

Association of Monterey Bay Area Governments Regional Travel Demand Model Program

SCCRTC ITAC
September 21, 2023



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OUTLINE

- AMBAG GIS Data and Modeling program
- Why Regional Travel Demand Model (RTDM)
- Objectives of RTDM upgrade
- RTDM framework and brief overview
- Land Use Model
- Development Monitoring System
- Stakeholder's participation and their stake
- Discussion

AMBAG GIS DATA AND MODELING PROGRAM

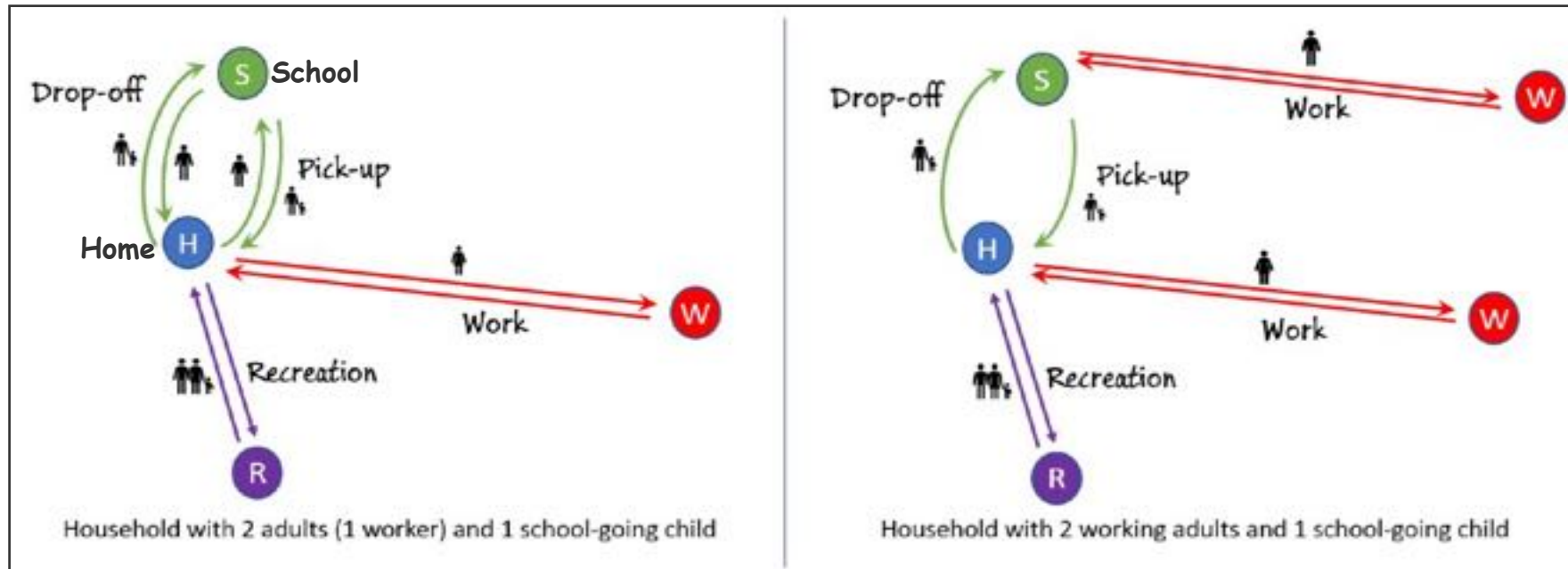
- Geographic Information Systems (GIS) data: used for land use, transportation, environmental and policy planning
- AMBAG collects, analyzes, and maintains various GIS datasets for planning and policy purpose
 - Census data
 - Regional employment
 - Highway and transit network
 - Active transportation and complete street network
 - Regional economic data for population and housing forecast
 - Environmental data
 - Traffic/truck counts
 - Freight and goods movements
- Provide data support to all stakeholders of Monterey Bay region and Caltrans
- To solicit greater public participation and building consensus
- Better inform policy bodies

WHY REGIONAL TRAVEL DEMAND MODEL?

- Required under Federal Law to:
 - Estimate region's future travel demand and analyze alternative transportation scenarios
 - Develop region's Metropolitan Transportation Plan (MTP)
 - Carryout air quality conformity analysis
 - Receive federal funding for major transportation investment projects
- Under SB 375, MPO is required to:
 - Develop Sustainable Community Strategies (SCS) in conjunction with region's MTP
 - Conduct GHG analysis as recommended by California Air Resource Board (CARB)

OBJECTIVES FOR RTDM UPGRADE

- Develop and apply an innovative modeling approach, ABM or Hybrid Model for AMBAG region:
 - Policy sensitive tools appropriate for Monterey Bay Area
 - More detailed representations of person level travel and activities pursued
 - More sensitive models of non-motorized modes
 - Built on a single software platform- easy to use, maintain and apply

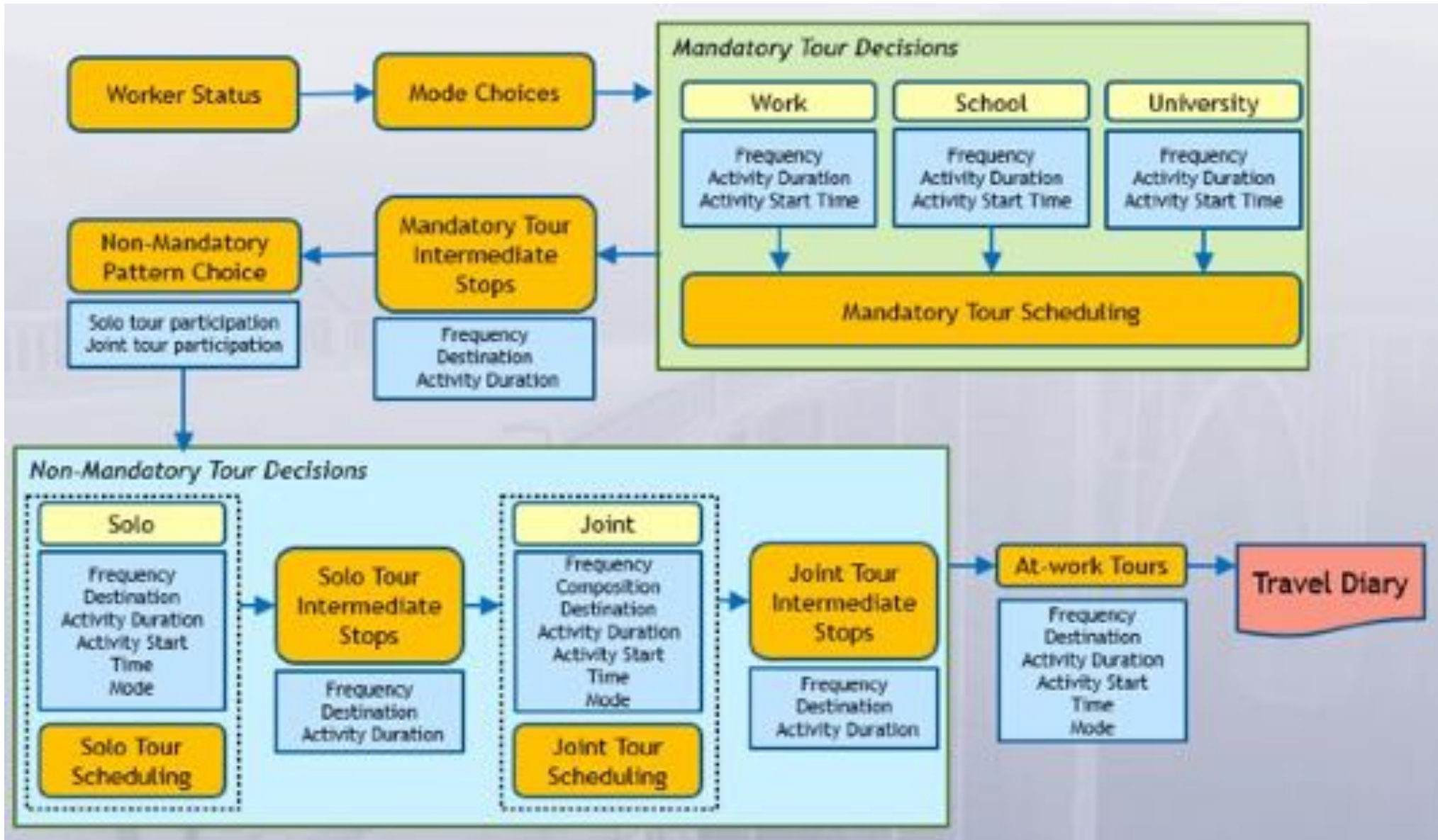


RTDM & LU MODEL STATISTICS

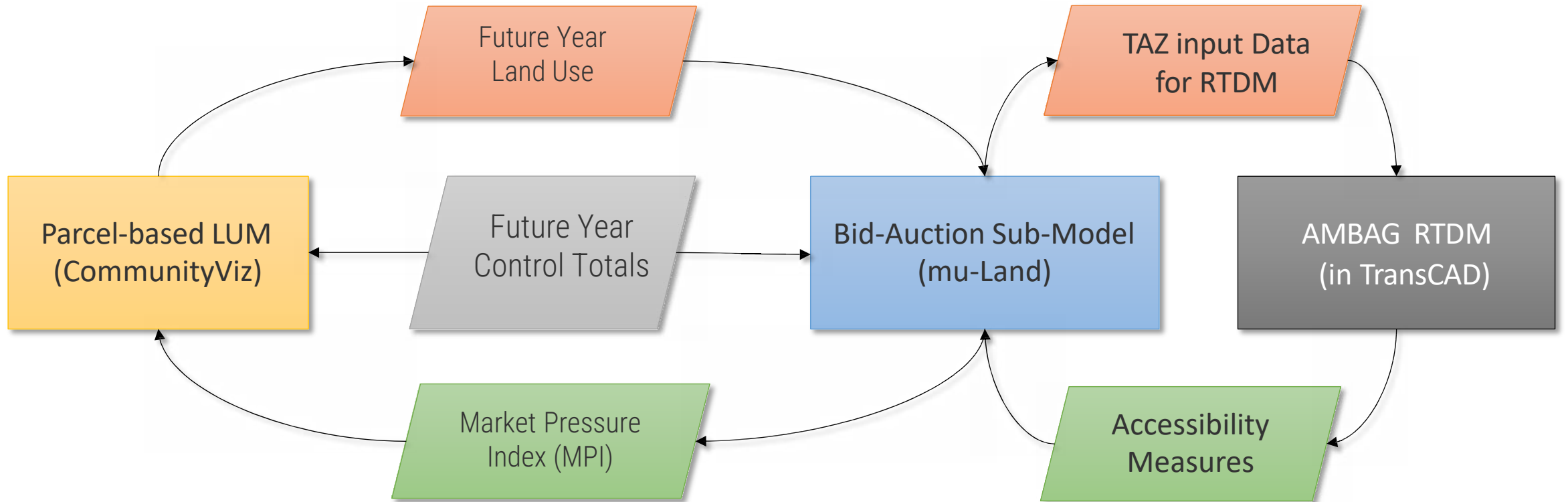
- Traffic Analysis Zones (TAZ): 1,673
- Parcels (County assessor): 237,052
- 2020 Census Geographies
 - 466 Block Groups
 - 184 Tracts
 - 5 PUMAs
- 2020 Base year network
- 2015 Households: 238,862
- 2015 Population: 762,241
- 2015 Group Quarters: 33,889
- 2015 Employment: 377,335
- 2015 Students (K-12): 138,373
- 2015 College Students: 63,365



ABM FRAMEWORK



HIGH-LEVEL LAND USE MODEL ARCHITECTURE



Data flows between the parcel-based LU Model and AMBAG RTDM

DEVELOPMENT MONITORING TOOL

View Development << Close

Joanne Drive
Joanne Drive, Stow, MA

Meta Data

Entry Created By: MAPC Staff
Last Updated: Tue Feb 02 2021 09:11:51 GMT-0500 (Eastern Standard Time)

Description
Preliminary Subdivision to create 7 lots off of Sudbury Road ***Many lots on this development appear to have been sold, however construction has yet to begin <https://www.robertpaul.com/real-estate/000-joanne-drive-stow-ma-01775/72674291/95662456>

MEPA ID: _____ Traffic Count URL: _____

Key Info

Status	Planning	Height	Unknown
Year complete	2023	Number of Stories	Unknown
Cost	Unknown	Number of Parking Spaces	Unknown
Project Area	Unknown	Parking Type	Unknown

Residential

Housing Units: 7 Units

Unit Type	Quantity	Percentage
Single Family	7	100%

Affordable Units: 7 Units

Map Search: Search developments by city or address
1 active filter

Legend:
● Completed
● In Construction
● Planning
● Projected
● Deselected

Map Controls: + Map Glossary, - Satellite About

- Web-based data entry portal open to local jurisdiction planners
- Open-source software customized for AMBAG's partner agencies
- Developing to gather info about upcoming development projects as well as current/completed projects

DEMO OF CALBUILDS TOOL

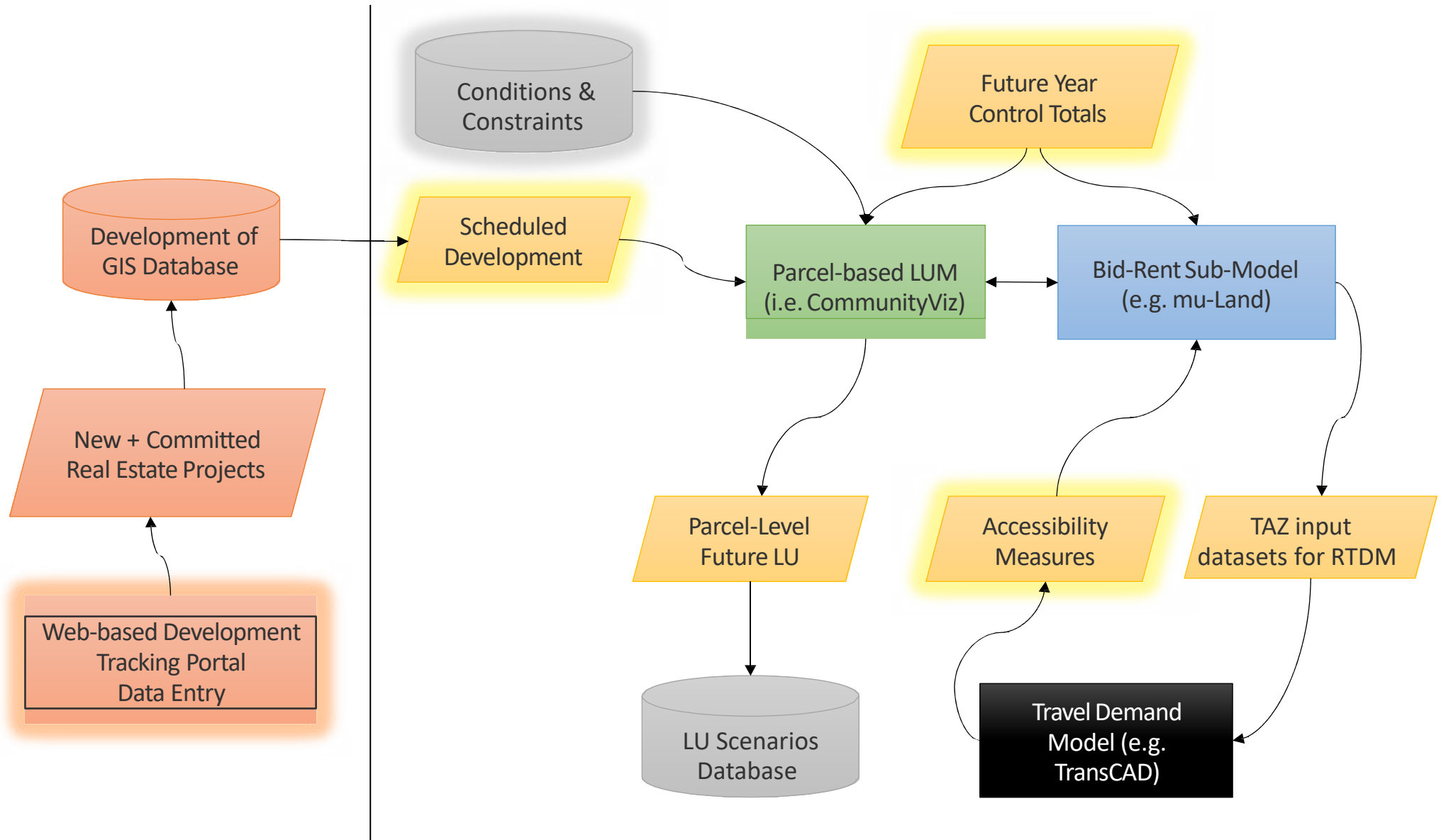
The screenshot displays the CALBUILDS tool interface. At the top left, there is a search bar with the placeholder text "Search developments by city or address". The main area is a map of the Monterey Bay Area, showing development points color-coded by status: green for "Completed", light green for "In Construction", blue for "Planning", light blue for "Projected", and grey for "Deselected". The map includes labels for "Atascadero", "San Luis Obispo", and "Santa Lucia Wilderness". In the bottom left corner, there is a legend for the development statuses and navigation controls for "Map" and "Satellite" views, along with links for "Glossary" and "About".

On the right side, there is a sidebar with the following content:

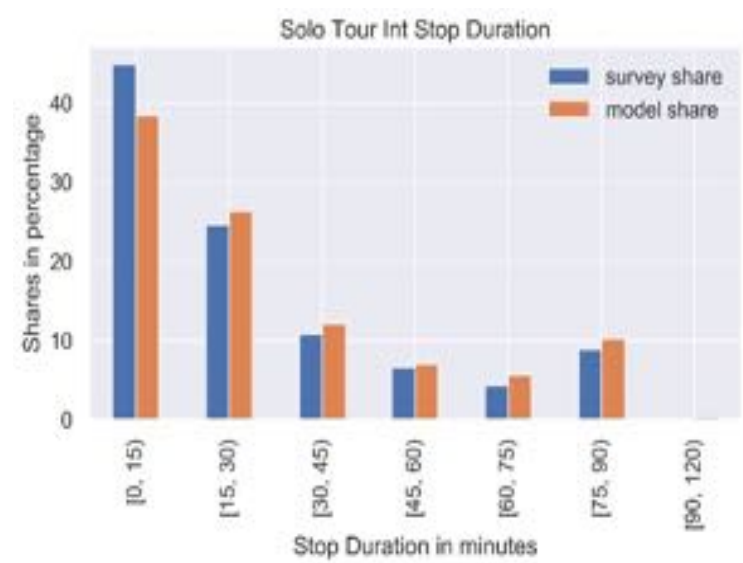
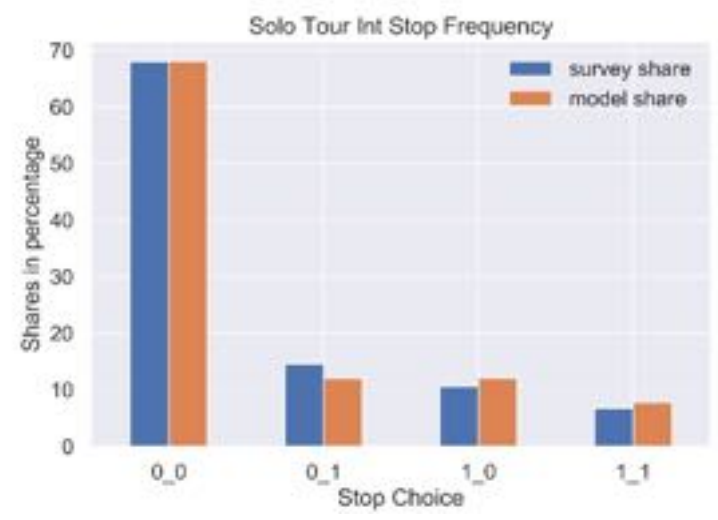
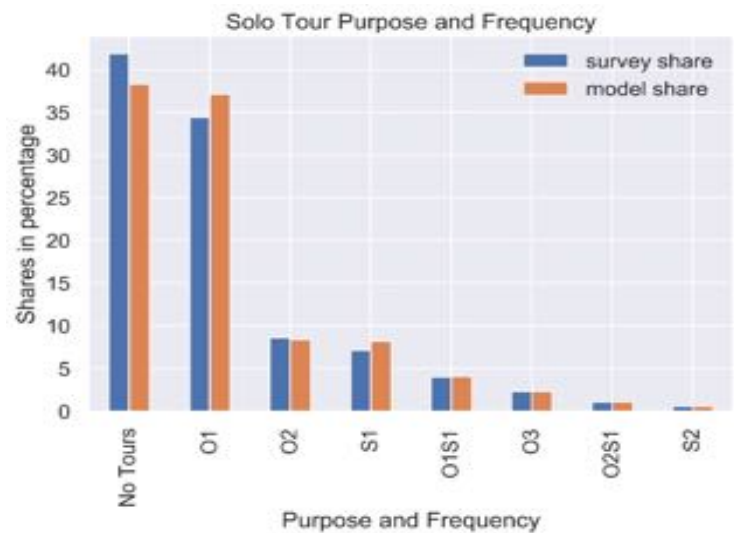
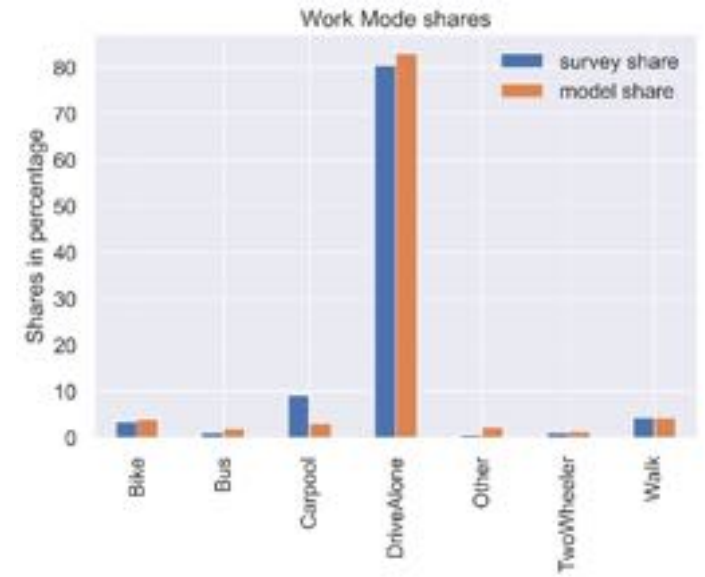
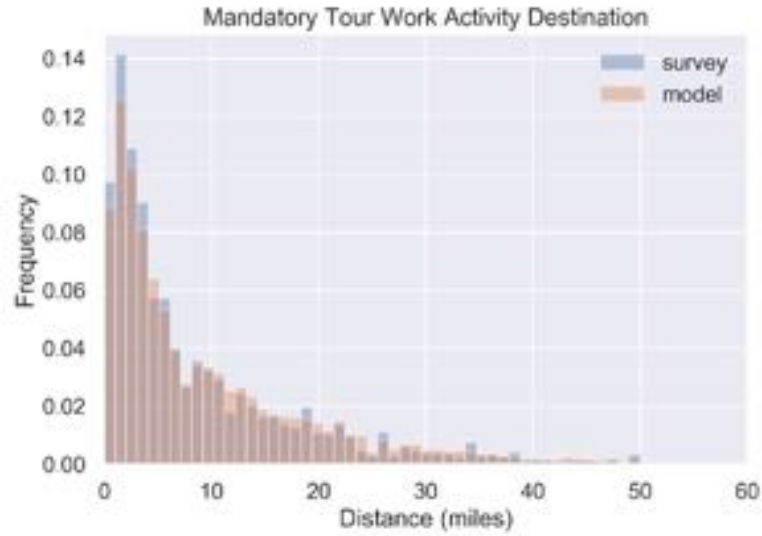
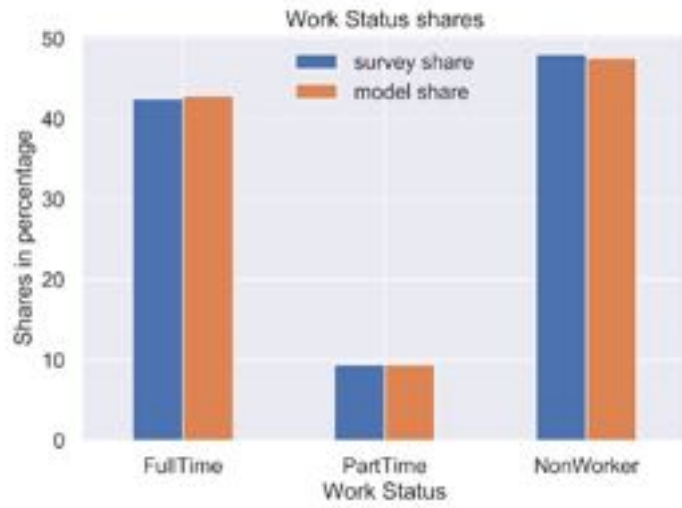
- Logos for the Association of Monterey Bay Area Governments and SLOCOG.
- Text: "A visual database for detailed information on real-estate developments in AMBAG and SLOCOG region. [Learn more](#)"
- Section: "Login"
- Form fields for "Email" and "Password".
- Links: "[Forgot password?](#)" and "Login".
- Text: "Don't have an account? [Signup here](#)"
- Contact information for the Association of Monterey Bay Area Governments: "24580 Silver Cloud Court, Monterey, CA 93940", "831-883-3750", and "calbuilds@ambag.org".

At the bottom right, there is a copyright notice: "© Mapbox © OpenStreetMap. Improve this map".

LU MODEL AND LAND USE TRACKING SYSTEM TOOL

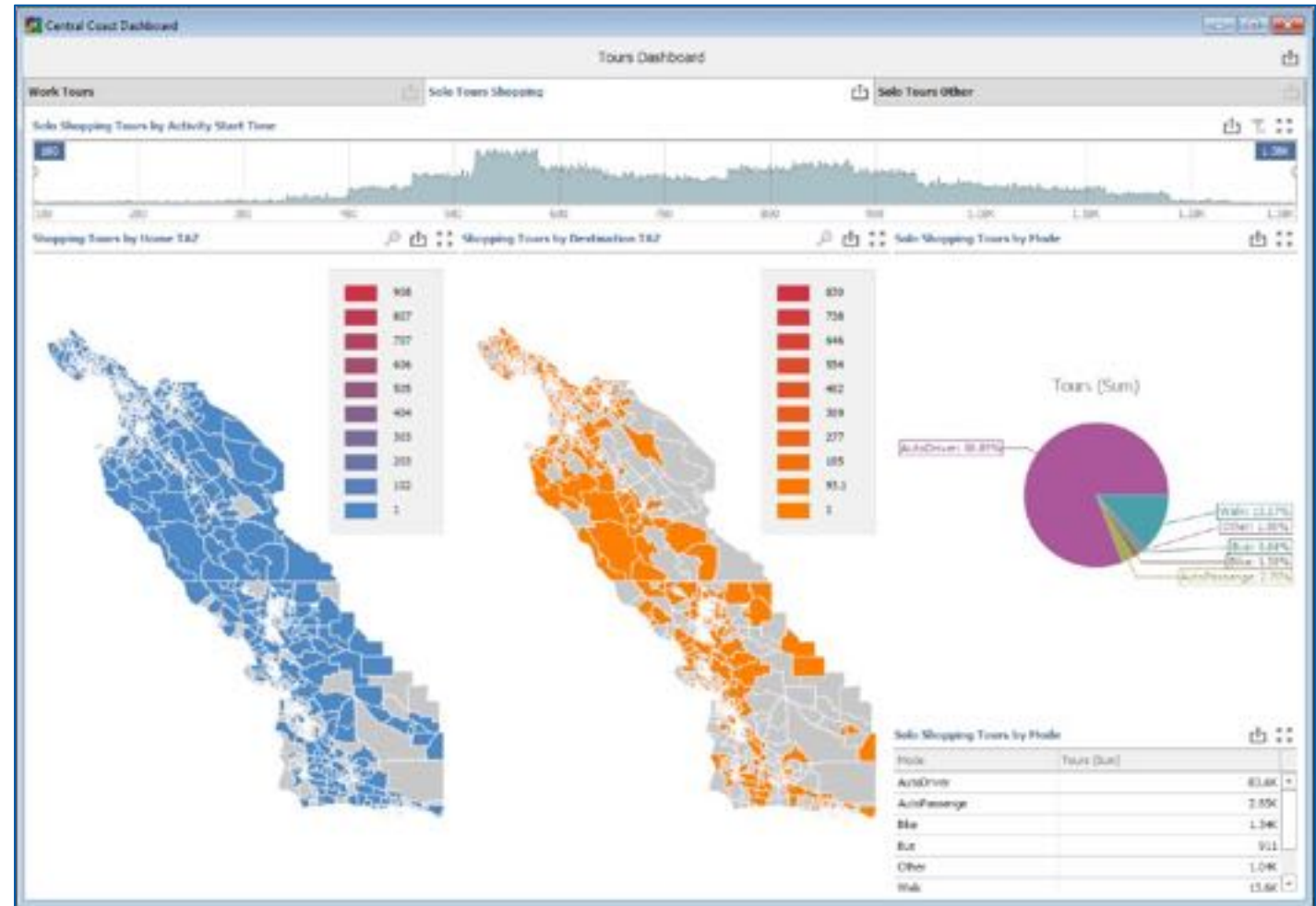
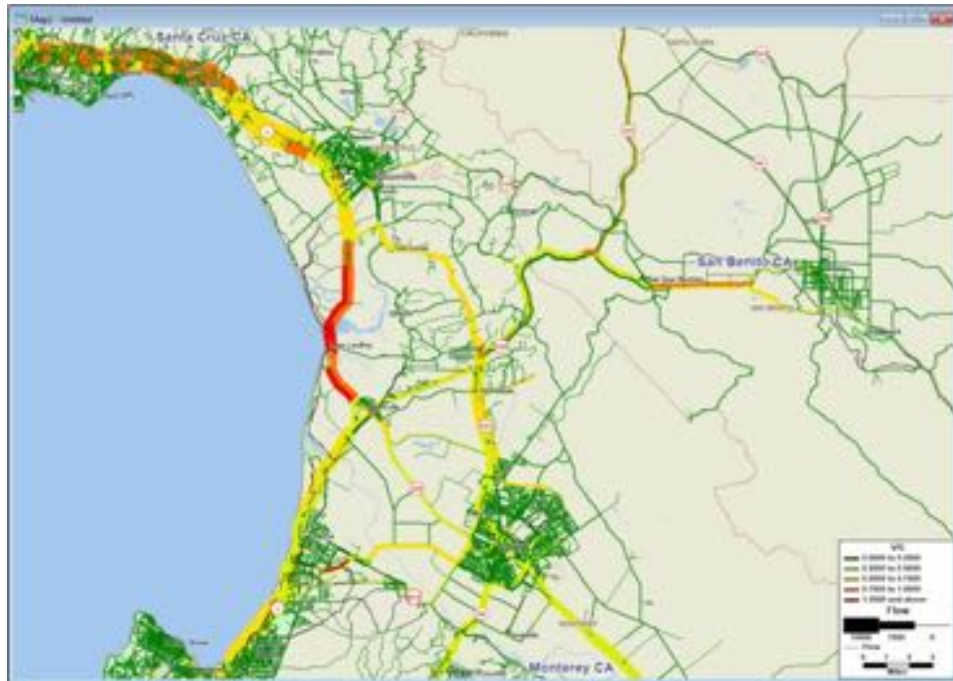


CALIBRATION RESULTS



MODEL VISUALIZATION

- Custom dashboards, maps and reports to utilize ABM outputs
 - Leverages TransCAD's GIS capabilities



QUESTIONS?

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