

APPENDIX A
Glossary

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Glossary

100-Year Floodplain: The areas along or adjacent to a stream or body of water that are capable of storing or conveying floodwaters during a 100-year frequency storm. In any given year, a 100-year flood event has the probability of occurring 1 percent of the time.

100-Year Floodplain Impacts: Refers to the acres of land within the 100-year floodplain that would be affected by a particular alternative.

Accessibility: A measure of how reachable locations or activities are from a given site; it is influenced by changes in travel time, safety, vehicle operating costs, and transportation choice.

Acquisitions and Displacements: The process of obtaining right-of-way to construct a project. A-Full Acquisition is the acquisition entire parcel of land, which would thus displace the entire current use of the land. Parcels that are needed in their entirety for the project would be subject to be acquired in full, as would parcels that may not be fully needed, but would be affected to such an extent that the current uses would be substantially impaired (e.g. a parcel is acquired for a park and ride). A Partial Acquisition is the acquisition of a portion of a parcel of land, with the remaining portion being untouched. The acquisition would not prevent the continued use of the property (e.g. a portion of a parcel is acquired for a lane widening, but access is maintained and the use of the property is not prevented).

Adverse Effect: Defined in Section 106 of the NHPA (36 CFR § 800.5(a) (1)). An adverse effect to a historic property occurs when the project under consideration alters any characteristic that qualifies the property for inclusion in the NRHP in a manner that would diminish the integrity of the property.

Affected Environment: Existing conditions at the time an Environmental Assessment is prepared.

Alignment: The route of a roadway, rail or other fixed guideway.

Ambient air: A physical and chemical measure of the existing concentration of various chemicals in the outside air, usually determined over a specific time (e.g., 1 hour, 8 hours).

Ambient background noise: The existing cumulative noise that is characteristic of an area based on current activity levels.

Americans with Disabilities Act (ADA): A federal civil rights law that mandates access to public facilities for all persons with disabilities Enacted in 1990, it specifically addresses transportation facilities in Title 2.

Aquatic: Pertaining to, consisting of, or relating to species living in the water. Aquatic communities/habitats within the study area consist of many small intermittent and perennial streams, as well as a few larger perennial streams (e.g., New Hope Creek, Little Creek) and their associated wetlands.

Archeological Resources: Within a given study area, the prehistoric and historic deposits of artifacts and physical remains of human activities.

Area of Potential Effect: For purposes of complying with Section 106 of the NHPA, a geographic area or areas where an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties are located in the area of the project.

Arterial: A roadway designed to connect two distant areas at higher speeds and higher capacity travel than a local road.

At-Grade: Typically refers to an intersection of two roadways, or a rail line and a roadway that are at the same level (on the ground).

At-Grade Alignment: An alignment that is on the ground, at surface level.

At-Grade Crossing: A crossing on rail tracks at the ground level. Vehicles cross at the same level intersection for all modes traveling through the intersection.

Attainment Area: An area where the quality of air is good or, in some cases, better than the national ambient air quality standards that are defined in the Clean Air Act. An area may be an attainment area for one pollutant and a non-attainment area for others.

Best Management Practices: Specific standards utilized during construction and design to minimize the impact on surrounding resources.

Build Alternative: The alternative being evaluated as the proposed action during the EIS process.

Capital Cost: The cost to plan and build a project. For a commuter rail, this includes the cost of engineering and design, the land on which the system is built (right-of-way), site preparation work, and all physical elements of the system including track, ballast, catenary (overhead wires), station platforms, any needed street reconstruction, utility relocations, wetland mitigation, park-and-ride lots, light rail vehicles, a Maintenance and Storage Facility, pedestrian bridges. It also includes associated “soft” costs such as insurance and professional services (such as attorneys).

Census tract: A small statistical subdivision of a county, defined by a local committee of Census data users for the purpose of presenting Census information every 10 years. The Census tract boundaries, which are nested within counties, generally follow visible features and often follow governmental unit boundaries or invisible features.

Civil Rights Act of 1964: Title VI of this federal law provides that no person shall, on the grounds of race, color, national origin, or sex, be discriminated against in federally funded programs or activities.

Clean Air Act of 1970: Legislation mandating the USEPA to set national air quality standards to protect the public against common pollutants. State governments are required to devise clean-up plans to meet these USEPA standards.

Clean Air Act Amendments of 1990: A strategy for the U.S. to address the problem of urban smog. It requires states and the federal government to reduce emissions from automobiles, trucks, buses, ships, barges, and consumer products, and to meet air quality standards. It particularly addresses the urban problem of ozone, carbon monoxide, and particulate matter. It defines how areas are designated “attainment” and allows the USEPA to classify “non-attainment” areas as those that do not meet the federal air quality standards.

Clean Water Act (CWA): Federal law that establishes basic structure for regulating discharges of pollutants in to the waters of the US. The act also continued requirements to set water quality standards for all contaminants in surface waters. It is codified at 33 USC §1251, et seq.

Code of Federal Regulations (CFR) The codification of the general and permanent rules published in the Federal Register by the departments and agencies of the federal government. The CFR is published annually.

Community Facility: Public or publicly-funded facilities, such as police and fire protection facilities, emergency medical response facilities, hospitals, schools, and libraries, as well as private facilities such as hospitals and schools.

Commuter Rail (CR): A transit mode that is an electric or diesel propelled railway for urban passenger train service consisting of local short distance travel operating between a central city and adjacent suburbs. Service must be operated on a regular basis by or under contract with a transit operator for the purpose of transporting passengers within urbanized areas (UZAs), or between urbanized areas and outlying areas. Such rail service, using either locomotive hauled or self-propelled railroad passenger cars, is generally characterized by multi-trip

tickets, specific station to station fares, railroad employment practices, and usually only on or two stations in the central business district.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): Commonly known as Superfund, this law was passed in 1980 to create a tax on the chemical and petroleum industries and provide broad federal authority to respond directly to releases or hazardous substances that may endanger public health or the environment.

Conformity: A designation given to transportation plans, programs, and projects that conform to federally mandated state air quality plans.

Construction Impact: The temporary impact that occurs over short period of time while a project is under construction.

Council on Environmental Quality: Established by NEPA, the council coordinates federal environmental efforts, policies, and initiatives, and ensures that federal agencies meet NEPA requirements.

Cumulative Effect: The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions.

Critical Habitat: Defined under the Endangered Species Act as areas within a listed species' current range (at the time of listing) that contain the physical or biological features that are essential to that species' conservation or that for some reason require special management and areas outside the species' current range that the Secretary of the Interior determines to be essential to its conversation.

Cross Section: The cross-sectional configuration of a transportation corridor (railway, trail, roadway, etc.) that specifies typical widths for tracks/travel lanes, related facilities, buffer areas, and total rights-of-way.

Cultural Resources: Within a study area, the historic and archaeological resources.

Decibel: A unit of measure of sound pressure used to describe the loudness of sound on the A-weighted scale.

De Minimis: A legal term that means of insufficient significance. A de minimis impact means that condition would essentially be the same whether or not the proposed project is implemented. The term is used when evaluating impacts to Section 4(f) resources for transportation projects.

Determination of Eligibility: The decision made by the State Historic Preservation Officer (SHPO) regarding whether historic buildings or district are eligible for or listed in the National Register of Historic Places.

Direct Effects: Effects that occur as a direct result of the project.

Draft Environmental Impact Statement (DEIS): A detailed written statement, required by the National Environmental Policy Act, that is required for projects that involve a federal action such as funding. The DEIS serves to provide information about significant environmental impacts and informs decision-makers and the public of practical alternatives that would prevent or minimize adverse impacts or improve the quality of the human environment.

Easement: A permanent or temporary right to use the land of another for a specific purpose. Easements may be purchased from the property owner or donated from the property owner to an agency.

Effects: Synonymous with impact, includes the result of actions that may have a beneficial or detrimental outcome.

Eminent Domain: Authority of a public agency to acquire property at fair market value for public purposes. Also known as condemnation.

Endangered: A species whose prospects for survival within the state are in immediate danger based on a loss of habitat, over-exploitation, predation, competition, or disease. An endangered species requires immediate attention or extinction will likely follow.

Environmental Justice (EJ): The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. EPA has this goal for all communities and persons across this Nation. It will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.

Environmental Site Assessment (ESA) Phase 1: Involves researching a property's potential for contamination on a cursory level from known database and reports. An ESA, Phase 1 involves limited site reconnaissance and historical research.

Environmental Site Assessment (ESA) Phase 2: Involves gathering primary data based on information gathered in Phase 2. Phase 2 ESA's include testing for contamination and determination of its historical duration.

Environmental Impact Statement: A comprehensive study of potential environmental impacts related to federally assisted projects. Projects for which such a statement is required are defined in NEPA.

Federal Highway Administration: The portion of the USDOT charged with ensuring that America's roads and highways remain safe and technologically up-to-date.

Federal Lead Agency: A federal agency that takes the primary responsibility for preparing the Environmental Impact Statement. The Federal Transit Administration is the federal lead agency for the Durham-Orange Light Rail Transit Project.

Federal Transit Administration: The division of the USDOT responsible for regulation and funding of public transportation.

Final Design: The final engineering phase of a project's design process. During final design, contract plans and specifications necessary for bidding are prepared. These contract documents provide all the necessary information needed by suppliers and contractors to construct the project.

Final Environmental Impact Statement (FEIS): The document that is published following a Draft Environmental Impact Statement (DEIS) that addresses revisions in the design of the proposed project and incorporates public and agency comments received during the public circulation period of the DEIS and during the DEIS public hearing.

Fiscally Constrained Long Range Plan: The regional long range plan that has funding sources identified for all strategies and improvements included in the plan.

Fixed Guideway Transit: An exclusive travel way used by a particular mode of public transportation.

Flood Insurance Rate Map (FIRM): The official map of a community on which the Federal Emergency Management Agency (FEMA) has delineated both the special hazard areas and the risk premium zones applicable to the community.

Floodplain: The riverside land that is periodically inundated by a river's floodwaters is called a floodplain. Floodplains serve important purposes. They temporarily store water during flooding events, improve water quality, provide important habitat for river wildlife, and create opportunities for recreation.

Fugitive Dust: Dust that leaves a property during construction, demolition, or other induced activity that can alter the air quality at a given location.

Geographic Information Systems: Systems of computer software and hardware, data, and personnel used to manipulate, analyze and present geographically referenced information or data identified by location.

Grade Crossing: An intersection where a roadway crosses a railway at the same elevation.

Grade Separated: Used to describe an alignment that is elevated or below ground, or crossings that use an overpass or underpass. Grade separation allows traffic or transit vehicles to pass through intersections without stopping for intersecting traffic.

Greenway: A linear parcel of land set aside to preserve open space. Greenways are generally located in flood plain areas, along wooded stream corridors unsuitable for development. Greenways provide a recreational amenity for walking, jogging, and bicycling that is separated from vehicular traffic; preserve open space; linked neighborhoods with parks, schools, community centers, and other neighborhoods; can help control storm water runoff, curb erosion, and minimize flooding which can damage our property; and can improve water quality by buffering streams, filtering pollutants, and recharging our ground water.

Habitat: The area or environment where an organism or ecological community normally lives or occurs.

Headway: The frequency of service on a transit route.

Historic Resources: Within a given study area, the built environment – including buildings, industrial structures, bridges and culverts – with an estimated age of at least 50 years old.

Household Income: The amount of money income received in the preceding calendar year by all household members 15 years old and over, including all household members not related to the householder.

Hydric: Having high water content.

Jurisdictional Determination: Regulatory review of previously identified wetlands and waters of the USACE in compliance with Section 404 of the Clean Water Act.

Jurisdictional "Waters of the United States": The term used in the Clean Water Act to refer to bodies of water which are under the jurisdiction of the Clean Water Act. It is defined at 40 CFR § 122.2.

Land Use: Classification providing information on land cover and the types of human activity occurring on a parcel of land, such as "commercial," "industrial," "residential," or "open space."

Level of Service: A letter grade designation used to describe given roadway traffic conditions, with "A" being at or close to free flow and "F" being at or close to over-saturation of the roadway; usually based on the progression of vehicles through the green phase of a signal, driver discomfort and frustration, lost travel time, and fuel consumption.

Limited English Proficiency (LEP): Percentage of households where no one older than 14 who lives there speaks English at home as a primary language, or speaks English "very well".

Limits of Disturbance: The horizontal boundary where soil will be exposed during construction activities. The limits of disturbance includes, but is not limited to the limits of excavation, borrow areas, storage areas, staging areas, areas to be cleared and grubbed, and roadways.

Low-Income: Any household with income at or below the U.S. Bureau of the Census poverty thresholds.

Master Plan: An exhaustive plan for a community's future development activities.

Metropolitan Planning Organization: The forum for cooperative transportation decision-making for a metropolitan area. USC, Title 23 § 134 requires that (1) an MPO be designated for each Urbanized Area containing 50,000 or more persons based on the latest US Census, and (2) the metropolitan area have a continuing, cooperative and comprehensive transportation planning process.

Minority: A member of the following races: (1) Black or African American, (2) American Indian or Alaska Native, (3) Asian, (4) Native Hawaiian or other Pacific Islander, or (5) Hispanic or Latino.

Mitigation: The actions necessary to reduce or eliminate an impact and thereby restore the affected environment.

Mixed-Use: Combination of land uses, such as residential, office, retail, public, entertainment, and even manufacturing.

National Ambient Air Quality Standards (NAAQS): Limitations on levels of pollutant in the air regulated by the Environmental Protection Agency.

National Environmental Policy Act of 1969 (NEPA): An Act of Congress passed and signed into law in 1970 that requires any federal agencies to consider the environmental impacts of any action, prior to taking any “major” or “significant” action. Consideration of those impacts may take the form of various environmental reviews and types of documentation.

National Historic Landmark: A place that is designated by the U.S. Department of the Interior as possessing exceptional value or quality in illustrating and interpreting the heritage of the United States. The National Park Service (NPS) administers the National Historic Landmarks program for the Secretary of the Interior. Only 3 percent of properties listed in the National Register of Historic Places are designated as National Historic Landmarks.

National Historic Preservation Act: Federal legislation intended to preserve historical and archaeological sites in the United States.

National Pollution Discharge Elimination System (NPDES): A program, as authorized by the Clean Water Act (CWA), which controls water pollution by regulating point sources that discharge pollutants into the waters of the United States.

National Register Eligible: Cultural resources eligible for inclusion in the National Register of Historic Places. Eligible resources do not have the full designation of National Register Listed properties but are afforded the same protection under the National Historic Preservation Act.

National Register Listed: Cultural resources include in the National Register of Historic Places.

National Register of Historic Places (NRHP or National Register): A federal list of buildings, sites, district or other properties that have a historic significance. The National Register of Historic Places is maintained by the Keeper of the National Register.

No Build Alternative: A “do nothing” alternative to compare as a benchmark to other alternatives.

Off-Peak Period: Used to describe times of day when travel is not at its peak, or highest level. Off-peak travel usually occurs in the midday and evening.

Operating Cost: Generally referred to as “Operating and Maintenance Costs,” this is the cost to operate a transit system, typically calculated on an annual basis. These figures include all costs to operate a transit system, including the labor of operators, maintenance personnel, and managers; general vehicle maintenance; electricity to power vehicles and other facilities; and administrative costs. Operating costs do not include vehicle depreciation or the cost of capital projects such as vehicle replacement.

Operating Plan: An operating plan details the service plan for a transit service. The plan details characteristics such as running times, service frequency, required number of vehicles, changes in frequency throughout the day, and assumptions pertaining to stations.

Ozone (O3): A colorless gas. The most chemically active form of oxygen having three atoms. It is naturally formed in the “ozone layer” of the stratosphere and filters out the most harmful ultraviolet light and high-energy radiation preventing it from reaching the earth’s surface.

Park-and-Ride Facilities: Parking lots or parking garages where people park their vehicle and board a bus, train, or ferry to complete their remaining journey.

Passenger Boardings: The number of revenue passengers embarking a transit vehicle.

Passenger Miles: A factor that determines the number of miles a transit vehicle carries passengers; one passenger transported one mile.

Peak Hour: The time of day when the greatest amount of travel occurs; the period of highest transportation service demand. Most cities experience a morning peak and an evening peak period associated with home-to-work and work-to-home trips, also called rush hour.

Protected Species: An organism that is legally protected because it is considered endangered or threatened to become endangered, or one of special concern. Protection may be granted at the federal, state, or local levels.

Public Parklands: Parks, recreational lands, wildlife refuges, and waterfowl refuges, as determined under Section 4(f) of the Department of Transportation Act of 1966.

Record of Decision (ROD): The final step in the Environmental Impact Statement (EIS) process. The ROD identifies the selected alternative, presents the basis for the decision, identifies all the alternatives considered, specifies the environmentally preferable alternative, and provides information on the adopted means to avoid, minimize, and compensate for environmental impacts. The ROD allows a project to move forward into more detailed engineering and design, and allows a project to qualify for federal funding assistance.

Ridership: The number of people using a public transportation system or route during a given time period.

Right-of-Way: Land available or used for operation of transportation facilities (roadways or rail lines). The land is typically government-owned (local, state, or federal). A transportation facility may occupy all or part of the right-of-way, which may be grade-separated or at-grade.

Riparian: Means pertaining to anything connected with or immediately adjacent to the banks of a stream; in other words, the land on the margins of streams, rivers and other bodies of water

Riparian Areas/Buffers: Riparian areas are lands adjacent to water bodies. The vegetation in the riparian areas filter nutrients and pollutants from runoff and is thus referred to as “buffers.” Overall, riparian areas perform a variety of ecological functions that help to improve or maintain local water quality and maintain the health of both the stream and the adjoining land.

Riparian Habitat: A habitat type associated with riparian land. In non-desert areas, riparian habitats typically are characterized by dense vegetation consisting primarily of willow, alder, and cottonwood species which support a wide variety of waterfowl, songbirds, amphibians, and small mammals.

Secondary Effect: The impact or effect of an action that takes place sometime after a primary event has occurred.

Scoping: The effort taken at the beginning of a study to consider all issues that should be addressed in the study. It is the first phase of activity in the preparation of an Environmental Impact Statement.

Section 4(f): A section of the USDOT Act of 1966 which stipulates that the U. S. Department of Transportation (USDOT) agencies (e.g. FTA) will not approve any program or project which requires the “use” of any publically owned park, recreation area, or wildlife or waterfowl refuge, or any land form an historic site of national, state or local significance unless 1) there is no feasible and prudent alternative to the use, and 2) all possible planning to

minimize harm resulting from such use is included. Section 4(f) is currently codified into law at 49 USC §303 and 23 USC §138.

Section 6(f): A section of the Land and Water Conservation Fund Act of 1965, which becomes effective when parkland developed with funds from the Land and Water Conservation Fund Act of 1965 is required for roadway improvements.

Section 106: From the National Historic Preservation Act (NHPA): Requires federal agencies to take into account the effects of their undertakings (projects) on historic properties, and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment. The historic preservation review process mandated by Section 106 is outlined in 36 CFR § 800 "Protection of Historic Properties," the regulations issued by the ACHP.

Section 401: Regulates water quality through water quality certification program. The permit review and issuance process first encourages avoidance of impacts, followed by minimizing impacts and lastly through mitigating unavoidable impacts.

Section 404: Regulates the discharge of dredged or fill material in waters of the United States through USACE permitting program.

Sensitive Receiver/Receptor: A land use that would receive noise or vibration caused by a project. The type of the land use in question (e.g., residences, schools, libraries, laboratories, etc.) is generally sensitive to noise and vibration effects.

Significantly: Describes the effects or impacts of a project in an Environmental Impact Statement (EIS). An action is considered in both context and intensity to determine whether or not the action significantly impacts a habitat, neighborhood, species or other item being assessed.

State Historic Preservation Office: A state administrative agency responsible for carrying out consultation in accordance with the NHPA and other historic preservation laws and regulations.

Stormwater: Runoff water that is generated by a rain event. Stormwater discharges include runoff from land, pavements, building rooftops, and other surfaces. Stormwater runoff can accumulate a variety of pollutants such as oil and grease, chemicals, nutrients, metals, and bacteria as it travels across land before discharging into surface and other receiving waters. Heavy surges in stormwater runoff can cause other negative effects, including flooding and erosion, to streams and adjacent low-lying areas, especially in urbanized watersheds.

Study Area: The special limits within which alternatives are considered.

Threatened Species: A species that may become endangered if surrounding conditions begin or continue to deteriorate.

Topography: The surface features of a place or region.

Traction Power Substation (TPSS): Substations converting alternating current from the power grid to the voltage and type of current needed for a light rail vehicle.

Transit-Dependent Population: Defined by FTA as persons in one or more of the following categories: without private transportation; elderly (over the age of 65); youths (under age 18); or persons below poverty or median income levels defined by the U.S. Census Bureau.

Travel Demand Forecasting: A technique of estimating the number and travel times of potential users of a transportation system.

Transit-Oriented Development (TOD): A land use designation intended to encourage the use of transit. Measures employed in areas with TOD designations include increased densities, clustered development, pedestrian amenities, parking restrictions, and urban design enhancements.

Travel Time: The time that it takes to travel from one location to another.

USACE (US Army Corps of Engineers): The federal agency which has jurisdiction over and manages the extensive water resource management lands of the United States. Also, the federal agency that delineates “Waters of the United States.” and issues Section 404 and Section 401 permit.

Vehicle Maintenance and Storage Facility: A site with facilities and buildings for the storage, maintenance, and cleaning of transit vehicles. May also include crew facilities such as locker rooms and break facilities.

Vehicle Miles Traveled (VMT): The number of miles traveled regionally by vehicles for a period of one year.

Viewshed: The area that can be seen from the proposed Commuter Rail and the area from where the Commuter Rail can be seen. In other words, what people on the light rail vehicles can see, and where anyone else can see the vehicles and associated facilities

Visual and Aesthetic: The aesthetic quality of a community is comprised of visual resources, or the physical features that make up its visible landscape. National Environmental Policy Act (NEPA) identifies aesthetics as one of the factors in the human environment that must be considered in determining the effects of a project. Federal regulations require that visual impacts be addresses for Section 106 and Section 4(f) resource properties.

Watercourses: a brook, stream, or artificially constructed water channel

Waterfowl: Any birds, such as ducks and geese that frequent the water, or lives about rivers or lakes.

Water Resources: The physical elements of the aquatic environment, such as streams, rivers, lakes, and shorelands, as well as life forms such as aquatic plants and fish that live within the aquatic environment. Water resources include the following features: groundwater, surface waters, wetlands, floodplains, floodways, and water quality.

Wetlands: Tidal areas or swamps with water-saturated soil characteristics and associated vegetation that meet certain criteria on which filling and development are federally- or state-regulated.

Wetland Impact: Refers to the acreage of wetlands that are considered Waters of the United States that would be affected by a particular alternative.

Zoning Ordinance: A local land use ordinance that identifies and regulates the use of property in the municipality. Zoning ordinances prescribe land use type, relationships to nearby uses, densities, height and setback requirements, parking requirements and related elements.

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