Appendix O: Biological Resources

Species Analysis Form

Species Analysis Spreadsheet

TPWD Rare, Threatened, and Endangered Species of Texas List

USFWS Information for Planning and Consulting List

Maps

Species Analysis Form

Form
Species Analysis

Project Name: **I-35 Capital Express Central**

CSJ(s): **0015-13-388**

County(ies): **Travis**

Date Analysis Completed: **November 3, 2021**

Prepared by: **Melissa Cross (CP&Y, Inc.)**

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 9, 2019, and executed by FHWA and TxDOT.

I. Endangered Species Act

Select the appropriate statement below based on the determinations recorded in the completed project-specific species analysis spreadsheet:

☒ This project does not require consultation with or authorization from the USFWS under the Endangered Species Act.

☐ This project requires consultation with or authorization from the USFWS under the Endangered Species Act.

For a project that requires federal authorization or approval, if the completed project-specific species analysis spreadsheet indicates, “May affect,” for any species, then consultation with the USFWS is required under section 7 of the Endangered Species Act and the second checkbox above must be checked.

For more information regarding the Endangered Species Act, see **ENV’s Endangered Species Act Handbook**.

II. TPWD Coordination

Select the appropriate statement below:

☒ This project requires an environmental assessment (EA) or environmental impact statement (EIS), and therefore must be coordinated with TPWD under the 2021 TxDOT/TPWD MOU.

☐ This project is a categorical exclusion (CE)-level project; therefore coordination with TPWD under the 2021 TxDOT/TPWD MOU is not required; however, it will be coordinated with TPWD under the 2021 TxDOT/TPWD MOU at the TxDOT district’s discretion.

☐ This project is a categorical exclusion (CE)-level project; therefore coordination with TPWD under the 2021 TxDOT/TPWD MOU is not required and it will not be coordinated with TPWD under 2021 TxDOT/TPWD MOU at the TxDOT district's discretion.

For any project that will be coordinated with TPWD, completed the **Documentation of Texas Parks and Wildlife Department Best Management Practices Form**.

For more information regarding TPWD Coordination, see **ENV's Guidance: TPWD Coordination Under the 2021 Memorandum of Understanding**.

III. Bald and Golden Eagle Protection Act (BGEPA)

Select the appropriate statement below:

☒ This project is not within 660 feet of an active or inactive Bald or Golden Eagle nest. Therefore, no coordination with USFWS is required.

☐ This project is within 660 feet of an active or inactive Bald or Golden Eagle nest; however, construction activities within 660 feet will not occur during the nesting season, and the project will adhere to the National Bald Eagle Management Guidelines of 2007. Therefore, no coordination with USFWS is required.

☐ This project is within 660 feet of an active or inactive Bald or Golden Eagle nest, and construction within 660 feet will occur during the nesting season or the project will not adhere to the National Bald Eagle Management Guidelines of 2007. Therefore, coordination with USFWS to obtain a Non-Purposeful Take Permit is required.

For more information regarding BGEPA, see Section 7.0 of **ENV's Ecological Resources Handbook**.

IV. Migratory Bird Protections

This project will comply with applicable provisions of the Migratory Bird Treaty Act (MBTA) and Texas Parks and Wildlife Code Title 5, Subtitle B, Chapter 64, Birds. It is the department's policy to avoid removal and destruction of active bird nests except through federal or state approved options. In addition, it is the department's policy to, where appropriate and practicable:

- use measures to prevent or discourage birds from building nests on man-made structures within portions of the project area planned for construction, and
- schedule construction activities outside the typical nesting season.

For more information regarding migratory bird protections, see **ENV's Guidance: Avoiding Migratory Birds and Handling Potential Violations** and Section 3.0 of **ENV's Ecological Resources Handbook**.

V. Resources Consulted

Indicate which resources were consulted/actions were taken to make the species analysis determinations recorded in this form (DO NOT ATTACH TO THIS FORM OR UPLOAD TO ECOS ANY RESOURCES CONSULTED – JUST CHECK THE APPROPRIATE BOX(ES)):

☒ Aerial Photography ☒ Topographic Map ☒ Natural Diversity Database (NDD)

☒ Karst Zone Maps ☒ Ecological Mapping System of Texas (EMST)
☒ Site Visit ☐ Species Expert Consulted ☐ Species Habitat or Presence/absence Survey

☒ Other:

- Geotechnical borings.
- A habitat assessment for freshwater mussels in October 2021.

Species Analysis Spreadsheet

SPECIES ANALYSIS SUMMARY

Project Name: I-35 Capital Express Central Project - Build Alternative 2 and Modified Build Alternative 3

CSJ: 0015-13-388

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Federal Status	Effect/Take Determination for Federally Listed Species	State Status	Impact Determination for State Listed Species	Explanation for Effect/Take and/or Impact Determination	Presence/ Absence survey conducted?
Travis	Amphibians	Austin Blind Salamander	*Eurycea waterlooensis*	The species is only known to occur at Barton Springs in Austin, Texas, and subterranean habitats of the Edwards Aquifer below the surface of Barton Springs. Its range is limited to south of the Colorado River, and it co-occurs with the Barton Springs salamander (*Eurycea sosorum*).	N	The study area does not occur within Barton Springs or in the vicinity of the known range of this species.	E	No effect or take	E	No impact	No suitable habitat is present.	N
Travis	Amphibians	Barton Springs Salamander	*Eurycea sosorum*	The species is only known to occur at Barton Springs in Austin, Texas, and subterranean habitats in the Barton Springs Segment of the Edwards Aquifer. “Surface” habitat for the Barton Springs salamander refers to the spring pools and spring runs where the Barton Springs salamander is observed as opposed to its subsurface aquifer habitat. The Barton Springs salamander inhabits relatively stable aquatic environmental conditions. These conditions consist of perennially flowing spring water that is generally clear, clean, mostly neutral (pH about 7), and stenothermal (narrow temperature range) with an annual average temperature of about 70° to 72°F. Flows of clean spring water with a relatively constant, cool temperature are essential to maintaining the well-oxygenated water necessary for salamander respiration and survival. Dissolved oxygen concentrations average about 6 mg/l.	N	The study area does not occur within Barton Springs or in the vicinity of the known range of this species.	E	No effect or take	E	No impact	No suitable habitat is present.	N
Travis	Amphibians	Jollyville Plateau Salamander	*Eurycea tonkawae*	Surface populations occur in springs of the Jollyville Plateau and springs of nearby Brushy Creek. Optimal habitat includes springs, spring-fed streams, and caves with flowing water.	N	No springs or spring-fed streams exist within the study area, and no caves are mapped by the City of Austin in the vicinity or were observed during the limited June 2021 site investigation.	T	No effect or take	T	No impact	No suitable habitat is present.	N

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Travis	Arachnids	Bee Creek Cave Harvestman	*Texella reddelli*	This subterranean obligate species inhabits karstic features within the Edwards Limestone Formation. It is known from Tooth, Bee Creek, McDonald, Weldon, and Bone Caves, and possibly Root Cave, in Travis and Williamson Counties.	N	The study area occurs in the newly defined Karst Zone 3b, which is described as an area with a low probability of containing endangered karst species because they are poorly suited for troglobite species. The project corridor is highly urbanized with a large amount of impervious cover. The geology in the study area is not known to be karstic in nature and extensive geotechnical borings throughout the study area failed to detect any subsurface karst features/voids. The project corridor is outside the known range of this species and there does not appear to be suitable habitat within the	E	No effect or take	—	N/A	No suitable habitat is present.	N

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Travis	Arachnids	Bone Cave Harvestman	*Texella reyesi*	A subterranean obligate, the species occurs in small isolated karstic features within the Edwards Limestone Formation. Sensitive to low humidity and temperature, it is found under large rocks in dark cool parts of caves. It is known from 203 different caves and six karst fauna regions in Travis and Williamson Counties.	N	The study area occurs in the newly defined Karst Zone 3b, which is described as an area with a low probability of containing endangered karst species because they are poorly suited for troglobite species. The project corridor is highly urbanized with a large amount of impervious cover. The geology in the study area is not known to be karstic in nature and extensive geotechnical borings throughout the study area failed to detect any subsurface karst features/voids. The project corridor is outside the known range of this species and there does not appear to be suitable habitat within the	E	No effect or take	—	N/A	No suitable habitat is present.	N

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Travis	Arachnids	Tooth Cave Pseudoscorpion	*Tartarocreagris texana*	This subterranean obligate species inhabits karstic features within the Edwards Limestone Formation. It is known from five caves in the Jollyville Plateau karst fauna Region in Travis County, including Tooth and Amber Caves.	N	The study area occurs in the newly defined Karst Zone 3b, which is described as an area with a low probability of containing endangered karst species because they are poorly suited for troglobite species. The project corridor is highly urbanized with a large amount of impervious cover. The geology in the study area is not known to be karstic in nature and extensive geotechnical borings throughout the study area failed to detect any subsurface karst features/voids. The project corridor is outside the known range of this species and there does not appear to be suitable habitat within the	E	No effect or take	—	N/A	No suitable habitat is present.	N

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Travis	Arachnids	Tooth Cave Spider	*Neoleptoneta myopica*	This subterranean obligate species inhabits karstic features within the Edwards Limestone Formation. It is known only from 13 caves in the Jollyville Plateau and McNeil/Round Rock karst fauna regions in Travis and Williamson counties.	N	The study area occurs in the newly defined Karst Zone 3b, which is described as an area with a low probability of containing endangered karst species because they are poorly suited for troglobite species. The project corridor is highly urbanized with a large amount of impervious cover. The geology in the study area is not known to be karstic in nature and extensive geotechnical borings throughout the study area failed to detect any subsurface karst features/voids. The project corridor is outside the known range of this species and there does not appear to be suitable habitat within the	E	No effect or take	–	N/A	No suitable habitat is present.	N
Travis	Birds	Black Rail	*Laterallus jamaicensis*	Black rails are year-round residents of the central and upper coast and migrants in the eastern part of the state. The species nests in salt, brackish, and freshwater marshes, pond borders, wet meadows, and wetlands with hydrophytic grass species. Water depth is an important and key habitat component, as the species typically is found where water is less than two to four centimeters deep. Other significant habitat factors may include vegetation density, distance to open water, and water regime stability. Nesting typically occurs in the highest sections of the marsh, which have mesic to hydric soils and are flooded by only the highest tides. Nests are built in areas with saturated or shallowly flooded soils and dense vegetation on damp ground, on mat of previous year's dead grasses, or over shallow water. In salt or brackish marshes, typical habitat includes dense stands of cordgrasses (*Spartina* sp.), spikegrasses (*Distichlis* sp.), and needlerush (*Juncus* sp.), or, in more upland saltbush communities along marsh edges. Typical freshwater habitat includes species such as cattail (*Typha*) and bulrush (*Scirpus* sp.). Non-breeding habitat is thought to be similar to breeding habitat.	N/A	In Texas, the Black Rail breeds and winters in high quality coastal marsh and prairie. The project area is outside the breeding and wintering ranges of this species. Suitable habitat for migratory Black Rails may be present; however, any use of that habitat would be incidental and ephemeral.	T	No effect or take	T	No impact	The project area does not contain suitable breeding or wintering habitat for the Black Rail. Any use of potential migratory stopover habitat within the project area would be incidental and ephemeral.	N

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Travis	Birds	Golden-cheeked Warbler	*Setophaga (=Dendroica) chrysoparia*	This migratory species breeds in central Texas along the Balcones Escarpment on the eastern edge of the Edwards Plateau and ranges from southwest of Fort Worth to northeast of Del Rio. Breeding habitat consists of juniper-oak woodlands dominated by Ashe juniper (*Juniperus ashei*) and various oak (*Quercus* sp.) species and deciduous trees found in areas with steep slopes, canyon heads, draws, and adjacent ridgetops. The species is dependent on Ashe juniper (also known as cedar) for long fine bark strips, only available from mature trees, used in nest construction; nests are generally placed in upright forks of mature Ashe junipers or various deciduous species. Occupied sites usually contain junipers at least 40 years old.	N	No suitable Ashe juniper habitat or other key habitat requirements were observed within the study area during the June 2021 site investigation.	E	No effect or take	E	No impact	No suitable habitat is present.	N
Travis	Birds	Least Tern - Migratory	*Sternula (=Sterna) antillarum*	The interior population (subspecies *athalassos*) of the Least Tern nests on bare or sparsely vegetated sand, shell, and gravel beaches, sandbars, islands, and salt flats associated with inland rivers and reservoirs. It occasionally nests on man-made structures such as sand and gravel pits or gravel rooftops. Preferred habitat includes sand and gravel bars within a wide unobstructed river channel, or open flats along shorelines of lakes and reservoirs. Colony sites can move annually, depending on landscape disturbance and vegetation growth at established colonies. It is known to nest at three reservoirs along the Rio Grande River, on the Canadian River in the northern Panhandle, and along the Red River.	N/A	The project area is outside the breeding and wintering range of this species. Although suitable stopover habitat may be present, Least Tern is not expected to regularly occur and any use of this habitat would be incidental.	—	N/A	E	No impact	The project area does not contain suitable breeding or wintering habitat for the Least Tern.	N
Travis	Birds	Piping Plover - Migratory	*Charadrius melodus*	This migratory species overwinters in Texas, where it occurs on beaches, ephemeral sand flats, barrier islands, sand, mud, algal flats, washover passes, salt marshes, lagoons, and dunes along the Gulf Coast and adjacent offshore islands, including spoil islands in the Intracoastal Waterway. Algal flats appear to be the highest quality habitat because of their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low or very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast.	N/A	The list of federally threatened and endangered species indicates that based on the project location within the migratory route, effects to Piping Plover only need be considered for wind energy projects. The project area is outside the breeding and wintering range of this species. Although suitable stopover habitat may be present, Piping Plover is not expected to regularly occur and any use of this habitat would be incidental.	T	No effect or Take	T	No impact	The project is not a wind energy project within the migratory route and does not contain suitable breeding and wintering habitat for the Piping Plover.	N

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Travis	Birds	Red Knot - Migratory	*Calidris canutus rufa*	The species is a winter resident and migrant in Texas. It is primarily found in marine habitats such as sandy beaches, salt marshes, lagoons, mudflats of estuaries and bays, and mangrove swamps during winter months. It primarily occurs along the Gulf coast on tidal flats and beaches and less frequently in marshes and flooded fields. It has occasionally been observed along shorelines of large lakes and freshwater marshes.	N/A	The list of federally threatened and endangered species indicates that based on the project location within the migratory route, effects to Red Knot only need be considered for wind energy projects. The project area is outside the breeding and wintering range of this species. Although suitable stopover habitat may be present, Red Knot is not expected to regularly occur and any use of this habitat would be incidental.	T	No effect or Take	T	No impact	The project is not a wind energy project within the migratory route and does not contain suitable breeding and wintering habitat for the Red Knot.	N
Travis	Birds	Swallow-tailed Kite	*Elanoides forficatus*	This migratory species breeds in the South Central Plains of east Texas and throughout the southeastern U.S. In Texas, breeding habitat occurs between sea level and 230 meters in elevation in bottomland forests, cypress swamps, pine glades, and freshwater marshes skirting large lakes. It nests near the tops of trees that are higher than the surrounding stand, often near a clearing or the edge of a forest or woodland. It prefers to nest in pines, but occasionally uses species such as bald cypress (*Taxodium distichum*), water oak (*Quercus nigra*), or cottonwood (*Populus deltoides*).	N	No bottomland habitat was observed during the June 2021 site investigation.	—	N/A	T	No impact	No suitable habitat is present.	N
Travis	Birds	White-faced Ibis	*Plegadis chihi*	The species is found in the Western Gulf Coastal Plains ecoregion of Texas. Preferred habitat includes freshwater wetlands, marshes, ponds, rivers, irrigated land, and sloughs, but it occasionally forages in brackish or saltwater marshes. It nests in marshes in low trees, on the ground in bulrushes (Scirpus sp.) or reeds, or on floating mats.	N	No suitable wading habitat was observed for this species during the June 2021 site investigation. The Colorado River within the study area is a highly urbanized stream with eroded banks that would not provide suitable foraging habitat.	—	N/A	T	No impact	No suitable habitat is present.	N

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Travis	Birds	Whooping Crane	*Grus americana*	The species breeds in Canada and winters on the Texas coast at Aransas National Wildlife Refuge. During migration it typically stops to rest and feed in open bottomlands of large rivers and marshes but, like other waterbirds, it may also utilize flooded croplands, playas, large wetlands associated with lakes, small ponds, and various other aquatic features. Typical migration habitat includes sites with good horizontal visibility, water depth of 30 centimeters or less, and minimum wetland size of 0.04 hectare for roosting.	N	No suitable wading habitat was observed for this species during the June 2021 site investigation. The Colorado River within the study area is a highly urbanized stream with eroded banks that would not provide suitable foraging habitat.	E	No effect or take	E	No impact	No suitable habitat is present.	N
Travis	Birds	Wood Stork	*Mycteria americana*	The species breeds in Mexico, and nesting sites have not been recorded in Texas since 1960. However, post-breeding migrants disperse into Texas in the summer. Foraging habitat includes freshwater prairie ponds, flooded pastures or fields, ditches, and other shallow standing water with an open canopy, occasionally including brackish wetlands. The species typically roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries).	N	No suitable wading habitat was observed for this species during the June 2021 site investigation. The Colorado River within the study area is a highly urbanized stream with eroded banks that would not provide suitable foraging habitat.	—	N/A	T	No impact	No suitable habitat is present.	N
Travis	Birds	Zone-tailed Hawk	*Buteo albonotatus*	The species occurs in arid open country, especially open deciduous or pine-oak woodland, mesa and mountain country, often near watercourses, and wooded canyons and tree-lined rivers along middle-slopes of desert mountains. It nests in a variety of sites including small trees in lower desert, giant cottonwoods in riparian areas, and mature conifers in high mountain regions. Nests are typically constructed in large trees like cottonwoods (*Populus deltoides*), usually along streams near cliffs or steep hillsides.	N	The study area occurs in a highly urbanized portion of Travis County. No open country with suitable pine-oak woodlands were observed during the June 2021 site investigation.	—	N/A	T	No impact	No suitable habitat is present.	
Travis	Fishes	Smalleye Shiner	*Notropis buccula*	The species is likely extirpated from the lower and middle portions of the Brazos River, currently known only from the upper Brazos River above Possum Kingdom Reservoir. The species is common in river channels and side channels with water of moderate depth and current. It is typically found in broad channels with high turbidity and constant shifting sand substrate, or occasionally silt substrate. It is most frequently found using the center of the channel, avoiding the shallow depth and slow velocity of the stream edges.	N	The study area does not occur within the Brazos River basin. This species also does not appear on USFWS or TPWD species list for this county.	E	No effect or take	E	No impact	No suitable habitat is present.	N

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Travis	Insects	Monarch Butterfly	*Danaus plexippus*	Found statewide. Adults are found in a variety of habitats including native prairies, pastures, open woodlands and savannas, desert scrub, roadsides, and other habitats with abundant nectar plants, including urbanized areas. Although adults may be present year round, they are primarily encountered between March and November, and are most commonly observed in the summer and fall during breeding and migration. Caterpillars are found on various species of the family Asclepiadaceae (occasionally treated as a subfamily of Apocynaceae). Common host plants in Texas include milkweeds (Asclepias spp.) milkweed vines (Matelea spp.), climbing milkweed (Funastrum spp.), swallowworts (Cynanchum spp.) and Anglepod (Gonolobus suberosus). Caterpillars are most frequently observed between April and September."	Y	Approximately 92% of the study area is already exisitng ROW that consists entirely of either impervious cover or maintained ROW. For either alternative chosen, less than 15 acres of vegetative cover would be disturbed. These ~15 acres are regularly maintained, but could still provide suitable habitat for any stage of the butterfly. The vegetation analysis was for areas of proposed ROWs only, temporary easements, driveway easements, and COA ROW were not included.	C	May affect	—	N/A	The project may affect the monarch butterfly; however, the monarch is currently a candidate species and no consultation with USFWS is required at this time. As construction activities for this project are not anticipated to be completed prior to Fiscal Year 2024, when a listing decision for the species is anticipated, additional coordination may be required. The project should be reevaluated at that time to determine if further action is required if the species becomes proposed for federal listing.	N

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Travis	Insects	Kretschmarr Cave Mold Beetle	*Texamaurops reddelli*	This subterranean obligate species inhabits karstic features within the Edwards Limestone Formation. It is known from nine caves in the Jollyville Plateau karst fauna Region in Travis and Williamson Counties, including Kretschmarr, Amber, Tooth and Coffin Caves.	N	The study area occurs in the newly defined Karst Zone 3b, which is described as an area with a low probability of containing endangered karst species because they are poorly suited for troglobite species. The project corridor is highly urbanized with a large amount of impervious cover. The geology in the study area is not known to be karstic in nature and extensive geotechnical borings throughout the study area failed to detect any subsurface karst features/voids. The project corridor is outside the known range of this species and there does not appear to be suitable habitat within the	E	No effect or take	—	N/A	No suitable habitat is present.	N

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Travis	Insects	Tooth Cave Ground Beetle	*Rhadine persephone*	This subterranean obligate species inhabits karstic features within the Edwards Limestone Formation. It is known from 61 caves in the Cedar Park and Jollyville Plateau karst fauna Regions in Travis County, including Tooth and Kretschmarr Caves.	N	The study area occurs in the newly defined Karst Zone 3b, which is described as an area with a low probability of containing endangered karst species because they are poorly suited for troglobite species. The project corridor is highly urbanized with a large amount of impervious cover. The geology in the study area is not known to be karstic in nature and extensive geotechnical borings throughout the study area failed to detect any subsurface karst features/voids. The project corridor is outside the known range of this species and there does not appear to be suitable habitat within the	E	No effect or take	—	N/A	No suitable habitat is present.	N
Travis	Mollusks	False Spike	*Fusconaia (=Quadrula) mitchelli*	Freshwater mussel currently known from the Colorado and Brazos River basins. The species occurs in small to medium-sized streams and rivers with various substrates including mud and mixtures of sand, gravel, and cobble. It is often found in riffle and pool habitats, and host species include the red (*Cyprinella lutrensis*) and blacktail shiner (*C. venusta*).	Y	No habitat for this species exists within Lady Bird Lake for this species, but potential habitat could occur within the Colorado River near the proposed drainage outfall. A habitat assessment of this area in October 2021 determined that this area of potential habitat is poor. Additionally, this species has not been recorded from this section of the Colorado River (MoTX).	PE	No effect or take	T	No impact	This species is not likely to occur within the project area near the drainage outfall. A due diligence presence/absence survey was conducted following USFWS protocols in Fall 2022 and no mussel species were found.	Y

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County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Federal Status	Effect/Take Determination for Federally Listed Species	State Status	Impact Determination for State Listed Species	Explanation for Effect/Take and/or Impact Determination	Presence/ Absence survey conducted?
Travis	Mollusks	Texas Fatmucket	*Lampsilis bracteata*	A freshwater mussel endemic to streams and small rivers of the Texas Hill Country, the species occurs in moderately flowing waters generally less than 1 meter in depth. It can occur in sand or gravel substrates, but typically occurs in soft silt deposits in bank or pool habitats or cracks in bedrock. It inhabits microhabitats among large cobble, boulders, bedrock ledges, horizontal cracks in bedrock slabs, and macrophyte beds. It has been reported inhabiting roots of cypress trees and other vegetation along steep banks. It is intolerant to impoundment and absent from backwater, mid-channel, and riffle habitats.	Y	No habitat for this species exists within Lady Bird Lake for this species, but potential habitat could occur within the Colorado River near the proposed drainage outfall. A habitat assessment of this area in October 2021 determined that this area of potential habitat is poor. Additionally, this species has not been recorded from this section of the Colorado River (MoTX).	PE	No effect or take	T	No impact	This species is not likely to occur within the project area near the drainage outfall. A due diligence presence/absence survey was conducted following USFWS protocols in Fall 2022 and no mussel species were found.	Y
Travis	Mollusks	Texas Fawnsfoot	*Truncilla macrodon*	A freshwater mussel that is currently limited to the Brazos, Colorado, and Trinity River basins in Texas. The species occupies large streams to medium rivers and is intolerant of impoundment. Little is known about the species due to lack of representative specimens, however it is thought that the species prefers protected areas near shore in water with a moderate current over mud, sandy mud, and gravel substrates. It is also found in perennial irrigation canals for rice.	Y	No habitat for this species exists within Lady Bird Lake for this species, but potential habitat could occur within the Colorado River near the proposed drainage outfall. A habitat assessment of this area in October 2021 determined that this area of potential habitat is poor. Additionally, this species has not been recorded from this section of the Colorado River (MoTX).	PT	No effect or take	T	No impact	This species is not likely to occur within the project area near the drainage outfall. A due diligence presence/absence survey was conducted following USFWS protocols in Fall 2022 and no mussel species were found.	Y

SPECIES ANALYSIS SUMMARY
Project Name: I-35 Capital Express Central Project - Build Alternative 2 and Modified Build Alternative 3
CSJ: 0015-13-388

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Federal Status	Effect/Take Determination for Federally Listed Species	State Status	Impact Determination for State Listed Species	Explanation for Effect/Take and/or Impact Determination	Presence/ Absence survey conducted?
Travis	Mollusks	Texas Pimpleback	*Cyclonaias (Quadrula) petrina*	A freshwater mussel endemic to the middle and lower portions of the Colorado River basin in Texas. The species inhabits medium to large rivers with shallow water and slow to moderate currents. It occurs in gravel-filled cracks in bedrock and microhabitats and on mud, sand, gravel, and cobble substrates. It is intolerant to extremely soft substrates, shifting sands, scoured bottoms, and impoundments.	Y	No habitat for this species exists within Lady Bird Lake for this species, but potential habitat could occur within the Colorado River near the proposed drainage outfall. A habitat assessment of this area in October 2021 determined that this area of potential habitat is poor. Additionally, this species has not been recorded from this section of the Colorado River (MoTX).	PE	No effect or take	T	No impact	This species is not likely to occur within the project area near the drainage outfall. A due diligence presence/absence survey was conducted following USFWS protocols in Fall 2022 and no mussel species were found.	Y
Travis	Plants	Bracted Twistflower	*Streptanthus bracteatus*	The species is found in south-central Texas. It is an annual; endemic to the Edwards Plateau where it is occurs on shallow, well-drained gravelly clays and clay loams over limestone, within oak-juniper woodland and associated openings, on steep to moderate slopes, and in canyon bottoms. Often found amid dense shrub growth where there is some protection from browsing.	N	No suitable oak-juniper woodlands with associated openings was observed during the June 2021 site investigation.	PT	No effect or harm	—	N/A	No suitable habitat is present.	N
Travis	Reptiles	Texas Horned Lizard	*Phrynosoma cornutum*	The species is found in semi-arid open areas with scattered vegetation comprised of bunchgrass, cacti, yucca, mesquite, acacia, juniper, or other woody shrubs and small trees commonly found in loose sandy or loamy soils.	N	No open areas with scattered vegetation was observed during within the study area during the June 2021 site investigation.	—	N/A	T	No impact	No suitable habitat is present.	N

SPECIES ANALYSIS SUMMARY (SGCN)
Project Name: I-35 Capital Express Central Project - Build Alternative 2 and Modified Build Alternative 3
CSJ: 0015-13-388

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
TRAVIS	AMPHIBIANS	Strecker's chorus frog	Pseudacris streckeri	Terrestrial and aquatic: Wooded floodplains and flats, prairies, cultivated fields and marshes. Likes sandy substrates.	N	All of the vegetation within the study area is highly maintained and classified as urban. No suitable vegetated areas and no appropriate aquatic habitat is available within the study area.	No impact	No suitable habitat present.	N
TRAVIS	AMPHIBIANS	Woodhouse's toad	Anaxyrus woodhousii	Terrestrial and aquatic: A wide variety of terrestrial habitats are used by this species, including forests, grasslands, and barrier island sand dunes. Aquatic habitats are equally varied.	Y	This species is known to do well in highly urbanized settings. The urban parkland habitats along the Lady Bird Lake walking trail could provide suitable habitat for this species.	May impact	Suitable habitat is present and may be altered by the proposed project.	N
TRAVIS	ARACHNIDS	Bandit Cave spider	Cicurina bandida	Very small, subterrestrial, subterranean obligate	N	The study area occurs within Karst Zone 3b, areas not known to contain karst species or suitable karst habitat.	No impact	No suitable habitat present.	N
TRAVIS	BIRDS	Bald Eagle	Haliaeetus leucocephalus	Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds	N	Though a large body of water suitable for foraging does exist within the study area, the project is located in a highly urbanized portion of Travis County. This species would be unlikely to utilize the potential nesting trees adjacent to the major highway.	No impact	No suitable habitat present.	N
TRAVIS	BIRDS	Black-capped Vireo	Vireo atricapilla	Oak-juniper woodlands with distinctive patchy, two-layered aspect; shrub and tree layer with open, grassy spaces; requires foliage reaching to ground level for nesting cover; return to same territory, or one nearby, year after year; deciduous and broad-leaved shrubs and trees provide insects for feeding; species composition less important than presence of adequate broad-leaved shrubs, foliage to ground level, and required structure; nesting season March-late summer	N	No oak juniper woodlands were observed within the study area.	No impact	No suitable habitat present.	N
TRAVIS	BIRDS	Chestnut-collared Longspur	Calcarius ornatus	According to Partners in Flight's Landbird Conservation Plan (2016), this species has a continental decline of 85%. Occurs in open shortgrass settings especially in patches with some bare ground. Also occurs in grain sorghum fields and Conservation Reserve Program lands	N	This species prefers shortgrass habitats that are grazed or burned regularly but tends to avoid highly populated areas. This species would not be likely to be found within the study area.	No impact	Any potential sightings of this species would be of migrating individuals and this species is not likely to regularly occur within the study area.	N

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
TRAVIS	BIRDS	Franklin's Gull	Leucophaeus pipixcan	This species is only a spring and fall migrant throughout Texas. It does not breed in or near Texas. Winter records are unusual consisting of one or a few individuals at a given site (especially along the Gulf coastline). During migration, these gulls fly during daylight hours but often come down to wetlands, lake shore, or islands to roost for the night.	N	The Colorado River is impounded to be Lady Bird Lake within the study area. No suitable stopover habitat is available along the shores of the lake for this species.	No impact	No suitable habitat present.	N
TRAVIS	BIRDS	Lark Bunting	Calamospiza melanocorys	According to Partners in Flight's Landbird Conservation Plan (2016), this species has a continental decline of 86%. Overall, it's a generalist in most short grassland settings including ones with some brushy component plus certain agricultural lands that include grain sorghum. Short grasses include sideoats and blue gramas, sand dropseed, prairie junegrass (Koeleria), buffalo grass also with patches of bluestem and other mid-grass species. This bunting will frequent smaller patches of grasses or disturbed patches of grasses including rural yards. It also uses weedy fields surrounding playas. This species avoids urban areas and cotton fields.	N	No potential suitable mid-grass habitats or short grass with brushy components was observed within the study area. In addition, this species is known to avoid urbanized areas and the project is located in a highly urbanized portion of Travis County.	No impact	No suitable habitat present.	N
TRAVIS	BIRDS	Mountain Plover	Charadrius montanus	Breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous	N	The study area occurs within a highly urbanized portion of Travis County that would likely detour any migrating individuals of this species.	No impact	No suitable habitat present.	N
TRAVIS	BIRDS	Western Burrowing Owl	Athene cunicularia hypugaea	Open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows	N	The study area occurs within a highly urbanized portion of Travis County. No vacant lots or other preferred habitat were observed within the study area.	No impact	No suitable habitat present.	N
TRAVIS	CRUSTACEANS	Balcones Cave amphipod	Stygobromus balconis	Subaquatic, subterranean obligate amphipod	N	No caves or subterranean habitats are mapped by the City of Austin within the vicinity of the study area and known were observed during the limited site investigation.	No impact	No suitable habitat present.	N
TRAVIS	CRUSTACEANS	Ezell's Cave amphipod	Stygobromus flagellatus	Known only from artesian wells	N	No artesian wells are located within the study area.	No impact	No suitable habitat present.	N

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
TRAVIS	FISH	American eel	Anguilla rostrata	Originally found in all river systems from the Red River to the Rio Grande. Aquatic habitats include large rivers, streams, tributaries, coastal watersheds, estuaries, bays, and oceans. Spawns in Sargasso Sea, larva move to coastal waters, metamorphose, and begin upstream movements. Females tend to move further upstream than males (who are often found in brackish estuaries). American Eel are habitat generalists and may be found in a broad range of habitat conditions including slow- and fast-flowing waters over many substrate types. Extirpation in upstream drainages attributed to reservoirs that impede upstream migration.	Y	Lady Bird Lake and the Colorado River downstream of Longhorn Dam could provide suitable habitat for this species, and individuals of this species have been collected from the lake.	May impact	Suitable habitat is present and may be altered by the proposed project.	N
TRAVIS	FISH	Guadalupe bass	Micropterus treculii	Endemic to the streams of the northern and eastern Edwards Plateau including portions of the Brazos, Colorado, Guadalupe, and San Antonio basins; species also found outside of the Edwards Plateau streams in decreased abundance, primarily in the lower Colorado River; two introduced populations have been established in the Nueces River system. A pure population was re-established in a portion of the Blanco River in 2014. Species prefers lentic environments but commonly taken in flowing water; numerous smaller fish occur in rapids, many times near eddies; large individuals found mainly in riffle tail races; usually found in spring-fed streams having clear water and relatively consistent temperatures.	Y	Colorado River below Longhorn Dam could provide suitable habitat for this species.	May impact	Suitable habitat is present and may be altered by the proposed project.	N
TRAVIS	FISH	silverband shiner	Notropis shumardi	In Texas, found from Red River to Lavaca River; Main channel with moderate to swift current velocities and moderate to deep depths; associated with turbid water over silt, sand, and gravel.	Y	Colorado River below Longhorn Dam could provide suitable habitat for this species.	May impact	Suitable habitat is present and may be altered by the proposed project.	N
TRAVIS	FISH	Texas shiner	Notropis amabilis	In Texas, it is found primarily in Edwards Plateau streams from the San Gabriel River in the east to the Pecos River in the west. Typical habitat includes rocky or sandy runs, as well as pools.	Y	Colorado River below Longhorn Dam could provide suitable habitat for this species.	May impact	Suitable habitat is present and may be altered by the proposed project.	N
TRAVIS	INSECTS	a caddisfly	Neotrichia juani	Specimens were collected from perennial and ephemeral rivers, and small spring-fed streams (Harris and Tiemann 1993).	Y	Lady Bird Lake and the Colorado River downstream of Longhorn Dam could provide suitable habitat for this species.	May impact	Suitable habitat is present and may be altered by the proposed project.	N
TRAVIS	MAMMALS	Aransas short-tailed shrew	Blarina hylophaga plumbea	Excavates burrows in sandy soils underlying mottes of live oak trees or in areas with little to no ground cover.	N	No sandy soils or live oak mottes are found within the study area.	No impact	No suitable habitat present.	N

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
TRAVIS	MAMMALS	big brown bat	Eptesicus fuscus	Any wooded areas or woodlands except south Texas. Riparian areas in west Texas.	Y	Potential roosting trees for this species occur at the outfall location near Longhorn Dam. Individuals or small groups of this species may utilize these trees sporadically, but no known colony is located withinthe vicinity of the project.	May impact	Suitable habitat is present and may be altered by the proposed project.	N
TRAVIS	MAMMALS	big free-tailed bat	Nyctinomops macrotis	Habitat data sparse but records indicate that species prefers to roost in crevices and cracks in high canyon walls, but will use buildings, as well; reproduction data sparse, gives birth to single offspring late June-early July; females gather in nursery colonies; winter habits undetermined, but may hibernate in the Trans-Pecos; opportunistic insectivore	N	A review of the historic range and roosting preferences of this species make it very unlikely that this species would be encountered within the study area.	No impact	This species is not known to occur within the vicinity of the study area.	N
TRAVIS	MAMMALS	cave myotis bat	Myotis velifer	Colonial and cave-dwelling; also roosts in rock crevices, old buildings, carports, under bridges, and even in abandoned Cliff Swallow (Hirundo pyrrhonota) nests; roosts in clusters of up to thousands of individuals; hibernates in limestone caves of Edwards Plateau and gypsum cave of Panhandle during winter; opportunistic insectivore.	Y	Potential roosting locations for this species occur at locations where swallow nests were obesrved. The primary potential habitat for this species is over Lady Bird Lake where swallow nests were observed along the bridge. Individuals or small groups of this species may utilize these nests sporadically, but no known colony is located withinthe vicinity of the project.	May impact	Work on structures would occur where potential roosting locations are present. Swallow nests will be checked before removal to be sure they are not occupied by bats.	N
TRAVIS	MAMMALS	eastern red bat	Lasiurus borealis	Red bats are migratory bats that are common across Texas. They are most common in the eastern and central parts of the state, due to their requirement of forests for foliage roosting. West Texas specimens are associated with forested areas (cottonwoods). Also common along the coastline. These bats are highly mobile, seasonally migratory, and practice a type of "wandering migration". Associations with specific habitat is difficult unless specific migratory stopover sites or wintering grounds are found. Likely associated with any forested area in East, Central, and North Texas but can occur statewide.	Y	Potential roosting trees for this species occur at the outfall location near Longhorn Dam. Individuals or small groups of this species may utilize these trees sporadically, but no known colony is located within the vicinity of the project.	May impact	Suitable habitat is present and may be altered by the proposed project.	N

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
TRAVIS	MAMMALS	eastern spotted skunk	Spilogale putorius	Generalist; open fields prairies, croplands, fence rows, farmyards, forest edges & woodlands. Prefer wooded, brushy areas & tallgrass prairies. S.p. ssp. interrupta found in wooded areas and tallgrass prairies, preferring rocky canyons and outcrops when such sites are available.	N	The project is located within a highly urbanized portion of Travis County with regularly maintained vegetation. This species would be unlikely to be found within the study area due to the amount of urbanization and human presence.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	MAMMALS	hoary bat	Lasiurus cinereus	Hoary bats are highly migratory, high-flying bats that have been noted throughout the state. Females are known to migrate to Mexico in the winter, males tend to remain further north and may stay in Texas year-round. Commonly associated with forests (foliage roosting species) but are found in unforested parts of the state and lowland deserts. Tend to be captured over water and large, open flyways.	Y	Potential roosting trees for this species occur at the outfall location near Longhorn Dam. Individuals or small groups of this species may utilize these trees sporadically, but no known colony is located withinthe vicinity of the project.	May impact	Suitable habitat is present and may be altered by the proposed project.	N
TRAVIS	MAMMALS	long-tailed weasel	Mustela frenata	Includes brushlands, fence rows, upland woods and bottomland hardwoods, forest edges & rocky desert scrub. Usually live close to water.	N	The project is located within a highly urbanized portion of Travis County with regularly maintained vegetation. This species would be unlikely to be found within the study area due to the amount of urbanization and human presence.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	MAMMALS	mountain lion	Puma concolor	Generalist; found in a wide range of habitats statewide. Found most frequently in rugged mountains & riparian zones.	N	The project is located within a highly urbanized portion of Travis County with regularly maintained vegetation. This species would be unlikely to be found within the study area due to the amount of urbanization and human presence.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	MAMMALS	northern yellow bat	Lasiurus intermedius	Occurs mainly along the Gulf Coast but inland specimens are not uncommon. Prefers roosting in spanish moss and in the hanging fronds of palm trees. Common where this vegtation occurs. Found near water and forages over grassy, open areas. Males usually roost solitarily, whereas females roost in groups of several individuals.	N	The preferred roosting substrates of Spanish moss and palm trees do not exist within the study area.	No impact	No suitable habitat is present within the study area.	N

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
TRAVIS	MAMMALS	swamp rabbit	Sylvilagus aquaticus	Primarily found in lowland areas near water including: cypress bogs and marshes, floodplains, creeks and rivers.	Y	Potential habitat for this species occurs at the outfall location adjacent to the Colorado River near Longhorn Dam.	May impact	Suitable habitat is present and may be altered by the proposed project.	N
TRAVIS	MAMMALS	tricolored bat	Perimyotis subflavus	Forest, woodland and riparian areas are important. Caves are very important to this species.	Y	Potential roosting trees for this species occur at the outfall location near Longhorn Dam. Individuals or small groups of this species may utilize these trees sporadically, but no known colony is located withinthe vicinity of the project.	May impact	Suitable habitat is present and may be altered by the proposed project.	N
TRAVIS	MAMMALS	western hog-nosed skunk	Conepatus leuconotus	Habitats include woodlands, grasslands & deserts, to 7200 feet, most common in rugged, rocky canyon country; little is known about the habitat of the ssp. telmalestes	N	The study area is highly disturbed and maintained; rugged, rocky canyonland does not occur within the study area.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	REPTILES	eastern box turtle	Terrapene carolina	Terrestrial: Eastern box turtles inhabit forests, fields, forest-brush, and forest-field ecotones. In some areas they move seasonally from fields in spring to forest in summer. They commonly enters pools of shallow water in summer. For shelter, they burrow into loose soil, debris, mud, old stump holes, or under leaf litter. They can successfully hibernate in sites that may experience subfreezing temperatures.	N	The project is located in a heavily developed area that would not provide suitable cover for this species. The stream located within the study area is too deep to be utilized by this species.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	REPTILES	plateau spot-tailed earless lizard	Holbrookia lacerata	Terrestrial: Habitats include moderately open prairie-brushland regions, particularly fairly flat areas free of vegetation or other obstructions (e.g., open meadows, old and new fields, graded roadways, cleared and disturbed areas, prairie savanna, and active agriculture including row crops); also, oak-juniper woodlands and mesquite-prickly pear associations (Axtell 1968, Bartlett and Bartlett 1999).	Y	Suitable habitat for this species exists within the greenbelt and parkland along Lady Bird Lake.	May impact	Suitable habitat is present and may be altered by the proposed project.	N
TRAVIS	REPTILES	slender glass lizard	Ophisaurus attenuatus	Terrestrial: Habitats include open grassland, prairie, woodland edge, open woodland, oak savannas, longleaf pine flatwoods, scrubby areas, fallow fields, and areas near streams and ponds, often in habitats with sandy soil.	Y	Suitable habitat for this species exists within the greenbelt and parkland along Lady Bird Lake.	May impact	Suitable habitat is present and may be altered by the proposed project.	N
TRAVIS	REPTILES	Texas garter snake	Thamnophis sirtalis annectens	Terrestrial and aquatic: Habitats used include the grasslands and modified open areas in the vicinity of aquatic features, such as ponds, streams or marshes. Damp soils and debris for cover are thought to be critical.	Y	Suitable habitat for this species exists within the greenbelt and parkland along Lady Bird Lake.	May impact	Suitable habitat is present and may be altered by the proposed project.	N
TRAVIS	REPTILES	Texas map turtle	Graptemys versa	Aquatic: Primarily a river turtle but can also be found in reservoirs. Can be found in deep and shallow water with sufficient basking sites (emergent rocks and woody debris).	Y	Suitable habitat for this species exists within Lady Bird Lake and the Colorado River downstream of Longhorn Dam.	May impact	Work will occur within the boundaries of Lady Bird Lake.	N

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
TRAVIS	REPTILES	western box turtle	Terrapene ornata	Terrestrial: Ornate or western box turtles inhabit prairie grassland, pasture, fields, sandhills, and open woodland. They are essentially terrestrial but sometimes enter slow, shallow streams and creek pools. For shelter, they burrow into soil (e.g., under plants such as yucca) (Converse et al. 2002) or enter burrows made by other species.	N	The project is located in a heavily developed area that would not provide suitable cover for this species. The stream located within the study area is too deep to be utilized by this species.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	arrowleaf milkvine	Matelea sagittifolia	Most consistently encountered in thorn scrub in South Texas; Perennial; Flowering March-July; Fruiting April-July and Dec?	N	The study area is highly urbanized and consists of maintained vegetation. No thornscrub was observed.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	basin bellflower	Campanula reverchonii	Among scattered vegetation on loose gravel, gravelly sand, and rock outcrops on open slopes with exposures of igneous and metamorphic rocks; may also occur on sandbars and other alluvial deposits along major rivers; flowering May-July	N	The study area is highly urbanized and consists of maintained vegetation. No loose gravel, gravelly sand, or rocky outcrops were observed. No sandbars are present.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	Buckley tridens	Tridens buckleyanus	Occurs in juniper-oak woodlands on rocky limestone slopes; Perennial; Flowering/Fruiting April-Nov	N	The study area is highly urbanized and consists of maintained vegetation. No juniper-oak woodlands were observed.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	canyon bean	Phaseolus texensis	Narrowly endemic to rocky canyons in eastern and southern Edwards Plateau occurring on limestone soils in mixed woodlands, on limestone cliffs and outcrops, frequently along creeks.	N	The study area is highly urbanized and consists of maintained vegetation. No rocky canyons, cliffs, or outcrops exist within the study area.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	canyon mock-orange	Philadelphus texensis var. ernestii	Usually found growing from honeycomb pits on outcrops of Cretaceous limestone exposed as rimrock along mesic canyons, usually in the shade of mixed evergreen-deciduous canyon woodland; flowering April-June, fruit dehiscing September-October	N	The study area is highly urbanized and consists of maintained vegetation. No honeycomb pits or rocky outcrops were observed.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	canyon sedge	Carex edwardsiana	Dry-mesic deciduous and deciduous-juniper woodlands in canyons and ravines, usually in clay loams very high in calcium on rocky banks and slopes just above streams and stream beds. Carex edwardsiana usually grows near C. planostachys. Fruiting spring (Ball, Reznicek, and 2003).	N	The study area is highly urbanized and consists of maintained vegetation. No canyons or ravines are present.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	Correll's false dragon-head	Physostegia correllii	Wet, silty clay loams on streamsides, in creek beds, irrigation channels and roadside drainage ditches; or seepy, mucky, sometimes gravelly soils along riverbanks or small islands in the Rio Grande; or underlain by Austin Chalk limestone along gently flowing spring-fed creek in central Texas; flowering May-September	Y	Mucky, gravelly, or silty clay loam soils may be present on the banks of Lady Bird Lake/Colorado River.	May impact	Suitable habitat is present and may be altered by the proposed project.	N

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
TRAVIS	PLANTS	Engelmann's bladderpod	Physaria engelmannii	Grasslands and calcareous rock outcrops in a band along the eastern edge of the Edwards Plateau, ranging as far north as the Red River (Carr 2015).	N	The study area is highly urbanized and consists of maintained vegetation. No rocky outcrops are present.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	glandular gay-feather	Liatris glandulosa	Occurs in herbaceous vegetation on limestone outcrops (Carr 2015)	N	The study area is highly urbanized and consists of maintained vegetation. No limestone outcrops are present.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	Glass Mountains coral-root	Hexalectris nitida	Apparently rare in mixed woodlands in canyons in the mountains of the Brewster County, but encountered with regularity, albeit in small numbers, under Juniperus ashei in woodlands over limestone on the Edwards Plateau, Callahan Divide and Lampasas Cutplain; Perennial; Flowering June-Sept; Fruiting July-Sept	N	The study area is highly urbanized and consists of maintained vegetation. No canyons or ashe juniper woodlands are present.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	gravelbar brickellbush	Brickellia dentata	Essentially restricted to frequently-scoured gravelly alluvial beds in creek and river bottoms; Perennial; Flowering June-Nov; Fruiting June-Oct	N	The study area is highly urbanized and consists of maintained vegetation. No alluvial beds are present.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	Greenman's bluet	Houstonia parviflora	Grass pastures. Feb- Apr. (Correll and Johnston 1970).	N	The study area is highly urbanized and consists of maintained vegetation. This species is not likely to occur dur to the regular maintenance.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	Heller's marbleseed	Onosmodium helleri	Occurs in loamy calcareous soils in oak-juniper woodlands on rocky limestone slopes, often in more mesic portions of canyons; Perennial; Flowering March-May	N	The study area is highly urbanized and consists of maintained vegetation. No oak-juniper woodlands or rocky limestone slopes are present.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	low spurge	Euphorbia peplidion	Occurs in a variety of vernally-moist situations in a number of natural regions; Annual; Flowering Feb-April; Fruiting March-April	N	The study area is highly urbanized and consists of maintained vegetation. No vernally-moist situations are present.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	narrowleaf brickellbush	Brickellia eupatorioides var. gracillima	Moist to dry gravelly alluvial soils along riverbanks but also on limestone slopes; Perennial; Flowering/Fruiting April-Nov	N	The study area is highly urbanized and consists of maintained vegetation. No alluvial soils or limestone slopes are present.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	net-leaf bundleflower	Desmanthus reticulatus	Mostly on clay prairies of the coastal plain of central and south Texas; Perennial; Flowering April-July; Fruiting April-Oct	N	The study area is highly urbanized and consists of maintained vegetation. No prairie habitat is present.	No impact	No suitable habitat is present within the study area.	N

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
TRAVIS	PLANTS	Plateau loosestrife	Lythrum ovalifolium	Banks and gravelly beds of perennial (or strong intermittent) streams on the Edwards Plateau, Llano Uplift and Lampasas Cutplain; Perennial; Flowering/Fruiting April-Nov	N	The study area is highly urbanized and consists of maintained vegetation. No gravelly beds are present.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	plateau milkvine	Matelea edwardsensis	Occurs in various types of juniper-oak and oak-juniper woodlands; Perennial; Flowering March-Oct; Fruiting May-June	N	The study area is highly urbanized and consists of maintained vegetation. No oak-juniper woodlands are present.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	rock grape	Vitis rupestris	Occurs on rocky limestone slopes and in streambeds; Perennial; Flowering March-May; Fruiting May-July	N	The study area is highly urbanized and consists of maintained vegetation.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	scarlet leather-flower	Clematis texensis	Usually in oak-juniper woodlands in mesic rocky limestone canyons or along perennial streams; Perennial; Flowering March-July; Fruiting May-July	N	The study area is highly urbanized and consists of maintained vegetation. No oak-juniper woodlands are present.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	spreading leastdaisy	Chaetopappa effusa	Limestone cliffs, ledges, bluffs, steep hillsides, sometimes in seepy areas, oak-juniper, oak, or mixed deciduous woods, 300-500 m elevation; Perennial; Flowering (May) July-Oct	N	The study area is highly urbanized and consists of maintained vegetation. No limestone outcrops or oak-juniper woodlands are present.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	Stanfield's beebalm	Monarda stanfieldii	Largely confined to granite sands along the middle course of the Colorado River and its tributaries; Perennial	N	The study area is highly urbanized and consists of maintained vegetation. No granite sandbars exist within Lady Bird Lake.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	sycamore-leaf snowbell	Styrax platanifolius ssp. platanifolius	Rare throughout range, usually in oak-juniper woodlands on steep rocky banks and ledges along intermittent or perennial streams, rarely far from some reliable source of moisture; Perennial; Flowering April-May; Fruiting May-Aug.	N	The study area is highly urbanized and consists of maintained vegetation. No oak-juniper woodlands or steep rocky banks are present.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	Texabama croton	Croton alabamensis var. texensis	In duff-covered loamy clay soils on rocky slopes in forested, mesic limestone canyons; locally abundant on deeper soils on small terraces in canyon bottoms, often forming large colonies and dominating the shrub layer; scattered individuals are occasionally on sunny margins of such forests; also found in contrasting habitat of deep, friable soils of limestone uplands, mostly in the shade of evergreen woodland mottes; flowering late February-March; fruit maturing and dehiscing by early June	N	The study area is highly urbanized and consists of maintained vegetation. No rocky slopes, limestone canyons, or evergreen mottes are present.	No impact	No suitable habitat is present within the study area.	N

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
TRAVIS	PLANTS	Texas almond	Prunus minutiflora	Wide-ranging but scarce, in a variety of grassland and shrubland situations, mostly on calcareous soils underlain by limestone but occasionally in sandier neutral soils underlain by granite; Perennial; Flowering Feb-May and Oct; Fruiting Feb-Sept	N	The study area is highly urbanized and consists of maintained vegetation. No natural grass or shrubland areas are present.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	Texas amorpha	Amorpha roemeriana	Juniper-oak woodlands or shrublands on rocky limestone slopes, sometimes on dry shelves above creeks; Perennial; Flowering May-June; Fruiting June-Oct	N	The study area is highly urbanized and consists of maintained vegetation. No oak-juniper woodlands or rock limestone slopes are present.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	Texas barberry	Berberis swaseyi	Shallow calcareous stony clay of upland grasslands/shrublands over limestone as well as in loamier soils in openly wooded canyons and on creek terraces; Perennial; Flowering/Fruiting March-June	N	The study area is highly urbanized and consists of maintained vegetation. No stony clay, openly wooded canyons, or creek terraces are present.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	Texas fescue	Festuca versuta	Occurs in mesic woodlands on limestone-derived soils on stream terraces and canyon slopes; Perennial; Flowering/Fruiting April-June	Y	The riparian area at the outfall structure along the Colorado River may provide suitable habitat for this species within the study area.	May impact	Suitable habitat is present and may be altered by the proposed project.	N
TRAVIS	PLANTS	Texas milk vetch	Astragalus reflexus	Grasslands, prairies, and roadsides on calcareous and clay substrates; Annual; Flowering Feb-June; Fruiting April-June	N	Roadside habitat within the study area is highly disturbed and modified.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	Texas seymeria	Seymeria texana	Found primarily in grassy openings in juniper-oak woodlands on dry rocky slopes but sometimes on rock outcrops in shaded canyons; Annual; Flowering May-Nov; Fruiting July-Nov	N	The study area is highly urbanized and consists of maintained vegetation. No juniper-oak woodlands or rocky slopes are present.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	tree dodder	Cuscuta exaltata	Parasitic on various Quercus, Juglans, Rhus, Vitis, Ulmus, and Diospyros species as well as Acacia berlandieri and other woody plants; Annual; Flowering May-Oct; Fruiting July-Oct	Y	Suitable tree host species occur within the study area.	May impact	Suitable host species within the study area may be impacted by the proposed project.	N
TRAVIS	PLANTS	turnip-root scurfpea	Pediomelum cyphocalyx	Grasslands and openings in juniper-oak woodlands on limestone substrates on the Edwards Plateau and in north-central Texas (Carr 2015).	N	The study area is highly urbanized and consists of maintained vegetation. No juniper oak woodlands were observed.	No impact	No suitable habitat is present within the study area.	N

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Impact Determination for SGCNs	Explanation for Impact Determination	Presence/ Absence survey conducted?
TRAVIS	PLANTS	Warnock's coral-root	Hexalectris warnockii	In leaf litter and humus in oak-juniper woodlands on shaded slopes and intermittent, rocky creekbeds in canyons; in the Trans Pecos in oak-pinyon-juniper woodlands in higher mesic canyons (to 2000 m [6550 ft]), primarily on igneous substrates; in Terrell County under Quercus fusiformis mottes on terraces of spring-fed perennial streams, draining an otherwise rather xeric limestone landscape; on the Callahan Divide (Taylor County), the White Rock Escarpment (Dallas County), and the Edwards Plateau in oak-juniper woodlands on limestone slopes; in Gillespie County on igneous substrates of the Llano Uplift; flowering June-September; individual plants do not usually bloom in successive years	N	The study area is highly urbanized and consists of maintained vegetation. No juniper oak woodlands or canyons were observed.	No impact	No suitable habitat is present within the study area.	N
TRAVIS	PLANTS	Wright's milkvetch	Astragalus wrightii	On sandy or gravelly soils; April (Diggs et al. 1999).	N	The study area does overlap some gravelly sand soils, but the project is located in a highly urbanized portion of Travis County. All vegetation is highly maintained and this species would be unlikely to occur.	No impact	This species would be unlikely to be found among the regularly maintained urban vegetation.	N

SPECIES ANALYSIS SUMMARY (ADDENDUM)
Project Name: I-35 Capital Express Central Project - Build Alternative 2 and Modified Build Alternative 3
CSJ: 0015-13-388

County	Taxon	Common Name	Scientific Name	Habitat	Suitable Habitat Present?	Explanation for determination regarding suitable habitat	Federal Status	Effect/Take Determination for Federally Listed Species	State Status	Impact Determination for State Listed Species	Explanation for Effect/Take and/or Impact Determination	Presence/ Absence survey conducted?
Travis	Birds	Sprague's pipit	*Anthus spragueii*	The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Habitat during migration and in winter consists of pastures and weedy fields (AOU 1983), including grasslands with dense herbaceous vegetation or grassy agricultural fields.	N	The project area is outside the breeding and wintering range of this species. Although suitable stopover habitat may be present, Sprague's pipit is not expected to regularly occur and any use of this habitat would be incidental.	N/A	N/A	SGCN	No impact	The project area does not contain suitable breeding or wintering habitat.	N
TRAVIS	MAMMALS	tricolored bat	*Perimyotis subflavus*	Forest, woodland and riparian areas are important. Caves are very important to this species.	Y	Potential roosting trees for this species occur at the outfall location near Longhorn Dam. Individuals or small groups of this species may utilize these trees sporadically, but no known colony is located within the vicinity of the project.	Proposed Endangered	May affect	SGCN	May impact	Suitable habitat is present and may be altered by the proposed project. A presence/absence survey will be conducted.	N

TPWD Rare, Threatened, and Endangered Species of Texas List

Last Update: 7/12/2022

TRAVIS COUNTY

AMPHIBIANS

Austin blind salamander *Eurycea waterlooensis*

Aquatic and subterranean; streams and caves.

Federal Status: LE | State Status: E | SGCN: Y
Endemic: Y | Global Rank: G1 | State Rank: S1

Barton Springs salamander *Eurycea sosorum*

Aquatic; springs, streams and caves with rocky or cobble beds.

Federal Status: LE | State Status: E | SGCN: Y
Endemic: Y | Global Rank: G1 | State Rank: S1

Jollyville Plateau salamander *Eurycea tonkawae*

Aquatic; springs, streams and caves with rocky or cobble beds.

Federal Status: LT | State Status: T | SGCN: Y
Endemic: Y | Global Rank: G2 | State Rank: S2

Pedernales River Springs salamander *Eurycea sp. 6*

Aquatic; springs, streams and caves with rocky or cobble beds.

Federal Status: | State Status: | SGCN: N
Endemic: Y | Global Rank: G1 | State Rank: S1S2

Strecker's chorus frog *Pseudacris streckeri*

Terrestrial and aquatic: Wooded floodplains and flats, prairies, cultivated fields and marshes. Likes sandy substrates.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: S3

Woodhouse's toad *Anaxyrus woodhousii*

Terrestrial and aquatic: A wide variety of terrestrial habitats are used by this species, including forests, grasslands, and barrier island sand dunes. Aquatic habitats are equally varied.

Federal Status: | State Status: | SGCN: Y
Endemic: N | Global Rank: G5 | State Rank: SU

ARACHNIDS

Bandit Cave spider *Cicurina bandida*

Very small, subterrestrial, subterranean obligate

Federal Status: | State Status: | SGCN: Y
Endemic: Y | Global Rank: G2Q | State Rank: S1

TRAVIS COUNTY

ARACHNIDS

Bone Cave harvestman *Texella reyesi*

Small, blind, cave-adapted harvestman endemic to several caves in Travis and Williamson counties; weakly differentiated from Texella reddelli

Federal Status: LE	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2G3	State Rank: S2

No accepted common name *Texella grubbsi*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G2	State Rank: S1

No accepted common name *Texella mulaiki*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2G3	State Rank: S2

No accepted common name *Texella spinoperca*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: GNR	State Rank: SNR

No accepted common name *Cicurina travisae*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G2Q	State Rank: S1

No accepted common name *Eidmannella reclusa*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G2	State Rank: S1

No accepted common name *Tartarocreagris infernalis*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2G3	State Rank: S2?

No accepted common name *Tartarocreagris intermedia*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G2	State Rank: S1

TRAVIS COUNTY

ARACHNIDS

No accepted common name *Tartarocreagris altimana*
Habitat description is not available at this time.
Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G1G2 State Rank: S1

No accepted common name *Tartarocreagris attenuata*
Habitat description is not available at this time.
Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G1G2 State Rank: S1

No accepted common name *Tartarocreagris domina*
Habitat description is not available at this time.
Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G1G2 State Rank: S1

No accepted common name *Tartarocreagris proserpina*
Habitat description is not available at this time.
Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G1G2 State Rank: S1

Reddell harvestman *Texella reddelli*
Small, blind, cave-adapted harvestman endemic to a few caves in Travis and Williamson counties
Federal Status: LE State Status: SGCN: Y
Endemic: Y Global Rank: G2G3 State Rank: S2

Tooth Cave pseudoscorpion *Tartarocreagris texana*
Small, cave-adapted pseudoscorpion known from small limestone caves of the Edwards Plateau
Federal Status: LE State Status: SGCN: Y
Endemic: Y Global Rank: G1G2 State Rank: S1

Tooth Cave spider *Neoleptoneta myopica*
Very small, cave-adapted, sedentary spider
Federal Status: LE State Status: SGCN: Y
Endemic: Global Rank: G1G2 State Rank: S1

BIRDS

bald eagle *Haliaeetus leucocephalus*

TRAVIS COUNTY

BIRDS

Found primarily near rivers and large lakes; nests in tall trees or on cliffs near water; communally roosts, especially in winter; hunts live prey, scavenges, and pirates food from other birds

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3B,S3N

black rail *Laterallus jamaicensis*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Salt, brackish, and freshwater marshes, pond borders, wet meadows, and grassy swamps; nests in or along edge of marsh, sometimes on damp ground, but usually on mat of previous years dead grasses; nest usually hidden in marsh grass or at base of Salicornia

Federal Status: LT	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

black-capped vireo *Vireo atricapilla*

Oak-juniper woodlands with distinctive patchy, two-layered aspect; shrub and tree layer with open, grassy spaces; requires foliage reaching to ground level for nesting cover; return to same territory, or one nearby, year after year; deciduous and broad-leaved shrubs and trees provide insects for feeding; species composition less important than presence of adequate broad-leaved shrubs, foliage to ground level, and required structure; nesting season March-late summer

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3B

chestnut-collared longspur *Calcarius ornatus*

Occurs in open shortgrass settings especially in patches with some bare ground. Also occurs in grain sorghum fields and Conservation Reserve Program lands

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Franklin's gull *Leucophaeus pipixcan*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. This species is only a spring and fall migrant throughout Texas. It does not breed in or near Texas. Winter records are unusual consisting of one or a few individuals at a given site (especially along the Gulf coastline). During migration, these gulls fly during daylight hours but often come down to wetlands, lake shore, or islands to roost for the night.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2N

golden-cheeked warbler *Setophaga chrysoparia*

Ashe juniper in mixed stands with various oaks (Quercus spp.). Edges of cedar brakes. Dependent on Ashe juniper (also known as cedar) for long fine bark strips, only available from mature trees, used in nest construction; nests are placed in various trees other than Ashe juniper; only a few mature junipers or nearby cedar brakes can provide the necessary nest material; forage for insects in broad-leaved trees and shrubs; nesting late March-early summer.

Federal Status: LE	State Status: E	SGCN: Y
Endemic: N	Global Rank: G2	State Rank: S2S3B

TRAVIS COUNTY

BIRDS

lark bunting *Calamospiza melanocorys*

Overall, it's a generalist in most short grassland settings including ones with some brushy component plus certain agricultural lands that include grain sorghum. Short grasses include sideoats and blue gramas, sand dropseed, prairie junegrass (Koeleria), buffalograss also with patches of bluestem and other mid-grass species. This bunting will frequent smaller patches of grasses or disturbed patches of grasses including rural yards. It also uses weedy fields surrounding playas. This species avoids urban areas and cotton fields.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

mountain plover *Charadrius montanus*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Breeding: nests on high plains or shortgrass prairie, on ground in shallow depression; nonbreeding: shortgrass plains and bare, dirt (plowed) fields; primarily insectivorous.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2

piping plover *Charadrius melodus*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Beaches, sandflats, and dunes along Gulf Coast beaches and adjacent offshore islands. Also spoil islands in the Intracoastal Waterway. Based on the November 30, 1992 Section 6 Job No. 9.1, Piping Plover and Snowy Plover Winter Habitat Status Survey, algal flats appear to be the highest quality habitat. Some of the most important aspects of algal flats are their relative inaccessibility and their continuous availability throughout all tidal conditions. Sand flats often appear to be preferred over algal flats when both are available, but large portions of sand flats along the Texas coast are available only during low-very low tides and are often completely unavailable during extreme high tides or strong north winds. Beaches appear to serve as a secondary habitat to the flats associated with the primary bays, lagoons, and inter-island passes. Beaches are rarely used on the southern Texas coast, where bayside habitat is always available, and are abandoned as bayside habitats become available on the central and northern coast. However, beaches are probably a vital habitat along the central and northern coast (i.e. north of Padre Island) during periods of extreme high tides that cover the flats. Optimal site characteristics appear to be large in area, sparsely vegetated, continuously available or in close proximity to secondary habitat, and with limited human disturbance.

Federal Status: LT	State Status: T	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S2N

rufa red knot *Calidris canutus rufa*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Habitat: Primarily seacoasts on tidal flats and beaches, herbaceous wetland, and Tidal flat/shore. Bolivar Flats in Galveston County, sandy beaches Mustang Island, few on outer coastal and barrier beaches, tidal mudflats and salt marshes.

Federal Status: LT	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4T2	State Rank: S2N

TRAVIS COUNTY

BIRDS

Sprague's pipit *Anthus spragueii*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Habitat during migration and in winter consists of pastures and weedy fields (AOU 1983), including grasslands with dense herbaceous vegetation or grassy agricultural fields.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3N

swallow-tailed kite *Elanoides forficatus*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Lowland forested regions, especially swampy areas, ranging into open woodland; marshes, along rivers, lakes, and ponds; nests high in tall tree in clearing or on forest woodland edge, usually in pine, cypress, or various deciduous trees.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2B

western burrowing owl *Athene cunicularia hypugaea*

Open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports; nests and roosts in abandoned burrows

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4T4	State Rank: S2

white-faced ibis *Plegadis chihi*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Prefers freshwater marshes, sloughs, and irrigated rice fields, but will attend brackish and saltwater habitats; currently confined to near-coastal rookeries in so-called hog-wallow prairies. Nests in marshes, in low trees, on the ground in bulrushes or reeds, or on floating mats.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4B

whooping crane *Grus americana*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Small ponds, marshes, and flooded grain fields for both roosting and foraging. Potential migrant via plains throughout most of state to coast; winters in coastal marshes of Aransas, Calhoun, and Refugio counties.

Federal Status: LE	State Status: E	SGCN: Y
Endemic: N	Global Rank: G1	State Rank: S1S2N

TRAVIS COUNTY

BIRDS

wood stork *Mycteria americana*

The county distribution for this species includes geographic areas that the species may use during migration. Time of year should be factored into evaluations to determine potential presence of this species in a specific county. Prefers to nest in large tracts of baldcypress (Taxodium distichum) or red mangrove (Rhizophora mangle); forages in prairie ponds, flooded pastures or fields, ditches, and other shallow standing water, including salt-water; usually roosts communally in tall snags, sometimes in association with other wading birds (i.e. active heronries); breeds in Mexico and birds move into Gulf States in search of mud flats and other wetlands, even those associated with forested areas; formerly nested in Texas, but no breeding records since 1960.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: SHB,S2N

CRUSTACEANS

Balcones Cave amphipod *Stygobromus balconis*

Subaquatic, subterranean obligate amphipod

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2G3	State Rank: S2

Ezell's Cave amphipod *Stygobromus flagellatus*

Known only from artesian wells

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2G3	State Rank: S3

No accepted common name *Lirceolus bisetus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G2	State Rank: S1

FISH

american eel *Anguilla rostrata*

Originally found in all river systems from the Red River to the Rio Grande. Aquatic habtiats include large rivers, streams, tributaries, coastal watersheds, estuaries, bays, and oceans. Spawns in Sargasso Sea, larva move to coastal waters, metamorphose, and begin upstream movements. Females tend to move further upstream than males (who are often found in brackish estuaries). American Eel are habitat generalists and may be found in a broad range of habitat conditions including slow- and fast-flowing waters over many substrate types. Extirpation in upstream drainages attributed to reservoirs that impede upstream migration.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4

TRAVIS COUNTY

FISH

Guadalupe bass *Micropterus treculii*

Endemic to the streams of the northern and eastern Edwards Plateau including portions of the Brazos, Colorado, Guadalupe, and San Antonio basins; species also found outside of the Edwards Plateau streams in decreased abundance, primarily in the lower Colorado River; two introduced populations have been established in the Nueces River system. A pure population was re-established in a portion of the Blanco River in 2014. Species prefers lentic environments but commonly taken in flowing water; numerous smaller fish occur in rapids, many times near eddies; large individuals found mainly in riffle tail races; usually found in spring-fed streams having clear water and relatively consistent temperatures.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

silverband shiner *Notropis shumardi*

In Texas, found from Red River to Lavaca River; Main channel with moderate to swift current velocities and moderate to deep depths; associatec with turbid water over silt, sand, and gravel.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4

Texas shiner *Notropis amabilis*

In Texas, it is found primarily in Edwards Plateau streams from the San Gabriel River in the east to the Pecos River in the west. Typical habitat includes rocky or sandy runs, as well as pools.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4

INSECTS

American bumblebee *Bombus pensylvanicus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G3G4	State Rank: SNR

Comanche harvester ant *Pogonomyrmex comanche*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2G3	State Rank: S2

Kretschmarr Cave mold beetle *Texamaurops reddelli*

Small, cave-adapted beetle found under rocks buried in silt; small, Edwards Limestone caves in of the Jollyville Plateau, a division of the Edwards Plateau

Federal Status: LE	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G2	State Rank: S1

TRAVIS COUNTY

INSECTS

No accepted common name *Lymantes nadineae*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: GNR	State Rank: S2

No accepted common name *Rhadine austinica*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G2	State Rank: S1S2

No accepted common name *Rhadine subterranea*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2	State Rank: S2

No accepted common name *Macrotera parkeri*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: GNR	State Rank: SNR

No accepted common name *Neotrichia juani*

Specimens were collected from perennial and ephemeral rivers, and small spring-fed streams (Harris and Tiemann 1993).

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G1	State Rank: S1

No accepted common name *Xiphocentron messapus*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1G3	State Rank: S2?

No accepted common name *Bombus variabilis*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G1G2	State Rank: SNR

TRAVIS COUNTY

INSECTS

No accepted common name *Andrena scotoptera*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Global Rank: GNR State Rank: SNR

No accepted common name *Oncopodura fenestra*

Habitat description is not available at this time.

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G2G3 State Rank: S2?

Tooth Cave ground beetle *Rhadine persephone*

Resident, small, cave-adapted beetle found in small Edwards Limestone caves in Travis and Williamson counties

Federal Status: LE State Status: SGCN: Y
Endemic: Y Global Rank: G1G2 State Rank: S1

MAMMALS

Aransas short-tailed shrew *Blarina hylophaga plumbea*

Excavates burrows in sandy soils underlying mottes of live oak trees or in areas with little to no ground cover.

Federal Status: State Status: SGCN: Y
Endemic: Y Global Rank: G5T1Q State Rank: S1

big brown bat *Eptesicus fuscus*

Any wooded areas or woodlands except south Texas. Riparian areas in west Texas.

Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G5 State Rank: S5

big free-tailed bat *Nyctinomops macrotis*

Habitat data sparse but records indicate that species prefers to roost in crevices and cracks in high canyon walls, but will use buildings, as well; reproduction data sparse, gives birth to single offspring late June-early July; females gather in nursery colonies; winter habits undetermined, but may hibernate in the Trans-Pecos; opportunistic insectivore

Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G5 State Rank: S3

cave myotis bat *Myotis velifer*

Colonial and cave-dwelling; also roosts in rock crevices, old buildings, carports, under bridges, and even in abandoned Cliff Swallow (Hirundo pyrrhonota) nests; roosts in clusters of up to thousands of individuals; hibernates in limestone caves of Edwards Plateau and gypsum cave of Panhandle during winter; opportunistic insectivore.

Federal Status: State Status: SGCN: Y
Endemic: N Global Rank: G4G5 State Rank: S2S3

TRAVIS COUNTY

MAMMALS

eastern red bat *Lasiurus borealis*

Red bats are migratory bats that are common across Texas. They are most common in the eastern and central parts of the state, due to their requirement of forests for foliage roosting. West Texas specimens are associated with forested areas (cottonwoods). Also common along the coastline. These bats are highly mobile, seasonally migratory, and practice a type of "wandering migration". Associations with specific habitat is difficult unless specific migratory stopover sites or wintering grounds are found. Likely associated with any forested area in East, Central, and North Texas but can occur statewide.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S4

eastern spotted skunk *Spilogale putorius*

Generalist; open fields prairies, croplands, fence rows, farmyards, forest edges & woodlands. Prefer wooded, brushy areas & tallgrass prairies. S.p. ssp. interrupta found in wooded areas and tallgrass prairies, preferring rocky canyons and outcrops when such sites are available.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S1S3

hoary bat *Lasiurus cinereus*

Hoary bats are highly migratory, high-flying bats that have been noted throughout the state. Females are known to migrate to Mexico in the winter, males tend to remain further north and may stay in Texas year-round. Commonly associated with forests (foliage roosting species) but are found in unforested parts of the state and lowland deserts. Tend to be captured over water and large, open flyways.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S4

long-tailed weasel *Mustela frenata*

Includes brushlands, fence rows, upland woods and bottomland hardwoods, forest edges & rocky desert scrub. Usually live close to water.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

mountain lion *Puma concolor*

Generalist; found in a wide range of habitats statewide. Found most frequently in rugged mountains & riparian zones.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S2S3

northern yellow bat *Lasiurus intermedius*

Occurs mainly along the Gulf Coast but inland specimens are not uncommon. Prefers roosting in spanish moss and in the hanging fronds of palm trees. Common where this vegtation occurs. Found near water and forages over grassy, open areas. Males usually roost solitarily, whereas females roost in groups of several individuals.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S4

TRAVIS COUNTY

MAMMALS

swamp rabbit *Sylvilagus aquaticus*

Primarily found in lowland areas near water including: cypress bogs and marshes, floodplains, creeks and rivers.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S5

tricolored bat *Perimyotis subflavus*

Forest, woodland and riparian areas are important. Caves are very important to this species.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S2

western hog-nosed skunk *Conepatus leuconotus*

Habitats include woodlands, grasslands & deserts, to 7200 feet, most common in rugged, rocky canyon country; little is known about the habitat of the ssp. telmalestes

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S4

MOLLUSKS

false spike *Fusconaia mitchelli*

Occurs in small streams to medium-size rivers in habitats such as riffles and runs with flowing water. Is often found in stable substrates of sand, gravel, and cobble (Howells 2010; Randklev et al. 2012; Sowards et al. 2013; Tsakiris and Randklev 2016). [Mussels of Texas 2019]

Federal Status: PE	State Status: T	SGCN: Y
Endemic: N	Global Rank: GNR	State Rank: S1

No accepted common name *Stygopyrgus bartonensis*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1	State Rank: S1

No accepted common name *Patera leatherwoodi*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G1	State Rank: S1

No accepted common name *Millerelix gracilis*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic:	Global Rank: G2G3	State Rank: S2?

TRAVIS COUNTY

MOLLUSKS

No accepted common name *Phreatodrobia punctata*

Habitat description is not available at this time.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2	State Rank: S1

Texas fatmucket *Lampsilis bracteata*

Reported to occur in slow to moderate current in sand, mud, and gravel substrates among large cobble, boulders, bedrock ledges, horizontal cracks in bedrock slabs, and macrophyte beds. Has also been observed inhabiting the roots of cypress trees and vegetation along steep banks. Past authorities have reported this species intolerant of reservoir conditions but recent surveys suggest it may persist in some impoundment conditions (Howells 2010c; Randklev et al. 2017b). [Mussel of Texas 2019]

Federal Status: PE	State Status: T	SGCN: Y
Endemic: Y	Global Rank: G1	State Rank: S1

Texas fawnsfoot *Truncilla macrodon*

Occurs in large rivers but may also be found in medium-sized streams. Is found in protected near shore areas such as banks and backwaters but also riffles and point bar habitats with low to moderate water velocities. Typically occurs in substrates of mud, sandy mud, gravel and cobble. Considered intolerant of reservoirs (Randklev et al. 2010; Howells 2010o; Randklev et al. 2014b,c; Randklev et al. 2017a,b). [Mussels of Texas 2019]

Federal Status: PT	State Status: T	SGCN: Y
Endemic: Y	Global Rank: G1	State Rank: S2

Texas pimpleback *Cyclonaias petrina*

Occurs in medium-size streams to large rivers primarily in riffles and runs. Often found in substrates composed of sand, gravel, and cobble, including mud-silt or gravel-filled cracks in bedrock slabs. Considered intolerant of reservoirs (Howells 2010m; Randklev et al. 2017b). [Mussels of Texas 2019]

Federal Status: PE	State Status: T	SGCN: Y
Endemic: Y	Global Rank: G1	State Rank: S1

REPTILES

eastern box turtle *Terrapene carolina*

Terrestrial: Eastern box turtles inhabit forests, fields, forest-brush, and forest-field ecotones. In some areas they move seasonally from fields in spring to forest in summer. They commonly enters pools of shallow water in summer. For shelter, they burrow into loose soil, debris, mud, old stump holes, or under leaf litter. They can successfully hibernate in sites that may experience subfreezing temperatures.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

TRAVIS COUNTY

REPTILES

plateau spot-tailed earless lizard *Holbrookia lacerata*

Terrestrial: Habitats include moderately open prairie-brushland regions, particularly fairly flat areas free of vegetation or other obstructions (e.g., open meadows, old and new fields, graded roadways, cleared and disturbed areas, prairie savanna, and active agriculture including row crops); also, oak-juniper woodlands and mesquite-prickly pear associations (Axtell 1968, Bartlett and Bartlett 1999).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: GNR	State Rank: S2

slender glass lizard *Ophisaurus attenuatus*

Terrestrial: Habitats include open grassland, prairie, woodland edge, open woodland, oak savannas, longleaf pine flatwoods, scrubby areas, fallow fields, and areas near streams and ponds, often in habitats with sandy soil.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

Texas garter snake *Thamnophis sirtalis annectens*

Terrestrial and aquatic: Habitats used include the grasslands and modified open areas in the vicinity of aquatic features, such as ponds, streams or marshes. Damp soils and debris for cover are thought to be critical.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G5T4	State Rank: S1

Texas horned lizard *Phrynosoma cornutum*

Terrestrial: Open habitats with sparse vegetation, including grass, prairie, cactus, scattered brush or scrubby trees; soil may vary in texture from sandy to rocky; burrows into soil, enters rodent burrows, or hides under rock when inactive. Occurs to 6000 feet, but largely limited below the pinyon-juniper zone on mountains in the Big Bend area.

Federal Status:	State Status: T	SGCN: Y
Endemic: N	Global Rank: G4G5	State Rank: S3

Texas map turtle *Graptemys versa*

Aquatic: Primarily a river turtle but can also be found in reservoirs. Can be found in deep and shallow water with sufficient basking sites (emergent rocks and woody debris).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G4	State Rank: SU

western box turtle *Terrapene ornata*

Terrestrial: Ornate or western box trutles inhabit prairie grassland, pasture, fields, sandhills, and open woodland. They are essentially terrestrial but sometimes enter slow, shallow streams and creek pools. For shelter, they burrow into soil (e.g., under plants such as yucca) (Converse et al. 2002) or enter burrows made by other species.

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G5	State Rank: S3

PLANTS

arrowleaf milkvine *Matelea sagittifolia*

TRAVIS COUNTY

PLANTS

Most consistently encountered in thornscrub in South Texas; Perennial; Flowering March-July; Fruiting April-July and Dec?

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

basin bellflower *Campanula reverchonii*

Among scattered vegetation on loose gravel, gravelly sand, and rock outcrops on open slopes with exposures of igneous and metamorphic rocks; may also occur on sandbars and other alluvial deposits along major rivers; flowering May-July

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2	State Rank: S2

bracted twistflower *Streptanthus bracteatus*

Shallow, well-drained gravelly clays and clay loams over limestone in oak juniper woodlands and associated openings, on steep to moderate slopes and in canyon bottoms; several known soils include Tarrant, Brackett, or Speck over Edwards, Glen Rose, and Walnut geologic formations; populations fluctuate widely from year to year, depending on winter rainfall; flowering mid April-late May, fruit matures and foliage withers by early summer

Federal Status: PT	State Status:	SGCN: Y
Endemic: Y	Global Rank: G1	State Rank: S1

Buckley tridens *Tridens buckleyanus*

Occurs in juniper-oak woodlands on rocky limestone slopes; Perennial; Flowering/Fruiting April-Nov

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4

canyon bean *Phaseolus texensis*

Narrowly endemic to rocky canyons in eastern and southern Edwards Plateau occurring on limestone soils in mixed woodlands, on limestone cliffs and outcrops, frequently along creeks.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G2	State Rank: S2

canyon mock-orange *Philadelphus texensis var. ernestii*

Usually found growing from honeycomb pits on outcrops of Cretaceous limestone exposed as rimrock along mesic canyons, usually in the shade of mixed evergreen-deciduous canyon woodland; flowering April-June, fruit dehiscing September-October

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3T3	State Rank: S3

canyon sedge *Carex edwardsiana*

Dry-mesic decidous and deciduous-juniper woodlands in canyons and ravines, usually in clay loams very high in calcium on rocky banks and slopes just above streams and stream beds. Carex edwardsiana usually grows near C. planostachys. Fruiting spring (Ball, Reznicek, and 2003).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4

TRAVIS COUNTY

PLANTS

Correll's false dragon-head *Physostegia correllii*

Wet, silty clay loams on streamsides, in creek beds, irrigation channels and roadside drainage ditches; or seepy, mucky, sometimes gravelly soils along riverbanks or small islands in the Rio Grande; or underlain by Austin Chalk limestone along gently flowing spring-fed creek in central Texas; flowering May-September

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G2	State Rank: S2

Engelmann's bladderpod *Physaria engelmannii*

Grasslands and calcareous rock outcrops in a band along the eastern edge of the Edwards Plateau, ranging as far north as the Red River (Carr 2015).

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G4	State Rank: S3

glandular gay-feather *Liatris glandulosa*

Occurs in herbaceous vegetation on limestone outcrops (Carr 2015)

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S2

Glass Mountains coral-root *Hexalectris nitida*

Apparently rare in mixed woodlands in canyons in the mountains of the Brewster County, but encountered with regularity, albeit in small numbers, under Juniperus ashei in woodlands over limestone on the Edwards Plateau, Callahan Divide and Lampasas Cutplain; Perennial; Flowering June-Sept; Fruiting July-Sept

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

gravelbar brickellbush *Brickellia dentata*

Essentially restricted to frequently-scoured gravelly alluvial beds in creek and river bottoms; Perennial; Flowering June-Nov; Fruiting June-Oct

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4

Greenman's bluet *Houstonia parviflora*

Grass pastures. Feb- Apr. (Correll and Johnston 1970).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

Heller's marbleseed *Onosmodium helleri*

Occurs in loamy calcareous soils in oak-juniper woodlands on rocky limestone slopes, often in more mesic portions of canyons; Perennial; Flowering March-May

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

TRAVIS COUNTY

PLANTS

low spurge *Euphorbia peplidion*

Occurs in a variety of vernally-moist situations in a number of natural regions; Annual; Flowering Feb-April; Fruiting March-April

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

narrowleaf brickellbush *Brickellia eupatorioides var. gracillima*

Moist to dry gravelly alluvial soils along riverbanks but also on limestone slopes; Perennial; Flowering/Fruiting April-Nov

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G5T3	State Rank: S3

net-leaf bundleflower *Desmanthus reticulatus*

Mostly on clay prairies of the coastal plain of central and south Texas; Perennial; Flowering April-July; Fruiting April-Oct

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

Plateau loosestrife *Lythrum ovalifolium*

Banks and gravelly beds of perennial (or strong intermittent) streams on the Edwards Plateau, Llano Uplift and Lampasas Cutplain; Perennial; Flowering/Fruiting April-Nov

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3G4	State Rank: S3S4

plateau milkvine *Matelea edwardsensis*

Occurs in various types of juniper-oak and oak-juniper woodlands; Perennial; Flowering March-Oct; Fruiting May-June

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

rock grape *Vitis rupestris*

Occurs on rocky limestone slopes and in streambeds; Perennial; Flowering March-May; Fruiting May-July

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S1

scarlet leather-flower *Clematis texensis*

Usually in oak-juniper woodlands in mesic rocky limestone canyons or along perennial streams; Perennial; Flowering March-July; Fruiting May-July

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4

TRAVIS COUNTY

PLANTS

spreading leastdaisy *Chaetopappa effusa*

Limestone cliffs, ledges, bluffs, steep hillsides, sometimes in seepy areas, oak-juniper, oak, or mixed deciduous woods, 300-500 m elevation; Perennial; Flowering (May) July-Oct

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S4

Stanfield's beebalm *Monarda stanfieldii*

Largely confined to granite sands along the middle course of the Colorado River and its tributaries; Perennial

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

sycamore-leaf snowbell *Styrax platanifolius ssp. platanifolius*

Rare throughout range, usually in oak-juniper woodlands on steep rocky banks and ledges along intermittent or perennial streams, rarely far from some reliable source of moisture; Perennial; Flowering April-May; Fruiting May-Aug.

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3T3	State Rank: S3

Texabama croton *Croton alabamensis var. texensis*

In duff-covered loamy clay soils on rocky slopes in forested, mesic limestone canyons; locally abundant on deeper soils on small terraces in canyon bottoms, often forming large colonies and dominating the shrub layer; scattered individuals are occasionally on sunny margins of such forests; also found in contrasting habitat of deep, friable soils of limestone uplands, mostly in the shade of evergreen woodland mottes; flowering late February-March; fruit maturing and dehiscing by early June

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3T2	State Rank: S2

Texas almond *Prunus minutiflora*

Wide-ranging but scarce, in a variety of grassland and shrubland situations, mostly on calcareous soils underlain by limestone but occasionally in sandier neutral soils underlain by granite; Perennial; Flowering Feb-May and Oct; Fruiting Feb-Sept

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S3S4

Texas amorpha *Amorpha roemeriana*

Juniper-oak woodlands or shrublands on rocky limestone slopes, sometimes on dry shelves above creeks; Perennial; Flowering May-June; Fruiting June-Oct

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

TRAVIS COUNTY

PLANTS

Texas barberry *Berberis swaseyi*

Shallow calcareous stony clay of upland grasslands/shrublands over limestone as well as in loamier soils in openly wooded canyons and on creek terraces; Perennial; Flowering/Fruiting March-June

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

Texas fescue *Festuca versuta*

Occurs in mesic woodlands on limestone-derived soils on stream terraces and canyon slopes; Perennial; Flowering/Fruiting April-June

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

Texas milk vetch *Astragalus reflexus*

Grasslands, prairies, and roadsides on calcareous and clay substrates; Annual; Flowering Feb-June; Fruiting April-June

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

Texas seymeria *Seymeria texana*

Found primarily in grassy openings in juniper-oak woodlands on dry rocky slopes but sometimes on rock outcrops in shaded canyons; Annual; Flowering May-Nov; Fruiting July-Nov

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

tree dodder *Cuscuta exaltata*

Parasitic on various Quercus, Juglans, Rhus, Vitis, Ulmus, and Diospyros species as well as Acacia berlandieri and other woody plants; Annual; Flowering May-Oct; Fruiting July-Oct

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G3	State Rank: S3

turnip-root scurfpea *Pediomelum cyphocalyx*

Grasslands and openings in juniper-oak woodlands on limestone substrates on the Edwards Plateau and in north-central Texas (Carr 2015).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3G4	State Rank: S2S3

TRAVIS COUNTY

PLANTS

Warnock's coral-root *Hexalectris warnockii*

In leaf litter and humus in oak-juniper woodlands on shaded slopes and intermittent, rocky creekbeds in canyons; in the Trans Pecos in oak-pinyon-juniper woodlands in higher mesic canyons (to 2000 m [6550 ft]), primarily on igneous substrates; in Terrell County under Quercus fusiformis mottes on terrraces of spring-fed perennial streams, draining an otherwise rather xeric limestone landscape; on the Callahan Divide (Taylor County), the White Rock Escarpment (Dallas County), and the Edwards Plateau in oak-juniper woodlands on limestone slopes; in Gillespie County on igneous substrates of the Llano Uplift; flowering June-September; individual plants do not usually bloom in successive years

Federal Status:	State Status:	SGCN: Y
Endemic: N	Global Rank: G2G3	State Rank: S2

Wright's milkvetch *Astragalus wrightii*

On sandy or gravelly soils; April (Diggs et al. 1999).

Federal Status:	State Status:	SGCN: Y
Endemic: Y	Global Rank: G3	State Rank: S3

USFWS Information for Planning and Consulting List

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Austin Ecological Services Field Office
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Phone: (512) 490-0057 Fax: (512) 490-0974
http://www.fws.gov/southwest/es/AustinTexas/
http://www.fws.gov/southwest/es/EndangeredSpecies/lists/

In Reply Refer To: April 29, 2022
Project Code: 2022-0017962
Project Name: Capital Express Central (I-35)

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of

this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Austin Ecological Services Field Office
10711 Burnet Road, Suite 200
Austin, TX 78758-4460
(512) 490-0057

Project Summary

Project Code: 2022-0017962
Event Code: None
Project Name: Capital Express Central (I-35)
Project Type: Road/Hwy - Maintenance/Modification
Project Description: Roadway widening and redesign along the I-35 corridor within Austin, Travis County, Texas.
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@30.2674309,-97.7338372508741,14z

Counties: Travis County, Texas

Endangered Species Act Species

There is a total of 14 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 2 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Golden-cheeked Warbler *Setophaga chrysoparia*	Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/33	
Piping Plover *Charadrius melodus*	Threatened
Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. The location of the critical habitat is not available. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/6039	
Red Knot *Calidris canutus rufa*	Threatened
There is **proposed** critical habitat for this species. The location of the critical habitat is not available. This species only needs to be considered under the following conditions: ▪ Wind Energy Projects Species profile: https://ecos.fws.gov/ecp/species/1864	
Whooping Crane *Grus americana*	Endangered
Population: Wherever found, except where listed as an experimental population There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/758	

Amphibians

NAME	STATUS
Austin Blind Salamander *Eurycea waterlooensis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5737	Endangered
Barton Springs Salamander *Eurycea sosorum* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1113	Endangered
Jollyville Plateau Salamander *Eurycea tonkawae* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3116	Threatened

Clams

NAME	STATUS
Texas Fatmucket *Lampsilis bracteata* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/9041	Proposed Endangered

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate
Tooth Cave Ground Beetle *Rhadine persephone* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5625	Endangered

Arachnids

NAME	STATUS
Bee Creek Cave Harvestman *Texella reddelli* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2464	Endangered
Bone Cave Harvestman *Texella reyesi* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5306	Endangered
Tooth Cave Spider *Tayshaneta myopica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2360	Endangered

Flowering Plants

NAME	STATUS
Bracted Twistflower *Streptanthus bracteatus* There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2856	Proposed Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Agency: CP&Y Inc.
Name: Melissa Cross
Address: 261 Saratoga Blvd
City: Corpus Christi
State: TX
Zip: 78415
Email mcross@cpyi.com
Phone: 5124926808

Lead Agency Contact Information

Lead Agency: Department of Transportation

Maps

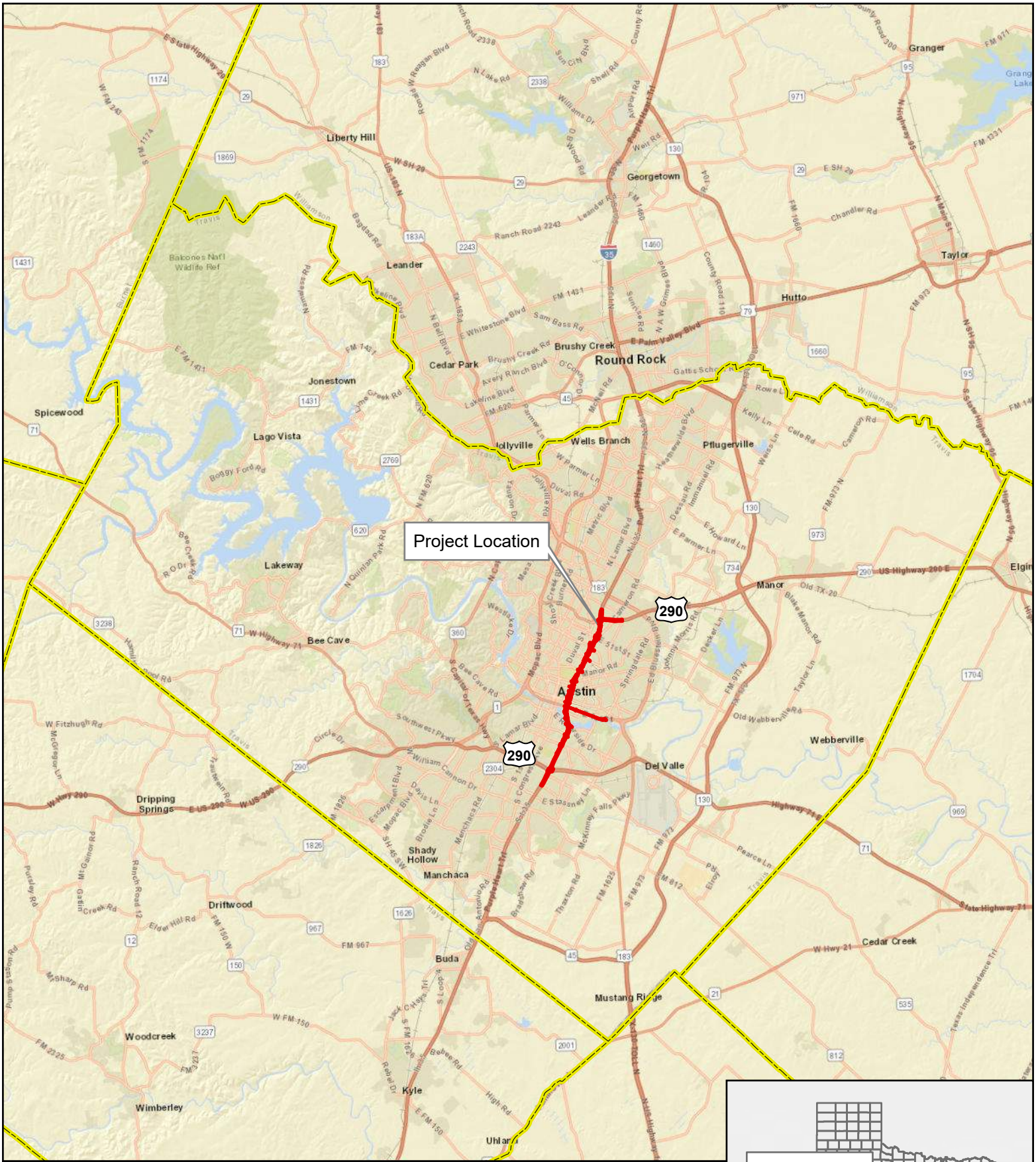


Figure 1: Project Vicinity

I-35 Capital Express Central
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388

Source: ESRI Street Map 2019

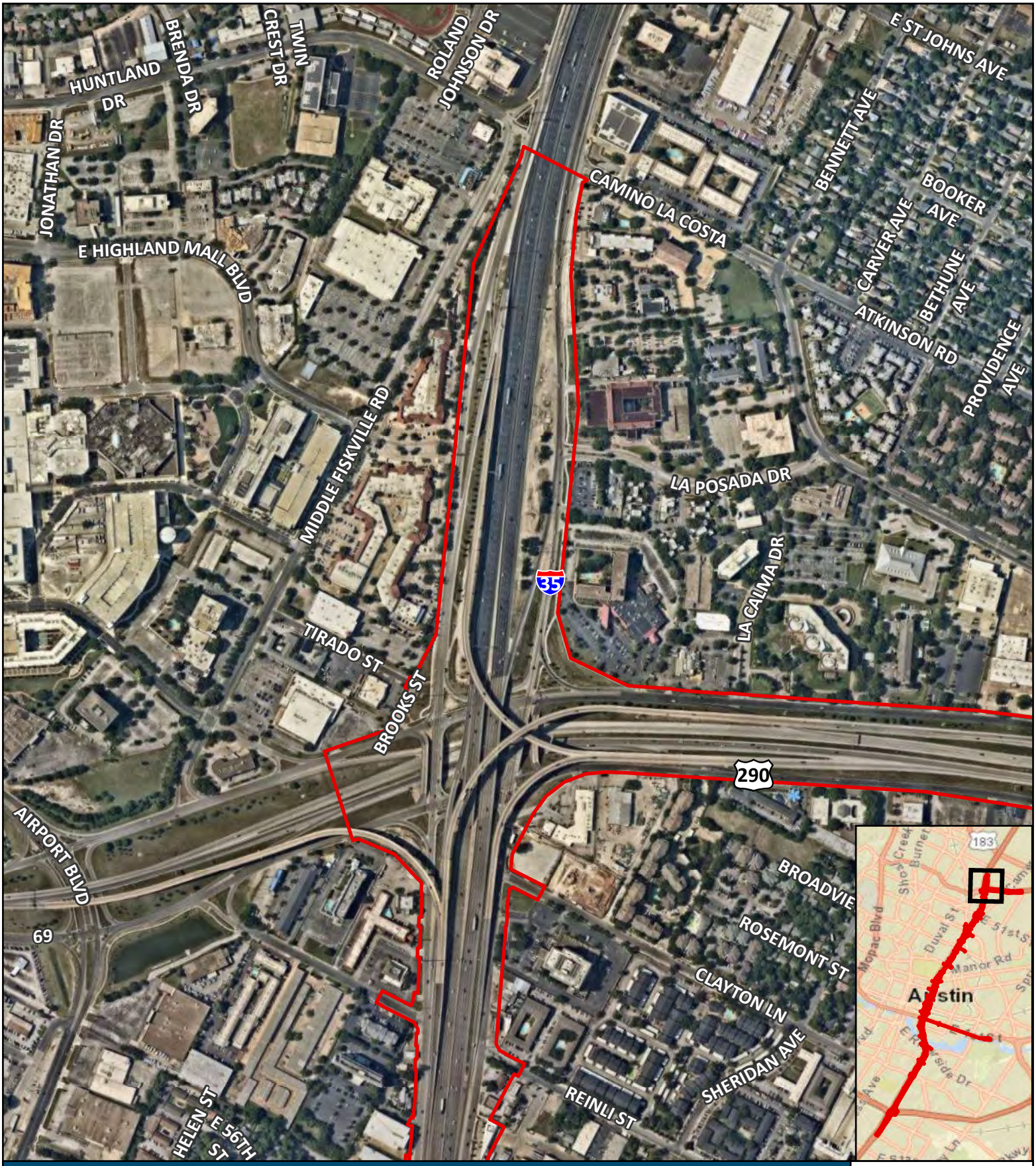


Figure 2: Project Location (Aerial)

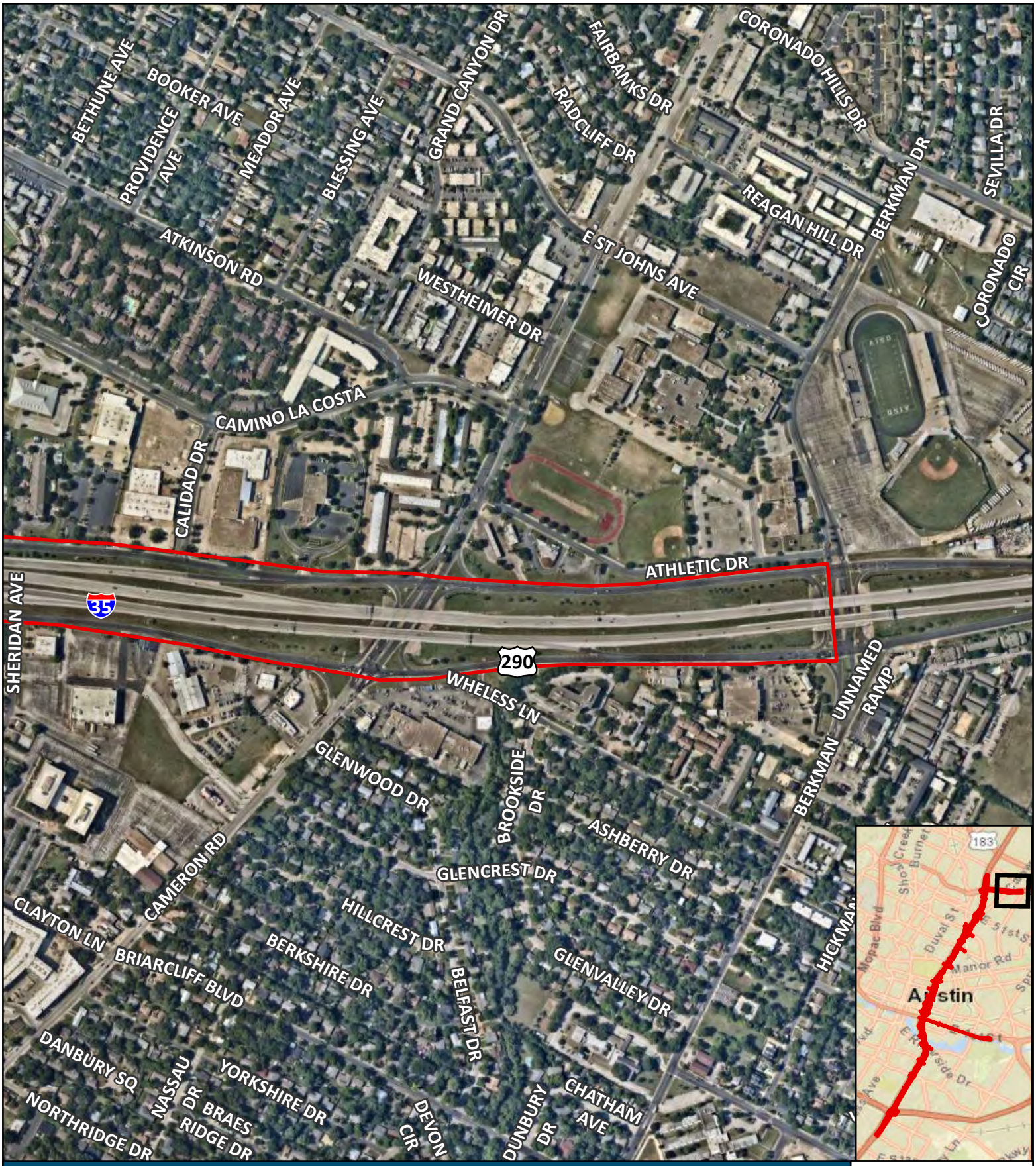
I-35 Capital Express Central
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388

Source: Nearmap 2021, ESRI Street Map 2019

Study Area

Texas Department of Transportation

0 500 1,000 Feet



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Travis County, TX
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Study Area

Texas Department of Transportation

0 500 1,000 Feet

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Travis County, TX
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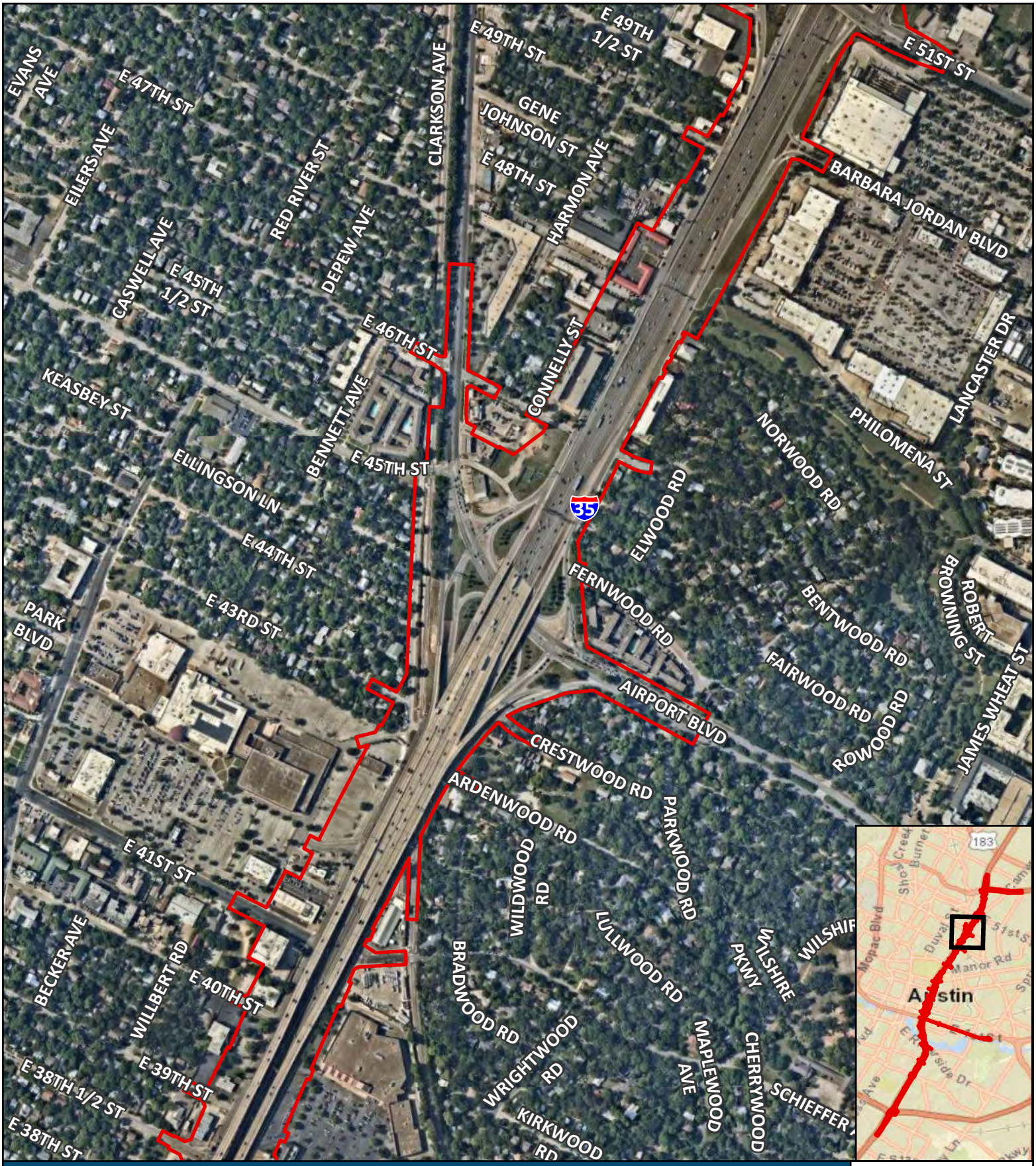
Study Area

Texas Department of Transportation

0 500 1,000 Feet

Source: Nearmap 2021, ESRI Street Map 2019



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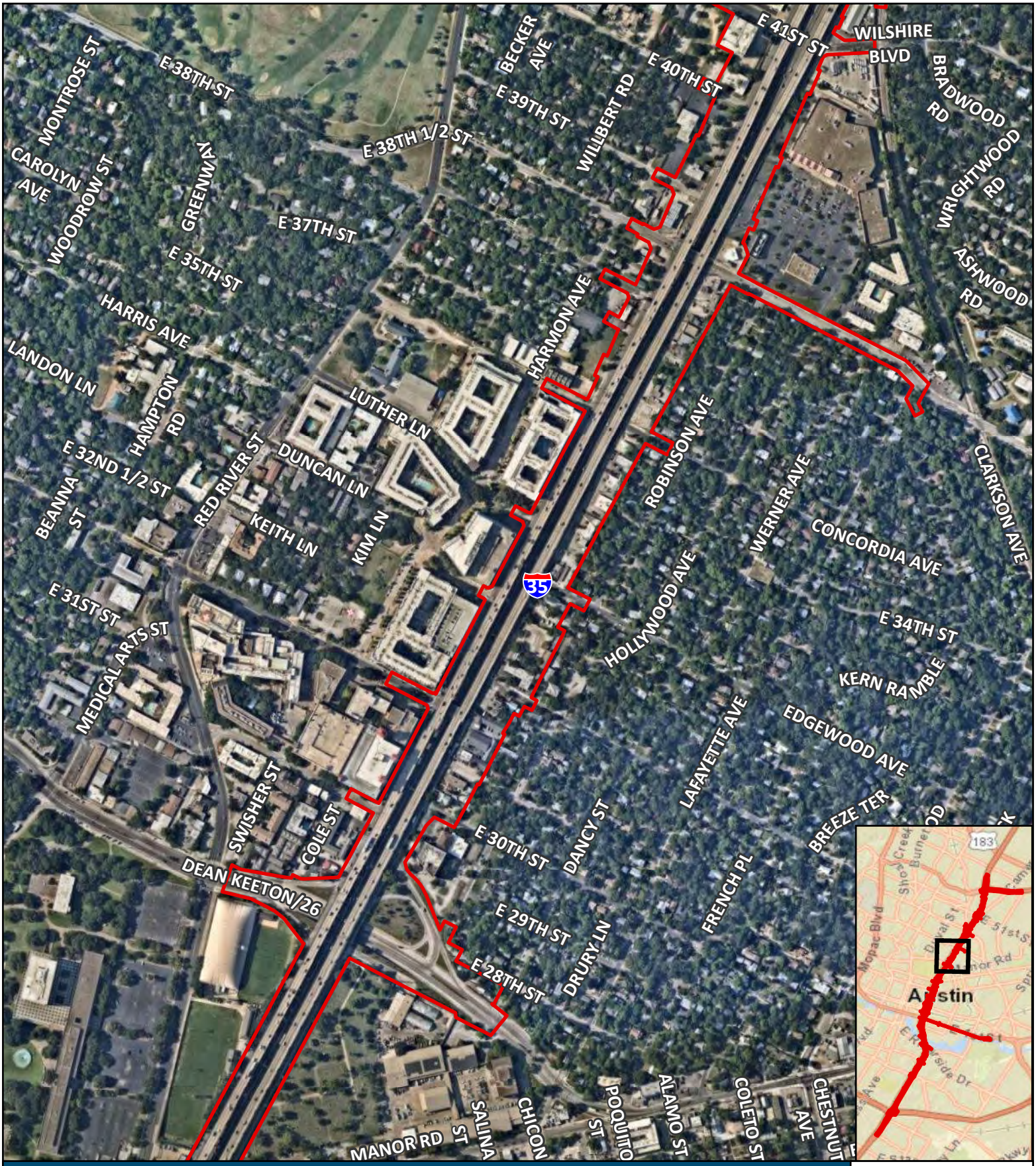
Source: Nearmap 2021, ESRI Street Map 2019

Study Area

Texas Department of Transportation

0 500 1,000 Feet



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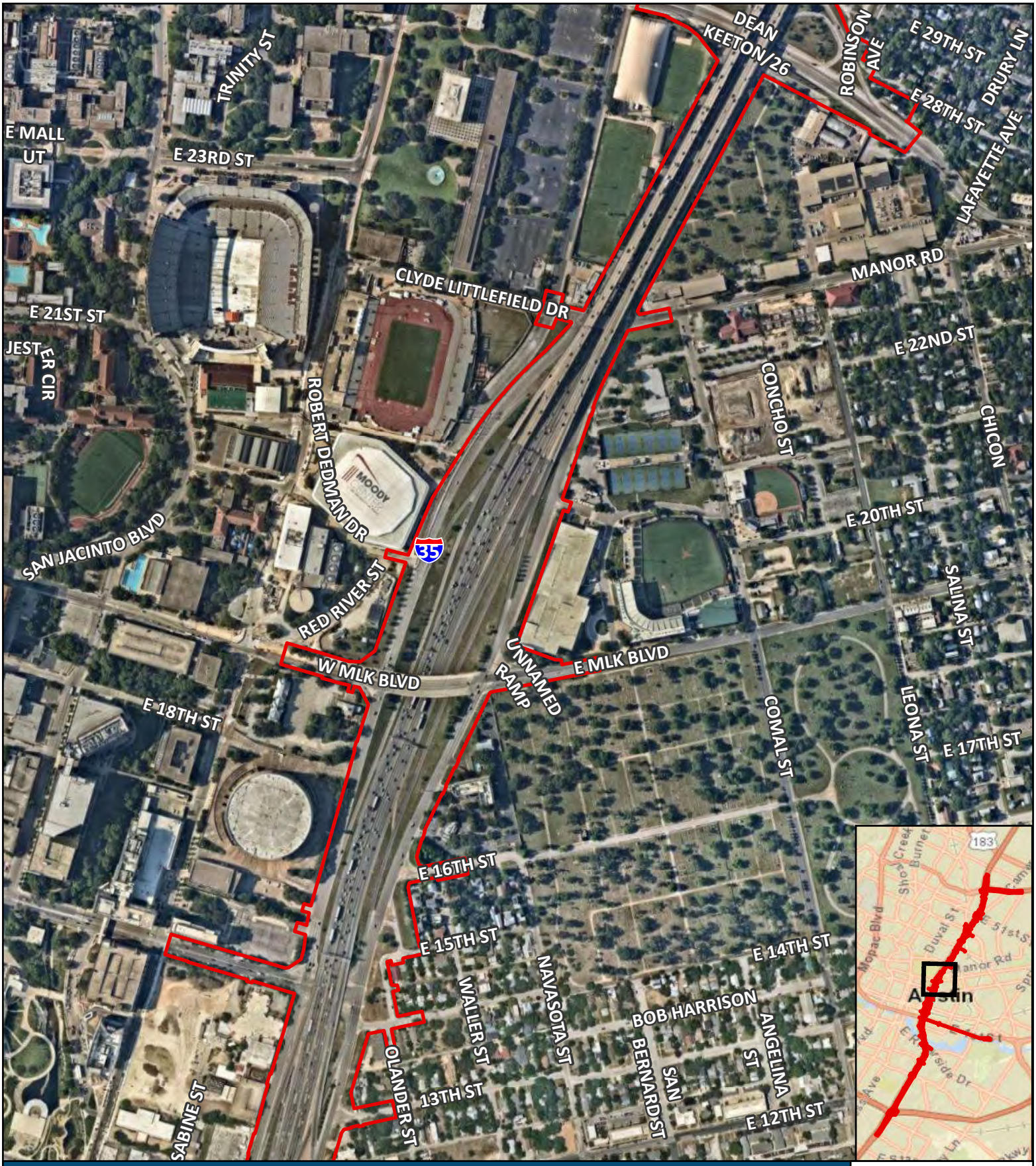
Source: Nearmap 2021, ESRI Street Map 2019

Study Area

0 500 1,000 Feet

Texas Department of Transportation



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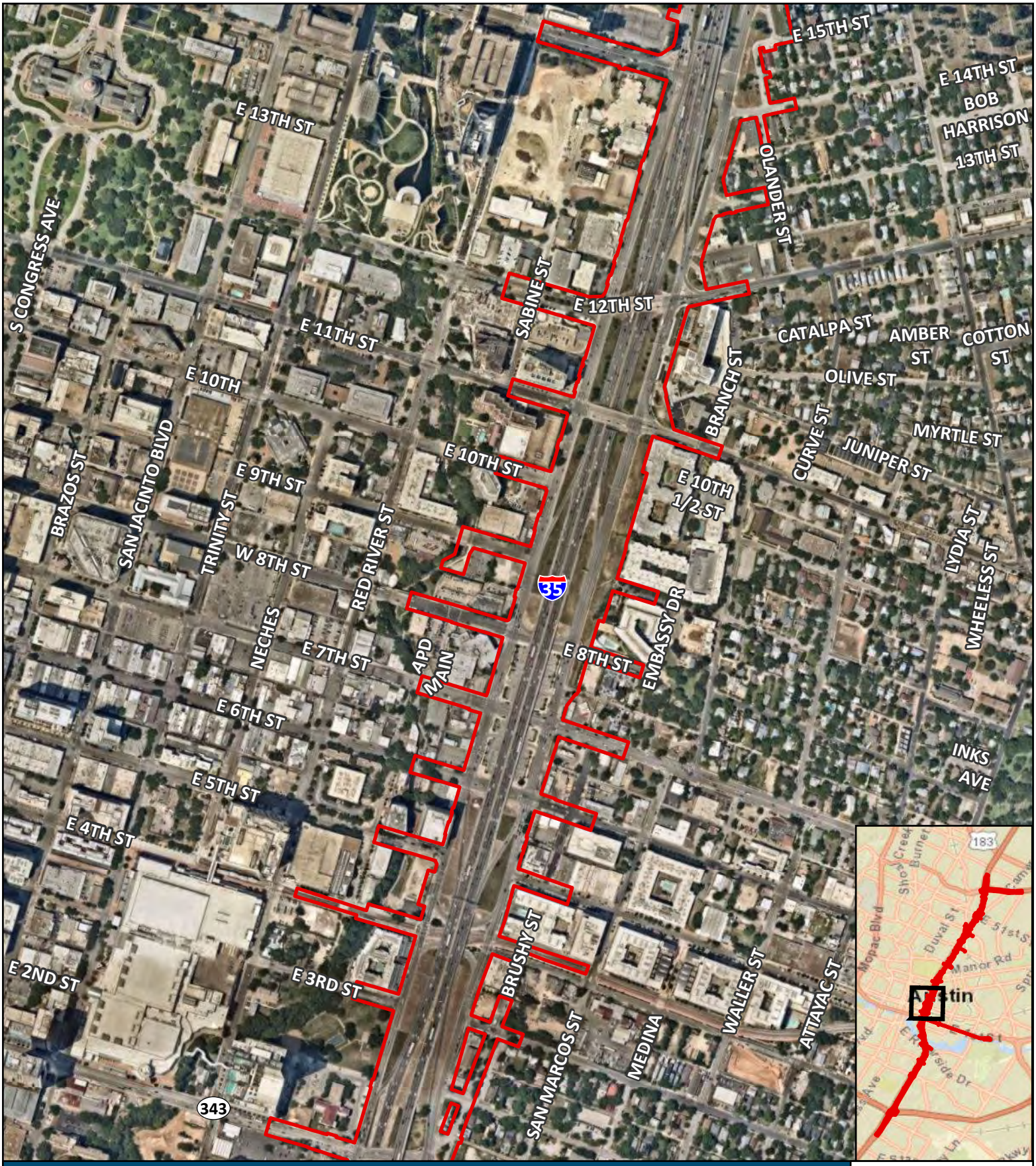
Study Area

Texas Department of Transportation

0 500 1,000 Feet

Source: Nearmap 2021, ESRI Street Map 2019



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Study Area

Texas Department of Transportation

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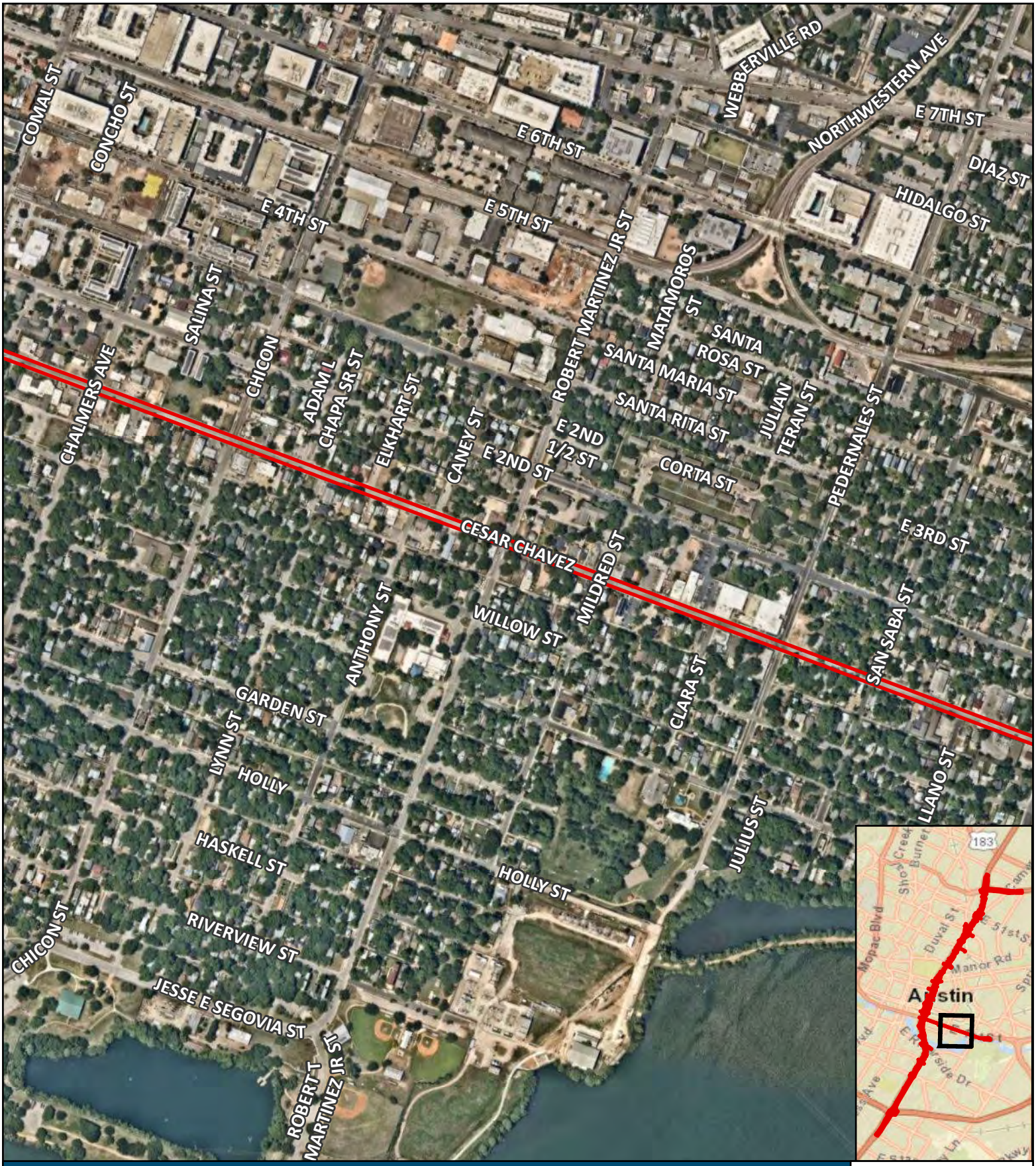
Source: Nearmap 2021, ESRI Street Map 2019

Study Area

0 500 1,000 Feet

Texas Department of Transportation



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Study Area

Texas Department of Transportation

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Source: Nearmap 2021, ESRI Street Map 2019

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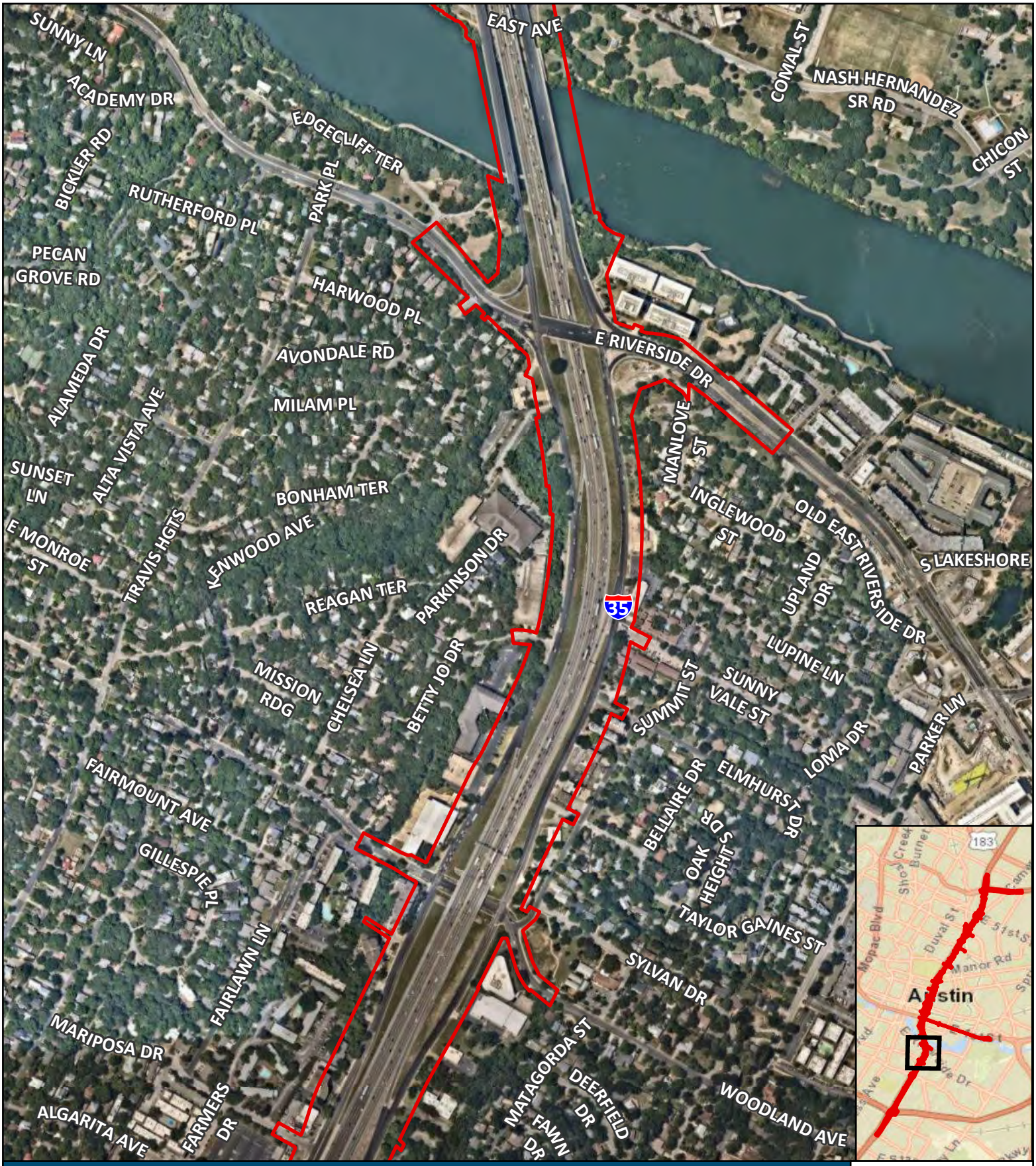
Study Area

Texas Department of Transportation

0 500 1,000 Feet

Source: Nearmap 2021, ESRI Street Map 2019



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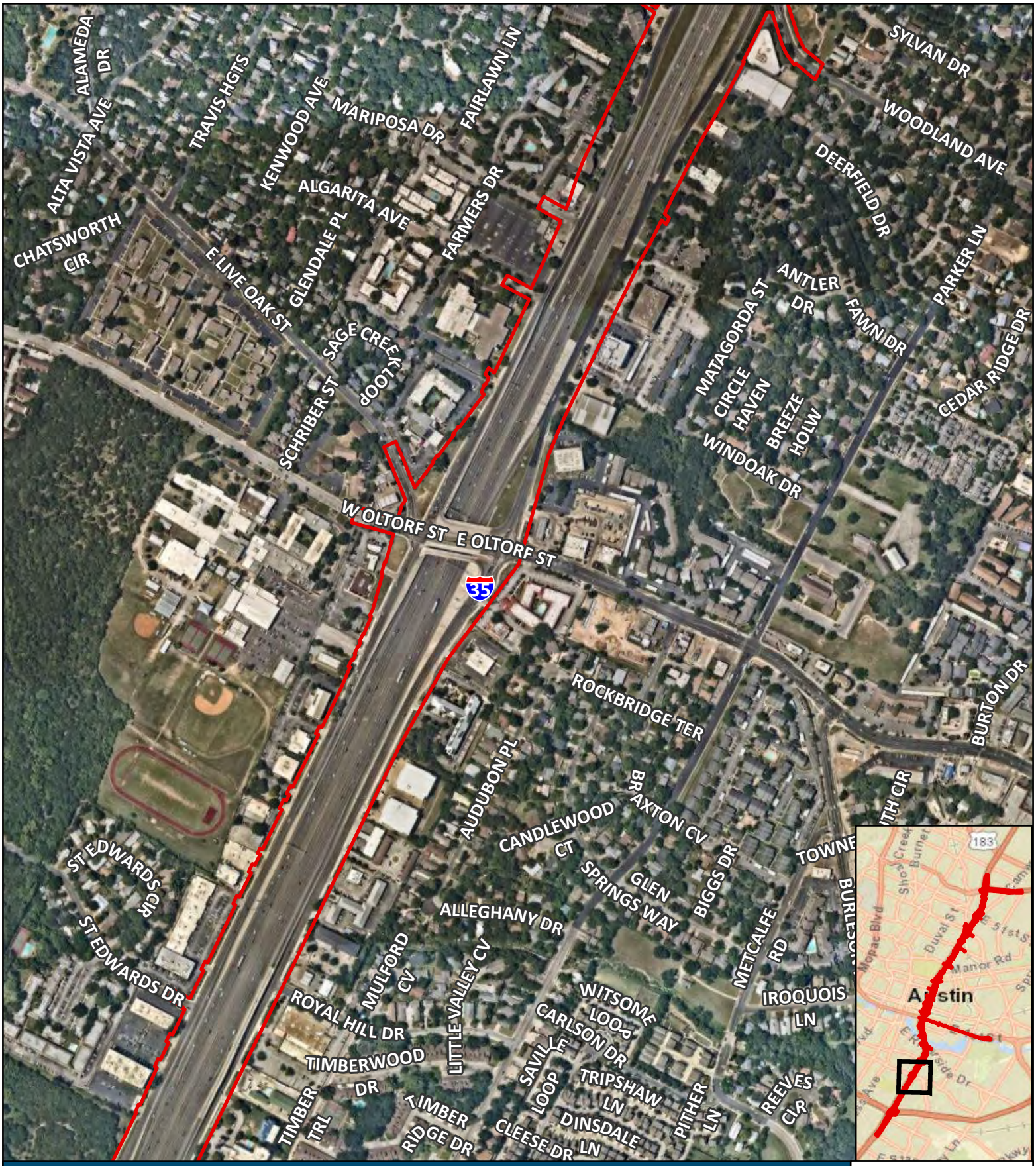
Source: Nearmap 2021, ESRI Street Map 2019

Study Area

Texas Department of Transportation

0 500 1,000 Feet



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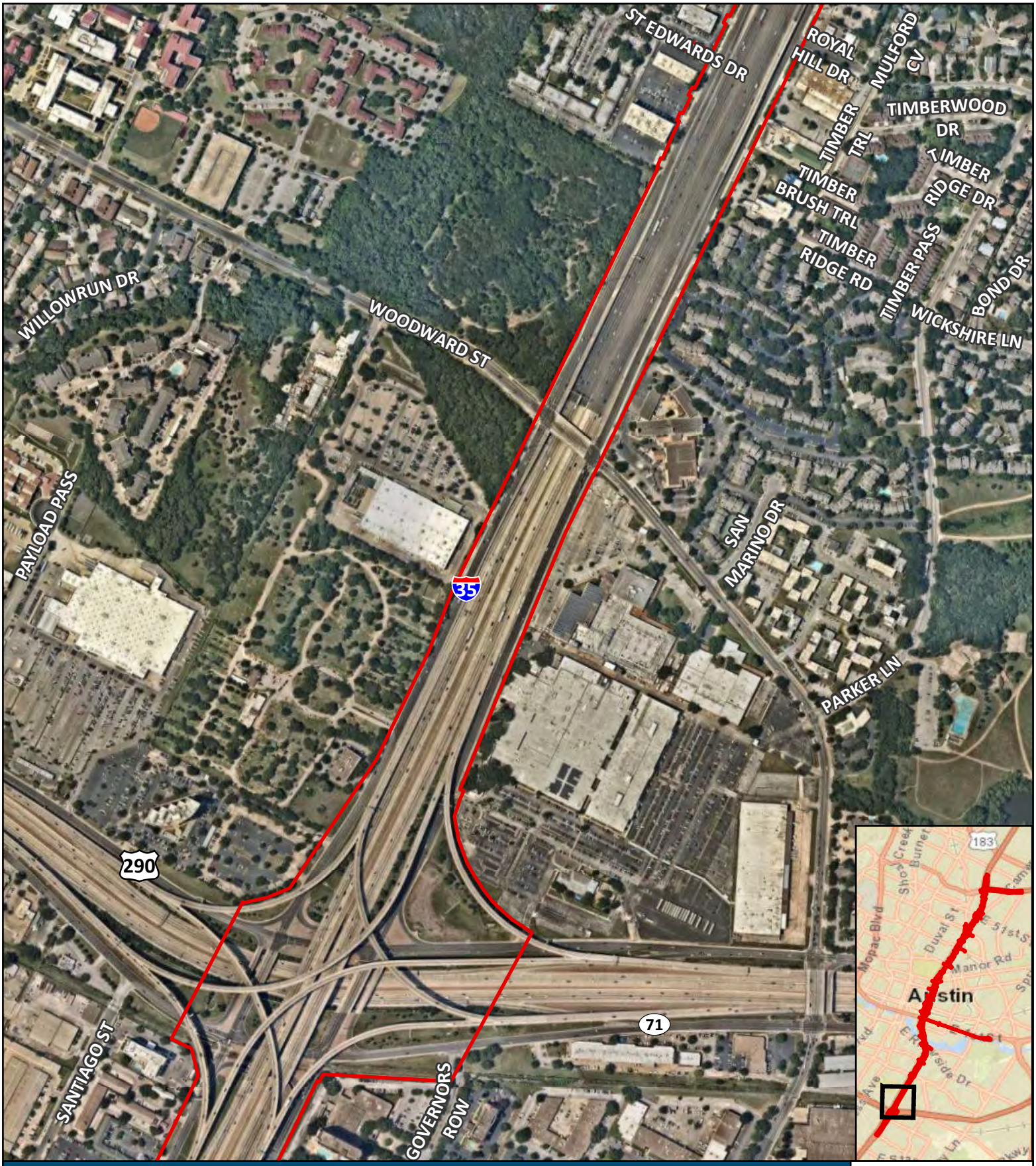
Source: Nearmap 2021, ESRI Street Map 2019

Study Area

Texas Department of Transportation

0 500 1,000 Feet



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Study Area

Texas Department of Transportation

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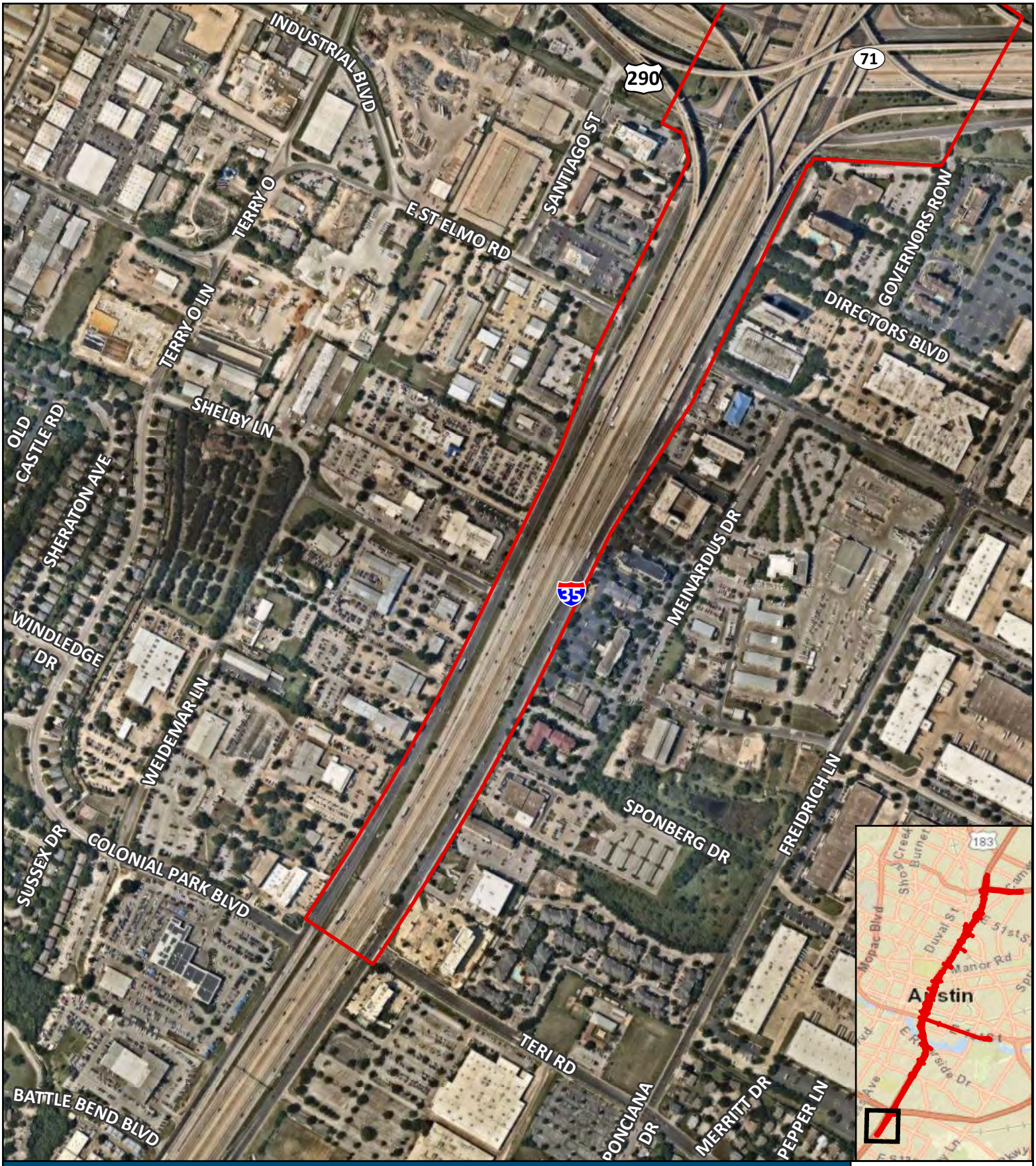
Source: Nearmap 2021, ESRI Street Map 2019



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Source: Nearmap 2021, ESRI Street Map 2019

Study Area

0 500 1,000 Feet

Texas Department of Transportation

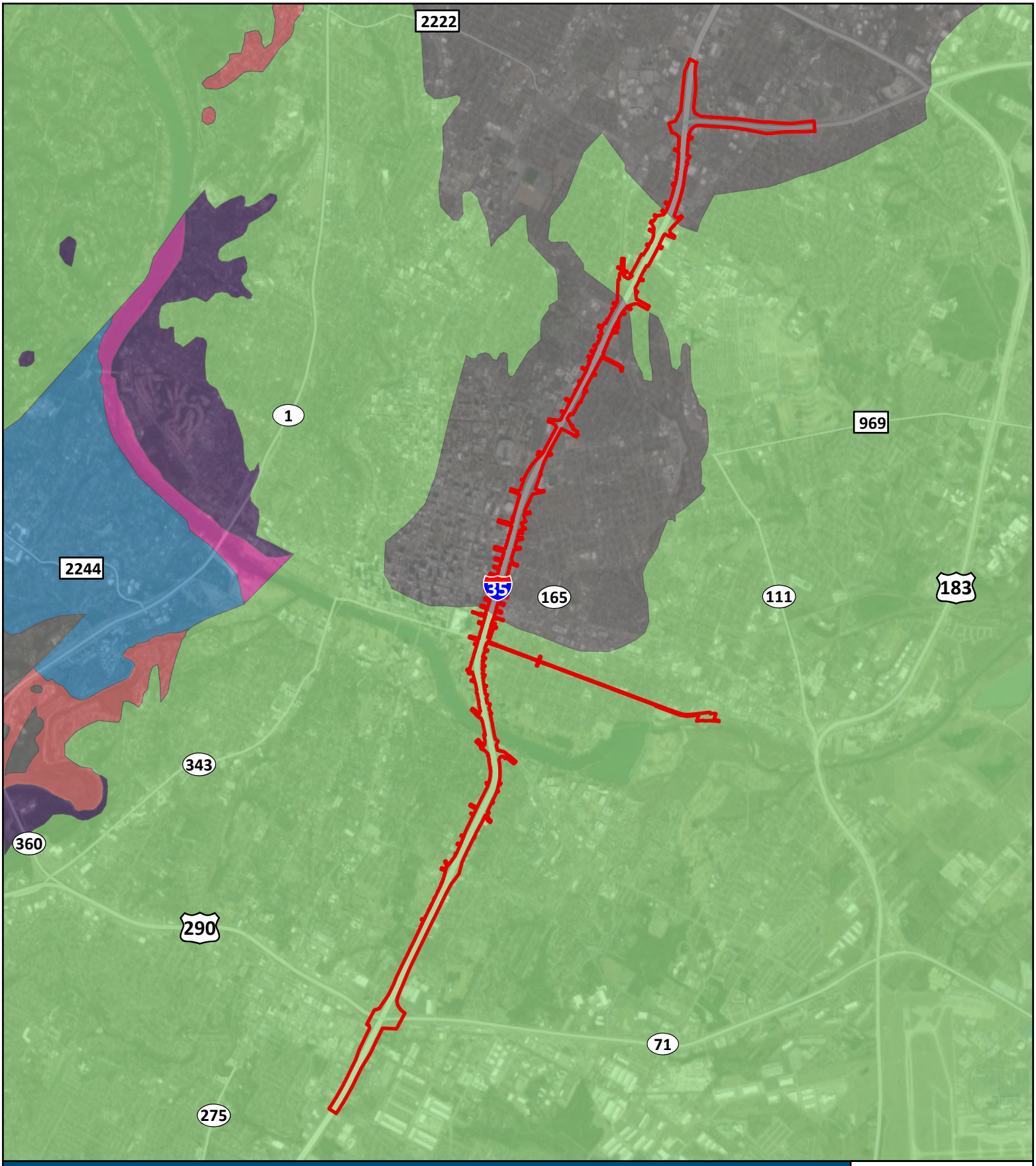


Figure 3: Karst Zones

I-35 Capital Express Central
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388

Source: Nearmap Imagery 2021, ESRI Street Map 2019

Study Area

Karst Zone

Zone 1
Zone 2
Zone 3a
Zone 3b
Zone 4a
Zone 4b

Texas Department of Transportation

0 1 2 Miles

Figure 4: Mapped Vegetative Communities

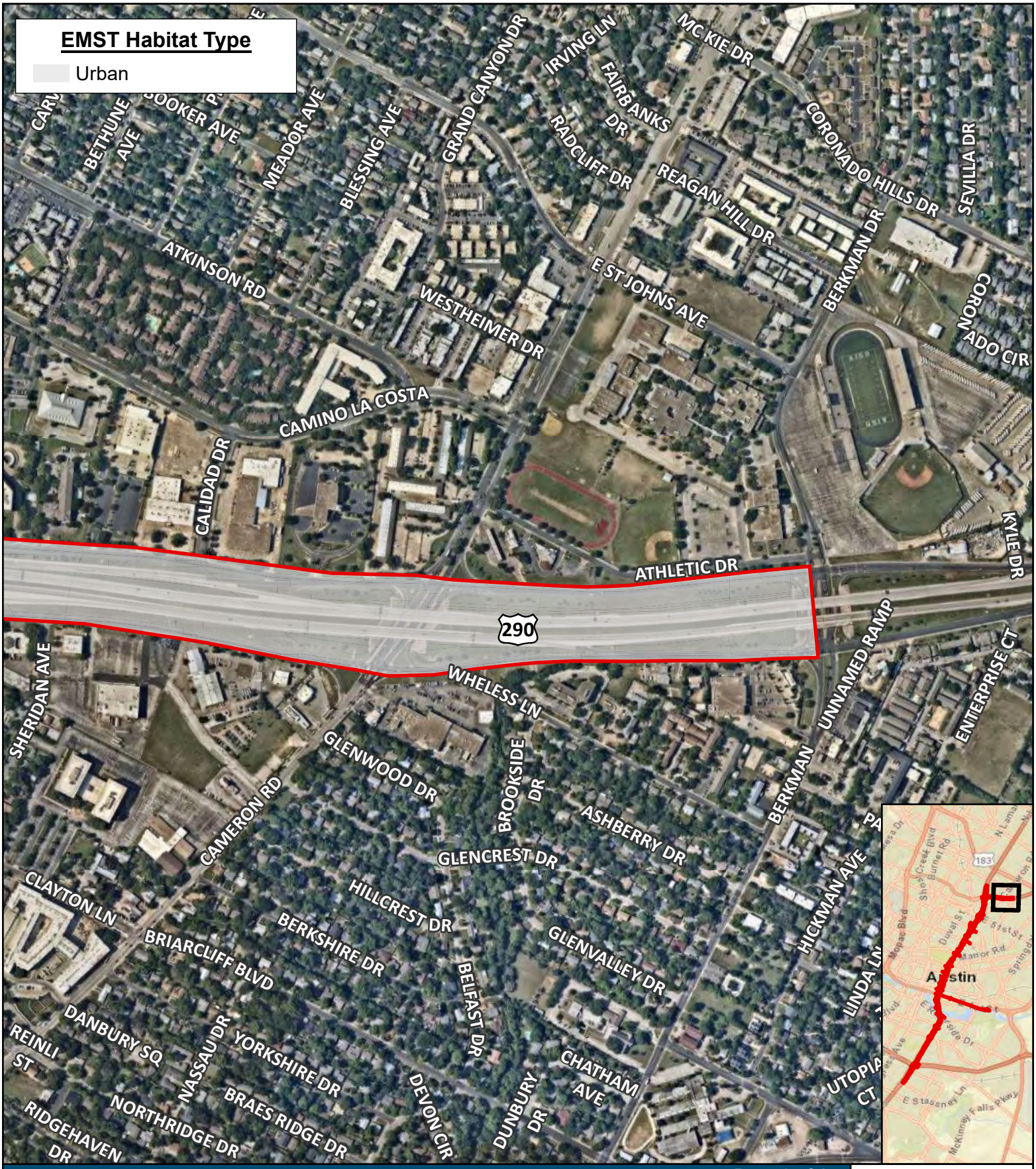
I-35 Capital Express Central
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388

Study Area

Texas Department of Transportation

0 500 1,000 Feet

Source: Nearmap 2021; ESRI Street Map 2019; TxDOT EMST 2018



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From US 290 East
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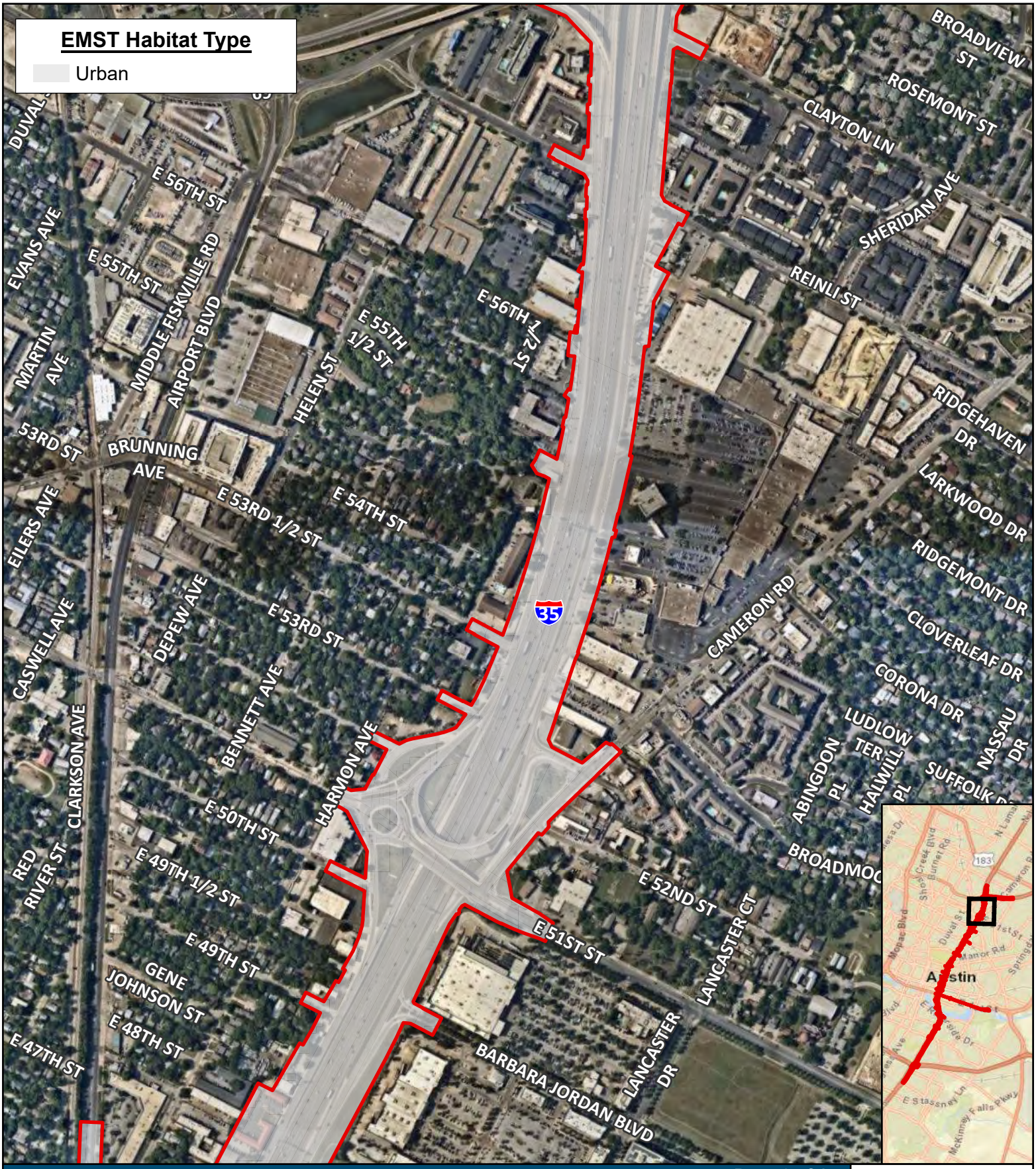
CSJ: 0015-13-388

Source: Nearmap 2021; ESRI Street Map 2019; TxDOT EMST 2018

Study Area

Texas Department of Transportation

0 500 1,000 Feet



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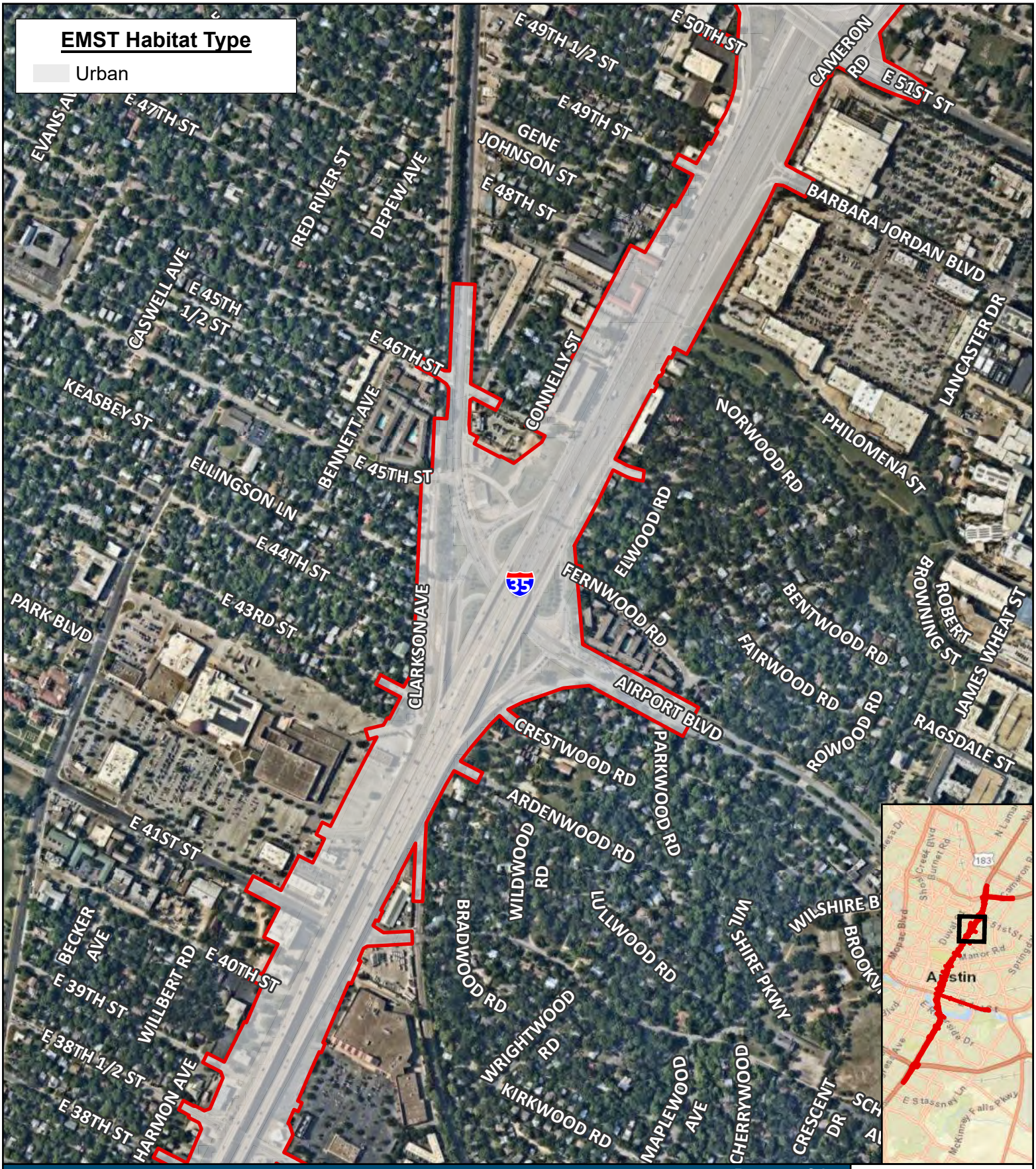
Study Area

Texas Department of Transportation

0 500 1,000 Feet

Source: Nearmap 2021; ESRI Street Map 2019; TxDOT EMST 2018



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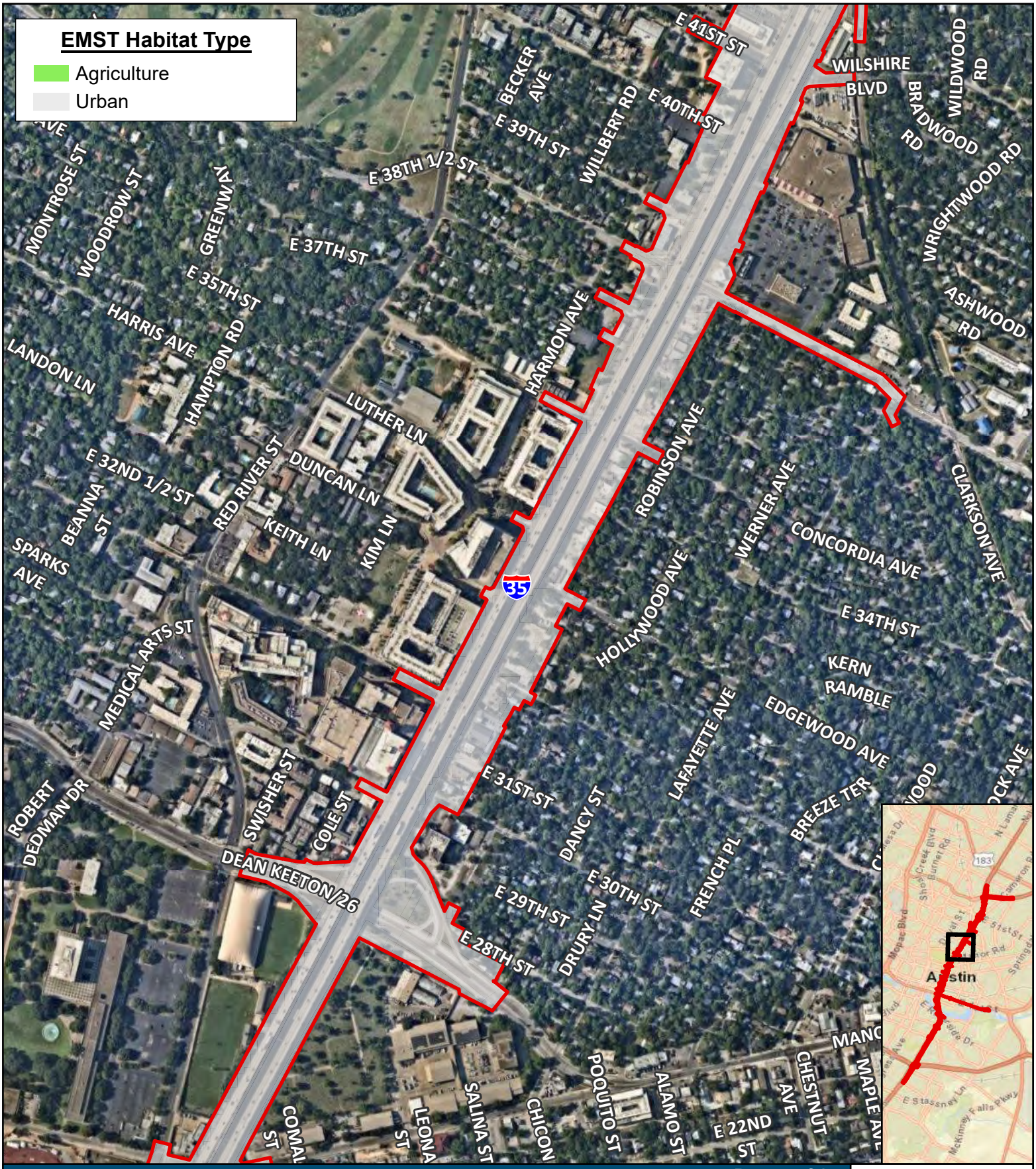
Source: Nearmap 2021; ESRI Street Map 2019; TxDOT EMST 2018

Study Area

Texas Department of Transportation

0 500 1,000 Feet



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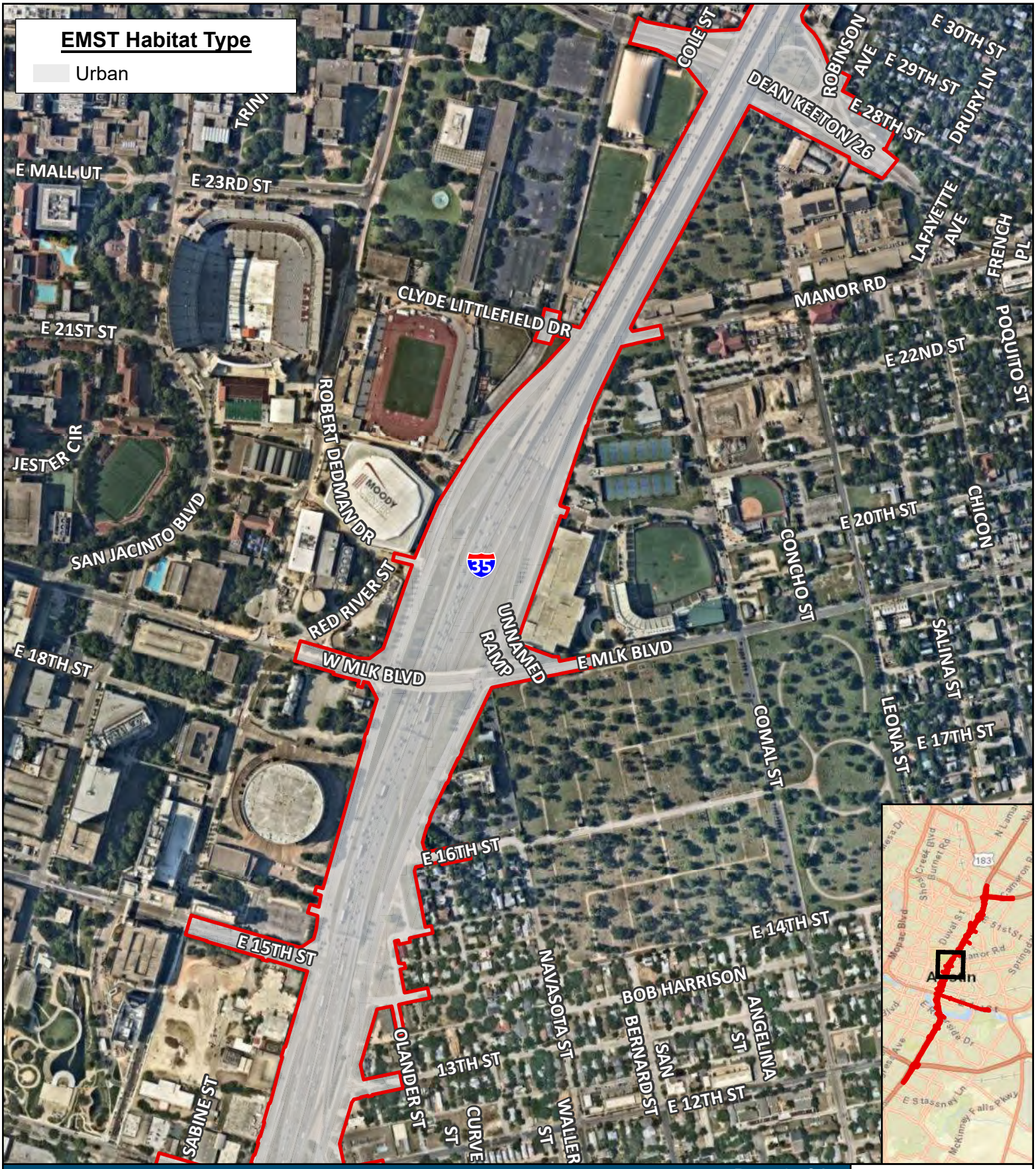
Texas Department of Transportation

0 500 1,000 Feet



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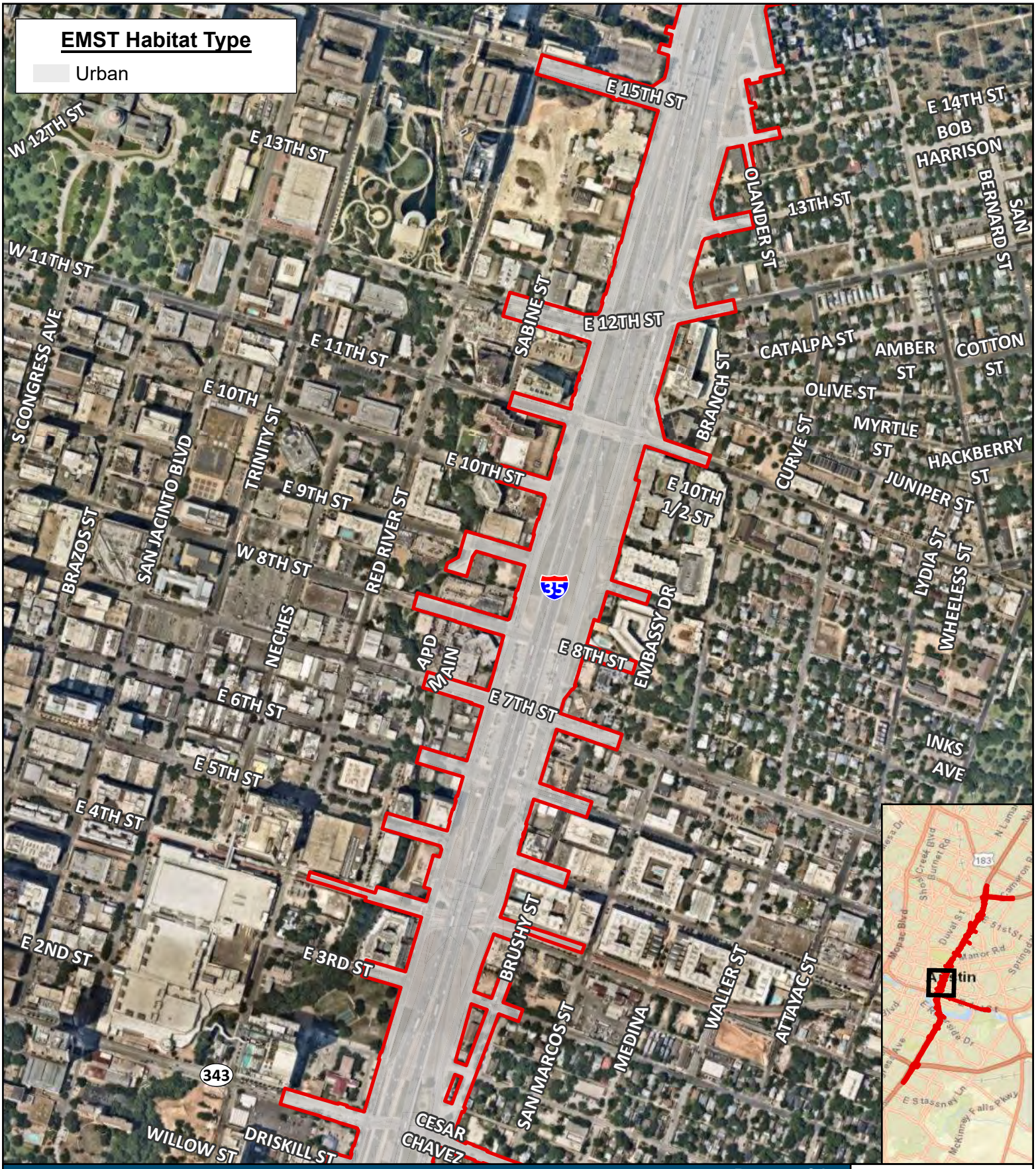
Study Area

Texas Department of Transportation

0 500 1,000 Feet



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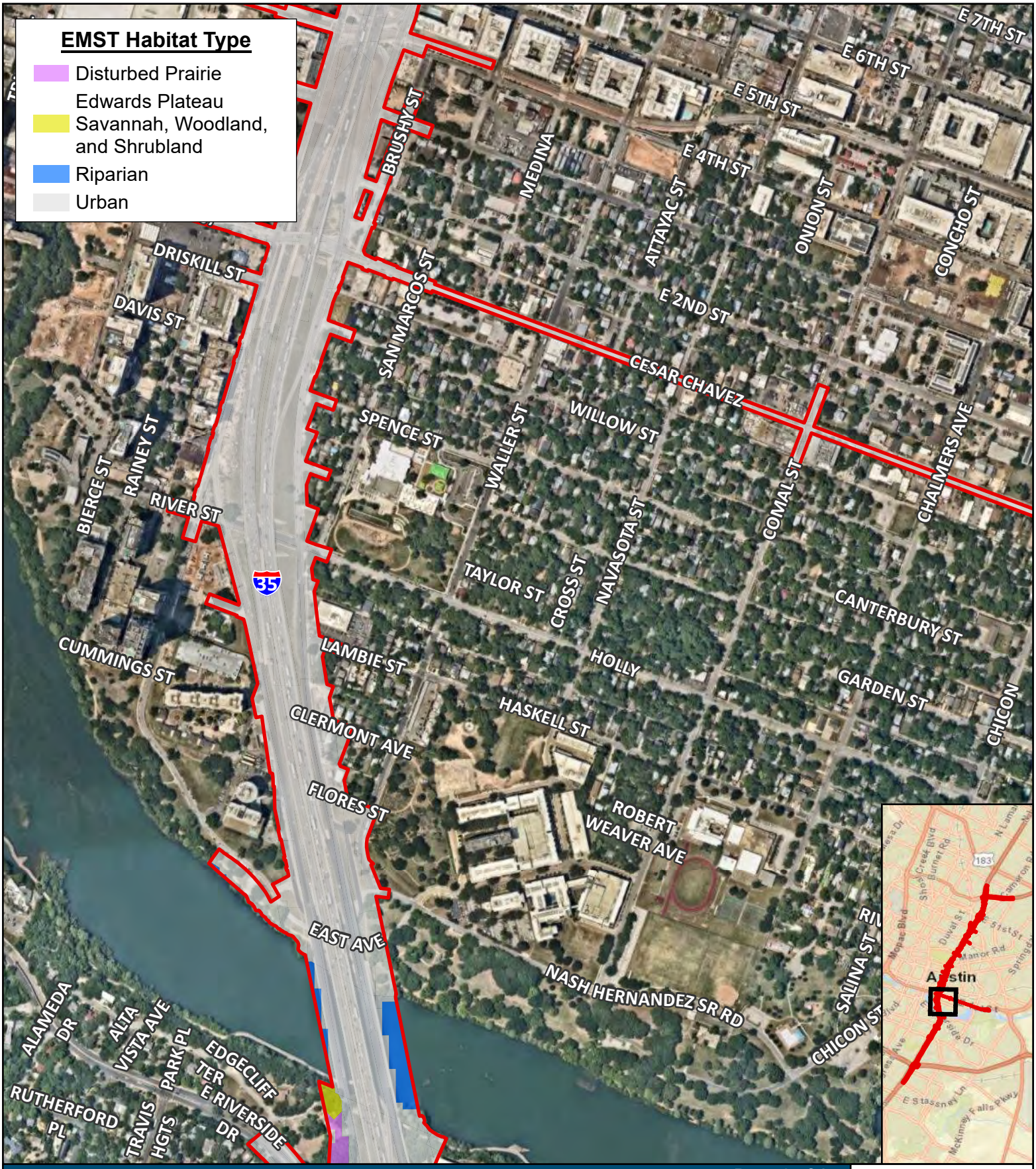
CSJ: 0015-13-388

Source: Nearmap 2021; ESRI Street Map 2019; TxDOT EMST 2018

Study Area

Texas Department of Transportation

0 500 1,000 Feet



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I-35 Capital Express Central
From US 290 East
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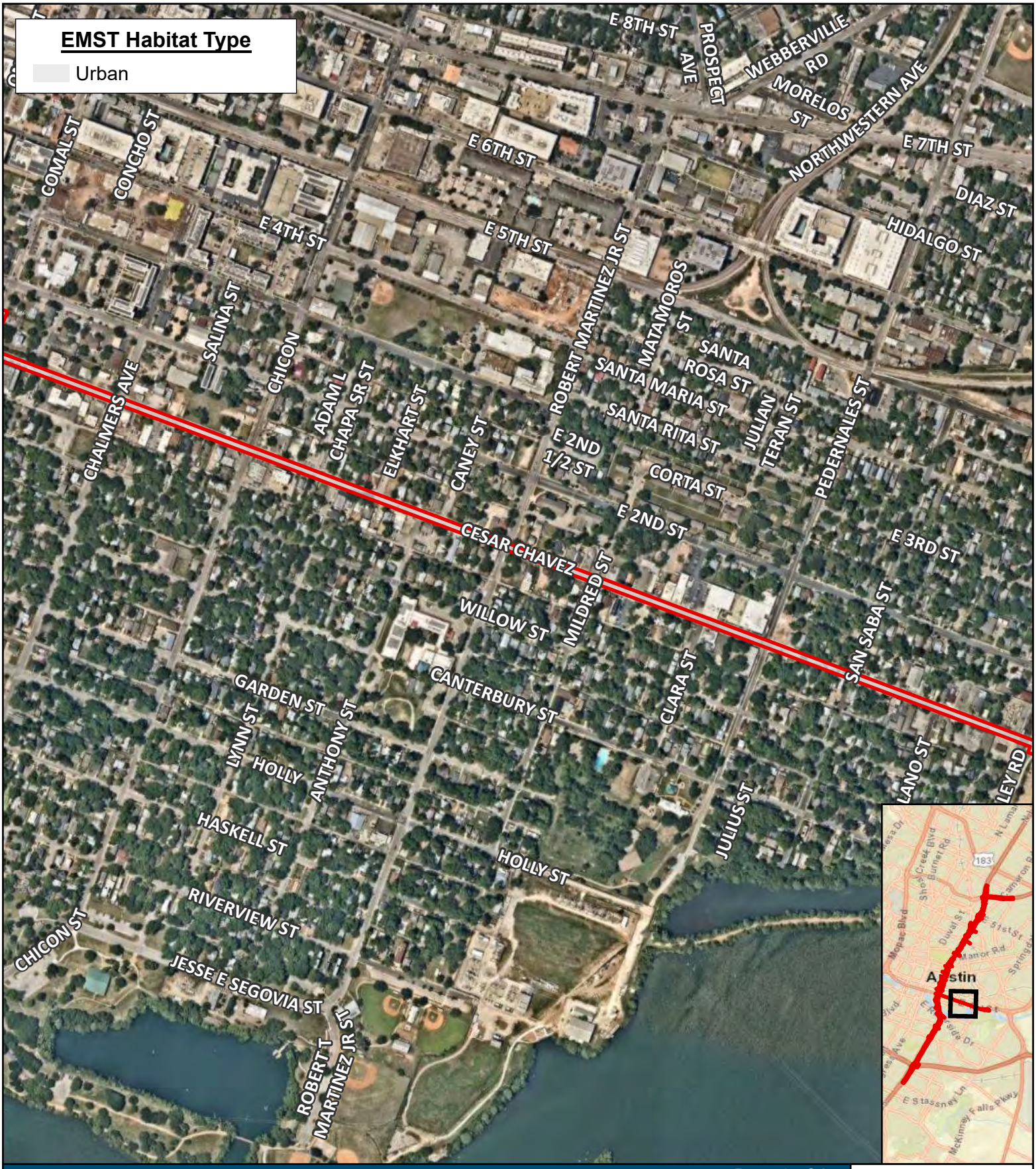
Travis County, TX
CSJ: 0015-13-388

Study Area

Source: Nearmap 2021; ESRI Street Map 2019; TxDOT EMST 2018

Texas Department of Transportation

0 500 1,000 Feet



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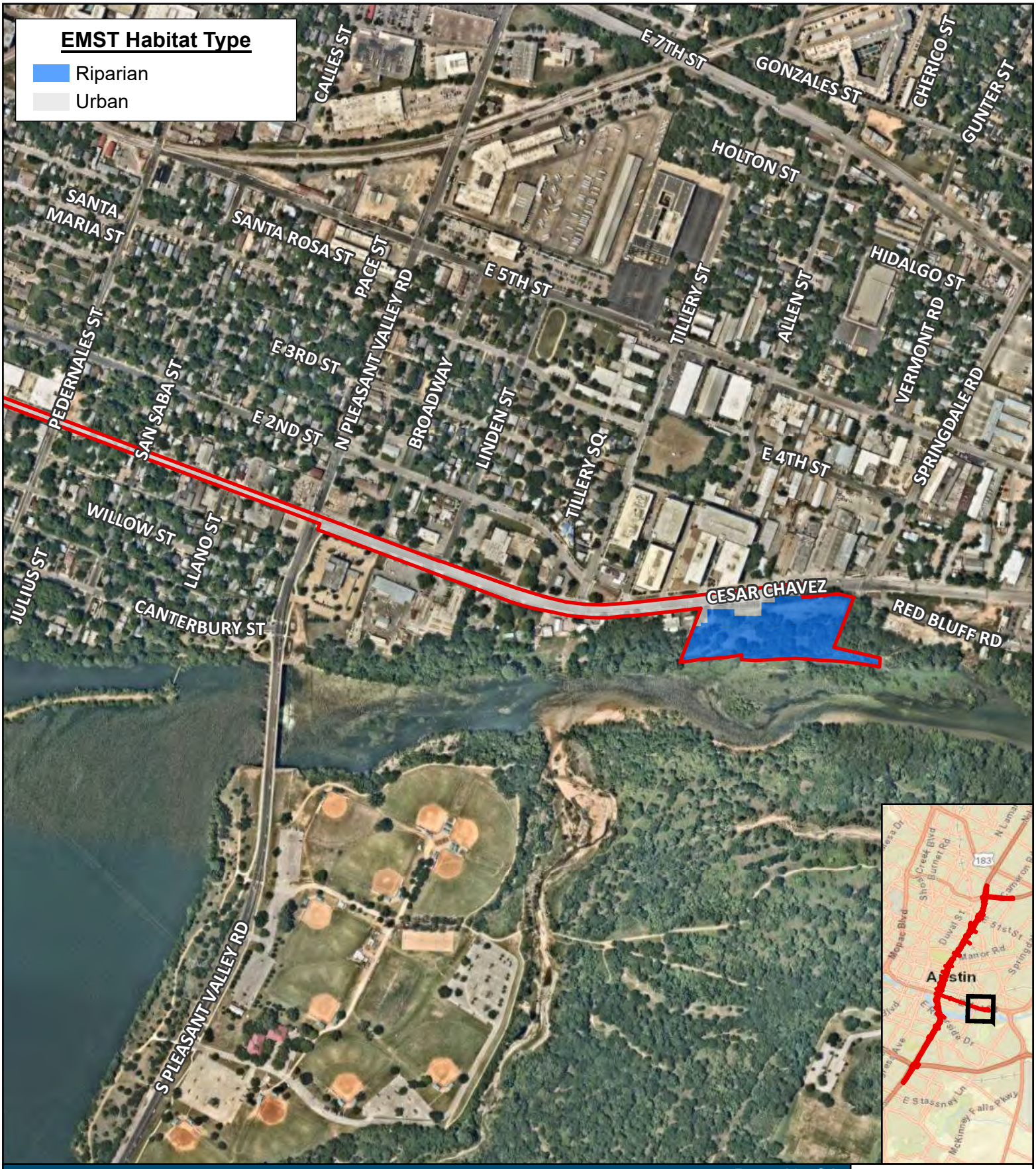
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388

Source: Nearmap 2021; ESRI Street Map 2019; TxDOT EMST 2018

Study Area

Texas Department of Transportation

0 500 1,000 Feet



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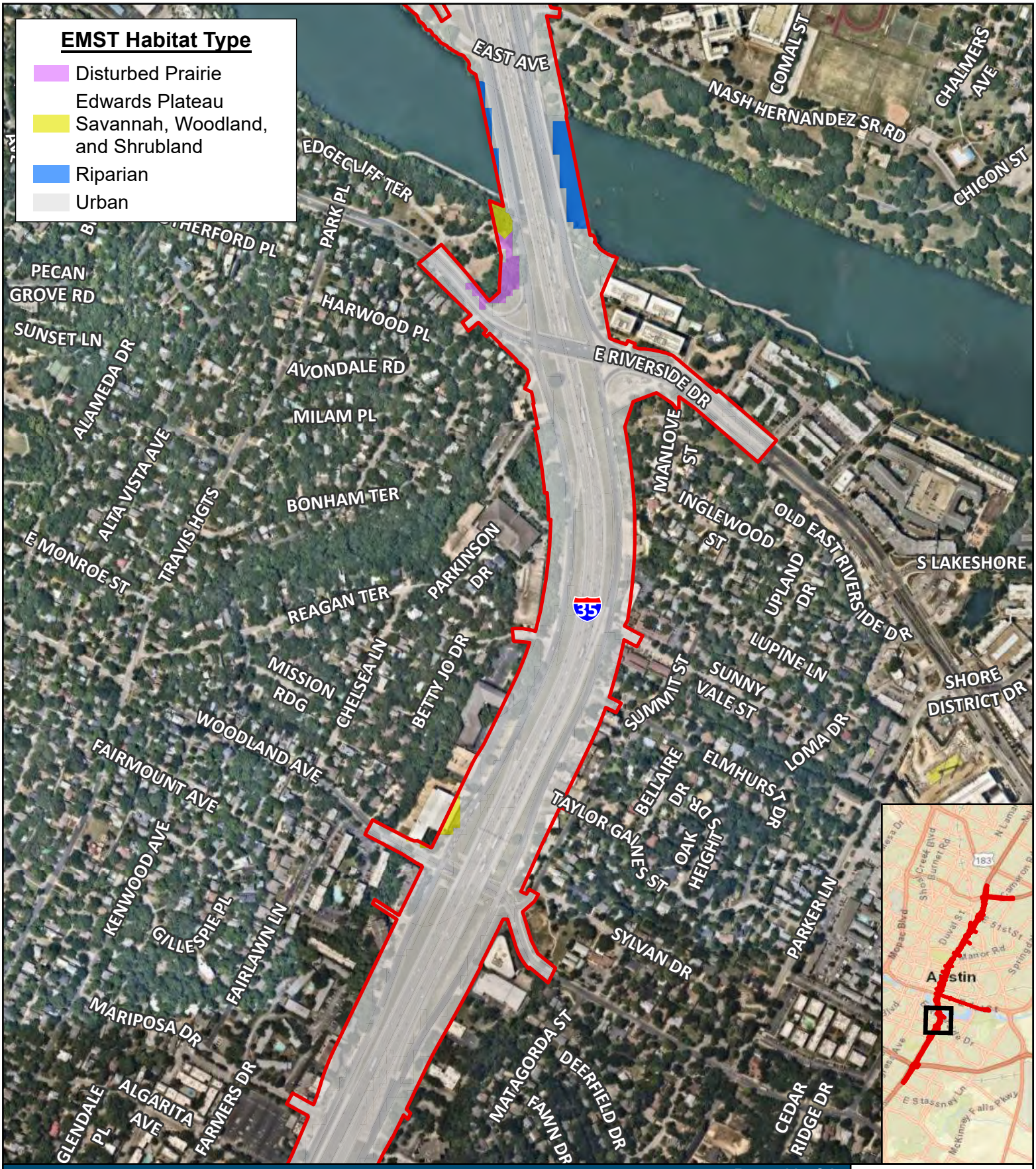
Study Area

Texas Department of Transportation

0 500 1,000 Feet



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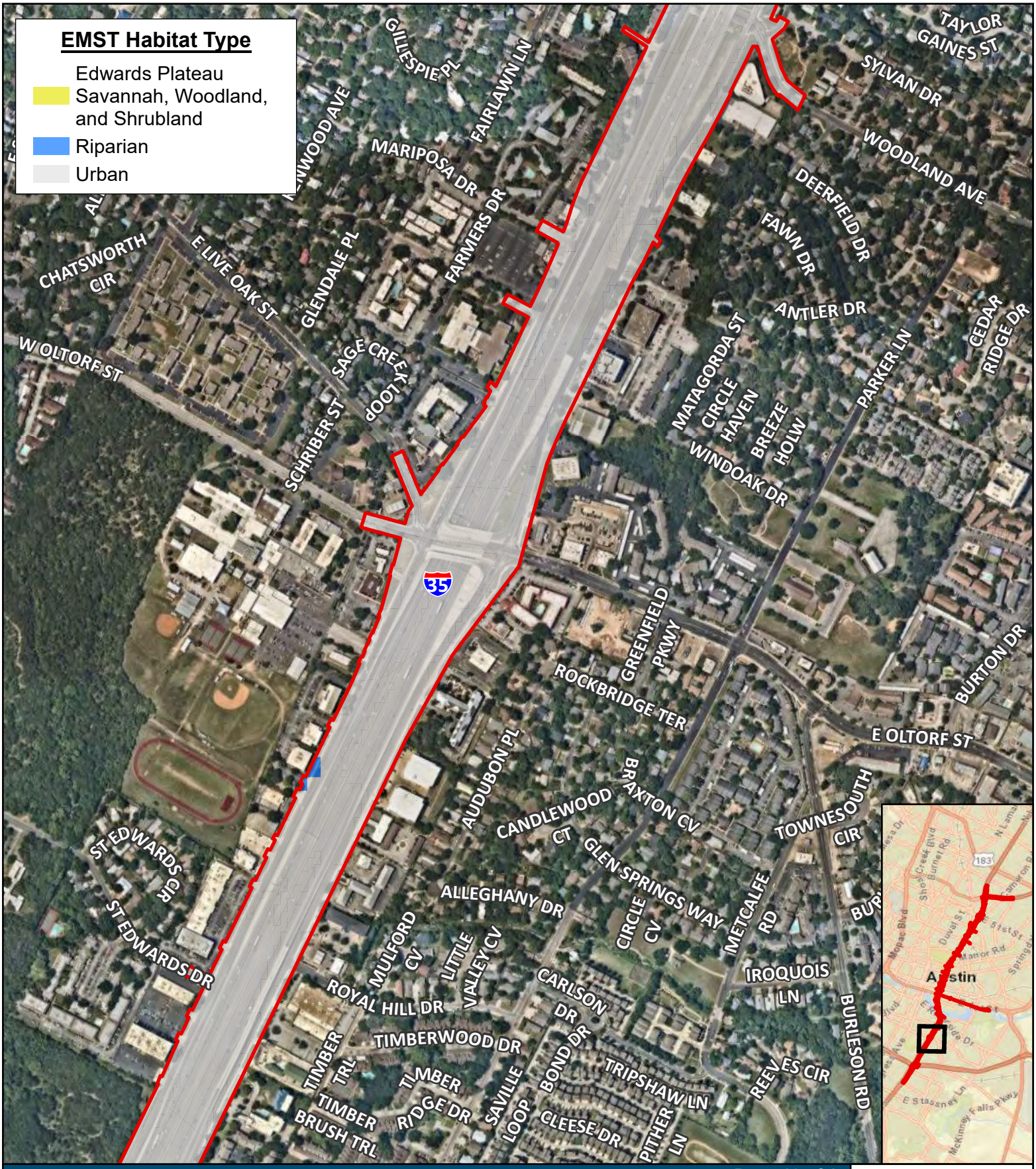

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Texas Department of Transportation

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Study Area

Texas Department of Transportation

0 500 1,000 Feet

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Study Area

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0 500 1,000 Feet

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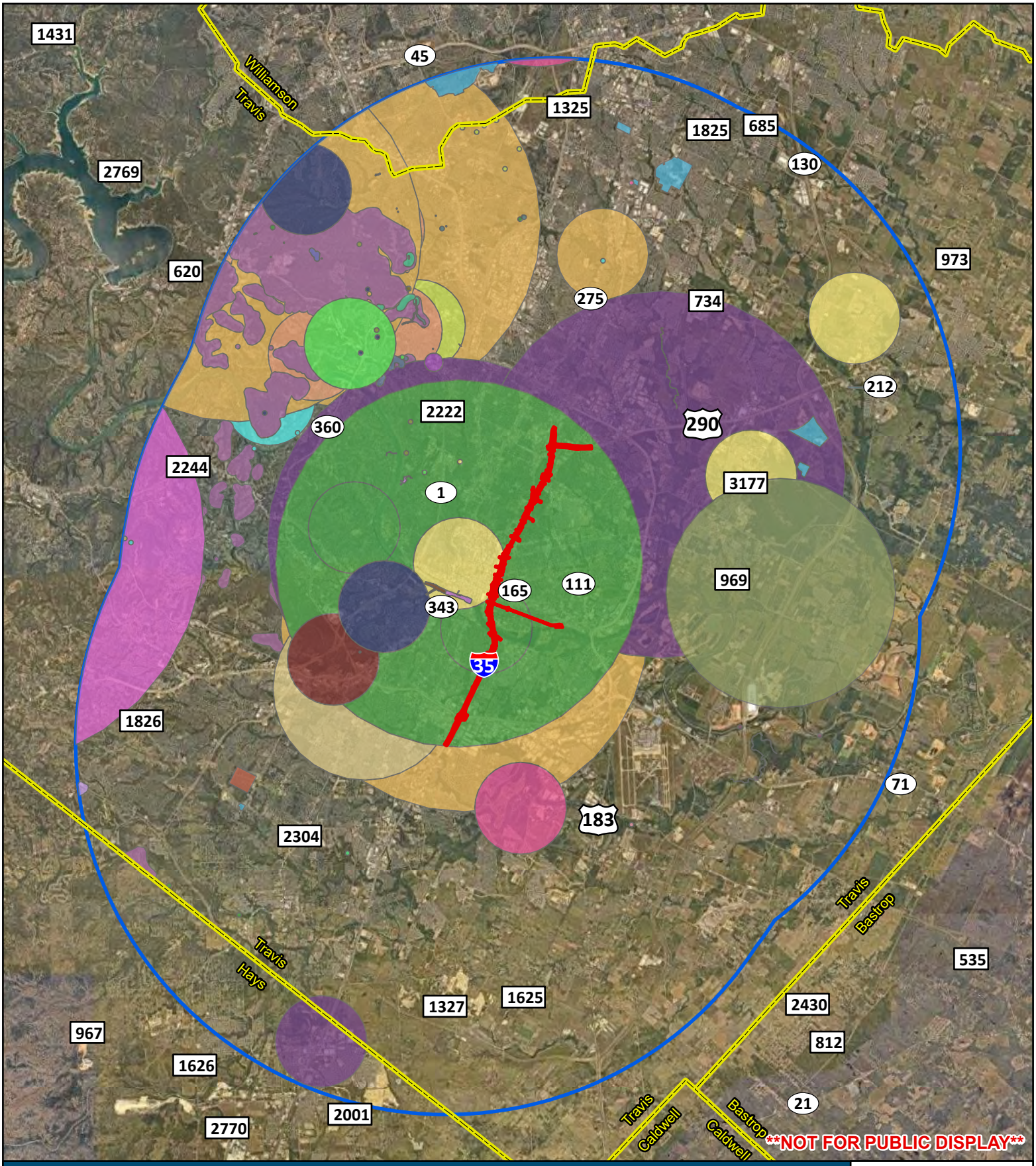


Figure 5a: TPWD Natural Diversity Database

I-35 Capital Express Central
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388

Source: Nearmap 2021; ESRI Street Map 2019

Study Area

10-Mile Buffer

Texas Department of Transportation

0 1 2 Miles

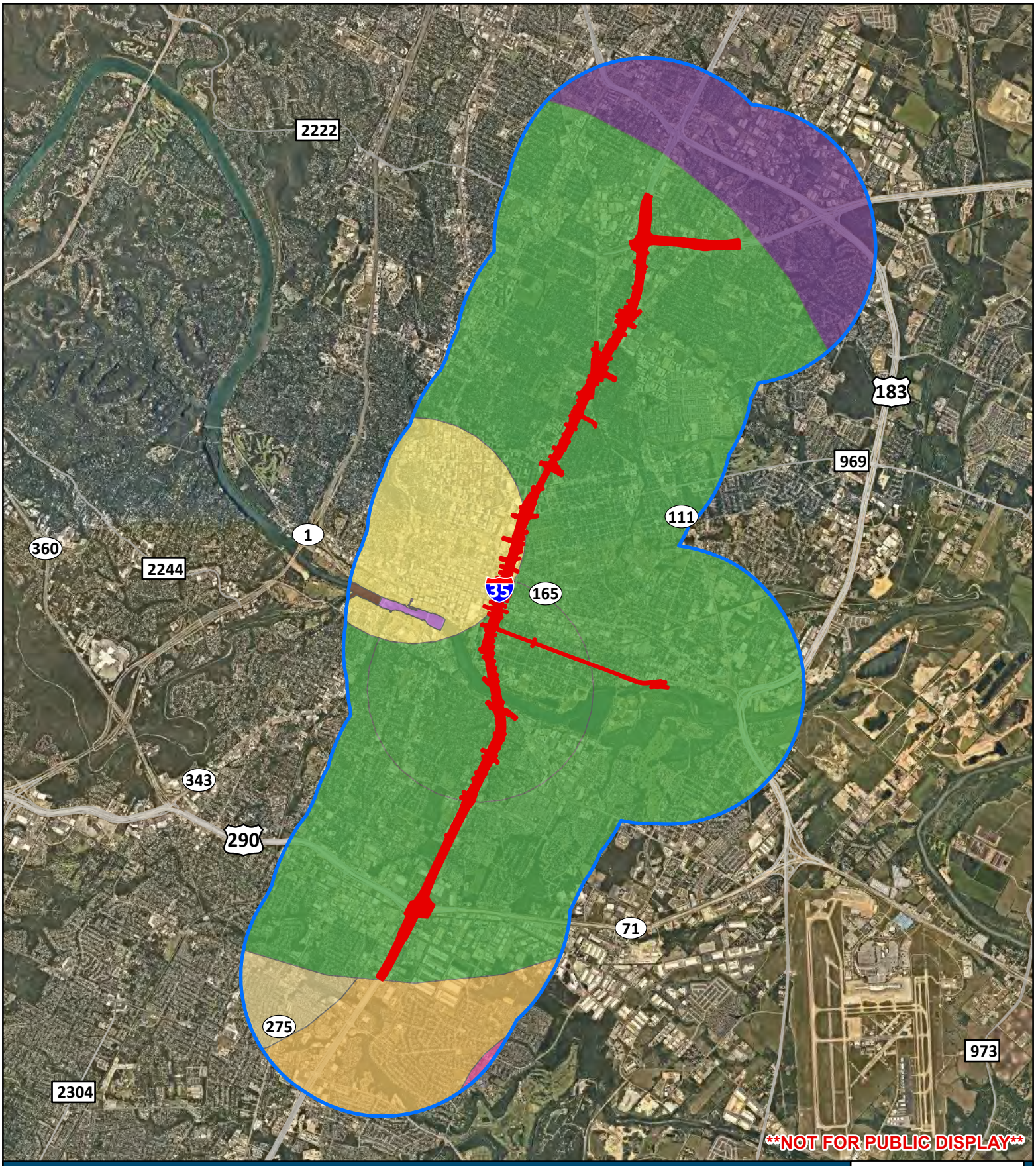


Figure 5b: TPWD Natural Diversity Database

I-35 Capital Express Central
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388

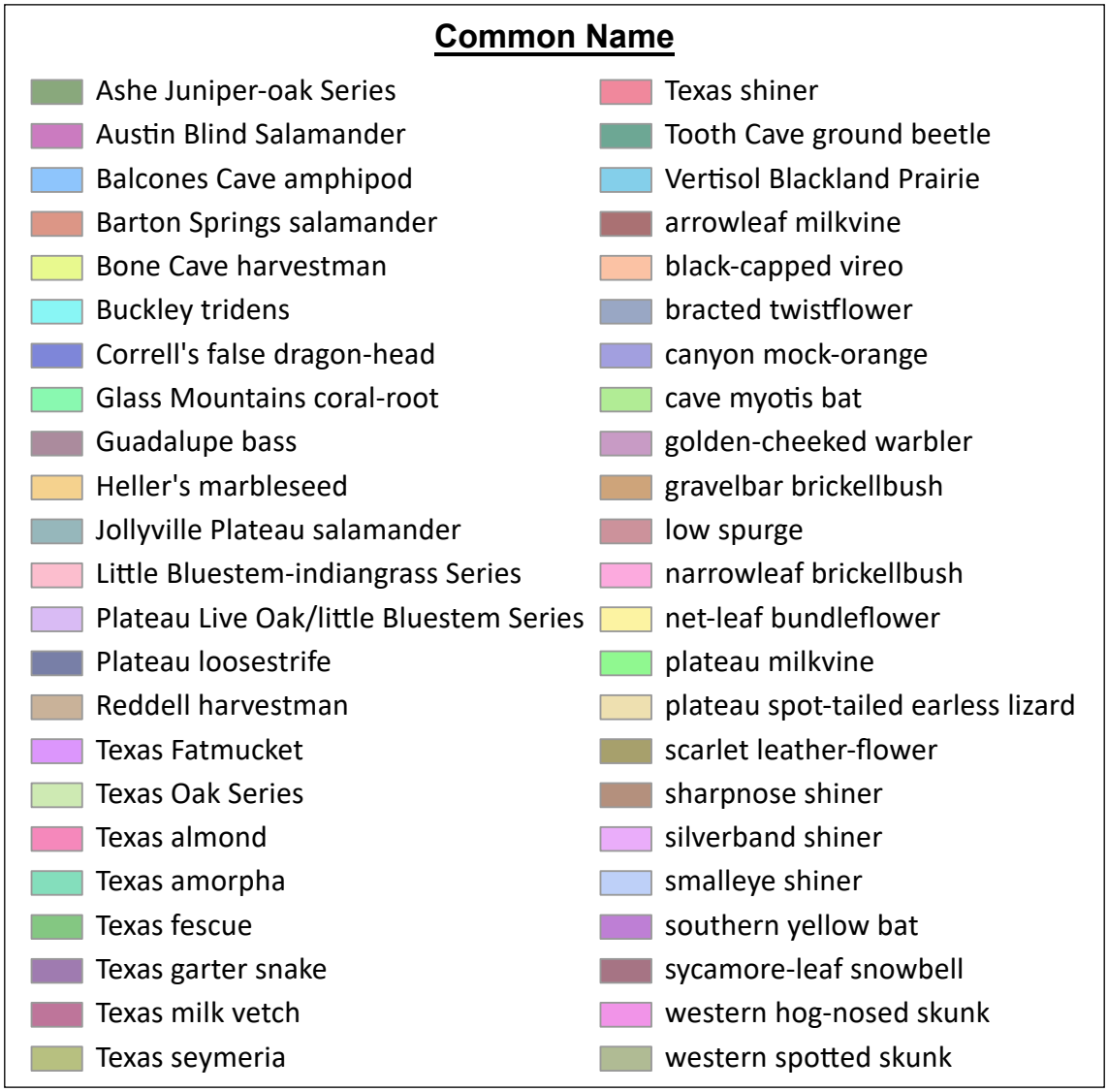
Source: Nearmap 2021; ESRI Street Map 2019

Study Area

1.5-Mile Buffer

Texas Department of Transportation

0 1 2 Miles



****NOT FOR PUBLIC DISPLAY****

Figure 5c: TPWD NDD Map Key

I-35 Capital Express Central
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388

Source: Nearmap 2021; ESRI Street Map 2019

Texas Department of Transportation

0 1 2 Miles

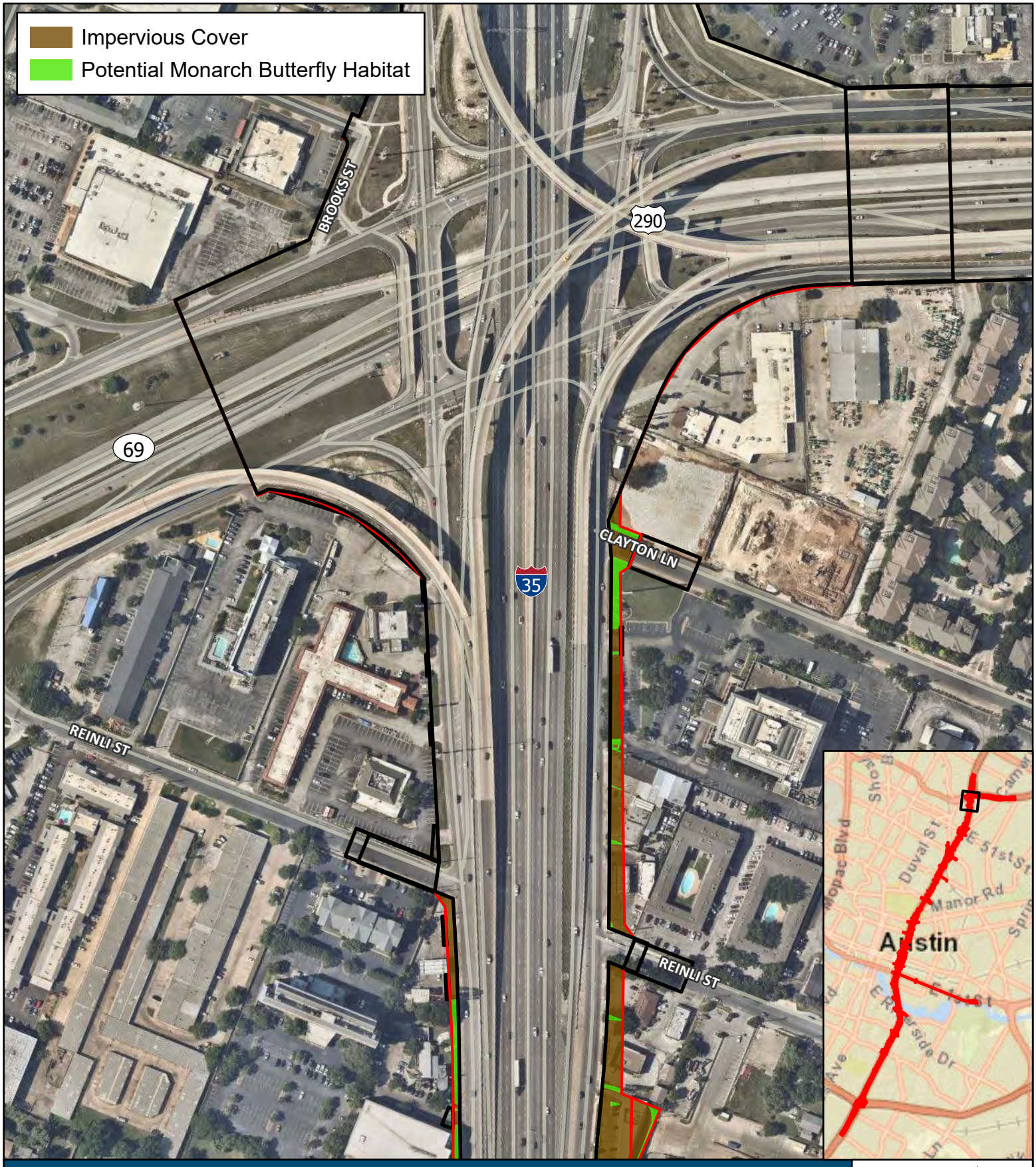


Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Texas Department of Transportation

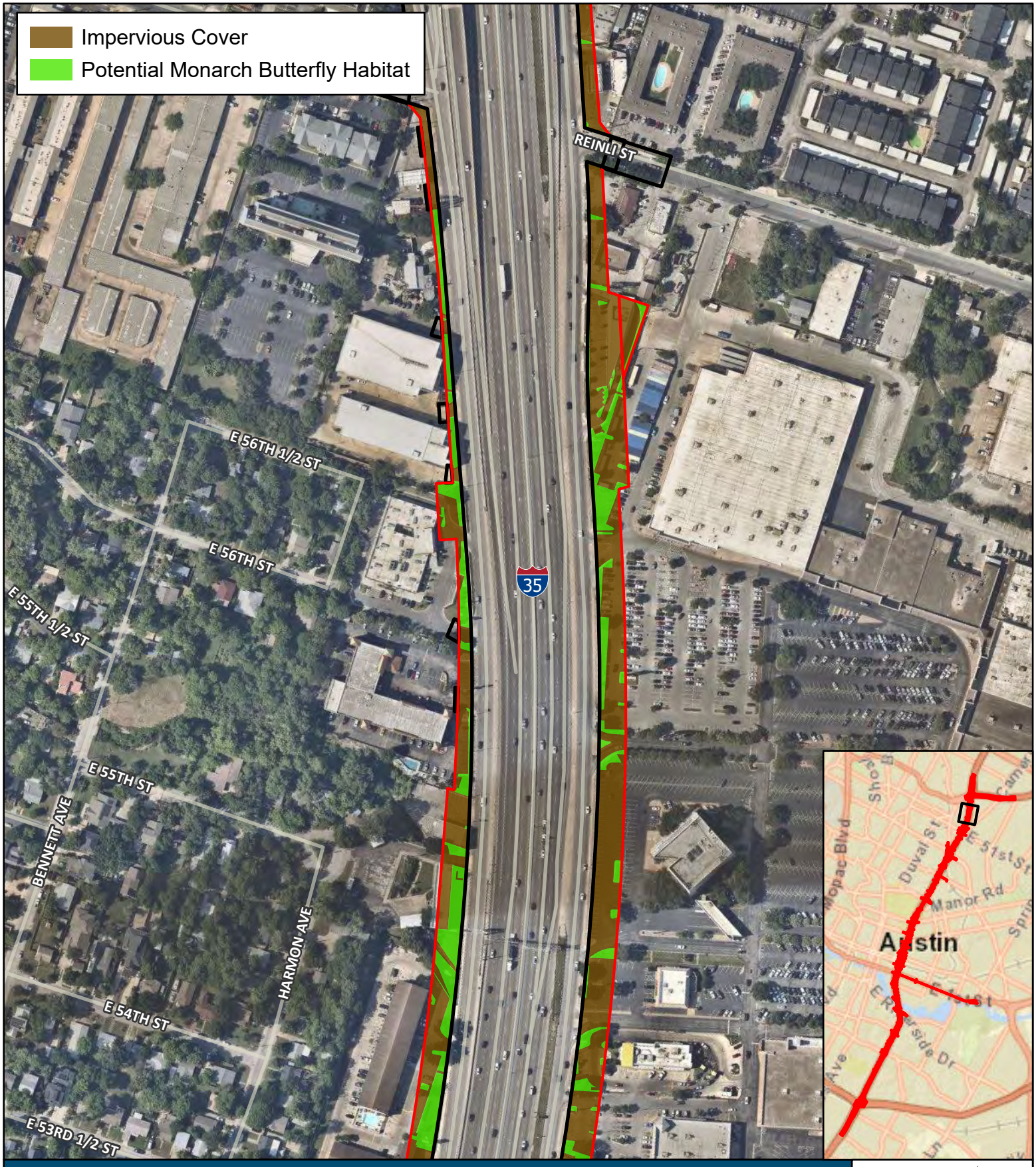


Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388

Source: Nearmap 2021

Texas Department of Transportation

Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300
Feet

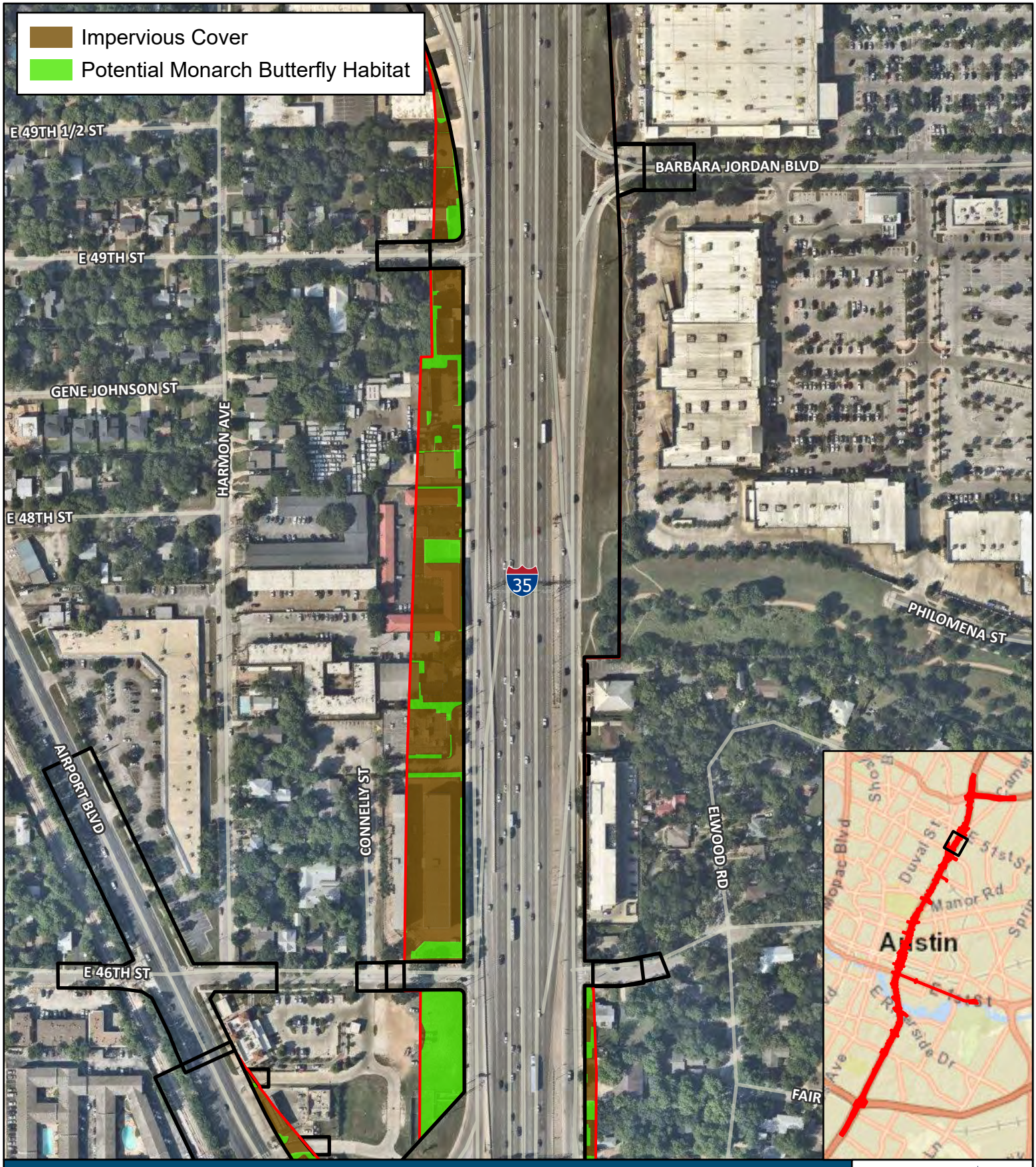


Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Texas Department of Transportation

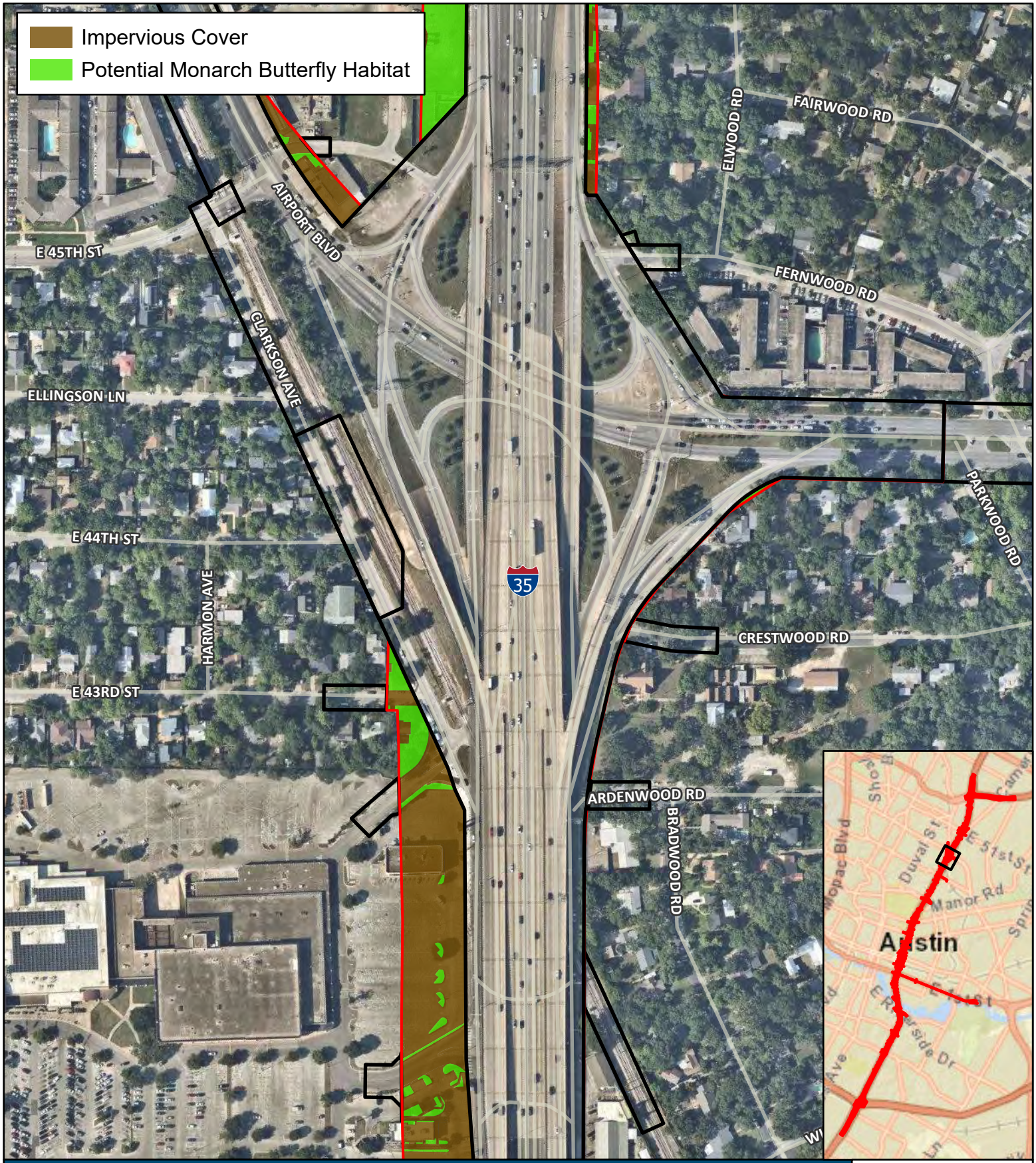


Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300 Feet

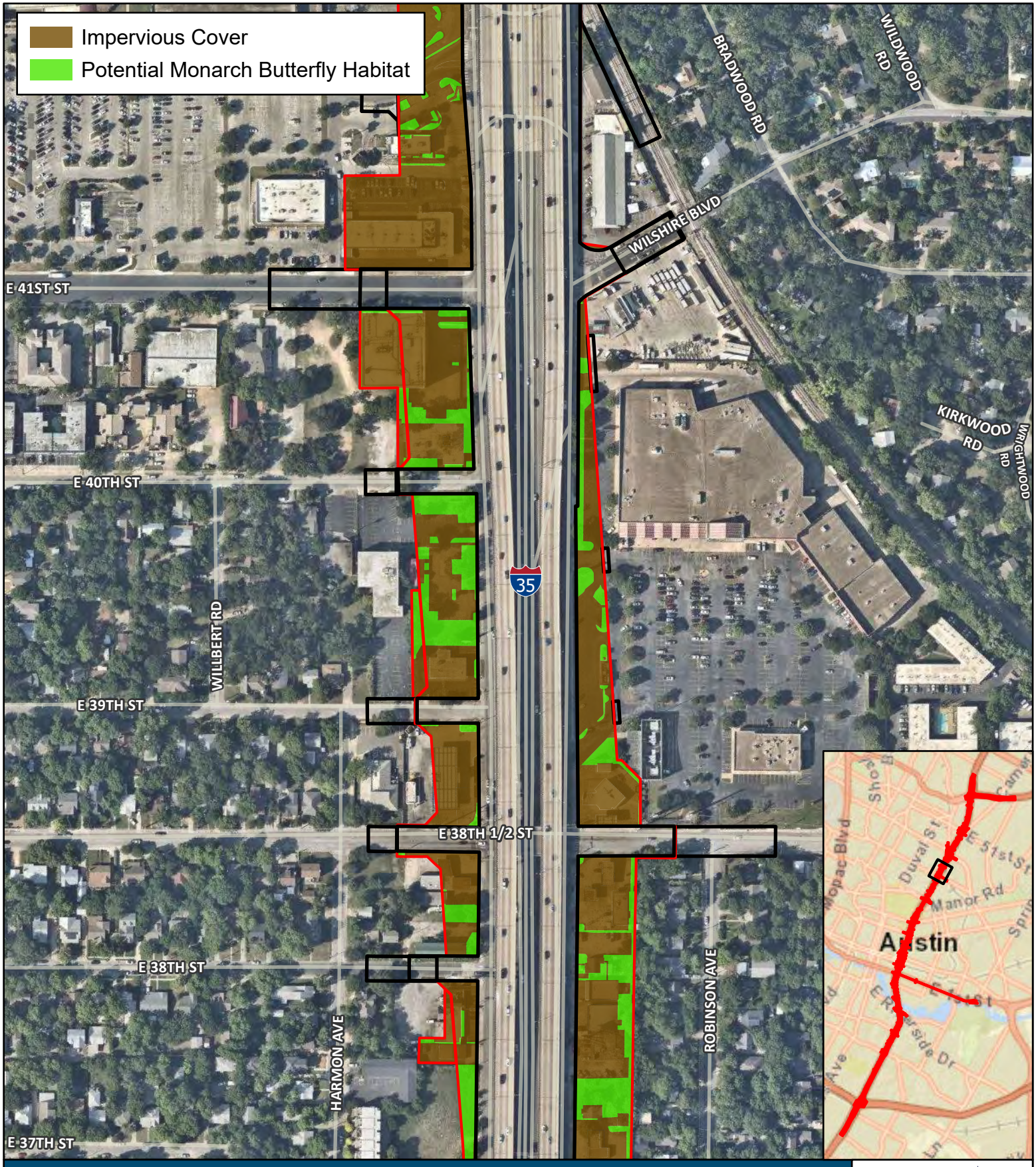


Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300
Feet

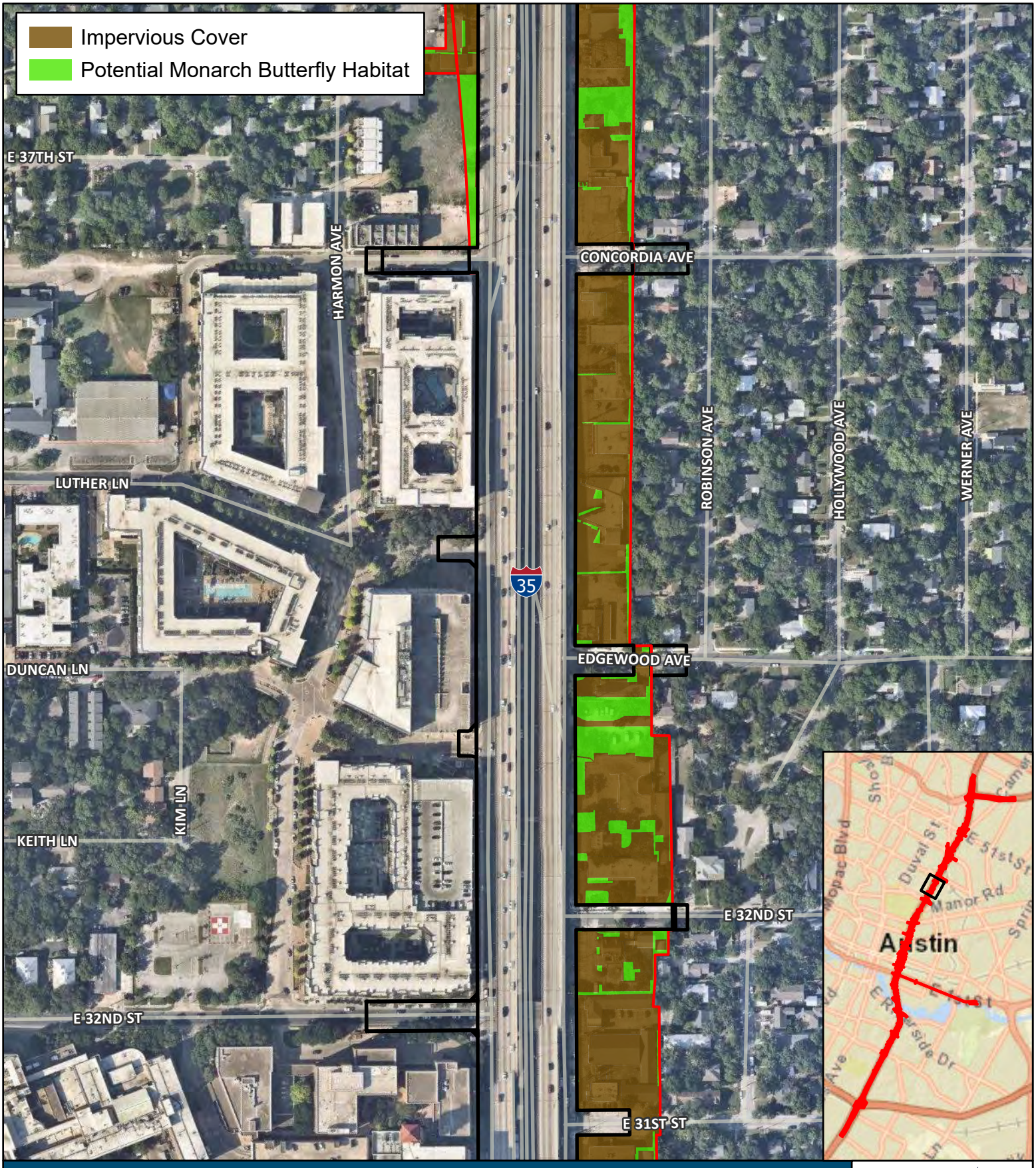


Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300
Feet

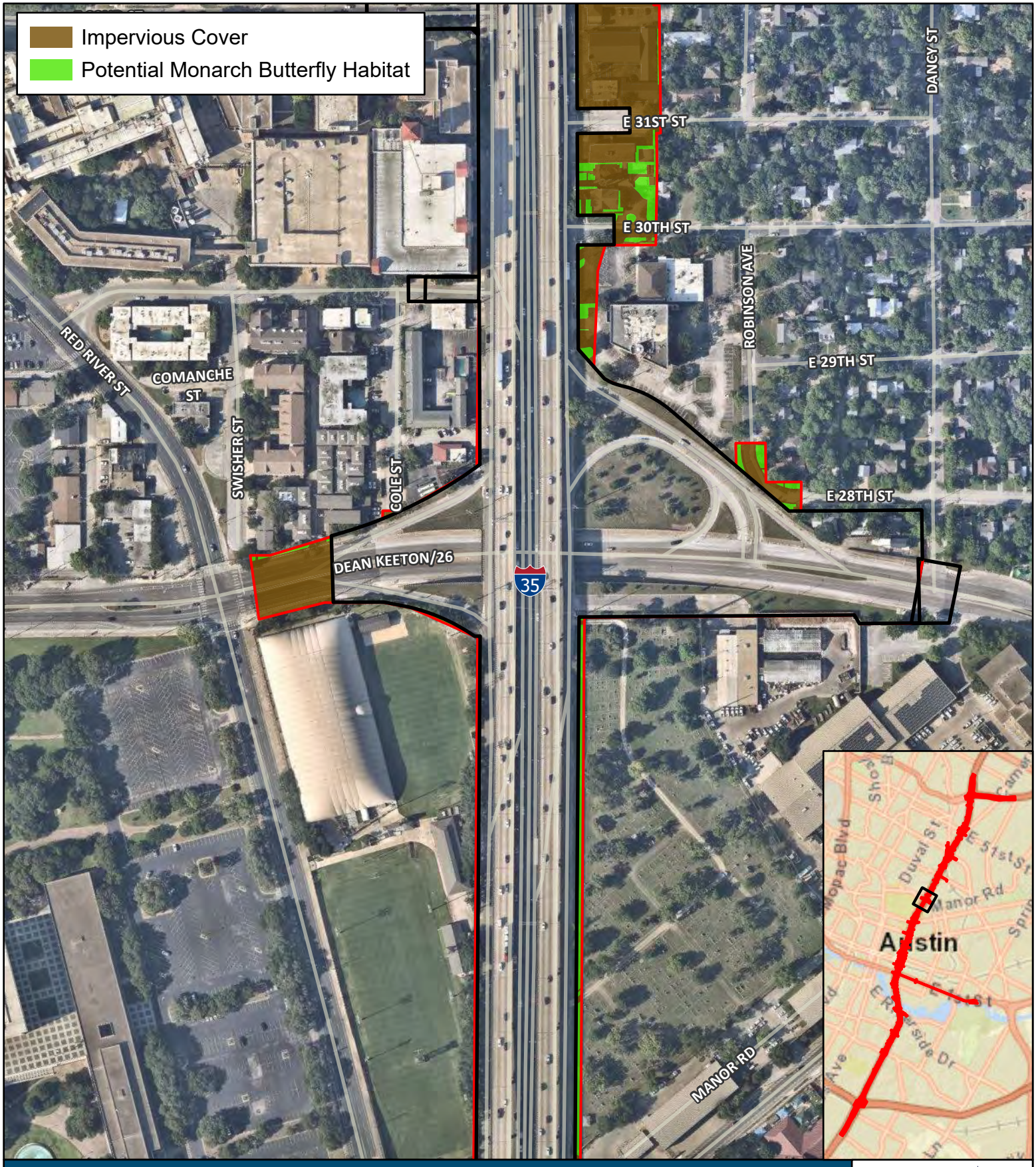


Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300 Feet

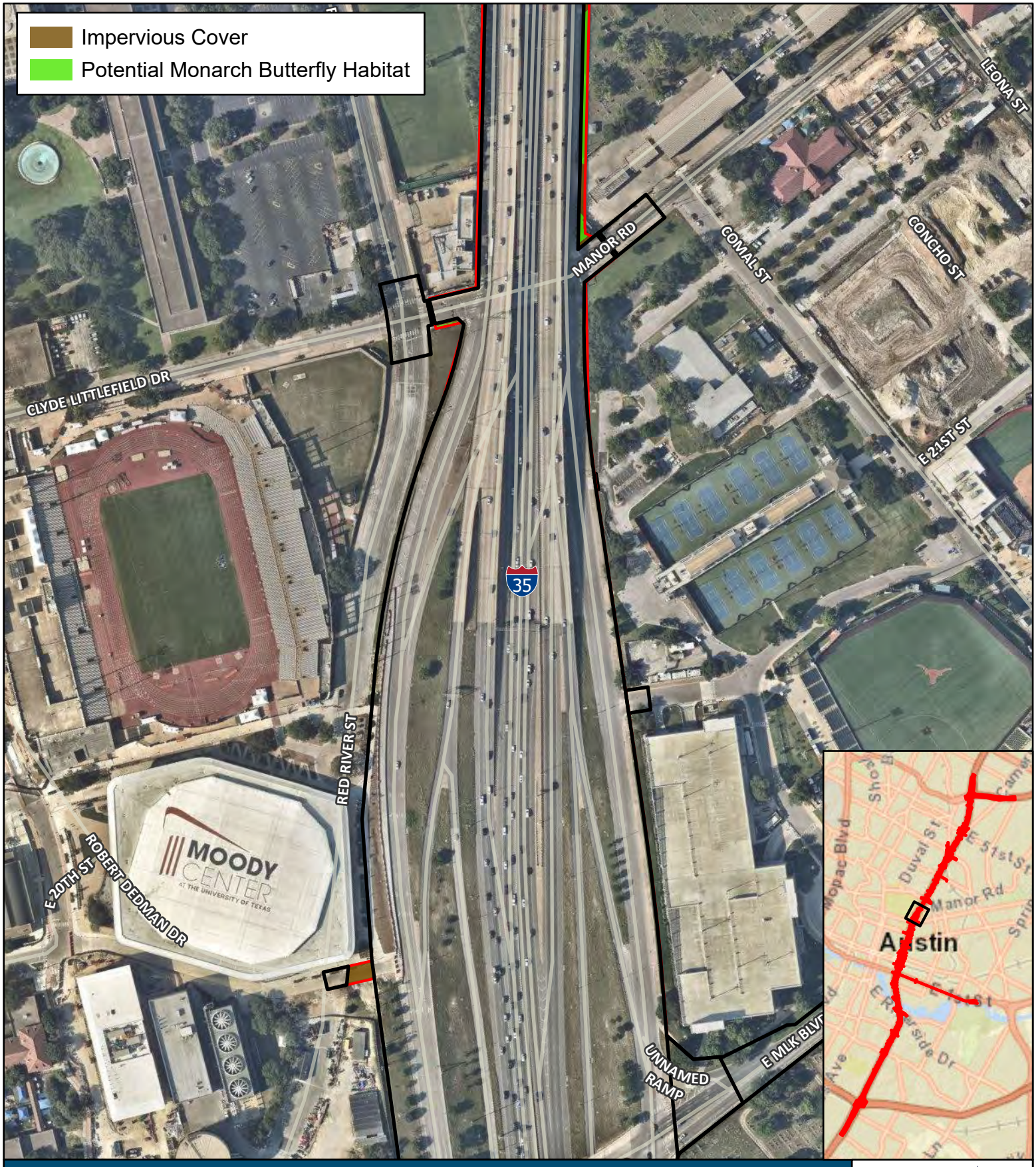


Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388

Existing ROW/Easement
Proposed ROW/Easement

Source: Nearmap 2021

Texas Department of Transportation

0 150 300 Feet

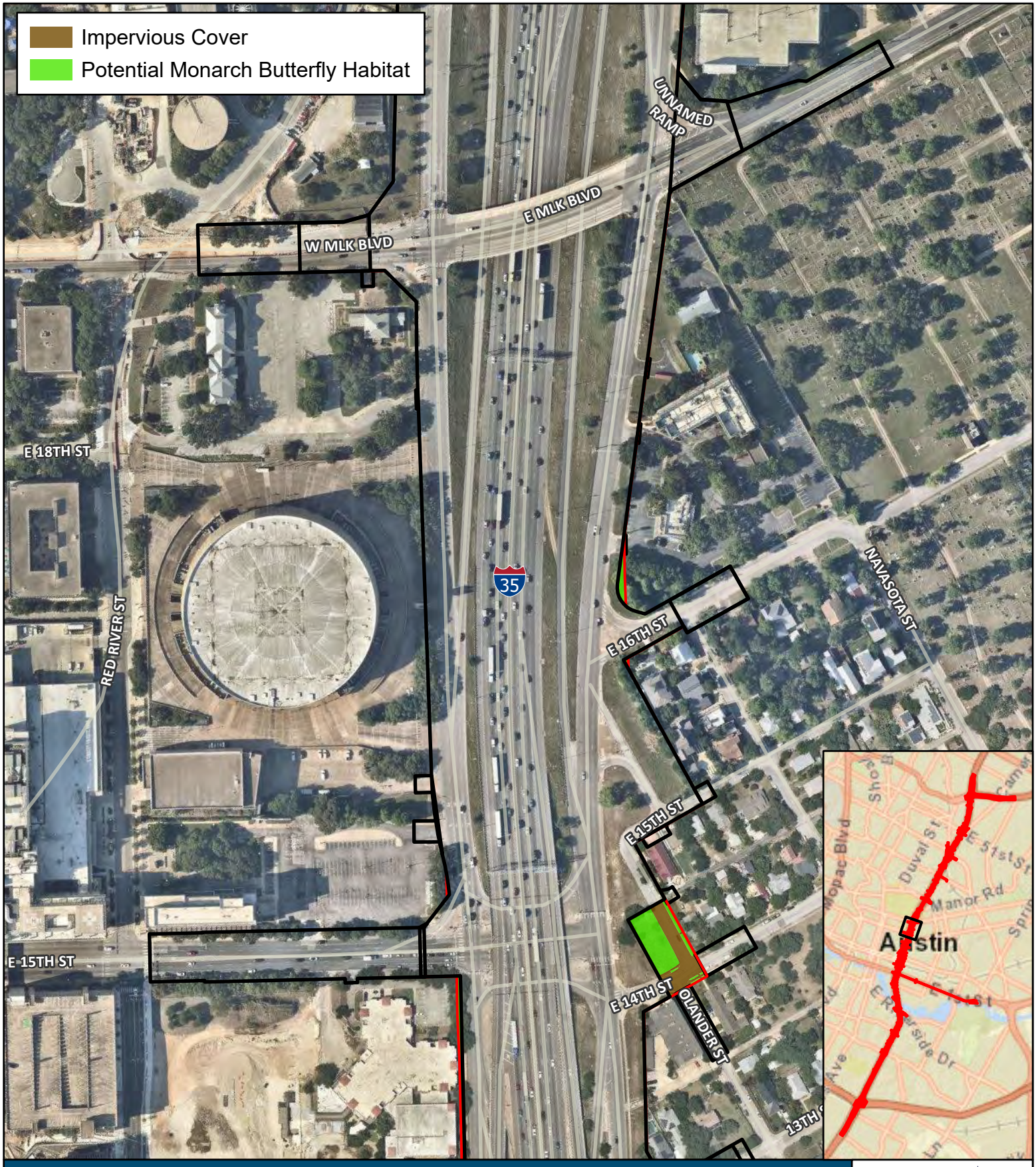


Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300
Feet

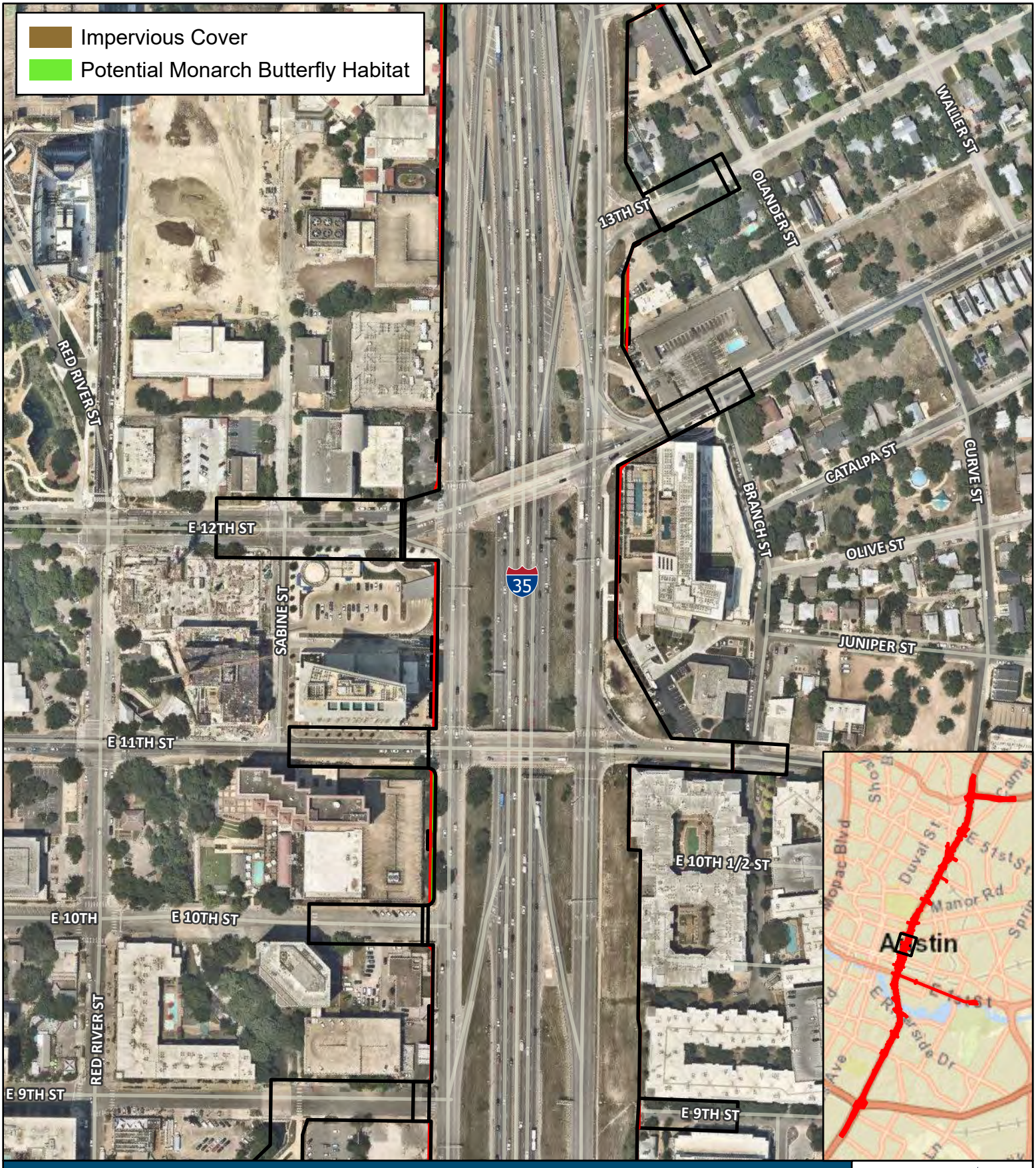


Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388

Existing ROW/Easement
Proposed ROW/Easement

Source: Nearmap 2021

Texas Department of Transportation

0 150 300
Feet

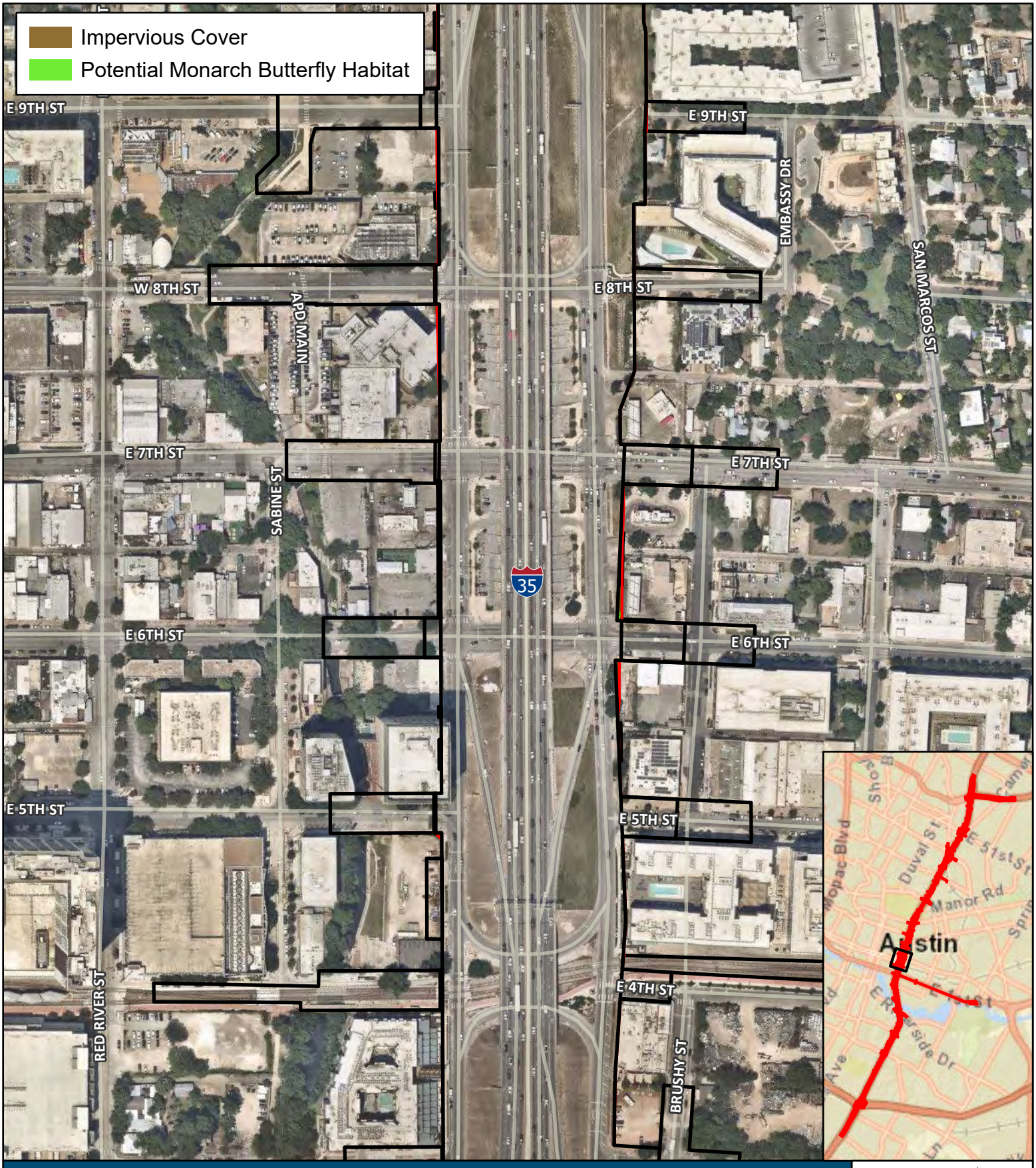


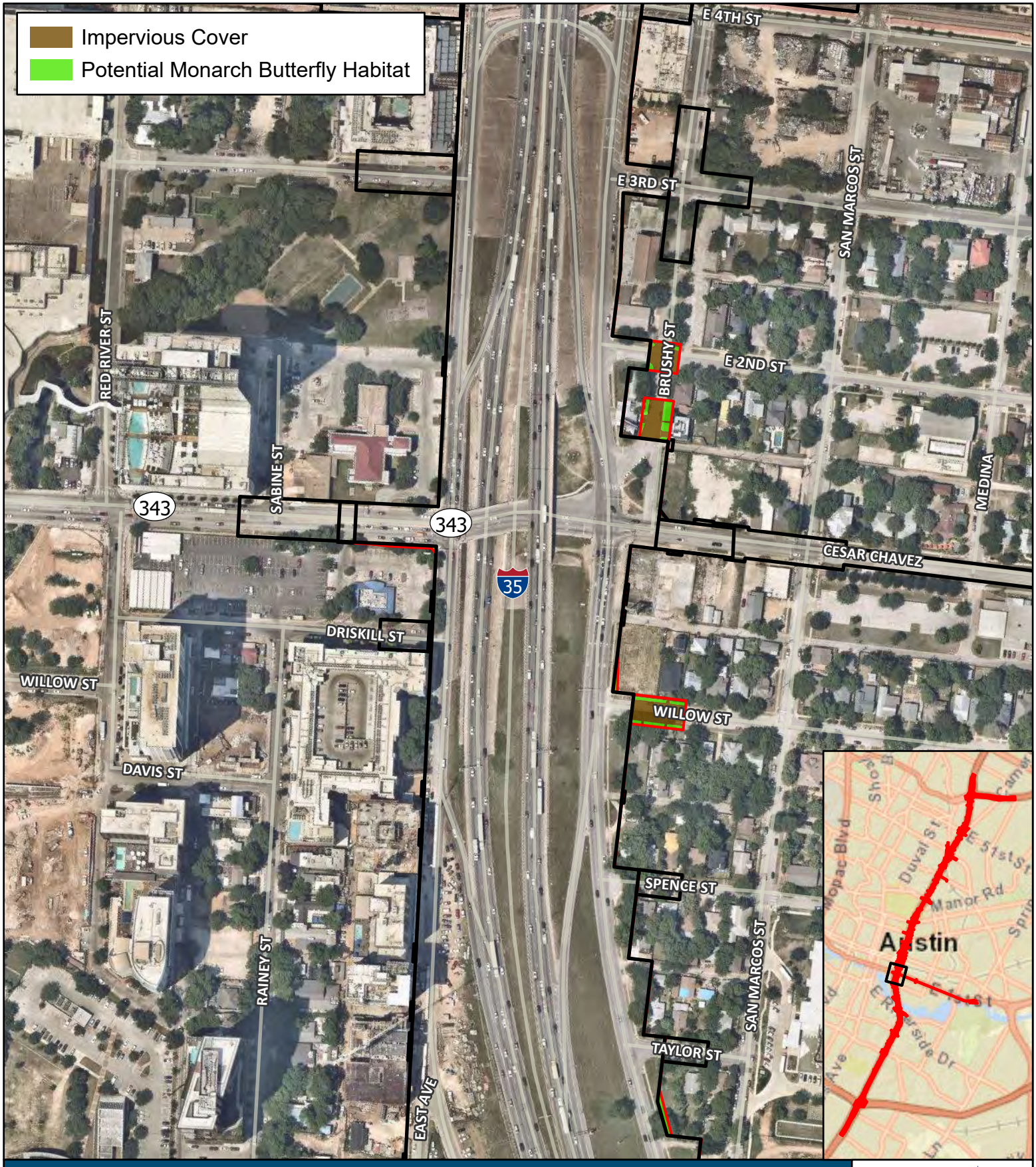
Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300
Feet



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I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300 Feet

Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300
Feet

Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300
Feet

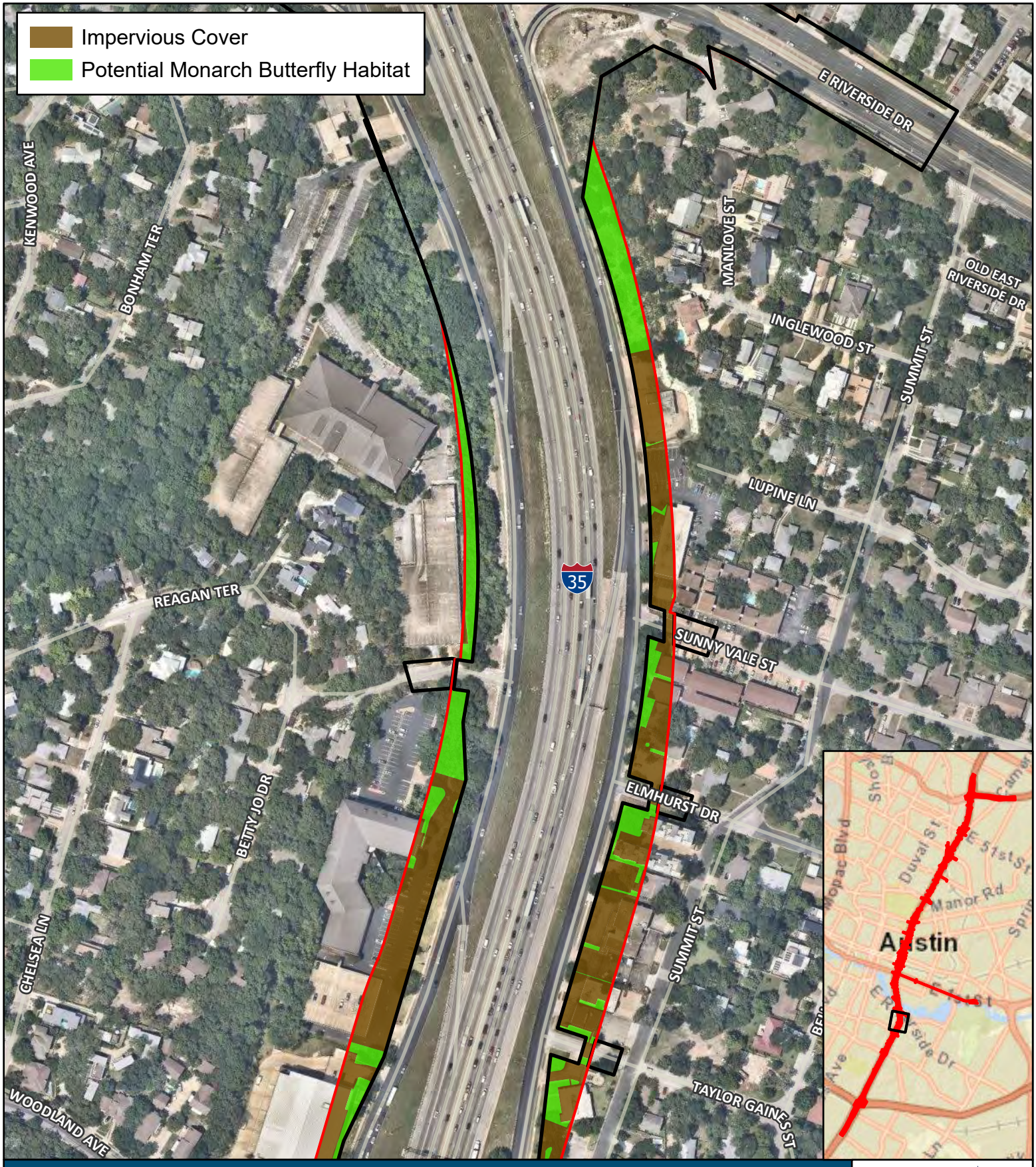

Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300
Feet

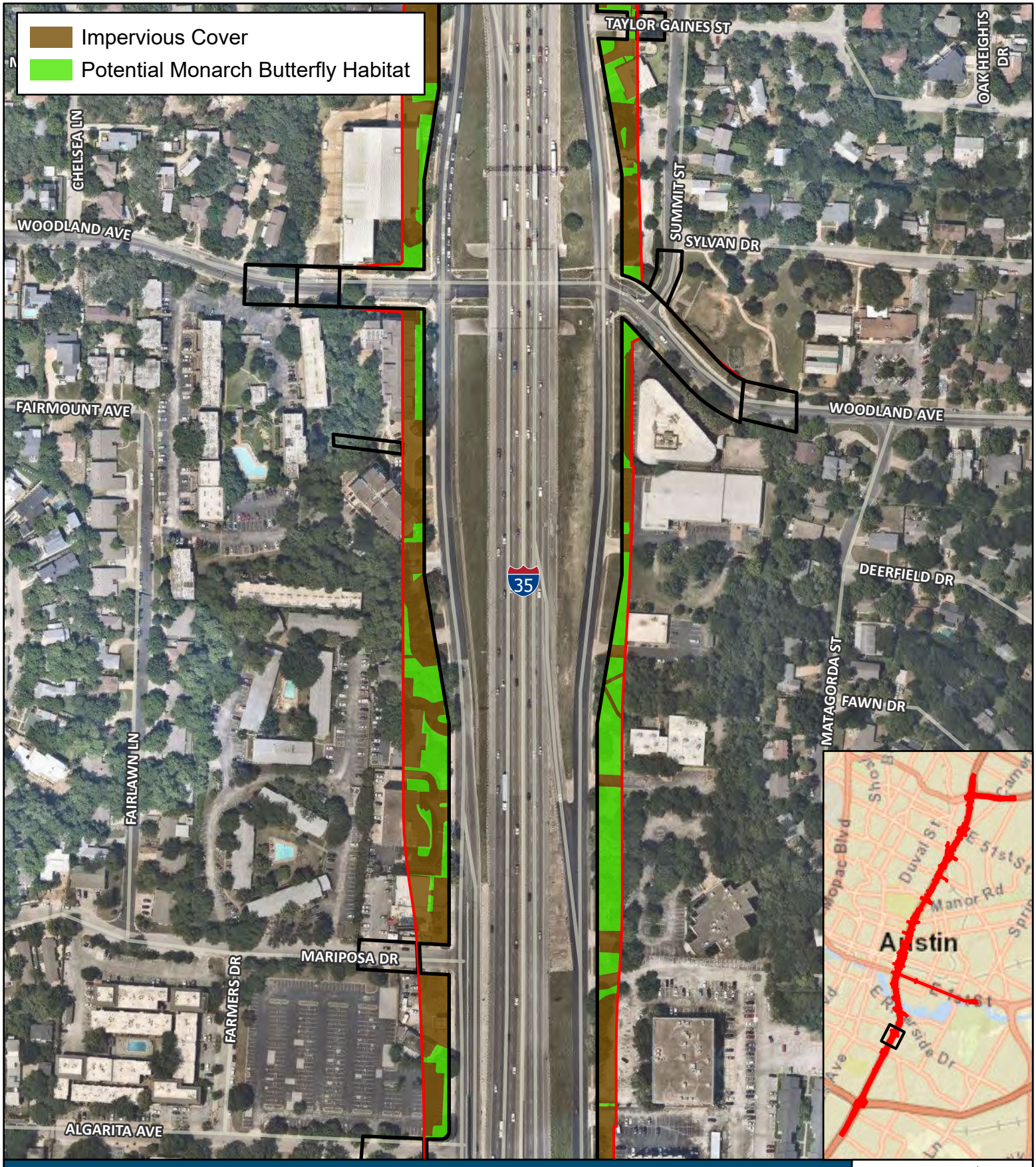

Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300 Feet

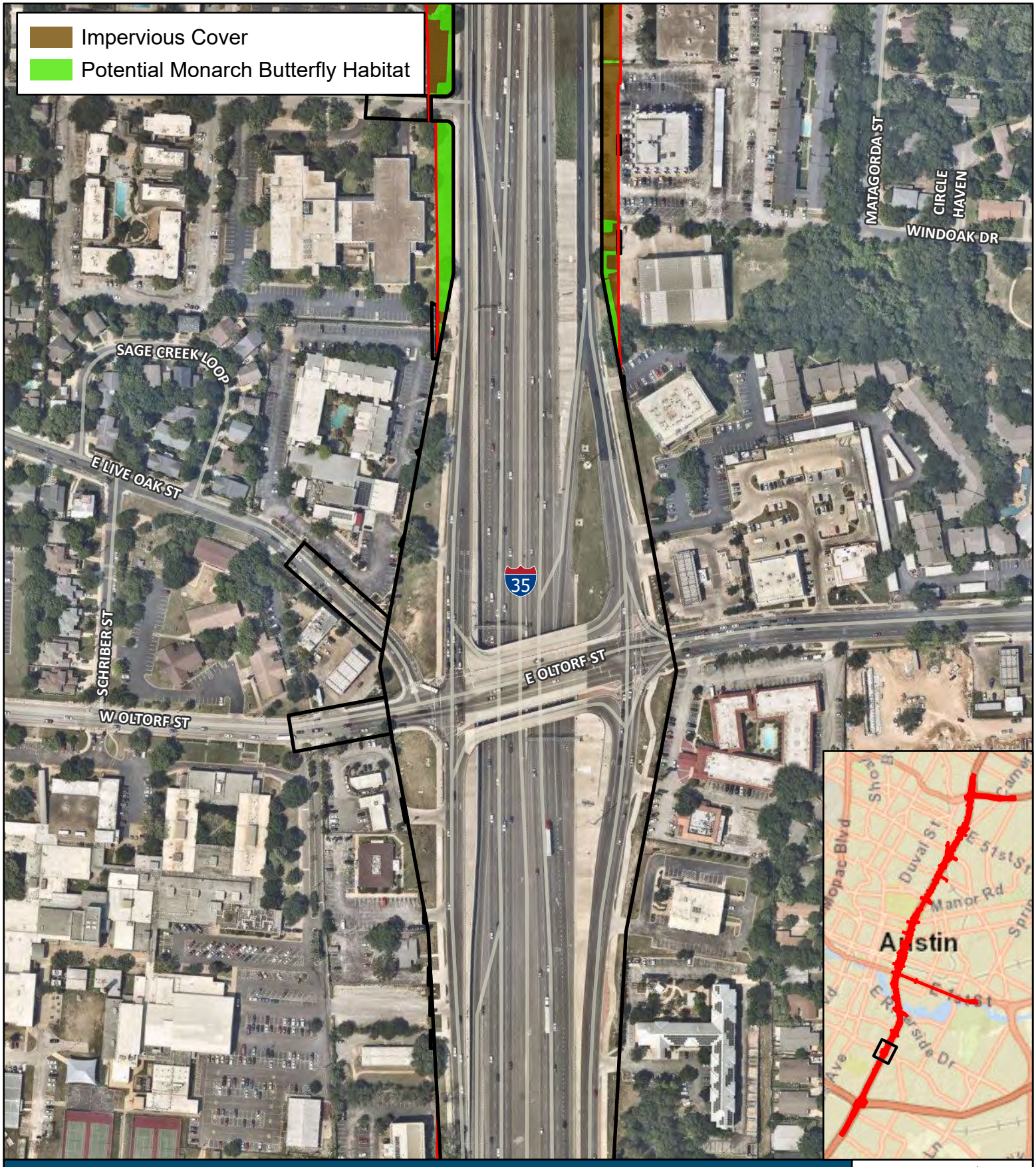

Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Texas Department of Transportation

Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Texas Department of Transportation

Figure 6: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Alternative 2
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Texas Department of Transportation

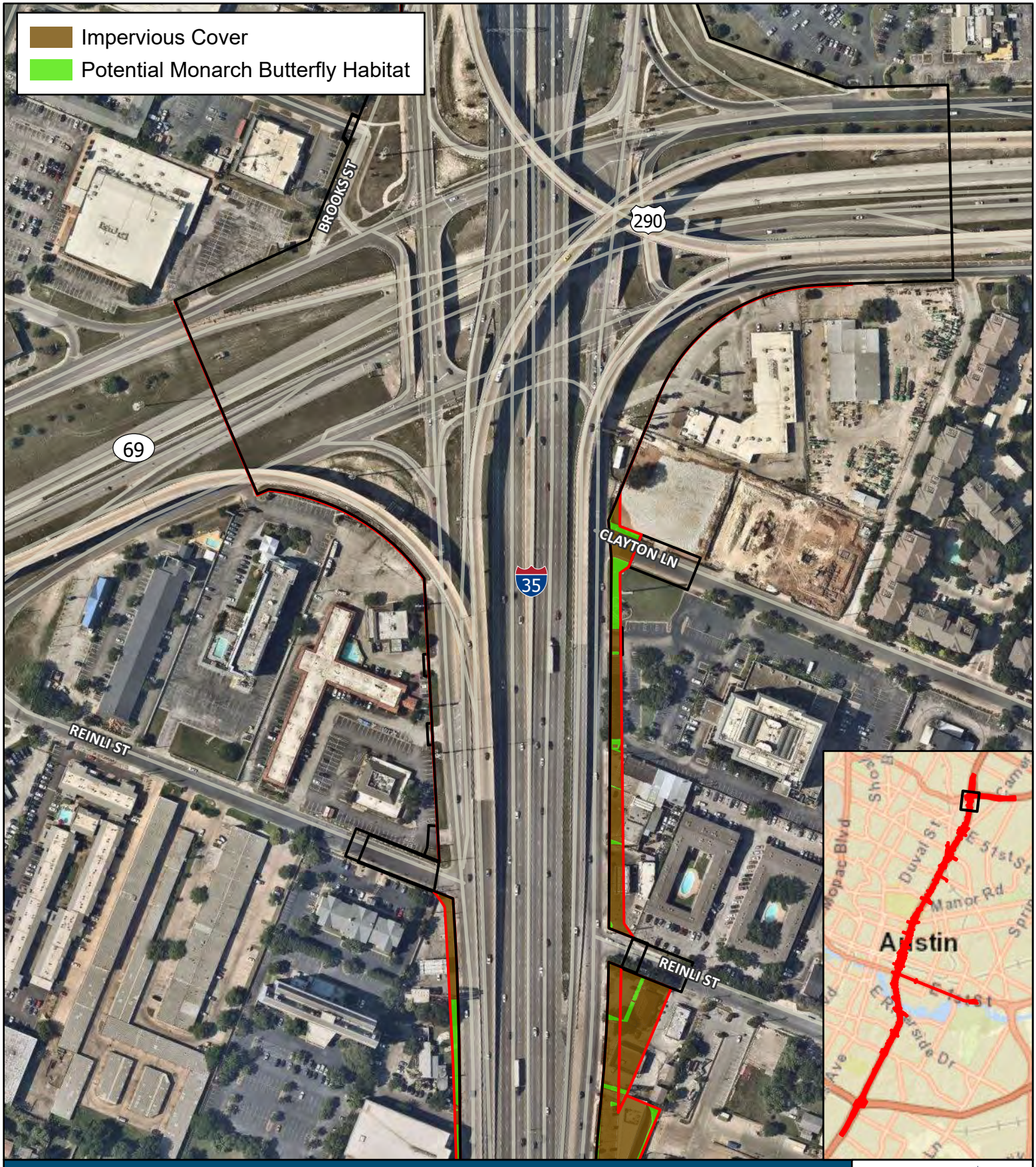

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388

Source: Nearmap 2021

Texas Department of Transportation

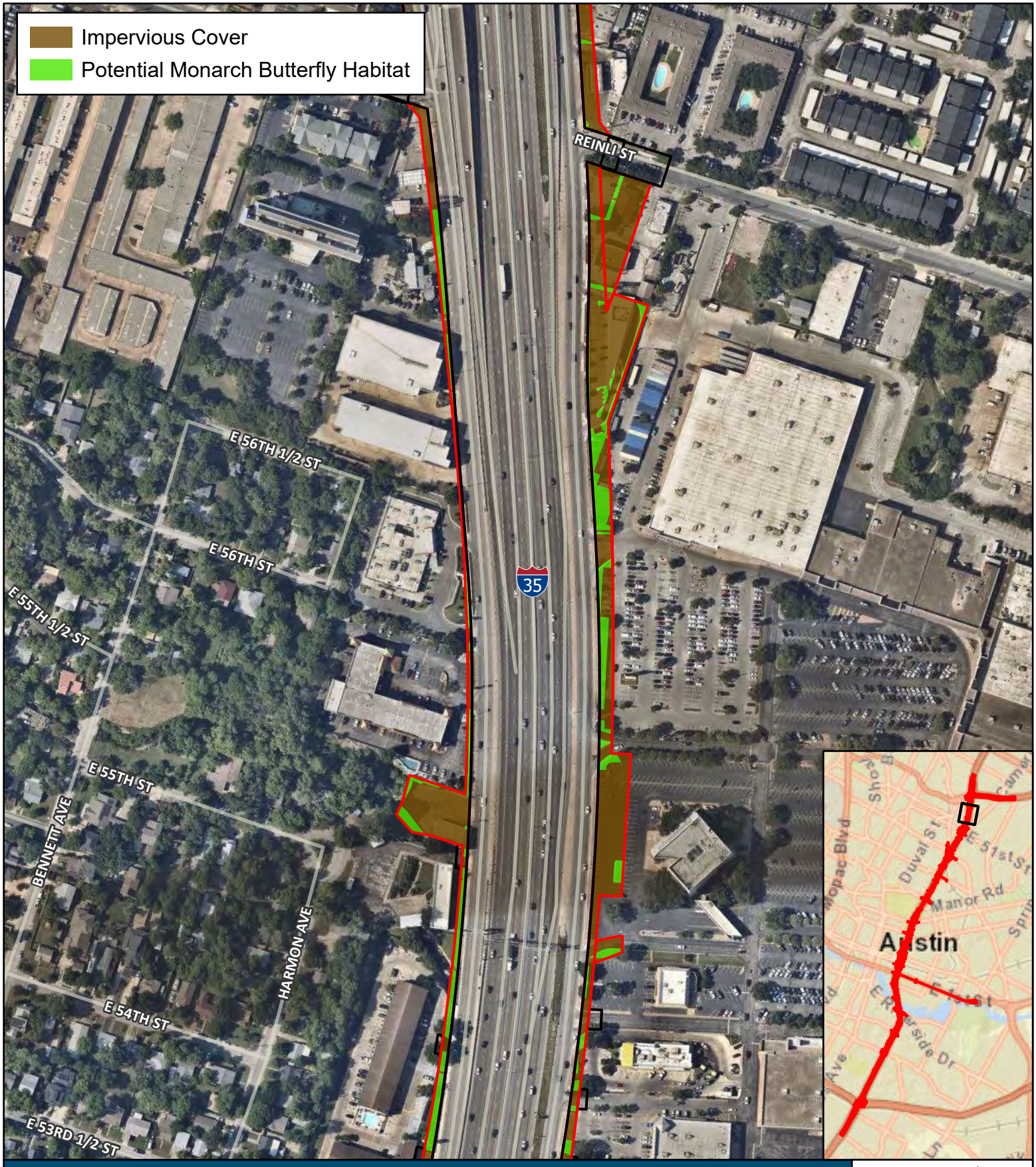

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300
Feet

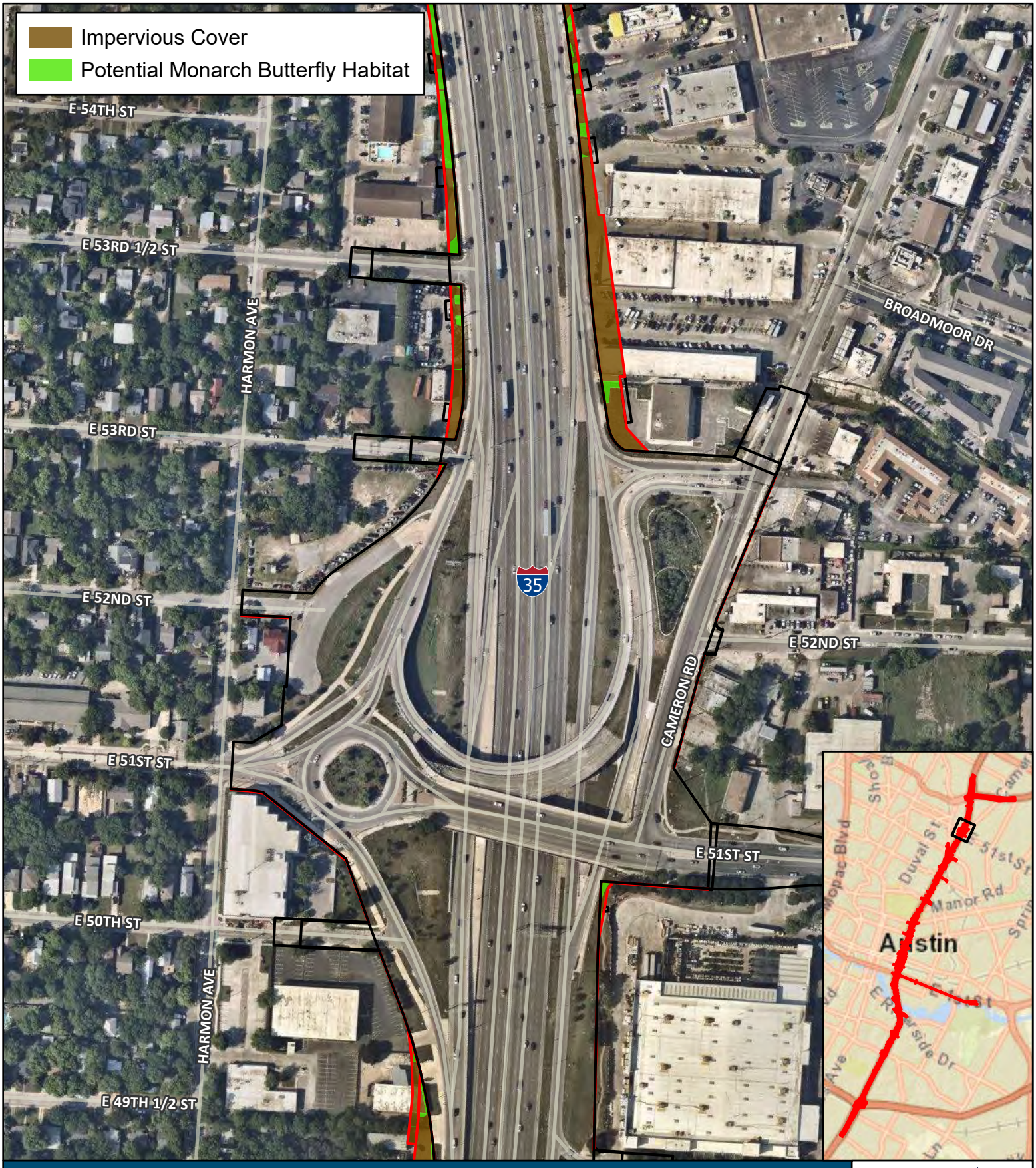

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388

Source: Nearmap 2021

Texas Department of Transportation

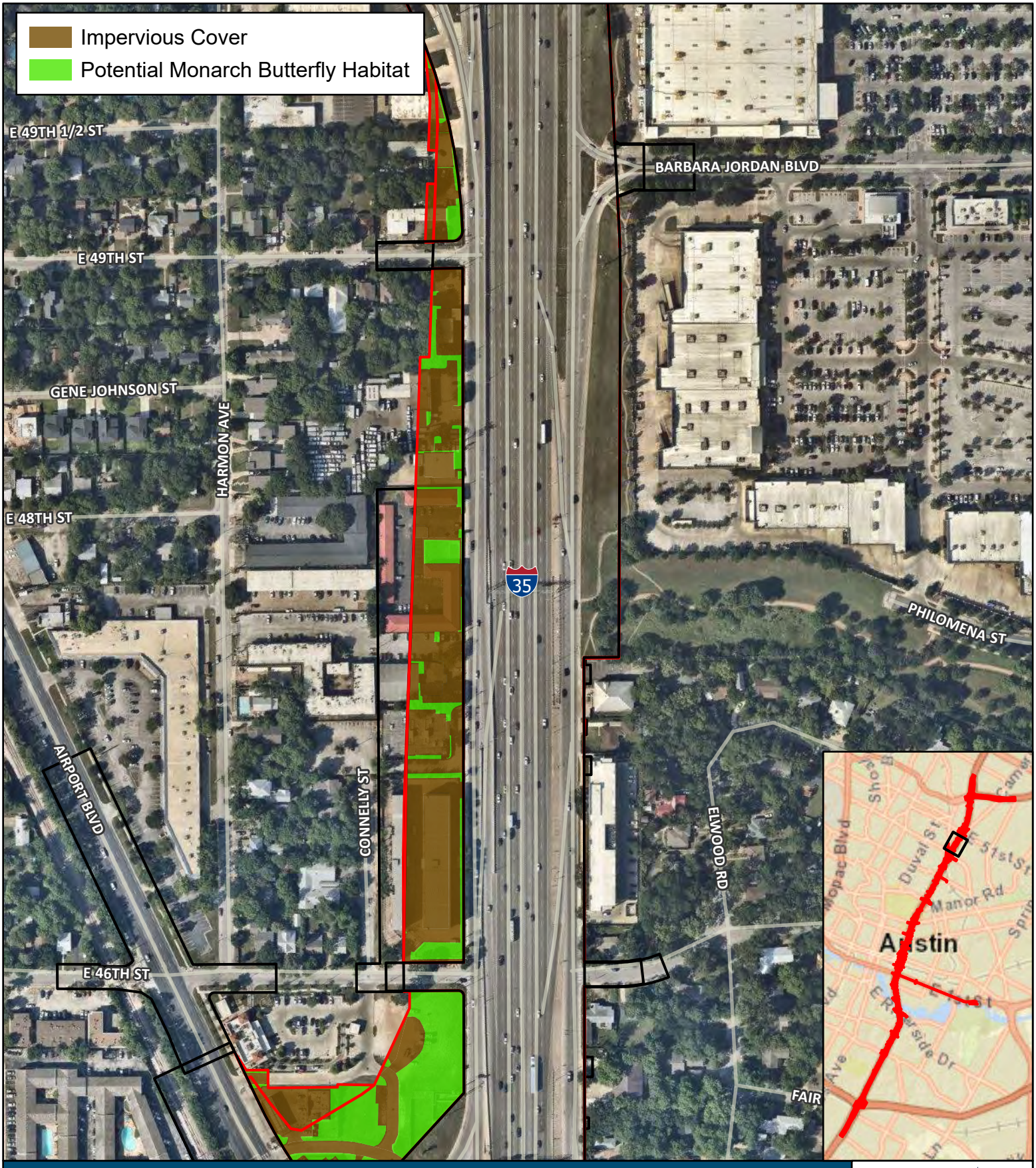

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300
Feet

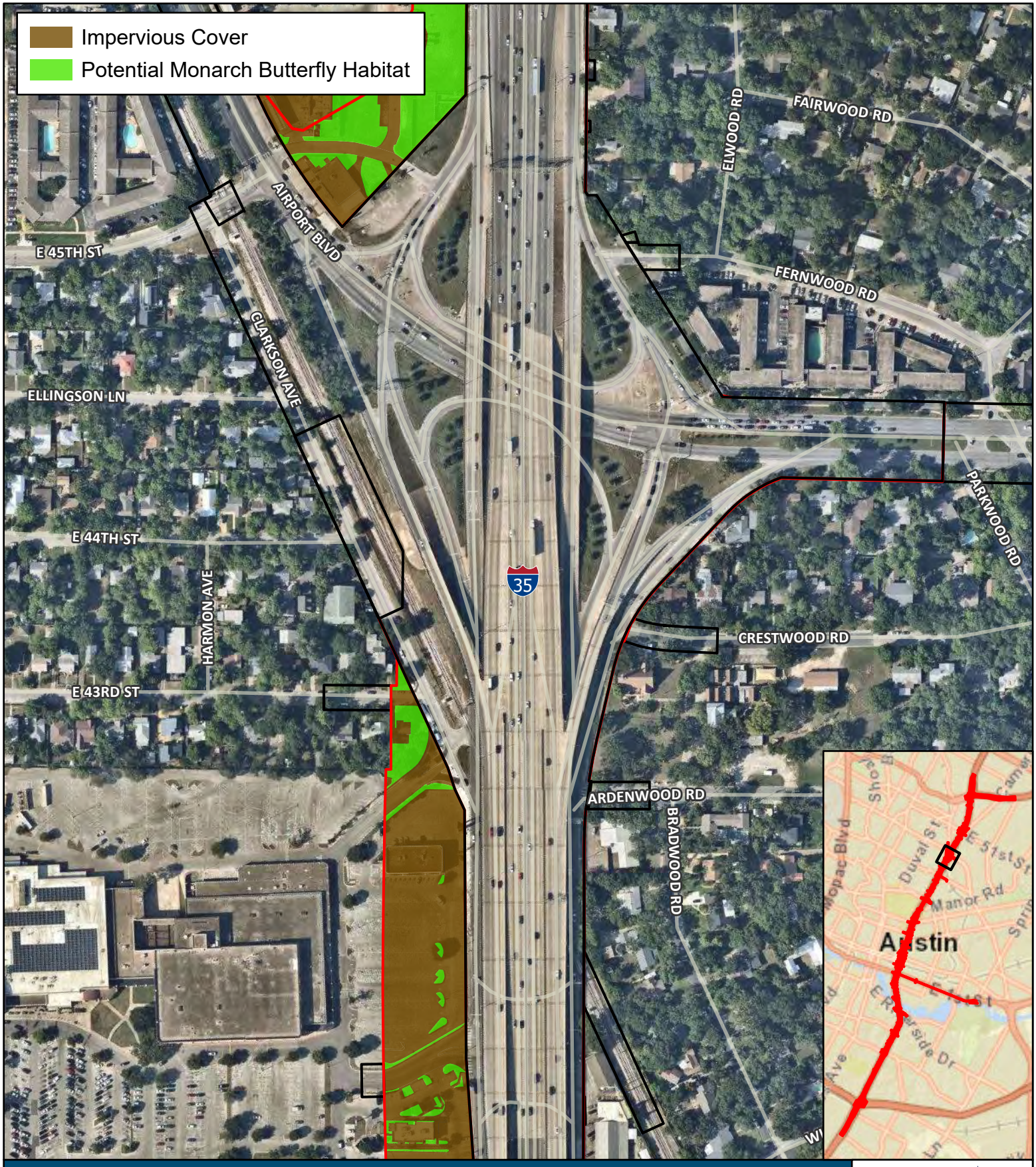

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300
Feet

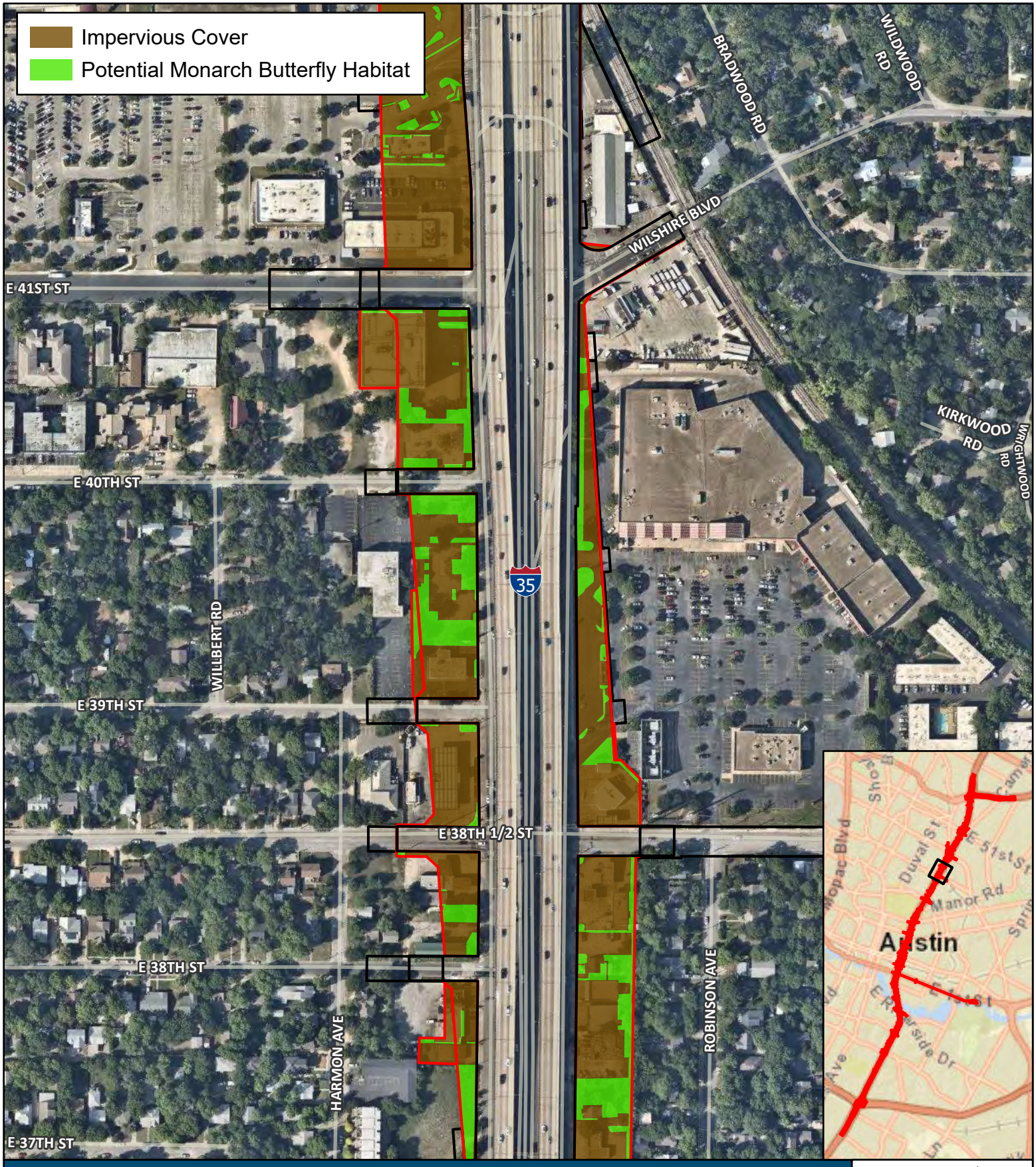

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300
Feet

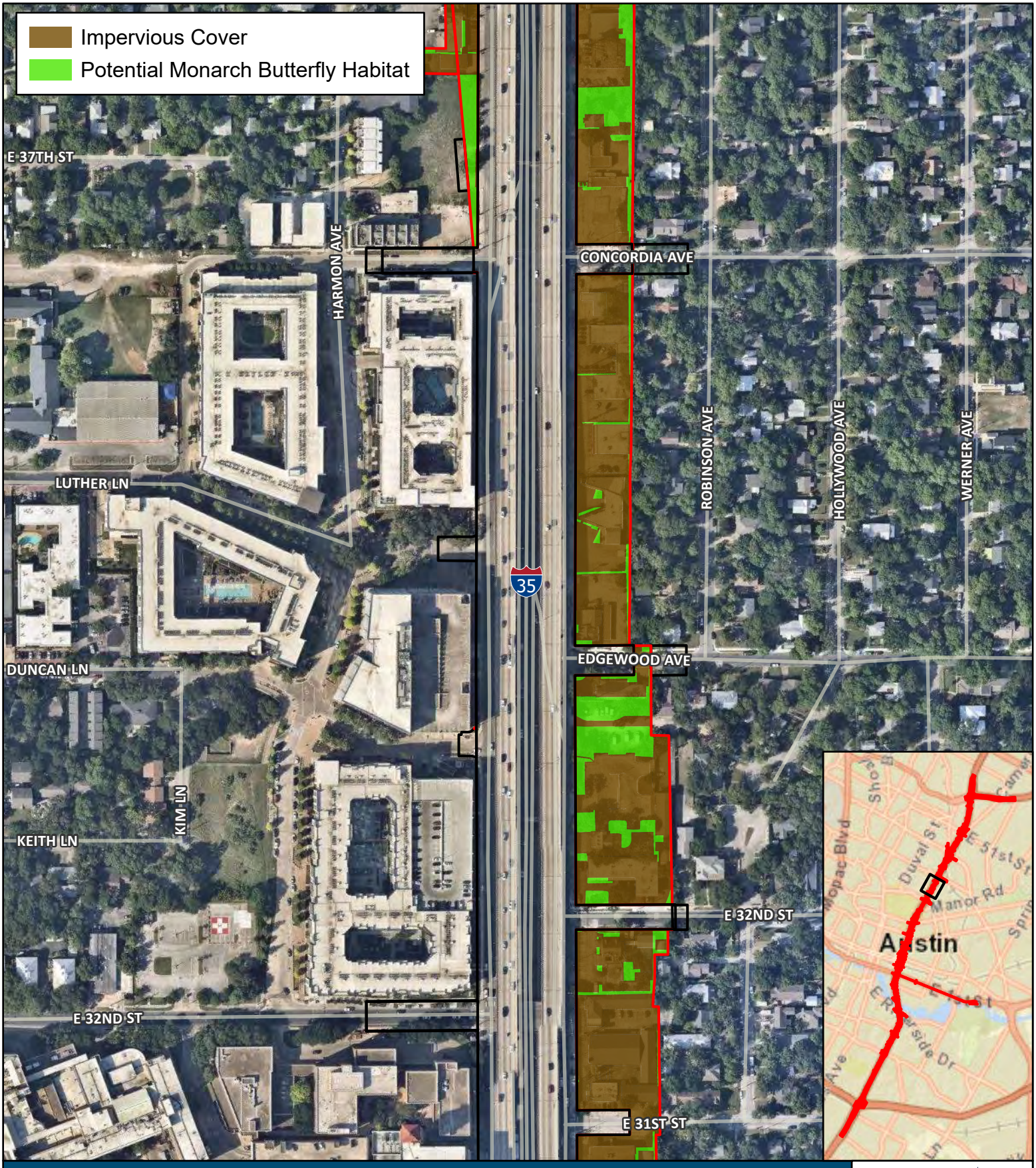

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300
Feet

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300
Feet

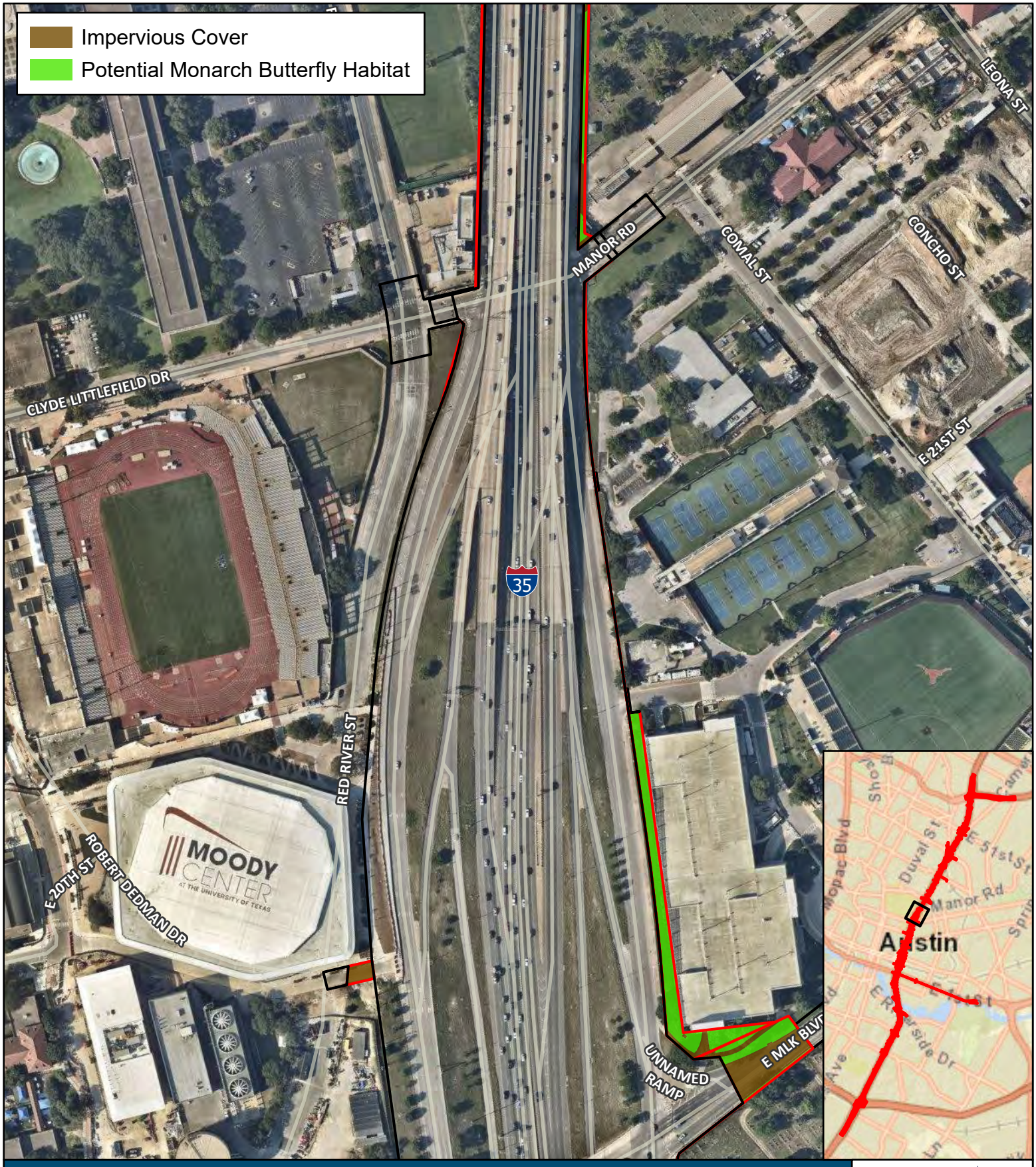

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300
Feet

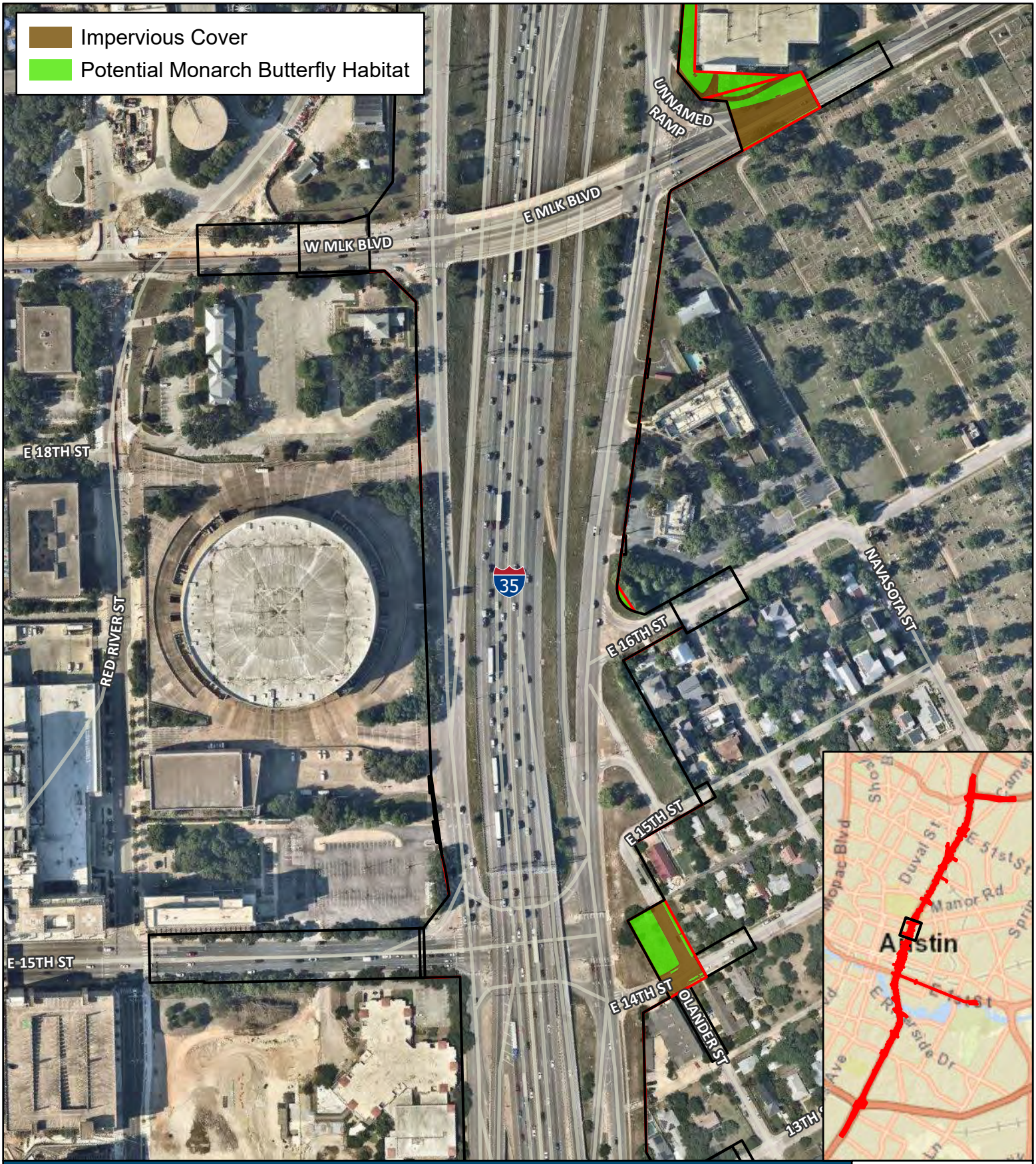

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300
Feet

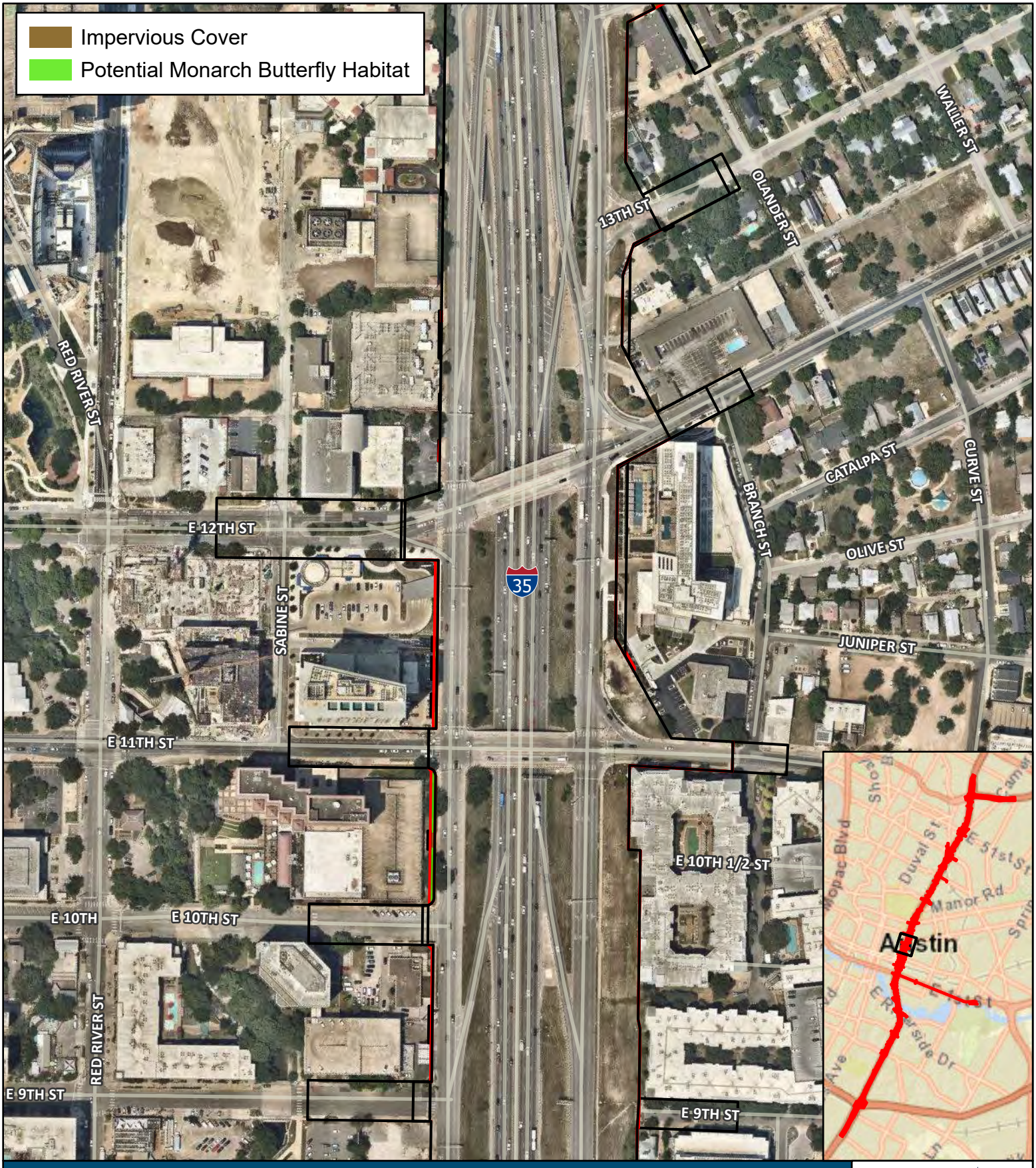

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300 Feet

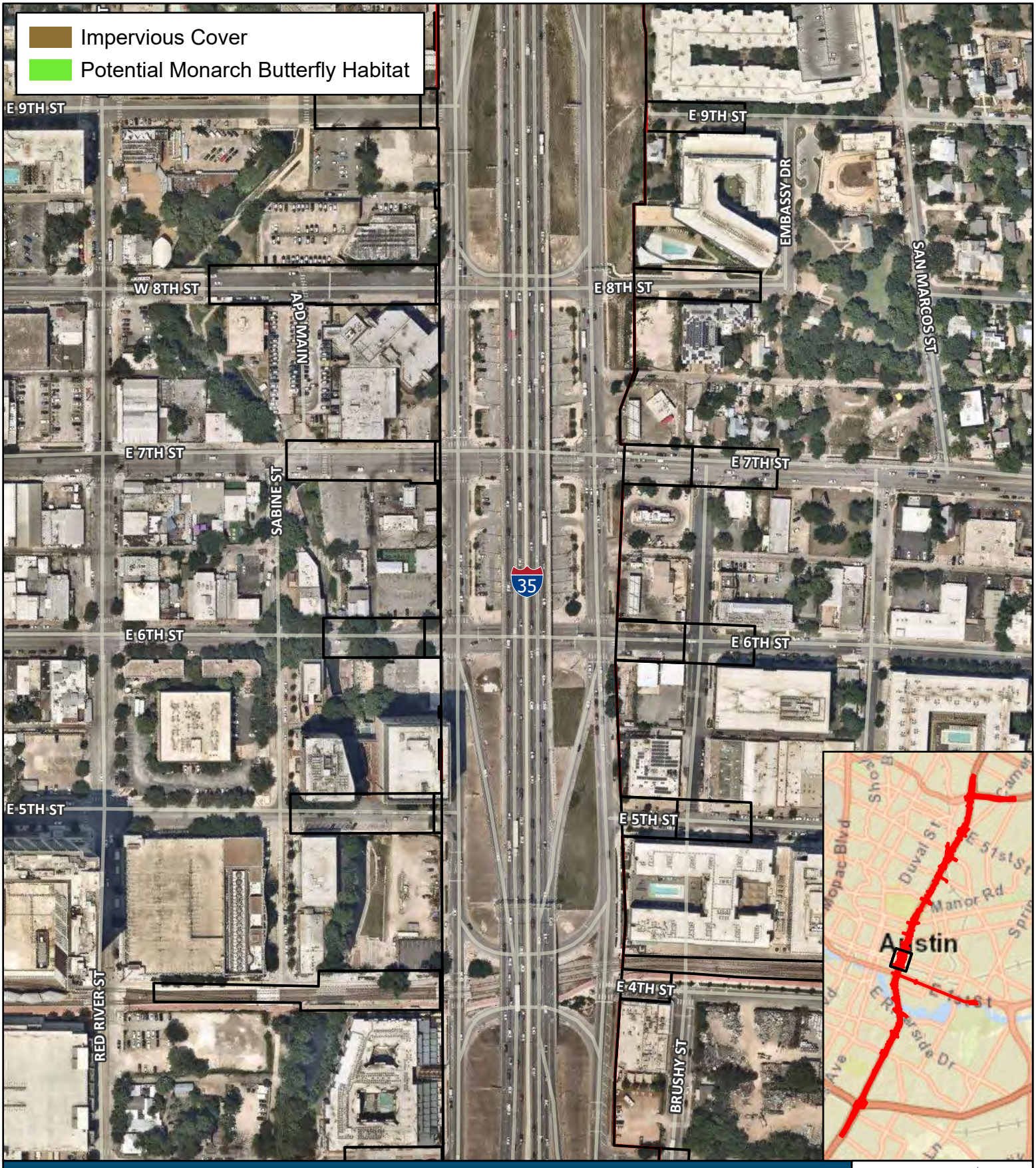

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300 Feet

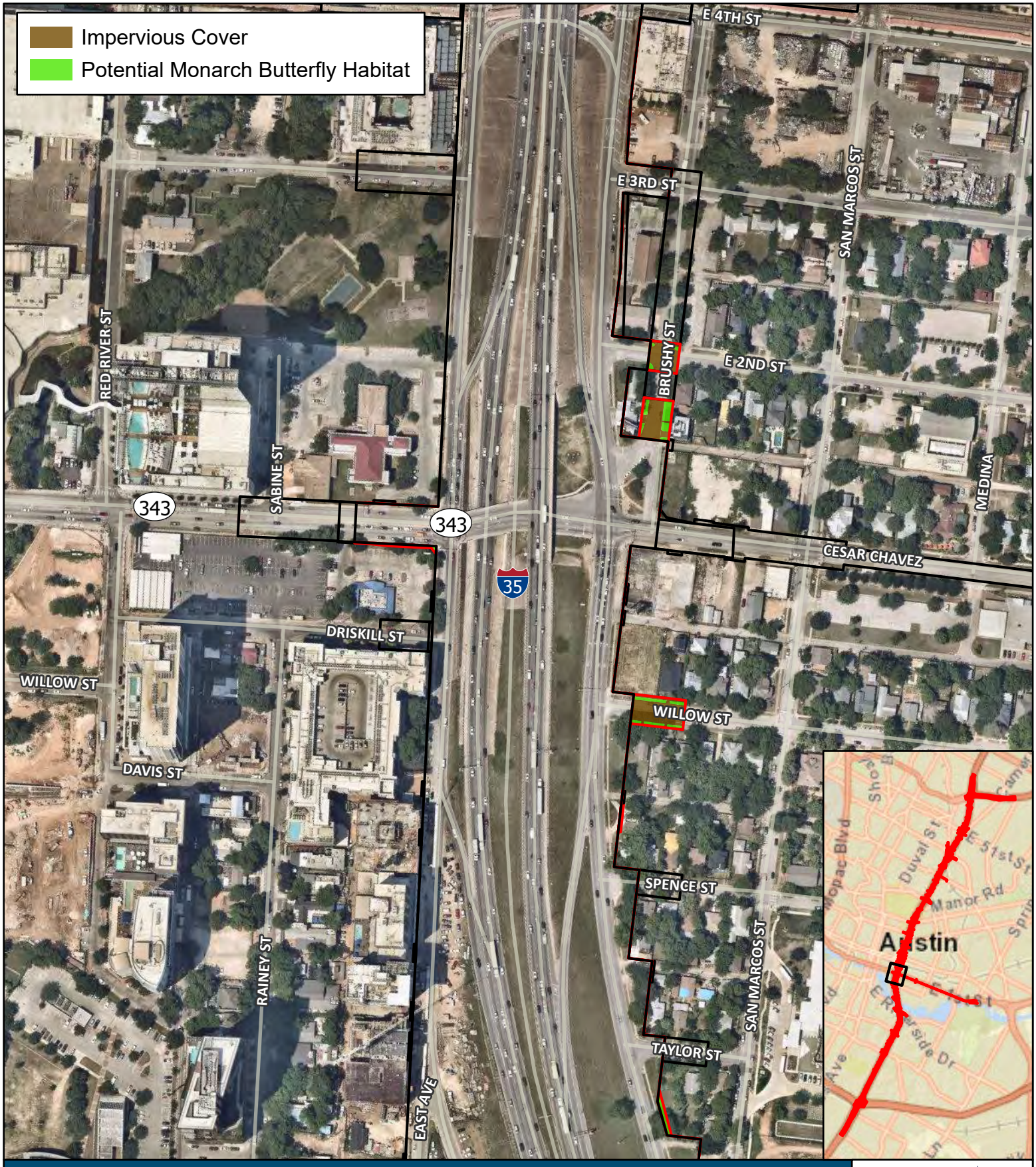

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388

Source: Nearmap 2021

Texas Department of Transportation

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300 Feet

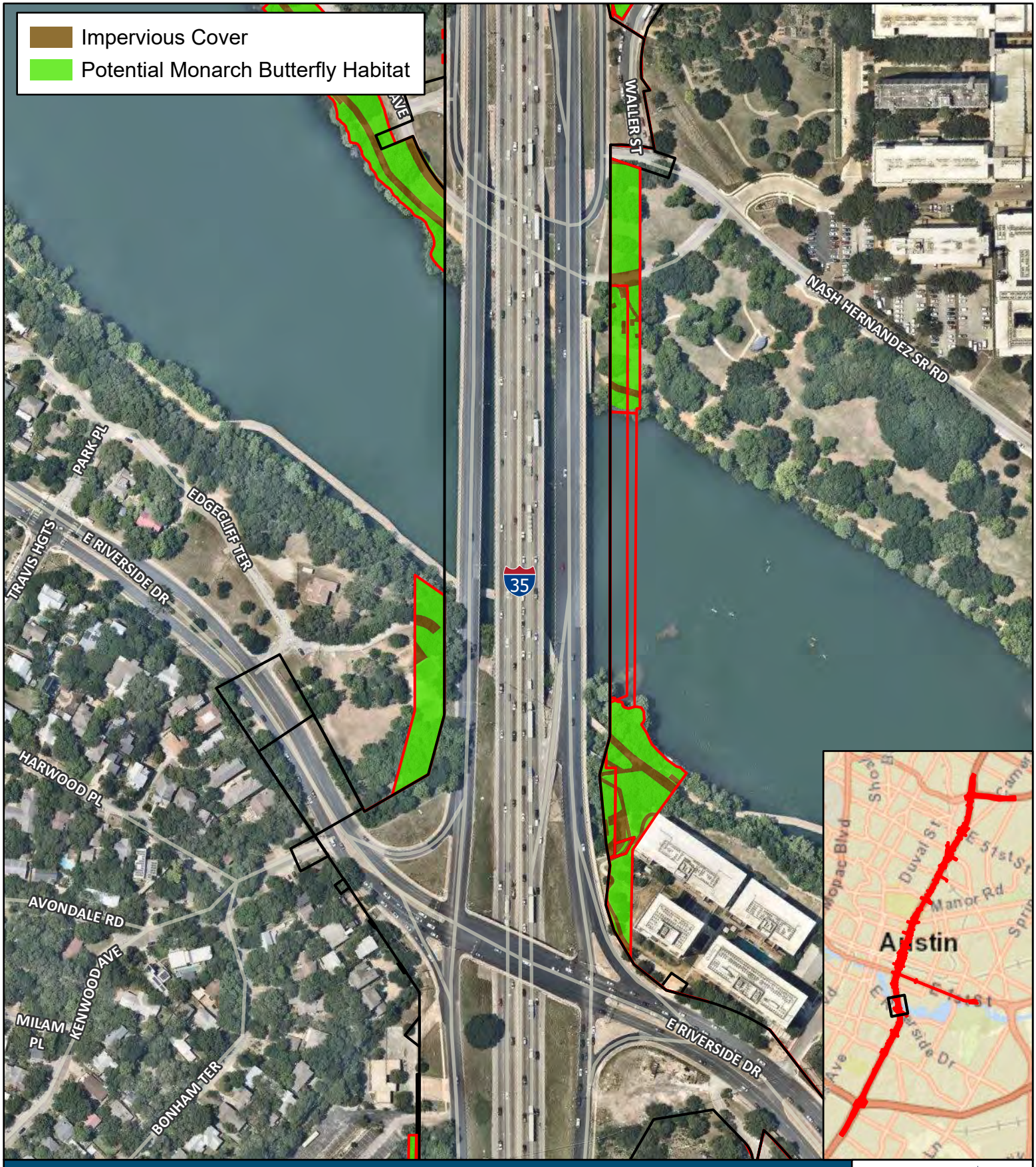

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388

Source: Nearmap 2021

Texas Department of Transportation

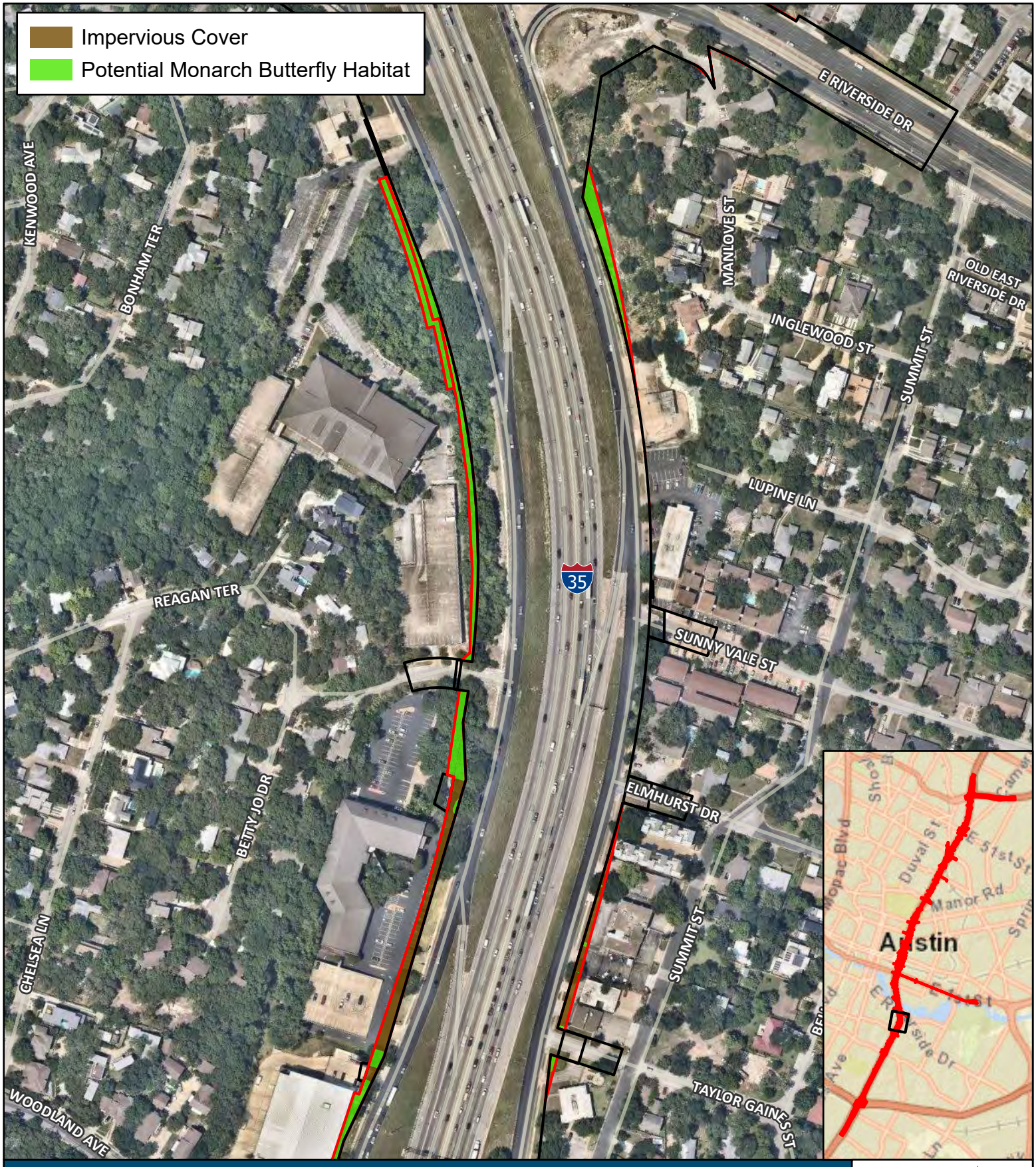

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300 Feet

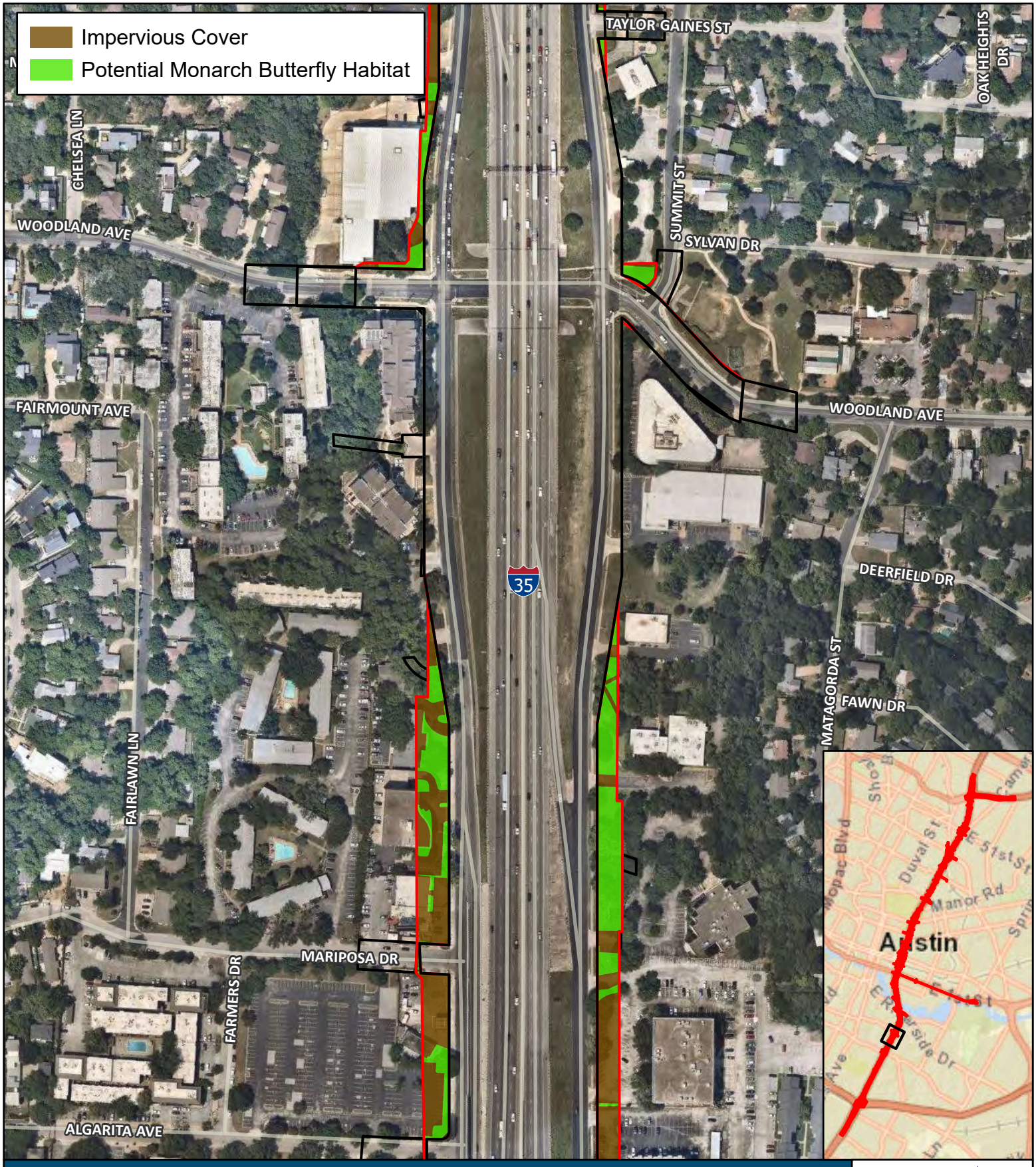

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300 Feet

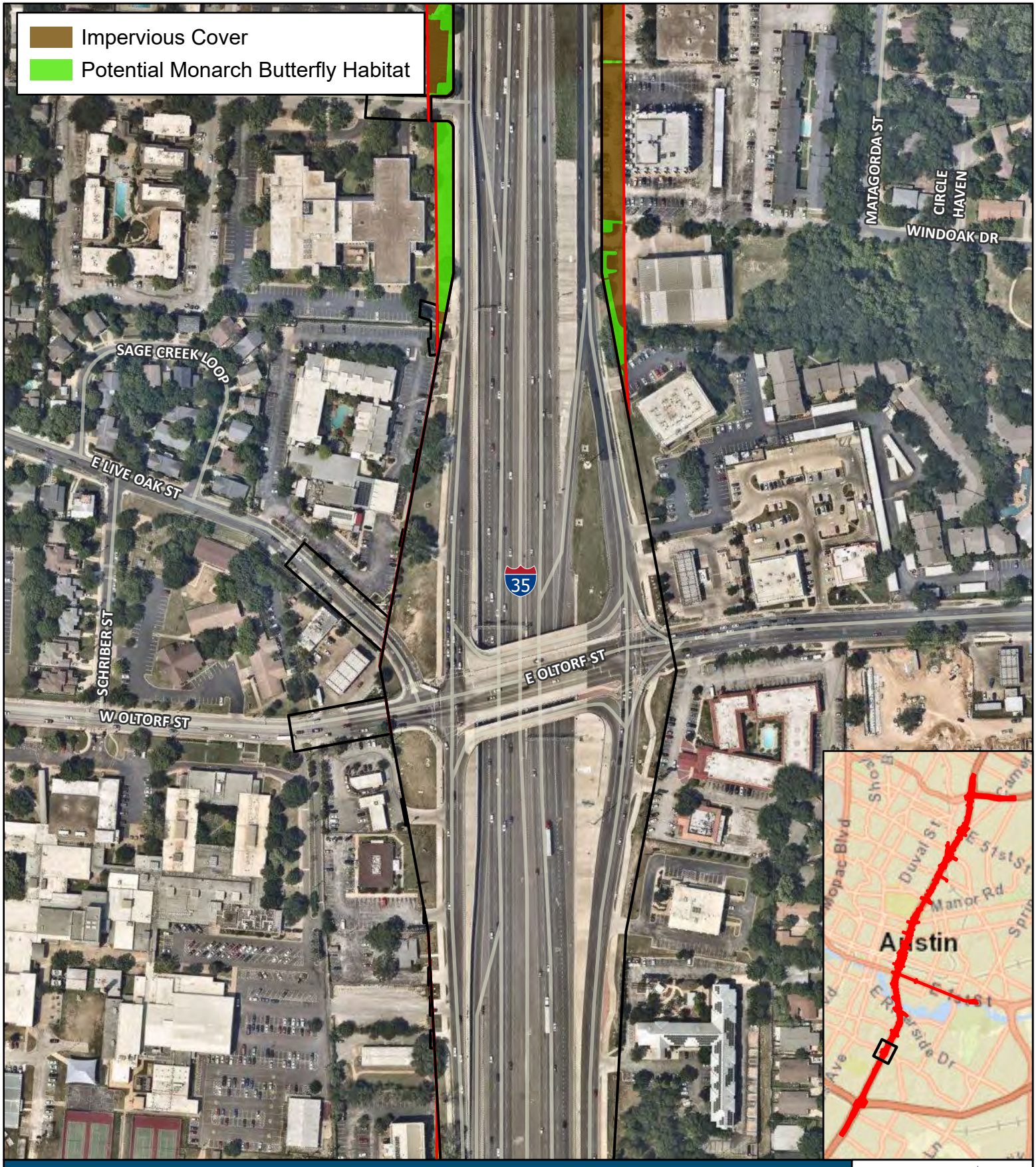

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300
Feet

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388
Source: Nearmap 2021

Texas Department of Transportation

Figure 7: Potential Monarch Butterfly Habitat

I-35 Capital Express Central - Modified Alternative 3
From US 290 East
To US 290 West/SH 71
Travis County, TX
CSJ: 0015-13-388

Existing ROW/Easement
Proposed ROW/Easement

Texas Department of Transportation

0 150 300
Feet

Source: Nearmap 2021