South Coast
Air Quality Management District

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Madam Chair –

Thank you for the opportunity to speak here today on Clean Air and Surface Transportation Policy. Surface transportation is an integral part of this nation's economy and has a direct impact on our quality of life. The linkages between the transportation sector, health and the environment have never been more important than at the present time, in view of escalating energy costs, increases in international trade, and mounting scientific evidence linking health impacts to transportation choices. Air quality and climate change are directly related – and both are greatly affected by emissions from mobile sources. Advanced energy-efficient technologies and systems are available, and can be used to satisfy our transportation demands with the least harm to air quality and human health.

I'd like to share some data on the impact of surface transportation on health, and then discuss some of the opportunities available to Congress next year as it considers reauthorization of the Surface Transportation Law. My testimony will focus on the connection between air quality, health and transportation policy, and many of the same ideas and recommendations are applicable to climate change as well.

Health Impacts
Earlier this year, the South Coast Air Quality Management District released the findings of its MATES III or Multiple Air Toxics Exposure Study. This landmark two-year study evaluated the health risks from air toxics in the Southland region. We found that while air pollution programs have reduced regional risk of cancer from toxic air pollution by an average of about 15 percent at our monitoring sites over the last seven years, the remaining cancer risk remains high – indeed it is on average over a hundred times higher than deemed acceptable under local rules for stationary sources. In some areas such as near the ports, cancer risks have actually increased in

the past seven years due to growth in cargo transport. Other areas of the country where diesel-powered trucks, locomotives and ships operate are also experiencing significant impacts.

The MATES study found the highest computer-modeled risk levels along transportation corridors, with maximum risks in residential areas near the ports. Maximum lifetime cancer risks in residential areas near the ports were found to be up to 2,900 in a million. Diesel exhaust accounts for approximately 84 percent of region-wide cancer risk from air pollution, and mobile sources -- including cars and trucks as well as ships, trains, aircraft and construction equipment -- account for 94 percent of the risk. As a result of diesel and other air pollution, thousands of residents are getting sick and dying prematurely. Low-income, minority neighborhoods are often heavily impacted by air pollution.

In addition to AQMD's efforts, regulations and programs instituted by the California Air Resources Board (CARB) and the Ports of Los Angeles and Long Beach have contributed to diesel emission reductions in recent years. But with the continued growth of the ports – experts project cargo handled at our ports to almost triple by 2030 – much more needs to be done to further reduce harmful emissions. In fact, in some areas, such as those near the ports, emissions have actually increased in the past decade due to greater cargo volume and relative lack of control of some goods transportation sources.

Since 1987, more than two dozen health studies have linked particulate pollution (such as diesel soot) to reductions in lung function, increased hospital and emergency room admissions, and premature deaths. Recent epidemiological studies show that people living in more polluted cities have an increased risk of premature death compared to those in cleaner cities.

Particulate pollution is estimated by CARB to cause 6,200 premature deaths per year in Southern California alone, with an average reduction in life of ten years. Additional thousands of premature deaths are linked with air pollution exposure nationally. That is more deaths annually than are caused by traffic accidents.

Simply living near busy freeways increases one's health risks. Black carbon, for example, which is emitted mainly from diesel-fueled vehicles, has been found to be nearly five times higher downwind than upwind levels. The concentrations drop off substantially with distance downwind from the freeway within the first 150 meters, and approach upwind levels at about 300 meters. But surprisingly, a 2005 survey found that almost 10% of California's schools were located within 150 meters of high traffic (over 50,000 vehicles/day) and medium traffic roads (25,000 - 50,000 vehicles/day).

Finally, in order to attain federally-mandated air quality standards in areas such as the South Coast Air Basin, mobile source emissions must be substantially cut – well beyond the benefits of all rules on the books today. We thus simply cannot forego any opportunity to reduce emissions from the transportation sector. Appropriately designed transportation infrastructure must be part of the solution.

Opportunities Presented By Surface Transportation Bill
Since 1991, Congress has recognized that the transportation sector must be part of our strategy to improve public health and the quality of our air. That is why it created the Congestion Management and Air Quality Improvement Program (CMAQ). But there is much more data now documenting the significant risk that mobile-source emissions pose to public health, and when combined with a greater concern for the impact of greenhouse gas emissions on climate change, there is a need to do more. The reauthorization of SAFETEA-LU presents a tremendous opportunity to address these issues.

As the air pollution control officer of the largest air district in the country, I am not here to tell you that we need to divert transportation funding to air quality programs. Not at all. There is no question that our nation's roads, bridges, highways and railroad tracks are extremely congested and in dire need of increased maintenance and rehabilitation. There is no doubt that we need to invest in our aging infrastructure for a strong economy and a better quality of life. But it's how we do this that is critical. Infrastructure enhancements must go hand in hand with efforts to achieve federal clean air standards and reduce the severe health impacts of air pollution.

We must make sure that the priorities we set, the projects we select, and the processes we undertake, are all undertaken with the dual goals of strengthening our aging infrastructure and substantially improving -- not just mitigating adverse impacts on -- air quality.

All Transportation Projects Must Consider Air Quality Impacts.
There is a prevailing view of many in the transportation sector that congestion relief, by its very nature, is beneficial to air quality. All too often, however, congestion-reduction projects are only minimally beneficial to air quality. Inappropriately designed projects can even exacerbate air quality problems. On the other hand, appropriately chosen and designed projects can both reduce congestion and also substantially improve air quality.

We need to make sure that all transportation projects are developed with air quality improvements in mind, and funding should be provided in ways that prioritize air quality. Given the health risks and attainment requirements, there is a clear need to reduce mobile source emissions through all feasible measures. But right now, except for the CMAQ program, air quality impacts are insufficiently considered.

Federal law thus should ensure that, in the most highly polluted areas (e.g. areas classified under the Clean Air Act as Severe or Extreme for ozone) CMAQ funds are expended for projects that provide *substantial air quality improvements*. For federal funding programs other than CMAQ, strong incentives – such as the greater federal match discussed below -- should be utilized to promote projects that substantially reduce current pollution levels.

The CMAQ Program Must Be Strengthened
CMAQ is the only dedicated federal funding source for programs to reduce the air quality impact of transportation infrastructure projects. It is a valuable program that must be protected and strengthened. CMAQ is also a very significant funding program for California. The CMAQ

funding formula is one of the few in SAFETEA-LU that provides a significant edge to California. So, any modifications to CMAQ's funding requirements must ensure that California does not lose this funding advantage. And, in fact, Congress needs to authorize more funding for CMAQ, and to limit the flexibility to transfer unused funds to other programs.

This potential to divert funds could be limited most stringently in the most highly polluted areas. If jurisdictions know they can only use CMAQ funds for CMAQ-eligible projects, they will have an incentive to spend those funds on projects and programs that can improve air quality.

Currently, SAFETEA-LU states that MPOs are merely "encouraged" to "consult with state and local air quality agencies" on estimated air emissions reductions from CMAQ projects. Unfortunately, there are many problems with this provision.

First, many (if not most) MPOs do not seek input from air agencies. This leads to the lack of early and effective input by agencies that have primary responsibility, expertise and motivation relating to air quality improvements.

Second, this consultation section is focused only on air emission estimates; it makes no mention of determining a project's actual air impact. There needs to be greater accountability so that projects, once built, are assessed to determine whether the projected air quality benefits are being achieved. Currently there is minimal follow-up to determine how successful a program is and whether further mitigation measures are necessary.

Third, this is the only provision in SAFETEA-LU which even considers input from air districts.

We thus urge that greater input by state and local air agencies into the CMAQ process be required. An advice-and-consent relationship with air agencies and transportation agencies, supplemented by mandatory public hearings on air quality impacts, is one approach. Another would be to have county transportation commissions ensure that air agencies are engaged during the project selection process before counties transmit their project lists to their MPOs.

Air Agencies Should Play a Larger Role in the Process for All Transportation Programs
Air districts have a thorough knowledge of air quality needs and of the State Implementation Plan (SIP) required by the federal Clean Air Act. They are also independent of transportation agencies.

Air districts are thus uniquely situated to not only assist with emissions impact estimates during project selection and determine compliance with air quality funding criteria, but also to conduct assessments of projects after they are built to assure the projected air benefits were met. And such assessments should be done, not only for CMAQ projects, but for all transportation projects. We are spending lots of money each year to improve our air quality based on projections developed by project sponsors. There should be a process to actually determine if these projections are accurate.

As I said before, investing in our transportation infrastructure must go hand in hand with efforts to achieve clean air standards and improve public health.

Clean Construction Equipment Should Be Utilized

As we rebuild and strengthen our nation's infrastructure, one of the key ways to reduce emissions is to make sure that the construction equipment rebuilding those roads and bridges use low emission fuels and technologies. Non-road diesel engines can contribute significantly to the levels of particulate matter (PM) and nitrogen oxides (NOx) in the air.

In recent years, federal emissions standards have been established for manufacturing engines used in most new construction equipment. However, because construction equipment has a useful life of 25 to 30 years, it takes many years before existing equipment is replaced with new, cleaner equipment. CARB and AQMD recently enacted rules to impose requirements on heavy-duty off-road vehicles which would encourage retrofits or replacement of old diesel vehicles with cleaner vehicles. This could be replicated nationally in the Surface Transportation Bill to promote the use of clean construction equipment in transportation construction projects, and further emissions reductions beyond the existing rules could be promoted in California.

The Nation's Goods Movement Chain Must Be Cleaner and More Efficient

I recognize that the Surface Transportation Bill does not directly deal with freight rail, but the entire goods movement chain is interconnected. Cargo travels from ship to truck to rail to truck to market. Our nation's goods movement chain plays a critical role in our nation's economy. It is also a primary generator of air pollution – NOx, Sulfur Oxides (SOx), and PM.

As our region's and our nation's ports and transportation corridors continue to grow, we need to make our goods movement chain both cleaner and more efficient. One way to do this is to expedite the recently adopted U.S. EPA standards for locomotives. Another is to move less freight by dirty trucks. Trucks that are on the road need to be cleaner, and our rail system needs to convert to cleaner technologies. Federal transportation laws should encourage design of cleaner highway infrastructure and non-highway alternatives (such as freight rail) so as to maximize efficiency and reduce air pollution. Some examples are (1) dedicated truck lanes restricted to low-emitting vehicles, (2) more on-dock rail to efficiently move international cargo from ships to trains without clogging our highways, and (3) use of electrified rail or trains powered by cleaner locomotives now under development to move freight without contributing to highway congestion or excessive emissions.

In the most highly polluted regions, zero or near-zero emission technology should be utilized. For instance, in "Severe" and "Extreme" Ozone Nonattainment Areas, projects to increase rail capacity (either as a means of reducing truck traffic or to accommodate the growth in goods movement) should ensure that such rail capacity will be used exclusively by low-emission Tier 4 locomotives, and should be electrified where possible.

Making each link in this chain cleaner is critical. We need to replicate and expand programs that will achieve substantial benefits – such as the San Pedro Bay Ports' Clean Trucks Program. In

the most polluted areas (e.g. “Severe” and “Extreme” Ozone Nonattainment Areas), projects to increase highway capacity should, at a minimum, achieve greater emission reductions than would be achieved simply by reducing congestion. These projects should utilize the cleanest combustion technologies available, and should include requirements or incentives to utilize alternative fuel (or equivalently low-emitting) trucks.

Utilize Incentives to Promote Cleaner Projects

One way to encourage these goals would be to incentivize projects with advantageous match requirements. For instance, instead of an 80/20 federal to non-federal match requirement, zero-emission projects, such as rail electrification or fleet turnover programs, would be eligible for 90% or 100% of federal funding. This would not harm current projects, but would be a great incentive for new projects to go green.

Addressing Climate Change

Because of concern over climate change and the carbon emissions caused by our nation’s over-reliance on fossil fuels, we join others to request that the surface transportation bill address some aspects of transportation-related greenhouse gases. Our nation clearly needs to reduce our reliance on fossil fuels and reduce carbon emissions.

Strategies to tackle greenhouse gas (GHG) emissions, if appropriately chosen, can also assure reductions in other critical pollutants affecting local health (e.g., electrification, particularly where electricity is generated from renewable sources like wind and solar). For instance, if we encourage transit operators to use clean fuels, you get the co-benefits of reducing GHG emissions and other pollutants.

Let me conclude by thanking you again for soliciting input from local jurisdictions on these potential policy choices. We look forward to working with you and your staff to help ensure that a stable infrastructure, clean air, and healthy communities go hand in hand.