

Mogavero Architects

CALIFORNIA BUILDING CODE PARKING REQUIREMENTS

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MARCH 21ST 2018



OBJECTIVES

1. Learn of Various Types of Required Vehicle Spaces in California.
2. Determine how many of each type is required in a given project.
 1. Utilizing Linden Oaks and Maple Grove as examples.
3. Study specialized vehicle accessibility requirements.



The California Building Codes contain many required specialized parking spaces:

- Accessible parking spaces
- Van accessible parking spaces
- Electric vehicle charging stations (EVCS - technically not a parking space)
 - Standard EVCS
 - Ambulatory EVCS
 - Standard accessible EVCS
 - Van accessible EVCS
- Clean air vehicle parking
- Bicycle Parking
 - Short Term
 - Long Term

Note: EVCS spaces must be shown on permit documents and infrastructure installed, but there is no requirement to install chargers at this time.

Required spaces are indicated on the handout.



PART 2 – Determine how many of each type of specialized vehicle spaces are required.

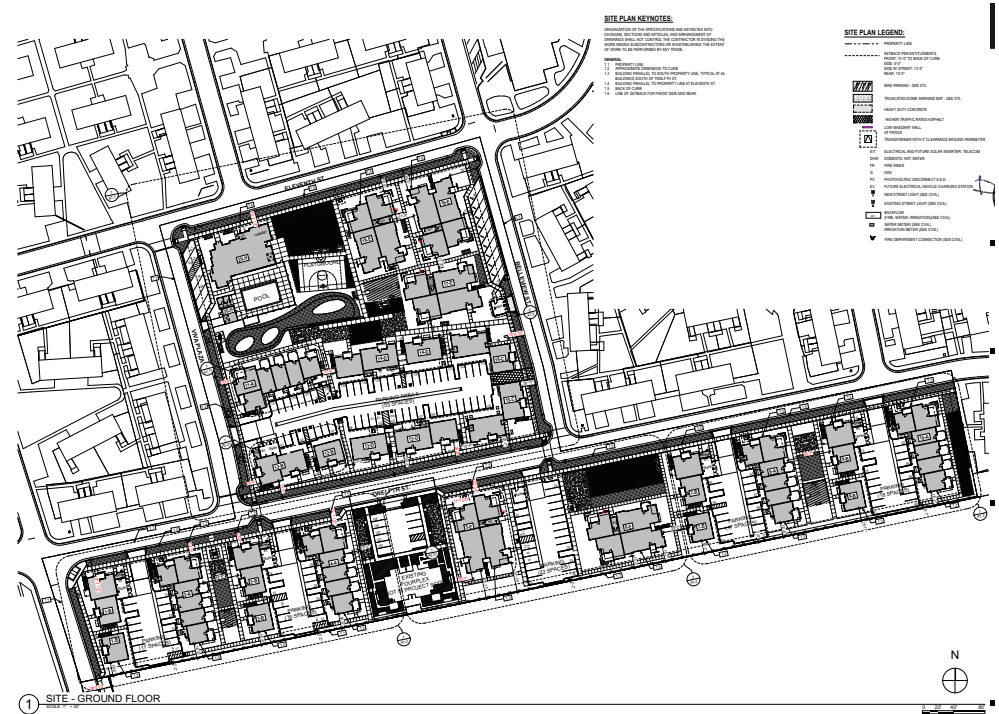
We will review two projects.

Linden Oaks, a 115 unit multifamily project and Maple Grove, a 278 unit mixed use project.



Linden Oaks is a typical Mogavero multifamily apartment complex.

- 115 dwelling units
- Small community building
- 147 total vehicle spaces plan
 - 6 spaces reserved for visitors and the community building
 - Parking is more than 1 vehicle per dwelling unit



Step 1 A

Determine the number of EVCS required:

- 141 residential (Cal Green 4.106.4.2):
 - 141 total spaces x 3% = 4.23 = 5 EVCS
- 6 community building (Cal Green table 5.106.5.3.3):
 - 6 total spaces = 0 EVCS

4.106.4.2 New multifamily dwellings. Where 17 or more multifamily dwelling units are constructed on a building site, 3 percent of the total number of parking spaces provided for all types of parking facilities, but in no case less than one, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number.

5.106.5.3.3 EV charging space calculation. [N] Table 5.106.5.3.3 shall be used to determine if single or multiple charging space requirements apply for the future installation of EVSE.

TOTAL NUMBER OF ACTUAL PARKING SPACES	NUMBER OF REQUIRED EV CHARGING SPACES
0-9	0



Step 1 B

Determine the type of EVCS required:

- 5 total EVCS (BCB table 11B-228.3.2.1):
 - 1 van accessible EVCS
 - 1 standard accessible EVCS
 - 3 standard EVCS

11B-228.3.2.1 Public use or common use EVCS. Where EVCS are provided for public use or common use, EVCS complying with Section 11B-812 shall be provided in accordance with Table 11B-228.3.2.1.

TABLE 11B-228.3.2.1
ELECTRIC VEHICLE CHARGING STATIONS FOR PUBLIC USE AND COMMON USE

TOTAL NUMBER OF EVCS AT A FACILITY	MINIMUM NUMBER (by type) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	Van Accessible	Standard Accessible	Ambulatory
5 to 25	1	1	0



Step 2 A

Determine the number of accessible residential spaces required:

- Residential:

- 136 total residential spaces (141 – 5 EVCS).
- 115 dwelling units x 5% mobility = 5.75 = 6 accessible spaces (11B-208.2.3.1)

Note: CBC requires 5% of the total number of dwelling units be dwelling units with mobility features and requires 1 accessible parking space be provided for each required dwelling unit with mobility features when the total amount of parking is 1 space per unit or more. TCAC requires 10% of the total number of dwelling units be dwelling units with mobility features. Potentially we need the same number of accessible parking spaces.

- 136 spaces – 115 (1 per dwelling unit) = 21 guest and visitor spaces
- 21 guest and visitor spaces x 2% = 1 required

11B-208.2.3 Residential facilities. *Parking spaces provided to serve residential facilities shall comply with Section 11B-208.2.3.*

11B-208.2.3.1 Parking for residents. *Where at least one parking space is provided for each residential dwelling unit, at least one parking space complying with Section 11B-502 shall be provided for each residential dwelling with required to provide mobility features complying with Sections 11B-809.2 through 11B-809.4.*

11B-208.2.3.2 Additional parking spaces for residents. *Where the total number of parking spaces provided for each residential dwelling unit exceeds one parking space per residential dwelling unit, 2 percent, but no fewer than one space, of all the parking spaces not covered by Section 11B-208.2.3. shall comply with Section 11B-502.*



Step 2 B

Determine the number of accessible non-residential spaces required:

- Community building:
 - 6 total spaces = 1 required accessible space (table 11B-208.2)

11B-208.2.3.3 Parking for guests, employees, and other non-residents. Where parking spaces are provided for persons other than residents, parking shall be provided in accordance with Table 11B-208.2.

TOTAL NUMBER OF PARKING SPACES PROVIDED IN PARKING FACILITY	MINIMUM NUMBER OF REQUIRED ACCESSIBLE PARKING SPACES
1 TO 25	1



Step 3

Determine the type of accessible spaces required:

- Van accessible spaces:
 - 7 total accessible spaces = 2 van accessible spaces (11B-208.2)

11B-208.2.4 Van parking spaces. For every six or fraction of six parking spaces required by Section 11B-208.2 to comply with Section 11B-502, at least one shall be a van parking space complying with Section 11B-502.



Step 4

Determine the number of clean air vehicle spaces required:

- Residential:
 - 126 spaces: 0 (Cal Green chapter 4.1)
- Community building:
 - 6 total spaces: 0 (Cal Green table 5.106.5.2)

- **5.106.5.2 Designated parking for clean air vehicles.** In new projects or additions or alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as follows:

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPACES
0-9	0



Step 5

Determine the number and type of bicycle parking spaces required:

- Residential dwelling units: 0
 - Community Building (6 parking spaces, less than 10 tenant occupants): 0
 - 2 Short term
 - 0 Long term
- **5.106.4 Bicycle parking.** For buildings within the authority of California Building Standards Commission as specified in Section 103, comply with Section 5.106.4.1. For buildings within the authority of the Division of the State Architect pursuant to Section 105, comply with Section 5.106.4.2.
 - **5.106.4.1.1 Short-term bicycle parking.** 5 percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack.
 - **5.106.4.1.2 Long-term bicycle parking.** For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of on bicycle parking facility.



LINDEN OAKS PARKING/EVCS TABULATION

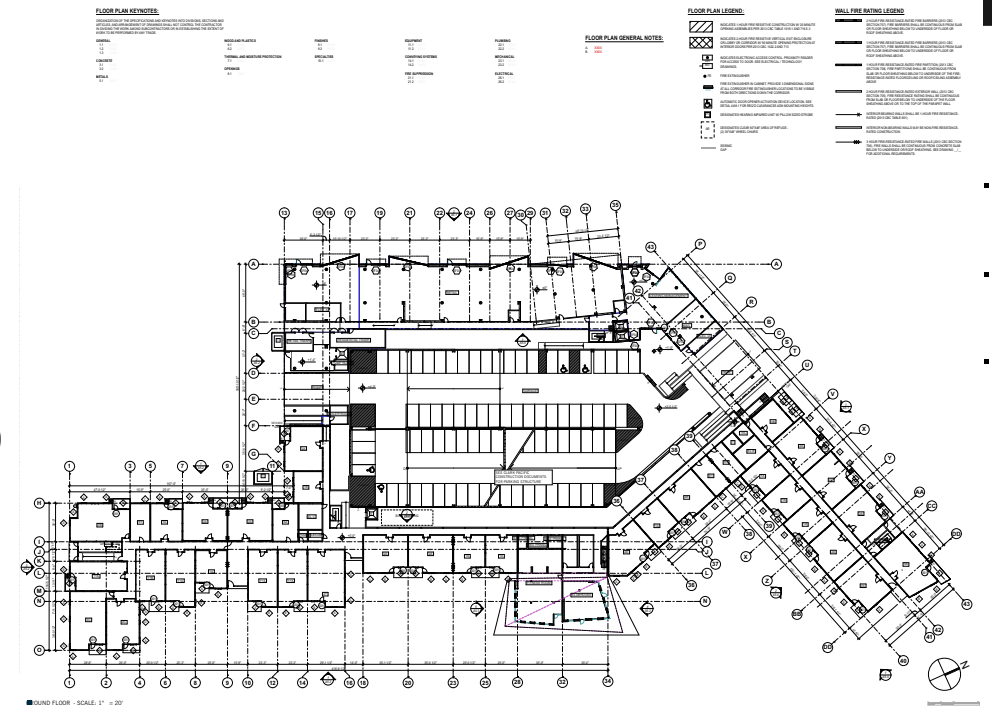
	STANDARD	ACCESSIBLE	VAN ACCESSIBLE	STANDARD EVCS	AMBULATORY EVCS	STANDARD ACCESSIBLE EVCS	VAN ACCESSIBLE EVCS	CLEAN AIR/CAR POOL/VAN POOL	LONG TERM BICYCLE PARKING	SHORT TERM BICYCLE PARKING
RESIDENTIAL	131	5	1	3	0	1	1	0	0	0
COMMUNITY BUILDING	5	0	1	0	0	0	0	0	0	2
TOTAL	136	5	2	3	0	1	1	0	0	2



Maple Grove is a more complex mixed-use project.

Maple Grove is privately funded housing and is not subject to 11B. For the purposes of this exercise, Maple Grove is treated as publically funded housing.

- 278 dwelling units
- Common use spaces
- Retail and entertainment
- 443 total vehicle spaces shown on the plan
 - 44 spaces are reserved for the retail (10,000 SF)
 - 399 spaces residential parking
 - Parking is more than 1 vehicle per dwelling unit



Step 1 A

Determine the number of Residential EVCS required:

- 443 residential (Cal Green 4.106.4.1): $443 \times 3\%$
= 13.29 = 14 EVCS

4.106.4.2 New multifamily dwellings. Where 17 or more multifamily dwelling units are constructed on a building site, 3 percent of the total number of parking spaces provided for all types of parking facilities, but in no case less than one, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number.



Step 1 B

Determine the type of Residential EVCS required:

- 14 EVCS
 - Type required (CBC table 11B-228.3.2.1):
 - 1 van accessible EVCS
 - 1 standard accessible EVCS
 - 0 ambulatory accessible EVCS
 - 12 standard EVCS

11B-228.3.2.1 Public use or common use EVCS. Where EVCS are provided for public use or common use, EVCS complying with Section 11B-812 shall be provided in accordance with Table 11B-228.3.2.1.

TABLE 11B-228.3.2.1
ELECTRIC VEHICLE CHARGING STATIONS FOR PUBLIC USE AND COMMON USE

TOTAL NUMBER OF EVCS AT A FACILITY	MINIMUM NUMBER (by type) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	Van Accessible	Standard Accessible	Ambulatory
5 to 25	1	1	0



Step 2 A

Determine the number of Retail EVCS required:

- 44 retail (Cal green table 5.106.5.3.3): 2 EVCS

5.106.5.3.3 EV charging space calculation. [N] Table 5.106.5.3.3 shall be used to determine if single or multiple charging space requirements apply for the future installation of EVSE.

TOTAL NUMBER OF ACTUAL PARKING SPACES	NUMBER OF REQUIRED EV CHARGING SPACES
26-50	2



Step 2 B

Determine the type of Retail EVCS required:

- 2 EVCS
 - Type required (CBC table 11B-228.3.2.1):
 - 1 van accessible EVCS
 - 0 standard accessible EVCS
 - 0 ambulatory accessible EVCS
 - 1 standard EVCS

11B-228.3.2.1 Public use or common use EVCS. Where EVCS are provided for public use or common use, EVCS complying with Section 11B-812 shall be provided in accordance with Table 11B-228.3.2.1.

TABLE 11B-228.3.2.1
ELECTRIC VEHICLE CHARGING STATIONS FOR PUBLIC USE AND COMMON USE

TOTAL NUMBER OF EVCS AT A FACILITY	MINIMUM NUMBER (by type) OF EVCS REQUIRED TO COMPLY WITH SECTION 11B-812		
	Van Accessible	Standard Accessible	Ambulatory
1 to 4	1	0	0

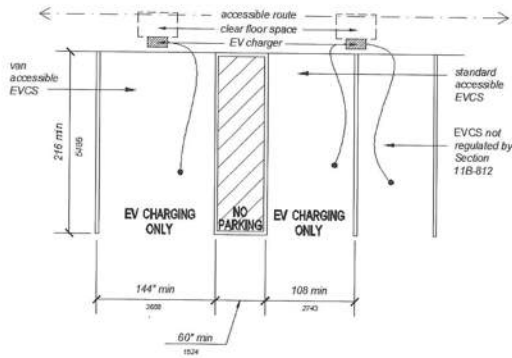


FIGURE 11B-812.9
SURFACE MARKING

SUPPLEMENT—BLUE
EFFECTIVE JULY 1, 2019

2016 CALIFORNIA BUILDING CODE



Step 3

Determine the number and type of accessible spaces required:

- Residential:
 - 429 total residential spaces (443 – 14 EVCS)
 - 278 dwelling units x 5% mobility = 13.9 = 14 accessible spaces (11B-208.2.3.1)
 - 429 spaces – 278 (1 per dwelling unit) = 151 additional resident and visitor spaces x 2% = 4 required accessible spaces (CBC table 11B-208.2)
 - Total accessible spaces: 18
 - 3 van accessible spaces required (11B-208.2)

11B-208.2.3 Residential facilities. Parking spaces provides to serve residential facilities shall comply with Section 11B-208.2.3

11B-208.2.3.1 Parking for residents. Where at least one parking space is provided for each residential dwelling unit, at least on parking space complying with Section 11B-502 shall be provided for each residential dwelling unit required to provide mobility features.

11B-208.2.3.2 Additional parking spaces for residents. Where the total number of parking spaces provided for each residential dwelling unit exceeds one parking space per residential dwelling unit, 2 percent, but no fewer than one space, of all the parking spaces not covered by Section 11B-208.2.3.1 shall comply with Section 11B-502.

11B-208.2.4 Van parking spaces. For every six or fraction of six parking spaces required by Section 11B-208.2 to comply with Section 11B-502, at least one shall be a van parking space complying with Section 11B-502.



Step 3 Continued

Determine the number and type of accessible spaces required:

- Retail and entertainment:
 - 42 total parking spaces (44 – 2 evcs) = 2 accessible spaces (CBC table 11B-208.2)
 - 1 van accessible space required (11B-208,2)

11B-208.2.3.3 Parking for guests, employees, and other non-residents. Where parking spaces are provided for persons other than residents, parking shall be provided in accordance with Table 11B-208.2.

TOTAL NUMBER OF PARKING SPACES PROVIDED IN PARKING FACILITY	MINIMUM NUMBER OF REQUIRED ACCESSIBLE PARKING SPACES
26-50	2



Step 4

Determine the number of clean air vehicle spaces required:

- Residential:
 - 429 spaces: 0 (Cal Green chapter 4.1)
- Retail and entertainment:
 - 42 total spaces: 3 (Cal Green table 5.106.5.2): 3

11B-208.2.3.3 Parking for guests, employees, and other non-residents. Where parking spaces are provided for persons other than residents, parking shall be provided in accordance with Table 11B-208.2.

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED SPACES
26-50	3



Step 5

Determine the number and type of bicycle parking required:

- 278 Dwelling units: 0
- 10,000 SF Retail and entertainment:
 - Short term: 44 spaces x 5% = 2.2 = 3
 - Long term: 44 spaces x 5% = 2.2 = 3

WARNING: These are MINIMUM requirements of the State of California – Local jurisdiction may require additional bicycle parking facilities.

5.106.4 Bicycle parking. For buildings within the authority of California Building Standards Commission as specified in Section 103, comply with Section 5.106.4.1. For buildings within the authority of the Division of the State Architect pursuant to Section 105, comply with Section 5.106.4.2.

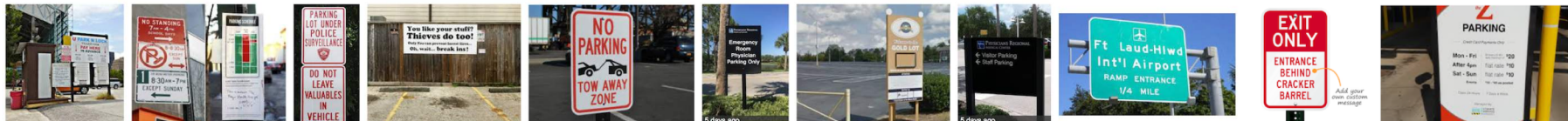
5.106.4.1.1 Short-term bicycle parking. 5 percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack.

5.106.4.1.2 Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of on bicycle parking facility.



MAPLE GROVE/TABULATION

	STANDARD	ACCESSIBLE	VAN ACCESSIBLE	STANDARD EVCS	AMBULATORY EVCS	STANDARD ACCESSIBLE EVCS	VAN ACCESSIBLE EVCS	CLEAN AIR/CAR POOL/VAN POOL	SHORT TERM BICYCLE PARKING	LONG TERM BICYCLE PARKING
RESIDENTIAL	409	15	3	12	0	1	1	0	0	0
COMMUNITY BUILDING	37	1	1	1	0	0	1	3	3	3
TOTAL	446	16	4	13	0	1	1	3	3	3



PART 3 – Accessibility Requirements for Specialized Vehicle Spaces.



Electric Vehicle Charging Stations (EVCS)

1 Location:

- All EVCS, including the charger, shall be located on an accessible route
- Except for ambulatory EVCS the design, shall not require persons using them to travel behind a vehicle other than their own.

11B-812.5 Accessible routes

11B-812.5.1 Accessible route to building or facility. EVCS complying with Section 11B-812 that serve a particular building or facility shall be located on an accessible route to an entrance complying with Section 11B-206.4. Where EVCS do not serve a particular building or facility. EVCS complying with Section 11B-812 shall be located on an accessible route to an accessible pedestrian entrance of the EV charging facility

Exception: EVCS complying with Section 11B-812 shall be permitted to be located in different EV charging facilities if substantially equivalent or greater accessibility is provided in terms of distance from an accessible entrance or entrances, charging fee, and user convenience.

11B-812.5 Accessible routes (Cont.)

11B-812.5.2 Accessible route to EV charger. An accessible route complying with Section 11B-402 shall connect the vehicle space and the EV charger which serves it.

11B-812.5.3 Relationship to accessible routes. Vehicle spaces and access aisles shall be designated so that when the vehicle space is occupied the required clear width of adjacent accessible routes is not obstructed. A curb, wheel stop, bollards, or other barrier shall be provided if required to prevent encroachment of vehicles over the required clear width of adjacent accessible routes.

11B-812.5.4 Arrangement. Vehicle spaces and access aisles shall be designed so that persons using them are not required to travel behind vehicle spaces or parking spaces other than the vehicle space in which their vehicle has been left to charge

Exception:

1. Ambulatory EVCS shall not be required to comply with Section 11B-812.5.4.
2. Vehicle spaces installed in existing facilities shall comply with Section 11B-912.5.4 to the maximum extent feasible.

11B-812.5.5 Obstructions. EVCS shall be designed so accessible routes are not obstructed by cables or other elements



Electric Vehicle Charging Stations (EVCS)

4 Types of Spaces:

- Van Accessible
 - 18' Long
 - 12' Wide
 - 5' Access aisle on passenger side
- Standard Accessible
 - 18' Long
 - 9' Wide
 - 5' Access aisle on passenger side
- Ambulatory
 - 18' Long
 - 10' Wide
- Drive Up
 - 18' Long
 - 17' Wide

11B-812.6 Vehicle Spaces. Vehicle spaces serving van accessible, standard accessible, ambulatory and drive-up EVCS shall be 216 inches (5486 mm) long minimum and shall comply with Sections 11B-812.6.1 through 11B-812.6.4 as applicable. All vehicles spaces shall be marked to define their width.

Exceptions:

1. Where the long dimension of vehicle spaces is parallel to the traffic flow in the adjacent vehicular way, the length of vehicle spaces shall be 240 inches (6096 mm) minimum.
2. Vehicle spaces at drive-up EVCS shall be 240 inches (6096 mm) long minimum and shall not be required to be marked to define their width.

11B-812.6.1 Van accessible. Vehicle spaces serving van accessible EVCS shall be 144 inches (3658 mm) wide minimum and shall have an adjacent access aisle complying with Section 11B-812.7.

11B-812.6.2 Standard accessible. Vehicle spaces serving standard accessible EVCS shall be 108 inches (2743 mm) wide minimum and shall have an adjacent access aisle complying with Section 11B-812.7.

11B-812.6.3 Ambulatory. Vehicle spaces serving ambulatory EVCS shall be 120 inches (3048 mm) wide minimum and shall not be required to have an adjacent access aisle.

11B-812.6.4 Drive-up. Vehicle spaces serving drive-up EVCS shall be 204 inches (5182 mm) wide minimum and shall not be required to have an adjacent accessible aisle.



Electric Vehicle Charging Stations (EVCS)

3 Access Aisles

- Access aisle shall be 5' wide
- Access aisles shall be marked with paint contrasting to the adjacent pavement
- Blue border that identifies access aisles for accessible spaces shall NOT be used.

11B-812.7 Access aisle. Access aisles shall adjoin an accessible route. Two vehicles paces shall be permitted to share a common access aisle. Access aisles shall be 60 inches (1524 mm) wide minimum and shall extend the full required length of the vehicle spaces they serve.

11B-812.7.1 Location. Access aisles at vehicle spaces shall not overlap the vehicular way and may be placed on either side of the vehicle space they serve except for van accessible spaces which shall have access aisles located on the passenger side of the vehicle spaces.

11B-812.7.2 Marking. Access aisles at vehicle spaces shall be marked with a painted borderline around their perimeter. The area within the borderlines shall be marked with hatched lines a maximum 36 inches (914 mm) on center. The color of the borderlines, hatched lines, and letters shall contrast with that of the surfaces of the access aisle. The blue color required for identification of access aisles for accessible parking shall not be used. Access aisle markings may extend beyond the minimum required length.

11B-812.7.3 Lettering. The words "NO PARKING" shall be painted on the surface within each access aisle in letters a minimum of 12 inches (305 mm) in height and located to be visible from the adjacent vehicular way.



Electric Vehicle Charging Stations (EVCS)

4 Signs + Identification

- The charger is not required to be installed when the EVCS locations are installed.
 - The surface of the EVCS shall be marked in 12” high letters “EV CHARGING ONLY”
 - The International Symbol of Accessibility (ISA) is NOT required until there are 5 EVCS
 - 5-26 EVCS require one van accessible EVCS to be identified with the ISA symbol
 - 26 or more EVCS require ALL van accessible EVCS to be identified with the ISA symbol
- 11B-812.8 Identification signs.** EVCS identification signs shall be provided in compliance with Section 11B-812.8.*
- 11B-812.8.1 Four or fewer.** Where four or fewer total EVCS are provided, identification with an International Symbol of Accessibility (ISA) and signs identifying van accessible spaces shall not be required.*
- 11B-812.8.2 Five to twenty-five.** Where five to twenty-five total EVCS are provided, one van accessible EVCS shall be identified by an ISA complying with Section 11B-703.7.2.1. The required standard accessible EVCS shall not be required to be identified with an ISA.*
- 11B-812.8.3 Twenty-six or more.** Where twenty-six or more total EVCS are provided, all required van accessible and all required standard accessible EVCS shall be identified by an ISA complying with Section 11B-703.7.2.1.*



Electric Vehicle Charging Stations (EVCS)

4 Signs + Identification (Continued)

11B-812.8.4 Ambulatory. Ambulatory EVCS shall not be required to be identified by an ISA.

11B-812.8.5 Drive-up. Drive-up EVCS shall not be required to be identified by an ISA

11B-812.8.6 Finish and size. Identification shall be reflectorized with a minimum area of 70 square inches (45161 mm²).

11B-812.8.7 Location. Required Identification signs shall be visible from the EVCS it serves. Signs shall be permanently posted either immediately adjacent to the vehicle space or within the projected vehicle space width at the head end of the vehicle space. Signs identifying van accessible vehicle spaces shall contain the designation “van accessible.” Signs shall be 60 inches (1525 mm) minimum above the finish floor or ground surface measured to the bottom of the sign. Signs located within an accessible route shall be 80 inches (2032 mm) minimum above the finish floor or ground surface measured to the bottom of the sign. Signs may also be permanently posted on a wall at the interior end of the vehicle space.

11B-812.9 Surface marking. EVCS vehicle spaces shall provide surface marking stating “EV CHARGING ONLY” in letters 12 inches (305 mm) high minimum. The centerline of the text shall be a maximum of 6 inches (152 mm) from the centerline of the vehicle space and its lower corner at, or lower side aligned with, the end of the parking space length.



Electric Vehicle Charging Stations (EVCS)

Not Subject to CBC Chapter 11B
(Privately funded residential projects only)

- 18' Long
- 9' Wide
- One out of every ECVS (out and less than 1) shall have a 5' wide access aisle.
- At least one shall be located in common use areas for use by residents

4.106.4.2.1 Electric vehicle charging space (EV space) locations. Construction documents shall indicate the location of proposed EV spaces. At least one EV space shall be located in common use areas and available for use by all residents.

When EV chargers are installed, EV spaces required by Section 4.106.4.2.2, Item 3, shall comply with at least one of the following options:

1. The EV space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space.
2. The EV space shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building.

4.106.4.2.2 Electric vehicle charging space (EV space) dimensions. The EV spaces shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet (5486 mm).
2. The minimum width of each EV space shall be 9 feet (2743 mm).
3. One in every 25 EV spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm).
 - a. Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.



Accessibility Parking Spaces

A1 Location

- Accessible parking spaces shall be located on the shortest possible route to the building entrance. Where there is more than one entrance, accessibility parking must be dispersed among the entrances.
- Van Parking may be grouped on one level of multi story parking garages
- Van spaces serving dwelling unit with mobility features shall be located on the shortest possible route to the units they serve

11B-208.3 Location. Parking facilities shall comply with Section 11B-208.3.

11B-208.3.1 General. Parking spaces complying with Section 11B-502 that serve a particular building or facility. shall be located on the shortest accessible route from parking to an entrance complying with Section 11B-206.4. Where parking serves more than one accessible entrance, parking spaces complying with Section 11B-502 shall be dispersed and located on the shortest accessible route to the accessible entrances. In parking facilities that do not serve a particular building or facility, parking spaces complying with Section 11B-502 shall be located on the shortest accessible route to an accessible pedestrian entrance of the parking facility.

Exceptions:

1. All van parking spaces shall be permitted to be grouped on one level within a multi-story parking facility.
2. Parking spaces shall be permitted to be located in different parking facilities if substantially equivalent or greater accessibility is provided in terms of distance from an accessible entrance or entrances, parking fee, and user convenience.

11B-208.3.2 Residential facilities. In residential facilities containing residential dwelling units required to provide mobility features complying with Sections 11B-809.2 through 11B-809.4, and adaptable features complying with Chapter 11A, Division IV, parking spaces provided in accordance with Section 11B-208.2.3.1 shall be located on the shortest accessible route to the residential dwelling unit entrance they serve. Spaces provided in accordance with Section 11B-208.2.3.2 shall be dispersed throughout all types of parking provided for the residential dwelling units.

Exception: Parking spaces provided in accordance with Section 11B-208.2.3.2 shall not be required to be dispersed throughout all types of parking if substantially equivalent or greater accessibility is provided in terms of distance from an accessible entrance, parking fee, and user convenience.



Accessible Parking Spaces

1B Location (continued)

- Accessible parking spaces shall be located on the accessible route.
- Persons using accessible parking spaces shall not be required to travel behind a vehicle other than their own.

11B-502.7 Relationship to accessible routes. Parking spaces and access aisles shall be designed so that cars and vans, when parked, cannot obstruct the required clear width of adjacent accessible routes.

11B-502.7.1 Arrangement. Parking spaces and access aisles shall be designed so that persons using them are not required to travel behind parking spaces other than to pass behind the parking space in which they parked.

11B-502.7.2 Wheel stops. A curb or wheel stop shall be provided if required to prevent encroachment of vehicles over the required clear width of adjacent accessible routes.



Accessible Parking Spaces

3 Types of Spaces and Aisles

- Van Accessible
 - 18' Long
 - 12' Wide
 - 9' High clearance
 - 5' Wide access aisle on passenger side
- Van Accessible (Alternate Configuration)
 - 18' Long
 - 9' Wide
 - 8' High clearance
 - 8' Wide access aisle on passenger side
- Standard Accessible
 - 18' Long
 - 9' Wide
 - 8' High clearance
 - 5' Wide access aisle on passenger side

11B-502.2 Vehicle spaces. Car and van parking spaces shall be 216 inches (5486 mm) long minimum. Car parking spaces shall be 108 inches (2743 mm) wide minimum and van parking spaces shall be 144 inches (3658 mm) wide minimum, shall be marked to define the width, and shall have an adjacent access aisle complying with Section 11B-502.3.

Exception: Van parking spaces shall be permitted to be 108 inches (2743 mm) wide minimum where the access aisle is 96 inches (2438 mm) wide minimum.

11B-502.3 Access aisle. Access aisles serving parking spaces shall comply with Section 11B-502.3. Access aisles shall adjoin an accessible route. Two parking spaces shall be permitted to share a common access aisle.

11B-502.3.1 Width. Access aisles serving car and van parking spaces shall be 60 inches (1524 mm) wide minimum.

11B-502.3.2 Length, Access aisles shall extend the full required length of the parking spaces they serve.

11B-502.3.3 Marking. Access aisles shall be marked with a blue painted borderline around their perimeter. The area within the blue borderlines shall be marked with hatched lines a maximum of 36 inches (914 mm) on center.

11B-502.5 Vertical clearance. Parking spaces, access aisles and vehicular routes serving them shall provide a vertical clearance of 98 inches (2489 mm) minimum.



Accessible Parking Spaces

3 Pavement Marking

- Vehicle spaces shall either be marked by the painted lines that contrast to the pavement color and a 36” square International Symbol of Accessibility (ISA) in white in a blue background or painted blue and marked by a 36” square ISA painted white or a suitable contrasting color.
- Access aisles shall be outlined in blue paint and diagonal lines that contrast to the pavement color and 12” high painted letter “NO PARKING”.

11B-502.2 Vehicle Spaces. Car and van parking spaces shall be 216 inches (5486 mm) long minimum. Car parking spaces shall be 108 inches (2743 mm) wide minimum and van parking spaces shall be 144 inches (3658 mm) wide minimum, shall be marked to define the width, and shall have an adjacent access aisle complying with Section 11B-502.3.

11B-502.3.3 Marking. Access aisles shall be marked with a blue painted borderline around their perimeter. The area within the blue borderlines shall be marked with hatched lines a maximum of 36 inches (914 mm) on center in a color contrasting with that of the aisle surface, preferably blue or white. The words "NO PARKING" shall be painted on the surface within each access aisle in white letters a minimum of 12 inches (305 mm) in height and located to be visible from the adjacent vehicular way. Access aisle markings may extend beyond the minimum required length.

11B-502.6.4 Marking. Each accessible car and van space shall have surface identification complying with either Section 11B-502.6.4.1 or 11B-502.6.4.2.

11B-502.6.4.1 The parking space shall be marked with an International Symbol of Accessibility complying with Section 11B-703.7.2.1 in white on a blue background a minimum 36 inches wide by 36 inches high (914 mm by 914 mm). The centerline of the International Symbol of Accessibility shall be a maximum of 6 inches (152 mm) from the centerline of the parking space, its sides parallel to the length of the parking space and its lower corner at, or lower side aligned with, the end of the parking space length.

11B-502.6.4.2 The parking space shall be outlined in blue or painted blue and shall be marked with an International Symbol of Accessibility complying with Section 11B-703.7.2.1 a minimum 36 inches wide by 36 inches high (914 mm by 914 mm) in white or a suitable contrasting color. The centerline of the International Symbol of Accessibility shall be a maximum of 6 inches (152 mm) from the centerline of the parking space, its sides parallel to the length of the parking space and its lower corner at, or lower side aligned with, the end of the parking space.



Accessible Parking Spaces

4 Additional Signs

- Additional pole on wall mounted signage shall be provided at the head of each parking space.
 - Reflectorized
 - Minimum 70 sq. in
 - International Symbol of Accessibility in white in a blue.
 - Minimum fine \$250
 - Van accessible at van accessible spaces.

11B-502.6 Identification. *Parking space identification signs shall include the International Symbol of Accessibility complying with Section 11B-703.7.2.1, in white on a blue background. Signs identifying van parking spaces shall contain additional language or an additional sign with the designation "van accessible". Signs shall be 60 inches (1524 mm) minimum above the finish floor or ground surface measured to the bottom of the sign.*

Exception: *Signs located within a circulation path shall be a minimum of 80 inches (2032 mm) above the finish floor or ground surface measured to the bottom of the sign.*

11B-502.6.1 Finish and size. *Parking identification signs shall be reflectorized with a minimum area of 70 square inches (45,161 mm²).*

11B-502.6.2 Minimum fine. *Additional language or an additional sign below the international Symbol of Accessibility shall state "Minimum Fine \$250".*

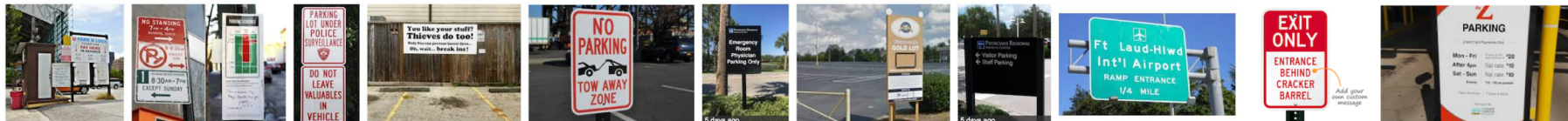
11B-502.6.3 Location. *A parking space identification sign shall be visible from each parking space. Signs shall be permanently posted either immediately adjacent to the parking space or within the projected parking space width at the head end of the parking space. Signs may also be permanently posted on a wall at the interior end of the parking space.*



Clean Air Vehicle Parking

1 Location and Size

- Cal Green 5.106.5.2 does not indicate minimum vehicle parking space requirements or location requirements.



Clean Air Vehicle Parking

2 Pavement Marking

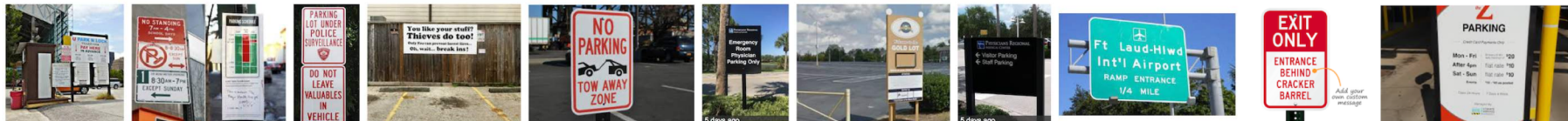
- Use striping paint to identify clean air vehicle parking spaces.

“CLEAN AIR/
VANPOOL/ EV”

5.106.5.2.1 Parking stall marking. Paint, in the paint used for stall striping, the following characters such that the lower edge of the last word aligns with the end of the stall striping and is visible beneath a parked vehicle:

CLEAN AIR/
VANPOOL/ EV

Note: Vehicles bearing Clean Air Vehicle stickers from expired HOV lane programs may be considered eligible for designated parking spaces.



Bicycle Parking

1 Location

- Short Term: Readily visible to passers-by with in 200' of the building entrance.
- Long Term: No requirement

5.106.4.1.1 Short-term bicycle parking. *If the new project or an addition or alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack.*

5.106.4.1.2 Long-term bicycle parking. *For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility.*



Bicycle Parking

2 Types Required

- Short Term: Open Bicycle racks. 2 bikes minimum capacity.
- Long Term:
 - Covered lockable permanently anchored bicycle lockers
 - Lockable bike rooms with permanently anchored bicycle lockers
 - Covered lockable enclosures with permanently anchored bicycle lockers

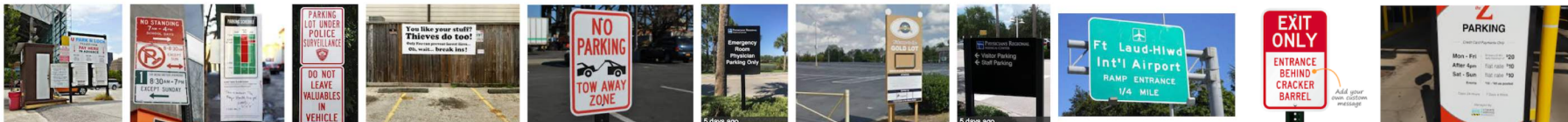
5.106.4.1.1 Short-term bicycle parking. If the new project or an addition or alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack.

5.106.4.1.5 Acceptable bicycle parking facility for sections 5.106.4.1.2, 5.106.4.1.3, and 5.106.4.1.4 shall be convenient from the street and shall meet one of the following:

Exception: Signs located within a circulation path shall be a minimum of 80 inches (2032 mm) above the finish floor or ground surface measured to the bottom of the sign.

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

Note: Additional information on recommended bicycle accommodations may be obtained from Sacramento Area Bicycle Advocates.

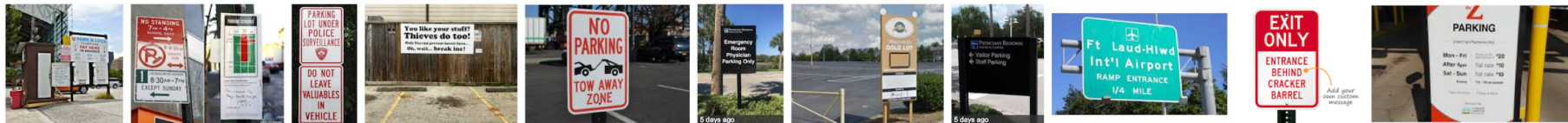


■ Mogavero University Summary of Required Special Vehicle Spaces

Type of space	Description	Multi-Family Residential	Non-Residential 2016 CBC Chapter 11B																	
Standard Accessible Parking	11A	<p>2% of each type of parking space (Covered, uncovered, etc.) but no less than 1 for each type.</p> <ul style="list-style-type: none"> Assigned Spaces: 2% minimum. Unassigned and Visitor Parking Spaces: 5% minimum. <p>NOTE: ECVS do not count as "Parking Spaces" for the purpose of calculating required number of accessible spaces.</p>																		
	11B	<p>Where 1 parking space is provided for each dwelling unit, 1 accessible space per each Required Mobility Unit (5% of total number of units). Parking in excess of 1 per unit or where parking is less than 1 per dwelling unit. Provide additional unit and Visitor Parking in conformance with the</p>	<p style="text-align: center;">CBC Table 11B-208.2</p> <table border="1" style="width: 100%; text-align: center;"> <thead> <tr> <th>Total Number of Parking Spaces per Parking Facility</th> <th>Minimum Number of Accessible Spaces.</th> </tr> </thead> <tbody> <tr> <td>1 to 25</td> <td>1</td> </tr> <tr> <td>26 to 50</td> <td>2</td> </tr> <tr> <td>51 to 75</td> <td>3</td> </tr> <tr> <td>76 to 100</td> <td>4</td> </tr> <tr> <td>101 to 150</td> <td>5</td> </tr> <tr> <td>151 to 200</td> <td>6</td> </tr> <tr> <td>201 to 300</td> <td>7</td> </tr> <tr> <td>301 to 400</td> <td>8</td> </tr> </tbody> </table>	Total Number of Parking Spaces per Parking Facility	Minimum Number of Accessible Spaces.	1 to 25	1	26 to 50	2	51 to 75	3	76 to 100	4	101 to 150	5	151 to 200	6	201 to 300	7	301 to 400
Total Number of Parking Spaces per Parking Facility	Minimum Number of Accessible Spaces.																			
1 to 25	1																			
26 to 50	2																			
51 to 75	3																			
76 to 100	4																			
101 to 150	5																			
151 to 200	6																			
201 to 300	7																			
301 to 400	8																			



		Table 11B-208.2. 1 in every 6, but no less than 1 shall be Van Accessible (CBC 11B-208.2.4)	401 to 500	9
			501 to 1,000	2% of total
			101+	2-. Plus 1 for each 100, or fraction thereof, over 1,000
			NOTE: ECVS do not count as "Parking Spaces" for the purpose of calculating required number of accessible spaces.	
Van Accessible Parking	Residential 11A	Non-Residential		
	1 in every 8 accessible spaces but no less than 1 CBC 1109A.8.6 NOTE: ECVS do not count as "Parking Spaces" for the purpose of calculating required number of accessible spaces.	1 in every 6 or fraction of 6 accessible spaces but no less than 1 CBC 11B-208.2.4		
Total # ECVS	CAL Green	3% of total parking spaces when 17 or more units are constructed. CGBSC 4.106.4.2	Table 5.106.5.3.3	
			Total Number of Actual Parking Spaces	Number of Required EV Charging Spaces
			0-9	0
			10-25	1
			26-50	2
			51-75	4
			76-100	5
			101-150	7
			151-200	10
			201 and over	6 percent of total*
		* Calculation for spaces shall be rounded up to the nearest whole number		
ECVS Accessible Requirements	Residential 11A Only	Non-Residential + Publically Founded Housing 11B		
	Must be located adjacent to an accessible parking	Table 11B-228.3.2.1 Electric Vehicle Charging Stations for Public use and Common use		



		space to allow use of the Charger in the EVCS space and the Accessible Parking Space or on an accessible route. (CGBSC 4.106.4.2.1)	Total Number of EVCS at a Facility*	Minimum Number (by type) of EVCS Required to Comply with Section 11B-812*		
				Van Accessible	Standard Accessible	Ambulatory
			1 to 4	1	0	0
			5 to 25	1	1	0
			26 to 50	1	1	1
			51 to 75	1	2	2
			76 to 100	1	3	3
			101 and over	1, plus 1 for each 300, or fraction thereof, over 100	3, plus 1 for each 60, or fraction thereof, over 100	3, plus 1 for each 50, or fraction thereof, over 100
			* Where an EV charger can simultaneously charge more than one vehicle, the number of EVCS provided shall be considered equivalent to the number of electric vehicles that can be simultaneously charged.			
Low-Emitting, Fuel-Efficient, and carpool/vanpool spaces	CAL Green	Residential – No Requirement	CGBSC Table 5.106.5.2			
			Total number of Parking Spaces		Number of Required Spaces	
			0-9		0	
			10-25		1	
			26-50		3	
			51-75		6	
			76-100		8	
			101-150		11	
151-200		16				
201 +		At least 8% of the total (round up)				
Bicycle Parking	CAL Green	Residential – No Requirement	Short Term (Anchored Bicycle Racks): Equal to 5% of the provided motor vehicle parking, minimum 1 bike rack with 2 bicycle capacity. (CGBSC 5.106.4.1.1)			
			Long Term (secured) For buildings with 10 or more tenants: 5% of Tenant Parking Spaces provided, but no less than 1 (CGBSC 5.106.4.1.2.1)			

