ins at B, proj 3 | Plan, est | |
| 192 | Bthru_prj3 | Int | 1 | | | future thru lanes at B, proj 3 | Plan, est | |
| 193 | Brite_prj3 | Int | 1 | | | future right turn Ins at B, proj 3 | Plan, est | |

| Field | FIELD_NAME | TYPE | WIDTH | DEC | Value | Description | Source | Notes |
|-------|------------|------|-------|-----|-------|--------------------------|------------|-------|
| 194 | Notes | Char | 24 | | | User notes for reference | Model team | |
| 195 | CCSTYLE | Int | 12 | | | line style | Model team | |