

CDOT ICAT: User Testing Guidelines and Checklist - Part 1

Developed and Maintained in Cooperation with Georgia DOT

CDOT ICAT Version 1.0 | Release Date: 9/17/2021

Instructions:

1. Using your own data, input information into the ICAT and check appropriate check-boxes in the input checklist below when complete.
2. Take screen shots if errors are encountered to assist with troubleshooting.
3. If any issues are identified, include a screen shot and supporting details in additional tabs within this checklist.
4. Once the checklist and ICAT are completed, upload to your Region folder in the Google Drive link provided.

Note: The ICAT must be opened in Excel, not Google Sheets

Input Checklist:

"IntersectionData" Tab:

- County
- CDOT Region
- Major Street: Name, Typical Section, ROW, Roadway Classification, Turn Lanes at Intersection, and Speed
**Note that without inputting Intersection Turn Lanes, user may get error message in future tabs*
- Minor Street: Name, Typical Section, ROW, Roadway Classification, Turn Lanes at Intersection, and Speed
**Note that without inputting Intersection Turn Lanes, user may get error message in future tabs*
- Major Road Direction, Area Type, Existing Intersection Control, and Terrain
- Enter the name of the Preparer, the Date, and a brief Project Description
- For the Type of Project, specify whether the primary purpose of the project is related to Safety or Operational Improvements
- Input Existing, Opening, and Design Project Years, and the K Factor
** Note that user can replace calculated opening and design year traffic turning movement and ADT volumes with known traffic forecast data using tables to the right (outside the page print border)*
- Input existing peak period traffic and pedestrian volumes and average truck percentages; if known, input same data for future years
- Include number and type of crashes, along with LOSS information

"Stage1" Tab:

- Answer questions 1-3, 6, 8-11, 14, and 15 using pull-down menu options
- Modify "Number of Alternatives to be Evaluated in Stage 2" if needed
- Insert "Conventional Improvements" information if applicable (Note these are not scored, but will be automatically carried forward if data is included)
- Insert "Other Intersection" type if applicable (Note that these are not scored, but will be automatically carried forward if data is included)
- If there are options shown as recommended, but there is a justification not to carry forward, insert an "X" under "Alternative choice override" and add Scoring Override Justification
- If there are options not shown as recommended, but there is a justification to carry forward, insert a "Y" under "Alternative choice override" and add Scoring Override Justification

- If the alternative scoring results are different than you expected, describe what you were expecting and why:

- If you have any other general suggestions for improvements to the ICAT, please describe them:

- Upload a KMZ file of the Test Case location to your Region folder:

<https://drive.google.com/drive/u/0/folders/1R15XPLp3Lj4daPPfpVL8osZLif5ulAWP>

Alternatively, paste a link to Google Maps of the Test Case location here:

- Upload this completed checklist and your completed ICAT to your Region folder:

<https://drive.google.com/drive/u/0/folders/1R15XPLp3Lj4daPPfpVL8osZLif5ulAWP>



COLORADO
Department of Transportation

CDOT ICAT: User Testing Guidelines and Checklist - Part 2

Developed and Maintained in Cooperation with Georgia DOT

CDOT ICAT Version 1.1 | Release Date: 9/17/2021

Instructions:

1. Using your own data, input information into the ICAT and check appropriate check-boxes in the input checklist below when complete.
2. Begin by completing the 'IntersectionData' and 'Stage1' tabs of the latest version of the ICAT (see 'Checklist1_Part1' tab of this spreadsheet)
3. Take screen shots if errors are encountered to assist with troubleshooting.
4. If any issues are identified, include a screen shot and supporting details in additional tabs within this checklist.
5. Once the checklist and ICAT are completed, upload to your Region folder in the Google Drive link provided.

Note: The ICAT must be opened in Excel, not Google Sheets

Input Checklist:

"Costs" Tab (Part 1):

- Under Existing Conditions, input the number of lanes and bay lengths
- For each alternative, specify level of utility impacts; if unknown, leave as "Moderate" for all
- For each alternative, specify number of driveways impacted; if known, include estimates for retaining walls, bridges, ROW/demolition, and landscaping
- Under Site Conditions, specify the Prevalent ROW Type; if unknown, leave as "Average"
- Under Roadway, specify the requirements for drainage, sidewalks (SW), and bike lanes or multi-use (MU) paths
- Under Intersection, specify the type of signal poles (if applicable), project size, and expected traffic management strategy
- Under Factors, enter assumptions for Engineering Design (as a %), and Contingency (as a %)
- In columns AC, AD, and AE, enter project specific assumptions for each alternative (for items highlighted in orange)

At this time, proceed to the Stage2 tab; Note: You will return to the Costs tab to enter cost estimates in the Environmental Impacts section after completing the Stage2 tab

"Stage2" Tab (Part 1):

- Under the Existing / Design Year No-Build Traffic Operations section, specify the Traffic Analysis Measure of Effectiveness and the Traffic Analysis Software Used
- Under the Existing / Design Year No-Build Traffic Operations section, enter the delay and v/c ratios for the AM and PM peak hours for the Existing No-Build Peak Hour
- Under the Existing / Design Year No-Build Traffic Operations section, enter the delay and v/c ratios for the AM and PM peak hours for the Design Year No-Build Peak Hour
- Under Traffic Operations, select the Software Used for analysis of each alternative, and enter the Design Year Build delay and v/c ratios
- In column R, under Assessment Criteria Scoring, review the Default values for scoring, and if desired, enter Override percentages, ensuring the total is 100%
- In columns P, Q, R, S and T, under the Cost Data Override section, enter any overrides for costs if a cost estimate was generated independent of this tool
- In columns P, Q, R, S and T, under the Safety Data Override section, enter any overrides for safety reduction factors generated independent of this tool
- Under the Environmental Impacts, identify whether any alternatives will have minimal or significant impact to resources (if known); if unknown, leave as "None"
- Under Stakeholder Support, identify the levels of Local Community and CDOT Region Support (if known); if unknown, leave as "Unknown"

"Env" Tab:

- Proceed to the Env tab if any significant environmental factors were identified for any of the alternatives; include a plan and cost estimates for mitigation that retains the proposed intersection type as a viable alternative

"Costs" Tab (Part 2):

- Return to the Costs tab and in the Environmental Impacts section, enter cost estimates to mitigate each impact, for the minimal or significant environmental impacts that were identified in Stage 2 (highlighted in orange)
- Review the summary table at the bottom of the Costs tab

"Stage2" Tab (Part 2):

- Return to the Stage2 tab and review the summary table at the bottom of the Stage2 tab; if necessary, provide additional comments below the final scores

- If the Final ICAT Stage 2 score results are different than you expected, describe what you were expecting and why:

- If you have any other general suggestions for improvements to the ICAT, please describe them:

- Upload a KMZ file of the Test Case location to your Region folder:

<https://drive.google.com/drive/u/0/folders/1R15XLP3Lj4daPPfpVL8osZLifSulAWP>

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