



# Technical Working Group

July 20, 2017

10:00 a.m. – 12 noon

## SCAG Downtown Office – Board Room

818 West 7<sup>th</sup> Street, 12<sup>th</sup> Floor

Los Angeles 90017

### (How to Participate in Meeting on Next Page)

#### AGENDA

##### Receive and File

None

##### Information Items

- |  |                |             |
|--|----------------|-------------|
| 1. ATP Augmentation & SCAG Call for Projects   | Patchan        |             |
| 2. 2020 RTP/SCS Growth Forecast - Preliminary Approaches to Project Jurisdictional Level Growth            | Wen/Zhou       |             |
| 3. 2016 Regional Land Use Data Development   | Seo            | Attachment  |
| 4. Draft Data Elements and Timeline for the 2020 RTP/SCS Bottom-Up Local Input Process of the 2020 RTP/SCS | Clark          | Attachment  |
| 5. 2020 RTP/SCS Local Input Survey   | Ok/Clark/Chang | Attachments |
| 6. MAP-21 Performance Measures Status Overview   | Chang/Gainor   | Attachment  |
| 7. SB 743 Update   | Chang          |             |



# How to Participate

## **In Person**

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### **SCAG Downtown Office Board Room**

818 W. 7<sup>th</sup> Street, 12<sup>th</sup> Floor  
Los Angeles 90017  
213-236-1800

## **Videoconference**

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### **Orange County**

OCTA Building  
600 South Main Street, Suite 1233  
Orange, CA 92868  
Telephone: (714) 542-3687

### **Riverside County**

3403 10th Street, Suite 805  
Riverside, CA 92501  
Telephone: (951) 784-1513

### **Imperial County**

1405 N. Imperial Avenue, Suite 1  
El Centro, CA 92243  
Telephone: (760) 353-7800

### **San Bernardino County**

1170 West 3rd Street, Suite 140  
San Bernardino, CA 92410  
Telephone: (909) 806-3556

### **Ventura County**

950 County Square Drive, Suite 101  
Ventura, CA 93003  
Telephone: (805) 642-2800

### **Coachella Valley**

73-710 Fred Waring Dr., Suite 200  
Palm Desert, CA 92260  
Telephone: (760) 346-1127

## **Web Meeting**

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<http://scag.adobeconnect.com/twg91814/>

**Teleconference Number: 1-800-832-0736**

**Meeting Room# 7334636**

## **Teleconference**

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**Number: 1-800-832-0736 – Participant Code: 7334636**



# Technical Working Group

June 15, 2017

## Meeting Summary

The following is a summary of discussions at the Technical Working Group on June 15, 2017.

### Information Items

**1. 2020 RTP/SCS Local Input Process**

Kimberly Clark updated the group on the 2020 RTP/SCS local input process. It was noted there are new issues for the 2020 RTP/SCS including a recently updated ARB draft target of 21% for 2035. There are also new FHWA planning requirements as well as the upcoming Regional Housing Needs Assessment. Ms. Clark stated a collaborative process will be engaged starting with the local input process. There will be one-on-one meetings with each local jurisdiction to gather the needed data sets. Ms. Clark reviewed with the TWG the different phases of the process through 2020 and the approach that will be taken for reviewing the data and other critical steps.

**2. SB 743 Update**

Ping Chang updated the group on SB 743. Mr. Chang noted changes will be made to the case studies and detailed the reason for these modifications. It was further noted that interested stakeholders can attend the upcoming workshop on June 26, 2017 in Sacramento.

**3. 2017 Local Profiles & Mini-Survey for Future Improvements**

Michael Gainor updated the TWG on the 2017 local profiles and the mini-survey. Mr. Gainor noted the 2017 local profile reports were released at SCAG's 2017 General Assembly. It was noted reports are produced for 189 member cities, 6 counties and 6 unincorporated areas for a total of 201 reports. Mr. Gainor stated that there has been considerable interest in the local reports as well as many favorable comments. Mr. Gainor reviewed a draft of the mini-surveys that will be released and requested the TWG's input.

**4. 2017 Climate Change Scoping Plan Update**

Ping Chang, updated the TWG on the 2017 Climate Change Scoping Plan. Mr. Chang noted that ARB has postponed its scoping plan update planned for June 22, 2017; however, action will be taken at a future date. Mr. Chang stated that he will update the TWG as the process proceeds.

**5. SB 375 GHG Target Update**

Frank Wen reported on SB 375 GHG target update. Mr. Wen stated that a target setting workshop will be held at SCAG June 21, 2017. Mr. Wen referenced the ARB staff report which indicates a possibility that the updated ARB target will be 21% by the year 2035. Mr. Wen noted that SCAG has worked with other MPOs to recommend a target of 18%. It was noted 21% represents a challenging target to achieve regionally. Mr. Wen stated additional innovations may provide a path forward to address this target. It was noted a collaborative effort will take place with stakeholders to explore every avenue for achieving this target including reducing vehicle miles travelled as well as strategies for eliminating or replacing trips currently taken with private vehicles.

**6. 2020 RTP/SCS Strategy Growth Forecast Development: Draft Preliminary Ranges of Regional and County Growth Projections**

Frank Wen updated the TWG on draft preliminary ranges for regional and county growth projections. Mr. Wen reviewed the modelling structure and significant trends such as a decline in the fertility and mortality rates. Additional trends include the aging of the baby boomers which has implications including a decline in labor force participation.

**7. Active Transportation Funding**

Rye Baerg reported that the passage of SB 1 has resulted in additional funding for active transportation. Funding guidelines will follow those from 2017. The intent is to fast track projects slated for funding by moving up the funding distribution date. Mr. Baerg noted a call for planning and non-infrastructure projects will be forthcoming.

**8. Open Data/Big Data First Meeting**

Rye Baerg stated that the first Open Data/Big Data meeting was held Tuesday June 13, 2017. The committee is made up of several Regional Council members, experts from universities and the private sector. The goal of the committee is to look at the implications of new trends and defining SCAG's role. Mr. Baerg stated one of the first tasks will be to release a regional data survey and assistance will be sought from the TWG.



## **Technical Working Group**

# **Agenda Item 3**

# 2016 SCAG General Plan Land Use Update

## Procedures and Methodology

### Overview

SCAG has produced regional geospatial dataset of general plan land use information at parcel-level to aid in its regional transportation planning, scenario planning and growth forecasting as well as facilitating policy discussion on various planning issues. In 2015, SCAG successfully released the final 2012 general plan land use dataset for the development of its 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). In order to develop the 2012 general plan land use dataset, SCAG communicated with local jurisdictions to collect local general plan land use information from March 2013. The 2012 general plan land use information was reviewed by local jurisdictions, and SCAG staff made every effort to ensure the data reflects each jurisdiction's input received during SCAG's bottom-up Local Input Process. After the successful adoption of SCAG's 2016 RTP/SCS, SCAG has been undertaking a process to develop the 2016 general plan land use dataset in preparation for the development of its 2020 RTP/SCS.

### Procedures & Timeline

The procedures for the 2016 general plan land use update are similar to the ones used in the 2012 general plan land use update process. The 2016 general plan land use update process consists of three phases as follows:

- **Phase 1 – Developing a Preliminary dataset**
  - Timeline: *Spring 2017* thru *Summer 2017*
  - Tasks: In preparation for the Local Input Process for the 2020 RTP/SCS, which will begin in the fall of 2017, SCAG staff is to develop a preliminary general plan land use dataset. The major tasks include (1) to incorporate the recent changes in local general plan land use information and (2) to ensure data accuracy and consistency.
- **Phase 2 – Developing a Draft dataset**
  - Timeline: *Fall 2017* thru *Summer 2018*
  - Tasks: SCAG staff review each jurisdiction' input on the Preliminary dataset received during the 1<sup>st</sup> stage of the Local Input Process and make edits to the dataset accordingly in order to develop a Draft dataset.
- **Phase 3 – Developing a Final dataset**
  - Timeline: *Fall 2018* thru *Spring 2019*
  - Tasks: SCAG staff review each jurisdiction' inputs on the Draft dataset received during the 2<sup>nd</sup> stage of the Local Input Process and make edits to the dataset accordingly in order to develop a Final dataset.

## **Methodology**

In late 2016 and early 2017, SCAG staff obtained the 2016 parcel boundary file from the Digital Map Product (DMP) and county assessor's offices. After months of review and clean-up process, SCAG staff released the 2016 parcel boundary file in March 2017, and then, staff migrated the 2012 general plan land use information into 2016 parcels in preparation for the 2016 general plan land use update process. Additionally, SCAG has updated its land use classifications for the 2020 RTP/SCS, based on inputs received from jurisdictions and internal staff.<sup>1</sup> Updates on land use classifications are to be incorporated during the 2016 general plan land use update process. Below is a general procedure of the Phase 1 of the 2016 general plan land use update process:

1. Collect local general plan land use information by searching jurisdiction's websites or by contacting planning department, if needed.
2. Review the local general plan land use information and identify the following information:
  - a. Land use designations – Codes & descriptions
  - b. Residential density – Average/preferable density, minimum density, maximum density
  - c. Adoption/amendment year of general plan land use element
3. Review and update the general plan land use correspondence tables by comparing with local general plan land use information.<sup>2</sup>
4. Review and update the general plan land use GIS file.<sup>3</sup>
  - a. Ensure that jurisdiction's general plan codes are correctly assigned to parcels by comparing with jurisdiction's general plan land use map.
  - b. Update symbology layer files for 2016 general plan land use GIS file.
  - c. Ensure that all parcels are located within jurisdiction boundaries.

Once the working dataset is ready, SCAG staff will conduct data quality evaluation procedures and then develop a preliminary 2016 general plan land use dataset. SCAG will produce two types of general plan land use maps—one based on jurisdiction's general plan land use designations and the other based on 2016 SCAG general plan land use classifications. And then, SCAG will provide the maps to jurisdictions for their review, along with GIS files and relevant information. During the Phases 2 and 3, SCAG will communicate with jurisdictions to receive inputs on the general plan land use dataset and make modifications as needed to ensure that the dataset reflects jurisdiction's input.

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<sup>1</sup> For details about 2016 SCAG Land Use Classifications, refer to *Appendix A: 2016 SCAG Land Use Codes – Legend* and *Appendix B: 2016 SCAG Land Use Codes – Descriptions*.

<sup>2</sup> For details about correspondence table, refer to *Appendix C: General Plan Land Use Correspondence Table - Data Dictionary*.

<sup>3</sup> For details about general plan GIS file attribute information refer to *Appendix D: General Plan GIS File Attribute Table - Data Dictionary*.

# 2016 SCAG Existing Land Use Update

## Procedures and Methodology

### Overview

SCAG has produced regional geospatial dataset of existing land use information at parcel-level to aid in its regional transportation planning, scenario planning and growth forecasting as well as facilitating policy discussion on various planning issues. In 2015, SCAG successfully released the final 2012 existing land use dataset for the development of its 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The 2012 existing land use dataset was developed based on the 2008 SCAG existing land use dataset and Digital Map Product (DMP)'s 2012 property attributes, plus DMP's new construction data. The 2012 existing land use information was then reviewed by local jurisdictions during SCAG's bottom-up Local Input Process, and SCAG staff made every effort to ensure the data reflects input received from each jurisdiction. After the successful adoption of SCAG's 2016 RTP/SCS, SCAG has been undertaking a process to develop the 2016 existing land use dataset in preparation for the development of its 2020 RTP/SCS.

### Procedures & Timeline

The procedures for the 2016 existing land use update are similar to the ones used in the 2012 existing land use update process. The 2016 existing land use update process consists of three phases as follows:

- **Phase 1 – Developing a Preliminary dataset**
  - Timeline: *Spring 2017* thru *Summer 2017*
  - Tasks: In preparation for the Local Input Process for the 2020 RTP/SCS, which will begin in the fall of 2017, SCAG staff is to develop a preliminary existing land use dataset. The major tasks include (1) to incorporate the new construction information into 2012 existing land use information to reflect new development activities in recent years (from 2012 thru 2016), (2) incorporate reference information such as open space and farmland database, and (3) to ensure data accuracy and consistency.
- **Phase 2 – Developing a Draft dataset**
  - Timeline: *Fall 2017* thru *Summer 2018*
  - Tasks: SCAG staff review each jurisdiction' input on the Preliminary dataset received during the 1<sup>st</sup> stage of the Local Input Process and make edits to the dataset accordingly in order to develop a Draft dataset.
- **Phase 3 – Developing a Final dataset**
  - Timeline: *Fall 2018* thru *Spring 2019*
  - Tasks: SCAG staff review each jurisdiction' inputs on the Draft dataset received during the 2<sup>nd</sup> stage of the Local Input Process and make edits to the dataset accordingly in order to develop a Final dataset.



## **Methodology**

In late 2016 and early 2017, SCAG staff obtained the 2016 parcel boundary file from the DMP and county assessor's offices. After months of review and clean-up process, SCAG staff released the 2016 parcel boundary file in March 2017, and then, staff migrated the 2012 existing land use information into 2016 parcels in preparation for the 2016 existing land use update process. Additionally, SCAG has updated its land use classifications for the 2020 RTP/SCS, based on inputs received from jurisdictions and internal staff.<sup>4</sup> Updates on land use classifications are to be incorporated during the 2016 general plan land use update process. Below is a general procedure of the Phase I of the 2016 existing land use update process:

1. Develop the 2016 new construction dataset which contains recent development activities (from 2012 thru 2016).
2. Incorporate the 2016 new construction information into the 2016 existing land use data GIS file.
3. Conduct a cross-check to ensure the accuracy of the existing land use information by comparing with the following reference information:
  - a. California Protected Areas Database (CPAD)<sup>5</sup>
  - b. California Conservation Easement Database (CCED)<sup>6</sup>
  - c. California School Campus Database (CSCD)<sup>7</sup>
  - d. Farmland Mapping and Monitoring Program (FMMP)'s farmland data<sup>8</sup>

Once the working dataset is ready, SCAG staff will conduct data quality evaluation procedures and then develop a preliminary 2016 existing land use dataset. SCAG will produce an existing land use map for each jurisdiction, and then, provide the maps to jurisdictions for their review, along with GIS files and relevant information. During the Phases 2 and 3, SCAG will communicate with jurisdictions to receive inputs on the existing land use dataset and make modifications as needed to ensure that the dataset reflects jurisdiction's input.

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<sup>4</sup> For details about 2016 SCAG Land Use Classifications, refer to *Appendix A: 2016 SCAG Land Use Codes – Legend* and *Appendix B: 2016 SCAG Land Use Codes – Descriptions*.

<sup>5</sup> The CPAD contains GIS data about lands that are owned in fee and protected for open space purposes by over 1,000 public agencies or non-profit organizations. The latest version of the CPAD database is CPAD 2016b which was released in December 2016. The CPAD data is available at <http://www.calands.org/data>.

<sup>6</sup> The CCED contains lands protected under conservation easements. The first version of the CCED database was released in April 2014, the latest update is December 2016. The CCED data is available at <http://www.calands.org/cced>.

<sup>7</sup> The CSCD contains detailed outlines of the lands used by public schools for educational purposes. The campus boundaries of schools with kindergarten through 12th grade instruction are each accurately mapped at the assessor parcel level. The CSCD data is the first statewide database of this information and was released in December 2016. The CSCD data is available at <http://www.californiaschoolcampusdatabase.org>.

<sup>8</sup> The FMMP produces maps and statistical data used for analyzing impacts on California's agricultural resources. Agricultural land is rated according to soil quality and irrigation status; the best quality land is called Prime Farmland. The maps are updated every two years with the use of a computer mapping system, aerial imagery, public review, and field reconnaissance. The FMMP data is available at <http://www.conservation.ca.gov/dlrp/fmmp>.

## **List of Appendices**

**Appendix A: 2016 SCAG Land Use Codes – Legend**

**Appendix B: 2016 SCAG Land Use Codes – Descriptions**












**Appendix C: General Plan Land Use Correspondence Table - Data Dictionary**












**Appendix D: General Plan GIS File Attribute Table - Data Dictionary**

**Appendix A**  
**2016 SCAG Land Use Codes – Legend**

***(DRAFT)***

## 2016 SCAG Land Use Codes - Legend

Legend	Land Use Description
 Single Family Residential	1110 Single Family Residential 1111 High Density Single Family Residential (9 or more DUs/ac) 1112 Medium Density Single Family Residential (3-8 DUs/ac) 1113 Low Density Single Family Residential (2 or less DUs/ac)
 Multi-Family Residential	1120 Multi-Family Residential 1121 Mixed Multi-Family Residential 1122 Duplexes, Triplexes and 2- or 3-Unit Condominiums and Townhouses 1123 Low-Rise Apartments, Condominiums, and Townhouses 1124 Medium-Rise Apartments and Condominiums 1125 High-Rise Apartments and Condominiums
 Mobile Homes and Trailer Parks	1130 Mobile Homes and Trailer Parks 1131 Trailer Parks and Mobile Home Courts, High-Density 1132 Mobile Home Courts and Subdivisions, Low-Density
 Mixed Residential	1140 Mixed Residential 1100 Residential
 Rural Residential	1150 Rural Residential
 General Office	1210 General Office Use 1211 Low- and Medium-Rise Major Office Use 1212 High-Rise Major Office Use 1213 Skyscrapers
 Commercial and Services	1200 Commercial and Services 1220 Retail Stores and Commercial Services 1221 Regional Shopping Center 1222 Retail Centers (Non-Strip With Contiguous Interconnected Off-Street Parking) 1223 Retail Strip Development 1230 Other Commercial 1231 Commercial Storage 1232 Commercial Recreation 1233 Hotels and Motels
 Facilities	1240 Public Facilities 1241 Government Offices 1242 Police and Sheriff Stations 1243 Fire Stations 1244 Major Medical Health Care Facilities 1245 Religious Facilities 1246 Other Public Facilities 1247 Public Parking Facilities 1250 Special Use Facilities 1251 Correctional Facilities 1252 Special Care Facilities 1253 Other Special Use Facilities
 Education	1260 Educational Institutions 1261 Pre-Schools/Day Care Centers 1262 Elementary Schools 1263 Junior or Intermediate High Schools 1264 Senior High Schools 1265 Colleges and Universities 1266 Trade Schools and Professional Training Facilities
 Military Installations	1270 Military Installations 1271 Base (Built-up Area) 1272 Vacant Area 1273 Air Field 1274 Former Base (Built-up Area) 1275 Former Base Vacant Area 1276 Former Base Air Field
 Industrial	1300 Industrial 1310 Light Industrial 1311 Manufacturing, Assembly, and Industrial Services 1312 Motion Picture and Television Studio Lots 1313 Packing Houses and Grain Elevators 1314 Research and Development 1320 Heavy Industrial 1321 Manufacturing 1322 Petroleum Refining and Processing 1323 Open Storage 1324 Major Metal Processing 1325 Chemical Processing 1330 Extraction

	<p>1331 Mineral Extraction - Other Than Oil and Gas  1332 Mineral Extraction - Oil and Gas  1340 Wholesaling and Warehousing</p>
<p> Transportation, Communications, and Utilities</p>	<p>1400 Transportation, Communications, and Utilities  1410 Transportation  1411 Airports  1412 Railroads  1413 Freeways and Major Roads  1414 Park-and-Ride Lots  1415 Bus Terminals and Yards  1416 Truck Terminals  1417 Harbor Facilities  1418 Navigation Aids  1420 Communication Facilities  1430 Utility Facilities  1431 Electrical Power Facilities  1432 Solid Waste Disposal Facilities  1433 Liquid Waste Disposal Facilities  1434 Water Storage Facilities  1435 Natural Gas and Petroleum Facilities  1436 Water Transfer Facilities  1437 Improved Flood Waterways and Structures  1438 Mixed Utilities  1440 Maintenance Yards  1441 Bus Yards  1442 Rail Yards  1450 Mixed Transportation  1460 Mixed Transportation and Utility</p>
<p> Mixed Commercial and Industrial</p>	<p>1500 Mixed Commercial and Industrial</p>
<p> Mixed Residential and Commercial</p>	<p>1600 Mixed Residential and Commercial  1610 Residential-Oriented Residential/Commercial Mixed Use  1620 Commercial-Oriented Residential/Commercial Mixed Use</p>
<p> Open Space and Recreation</p>	<p>1800 Open Space and Recreation  1810 Golf Courses  1820 Local Parks and Recreation  1830 Regional Parks and Recreation  1840 Cemeteries  1850 Wildlife Preserves and Sanctuaries  1860 Specimen Gardens and Arboreta  1870 Beach Parks  1880 Other Open Space and Recreation</p>
<p> Agriculture</p>	<p>2000 Agriculture  2100 Cropland and Improved Pasture Land  2110 Irrigated Cropland and Improved Pasture Land  2120 Non-Irrigated Cropland and Improved Pasture Land  2200 Orchards and Vineyards  2300 Nurseries  2400 Dairy, Intensive Livestock, and Associated Facilities  2500 Poultry Operations  2600 Other Agriculture  2700 Horse Ranches</p>
<p> Vacant</p>	<p>3000 Vacant  3100 Vacant Undifferentiated  3200 Abandoned Orchards and Vineyards  3300 Vacant With Limited Improvements  3400 Beaches (Vacant)  1900 Urban Vacant</p>
<p> Water</p>	<p>4000 Water  4100 Water, Undifferentiated  4200 Harbor Water Facilities  4300 Marina Water Facilities  4400 Water Within a Military Installation  4500 Area of Inundation (High Water)</p>
<p> Specific Plan</p>	<p>7777 Specific Plan</p>
<p> Under Construction</p>	<p>1700 Under Construction</p>
<p> Undevelopable or Protected Land</p>	<p>8888 Undevelopable or Protected Land</p>
<p> Unknown</p>	<p>9999 Unknown</p>

**Appendix B**  
**2016 SCAG Land Use Codes – Descriptions**  
***(DRAFT)***

# **SOUTHERN CALIFORNIA 2016 LAND USE CLASSIFICATION UPDATE**

## **LAND USE CODE DESCRIPTIONS**

By  
Department of Research and Analysis  
Southern California Association of Governments (SCAG)

Revised in May, 2017

The land use definitions and descriptions were developed by Aerial Information Systems, Inc. as a Modified Anderson Land Use Classification. This classification uses a hierarchical system, allowing easy aggregation and disaggregation of classes. Most uses in the 1990 Land Use Study of Southern California were mapped to the fourth level. The user may elect to use the second or third level, or any variation, in analyses or display. The descriptions below apply to land use characteristics in southern California, and may not apply to other geographic areas. Key signatures are described using natural color aerial photography.

### **1000 URBAN OR BUILT-UP**

Areas of built-up land characterized by intensive land use, where most of the land is covered by man-made structures because of human activity.

### **1100 RESIDENTIAL**

The residential category includes areas of single family residences, multi unit dwellings, and mobile homes. Also included is a mixed residential category that consists of two or more of the aforementioned groups. The units/acre listed can be used as an indicator of relative density to aid in analysis when using the land use study.

#### **1110 SINGLE FAMILY RESIDENTIAL - Low Density Residential**

These residential areas are typically made up of detached dwellings, where each structure houses a single family, located in an urban or suburban setting. (Single family residential units located in a rural setting are classified as code 1150 under Rural Residential.) These single family residences are usually served by all utilities, are on paved streets, and are provided with or have access to all urban facilities such as schools, parks, police, and fire stations.

Single family residential neighborhoods are normally large contiguous areas of residential lots. Some areas have subdivisions or tracts of homes with similar size or architectural design. In these areas the roofs may be similar in shape or color when viewed on the aerial photo. Typically, single family lots contain landscaped front and back yards,

one driveway, and one walkway either to the sidewalk or to the driveway. The house usually contains one chimney, and one air-conditioning unit. Some lots may have swimming pools in the back yards. High or low density is determined by the size of the lot on which the residence is located. If an area is under construction, and the residential lots or pads are easily identifiable, then the unit may be coded with the appropriate density category.

**1111 High Density Single Family Residential (9 or more units/acre)**

This category contains single family *detached residential* units with a unit density of 9 or more units/acre. These units are typically found in modern urban and suburban subdivisions.

**1112 Medium Density Single Family Residential (3-8 units/acre)**

This category contains single family *detached residential* units with a unit density of 3-8 units/acre. These units are typically found in modern urban and suburban subdivisions.

**1113 Low Density Single Family Residential (2 or less units/acre)**

This category contains single family *detached residential* units with a unit density of 2 or less units/acre. These units may include areas of urban ranch homes or estates. Also included are urban areas where single family lots have been established but houses have not been built on all of them and are not likely to be built in the near future. The homes are spaced at a density of 2 or less units/acre. In some situations, a low density area may be rural in appearance because it was once a rural area but is now within the urban setting or a transitional area.

**1120 MULTI-FAMILY RESIDENTIAL (Medium-High Density Residential)**

Multi-family units are attached residences, apartments, condominiums, and townhouses. Multi-family residences are usually served by all utilities, are on paved streets, and are provided with or have access to all urban facilities such as schools, parks, police and fire stations. Senior citizen apartment buildings are included in these classes. Also included are off-campus university owned housing and off-campus fraternity/sorority houses.

**1121 Mixed Multi-Family Residential**

This category is used when there is a mixture of multi-family uses (duplexes, triplexes, apartments, condominiums, and/or townhouses of any type), none of which is over 2.5 acres in size, and no one type dominates. This situation may occur in older neighborhoods.

**1122 Duplexes, Triplexes, and 2- or 3-Unit Condominiums and Townhouses**

This category is composed of duplexes, triplexes, and 2- or 3-unit condominiums and townhouses that are attached multi-family structures.



Duplex and triplex residences may occur together or mixed with single family houses in some older neighborhoods (see code 1121 and 1140). Typically the multi-unit structure is one story located on a lot approximately the same size as nearby single family residential lots. There may be minimal landscaping or yard space. On the aerial photo, one may be able to count the driveways, sidewalks, entryway overhangs, chimneys, or air conditioning units corresponding to the number of units in the structure. Some newer duplexes and triplexes occur as 2- or 3-unit structures in complexes as condominiums and townhouses, with common grounds.

### **1123 Low-Rise Apartments, Condominiums, and Townhouses**

This category includes multi-family structures of *one to two (1-2) stories* and *approximately 10 to 18 units/acre*. The area consists of either a large single structure or a group of structures, of four or more units each, in a complex with associated common grounds, facilities and parking areas.

Typically low-rise apartments, condominiums, and townhouses occur together in large contiguous areas since land use is restricted to multi-family zoned areas. However, in some areas one to a few buildings may occur on individual lots in single family residential neighborhoods. In newer neighborhoods they may appear as a large complex composed of many structures of similar architecture with common grounds and facilities. Some older structures are U-shaped or O-shaped with a swimming pool in the middle. A parking level may be located underneath the living area, in which case it is not counted as a story. Parking for larger complexes may include garages or carports along the periphery of the complex. Low-rise apartments and condominiums are the most common types of multi-family structures in the study area. Also included are off-campus fraternity/sorority houses and senior citizen apartments. Residential units located above first floor commercial in buildings along a commercial strip are considered commercial use (1223, 1224). An area mapped as Low-Rise Apartments, Condominiums, and Townhouses may contain an occasional Medium-Rise building.

### **1124 Medium-Rise Apartments and Condominiums**

This category includes multi-family structures of *three to four (3-4) stories* and *19 or more units/acre*. The area consists of a large single structure or a group of structures, of four or more units each, in a complex with associated common grounds, facilities and parking areas.

Many medium-rise apartments and condominiums occur in older areas as hotel/apartments. Several may be located next to each other in compact areas. Some may occur as large complexes, composed of many structures of similar architecture, with common grounds and facilities. Medium-rise apartments and condominiums are not as common as low-rise. Senior citizen apartments are included. If an area contains commercial use on the first floor and multi-family residential use on the upper floors, then the area is

considered strip commercial (codes 1223, 1224). Some older urban core cities contain apartment and condominium buildings predominantly of three, four, or more stories. An area mapped as Medium-Rise may contain occasional Low-Rise or High-Rise buildings. Use of stereoscopic viewing of aerial photos is essential in determining relative height in relation to other structures in the area.

### **1125 High-Rise Apartments and Condominiums**

This category includes multi-family structures of *five (5) stories or greater (5+) and 19 or more units/acre*. The area consists of either a single large structure or a group of adjacent structures with common grounds, facilities and parking areas.

Many high-rise apartments and condominiums occur as single or groups of high residential towers. Parking may be underground or in an adjacent parking structure. Smaller high-rise structures may contain only residential units with no other uses. High-rise residential structures are configured to maximize availability of window access to each individual residential unit. Thus the building may be long and narrow, or contain narrow lateral wings that provide window access. Senior citizen apartments are included. If an area contains *commercial use* on the first floor and multi-family residential use on the upper floors, then it is considered High-Rise Apartments and Condominiums.

### **1130 MOBILE HOMES AND TRAILER PARKS**

These residential units are composed of mobile homes, trailers and pre-fabricated housing that are either stationary with foundations or that is on wheels and capable of being moved. Included are vacant and occupied spaces, and associated storage facilities for the complex. Mobile homes and trailer parks are usually served by all utilities, are on paved streets, and are provided with or have access to all urban facilities, such as schools, parks, police, and fire stations. This category does not include transient facilities such as recreational vehicle parks or campgrounds (see code 1880).

Mobile homes are typically long, narrow, and rectangular in shape. Most have a white signature when represented on an aerial photo, although some modern mobile homes may have a less reflective or colored roofing material. Some newer modular home or mobile home courts and subdivisions contain homes with false facades, giving the impression of an apartment or condominium complex, or single family houses.

### **1131 Trailer Parks and Mobile Home Courts, High Density**

This category includes typical mobile home or trailer parks and pre-fabricated homes (6 or more units per acre) that are in a contiguous area with trailer or mobile home spaces and associated facilities.

Trailer courts and mobile home parks normally have a high, closely spaced density of units within the lot with

very limited landscaping. The mobile homes are parked side by side in parallel rows with an access drive along the front of the row. Also included are associated recreational vehicle storage lots within or next to the mobile home park.

**1132 Mobile Home Courts and Subdivisions, Low Density**

This category includes typical mobile and pre-fabricated homes located in lower density mobile home park or in a single family residential subdivision pattern on curbed named streets (less than 6 units per acre).

Individual mobile homes appear as in the description above (1131), although there may be additional architectural modification associated with it. Units are more widely spaced, with landscaping as in front and back yard areas of a normal subdivision. Each lot has its own driveway or walkway, similar to single family residential areas. Also included are associated recreational vehicle storage lots within or next to the mobile home park.

**1140 MIXED RESIDENTIAL**

**1140 Mixed Residential**

This category includes areas where there is a combination of single family detached and multi-family dwellings of any type occurring together. Typically these are located in older neighborhoods, where duplexes, triplexes, and apartment buildings occur among single family houses.

**1150 RURAL RESIDENTIAL**

**1150 Rural Residential**

Rural Residential units include ranches, farmsteads, single mobile homes, and residences located in a rural setting. Rural residential density varies based on locations of geographic area in SCAG region. The density range could be one (1) unit per acre to one (1) unit per 10 acre. Typically these areas have limited urban services.

## **1200 COMMERCIAL AND SERVICES**

Commercial and Services includes areas used predominantly for business or the sale of products and their associated services. Also included are some non-commercial uses such as government and public service offices. This class does not include industrial activities.

### **1210 GENERAL OFFICE USE**

Included are areas of office buildings usually used for financial, personnel, business, medical and other professional services. The unit includes associated facilities and parking areas.

#### **1211 Low- to Medium-Rise Major Office Use**

This category includes office buildings of one to ten stories in height.

Office buildings are usually located on or adjacent to major streets, depending on the need for high visibility. Offices have parking areas either behind or around the buildings. Typically there are two styles of building structures. Normally, the low-rise office buildings (one to four stories in height) try to maximize window access, resulting in buildings that are long and narrow, containing a central courtyard, or have lateral wings. Medium-rise office buildings (five to ten stories in height) tend to be square, or rectangular in shape. Landscaping can vary from minimal to extensive, although modern larger office buildings do have considerable surrounding landscaped areas. Utility administrative offices are included in this category. Some corporate or business parks may be entirely made up of, or predominantly contain office space, although they may be similar to light industrial complexes (1311) or mixed commercial and industrial complexes (1500).

If an area contains commercial strip use on the first floor and offices on the upper floors (3 - 10 stories), then the area is considered Low- to Medium-Rise Major Office Use. A commercial strip of two-story structures containing offices on the upper floors is considered retail strip development (1223).

#### **1212 High-Rise Major Office Use**

This category includes office buildings that are eleven to forty stories in height.

The characteristics of the smaller high-rise office buildings are similar to medium-rise office buildings as described above. The taller office buildings are typically rectangular, with no particular regard for window accessibility. Older office buildings may be located side by side with retail commercial on the first floor. Modern suburban office buildings may have their own parking areas or landscaped surroundings. Many taller office buildings will have underground parking, or parking on the first few levels.

### **1213 Skyscrapers**

This category includes office buildings greater than forty stories in height.

Skyscrapers are the tallest buildings built, normally occurring in downtown areas of larger cities, although they can also be located in business districts not associated with a downtown area. Retail commercial use usually occurs on the ground floor, with office use on the upper floors. Their relative height compared to surrounding areas is evident when the photos are viewed in stereo. Parking may be underground, on the first few levels, or in adjacent parking structures.

## **1220 RETAIL STORES AND COMMERCIAL SERVICES**

Areas composed primarily of retail stores, restaurants, offices, and personal services, including associated facilities and parking areas.

### **1221 Regional Shopping Center**

This category includes large retail centers composed of one or more major department stores and a full range of smaller shops, restaurants, offices and commercial services.

Most regional centers are enclosed malls, which are typically one to three stories in height, elongate in shape, with large square protrusions formed by the large department stores, the areas between being the smaller retail stores, services, and restaurants. Usually parking areas totally surround the building, some of which may be parking structures. Businesses located within the contiguous parking area are included with the regional shopping center. In urban areas, where open space may be limited, the mall building may be located over an entire block, with parking underground, and no visible surface parking. Factory outlet centers are included in this category.

### **1222 Retail Centers (Non-Strip with Contiguous Interconnected Off-Street Parking)**

This category includes a large magnet store, with smaller retail stores, restaurants, service shops, and offices located in shopping centers with contiguous interconnected off-street parking. These centers are normally located along major highways and traffic corridors to take advantage of the increased customer exposure. Included are gasoline stations, restaurants and other stores whose parking area is contiguous with the center. Included are some grocery store, drug store, and department store shopping centers.

Retail or shopping centers contain buildings that are typically rectangular in shape with some architectural protrusions spaced at intervals when viewed on an aerial photo. The smaller stores are housed in long, narrow portions of the building, the larger stores are in the larger square portions. The building is usually situated toward the rear of the lot, with parking on the street side. There may be smaller commercial buildings within

the parking area. Usually there is minimal to no landscaping.

Also included in this category are thematic commercial centers that function as a tourist attraction with specialty shops and restaurants.

### **1223 Retail Strip Development**

This category includes retail stores, restaurants, service shops, and offices aligned along major highways and traffic corridors to take advantage of the increased customer exposure. Included are gasoline stations, auto repair shops, convenience stores, liquor stores, small bank branch offices, clothing stores, restaurants, furniture stores, discount stores, novelty stores, car dealerships or auto centers, drug stores, small corner markets, auctions, and mini-malls. In addition to on-street parking, there is easy access to off-street parking areas, that can be found in the front, on the side, as well as behind the commercial establishments. This category includes most newer style business corridors built since the 1950's.

Included are modern commercial corridors, usually containing a mixture of commercial uses along major highways. Some lots contain one building toward the back of the lot with no major store, and a small parking lot on the street side. Strip Development areas are typically located on major streets to take advantage of the high visibility. Usually there is minimal to no landscaping. Mini-malls are similar to shopping centers except they contain no large or magnet store. Older style strip development areas are also included in class 1223.

## **1230 OTHER COMMERCIAL**

Commercial uses other than general office, typical retail stores, and/or personal services. Included in this category are associated facilities and parking areas.

### **1231 Commercial Storage**

This category includes public mini storage unit facilities and small commercial storage yards. This class does not include large storage warehouses (see code 1340).

Mini storage facilities are normally composed of a series of long, narrow parallel rectangular buildings, sometimes encompassed by a U-shaped or L-shaped building. Also included in this category are RV or large vehicle storage lots which, in some cases, are adjacent to mini storage unit facilities.

### **1232 Commercial Recreation**

This category includes areas of commercial recreational use, such as sports stadiums (not associated with

schools), car and horse race tracks, indoor shooting ranges, amusement parks, fairgrounds, gambling facilities (card halls and Indian bingo), and movie theaters (all drive-in and some walk-in types). Zoos are not included in this class, but are mapped as class 1850.

School sports facilities are mapped with the appropriate school category (e.g. a high school track would be called "High School"). Race tracks in this category do not include isolated or rural horse exercise or training tracks (see code 2700). Drive-in theaters are pie slice-shaped areas with concentric arcs within, as seen on aerial photos. Other examples include walk-in theaters not located in a mall or retail center, bowling alleys, ice and roller skating rinks, miniature golf courses, and small amusement facilities. Facilities such as bowling alleys and skating rinks may need to be verified and coded in the field since, on the photo, they resemble other types of land uses. Some categories, such as race tracks, some amusement parks, and fairgrounds, may already be identified on the collateral maps.

### **1233 Hotels and Motels**

This category includes all major hotels and motels. Small or inactive motels which may be less than 2.5 acres may be classified as strip commercial. Large hotels usually contain varied commercial activity on-site (e.g. restaurant, barber/beauty salons, bar, gift shops, etc.). Motels, however, tend to be limited to an office and individual units.

Hotels, motels, suites, inns, and motor lodges tend to be located along major transportation corridors, near airports, large amusement parks, convention centers, civic centers, and/or downtown areas to take advantage of the potential market of transient overnight or extended-stay travellers. Smaller facilities normally contain a series of one- or two-story buildings with parking within the complex, or surrounding the buildings. Landscaping may be minimal. Usually there is a swimming pool toward the front or middle of the lot. Restaurants and gas stations are located in the immediate area. Large hotels tend to be greater than three stories in height.

In order to maximize window access the building configurations are long and narrow in shape, or contain narrow lateral wings. Parking may be underground, in parking structures, or in open areas around the hotel complex. Older hotels and motel may be located along what once was a major transportation corridor, but the major corridor has since been moved to a freeway in another location.

## **1240 PUBLIC FACILITIES**

Public Facilities include government offices and other public service facilities, major health care facilities, religious facilities, and public and private educational facilities. This class also includes associated facilities and parking areas. Collateral data aids in the identification of these facilities.

#### **1241 Government Offices**

This category includes federal, state, regional, county or municipal administrative office buildings. Also included in this category are post offices, courthouses, and school district offices.

The aerial photo signature will appear similar to Commercial General Office Use (see code 1211). In the suburban areas the offices will usually be one to two stories in height, with landscaping and parking.

#### **1242 Police and Sheriff Stations\*\***

This category includes all municipal, county sheriff, and state highway patrol police stations. Police stations in a military installation are not included.

Collateral data is required to map these facilities. Normally these facilities are below the 2.5-acre minimum mapping resolution. As a critical land use, these facilities will be mapped at a minimum as a one acre polygon so that they can be included in this data base.

#### **1243 Fire Stations\*\***

This category includes all state, county and municipal fire stations. Seasonal fire stations are also included. Fire stations in a military installation are not included.

Collateral data is required to map these facilities. Normally these facilities are below the 2.5-acre minimum mapping resolution. As a critical land use, these facilities will be mapped at a minimum as a one acre polygon so that they can be included in this data base.

#### **1244 Major Medical Health Care Facilities**

This category includes public and private general medical health care facilities (hospitals) that give short-term care.

Larger hospitals are normally multi-storied, with split-level recessed/tiered upper floors that may form long and narrow lateral wings in order to maximize availability of window access for patient rooms. The area may contain other associated buildings, parking structures, parking areas, and landscaping. Smaller hospitals are one to two stories in height, with parking areas and landscaping. In both cases there may be circular drives with covered main entrances. Some facilities contain a number of buildings forming a complex. Medical offices are often located in close proximity to medical health care facilities. Some medical school facilities may be included as part of a major medical health care facility complex.



## **1245 Religious Facilities**

This category includes churches, mosques, synagogues, temples, tabernacles, and other places of worship or religious pursuit. Religious monasteries, convents, etc. are also included in this category. Not included are schools (see 1262 through 1264), communication (see code 1420) and mass media facilities (see code 1211 and 1212) associated with a religious denomination.

Worship facilities are normally below the 2.5-acre minimum mapping resolution. They appear as one main building with landscaping and parking areas. Some facilities have a grass play area, or other smaller buildings. Monasteries and convents may appear as large office-type or apartment-type buildings in a closed compound with parking areas and substantial landscaping. Religious facilities may be identified on the topographic base maps, but that source may not be current. Small cemeteries, less than 2.5 acres, that are associated with an adjacent church are included with the church. Religious camps are mapped as code 1880. Retreat or conference centers are mapped as code 1253.

## **1246 Other Public Facilities**

This category includes convention centers, and other public facilities, such as libraries, community centers, auditoriums, live indoor and outdoor theater facilities, observatories and museums, which are not covered by other categories.

Convention centers may appear as very large rectangular to square building complexes with some architectural design. There is much landscaping and surface parking, parking structures, or underground parking. Convention centers are usually located in downtown civic center areas, central business districts, or near major airports.

Many public facilities in this category resemble office buildings in appearance. Outdoor theaters appear as large amphitheater areas with concentric seating pattern. Libraries, auditoriums, observatories, museums, and community centers are usually identified on collateral sources.

## **1247 Public Parking Facilities**

This category includes public parking areas where with or without attendant-cashier is present. Only parking facilities greater than the 2.5-acre minimum mapping resolution are included. Facilities smaller than minimum mapping resolution are mapped with the adjacent use.

Most public parking facilities occur in older strip development areas (code 1224). Most of these parking facilities are located in the central business districts of suburban cities or community centers. The parking facility is usually located behind or across the street from the old commercial strip.

## 1250 SPECIAL USE FACILITIES

Special Use Facilities include institutional type facilities such as correctional institutions, mental health institutions, convalescent health care facilities, non-profit institutions, and fraternal organizations.

### 1251 Correctional Facilities

This category includes large facilities providing institutional services, such as juvenile halls, youth correctional facilities, county jailhouses, federal and state prisons, and state correctional mental hospitals (also see code 1252).

These institutions may be several acres in size, with many "office-type" or "apartment-type" buildings, landscaping, and parking areas, all confined to a closed complex. Other uses, such as agriculture, occurring within the correctional facility grounds are mapped separately.

### 1252 Special Care Facilities

This category includes public and private institutional care, such as convalescent and rehabilitation facilities, nursing homes, mental health facilities, sanitariums and state non-correctional mental hospitals. Also included are reform schools, orphanages, and homes for abused, neglected, or other special needs children. This class does not include senior citizen apartments (see codes 1121, 1122, 1123, 1124, and 1125).

Larger facilities are normally multi-storied, with split level recess-tiered upper floors that may form long and narrow lateral wings in order to maximize availability of window access for patient or resident rooms. The area may contain other associated buildings, parking structures, parking areas, and landscaping. Smaller facilities are one to two stories in height, with parking areas and landscaping. In both cases there may be circular drives with covered main entrances. Residential and mental health facilities may contain "office-type" or "apartment-type" buildings, landscaping, and parking areas in a closed complex.

### 1253 Other Special Use Facilities

This category includes fraternal and other non-profit organizations, such as Salvation Army, Goodwill Industries, YMCA, youth organizations, homeless shelters, etc. Also included are retreat or conference centers.

This category includes a wide range of photo signatures. Many of the facilities in this category are similar to office buildings in appearance. Some may occur in retail commercial areas. Some fraternal organizations, however, may take on the appearance of churches or other religious facilities. YMCA and YWCA facilities may contain recreational facilities such as swimming pools, gymnasiums, baseball fields, etc. Some facilities

may appear in industrial areas, such as Goodwill Industries.

## **1260 EDUCATIONAL INSTITUTIONS**

All levels of public and private schools, colleges, universities, seminaries, and training centers are covered by this category. Includes buildings, open space, dormitories, and parking areas. Also included are all athletic facilities, such as ball fields, stadiums, soccer fields, swimming pools, and tennis courts.

### **1261 Pre-Schools/Day Care Centers**

This category includes public and private pre-schools, nursery schools, and day care centers. Facilities associated with other educational institutions or religious facilities are not included in this category.

Most pre-schools/day care centers are below the 2.5-acre minimum mapping resolution. Typically, pre-schools and day care centers are located in commercial areas within close proximity to residential neighborhoods. The facility can appear similar to any commercial type use, however, it will usually contain playground equipment within a fenced lot.

### **1262 Elementary Schools**

This category includes public and private schools, kindergarten through sixth grade, kindergarten through eighth grade, or other beginning grade levels, depending on local school board or administration policy.

Normally buildings are one or two stories in height, though some higher storied buildings may be present. The area contains landscaping and walkways. Buildings are either long and rectangular or have long narrow wings to maximize availability of window access. The play area can be a gray photo signature of asphalt, or a green signature of grass, or both. Elementary schools are usually much smaller than the other types of schools, normally less than 10 acres in size. The parking lot is very small, and may contain a bus loading curb or area. Because this class is a critical land use, any schools that are below the 2.5-acre minimum mapping resolution will be mapped at their actual size, or at a one-acre minimum. If a school serves a narrower or wider range of grade levels, then the school is assigned the class that the facility typically resembles.

### **1263 Middle Schools**

This category includes public and private schools for grades seven through eight, seven through nine, or other intermediate grade levels, depending on local school board or administration policy. Intermediate and Middle Schools may be included in this category.

Normally buildings are one or two stories in height, though some higher storied buildings may be present.

The area contains landscaping and walkways. The buildings are either long and rectangular or have long narrow wings to maximize availability of window access. The athletic area may have a gray photo signature representing asphalt and a larger area of grass which is used as the soccer field/baseball diamond/track. Some schools will have a swimming pool or tennis courts. A parking lot with bus loading curb area may be visible.

Junior high schools appear similar to high schools, but have smaller parking and athletic facilities. A junior high school lot is normally about 10 to 20 acres in size. Because this class is a critical land use, any schools that are below the 2.5-acre minimum mapping resolution will be mapped at their actual size or at a one acre minimum. If a school serves a narrower or wider range of grade levels, then the school is assigned the class that the facility typically resembles.

#### **1264 High Schools**

This category includes public or private schools for grades ten through twelve, nine through twelve, or other upper grade levels, which are authorized to grant a high school diploma. Both regular, alternative, and extended day or adult education campuses are included. Seminary high schools are also included.

Normally buildings are one or two stories in height, though three- or four-story buildings may be present. The area contains landscaping, walkways, and glades. Buildings are either long and rectangular or have long narrow wings to maximize availability of window access. The athletic area may be a gray signature of asphalt, with a larger area of grass for a soccer field. There are also separate baseball diamond/fields, football fields/stadiums, and track ovals.

Some schools will have a swimming pool and tennis courts. A parking lot with bus loading curb area may be visible. One may find a series of buses parked there. A senior high school lot is normally about 20 to 50 acres in size. However some private high schools may be below the 2.5-acre minimum mapping resolution and will be mapped as a one acre polygon at minimum in order to be included in the data base. If the school serves a narrower or wider range of grade levels, then the school is assigned the class that the facility typically resembles.

#### **1265 Colleges and Universities**

This category includes all public or private schools that offer courses at grade level 13 or higher, conferring either professional or academic degrees. Post-high school seminaries are also included.

Normally buildings are one to four stories in height, though higher storied buildings may be present. Buildings are either long and rectangular or have long narrow lateral wings to maximize availability of window access. Some buildings, such as libraries, auditoriums, and gymnasiums, may be rectangular in shape. Many buildings have architectural design in their shapes and features. Areas within the school may be

well landscaped, containing walkways, glades, quads, squares, large lawn areas, greens, or malls. Athletic areas may be separate from the main school area. Asphalt areas for basketball may be present. There are also separate baseball fields, football stadiums, track ovals, tennis courts, and swimming pools. Small streets and parking areas may be located throughout the complex. Dormitories and on-campus fraternity/sorority houses are included. Off-campus university-owned housing and off-campus fraternity/sorority houses may be mapped as a multi-family or single-family residential category.

#### **1266 Trade Schools and Professional Training Facilities**

This category includes all schools which provide technical, vocational, occupational, or professional training (e.g. vocational schools, occupational training centers, police academies, secretarial schools, nursing academies, technical institutes, or art institutes).

These facilities are normally smaller than and may identify themselves as, a college or university. Most facilities will be smaller than a high school and without the athletic facilities normally associated with other schools. Buildings may be any size, but normally one to two stories in height, resembling office buildings. Some buildings may be long and narrow to maximize availability of window access. The facility will have an adjacent parking area.

### **1270 MILITARY INSTALLATION**

Areas of military installations and associated facilities administered by the United States Armed Forces or the California National Guard. Water bodies within a military installation are coded as 4400.

#### **1271 Base (Built-Up Area)**

This category includes all developed lands (except agriculture (1272), airfields (1273), and water (4400)) within a military installation. Includes bases, camps, armories, ordnance depots, and missile sites.

Built up area may contain office buildings, residential units, industrial areas, equipment storage facilities, administrative buildings, other support facilities, parking areas, landscaping, glades, walkways, and athletic facilities. Small areas of vacant land within this category are considered part of the built-up area. Some government contracted research or industrial facilities may be located within a military reserve. Collateral data is necessary to delineate the boundaries of the military reservations.

#### **1272 Vacant Area**

This category includes all large areas of undeveloped lands within a military installation.

Includes large areas of vacant land within the military installation boundary. Small areas of vacant land

within the built-up base area are considered part of the base (1271). Also included in this category are agricultural areas within the military reservation. Collateral data is necessary to delineate the boundaries of the military reservations.

**1273 Air Field**

This category includes air fields and associated facilities within a military installation.

Includes the landing strip, tarmac, taxiways, aircraft storage areas, hangars, and repair areas. Vacant areas within the airfield complex are included. On the aerial photos the hangars appear as large square buildings, two to three stories in height with aircraft parked nearby, with direct access to the air strip and taxiways.

**1274 Former Military Base (Built-Up Area)**

This category includes all developed lands (except agriculture (1272), airfields (1273), and water (4400)) within a former military installation. Includes bases, camps, armories, ordnance depots, and missile sites.

Built up area may contain office buildings, residential units, industrial areas, equipment storage facilities, administrative buildings, other support facilities, parking areas, landscaping, glades, walkways, and athletic facilities. Small areas of vacant land within this category are considered part of the built-up area. Some government contracted research or industrial facilities may be located within a military reserve. Collateral data is necessary to delineate the boundaries of the military reservations.

**1275 Former Military Vacant Area**

This category includes all large areas of undeveloped lands within a former military installation.

Includes large areas of vacant land within the military installation boundary. Small areas of vacant land within the built-up base area are considered part of the base (1271). Also included in this category are agricultural areas within the military reservation. Collateral data is necessary to delineate the boundaries of the military reservations.

**1276 Former Military Air Field**

This category includes airfields and associated facilities within a former military installation.

Includes the landing strip, tarmac, taxiways, aircraft storage areas, hangars, and repair areas. Vacant areas within the airfield complex are included. On the aerial photos the hangars appear as large square buildings, two to three stories in height with aircraft parked nearby, with direct access to the air strip and taxiways.

## **1300 INDUSTRIAL**

Areas where manufacturing, assembly, processing, packaging, or storage of products takes place.

### **1310 LIGHT INDUSTRIAL**

Design, assembly, finishing, packaging, and storage of products or materials which have been processed at least once.

These activities are characterized as "clean", since they produce a relatively small amount of smoke or other effluents, noise, and dust. Includes associated facilities and parking.

#### **1311 Manufacturing, Assembly, and Industrial Services**

This category includes all types of light industrial activity except those associated with the motion picture industry. Associated areas used for open storage of heavy equipment are mapped as 1323.

Most light industrial manufacturing and assembly buildings appear as large square or rectangular structures, all located in an contiguous area usually zoned for such operations. Some buildings may be long and narrow; most buildings are one story and may have very high ceilings. On the aerial photo one can note a series of evenly spaced air conditioning units or air turbines on the roof. Many newer industrial buildings will have a white roof photo signature. The buildings are usually located in the middle of the lot, though that is not an essential requirement. There will be parking areas surrounding the building for employee parking. There is also minimal to no landscaping. Some light industrial manufacturing establishments occur together in a business, corporate, or industrial park. Others may occur in an industrial or commercial park mixed with commercial uses or offices (see code 1500). Included in this category are wholesale lumber yards and lumber milling and cutting operations. Lumber operations are distinguishable on the photo by the many large stacks of wood, pallets, and trusses. Also included are breweries, wineries, and food processing facilities. Small extractive sand and gravel operations as part of a small brick making operation are included in this category unless the extractive (code 1331) area is large enough to map as a unit by itself. Metal reprocessing facilities and recycling centers are also included. Industrial facilities located within a military reserve are mapped as military (code 1271).

#### **1312 Motion Picture and Television Studio Lots**

This category includes motion picture company and television production studios as well lots or open areas used for outdoor sets. Also included are permanent remote lots used for production.

Various types of structures may appear on the lot. Offices would appear as long narrow buildings, possibly with wings. Sound stages may appear as very larger square or rectangular buildings. The buildings may appear in a series or in rows. The back lot areas may appear as non-descript open areas with various smaller structures and vegetation.

### **1313 Packing Houses and Grain Elevators**

This category includes facilities used for the packing and storage of produce for shipment to markets or processing plants.

Packing houses and grain elevators are usually located adjacent to railway lines. They can occur in urban industrial areas, although they are normally located in rural agricultural areas. Packing houses are large, rectangular warehouse type buildings. Grain elevators consist of one to several adjacent, tall, cylindrical metallic structures. The elevators may be adjacent to associated buildings.

### **1314 Research and Development**

This category includes industrial complexes where product, technology, or idea development and research is the primary function.

Normally research and development is part of a commercial or industrial business and is housed within structures of that primary use. However, some research and development takes place in separate areas or structures apart from or adjacent to its associated parent facility. Research and development facilities contain office buildings and laboratories. Some light industrial-type structures may also be present. Off-campus university field laboratories are included. Academic institutions, however, are not included in this class. Research and development facilities located within a military reserve are mapped as military (code 1271).

## **1320 HEAVY INDUSTRIAL**

Industrial and manufacturing facilities of a large magnitude involving the processing of raw materials. It is considered relatively "dirty" since wastes such as smoke, slag, dust, and liquid effluent, as well as noise, are often generated. Includes associated facilities and parking areas.

### **1321 Manufacturing**

This category includes large operations of manufacturing activities such as large brick, cement, and asphalt production facilities. This category does not include Petroleum Refining and Processing (see code 1322), Open Storage (see code 1323), Major Metal Processing (see code 1323), and Chemical Processing (see code 1325).

These facilities may appear as several large buildings or as a complex on a large lot, with parking. The layout of the complex buildings may not be orderly. The facility may have access to several spurs of a railroad system taking advantage of the transportation network. Raw materials may be stored in the open or in large silos. The area appears to be very "dirty" from the fallout of raw materials or industrial waste



products.

Manufacturing plants are usually located in an area of other similar operations or with light industrial areas.

### **1322 Petroleum Refining and Processing**

This category includes major oil refineries, as well as associated petrochemical plants.

Petroleum operation photo signatures have a "dirty" gray to black appearance over the entire facility. Large pipes, vats and storage tanks are compactly situated over the entire area. Typically there are acres of storage tanks situated in a matrix formation. Petroleum refining facilities are located adjacent to major harbor facilities, or may be located on the coast where tankers may unload their crude oil from offshore intake pipes. This category does not include oil well or exploration areas (see code 1332).

### **1323 Open Storage**

This category includes wrecking yards, junk yards, storage of heavy equipment not related to maintenance, and other salvage and recycling operations. Also included are outdoor areas used for storage of light or heavy industrial products. This class does not include open storage of new cargo at harbor facilities (see code 1411).

The photo signature for wrecking and junk-yards appears as a lot containing many cars in high concentration lined up in columns or rows with dirt access "lanes" in between. Other junk-yards may appear as non-descript areas of large metallic material lying in an area in no particular order or arrangement. Open storage of light or heavy industrial products appear as large yards in an industrial area with a relatively neat organization of heavy equipment. Also included are non-commercial lots containing what appears to be abandoned equipment, usually stored in a disorderly fashion. Cargo storage areas located in railroad yards are coded as Railroad (code 1412).

### **1324 Major Metal Processing**

This category includes all foundries, smelters, stamp mills, and other heavy metal manufacturing or processing plants, with the exception of recycling centers or wrecking yards.

The photo signature appears as an area, many acres in size, containing many square to rectangular or long narrow buildings, with air turbines or air conditioning units on the roofs. Situated within the area are numerous smoke stacks and pipes. The area is also tinged with a "dirty" gray color. Also included are associated "slag heaps".

### **1325 Chemical Processing**

This category includes major chemical refining plants and their associated facilities.

Chemical processing plants may appear as office type buildings used for administrative purposes, with larger industrial type buildings, large pipes, and tanks for movement and storage of necessary liquids or gases.

## **1330 EXTRACTION**

Areas whose use is devoted to the extraction of mineral and rock products. Includes associated mining area, facility structures, and parking areas.

### **1331 Mineral Extraction - Other Than Oil and Gas**

This category includes surficial extraction of minerals and rock products, including sand, gravel, clay, diatomaceous earth, metals and other non-metals. Includes quarries, open pit mines, and borrow pits. Also included are surficial structures related to below ground mine activities. This class does not include oil and gas extraction (see code 1332).

Most quarries will appear as a giant hole dug in the earth, with steep-sided edges. On the top surface and down in the pit there will be little or no vegetation due to the disturbance of the ground by earth movers. Ponds of water may be located in the pit or on the upper ground surface. Tailing piles may be located nearby, adjacent to, or on the mining site. Sand and gravel operations are usually located in or near river floodplains. Sand and gravel pits may have the extracted material piled in the pit or adjacent to the pit on the upper ground surface, with storage bins and long linear conveyor belts crossing the piles. Borrow pits may appear only as small one- to 3-acre areas of graded land with little or no vegetation located near a highway or built up area. The borrow pit was extracted for fill dirt. Some short escarpments may be found at the edges of the borrow pit. Most underground mining operations have limited surface exposure. Some shaft or mining operation out-buildings may be located in a mappable cluster, with some adjacent tailings.

### **1332 Mineral Extraction - Oil and Gas**

This category includes oil and gas extraction and associated surface storage facilities. Subsurface known or suspected reserves are not included. Offshore oil and gas extraction is not included.

Oil and gas extraction fields can be distinguished by the presence of a series of tall oil derrick towers or oil pumps. The derricks appear as a group of concentrated long shadows on the aerial photo. Some areas

have only the oil pumps, without derricks, scattered within a field area. Some oil field pumps may be located in a built-up area. By itself, a pump is below mapping resolution, but when situated in a group, the area may be mappable. An oil field area appears on the aerial photo as an extensive network of roads and small clearings usually located on a hill or mountain slope. Most fields are identified on the basemap. Built-up uses take precedence over the mapping of pumps.

## **1340 WHOLESALING AND WAREHOUSING**

### **1340 Wholesaling and Warehousing**

This category includes storage, supply, or distribution warehousing or wholesale shipping centers other than those which are integral parts of airports, transportation centers, and harbor facilities.

The warehouse structures appear similar to light industrial manufacturing buildings in that most are large squares or rectangular in size and shape, with few or no air turbines or air conditioning units on the roof. The building is typically located near the middle of the lot, with very little employee parking. On the aerial photo one may be able to see long narrow truck trailers lining the edges at the loading docks. Other truck trailers may be parked within the lot. Usually there is little or no landscaping, and very little parking. Only large high volume operations may have larger employee parking areas. This category does not include Truck Terminals (1416). Open storage of heavy equipment is coded 1323.

## **1400 TRANSPORTATION, COMMUNICATION, AND UTILITIES**

Major structures and facilities associated with forms of transportation, communication, and utilities.

### **1410 TRANSPORTATION**

Areas devoted to major transportation, such as airports, freeways, roads, railways, and harbors facilities.

#### **1411 Airports**

This category includes all airports (Commercial Service Airports, General Aviation, airports Military Airfields, Joint Use Airfield) air fields, and air strips, heliports, and their associated parking and storage facilities.

The airport area includes repair and storage hangars, aircraft parking areas, taxiways, and the vacant areas at the ends of and between runways. On the aerial photo the hangars will appear as large rectangular or square structures adjacent to the runway/taxiway and aircraft parking area. In major airports, passenger terminals and automobile parking areas are also included, as well as air freight facilities. Also included in this class are heliports and land associated with seaplane bases. Also included are car rental

establishments located within the airport complex. Off-site car rental locations are mapped as modern strip development (code 1223). Vacant and agricultural areas within the airport boundary are coded 3100 and 2110 or 2120 respectively.

#### **1412 Railroads**

This category includes train terminals, stations, associated parking areas, roundhouses, repair and switching yards, and railbed rights-of-way, including spurs and sidings. Also included are cargo storage and transfer areas located within the railroad yards. The width of the rights-of-way must be at least half the width of a 2.5-acre square to be included.

Railroad beds appear on the aerial photo as a continuous dark, narrow line with an adjacent band of off-white on each side. The railroad beds appear very similar to minor roadway beds, except they are narrower and are continuous for miles. Terminals and switching yards appear as an abrupt multi-branching of the line, becoming polygonal areas, rather than linear. One may be able to see the railroad cars on the photo. Spurs and sidings may be below resolution. They appear as two or three tracks branching off side by side next to the main track or as a branch of the track veering off in another direction. Railroad rights-of-way are normally below minimum mapping resolution, so only those areas meeting the minimum resolution are mapped. Major railroad stations will appear as a large facility with parking and a large building adjacent to the railroad tracks. The tracks may be under a large covering, or have covered platforms adjacent to each track.

#### **1413 Freeways and Major Roads**

This category includes freeways, interchanges, major roadways, and their adjacent rights-of-way. The delineations include the roadbed, landscaped areas, access routes, and associated adjacent drainage ways. Also included are rest areas, weigh stations, and toll booths.

All freeways are to be mapped, as well as major roadways that are at least half the width of a 2.5-acre square. Freeways appear as two to six lane roadways with adjacent landscaping and center divider, with interchanges, overpasses, and underpasses. The freeway lane signature is gray to white. Rest areas appear as landscaped areas with small structures (bathrooms and picnic overhangs) and parking areas. On the photo one may be able to see cars and large trucks parked. Normally there is a rest area located on each side of a freeway at the same location. There is an off-ramp and an on-ramp from the freeway to each rest area. Toll booth plazas appear as a sudden widening of the roadway into many lanes that run into a long, narrow covered area dissecting the roadway. On the other side of the booths, the lanes converge again to form the freeway lanes. Road cuts are mapped as vacant land (3100), not as part of the 1413.

#### **1414 Carpool and Rideshare Facilities**

This category includes Cal Trans park and ride lots provided for commuter ridesharing, buspooling, vanpooling, and carpooling purposes.

Park and ride facilities appear similar to parking lots and are located near major freeways or highways. Some park and ride lots are located in retail center parking lots. Collateral data is necessary to map these facilities.

#### **1415 Bus Terminals and Transit Centers**

This category includes areas used as bus terminal facilities, including transit centers. These are parcels or sections of parcels where multiple transit vehicles stop, allowing for easy transfer between routes.

#### **1416 Truck Terminals**

This category includes areas used as truck or highway freight terminals, freight transfer, or large truck stops where there is a high level of truck activity.

Truck terminals and freight transfer structures will appear as small rectangular buildings with the large truck trailers parked all around at the loading docks. Additional trailers may be parked on the lot. There is not very much employee parking. Warehousing is not included in this category (1340). Large truck stops are located adjacent to freeways and contain services such as gas stations, restaurants, motels, and truck repair. On the aerial photo one can see a large truck trailer parking area, with trucks. Small truck stops are mapped as part of modern strip development (code 1223).

#### **1417 Harbor Facilities**

This category includes port and dock facilities and associated storage areas. Includes shipyards, dry-docks, locks, waterway control structures, buildings and associated parking areas. Marinas are included in Other Open Space and Recreation (see codes 1880 and 4300). Harbor-use in the adjacent water body are included in Water (code 4200).

Major harbor facilities are located at the ocean, within close proximity to or within a large metropolitan area. Numerous wide channels and "sea lanes" are available for ships to pass in, out and through the facility. There are numerous slips and berths for loading and unloading of cargo, as well as large areas for container or cargo storage. Other facilities include ship repair and ship building areas. There may also be tanks for storage of petroleum products not associated with a refinery. Other adjacent facilities, such as heavy or light industrial are mapped into their respective categories. All water associated with the

harbor facilities is included in class 4200, Harbor Water Facilities.

#### **1418 Navigation Aids**

This category includes areas occupied by facilities necessary to aid navigation, such as lighthouses.

Lighthouses will appear on the coast at prominent points where sea navigation may be hazardous. There is usually an area set aside for the light itself, keepers quarters, other navigation and communication antennas, as well as some landscaping. When viewed in stereo one may be able to discern the lighthouse tower. Other navigation aids such as beacons, horns, and communication antennae, and VORTACs may be below minimum mapping resolution.

### **1420 COMMUNICATION FACILITIES**

#### **1420 Communication Facilities**

This category includes areas used for airwave communications, including radio, radar, television, telephone, and microwave facilities.

Most communication facilities are below minimum mapping resolution, unless many antennae towers and structures are located together. These facilities are normally made up of one or more antennae or towers, sometimes including one to a few small square or rectangular buildings. Radio towers occur as a set of 3 tall towers on a lot, whereas TV towers occur as one large, tall tower. Microwave towers are usually individual, shorter towers. Telephone central offices are normally enclosed in a one- or two-story, square or rectangular building in a built-up area.

### **1430 UTILITY FACILITIES**

Areas which are used for the production and transmission of electricity, and the treatment or transportation of water, sewage, and fuels.

#### **1431 Electrical Power Facilities**

This category includes facilities engaged directly in the generation and distribution of electricity. Included are power generating stations (thermal, nuclear, hydroelectric, coal, steam, wind energy farms), substations, and transmission line rights-of-way. Transmission line rights-of-way are mapped if the width of the corridor is at least half the width of a 2.5-acre square. This class does not include administrative offices.

Electrical power plants appear similar to heavy industrial operations. The facility contains smoke or steam stacks with vents, piping, tanks, towers, and racks containing transformers and other electrical equipment. Several transmission line corridors converge at power plant sites. Substations appear as metal racks containing the transformers and other electrical equipment. They may be as small as 1/4 acre to as large as several acres. The racks are normally located near the center of the lot, with the ground surfaced in gravel. One to several transmission line corridors converge at the substation. The transmission line corridor appears as a linear swath of land traversing the landscape. The corridor may be located along the side of a street and be very narrow or located in vacant areas and be as wide as 1/4 mile if the corridor contains several transmission line towers. On the aerial photo one may be able to see the individual tower areas as a white dot immediately surrounded by a small graded area. Leaning away from each dot one may be able to see the black shadow of the tower or power pole. One can follow these dots from tower to tower along the corridor, from substation to substation or power plant. Some corridors contain other uses such as nurseries, orchards, cropland, or pastures within the right-of-way. The other uses underlying a transmission line take precedence. If the underlying use is vacant, the electric transmission line corridor takes precedence. Only corridors that are above the minimum mapping resolution are mapped.

#### **1432 Solid Waste Disposal Facilities**

This category is used for active dumps and sanitary landfill operations, and their associated facilities.

Most landfills in southern California are located in old excavated gravel pits or in canyons. They will appear as large extents of graded area, or if located on a plain, will appear as an extensive graded mound.

The pit or canyon may appear to be partially or significantly filled, with tractors or other heavy excavating equipment on its surface. These facilities are normally located away from areas of human habitation or areas of high human concentration or activity. Other uses overlying a closed, abandoned, or inactive landfill take precedence.

#### **1433 Liquid Waste Disposal Facilities**

This category includes sewage treatment and liquid waste treatment plants and associated spreading grounds, aeration fields, and water injection plants. Also included are associated facilities and parking areas.

The aerial photo signature will normally show about four circular tanks, each with a linear pipe forming a radius within the tank. Surrounding the tanks may be some small ponds, site office, and parking facilities.

#### **1434 Water Storage Facilities**

This category includes most small water reservoirs and water tanks used for domestic water supply. Included are any associated facilities and dams.

The reservoirs include all covered water storage facilities and water tanks. Open water bodies used for water storage are included if they are below 5 acres in area, otherwise they are mapped as Water (see code 4100). Water tanks appear on the photo as a small round light colored structure. Covered reservoirs may be circular, oval, or rectangular in shape. Dams associated with water storage reservoirs are included. Dams associated with flood control are mapped as code 1437.

#### **1435 Natural Gas and Petroleum Facilities**

This category includes major natural gas and petroleum distribution systems. Included are pumping facilities, and storage facilities not associated with a refinery. Not included are underground storage facilities.

Pipeline rights-of-way at least half the width of a 2.5-acre square are mapped. Most of the facilities require collateral data in order to be mapped. Large tank farms not associated with a refinery are included.

#### **1436 Water Transfer Facilities**

This category includes major above-ground water distribution channels, aqueducts, water treatment, filtration (non-sewage), reclamation (non-sewage), and pumping facilities.

Examples of water transfer are the California Aqueduct and Coachella Canal which appear on the aerial photo as a linear open water, concrete lined canal; and the Los Angeles Aqueduct which appears as a linear, large, above-ground pipeline. Most of the facilities can be identified on the collateral data. This category does not include improved flood channels and structures (see code 1437).

#### **1437 Improved Flood Waterways and Structures**

This category includes flood control channels and dams, detention ponds, percolation basins, and debris dams.

Most improved flood control channels are channelized and/or lined with concrete. The photo signature shows a white to off-white color representing the concrete lining. Percolation basins are a series of basins adjacent to a flood control channel where flood water is allowed to recharge the groundwater. Debris dams are normally earthen, but may contain a concrete spillway. They are located at the mouth of canyons or downstream of the canyon, and contain a vegetated, though dry to intermittent back pond.



Dams associated with water storage are mapped as code 1434. The improved flood waterways and structures are usually identified on the collateral data.

#### **1438 Mixed Wind Energy Generation and Percolation Basin**

This category is used where electrical power facilities such as wind energy generation farms and improved flood structures, such as percolation basins occur together in a double use fashion. The wind energy towers are located on the levees between the basins.

### **1440 MAINTENANCE YARDS**

This category includes maintenance facilities owned and operated by a major utility or government agency. Included are repair and storage yards.

Maintenance yards normally contain an L-shaped or long, narrow rectangular, single story building. The lot contains a number of parked company vehicles and heavy equipment or machinery. Also stored on the lot is other maintenance or replacement equipment. Construction materials may also be stored on the lot. Collateral data and field verification are required for mapping.

#### **1441 Bus Yards**

Facilities for the storage and maintenance of bus transit vehicles. Major storage/maintenance yards appear as large parking areas for buses. On the aerial photo one may be able to see a number of buses parked side by side or one behind the other. School bus yards are also included. School buses will appear as yellow in color, with a white roof and, in some cases, large black numbers painted on top.

#### **1441 Rail Yards**

Facilities for the storage and maintenance of rail vehicles.

### **1450 MIXED TRANSPORTATION**

#### **1450 Mixed Transportation (Highway, Passenger Rail ...)**

This category includes areas where more than one transportation use is present and neither dominates.

This class may be used when a highway occurs adjacent to a railroad and together the width of the right-of-way is above the 2.5-acre minimum mapping resolution. Each individual right-of-way may be below resolution. Where a 1450 is crossed by a freeway (1413), the freeway takes precedence in the overlap area.

## **1460 MIXED TRANSPORTATION AND UTILITY**

### **1460 Mixed Transportation and Utility**

This category includes areas where a transportation and utility right-of-way occur together or side by side and neither use dominates.

This class may be used when a highway or railroad occurs adjacent to a transmission line corridor or an improved flood control channel. Together the combined right-of-way is above the 2.5-acre minimum mapping resolution. Each individual right-of-way may be below resolution.

## **1500 MIXED COMMERCIAL AND INDUSTRIAL**

### **1500 Mixed Commercial and Industrial**

This category includes both commercial and industrial land uses occurring together, or in close proximity. Each individual land use unit is below the 2.5-acre minimum mapping resolution and neither use dominates.

Typically this class occurs at some "industrial", "commercial" or "business" parks that contain a mixture of light industrial use, offices, warehouse/distribution use, retailing, and personal services. These complexes usually contain one or more buildings rectangular in shape, with minimal landscaping. Each building is similar to a typical light industrial building. Buildings composed predominantly of retail businesses are coded 1223, and those composed predominantly of light industrial are coded 1311. This class is also used in areas not located in a complex, but the industrial and commercial classes do follow the definition above. Also included are areas where a combination of commercial and industrial use occur within the same building.

### **1600 MIXED Residential and Commercial Services**

This category includes built-up areas where there is a mixture of residential and commercial uses occurring within a specific area.

This class typically occurs in smaller towns or villages where there are various uses in a small area. It may also occur in older areas where consistent zoning was not in force at the time of construction of structures. Also included are areas where a mixture of uses occur within the same building. For example, an older commercial strip may contain adjacent buildings where commercial use occurs on the first floor

and, in all buildings, either residential or offices occur in the upper floors.

**1610 Residential-Oriented Residential/Commercial Mixed Use**

This category includes sites or buildings that have floor area dedicated to both residential and commercial uses, such as office or retail, but residential makes up the primary use of the site. This category includes low and medium-rise mixed use buildings, often with retail on the first floor and up to four floors of residences. It also includes mixed use high rises with floors dedicated to retail and office space and floors dedicated to condos or apartments. As well as mixed sites with both commercial and residential uses adjacent on the first floor. This is different from Commercial-Oriented Residential/Commercial Mixed Use (1620), which dedicates half or more of the building space to commercial uses.

**1620 Commercial-Oriented Residential/Commercial Mixed Use**

This category includes sites or buildings that have floor area dedicated to both residential and commercial uses, with the majority of the site or building's use dedicated to commercial purposes like retail, office, or hotel or other nonresidential uses. This category includes low and medium-rise mixed use buildings, like buildings with floors dedicated to office space and floors dedicated to residential, as well as high rise buildings like a hotel that includes residential apartments or condos. For this category, commercial makes up the primary use of the building and residential uses are included. Buildings that do not include residential uses are coded as Office or Commercial uses (1200-1233).

**1700 UNDER CONSTRUCTION**

This category includes facilities that were under construction at the time of field verification. Structure use and/or extent cannot be or is difficult to determine.

Pad platforms or foundations may be visible. Partly constructed structures may also be visible. If the use and its extent can be determined, then the polygon is categorized with its known use.

**1800 OPEN SPACE AND RECREATION**

Developed open areas within urban settings, and urban and non-urban open areas developed for recreational activities.

**1810 Golf Courses**

This category includes public and private courses including driving ranges, greens, fairways, links,

hazards, buildings, and parking areas.

Golf courses appear on the photo as areas containing long green grass areas lined with trees. The greens have hazard ponds and white sand traps adjacent to them. There can be nine or eighteen fairways/greens. Typically there is a main building serving as the clubhouse/office/restaurant. Driving ranges not associated with a golf course are mapped as Other Open Space and Recreation (code 1880). Most golf courses are identified on the collateral data. Residential areas within golf courses are mapped separately as their residential type. Water bodies that are greater than 2.5 acres are mapped as 4100.

### **1820 Local Parks and Recreation**

This category includes neighborhood, city, town, or community parks, and sports fields, and their associated parking facilities. Beach parks are not included (see code 1870).

Local parks are typically small, up to several city blocks in size, but basically serve the immediately surrounding community. The photo signature shows a green grass area with trees scattered throughout, though trees are not a requirement of this class. The park may contain limited sports facilities. Parking is usually on the street, though there may be one or more parking lots. The sports fields are usually softball fields, basketball courts, tennis courts, or soccer fields, though some parks also contain swimming pools. Some parks also contain a recreational building or multi-purpose building, with offices and indoor sports facilities. Private parks serving a development or subdivision are included. Most parks are identified from collateral sources. In some cities, school athletic field/playground areas are also considered parks, therefore these areas were mapped as parks. This class includes such uses as zoos, wild animal parks, duck ponds, exotic animal farms, etc.

### **1830 State/National Park and Recreation**

This category includes developed land within parks designed to serve a regional area. All facilities within the park, such as campgrounds, marinas, or boat launching facilities, are included in this class.

Regional parks are typically large, and may include undeveloped areas.. The photo signature shows green grass areas, as well as tree-covered areas. The park may have one or more roads winding through it, depending on the size of the park. The park usually contains a number of sports facilities, such as basketball courts, tennis courts, softball fields, soccer fields, and swimming facilities. Water bodies within regional parks that are above mapping resolution are coded 4100. Beach parks are not included (see code 1870). Where multiple uses occur within a regional park, for example golf course, agriculture, flood control, etc., the use other than Regional Park takes precedence. Most regional parks are identified on collateral sources. This class includes such uses as zoos, wild animal parks, duck ponds, exotic animal

farms, etc. Zoos appear as large areas with many buildings and much vegetation in a confined area, with numerous walkways. A large parking lot is adjacent to the facility.

#### **1840 Cemeteries**

This category includes public and private cemeteries, memorial parks, mausoleums, and other burial grounds. Included are associated facilities and parking areas.

Cemeteries appear on the photo as green grass areas, similar to local parks. Cemeteries, however, contain roads configured as a grid network or with a center oval. The interpreter may be able to see subtle lineation representing the tombstones, plaques, and flowers at each grave. One or more buildings are found on the lot which may include a mortuary, chapel, office, or crematory. A line of cars may be seen on the photo if a funeral was in progress at the time of exposure.

#### **1850 Wildlife Preserves and Sanctuaries**

This category includes public and private facilities, and areas devoted to the preservation of wildlife species and habitats.

Other wild animal facilities are typically located outside the urban area in canyons and are not open to the general public. Most wildlife preserves and sanctuaries will be identified on collateral data.

#### **1860 Specimen Gardens and Arboreta**

This category includes botanical gardens or arboreta devoted to preserving living specimens of vegetation for scientific or cultural purposes.

These facilities are identified on collateral data. The photo signature will show a well manicured, highly vegetated area, with numerous walkways, buildings, and greenhouses, with an adjacent parking area. Arboreta associated with colleges or universities are mapped as 1860.

#### **1870 Beach Parks**

This category includes all public and private beach parks. The facilities include bathhouses, barbecue pits, parking areas, sports areas, as well as the beach area.

Beach parks are identified on the collateral data. The aerial photo signature shows a white to tan color for the sand area, and a gray signature for parking areas. Some buildings may be located adjacent to the parking lots.

## **1880 Other Open Space and Recreation**

This category includes developed portions of public and private recreational facilities that are not described in the other open space and recreational categories above. Included are camps, campgrounds (unless within a regional park (1830)), outdoor shooting ranges, ski areas, marinas, and driving ranges not associated with a golf course. Also included are maintained grass areas not used or designated as a local park.

Most of these facilities are identified on the collateral data. Marinas are located adjacent to harbors, and contain small piers, with numerous boats. The water portion of a marina, where the boats are moored, is mapped in the Water category (see code 4300). Ski areas are typically located in mountains above 5000 feet. The area contains a series of wide linear clearings that may braid with each other. A series of towers representing the chairlift system can be seen on the aerial photo. Campgrounds appear as an area with narrow roads circling within, with offshoot segments representing each campsite area. Campgrounds are also identified on collateral sources.

## **1900 URBAN VACANT**

### **1900 Urban Vacant (Developable)**

This category includes open undeveloped, but developable land within urban areas that are not associated with a particular facility.

Typically these areas are vacant lots. They normally contain no structures but may have such improvements as curbs and sidewalks. The land may be in a graded condition showing little or no vegetation, or may be in a successional vegetated state, with numerous shrubs and grasses, in a non-uniform, unkept condition. Not included in this class are terraced erosion control embankments (see 3100).

## **2000 AGRICULTURE**

Agriculture includes land used primarily for the production of food, fiber, and livestock. Included in these classes are associated structures and facilities.

### **2100 CROPLAND AND IMPROVED PASTURE LAND**

Included here are active field and row cropland areas and improved pasture lands. The croplands include cultivated, in crop, harvested, fallow or temporarily idle land. The improved pasture land may be in pasture year-around or be in the cropland seasonal rotation. Improved pasture land does not include rangeland (see code 3100).

## **2110 Irrigated Cropland and Improved Pasture Land**

This category includes all irrigated field and row cropland areas, and irrigated improved pasture land.

The majority of row crops in southern California is irrigated. The photo signature for active cropland will show one of several signatures. If the land is in field crop, the signature will show a uniform, smooth texture area, with a green color. Land that is in row crop will appear similar to field crop, except the individual rows can be distinguished as narrow parallel lineations. Land that is being made ready for crop or has been harvested will appear as a uniform, smooth texture of off-white to tan color representing the just graded or plowed field. Fallow fields will appear similar to vacant lots or disturbed vacant land. The area will appear unkept, with a non-uniform texture representing a mixture of shrubs and grasses in a successional state. Fallow land will occur in close proximity to in-crop areas. The improved pasture land photo signature may appear similar to the cropland signature. Most improved pasture lands are mapped as non-irrigated (2120). In many cases post-harvest field crop, row crop, or fallow area will be used for pasture of livestock. Cropland and improved pastures may occur within electrical transmission line rights-of-way.

## **2120 Non-Irrigated Cropland and Improved Pasture Land**

This category includes all non-irrigated cropland, including dry-farmed field crops.

Most non-irrigated cropland is represented by dry-farmed field crops such as peas, beans, barley, oats, and hay. The photo signature for field crop will show a dull green to mottled brown color with smooth, uniform texture. Furrows or plow marks may also be visible. Dry farmed areas may appear very similar to natural grass vegetation. Land that is being made ready for crop or has been harvested will appear as a uniform, smooth texture of off-white to tan color representing the just graded or plowed field. Fallow fields will appear similar to vacant lots or disturbed vacant land. The area will appear unkempt, with a non-uniform texture representing a mixture of shrubs and grasses in a successional state. Fallow land will occur in close proximity to in-crop areas.

## **2200 ORCHARDS AND VINEYARDS**

### **2200 Orchards and Vineyards**

This category includes commercially productive tree, bush, and vine crops.

Orchards include fruit and nut trees, and bush crops. The photo signature for citrus orchards appear as dark green, coarse textured areas, where the individual trees are distinguishable. The trees are aligned in a matrix form, with crowns appearing to abut each other. Nut and other fruit trees are similar, however,

the color will be a lighter shade of green. The trees are aligned in a matrix form, with crowns abutting each other. Bush crops are similar to orchards, however, they may be configured in rows rather than a matrix, and are much shorter in height. The photo signature for vineyards will appear as dark green, coarse-textured, thin linear rows that, when measured, will be approximately five to ten feet apart. The height of vineyards is shorter than orchards. The orchard and vineyard areas will be neat and uniform. Orchard areas typically are formed as square plots of land, whereas vineyard plots typically form two sections on a similar-sized plot of land. In many cases orchards occur within electrical transmission line rights-of way. It is important to use stereo viewing, to avoid confusing vineyards with row crops.

## **2300 NURSERIES**

### **2300 Nurseries**

This category includes land managed for the production of ornamental trees, plants and flowers, vegetable seedlings, seed farms, sod farms, and wholesale greenhouses.

Nurseries typically appear similar to row crops in configuration. The photo signature, however, reveals that it is an area of non-uniformity, where a few rows appear similar, then the next few rows are of a different type of plant, and so on. Trees may occur in some rows, then plants in the next section. Greenhouses or hot houses may also occur in some row areas, or in separate areas altogether. Greenhouses typically appear as long narrow structures abutting each other with steeply pitched roofs. Together the roofs give an accordion effect.

In many cases nurseries occur within electrical transmission line rights-of-way. Also included in this category are Christmas tree farms, which appear on the photo as groves with uneven spacing, smaller crown cover, and open space between the trees. On the aerial photo, sod farms appear similar to pasture or field crop; therefore, some field verification is necessary. Abandoned greenhouse structures are mapped as 2300.

## **2400 DAIRY AND INTENSIVE LIVESTOCK, AND ASSOCIATED FACILITIES**

### **2400 Dairy and Intensive Livestock, and Associated Facilities**

This category includes large, specialized livestock and other specialty farms. These areas have a high concentration of animal population in a relatively small area. This class includes beef cattle feed lots, dairies, hog farms, and goat farms.

Livestock feedlots and dairies appear similar in that both contain a series of small fenced areas with a



very high concentration of animals. Dairies contain simple rectangular shade structures that are evenly and widely spaced over the area. Structures for protecting stored hay bales may be present. Dairies also contain structures used for milking.

Both feedlot and dairies contain fenced areas with a very dark to black photo signature representing dung piles. Large fertilizer mounds associated with dairies are mapped as 2600. Pasture and field crop adjacent to and associated with dairies are mapped as 2110. Abandoned dairy structures are mapped as 2400.

## **2500 POULTRY OPERATIONS**

### **2500 Poultry Operations**

This category includes poultry operations such as chicken, turkey, and egg farms.

Poultry farms typically contain a series of long, narrow enclosed structures in a parallel, side-by-side configuration. The photo signature shows each structure as having a white pitched roof, typically with air conditioning units. Grain feed storage structures may be located at the ends of the building. One to ten structures may occur in each group. Major poultry manure spreading grounds are coded 2600.

## **2600 OTHER AGRICULTURE**

### **2600 Other Agriculture**

This category includes other miscellaneous agricultural facilities not described in the agricultural categories above. These facilities include storage facilities, dairy fertilizer piles, poultry manure spreading grounds, hydroponic farms, fish hatcheries, apiaries, and worm farms. Also included are backyard lots of mixed agricultural/non-agricultural use that meet the MMU.

Storage facilities can include isolated barns, or other structures located in, or adjacent to an agricultural area. Also included are small plots of land where heavy equipment or machinery is stored within the agricultural field area. Fish hatcheries may be identified on the basemap or on the collateral maps. Typically they appear as a series of small square or rectangular ponds adjacent to several small buildings. Track ovals not associated with a horse ranch are coded 2600. Backyard agriculture may include improved pastures, barns, and/or corrals. These areas are mapped as part of the residential class if the land use is less than 2.5 acres in size.

## **2700 HORSE RANCHES**

### **2700 Horse Ranches**

This category includes commercial and non-commercial horse ranches, stables, tracks, barns, and corral areas, and improved pastureland. The 2700 class also includes backyard horse facilities, i.e. track ovals, walking rings, stables, barns, etc., that meet the MMU. Horse racing track facilities are mapped as Commercial Recreation (code 1232).

Stables appear as one or more long, narrow buildings within a farm complex, adjacent to pastures (irrigated pastures are coded as 2110). Horse tracks are large dirt oval tracks located at the horse ranches. Track ovals not associated with a horse ranch are coded 2600. Corral areas, included horse corrals associated with residential areas, are coded 2700. Improved pasture areas are fenced, containing water troughs, and possibly shade structures or enclosures. Improved pastures differ from fenced rangeland in that pasture contains smaller fenced areas, typically with individual enclosures of less than one hundred acres. Horse ranches may also occur within electrical transmission line rights-of-way.

### **3000 VACANT**

Vacant areas include land that has not been built-up with man-made structures, and contains no agriculture or waterbody. The area is open, containing natural or disturbed natural vegetation. Rangeland is included in this category. Areas containing abandoned structures are mapped as their previous use.

### **3100 Vacant Undifferentiated**

This category represents most occurrences of vacant land.

This class does not include vacant lots in urbanized areas (see code 1900), although terraced erosion control embankments are included. Also included in this category are road cuts. Undeveloped areas of parks are also included. Most vacant land is in a natural state, containing tree, brush/shrub, and/or grassland vegetation. No or few significant structures or improvements are present. Rangeland may be open land or fenced over large areas. Rangeland vegetation may be no different than open vacant land, or may contain grassland for grazing livestock. Eucalyptus groves are also included.

### **3200 Abandoned Orchards and Vineyards**

This category includes orchards and vineyards, formerly productive, now abandoned and not in commercial production.

Abandoned orchards and vineyards may contain successional or weedy vegetation between the rows. The photo signature may show and the field check may verify an unkept condition. Many trees or vine plants may be dead, or totally removed. If a significant number of trees remain on the lot, then the polygon is coded 3200. If most trees have been removed, then the polygon is mapped as Urban Vacant (code 1900) or Vacant Undifferentiated (code 3100).

### **3300 Vacant With Limited Improvements**

This category includes areas where streets have been laid in a subdivision pattern, but no further building or improvements have occurred over time.

Typically, the photo will show a network of streets, dirt or paved, but with no structures. The lots will be vacant, with natural vegetation.

### **3400 Beaches (Vacant)**

This category is used for vacant coastal beach areas not associated with a national, state, county, or municipal beach park.

The photo shows a white to tan signature of the sand area. The collateral data does not show these areas to be beach parks.

## **4000 WATER**

Water includes open water bodies which are greater than 2.5 acres in size.

### **4100 Water, Undifferentiated**

This category includes all open water bodies greater than 2.5 acres in area not associated with water storage; and all water bodies associated with water storage that are greater than 5 acres in size. Included in this class are oceans, lakes, reservoirs, golf course ponds, rivers, estuaries, and channels. The water must occur perennially.

Water body delineations follow those depicted on the 7.5 minute U.S.G.S. topographic quadrangles, unless the configuration of the water body has changed significantly. Water bodies at low water levels are mapped at their normal levels to account for drought years. The photo signature for water is blue to dark blue.

**4200 Harbor Water Facilities**

This category includes the water portion of harbor facilities. These include the slips and berths where the ships load and unload, the shipping channels, and outer harbor area within the outer jetty.

**4300 Marina Water Facilities**

This category includes the water portion of marina facilities composed primarily of the boat mooring areas. The aerial photo will show an area of buoys or anchorages where the small pleasure boats moor or "park".

**4400 Water Within a Military Installation**

This category includes all water bodies within a Military Installation of 2.5 acres or larger in size.

**4500 Area of Inundation (High Water)**

This category includes the areas of water inundation. This occurs at the Salton Sea and includes the area from the basemap's designated shoreline to the 1990 shoreline as shown on the aerial photo. This situation also occurs at Lake Skinner where the 1990 shoreline is greater than the basemap shoreline.

**8888 Undevelopable or protected Land**

This category is a new category in the 2012 version. The category include, but are not limited to, the areas of slopes greater than 15 degree, designated endangered species and plants, wetlands, flood ways, and natural habitat.

**9999 Unknown**

Areas in which no land use information was available.

## Appendix C

### General Plan Land Use Correspondence Table – Data Dictionary

**(DRAFT)**

Field Name	Field Description
COUNTY	County name
CNTY_FIPSD	County FIPS code
CITY	City name
CITY_FIPS	City FIPS code ('9999' = county unincorporated area)
CITY_GP_CO_DESC	Local general plan land use designation – full name
CITY_GP_CO	Local general plan land use designation – code
SCAG_GP_CO	SCAG general plan land use code
DENSITY	An average or preferable density of residential/housing development (dwelling units per acre) based on local general plan
LOW	A minimum density of residential/housing development permitted (dwelling units per acre) based on local general plan
HIGH	A maximum density of residential/housing development permitted (dwelling units per acre) based on local general plan
YEAR_ADOPT	Adoption/amendment year of local general plan land use element

## Appendix D

### General Plan GIS File Attribute Table – Data Dictionary

**(DRAFT)**

Field Name	Field Description
OBJECTID	A unique number for each row automatically assigned sequentially by the ArcGIS software
APN	Assessor's Identification Number
SCAGUID16	A unique ID for each parcel assigned by SCAG for 2016 parcel data
SCAGUID12	A unique ID for each parcel assigned by SCAG for 2012 parcel data
CITY	City name
CITY_ID	City FIPS code ('9999' = county unincorporated area)
COUNTY	County name
COUNTY_ID	County FIPS code
UPPER_NAME	City name (upper case)
CITY_GP_CO	Local general plan land use designation
SCAG_GP_CO	SCAG general plan land use code
DENSITY	An average or preferable density of residential/housing development (dwelling units per acre) based on local general plan
LOW	A minimum density of residential/housing development permitted (dwelling units per acre) based on local general plan
HIGH	A maximum density of residential/housing development permitted (dwelling units per acre) based on local general plan
YEAR_ADOPT	Adoption/amendment year of local general plan land use element
ZONE_CODE	Local zoning code
NOTES	Additional comments



## **Technical Working Group**

# **Agenda Item 4**

## Draft Data Elements and Timeline for the 2020 RTP/SCS Bottom-Up Local Input Process of the 2020 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS)

DRAFT Bottom-Up Local Input Process Data Elements			
17-Jul-17			
	#	YEAR	DATA ELEMENT
LAND USE	1	2016	2016 General Plan Land Use (both local and regional coding schemes)
	2	2016	2016 Zoning (both local and regional coding schemes)
	3	2016 & Planned	Zoning Overlay Areas
	4	2016	2016 Existing Land Use
	5	2016 & Planned	Specific Plans (especially TOD oriented specific plans)
	6	2016 & Planned	Community Design Overlays
	7	2016	Parcels with Development Potential
GROWTH	8	2016	Estimates of Population, Households, and Employment at the Jurisdictional and TAZ Level
	9	2016, 2030, 2035, 2045	Projections of Population, Households, and Employment at the Jurisdictional and TAZ Level
HOUSING	10	2016 & Planned	Entitlements + Phasing for Plan Horizon Years
	11	2016 - 2020	Recent Demolitions
	12	2016 & Planned	AHSC Projects + Phasing for Plan Horizon Years
	13	2016 & Planned	Community Land Trusts
	14	2016 & Planned	Historic Preservation Areas
	15	2016 & Planned	Areas with Minimum Densities (no maximums)
	16	2016 & Planned	HCD TOD Housing Program Sites for Plan Horizon Years
17	2016 & Planned	Joint Public/Private Developments for Affordable Housing	
TRANSPORTATION	18	2016, 2030, 2035, 2045	Major Stops & High Quality Transit Corridors
	19	2016, 2030, 2035, 2045	Transit Priority Areas (TPAs)
	20	2016 & Planned	Planned and built bicycle infrastructure
	21	2016	Any available bicycle or pedestrian volume data
	22	2016 & Planned	Any available pedestrian trails and sidewalk data
	23	2016 & Planned	Bike Sharing Facilities and Service Areas
	24	2016 & Planned	Bike Stations
	25	2016 & Planned	Local truck routes
	26	2016 & Planned	Car-Sharing Parking Sites and Service Areas
	27	2016 & Planned	Corridor Plans
	28	2016 & Planned	Metro TOD Planning Grant Site + Phasing for Plan Horizon Years
	29	2016 & Planned	Pedestrian Commercial Corridors (front-facing retail areas)
	30	2016 & Planned	Parking Management Districts
	31	2016 & Planned	Areas with Reduced Parking Minimums and Maximums
32	2016 & Planned	Caltrans Sustainable Transportation Planning Grant + Phasing	
NATURAL LANDS	33	2016	Endangered, Threatened, and Rare Plant and Animal Species
	34	2016	Federally Designated Flood Hazard Zones
	35	2016 & Planned	Natural Community & Habitat Conservation Plans
	36	2016 & Planned	Protected Open Space and Parks
	37	2016 & Planned	Farmland
	38	2016 & Planned	1 ft and 2 ft Sea Level Rise
ADMIN BOUNDARY	39	2016	City Boundaries
	40	2016	Local Jurisdiction's Spheres of Influence
	41	2016	Census Tracts
	42	2016	TAZs
	43	2016	Scenario Planning Zone (SPZ) boundaries
PUBLIC HEALTH	44	2016	Any available local public health data (collect from local jurisdictions)

Note: Some data elements have specific horizon years, and others just need base year information. Some items need base year information + planned updates ("2016 + Planned")



**DRAFT FOR TECHNICAL FEEDBACK**  
**Bottom-Up Local Input Process Initial Schedule**  
**July 17, 2017**

	2017											2018										
	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Overall Data Update	Update base data by end of July, including socioeconomic estimates and projections					Create hard copy outreach materials (Map Books, etc.)														Finalize Base Data		
Growth Forecast Portion			DOF 2017 estimates; POE Meeting	Develop Draft Numbers; Consult with TWG															Finalize Base Data			
Overall Process TWG/Policy Committees/RC				TWG	TWG	TWG	CEHD	RC														
One on One Meetings								Meet with 197 Jurisdictions; Attend Subregional Planning Directors' Meetings to advertise process and solicit one-on-one meeting appointments														
Implementation and Scenario Planning Survey	Develop Draft, Seek Input from Locals to Firm Up, then Finalize				TWG	Create Electronic Version using Survey Monkey or Esri Hub																

**NOTE: Draft version for technical feedback, and subject to revision**



## **Technical Working Group**

# **Agenda Item 5**

Subject: Draft SCAG Local Input Survey

Date: July 20, 2017

To: Technical Working Group

From: Roland Ok, Senior Regional Planner; [ok@scag.ca.gov](mailto:ok@scag.ca.gov); (213) 236-1819

SCAG is initiating the development of the 2020-2045 Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS). As part of the 2020 RTP/SCS process, SCAG is developing a Local Input Survey to collect information from local jurisdictions related to the implementation of the 2012 and 2016 RTP/SCS as well as to inform the development of the 2020 RTP/SCS. The Local Input Survey will be distributed to all local jurisdictions and information collected from the Local Input Survey will ultimately help SCAG in developing a robust 2020 RTP/SCS.

The development of the Local Input Survey is an iterative process and is currently at a draft stage. We have asked selected local Planning Directors for feedback by July 31, 2017. At this time, we believe that the Survey would most benefit with the review from the Technical Working Group. As such, we are requesting that you review the draft Survey and provide feedback, comments or suggested revisions by July 31, 2017, COB. We appreciate your input and assisting SCAG staff in finalizing the Local Input Survey, for distribution amongst all of our local jurisdictions within the SCAG region in fall 2017.

**DRAFT SCAG Local Input Survey**

The Southern California Association of Governments (SCAG) is currently seeking input from local jurisdictions across the six-county area to begin a new long-range plan for the region, the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. It is developed every four years and includes over 4,000 transportation projects. In addition SB375 requires that land use strategies help the region achieve state greenhouse gas emission reduction goals and federal Clean Air Act requirements.

SCAG is collecting information from local jurisdictions related to the initial implementation of the 2016-2040 RTP/SCS, as well as to inform development of the 2020-2045 RTP/SCS. Please respond to each question as it pertains to your jurisdiction.

**Background Questions**

Jurisdiction: \_\_\_\_\_

SCAG Subregion: \_\_\_\_\_

Date Completed: \_\_\_\_\_

Survey Respondent: \_\_\_\_\_ e-mail: \_\_\_\_\_

Title: \_\_\_\_\_ phone: \_\_\_\_\_

**PART I – LAND USE**

**General Plan**

1. Please enter the year of your jurisdiction’s most recent General Plan Element update. Add information for any additional elements contained in the General Plan but not listed:
  - a) Land use \_\_\_\_\_
  - b) Circulation \_\_\_\_\_
  - c) Housing \_\_\_\_\_
  - d) Conservation \_\_\_\_\_
  - e) Open space \_\_\_\_\_
  - f) Noise \_\_\_\_\_
  - g) Safety \_\_\_\_\_
  - h) Additional element name & year updated: \_\_\_\_\_
  - i) Additional element name & year updated: \_\_\_\_\_
  - j) Additional element name & year updated: \_\_\_\_\_
  - k) Additional element name & year updated: \_\_\_\_\_
  - l) Additional element name & year updated: \_\_\_\_\_
  - m) Additional element name & year updated: \_\_\_\_\_
  
2. Is your jurisdiction currently in the process of updating its General Plan?  
Yes\_\_ No\_\_  
If yes, when do you expect to complete the update? \_\_\_\_\_

3. Which elements of the general plan will your jurisdiction update within the next five years?
- a) \_\_\_\_\_
  - b) \_\_\_\_\_
  - c) \_\_\_\_\_
  - d) \_\_\_\_\_
  - e) \_\_\_\_\_
4. Does the most recently adopted general plan update support any of the following Sustainable Communities Strategies (SCS)? (please refer to the glossary for a definition of terms)
- a) Transit Oriented Development (TOD) Yes \_\_\_ No \_\_\_ Elements \_\_\_\_\_
  - b) Infill Yes \_\_\_ No \_\_\_ Elements \_\_\_\_\_
  - c) Complete communities Yes \_\_\_ No \_\_\_ Elements \_\_\_\_\_
  - d) Non-Residential Mixed Use Yes \_\_\_ No \_\_\_ Elements \_\_\_\_\_
  - e) High Quality Transit Area (HQTA) Yes \_\_\_ No \_\_\_ Elements \_\_\_\_\_
  - f) Livable corridors Yes \_\_\_ No \_\_\_ Elements \_\_\_\_\_
  - g) Form based code Yes \_\_\_ No \_\_\_ Elements \_\_\_\_\_
  - h) Others: \_\_\_\_\_
5. If you specified that your jurisdiction is currently developing a new general plan update, does the update intend to support any of the following Sustainable Communities Strategies?
- a) Transit Oriented Development (TOD) Yes \_\_\_ No \_\_\_ Elements \_\_\_\_\_
  - b) Infill Yes \_\_\_ No \_\_\_ Elements \_\_\_\_\_
  - c) Complete communities Yes \_\_\_ No \_\_\_ Elements \_\_\_\_\_
  - d) Non-Residential Mixed Use Yes \_\_\_ No \_\_\_ Elements \_\_\_\_\_
  - e) High Quality Transit Area (HQTA) Yes \_\_\_ No \_\_\_ Elements \_\_\_\_\_
  - f) Livable corridors Yes \_\_\_ No \_\_\_ Elements \_\_\_\_\_
  - g) Form based code Yes \_\_\_ No \_\_\_ Elements \_\_\_\_\_
  - Others: \_\_\_\_\_
6. Does the Circulation element of your General Plan include:
- a) Guidelines for freight movement and heavy duty vehicles Yes \_\_\_ No \_\_\_
  - b) Truck Circulation Plan Yes \_\_\_ No \_\_\_
7. When was the zoning code last updated (via web or hard copy) to reflect your most recent amendments? \_\_\_\_\_
8. Is your jurisdiction currently in the process of updating its land use designation and zoning code? Yes \_\_\_ No \_\_\_  
If yes, when do you expect to complete the update? \_\_\_\_\_
9. Did your jurisdiction's most recent land use designation and/or zoning code update include provisions supporting any of these policies?
- a) Transit Oriented Development (TOD) Yes \_\_\_ No \_\_\_ Municipal Code No. \_\_\_\_\_
  - b) Infill Yes \_\_\_ No \_\_\_ Municipal Code No. \_\_\_\_\_
  - c) Complete communities Yes \_\_\_ No \_\_\_ Municipal Code No. \_\_\_\_\_
  - d) Non-Residential Mixed Use Yes \_\_\_ No \_\_\_ Municipal Code No. \_\_\_\_\_

- e) High Quality Transit Area (HQTA) Yes \_\_\_ No \_\_\_ Municipal Code No. \_\_\_\_\_
- f) Livable corridors Yes \_\_\_ No \_\_\_ Municipal Code No. \_\_\_\_\_
- g) Form based code Yes \_\_\_ No \_\_\_ Municipal Code No. \_\_\_\_\_
- h) Accessory Dwelling Units Yes \_\_\_ No \_\_\_ Municipal Code No. \_\_\_\_\_
- i) Others: \_\_\_\_\_

10. Does your jurisdiction have TOD building standards and design guidelines? Yes \_\_\_ No \_\_\_

11. Does your jurisdiction offer incentives for infill development? Yes \_\_\_ No \_\_\_

If yes, which of the following incentives apply:

- a) Fast Track Permitting Yes\_\_\_ No\_\_\_
- b) Fee Waivers Yes \_\_\_ No \_\_\_
- c) Density Bonus Yes \_\_\_ No \_\_\_
- d) Increased Floor Area Ratio Yes \_\_\_ No \_\_\_
- e) Building height waivers Yes\_\_\_ No\_\_\_
- f) Tax subsidies or other benefits Yes\_\_\_ No\_\_\_
- g) Waived or reduced minimum parking requirement Yes \_\_\_ No \_\_\_
- h) Reduced Open Space Requirements Yes \_\_\_ No \_\_\_

Other \_\_\_\_\_

12. Does your jurisdiction overlap with a High Quality Transit Area (HQTA) as included in the 2016 RTP/SCS?

Yes \_\_\_ No \_\_\_

If yes, does your jurisdiction have policy incentives to encourage development TODs within HQTAs? (Please refer to the HQTA Map included in the Draft SCAG Data/Map Book on the FTP site for each local jurisdiction, as applicable, at [ftp://scag-data:\\$cag424@data.scag.ca.gov/Data\\_Map\\_Book](ftp://scag-data:$cag424@data.scag.ca.gov/Data_Map_Book))

Yes \_\_\_ No \_\_\_

If yes, which of the following incentives apply:

- a) Fast Track Permitting Yes\_\_ No\_\_\_
- b) Fee Waivers Yes \_\_\_ No \_\_\_
- c) Density Bonus Yes \_\_\_ No \_\_\_
- d) Increased Floor Area Ratio Yes \_\_\_ No \_\_\_
- e) Building height waivers Yes\_\_\_ No\_\_\_
- f) Tax subsidies or other benefits Yes\_\_\_ No\_\_\_
- g) Waived or reduced minimum parking requirement Yes \_\_\_ No \_\_\_
- h) Reduced Open Space Requirements Yes \_\_\_ No \_\_\_

Other \_\_\_\_\_

13. Do any adopted specific plans and/or community plans with certified EIRs overlap with the existing Transit Priority Areas (TPAs)? Please list their names and years of adoption below. If you have more than five, please use another page.

- a) \_\_\_\_\_
- b) \_\_\_\_\_
- c) \_\_\_\_\_
- d) \_\_\_\_\_
- e) \_\_\_\_\_

14. For any other adopted specific plans and/or community plans that do not overlap with the existing Transit Priority Areas (TPAs), please list their names and years of adoption below. . If you have more than five, please use another page.

- a) \_\_\_\_\_
- b) \_\_\_\_\_
- c) \_\_\_\_\_
- d) \_\_\_\_\_
- e) \_\_\_\_\_

15. Which of the following parking strategies are included in any of your existing specific plans or general plans?

- a) Relaxed minimum parking requirements Yes\_\_ No\_\_
- b) Right-sized parking Yes\_\_ No\_\_
  - o If yes, has your jurisdiction faced litigation for reducing parking requirements? Yes\_\_ No\_\_
  - o If yes, what was the outcome of the lawsuit? \_\_\_\_\_
- c) Park-once districts Yes\_\_ No\_\_
- d) Shared parking Yes\_\_ No\_\_
- e) Unbundled parking Yes\_\_ No\_\_
- f) Parking maximums in designated areas Yes\_\_ No\_\_
- g) Innovative Parking Design (i.e. Incorporating Sustainable Features) Yes\_\_ No\_\_
- h) Other \_\_\_\_\_

16. Does your jurisdiction have a small-lot development policy?

Yes\_\_ No\_\_

17. Does your jurisdiction have any policies or programs in place to address residential and industrial or transportation-related land use conflicts?

Yes\_\_ No\_\_

18. Does your jurisdiction have any policies or programs in place for the design of industrial neighborhoods?

Yes\_\_ No\_\_

19. Does your jurisdiction have any design guidelines in place for warehouse development? Yes\_\_ No\_\_

20. Does your jurisdiction have a development/impact/linkage fee ordinance? Yes\_\_ / No\_\_ Year \_\_\_\_\_ Link \_\_\_\_\_

a) If there is a development/impact/linkage fee ordinance, which of the following does it fund:

- o Parks Yes\_\_ No\_\_
- o Affordable Housing Yes\_\_ No\_\_
- o Natural lands/Open Space Preservation Yes\_\_ No\_\_
- o Transit improvements/amenities Yes\_\_ No\_\_

21. Does your jurisdiction participate in the Mills Act in an effort to maintain, preserve or rehabilitate historically significant property?

Yes\_\_ No\_\_

**Housing**

22. Does your jurisdiction utilize any of the following zoning or land use strategies for housing?

- a) Inclusionary zoning ordinance Yes \_\_\_ No \_\_\_  
If yes, is there also an-lieu fee component? Yes \_\_\_ No \_\_\_
- b) Rent stabilization ordinance Yes \_\_\_ No \_\_\_
  - o If yes, what is the maximum annual percentage rent increase allowed? \_\_\_\_\_
- c) Affordable housing preservation ordinance Yes \_\_\_ No \_\_\_
- d) Mortgage down payment assistance program Yes \_\_\_ No \_\_\_
- e) Special Financing District: (CRIA, EIFD, Other?) Yes \_\_\_ No \_\_\_
- f) Incentives for affordable housing Yes \_\_\_ No \_\_\_
  - o Fast Track Permitting Yes \_\_\_ No \_\_\_
  - o Fee Waivers Yes \_\_\_ No \_\_\_
  - o Density Bonus Yes \_\_\_ No \_\_\_
  - o Increased Floor Area Ratio Yes \_\_\_ No \_\_\_
  - o Building height waivers Yes \_\_\_ No \_\_\_
  - o Tax subsidies or other benefits Yes \_\_\_ No \_\_\_
  - o Waived or reduced minimum parking requirement Yes \_\_\_ No \_\_\_
  - o Reduced Open Space Requirements Yes \_\_\_ No \_\_\_
  - o Other relaxed requirements for affordable housing (SB 744) Yes \_\_\_ No \_\_\_
- g) Low-income Housing Tax Credit (LITHC) Yes \_\_\_ No \_\_\_

23. Please fill in the number of units permitted for each Regional Housing Needs Assessment (RHNA) category since the beginning of the current RHNA cycle (October 2013- October 2021) (note that your housing permit data will not be used to determine the subsequent RHNA).

	Very Low	Low	Moderate	Above Moderate	Total
2014					
2015					
2016					

24. Please indicate if any of the following planning circumstances affect future household growth in your jurisdiction. (While this section is not the official local planning survey of the RHNA process, SCAG will use responses to inform the formal local survey as part of the 6<sup>th</sup> RHNA cycle process, beginning in 2018)

- a) Existing and projected job housing balance Yes \_\_\_ No \_\_\_
- b) Lack of capacity for sewer or water service due to federal and state laws, regulations or regulatory actions, or supply and distribution decisions made by a sewer or water service provider other than the local jurisdiction that preclude the jurisdiction from providing necessary infrastructure for additional development during the planning period. Yes \_\_\_ No \_\_\_
- c) Availability of land suitable for urban development or for conversion to residential use, the availability of underutilized land, and opportunities for infill development and increased residential densities. Yes \_\_\_ No \_\_\_



- d) Lands preserved or protected from urban development under existing federal and state programs, or both, designed to protect open space, farmland, environmental habitats and natural resources on a long-term basis. Yes\_\_ No\_\_
- e) County policies to preserve agricultural land within an unincorporated area. Yes\_\_ No\_\_
- f) Distribution of household growth assumed for purposes of a comparable period of regional transportation plans and opportunities to maximize the use of public transportation and existing transportation infrastructure. Yes\_\_ No\_\_
- g) Loss of low-income housing units in assisted housing developments due to contract expirations or termination of use restrictions. Yes\_\_ No\_\_
- h) Market demand for housing. Yes\_\_ No\_\_
- i) Agreements between a county and cities in a county to direct growth toward incorporated areas of the county. Yes\_\_ No\_\_
- j) High housing cost burdens Yes\_\_ No\_\_
- k) Housing needs of farm workers Yes\_\_ No\_\_
- l) Housing needs generated by the presence of a private university or a campus of the California State University or the University of California within any member jurisdiction Yes\_\_ No\_\_
- m) Demand for rural housing Yes\_\_ No\_\_
- n) Other \_\_\_\_\_

**PART II – TRANSPORTATION**

**Transportation (including active transportation) - Please include web links (URLs) to your policies, if available**

25. Has your jurisdiction adopted any of the following:

- a) Complete Streets Policy Yes\_\_ / No\_\_ Year \_\_\_\_\_
  - o Does it include provisions for delivery vehicles or truck access? Yes\_\_ No\_\_
- b) Safe Routes to School Plan Yes\_\_ / No\_\_ Year \_\_\_\_\_
- c) Safe Routes to School Program Yes\_\_ / No\_\_ Year \_\_\_\_\_
- d) Active Transportation Plan Yes\_\_ / No\_\_ Year \_\_\_\_\_
- e) Bicycle Master Plan Yes\_\_ / No\_\_ Year \_\_\_\_\_
- f) Pedestrian Master Plan Yes\_\_ / No\_\_ Year \_\_\_\_\_
- g) Streetscape Standards and Design Guidelines Yes\_\_ / No\_\_ Year \_\_\_\_\_
- h) Transportation Master Plan Yes\_\_ / No\_\_ Year \_\_\_\_\_
- i) Traffic Calming Measures Yes\_\_ / No\_\_ Year \_\_\_\_\_
- j) Transportation Demand Management program Yes\_\_ / No\_\_ Year \_\_\_\_\_
- k) Transportation Demand Management ordinance Yes\_\_ / No\_\_ Year \_\_\_\_\_
- l) Parking management plan/ordinance Yes\_\_ / No\_\_ Year \_\_\_\_\_
  - o Provisions for truck parking and commercial vehicle access? Yes\_\_ No\_\_
- m) Vision Zero Policy Yes\_\_ / No\_\_ Year \_\_\_\_\_
- n) Safety Plan/Safety Targets Yes\_\_ / No\_\_ Year \_\_\_\_\_
- o) Industrial Land Use ordinance Yes\_\_ / No\_\_ Year \_\_\_\_\_
- p) Intelligent transportation systems plan/program Yes\_\_ / No\_\_ Year \_\_\_\_\_
- q) Intermodal facility plan Yes\_\_ / No\_\_ Year \_\_\_\_\_
- r) Truck Route/Truck Prohibit Route Plan Yes\_\_ / No\_\_ Year \_\_\_\_\_
- s) Multimodal performance measures/targets Yes\_\_ / No\_\_ Year \_\_\_\_\_

26. Is your jurisdiction currently engaged in developing any of the following (if "Yes," please include the anticipated completion year): **(Please include web links (URLs) to your policies, if available)**

- a) Complete Streets Policy Yes\_\_ / No\_\_ Year \_\_\_\_
  - o Does it include provisions for delivery vehicles or truck access? Yes\_\_ No\_\_
- b) Safe Routes to School Plan Yes\_\_ / No\_\_ Year \_\_\_\_
- c) Safe Routes to School Program Yes\_\_ / No\_\_ Year \_\_\_\_
- d) Active Transportation Plan Yes\_\_ / No\_\_ Year \_\_\_\_
- e) Bicycle Master Plan Yes\_\_ / No\_\_ Year \_\_\_\_
- f) Pedestrian Master Plan Yes\_\_ / No\_\_ Year \_\_\_\_
- g) Streetscape Standards and Design Guidelines Yes\_\_ / No\_\_ Year \_\_\_\_
- h) Transportation Master Plan Yes\_\_ / No\_\_ Year \_\_\_\_
- i) Traffic Calming Measures Yes\_\_ / No\_\_ Year \_\_\_\_
- j) Transportation Demand Management program Yes\_\_ / No\_\_ Year \_\_\_\_
- k) Transportation Demand Management ordinance Yes\_\_ / No\_\_ Year \_\_\_\_
- l) Parking management plan/ordinance Yes\_\_ / No\_\_ Year \_\_\_\_
  - o Provisions for truck parking and commercial vehicle access? Yes\_\_ No\_\_
- m) Vision Zero Policy Yes\_\_ / No\_\_ Year \_\_\_\_
- n) Safety Plan/Safety Targets Yes\_\_ / No\_\_ Year \_\_\_\_
- o) Industrial Land Use ordinance Yes\_\_ / No\_\_ Year \_\_\_\_
- p) Intelligent transportation systems plan/program Yes\_\_ / No\_\_ Year \_\_\_\_
- q) Intermodal facility plan Yes\_\_ / No\_\_ Year \_\_\_\_
- r) Truck Route/Truck Prohibit Route Plan Yes\_\_ / No\_\_ Year \_\_\_\_
- s) Multimodal performance measures/targets Yes\_\_ / No\_\_ Year \_\_\_\_

27. Has your jurisdiction adopted or implemented any of the following Travel Demand Management (TDM) Strategies? **(Please include web links (URLs) to your policies, if available)**

- a) Ridesharing incentives and rideshare matching Yes\_\_ No\_\_
- b) Vanpool programs Yes\_\_ No\_\_
- c) Transit pass benefits Yes\_\_ No\_\_
- d) Private employer shuttles or other transportation providers Yes\_\_ No\_\_
- e) Parking cash-out policies Yes\_\_ No\_\_
- f) Preferential parking or parking subsidies for carpoolers Yes\_\_ No\_\_
- g) Intelligent parking programs Yes\_\_ No\_\_
- h) Dynamic pricing for parking Yes\_\_ No\_\_
- i) Programs or mobility services aimed at local tourism travel (eg. Shuttle bus) Yes\_\_ No\_\_
- j) Guaranteed Ride Home Programs Yes\_\_ No\_\_
- k) Incentives for telecommuting Yes\_\_ No\_\_ Link\_\_\_\_\_
- l) Designated pick-up/drop-off for ride sourcing or Transportation Network Companies (Lyft or Uber) Yes\_\_ No\_\_  
\_\_\_\_\_
- m) Bike share system Yes\_\_ No\_\_
- n) Facilities or incentives for low speed modes (Neighborhood Electric Vehicles) Yes\_\_ No\_\_
- o) Integrated mobility hubs Yes\_\_ No\_\_
- p) Transportation Management Areas Yes\_\_ No\_\_

28. Is your jurisdiction currently in the process of planning to address VMT related development impacts? Yes\_\_ No\_\_  
If yes, please list applicable projects and the measures taken (or proposed) to mitigate VMT impacts.

- a) \_\_\_\_\_

- b) \_\_\_\_\_
- c) \_\_\_\_\_
- d) \_\_\_\_\_
- e) \_\_\_\_\_

29. Does your jurisdiction provide or plan to provide support for any of the following Bus Rapid Transit (BRT) infrastructure:

- a) Bus-only lanes: Yes\_\_ No\_\_
- b) Signal prioritization: Yes\_\_ No\_\_
- c) Ticket vending machines on sidewalks for expedited boarding: Yes\_\_ No\_\_
- d) First/Last Mile connectivity improvements: Yes\_\_ No\_\_

30. If applicable, please provide the estimated annual expenditures for the following:

- a) Bus Stops/Shelters Annual Spending \_\_\_\_\_
- b) Wayfinding/signage Annual Spending \_\_\_\_\_
- c) Data/trip planner Annual Spending \_\_\_\_\_

31. Does your jurisdiction receive local return funding (from a county transportation tax measure)? Yes\_\_ No\_\_

a) If yes, does your jurisdiction have an adopted policy for prioritizing spending of these funds? Yes\_\_ No\_\_

b) Does your jurisdiction use local return revenue to fund any of the following:

- o Bike lanes Yes\_\_ No\_\_
- o Pedestrian improvements Yes\_\_ No\_\_
- o Repair (pavement, pot-holes) Yes\_\_ No\_\_
- o Signal synchronization Yes\_\_ No\_\_
- o Fixed Route Transit Service Yes\_\_ No\_\_
- o Dial-a-Ride or other Demand Response Service Yes\_\_ No\_\_
- o Taxi Scrip (or other compensation for third-party-provided mobility service) Yes\_\_ No\_\_
- o Other: \_\_\_\_\_

32. Does your jurisdiction have an idling reduction policy or use communication/signage to reduce idling, particularly in sensitive areas such as near schools or hospitals? Yes\_\_ No\_\_

33. Has your jurisdiction set aside a portion of its municipal funding (from the general fund, capital improvement program, or other sources) for bicycle and/or pedestrian improvements? Yes\_\_ No\_\_

**PART III – ENVIRONMENTAL**

**CEQA Streamlining**

34. Does your jurisdiction have any potential projects eligible for CEQA streamlining? (Under SB 743, SB 375, or SB 226)

Yes \_\_\_ No \_\_\_

35. Has your jurisdiction approved projects utilizing CEQA streamlining? (Under SB 743, SB 375, or SB 226) If yes, please indicate which projects:

Yes \_\_\_ No \_\_\_ Projects \_\_\_\_\_

36. In your opinion, what are the major challenges in using CEQA streamlining in your jurisdiction?

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**Natural and Agricultural Lands**

37. Does your jurisdiction have Natural and/or Agricultural undeveloped lands?

Yes\_\_\_ No\_\_\_ (If No, Please Skip to Question 47)

38. Does your jurisdiction participate in any of the following natural lands conservation strategies?

- a) Conservation Easement: Yes\_\_\_ No\_\_\_
- b) Development Impact Fee: Yes\_\_\_ No\_\_\_
- c) Hillside/Steep Slope Protection Ordinance: Yes\_\_\_ No\_\_\_
- d) Transfer of Development Rights: Yes\_\_\_ No\_\_\_
- e) Mitigation Bank: Yes\_\_\_ No\_\_\_
- f) Multiple Species Habitat Conservation Program (MSHCP): Yes\_\_\_ No\_\_\_
- g) Natural Community Conservation Plan (NCCP): Yes\_\_\_ No\_\_\_
- h) Other: \_\_\_\_\_

39. Does your jurisdiction participate in any of the following agricultural lands conservation strategies?

- a) Conservation Easement: Yes\_\_\_ No\_\_\_
- b) In-Lieu Fee: Yes\_\_\_ No\_\_\_
- c) Agricultural Land Mitigation Program: Yes\_\_\_ No\_\_\_
- d) Williamson Act: Yes\_\_\_ No\_\_\_
- e) Other: \_\_\_\_\_

40. What kinds of existing or historic funds (from your general fund, special allocations, or voter-approved taxes/bonds) or other funding mechanisms are available to implement natural/agricultural conservation programs? Please select all that apply.

- a) General Fund: Yes\_\_\_ No\_\_\_
- b) Grant Funds: Yes\_\_\_ No\_\_\_
- c) Development Impact Fee: Yes\_\_\_ No\_\_\_
- d) Other: \_\_\_\_\_

41. Do you have any pending or future plans to develop natural/agricultural programs or polices in your jurisdiction in the near future? If yes, please list and describe them. Yes\_\_\_ No\_\_\_

- a) \_\_\_\_\_ Year: \_\_\_\_\_
- b) \_\_\_\_\_ Year: \_\_\_\_\_
- c) \_\_\_\_\_ Year: \_\_\_\_\_

42. Do you face any barriers to implementing conservation programs in your jurisdiction? Yes\_\_\_ No\_\_\_ . If yes, which ones?

- a) Funding: Yes\_\_\_ No\_\_\_
- b) Capacity (staff time): Yes\_\_\_ No\_\_\_
- c) Lack of interest from constituents: Yes\_\_\_ No\_\_\_

43. Is your jurisdiction interested in applying for conservation grants through the California Greenhouse Reduction Fund? Yes\_\_ No\_\_ If yes, which of the following would be most helpful to your jurisdiction?

- a) Sustainable Agricultural Lands Conservation Program (SALC): Yes\_\_\_ No\_\_\_
- b) Urban Greening Grant Program: Yes\_\_\_ No\_\_\_
- c) Wetlands Restoration for Greenhouse Gas Reduction Program: Yes\_\_\_ No\_\_\_

44. Are there any additional data, resources, tools or examples you need for considering conservation planning or mitigation? What types of data would be useful to have? Please describe.

- a) \_\_\_\_\_
- b) \_\_\_\_\_
- c) \_\_\_\_\_

45. What other agencies, non-profits, or private entities are particularly active in conservation planning, mitigation and conservation in your jurisdiction? Who else should we talk to?

- a) \_\_\_\_\_
- b) \_\_\_\_\_
- c) \_\_\_\_\_

46. Does your jurisdiction encourage the use of vegetation native to Southern California?

- a) Through code requirements Yes\_\_\_ No\_\_\_
- b) Code incentives Yes\_\_\_ No\_\_\_
- c) In conjunction with development on privately owned land Yes\_\_\_ No\_\_\_
- d) In conjunction with development on publicly owned land Yes\_\_\_ No\_\_\_
- e) In conjunction with development with public infrastructure projects (e.g. street improvements, stormwater management, park improvements) Yes\_\_\_ No\_\_\_
- f) Other: \_\_\_\_\_

**Environmental Justice**

47. Does your jurisdiction take into account disadvantaged areas in planning or when seeking grant funding?  
Yes \_\_\_ No \_\_\_

48. Does your jurisdiction make use of the CalEnviroScreen tool developed by CalEPA to help identify disadvantaged communities within your jurisdiction?  
Yes\_\_ No\_\_\_

49. Does your jurisdiction have a program to mitigate air quality in environmentally sensitive areas (for example, hospitals, schools, hospices, or daycare facilities located within 500 feet of a freeway)?  
Yes\_\_ No\_\_\_

50. What strategies does your jurisdiction employ to engage low-income, minority groups and Tribal Governments when pursuing community infrastructure projects?
- a) We host community workshops in targeted locations to solicit feedback from low-income and minority residents Yes\_\_ No\_\_
  - b) We regularly engage community groups that have a large membership from low-income and minority residents Yes\_\_ No\_\_
  - c) We advertise in media outlets that aim to serve low income and minority residents Yes\_\_ No\_\_
  - d) All of the above Yes\_\_ No\_\_
  - e) Other(please specify): \_\_\_\_\_
51. If your jurisdiction leads federally funded infrastructure or transportation programs, how do you identify and resolve potential severe and adverse impacts to low income and minority populations? (select all answers that apply)
- a) We conduct an environmental justice impacts analysis and seek input from community residents to minimize, mitigate, or avoid potentially severe or adverse impacts for low income and minority communities Yes\_\_ No\_\_
  - b) We engage low income and minority residents early in the planning process to avoid impacts Yes\_\_ No\_\_
  - c) We work with our County Transportation Commission to address impacts Yes\_\_ No\_\_
  - d) Other(please specify) \_\_\_\_\_
52. Does your jurisdiction promote the use of New Markets Tax Credit Benefits to revitalize the community?  
Yes\_\_ No\_\_

**Environmental Sustainability**

53. Has your jurisdiction adopted or plan to adopt a Climate Action Plan?  
Yes\_\_ No\_\_  
If yes, jurisdiction has a Climate Action Plan, what is your greenhouse gas reduction target and anticipated horizon year? \_\_\_\_\_
54. Does your jurisdiction have plans or policies in place to implement a local version of the State’s climate goal of reducing greenhouse gases by 40% by 2030?  
Yes \_\_ No \_\_\_\_
55. Does your jurisdiction have the capacity (i.e. staffing and resources) to apply for Greenhouse Gas Reduction Fund (cap-and-trade) grants? Yes\_\_ No\_\_ What about other federal, state, or local grants? Yes\_\_ No\_\_
56. Does your general plan and/or specific plan consider implications resulting from any of the following climate change hazards:
- a) Fire Yes \_\_ No \_\_\_\_
  - b) Flood Yes \_\_ No \_\_\_\_
  - c) Drought resistance Yes\_\_ No \_\_\_\_
  - d) Heat island effect Yes \_\_ No \_\_\_\_

- e) Sea level rise Yes \_\_\_ No \_\_\_
- f) Other \_\_\_\_\_

57. Does your jurisdiction use any of the other water management and efficiency strategies:

- a) Stormwater Management Yes \_\_\_ No \_\_\_
- b) Greywater/Reclaimed water (purple pipes) Yes \_\_\_ No \_\_\_
- c) Ground water recharge Yes \_\_\_ No \_\_\_
- d) Low impact development Yes \_\_\_ No \_\_\_
- e) Green infrastructure Yes \_\_\_ No \_\_\_
- f) Other: \_\_\_\_\_

**PART IV - PUBLIC HEALTH AND SAFETY**

58. Does your jurisdiction have a 'Healthy Cities' resolution or ordinance? If so, please provide the date adopted and link to policy.

Yes \_\_\_ No \_\_\_ Date Adopted \_\_\_\_\_

59. Does your jurisdiction have a Health Element as part of its general plan or has your jurisdiction incorporated health as a consideration into the general plan?

Yes \_\_\_ No \_\_\_ Date Adopted \_\_\_\_\_

60. Has your jurisdiction incorporated any of the following into its planning processes?

- a) Health in All Policies Yes \_\_\_ No \_\_\_
- b) Health Equity Yes \_\_\_ No \_\_\_
- c) Analysis of the Social Determinants of Health Yes \_\_\_ No \_\_\_

61. Does your jurisdiction have any of the following plans to address emergencies caused by natural disasters?

- a) Seismic Safety Plan Yes \_\_\_ No \_\_\_
- b) Emergency Evacuation Plan Yes \_\_\_ No \_\_\_
- c) Emergency Response Plan Yes \_\_\_ No \_\_\_
- d) Hazard Mitigation Plan Yes \_\_\_ No \_\_\_
- e) Fire Protection Plan Yes \_\_\_ No \_\_\_
- f) Other \_\_\_\_\_

**PART V – DATA**

62. Does your jurisdiction have or collect any of the following:

- a) Bicycle or pedestrian volume data Yes \_\_\_ No \_\_\_ Contact Name \_\_\_\_\_ Email \_\_\_\_\_
- b) Sidewalk data Yes \_\_\_ No \_\_\_ Contact Name \_\_\_\_\_ Email \_\_\_\_\_
- c) Traffic counts Yes \_\_\_ No \_\_\_ Contact Name \_\_\_\_\_ Email \_\_\_\_\_
- d) Truck traffic counts Yes \_\_\_ No \_\_\_ Contact Name \_\_\_\_\_ Email \_\_\_\_\_
- e) Automated traffic counters Yes \_\_\_ No \_\_\_ Contact Name \_\_\_\_\_ Email \_\_\_\_\_
- f) Warehouse/Manufacturing Firm Inventory Data Yes \_\_\_ No \_\_\_ Contact Name \_\_\_\_\_ Email \_\_\_\_\_
- g) Local Road Pavement Management and Performance Data Yes \_\_\_ No \_\_\_ Contact Name \_\_\_\_\_ Email \_\_\_\_\_
- h) Public health data Yes \_\_\_ No \_\_\_ Contact Name \_\_\_\_\_ Email \_\_\_\_\_
- i) Bike lane mileage data Yes \_\_\_ No \_\_\_ Contact Name \_\_\_\_\_ Email \_\_\_\_\_

- j) Collision data (vehicle, bicycle, pedestrian) Yes\_\_ No\_\_ Contact Name\_\_\_\_\_ Email\_\_\_\_\_
- k) Bridge Condition Data Yes\_\_ No\_\_ Contact Name\_\_\_\_\_ Email\_\_\_\_\_
- l) Pavement Condition Index (PCI) or International Roughness Index (IRI) data for local roads Yes \_\_ No\_\_  
Contact Name\_\_\_\_\_ Email\_\_\_\_\_
- m) Open Data Portal Yes\_\_ No\_\_ Contact Name\_\_\_\_\_ Email\_\_\_\_\_
- n) New housing starts data Yes\_\_\_\_\_ No\_\_\_\_\_ Contact Name\_\_\_\_\_ Email \_\_\_\_\_



## Local Implementation Survey Glossary

*Note: This glossary has been provided to local jurisdictions to facilitate the completion of the Local Input Survey and to provide an understanding of survey results.*

**AB 744:** Assembly Bill 744 allows a developer that is requesting a density bonus and including 100% affordable rental units in the development to also request that the city or county reduce the minimum parking requirements for the development. To qualify, the development would have to be either within half a mile of a major transit stop, a seniors-only development with access to transit, or a development that serves special-needs individuals and has access to transit. For mixed-income developments within a half mile of a major transit stop that include the maximum number of very low- or low-income units under Density Bonus Law, the parking requirement cannot exceed 0.5 per bedroom.

**Accessory Dwelling Units (ADU):** A room or set of rooms in a single-family home (and in a single-family zone) that has been designated or configured to be used as a separate dwelling unit, and has been established by a permit.

**Active Transportation:** A mode of transportation that includes walking, running, biking, skateboarding and other human powered forms of transportation. It can also include low-speed electrical devices such as motorized wheel chairs, Segways, electric-assist bicycles and neighborhood electric vehicles, such as golf carts.

**Active Transportation Program:** Provides state funds for city and county projects that improve safety and convenience for bicycle commuters, recreational riders and safe routes to school programs. Replaces the Bicycle Transportation Account (BTA).

**Complete Communities:** A framework that aims to meet the basic needs of all citizens in a community, regardless of income, culture or political ideologies, through integrated land use planning, transportation planning and community design.

**Complete Streets:** Streets designed and operated to enable safe access for all roadway users of all ages and abilities, including pedestrians, bicyclists, motorists and transit riders.

**Community Revitalization and Investment Authorities (CRIA):** Community Revitalization and Investment Authorities (CRIA) were enacted into law by Assembly Bill 2, which authorized the revitalization of disadvantaged communities through planning and financing infrastructure improvements and upgrades; economic development activities; and affordable housing via tax increment financing.

**Conservation Easement:** A voluntary legal agreement between a landowner and a land trust or government agency that permanently limits uses of the land in order to protect its conservation values or natural resources.

**Development Impact Fee:** A fee imposed by a local government on a new or proposed development project, to pay for the costs of providing public services to the new development.

**Enhanced Infrastructure Financing District (EIFD):** Enacted into law by Senate Bill 628, which authorizes the creation of a new governmental entity called an EIFD. One or more of these districts may be created within a city or county and used to finance the construction or rehabilitation of a wide variety of public

infrastructure and private facilities. An EIFD may fund these facilities and development with the property tax increment of those taxing agencies (cities, counties, special districts, but not schools) that consent.

**First Mile/Last Mile:** Strategies designed to increase transit usage by making it more convenient and safe to walk or bike to transit stations. Includes strategies like wayfinding, bikeways, sidewalk repair and bike share programs.

**CalEnviroScreen:** A screening tool developed by CalEPA that can be used to help identify California communities that are disproportionately burdened by multiple sources of pollution. CalEPA has used the tool to designate California communities as disadvantaged.

**California Land Conservation Act (Williamson Act):** Enacted to facilitate orderly growth, offering tax incentives to keep land in agricultural use with conservation agreements of minimum ten years.

**Form based code:** A means of regulating land development to achieve a specific urban form. Form based codes foster predictable built results and a high-quality public realm by using physical form (rather than separation of uses) as the organizing principle, with a lesser focus on land use through municipal regulations.

**Healthy Cities:** A movement that promotes comprehensive, systematic policy and planning for health and emphasizes the need to address inequality in health, urban poverty, participatory governance and addressing the social, economic and environmental determinants of health.

**High Quality Transit Areas (HQTA):** A walkable transit village or corridor, consistent with the adopted RTP/SCS and situated within half a mile of a well-served transit stop or a transit corridor with service frequency interval of 15 minutes or less during peak commute hours. The definition that SCAG has been using for the HQTA is based on the language in SB 375 which defines:

- **Major Transit Stop:** A site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (CA Public Resource Code Section 21064.3).
- **High-Quality Transit Corridor (HQTC):** A corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

**Infill:** New development on vacant or undeveloped land within an existing community that is enclosed by other types of development.

**Inclusionary Zoning:** Municipal or county planning ordinances that require a given share of new construction to be affordable by people with low to moderate incomes.

**In-lieu fee (Housing):** A fee typically applied when affordable housing cannot be provided “on-site” of a new development. These fees are typically paid into a housing trust fund and used (often along with other local funding sources) to finance affordable housing to be developed “off-site”.

**In-lieu fee (Environment):** An in-lieu fee is one type of mitigation that can be used to compensate for unavoidable environmental impacts that would affect open space, culturally significant land, agricultural and forestry land, wetlands or other environmentally sensitive areas. Such fees are typically pooled and distributed to build off-site mitigation areas.

**Intelligent Transportation System (ITS)** - Systems that use modern detection, communications and computing technology to collect data on system operations and performance, communicate that information to system managers and users and use that information to manage and adjust the transportation system to respond to changing operating conditions, congestion, or accidents. ITS technology can be applied to arterials, highways, transit, trucks and private vehicles.

**Integrated Mobility Hub:** A hub within an urban area which provides a multitude of transportation options.

**Intermodal Facility Plan:** A plan which addresses the linkages, interactions and movements between various modes of transportation. Intermodal facilities is often used to refer to facilities where freight is transferred between modes such as truck and rail.

**International Roughness Index (IRI):** Commonly obtained from measured longitudinal road profiles, IRI is used worldwide to evaluate and manage road systems. The measurement of IRI is required for data provided to the United States Federal Highway Administration, and is covered in several standards from ASTM International. IRI is also used to evaluate new pavement construction and to determine penalties or bonus payments based on smoothness.

**Livable Corridors:** Arterial roadways where local jurisdictions may plan for a combination of the following elements: high-quality bus frequency; higher density residential and employment at key intersections; and increased active transportation through dedicated bikeways. Most, but not all Livable Corridors would be located within HQTAs. Livable Corridor land-use strategies include development of mixed use retail centers at key nodes along corridors, increasing neighborhood oriented retail at more intersections, applying a "Complete Streets" approach to roadway improvements and zoning that allows for the replacement of underperforming auto-oriented strip retail between nodes with higher density residential and employment.

**Low Income Housing Tax Credit (LIHTC):** A federal program created under the Tax Reform Act of 1986, that gives incentives for the utilization of private equity in the development of affordable housing.

**Low Impact Development (LID):** A land planning and engineering design approach to manage stormwater runoff as part of green infrastructure. LID emphasizes conservation and use of on-site natural features to protect water quality.

**Mills Act:** A state law allowing cities to enter into contracts with the owners of historic structures. Such contracts require a reduction of property taxes in exchange for the continued preservation of the property.

**Mitigation Banking:** The preservation, enhancement, restoration or creation (PERC) of a wetland, stream, or habitat conservation area which offsets, or compensates for, expected adverse impacts to similar nearby ecosystems.

**Mixed Use Development:** A type of urban development that blends residential, commercial, cultural, institutional or industrial uses, where those functions are physically and functionally integrated, and that provides pedestrian connections.

**Multiple Species Habitat Conservation Program (MSHCP):** A program developed to preserve a network of habitat and open space, protecting biodiversity and enhancing the region's quality of life. MSHCPs are often implemented with the assistance of federal and state wildlife agencies.

**Natural Community Conservation Plan (NCCP):** A program that takes a broad-based ecosystem approach to planning for the protection and perpetuation of biological diversity. It is broader in its orientation and objectives than the California and Federal Endangered Species Acts, as these laws are designed to identify and protect individual species that have already declined in number significantly.

**New Markets Tax Credit:** The New Markets Tax Credit (NMTC) Program incentivizes business and real estate investment in low-income communities via a federal tax credit.

**Park-once districts:** Areas that encourage walking through the strategic placement and pricing of parking. These districts create a pedestrian-friendly environment through the use of policies, codes, planning and management efforts that design parking facilities and land use so that most visitors to an area are within a comfortable walking distance of their destinations.

**Pavement Condition Index (PCI):** A numerical index between 0 and 100 which is used to indicate the general condition of a pavement.

**Regional Housing Needs Assessment (RHNA):** Quantifies the need for housing within each jurisdiction of the SCAG region based on population growth projections. Communities then address this need through the process of completing the housing elements of their General Plans.

**Rent stabilization:** A practice which allows landlords a reasonable rate of return on their investments while setting maximum rates for annual rent increases to protect tenants.

**Safe Routes to School:** Part of a nationwide/region-wide program to increase students walking or biking to school. Includes engineering, educational and enforcement activities. Funded through the State Active Transportation Program (ATP).

**Scrip:** A form of fare payment transferrable among transportation providers, often issued by Dial-A-Ride transit service providers to be used on taxis.

**Senate Bill 375 (Chapter 728, Steinberg):** Established to implement the state's greenhouse gas (GHG) emission-reduction goals, as set forth by Assembly Bill 32, in the sector of cars and light trucks. This mandate requires the California Air Resources Board to determine per capita GHG emission-reduction targets for each metropolitan planning organization (MPO) in the state at two points in the future—2020 and 2035. In turn, each MPO must prepare a Sustainable Communities Strategy (SCS) that demonstrates how the region will meet its GHG reduction target through integrated land use, housing and transportation planning.

**Senate Bill 226 (Simitian):** Implements changes to the California Environmental Quality Act (CEQA) by authorizing limited CEQA review for urban infill projects, creating a new statutory exemption for rooftop and parking lot solar energy projects and establishing that greenhouse gas emissions at a project or cumulative level do not disqualify the use of categorical exemptions if the project complies with certain regulations and requirements.

**Senate Bill 743 (Steinberg, 2013):** Made several changes to the California Environmental Quality Act (CEQA) for projects located in areas served by transit. SB 743 proposes to eliminate auto delay, level of services, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts. It also creates a new exemption for certain projects that are consistent with a Specific Plan, and eliminates the need to evaluate aesthetic and parking impacts of a project in some circumstances.

**Shared parking:** A tool in parking management which allows different land uses with different periods of parking demand to share a common parking facility and thereby limit the need to provide additional parking. Shared parking policies do not treat the parking supply as individual units specific to particular businesses or uses, but rather emphasize the efficient use of the parking supply by including as many spaces as possible in a common pool of shared, publicly available spaces.

**Small-lot development:** A practice that allows for the subdivision of lots located within existing multifamily and commercial zones to develop fee simple housing. Typically small lot developments are not required to be part of a homeowner's association, thus reducing the cost for home buyers.

**Sustainable Agricultural Lands Conservation Program (SALC):** A component of the Strategic Growth Council's Affordable Housing and Sustainability Program (AHSC), which complements investments made in urban areas with the purchase of agricultural conservation easements, development of agricultural land strategy plans and other mechanisms that to reduce GHG emissions and make the agricultural sector more resilient.

**Transit Oriented Development (TOD):** A planning strategy that explicitly links land-use and transportation by focusing mixed housing, employment and commercial growth around bus and rail stations (usually within ½ mile). TODs can reduce the number and length of vehicle trips by encouraging more bicycle/pedestrian and transit use and can support transit investments by creating the density around stations to boost ridership.

**Transit Priority Areas (TPA):** An area within half a mile of a major transit stop that is existing or planned.

**Unbundled parking:** Unbundled parking is the practice of selling or leasing parking spaces separate from the commercial or residential use.

**Urban Heat Island/ Heat Island Effect:** An urban or metropolitan area that is significantly warmer than surrounding rural areas due to human activities. Its main cause is the modification of land surfaces.

**Transportation Demand Management (TDM):** Strategies that result in more efficient use of transportation resources, such as ridesharing, telecommuting, park-and-ride programs, pedestrian improvements and alternative work schedules.

**Transportation Management Areas:** A Transportation Management Area (TMA) is an area designated by the Secretary of Transportation, having an urbanized area population of over 200,000, or upon special request from the Governor and the MPO designated for the area.

**Urban Greening Grant Program:** A grant program that competitively distributes grants statewide to projects that make the built environment more sustainable and effective in creating healthy and vibrant communities. The program funds establishing and enhancing parks and open space, using natural

solutions to improving air and water quality and reducing energy consumption, and creating more walkable and bikeable trails.

**Vehicle Miles Traveled (VMT):** On highways, a measurement of the total miles traveled by all vehicles in the area for a specified time period. It is calculated by the number of vehicles times the miles traveled in a given area or on a given highway during the time period. In transit, the number of vehicle miles operated on a given route or line or network during a specified time period.

**Vision Zero Policy:** A multi-national road traffic safety project that aims to achieve a highway system with no fatalities or serious injuries in road traffic. The policy was started in Sweden and was approved by their parliament in 1997. Since then, various countries (including the United States) have adopted the policy.

**Wetlands Restoration for Greenhouse Gas Reduction Program:** Funds projects that reduce greenhouse gases and provide co-benefits such as enhancing fish and wildlife habitat, protecting and improving water quality and quantity and helping California adapt to climate change.



## **Technical Working Group**

# **Agenda Item 6**

## MAP-21 Performance Measures

Category	Performance Measure	Applicability	Data Source(s)	Metric	Calculation	Effective Date
<b>Travel Time Reliability</b>	% of interstate system with reliable person-mile travel times	Interstate system	NPMRDS	Level of travel time reliability (LOTTR)	Percent of interstate directional mileage with ratio between 80th percentile and 50th percentile travel times less than 1.5	5/20/17
	% of non-interstate NHS with reliable person-mile travel times	Non-interstate NHS	NPMRDS	Level of travel time reliability (LOTTR)	Percent of non-interstate directional mileage with ratio between 80th percentile and 50th percentile travel times less than 1.5	
<b>Peak Hour Travel Time</b>	% of interstate system where peak hour travel times meet expectations	Interstate system in urban areas (population over 1 million)	NPMRDS	Peak hour travel time ratio (PHTTR)	Percent of interstate directional mileage with ratio of peak hour travel time and desired peak period travel time less than 1.5	5/20/17
	% of non-interstate NHS where peak hour travel times meet expectations	Non-interstate NHS in urban areas (population over 1 million)	NPMRDS	Peak hour travel time ratio (PHTTR)	Percent of non-interstate directional mileage with ratio of peak hour travel time and desired peak period travel time less than 1.5	
<b>Freight Movement</b>	% of interstate system mileage reporting reliable truck travel times	Interstate system	NPMRDS; INRIX	Truck travel time reliability index (TTTR)	Percent of interstate directional mileage with ratio between 95th percentile and 50th percentile truck travel time less than 1.5	5/20/17
	% of interstate system mileage uncongested	Interstate system	NPMRDS; INRIX	Average truck speed (ATS)	Percent of interstate directional mileage reporting average truck speed of 50 MPH+	



## MAP-21 Performance Measures

Category	Performance Measure	Applicability	Data Source(s)	Metric	Calculation	Effective Date
<b>CMAQ: Traffic Congestion</b>	Annual hours of peak hour excessive delay per capita	NHS in urbanized areas with population over 1 million for the first performance period & urbanized areas with population over 200,000 for all subsequent performance periods that are also in nonattainment or maintenance areas for ozone (O3), carbon monoxide (CO), or particulate matter (PM10 & PM2.5)	NPMRDS traffic/vehicle data (or equivalent 15 minute interval dataset); HPMS bus, car, & truck volumes; FHWA published occupancy factors	Total peak hour excessive delay (TPHED) in person-hours	Annual hours of peak hour excessive delay per capita = TPHED person-hours/total population in applicable area	5/20/17
	Percent of non-Single Occupancy Vehicle (SOV) travel	NHS in urbanized areas with population over 1 million for the first performance period & urbanized areas with population over 200,000 for all subsequent performance periods that are also in nonattainment or maintenance areas for ozone (O3), carbon monoxide (CO), or particulate matter (PM10 & PM2.5)	ACS, local survey, or local counts (includes bike/pedestrian counts)	Non-SOV mode share	Three options: (1) ACS: Subtract estimated SOV percentage from 100 percent; (2) Local survey data: Report percentage of non-SOV travel; (3) System use data: Divide non-SOV volume by total volume, where non-SOV includes travel modes other than driving alone in a motorized vehicle, including travel avoided by teleworking	
<b>CMAQ: On-Road Mobile Source Emissions</b>	Total emissions reductions	All projects financed with CMAQ funds in areas designated as nonattainment or maintenance for ozone (O3), carbon monoxide (CO), or particulate matter (PM10 & PM2.5)	CMAQ Public Access System	Total emissions reductions	Sum of annual tons of emissions reduced by CMAQ projects, using the 2 & 4 years of available data from the Public Access System by criteria pollutant or precursor	5/20/17

## MAP-21 Performance Measures

Category	Performance Measure	Applicability	Data Source(s)	Metric	Calculation	Effective Date
<b>Pavement Condition</b>	% of interstate pavement in 'Good' condition	Interstate system	State DOT; HPMS	Share of interstate pavement in 'Good' condition	Interstate system mileage in 'Good' condition based on IRI or PSR rating	5/20/17
	% of interstate pavement in 'Poor' condition	Interstate system	State DOT; HPMS	Share of interstate pavement in 'Poor' condition	No more than 5% of interstate system mileage in 'Poor' condition based on IRI or PSR rating	
	% of non-interstate NHS pavement in 'Good' condition	Non-interstate NHS	State DOT; HPMS	Share of non-interstate NHS pavement in 'Good' condition	Non-interstate NHS mileage in 'Good' condition based on IRI or PSR rating	
	% of non-interstate NHS pavement in 'Poor' condition	Non-interstate NHS	State DOT; HPMS	Share of non-interstate NHS pavement in 'Poor' condition	No more than 5% of non-interstate NHS mileage in 'Poor' condition based on IRI or PSR rating	
<b>Bridge Condition</b>	% of NHS bridges in 'Good' condition	All NHS bridges	State DOT; National Bridge Inventory	Share of NHS bridges with National Bridge Inventory (NBI) rating of 'Good'	Share of NHS bridges with National Bridge Inventory (NBI) rating of 'Good'	5/20/17
	% of NHS bridges in 'Poor' condition	All NHS bridges	State DOT; National Bridge Inventory	Share of NHS bridges with NBI rating of 'Poor'	Share of NHS bridges with NBI rating of 'Poor'	
	Serious injuries per 100 million vehicle miles traveled	All public roadways	Statewide Integrated Traffic Records System (SWITRS); HPMS	Rate of motor vehicle collisions involving serious injuries on public roadways	Number of serious injuries incurred divided by total vehicle miles traveled	

## MAP-21 Performance Measures

Category	Performance Measure	Applicability	Data Source(s)	Metric	Calculation	Effective Date
<b>Highway Safety</b>	Fatalities per 100 million vehicle miles traveled	All public roadways	Fatality Analysis Reporting System (FARS); HPMS	Rate of motor vehicle collisions involving fatalities on public roadways	Number of fatalities incurred divided by total vehicle miles traveled	4/14/16
	Total number of serious injuries	All public roadways	SWITRS	Number of serious injuries incurred on public roadways	Total number of serious injuries incurred on all public roadways	
	Total number of fatalities	All public roadways	FARS	Number of fatalities incurred on public roadways	Total number of fatalities incurred on all public roadways	
	Total number of non-motorized fatalities & serious injuries	All public roadways	FARS; SWITRS	Number of non-motorized fatalities & serious injuries incurred on public roadways	Total number of non-motorized fatalities & serious injuries incurred on all public roadways	
	<b>Equipment:</b> Non-revenue support-service & maintenance vehicles	All recipients & subrecipients of Federal financial assistance under 49 U.S.C. Chapter 53 that own, operate, or manage capital assets used for providing public transportation	Transit service providers	% of non-revenue vehicles that meet or exceed Useful Life Benchmark	Share of non-revenue vehicles that meet or exceed Useful Life Benchmark (ULB)	

## MAP-21 Performance Measures

Category	Performance Measure	Applicability	Data Source(s)	Metric	Calculation	Effective Date
Transit Asset Management	<b>Rolling Stock:</b> Revenue vehicles by mode	All recipients & subrecipients of Federal financial assistance under 49 U.S.C. Chapter 53 that own, operate, or manage capital assets used for providing public transportation	Transit service providers	% of revenue vehicles that meet or exceed Useful Life Benchmark	Share of revenue vehicles that meet or exceed Useful Life Benchmark (ULB)	10/1/16
	<b>Infrastructure:</b> Rail, fixed-guideway, track, signals, & systems	All recipients & subrecipients of Federal financial assistance under 49 U.S.C. Chapter 53 that own, operate, or manage capital assets used for providing public transportation	Transit service providers	% of track segments with performance restrictions	Share of track segments with performance restrictions	
	<b>Facilities:</b> Maintenance & administrative facilities; passenger stations; parking facilities	All recipients & subrecipients of Federal financial assistance under 49 U.S.C. Chapter 53 that own, operate, or manage capital assets used for providing public transportation	Transit service providers	% of assets with condition rating below 3.0 on FTA TERM Scale	Share of transit facilities with condition rating below 3.0 on FTA TERM Scale	
	Total number & rate of fatalities	Any state or local governmental authority or any other operator of a public transportation system that receives Federal financial assistance under 49 U.S.C. Chapter 53	Transit service providers	Number & rate of transit system fatalities by vehicle revenue miles	Total number of reportable fatalities & fatality rate per total vehicle revenue miles by mode	

## MAP-21 Performance Measures

Category	Performance Measure	Applicability	Data Source(s)	Metric	Calculation	Effective Date
Transit Safety	Total number & rate of injuries	Any state or local governmental authority or any other operator of a public transportation system that receives Federal financial assistance under 49 U.S.C. Chapter 53	Transit service providers	Number & rate of transit system injuries by vehicle revenue miles	Total number of reportable injuries & injury rate per total vehicle revenue miles by mode	TBD
	Safety events	Any state or local governmental authority or any other operator of a public transportation system that receives Federal financial assistance under 49 U.S.C. Chapter 53	Transit service providers	Number & rate of transit safety events by vehicle revenue miles	Total number of reportable events & rate of events per total vehicle revenue miles by mode	
	System reliability	Any state or local governmental authority or any other operator of a public transportation system that receives Federal financial assistance under 49 U.S.C. Chapter 53	Transit service providers	Rate of service vehicle failure	Mean distance between major mechanical failures: Revenue miles operated divided by number of major mechanical failures	