

Data Collection

Constraint	Information Sought	Source of Information	Constraints Found
Existing and Planned Land Use	Location of current and proposed land uses within the study area	<ul style="list-style-type: none"> • Polling Agencies • Stakeholders and the Community • City of New Braunfels GIS Information • City of Schertz GIS Information • Aerial Photography • Field Observations • Input at public meetings • Community Work Group • Technical Work Group 	<ul style="list-style-type: none"> • Agricultural (Farmlands/Ranchlands) • Faith-based organizations • Commercial properties • Hazardous material sites • Civic (state, county, and municipal facilities) • Park & Recreational Areas • Residences • Schools
Utilities	Location of major utilities located within the study area	<ul style="list-style-type: none"> • Listing of record drawings of existing and proposed utility locations within the study area • Map of the utility locations electronically for reference into planning maps 	<ul style="list-style-type: none"> • PECI Transmission Line • Communication Towers • Crystal Clear Water Supply Water Tower/Line • New Braunfels Utilities • Chevron Pipeline (Gas) • Enterprise Products Line (Natural Gas) • LCRA Transmission Line • P2 Energy Solutions (Tobin Wells) • Level (3) Communications (Fiber Optic) • Guadalupe Valley Telephone Communications
Planned Capital Improvement Projects	Location of planned capital improvement projects within the study area	<ul style="list-style-type: none"> • Comal and Guadalupe Counties • Cities of New Braunfels and Schertz • Utility Companies • TxDOT New Braunfels Area Office • Stakeholder input 	<ul style="list-style-type: none"> • Comal County Dam Project • Lacks Warehouse/Schwab Road realignment • SH 46 Expansion Project

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Hazardous Materials	Location of known and potential hazardous materials (HAZMAT) sites such as superfund sites and Leaking Petroleum Storage Tank (LPST) sites within the study area	<ul style="list-style-type: none"> • Texas Commission on Environmental Quality (TCEQ) database • Stakeholder input 	<ul style="list-style-type: none"> • Comal County Landfill was the only HAZMAT site located
Landfills	Location of landfills within the study area	<ul style="list-style-type: none"> • Waste Management, Inc. • Comal County Engineers Office 	<ul style="list-style-type: none"> • Comal County Landfill (Approximately 237 acres)
Historic Sites	Location of known and potentially historic sites within the study area	<p>Recorded Historic Sites</p> <ul style="list-style-type: none"> • Texas Historical Commission Texas Historic Sites Atlas <p>Potentially Eligible Historic Sites</p> <ul style="list-style-type: none"> • Historic United States Geological Survey (USGS) maps • Historic Texas Highway Department county highway maps • Windshield surveys • Limited research was undertaken on a few properties (Karchach Ranch, the Hunter Road Stagecoach Inn, and the Lake Dunlap Powerhouse) • Stakeholder Input 	<ul style="list-style-type: none"> • 13 properties were found that had been previously designated as Recorded Texas Historical Landmarks (RTHL), Official State Historical Markers (OSHM), and cemeteries with no regulatory designation. • 86 properties (some of which area duplicated in the previously 13 recorded historic sites) were identified as potentially eligible for listing in the NRHP. • Refer to Appendix B of the New Braunfels Outer Loop Study Report for a listing of Recorded Historic Sites and Potentially Eligible Historic Sites. • Beechie property (East of IH 35) identified as a possible archeological site through the public involvement process*

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Archaeology	Location of known and potential archaeologically significant sites within the study area	<ul style="list-style-type: none"> • Texas Historical Commission maps and reports • Texas Archaeological Research Laboratory • Texas Historical Commission's Texas Historic Sites Atlas on-line database <ul style="list-style-type: none"> • National Register of Historic Properties (NRHP) • State Archaeological Landmarks (SALs) • Official State Historic Markers (OSHM) • Recorded Texas Historical Landmark (RTHL) • Cemeteries and local neighborhood surveys. • Soil Survey of Comal County, Texas • Geologic Atlas of Texas • United States Geological Survey (USGS) topographic maps • Aerial photographs 	<ul style="list-style-type: none"> • Composite maps showing the relationship between the project study area, previously surveyed areas, and known archeological sites were used to identify areas of high probability for archeological sites. • Approximately 25,764 acres were identified as areas of high probability for archeological sites
Cemeteries	Location of cemeteries within the study area	<ul style="list-style-type: none"> • United States Geological Survey (USGS) maps • Public meetings • Community Work Group meetings • Technical Work Group meetings • Windshield survey 	<ul style="list-style-type: none"> • Forty-two (42) cemeteries • An additional cemetery (West of IH 35) was found after the completion of the Study Report and Recommended Corridor Selection. This information is being documented by the study team and will be passed along and included in the constraints map with a footnote.*
Schools	Location of existing and proposed schools within the study area	<ul style="list-style-type: none"> • Stakeholder meetings with the Comal, Navarro, and New Braunfels Independent School Districts • Internet research • Windshield surveys 	<ul style="list-style-type: none"> • 2 existing schools and 3 proposed schools were identified (East of IH 35) within the study area
Parks/ Recreational Areas	Location of parks and recreational areas	<ul style="list-style-type: none"> • City of New Braunfels 	<ul style="list-style-type: none"> • 8 parks and recreational areas were identified within the study area
Civic Organizations	Location of civic organizations	<ul style="list-style-type: none"> • Windshield Survey • Public meetings 	<ul style="list-style-type: none"> • 2 civic organizations were identified within the study area

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Faith-Based Organizations	Location of faith-based organizations	<ul style="list-style-type: none"> • Windshield Survey • Public meetings 	<ul style="list-style-type: none"> • No faith-based organizations were identified within the study area
Residences	Existing residential developments, planned subdivisions, and individual homes	<ul style="list-style-type: none"> • 2006, 2007, and 2008 aerial photography • Windshield surveys • Rooftops identified using aerial photography that were able to be reasonably identified as a residential structure and not a barn, shed or other non-residential structural were researched and verified and added to the maps upon verification • Public input at the various public meetings • Comal or Guadalupe County Appraisal District tax records to confirm its existence 	<ul style="list-style-type: none"> • Approximately 2750 residences were identified within the study area • Through the public involvement process the Schumann property was reported to have additional homes that were not identified as constraints. Field verification was not able to be completed.*
Agricultural	Individual parcels of 50+ acres were identified to avoid bisecting 50+ acre or larger parcels	<ul style="list-style-type: none"> • Comal & Guadalupe County Appraisal District tax records • Aerial photography • Windshield survey 	<ul style="list-style-type: none"> • Approximately 257 parcels larger than 50+ acres were identified within the study area.
Commercial	Location of commercial and industrial development	<ul style="list-style-type: none"> • Aerial photography • Windshield survey • Public Meetings 	<ul style="list-style-type: none"> • Commercial and industrial developments were sight identified. • Approximately 82 businesses were identified within the study area.
Environmental Justice	Areas with concentrated minority populations and/or low income populations within the study area	<ul style="list-style-type: none"> • US Census Bureau • Public Input • Windshield Survey 	<ul style="list-style-type: none"> • A preliminary evaluation was conducted using US Census Bureau information. Further evaluation will be necessary in future phases. • Approximately 5397 acres of potential environmental justice was identified within the study area.
Noise Impacts	Residences, faith-based organizations, and schools within a 300-foot buffer of the proposed corridors (and within the corridors themselves) were quantified and considered	<ul style="list-style-type: none"> • Residences previously identified within the study area. 	<ul style="list-style-type: none"> • Approximately 2755 potential sensitive receivers were identified within the study area.

Constraint	Information Sought	Source of Information	Constraints Found
Water Resources	Limits of the 100 year flood plain, Edwards Aquifer recharge and contributing zones, and wetlands within the study area	Floodplains <ul style="list-style-type: none"> • FEMA Flood Insurance Rate Maps for Comal and Guadalupe Counties were investigated to delineate the 100-year floodplain of the Guadalupe River and its tributaries Edwards Aquifer <ul style="list-style-type: none"> • Edwards Aquifer Authority Potential Wetlands <ul style="list-style-type: none"> • National Wetlands Inventory Maps 	<ul style="list-style-type: none"> • Surface water features in and near the study area include the Guadalupe River, and several small streams including Blieders Creek, Dry Comal Creek, Long Creek, Santa Clara Creek, Alligator Creek, Elm Creek, and Isaac Creek • Approximately 22,745 acres within the Edwards Aquifer recharge zone were located within the study area. • Approximately 2806 acres of the 100 year flood plain located within the study area. • Approximately 427 acres of wetlands are located within the study area.
Threatened and Endangered Species	Location of known and potential endangered species habitat	<ul style="list-style-type: none"> • Environmental firm subcontracted to identify potential areas of threatened and endangered species. • Aerial photography and topographic maps • Stakeholder Input 	<ul style="list-style-type: none"> • Preliminary delineation of potential golden-cheeked warbler habitat • Approximately 9182 acres of potential golden-cheeked warbler habitat were identified within the study area.
Prime and Unique Farmlands	Location of possible prime and unique farmlands identified and mapped by soil type	<ul style="list-style-type: none"> • Possible prime or unique farmlands were identified based on soil type 	<ul style="list-style-type: none"> • Possible prime or unique farmlands were identified. Further evaluation will be necessary in future phases. • Prime or unique farmlands identified were in the range between 3 acres and 1443 acres
Vegetation and Wildlife Impacts	Location of land cover that could potentially facilitate growth and life of vegetative and wildlife species (undeveloped land)	<ul style="list-style-type: none"> • Comal & Guadalupe County Appraisal District tax records information • Windshield surveys • Aerial photographs 	<ul style="list-style-type: none"> • Undeveloped land was identified. Land cover was not further classified for this phase of the study.

*Identified after the Final Study Recommendation