# City of New Braunfels
## Traffic Impact Analysis (TIA) Worksheet Guide

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Overview
A completed traffic impact analysis (TIA) worksheet is a requirement for zoning, master plan, plat and permit as specified in the City of New Braunfels Code of Ordinances, Sections 144-99 and 118-46. This guide describes each section of the current TIA worksheet accepted by the city. The intent of the TIA worksheet is to assist the owner and city staff in reviewing traffic impacts and determining conformance with previously approved TIA.

A sample completed TIA worksheet is provided in Appendix A for reference.

Instructions for TIA Worksheet
Section 1: General Information
Complete this section with general information about the project, owner, and preparer.

- **Project Name**: Include the specific subdivision unit or phase number for the application, if applicable.
- **Date**: Provide the date of the TIA worksheet preparation.
- **Subdivision Plat Name**: Provide the legal subdivision plat name.
- **Project Address/Location**: Provide the specific address or intersection location.
- **Owner Name, Address, Email, and Phone Number**
- **Preparer Company, Name, Address, Email, and Phone Number**
- **TIA Scoping Meeting**: A TIA scoping meeting is required for all TIA Reports as the ordinance specifies the minimum requirements. List the date of the meeting.
- **TIA Worksheet/Report approved with previous zoning, plan, plat or permit?**: If No, Page 1 is required for a project and a blank Page 2 does not need to be submitted. If yes, Pages 1 and 2 are required to be submitted.
- **Application Type or Reason for a TIA Worksheet/Report**
- **TIA Submittal Type**: Select what is being submitted for the application.

Section 2: Proposed Land Use and Trip Information for Application
Complete this section with information about the project that is being submitted using the data in the *Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th* or most recent edition.

- **Unit**: Provide the subdivision unit or phase number for the application, if applicable.
- **Land Use, ITE Code, ITE Unit**: These values are from the *ITE Trip Generation Manual, 10th* or most recent edition.
- **Estimated Project Units**: This is the value used to calculate the peak hour and daily trips from the information in the *ITE Trip Generation Manual, 10th* or most recent edition.
- **Critical Peak Hour**: List the critical peak hour for this land use and unit.
- **AM Peak Hour, PM Peak Hour, Weekend Peak Hour, and Daily Trip Rates**: These values are from the *ITE Trip Generation Manual, 10th* or most recent edition. Leave blank if rates are not available.
• AM Peak Hour, PM Peak Hour, Weekend Peak Hour, and Daily Trips: These values are calculated using the applicable trip rates and the estimated project units listed for this land use and unit. Leave blank if trips are not available.
• Total from additional tabulation sheet: If additional rows are needed in Section 2, an additional tabulation sheet can be attached.
• Total: Sum each trips column in Section 2, including totals from any additional tabulation sheets.

Section 3: Previously Approved TIA Worksheet/Report
Complete this section with information about any TIA worksheet or report that has been previously approved by the city.

• Project Name: If the previously approved TIA was a master plan, indicate that here.
• Preparer Company and Name
• Type: Select the type of TIA that was previously approved.
• Approved with: Select the stage of development that the previous TIA was approved at.

Section 4: Update to and Status of Land Use and Trip Information for Total Development with Approved TIA Worksheet/Report (All Subdivision Units)
Complete this section with information about all subdivision units or phases that were included in the previously approved TIA worksheet or report, including the unit or phase in the current TIA worksheet and application. If any subdivision units or phases have already been permitted or completed with different trips generated than what was included in the previously approved TIA worksheet or report, the actual trips generated are listed in Section 4 instead of the values from the previously approved TIA worksheet or report.

• Unit: List each subdivision unit or phase separately. If the unit (or land use) for the application was previously part of a larger unit or land use, list on a separate line.
• Land Use: This is from the ITE Trip Generation Manual, 10th or most recent edition.
• Status: Indicate the current approved status of each unit using the following codes:
  o PLAN = Zoning/Concept Plan/Detail Plan/Master Plan approved by planning commission and city council, if applicable
  o PP = Preliminary Plat approved by planning commission
  o FP = Final Plat approved by planning commission
  o P = Permit approved and issued by the city
  o C = Unit completed and accepted by the city
  o A = Unit with this application
• ITE Code, ITE Unit: These values are from the ITE Trip Generation Manual, 10th or most recent edition.
• Estimated Project Units: This is the value used to calculate the peak hour and daily trips from the information in the ITE Trip Generation Manual, 10th or most recent edition.
• Critical Peak Hour: List the critical peak hour for this land use and unit.
• AM Peak Hour, PM Peak Hour, Weekend Peak Hour, and Daily Trip Rates: These values are from the *ITE Trip Generation Manual, 10th* most recent edition. Leave blank if rates are not available.

• AM Peak Hour, PM Peak Hour, Weekend Peak Hour, and Daily Trips: These values are calculated using the applicable trip rates and the estimated project units listed for this land use and unit. Leave blank if trips are not available.

• Total from additional tabulation sheet: If additional rows are needed in Section 4, an additional tabulation sheet can be attached.

• Total: Sum each column in Section 4, including totals from any additional tabulation sheets.

Section 5: Approved TIA Worksheet/Report Conformance
The information in this section is used to compare the totals for peak hour and daily trips in the previously approved TIA worksheet or report to the values calculated in this worksheet. This information is used to determine if a new TIA report is required.

• Approved development total AM Peak Hour, PM Peak Hour, Weekend Peak Hour, Daily Trips: List the values in each column from the previously approved TIA worksheet or report.

• Updated development total AM Peak Hour, PM Peak Hour, Weekend Peak Hour, Daily Trips: List the values in each column from the Total row in the table in Section 4 above.

• Difference in development total AM Peak Hour, PM Peak Hour, Weekend Peak Hour, Daily Trips: Calculate the difference between the approved and updated development totals for each column.

• New TIA Report Required: If there is an increase in peak hour trips over 100, then a new TIA report is required to be approved prior to permit approval.

Section 6: Required TIA Mitigation Measures
Complete this section with any TIA mitigation measures that are required by a previously approved TIA report. Indicate the unit when the mitigation measure is to be installed and the total peak hour trips (PHT) for the development that trigger the installation of each mitigation measure.

Review
City staff will review the TIA worksheet and determine if it acceptable, requires correction and if a TIA report is or not required. An accepted TIA worksheet is required prior to plat recordation or permit issuance.

Contact
Contact the City of New Braunfels Engineering Division with questions regarding this form or to schedule a TIA scoping meeting at 830-221-4020.
Appendix A: Sample Completed TIA Worksheet
**SAMPLE** CITY OF NEW BRAUNFELS TRAFFIC IMPACT ANALYSIS (TIA) WORKSHEET **SAMPLE**

Complete this worksheet as a requirement for zoning, master plan, plat and permit as specified in City of New Braunfels Code of Ordinances Sections 114-99 and 118-46. 

*Note: The Code provides the minimum information for a TIA report and it is recommended that a scoping meeting be scheduled with the Engineering Division.*

### Section 1: General Information

<table>
<thead>
<tr>
<th>Project Name: New Braunfels Subdivision Unit 4</th>
<th>Date: 01/15/2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subdivision Plat Name: New Braunfels Subdivision</td>
<td>Project Address/Location: Landa Street and Walnut Avenue, New Braunfels</td>
</tr>
<tr>
<td><strong>Location?</strong></td>
<td></td>
</tr>
<tr>
<td>☑ City of New Braunfels</td>
<td>☐ New Braunfels ETJ</td>
</tr>
<tr>
<td>Owner Name: John Smith</td>
<td>Owner Email: <a href="mailto:smith@email.com">smith@email.com</a></td>
</tr>
<tr>
<td>Owner Address: 550 Landa Street, New Braunfels, TX 78130</td>
<td>Owner Phone: 830-221-4000</td>
</tr>
<tr>
<td>Preparer Company: TIA Engineering &amp; Company</td>
<td></td>
</tr>
<tr>
<td>Preparer Name: Jane Johnson</td>
<td>Preparer Email: <a href="mailto:johnson@tia.com">johnson@tia.com</a></td>
</tr>
<tr>
<td>Preparer Address: 123 Consultant Road, New Braunfels, TX 78130</td>
<td>Preparer Phone: 830-221-4020</td>
</tr>
<tr>
<td>TIA scoping meeting with City Engineering</td>
<td></td>
</tr>
<tr>
<td>☑ Yes. Date: 12/20/2017</td>
<td>☐ No.</td>
</tr>
<tr>
<td>TIA Worksheet/Report approved with previous zoning, plan, plat or permit?</td>
<td></td>
</tr>
<tr>
<td>☐ No. Complete Page 1 only.</td>
<td>☑ Yes. Complete Pages 1 and 2.</td>
</tr>
</tbody>
</table>

### Application Type or Reason for TIA Worksheet/Report

| ☐ Zoning/Concept Plan/Detail Plan | ☐ Master Plan | ☐ Preliminary Plat | ☑ Final Plat | ☐ Permit | ☐ Other |

### TIA Submittal Type

- ☑ TIA Worksheet Only (100 peak hour trips or less)
- ☑ TIA Worksheet Only – Previous TIA Report Approved
- ☐ TIA Worksheet Only – Previous TIA Report not required (supporting documentation may be required)
- ☐ Level 1 TIA Report (101-500 peak hour trips)
- ☐ Level 2 TIA Report (501-1,000 peak hour trips)
- ☐ Level 3 TIA Report (1,001 or more peak hour trips)

### Section 2: Proposed Land Use and Trip Information for Application

<table>
<thead>
<tr>
<th>Unit</th>
<th>Land Use</th>
<th>ITE Code¹</th>
<th>ITE Unit²</th>
<th>Est. Project Units</th>
<th>Critical Peak Hour</th>
<th>AM Peak Hour Rate</th>
<th>PM Peak Hour Rate</th>
<th>WKND Peak Hour Rate</th>
<th>Daily Trip Rate</th>
<th>AM Peak Hour Trips</th>
<th>PM Peak Hour Trips</th>
<th>WKND Peak Hour Trips</th>
<th>Daily Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Single Family Homes</td>
<td>210</td>
<td>DU</td>
<td>50</td>
<td>PM</td>
<td>0.75</td>
<td>1.00</td>
<td>9.52</td>
<td>38</td>
<td>50</td>
<td>476</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Total from additional tabulation sheet (if necessary): | 38 | 50 | 476 |

| Total: | 38 | 50 | 476 |

¹Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition or most recent; ²E.g., Dwelling Units, Acres, Employees, KSF, etc.

Internal Use Only

<table>
<thead>
<tr>
<th>Reviewed by:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ TIA Worksheet is acceptable.</td>
<td>☐ TIA Worksheet requires corrections.</td>
</tr>
</tbody>
</table>
### Section 3: Previously Approved TIA Worksheet/Report

**Project Name:** New Braunfels Subdivision Master Plan  
**Preparer Company:** TIA Engineering & Company  
**Preparer Name:** Susan Smith  
**Date:** 05/22/2015

**Type:**  
- [ ] TIA Worksheet Only  
- [x] Level 1 TIA Report  
- [ ] Level 2 TIA Report  
- [ ] Level 3 TIA Report

**Approved with:**  
- [ ] Zoning/Concept Plan/Detail Plan  
- [x] Master Plan  
- [ ] Plat  
- [ ] Permit  
- [ ] Other

### Section 4: Update to and Status of Land Use and Trip Information for Total Development with Approved TIA Worksheet/Report (All Subdivision Units)

<table>
<thead>
<tr>
<th>Unit</th>
<th>Land Use</th>
<th>Status⁵</th>
<th>ITE Code¹</th>
<th>ITE Unit²</th>
<th>Est. Project Units</th>
<th>Critical Peak Hour</th>
<th>AM Peak Hour Rate</th>
<th>PM Peak Hour Rate</th>
<th>WKND Peak Hour Rate</th>
<th>Daily Trip Rate</th>
<th>AM Peak Hour Trips</th>
<th>PM Peak Hour Trips</th>
<th>WKND Peak Hour Trips</th>
<th>Daily Trips</th>
</tr>
</thead>
<tbody>
<tr>
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<td>DU</td>
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<td>1.00</td>
<td>9.52</td>
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<td>24</td>
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<td></td>
</tr>
<tr>
<td>2</td>
<td>Single Family Homes</td>
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<td>210</td>
<td>DU</td>
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<td>43</td>
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<td></td>
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<tr>
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<td>Single Family Homes</td>
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<td>DU</td>
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<td>1.00</td>
<td>9.52</td>
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<td>DU</td>
<td>50</td>
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<td>Single Family Homes</td>
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<td>DU</td>
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<td>1.00</td>
<td>9.52</td>
<td>17</td>
<td>23</td>
<td>219</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Total from additional tabulation sheet (if necessary):** 163 217 2065

**Total:** 163 217 2065

¹*Institute of Transportation Engineers (ITE) Trip Generation*, 10th Edition or most recent; ²E.g., Dwelling Units, Acres, Employees, KSF, etc.; ³Specify current approved status of unit: PLAN – Zoning/Concept Plan/Detail Plan/Master Plan, PP – Preliminary Plat, FP – Final Plat, P – Permit, C – Completed, A – With this Application (current)

### Section 5: Approved TIA Worksheet/Report Conformance

<table>
<thead>
<tr>
<th>Approved TIA Conformance</th>
<th>AM Peak Hour Trips</th>
<th>PM Peak Hour Trips</th>
<th>WKND Peak Hour Trips</th>
<th>Daily Trips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved development total:</td>
<td>154</td>
<td>204</td>
<td>1986</td>
<td></td>
</tr>
<tr>
<td>Updated development total:</td>
<td>163</td>
<td>217</td>
<td>2065</td>
<td></td>
</tr>
<tr>
<td>Difference development total:</td>
<td>+9</td>
<td>+13</td>
<td>+79</td>
<td></td>
</tr>
</tbody>
</table>

**New TIA Report Required?**  
- [ ] Yes. New TIA Report required to be approved prior to approval.  
- [x] No.

### Section 6: Required TIA Mitigation Measures

<table>
<thead>
<tr>
<th>Mitigation Measures</th>
<th>Unit</th>
<th>Total PHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. left turn lane on WB Main St at 1st Ave</td>
<td>2</td>
<td>67</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
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</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
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</tr>
<tr>
<td>6.</td>
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</table>