

**Draft Final Report for Project Entitled:**  
**FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION**  
**REVIEW AND RECOMMENDATIONS**

**PO Number A95F33**

**Performance Period: 1/6/2014 – 6/30/2014**

Submitted on

**June 15, 2014**

Presented to the

Florida Building Commission  
State of Florida Department of Business and Professional Regulation

by

Forrest J. Masters, Ph.D., P.E., masters@ce.ufl.edu, (352) 392-9537 x 1505, Principal Investigator

Kurtis R. Gurley, Ph.D., kgurl@ce.ufl.edu, (352) 392-9537 x 1508

David O. Prevatt, Ph.D., P.E. (MA), dprev@ce.ufl.edu, (352) 392-9537 x 1498

Janet Fay, E.I., jfay1210@ufl.edu, (954)-732-2837

**Designated Project Leader:** David O. Prevatt

Engineering School for Sustainable Infrastructure & Environment



DRAFT

## Table of Contents

1. Applicable Sections of the Code.....	1
1.1. Description of Issues.....	1
2. Executive Summary.....	2
3. Scope of Work.....	3
4. Deliverables.....	3
5. Detailed Project Description.....	3
5.1. Background.....	3
5.2. Literature Review.....	3
5.3. Demographic Differences.....	6
5.4. Tourism Industry.....	8
5.5. Explanation and Recommendations for Florida Specific Items.....	9
6. Conclusion.....	36
7. References.....	37
8. Appendices.....	39
8.1. Summary of UF's Recommendations for the Florida Specific Items.....	39
8.2. Code Language from States Exceeding the 2010 ADA Standards.....	40
8.3. Calculations for FACBC Universal Parking Savings.....	49
8.4. Accessibility Standards Development Consideration.....	50
8.5. Janet Fay's Timesheet.....	51

## **1. Applicable Sections of the Code**

- 2011-222.22 through 2011-222.29

### **1.1. Description of Issues**

- The 2010 Federal ADA Standards for Accessible Design were adopted by the state of Florida as part of the 2012 Florida Building Code (FBC), Accessibility. The Florida Building Commission has authority for implementing its provisions (see Laws of Florida Chapter 2011-222, Sections 22 through 29).
- The efficacy/technical bases for the seven Florida Specific items in the FBC, Accessibility is unknown to the FBC and research is needed to determine whether they need to be expanded, reduced or eliminated.
- Historical assessment and analysis of available data/literature specific to the seven issues of concern are needed to understand the impact this law has had in the State.

## 2. Executive Summary

The ADA Standards for Accessible Design establishes design requirements for the construction and alteration of facilities so as to not discriminate against individuals with disabilities. The most recent version of the design standards was adopted in 2010 and this was the version used for comparison to the Florida design standards during this project. In 2011, the Florida Building Commission (FBC) updated the Florida Accessibility Code for Building Construction (FACBC) to incorporate the 2010 ADA Standards and Florida law, Part II, Chapter 553, Florida Statutes. The FBC has maintained provisions of the Florida law that were thought to be more stringent than the ADA guidelines. The purpose of this project is to determine if these Florida-specific provisions are necessary and to develop a technical basis for these items.

It is important to understand how the demographics vary at the state and national level in order to assess if the requirements of the FACBC need to be more stringent than the national requirements of the ADA. The populations of disabled people and people over the age of 65 in Florida were compared to that of the United States. The percentage of various types of disability, such as ambulatory or vision difficulties were found to help to determine what type of accessibility requirements are most needed. Along with the varying demographics, the impact of Florida's large tourism industry was also assessed.

In order to determine a technical basis for the Florida-specific items it was important to understand what technical basis was used to develop the 2010 ADA Standards, as well as Chapter 11 of the International Building Code and the ANSI Standards. The University of Florida hired ADA specialist James L Terry, AIA from Evan Terry Associates to help to assess the need of these Florida-specific items. Through research conducted by the University of Florida and the experience and knowledge of the contractor, an explanation and recommendation was made for each of the Florida specific items. The majority of these items did not need to be changed, however a few provisions are either recommended to be expanded or reduced. It is recommended that the provisions for the removal of architectural barriers and parking space widths be reduced. The provisions for curbs adjacent to on-street parking spaces and the removal of parking barriers should be expanded. It is also suggested that the language be changed for clarification of requirements in the following provisions: door opening force, additional hotel and motel features, and vertical accessibility.

The University of Florida has given recommendations based on data available online and from the knowledge and resources of the ADA contractor. This is a technical study of a politically driven issue so the views of specific contractors and disability organizations were not taken into consideration. It is suggested that the Florida Building Commission meet with contractors and disability organizations in the state of Florida to get their perspectives on the recommendations.

### 3. Scope of Work

- Perform literature review of recent scholarly work on the subject of concern and its impacts in Florida
- Evaluate and summarize data on the results the law has had on building construction and welfare of the general public.
- Interpret results, determine whether the problem requires action, and produce a report that explains the results and implications for the Code
- Develop a technical basis for Florida-specific items.
- Present report/findings to the Commission's Technical Advisory Committee and interest groups for review and feedback

### 4. Deliverables

- A report providing technical information on the problem background, results and implications to the Code submitted to the Program Manager by June 15, 2014
- A proposed scope of work for 2014-2015 funding cycle, if warranted
- A breakdown of the number of hours or partial hours, in increments of fifteen (15) minutes, of work performed and a brief description of the work performed. The Contractor agrees to provide any additional documentation requested by the Department to satisfy audit requirements.

### 5. Detailed Project Description

#### 5.1. Background

The Americans with Disabilities Act of 1990 (ADA) provides a national mandate for the elimination of discrimination against individuals with disabilities. The ADA defines "disability" with respect to an individual as a physical or mental impairment that substantially limits one or more major life activities of such individual; a record of such an impairment; or being regarded as having such an impairment. These major life activities include, but are not limited to, caring for oneself, performing manual tasks, seeing, hearing, eating, sleeping, walking, standing, lifting, bending, speaking, breathing, learning, reading, concentrating, thinking, communicating, and working. A major life activity also includes the operation of a major bodily function, including but not limited to, functions of the immune system, normal cell growth, digestive, bowel, bladder, neurological, brain, respiratory, circulatory, endocrine, and reproductive functions (Americans with Disabilities Act of 1990). In order to ensure that the needs of disabled individuals are met, the ADA Standards for Accessible Design, as well as the Florida Accessibility Code for Building Construction, provide technical requirements for the construction and alteration of sites, facilities, and buildings.

#### 5.2. Literature Review

- **Americans with Disabilities Act of 1990** The Americans with Disabilities Act was enacted in 1990 with the purpose of eliminating discrimination against individuals with disabilities. This Act led to the establishment of the ADA Standards and, therefore, the FACBC. The definitions of 'disability' and 'major life activities' provided in the ADA of 1990 were used throughout this report to help determine what group of people were being affected by each Florida specific item.
- **"The State of Aging and Health in America 2013" by Centers for Disease Control and Prevention (2013)** This report discusses the nation's progress in improving the health and well-being of older adults and reducing behaviors that contribute to premature death and disability. Advances in medical technology and the encouragement of mobility in older adults have allowed adults to live longer lives. The report also projects that the population of Americans aged 65 and older will double in the next 25 years which suggests that the accessibility requirements will need to be expanded in the coming years. The information provided in this report was used in the determining the demographics of Florida and the United States.

([http://www.cdc.gov/features/agingandhealth/state\\_of\\_aging\\_and\\_health\\_in\\_america\\_2013.pdf](http://www.cdc.gov/features/agingandhealth/state_of_aging_and_health_in_america_2013.pdf))

- **“Beds in Accessible Sleeping Rooms” by Disability Rights Education and Defense Fund**  
While the ADA Standards require beds that are usable by people with disabilities in accessible sleeping rooms, there are no specific requirements for bed heights and clear space for maneuvering to the bed. Many disabled individuals have problems finding hotel rooms that can accommodate them either because the bed is too high to transfer from a wheelchair or because there is not enough clearance beneath the bed for a mechanical lift. The article discusses the need for the ADA to adopt provisions that require specific bed heights and was used in this report to support the Florida specific requirement for extra mobility features in hotel rooms.  
(<http://dredf.org/anprm/beds-in-accessible-sleeping-rooms.shtml>)
- **“Aging in Place: A State Survey of Livability Policies and Practices” by Farber, N., and Shinkle, D. (2011)** This report examines current policies and practices of various states that support older adults desiring to “age in place” or live in their own homes and communities as long as possible. Certain states have additional accessibility requirements for residential structures as well as policies that encourage developers of affordable housing to install accessibility features. We used this report to help determine the necessity of the residential bathroom requirements of Florida Statute 553.504(4). (<http://assets.aarp.org/rgcenter/ppi/liv-com/aging-in-place-2011-full.pdf>)
- **Florida Accessibility Code for Building Construction** In 1993 Florida Legislature enacted the “Florida Americans with Disability Accessibility Implementation Act” which integrated the architectural accessibility requires of the ADA into Florida law and maintained laws of Florida that were more stringent then the ADA guidelines. In 2011, the Florida Building Commission (FBC) updated the Florida Accessibility Code for Building Construction (FACBC) to incorporate the 2010 ADA Standards and Florida law, Part II, Chapter 553, Florida Statutes.
- **“Detailed Revenue Report FY1213” by Office of Economic and Demographic Research (2013)** This report provides the monthly amount of Florida tax revenue for various categories, such as tourism or beverage tax, from July 2012 to June 2013. Approximately 17% of Florida’s total tax revenue was from the tourism industry. Because Florida has such a large tourism industry it may be necessary to include certain provisions in the FACBC that deal with theme parks, entertainment complexes, and hotels or condominiums.  
([http://edr.state.fl.us/Content/revenues/reports/detailed-revenue-report/detailrpt\\_final1213.pdf](http://edr.state.fl.us/Content/revenues/reports/detailed-revenue-report/detailrpt_final1213.pdf))
- **“Gov. Rick Scott: Another Record Year for Florida Tourism” by the State of Florida (2013)** Governor Rick Scott announced that Florida had nearly 95 million visitors in 2013, which is a 3.5% increase from 2012. Governor Rick Scott believes that the increase in visitors will help to create jobs and economic growth for Florida families. Florida tourism has been steadily regaining market share since January 2013, outperforming the rest of the U.S. by 1.3 percentage points. Governor Rick Scott continues to encourage people to visit the state of Florida and because of this is may be necessary to have provisions in the FACBC directly dealing with the tourism related facilities and buildings. (<http://www.flgov.com/gov-rick-scott-another-record-year-for-florida-tourism-2/>)
- **“Automated Doors: Towards Universal Design” by Steinfeld, E. and Danford, G. (1993)** The purpose of this report was to review automated door systems and provides recommendations for revising the Americans with Disabilities Act Accessibility Guidelines (ADAAG). Many manufacturers of manual door closers have problems meeting the opening force requirements for exterior hinged doors. The authors discuss the benefits of having automated doors as well as the costs associated with operating and maintaining the doors. The mechanics behind the manual door systems are also discussed and we used this information in determining if the 8.5 pound opening force for exterior hinged doors was necessary in Florida.  
(<http://idea.ap.buffalo.edu/publications/Articles%20and%20Publications%20-%20see%20alex%20with%20questions/AUTOMATED%20DOORS.pdf>)

- **2010 ADA Standards for Accessible Design** The current ADA Standards were adopted in 2010 after the Department of Justice revised the regulations for Titles II and III of the Americans with Disabilities Act of 1990. These enforceable accessibility standards are based on the 2004 ADA Accessibility Guidelines issued by the United States Access Board. To minimize compliance burdens on entities subject to more than one legal standard, these design standards are consistent with the Architectural Barriers Act and with the private sector model codes adopted by most states. In this project the 2010 Standards were used as a comparison to the more stringent items of the Florida Accessibility Code for Building Construction.
- **ADA Accessibility Guidelines (ADAAG)** The ADAAG was first published by the United States Access Board in 1991 and is used by the Department of Justice (DOJ) and the Department of Transportation (DOT) in setting enforceable standards that the public must follow. The guidelines were later supplemented to address state and local government facilities in 1998, children's environments in 1998, play areas in 2000, and recreation facilities in 2002. In 2004 the Access Board published the updated ADA Accessibility Guidelines which was then used to develop the 2010 ADA Standards. The ADAAG provides an explanation for the technical basis of some of the ADA Standards provisions. We used the ADAAG in determining the technical basis for some of the Florida specific items, such as the width of accessible parking spaces and the force required to open an exterior hinged door.
- **American Community Survey (US Census Bureau)** The American Community Survey (ACS) is an ongoing statistical survey that helps to determine how federal and state funds are distributed each year. The US Census Bureau collects disability data primarily through the ACS and the Survey of Income and Program Participation (SIPP). While the SIPP estimates of disability are broader and encompass a greater number of activities on which disability is assessed, it does not provide the data on a state level and was therefore not used in this project. The ACS has a more narrow definition of disability and provides estimates for states, counties, and metropolitan areas. The ACS defines a disability as anyone of the following conditions: hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, or independent living difficulty. We used the ACS to provide the disability statistics for Florida and the United States throughout this report. (<https://www.census.gov/people/disability/>)
- **Population Estimates Program (US Census Bureau)** The Population Estimates Program (PEP) produces estimates of the population of the United States, its states, counties, cities, and towns. These estimates are used in federal funding allocations, as survey controls, and as indicators of recent demographic changes. We used the PEP to provide statistics on the elderly populations of Florida and the United States. (<https://www.census.gov/popest/>)
- **“Transportation Cost and Benefit Analysis II – Parking Costs” by Victoria Transport Policy Institute (2013)** This report investigates the costs of different types of parking facilities, the number of spaces per vehicle, and the distribution of parking costs. Parking costs include parking facility land, construction and operating costs, plus indirect costs such as stormwater management costs. We used this report in determining the costs associated with the Florida required 12' wide accessible spaces versus the 8' wide spaces required by the ADA Standards. (<http://www.vtpi.org/tca/tca0504.pdf>)
- **VISIT FLORIDA** VISIT FLORIDA is the tourism marketing corporation for the state of Florida. The website provides Florida tourism news and updates, press releases, and facts about Florida tourism. There are tables and charts that provide statistical data for tourism related surveys in Florida. We used this website to evaluate the tourism spending and tourism related employment in Florida and determine the need for tourism related provisions in the FACBC. (<http://www.visitfloridamediablog.com/home/florida-facts/research/>)



### 5.3. Demographic Differences

It is important to understand how the demographics vary at the state and national level in order to assess if the requirements of the Florida Accessibility Code for Building Construction need to be more stringent than the national requirements of the ADA Standards for Accessible Design. The percentage of the population with disabilities and the population of elderly will influence the necessity for certain accessibility requirements. Individual states having a prevalence of disabled and elderly compared to the United States as a whole may desire to have more stringent laws.

The American Community Survey (ACS) is an on-going survey conducted by the U.S. Census Bureau and defines a disability as anyone of the following conditions: hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, or independent living difficulty. The questions used in the ACS for disability are shown in Figure 1 below. In 2012 approximately 12.2% of the 309 million people in the United States had a disability, while 12.9% of the 19 million people in Florida had a disability, as shown in Table 1. Florida was ranked 19 out of 51 states, with 1 being the highest percentage of disabled population and 51 being the lowest. West Virginia and Utah were ranked 1 and 51 in the US, respectively, and both have adopted the ADA Standards for Accessible Design.

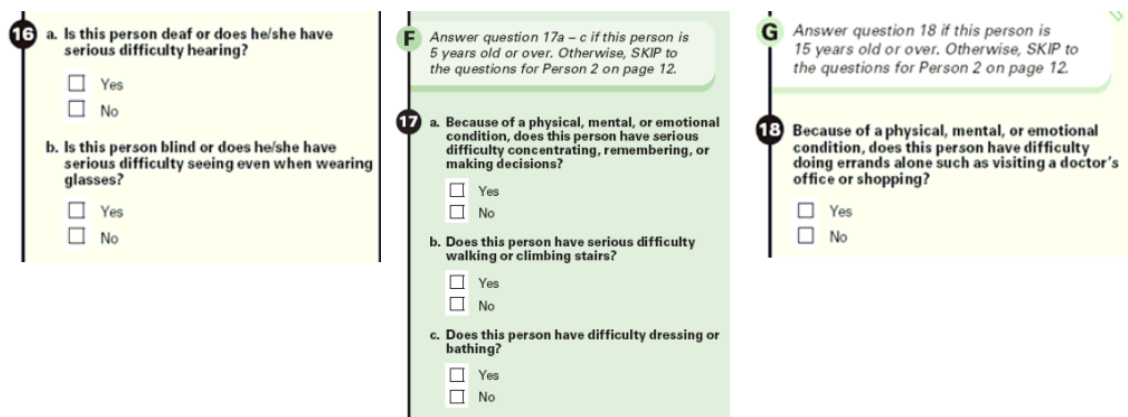


Figure 1: Disability Questions used in the American Community Survey

Table 1: Percentage of Disabled Population Compared to US in 2012 (ACS 2012)

	<b>United States</b>	<b>Florida</b>	<b>West Virginia</b>	<b>Utah</b>
<b>Total Population</b>	308,896,460	19,011,070	1,826,512	2,829,001
<b>Percent Disabled</b>	12.2%	12.9%	19.0%	9.2%
<b>National Ranking</b>	N/A	19	1	51

A breakdown of the various types of disability will help to determine what type of accessibility requirements are most needed. Table 2 shows the number of people in Florida with each type of disability and the percentage of each specific disability to the total number of people with disabilities. Keep in mind that some people may have more than one type of disability, which is why the percentages don't total to 100%.

Table 2: Types of Disabilities in Florida (ACS 2012)

Type of Disability	Population above 5 years	Percentage of Total Disability
Hearing Difficulty	699,998	28.5%
Vision Difficulty	432,172	17.6%
Cognitive Difficulty	919,971	37.5%
Ambulatory Difficulty	1,355,292	55.2%
Self-Care Disability	517,717	21.1%
Independent Living Difficulty	917,665	37.4%
Total with Disability	2,453,376	
Total Population above 5 yrs	17,942,110	

There is a discrepancy of approximately 600,000 less disabled people in Florida in the 2012 ACS data as compared with the 1990 Decennial Census survey. The 1990 Decennial Survey reported 3 million disabled persons out of a total state population of 13 million, or 30%. The current disabled population in Florida reported by the ACS in 2012 is 2.4 million out of a total population of 19 million, or 13%. The University of Florida could not determine whether this is a statistical aberration or the ACS has excluded a portion of disabled populations for their survey. It is possible that the numbers are skewed by the people who claim residency in other states but who spend the winter months in Florida or by wounded warriors that may not have been included in the survey but have since returned to Florida. There are many possibilities as to why there is a discrepancy but after researching other sources for demographics data the University of Florida has determined that the American Community Survey is the most accurate and useful for this report.

Comparing the state of Florida's disability statistics to the national averages alone indicates that Florida should not need more stringent accessibility requirements, considering Florida's percentage of disabled is very close to the national level. However, it is important to also examine the percentage of elderly in Florida compared to the national level. Roughly half of people in Florida with a disability are above the age of 65 (US Census Bureau) which corroborates common knowledge that there is a large correlation between disability and age.

The U.S. Census Bureau's Population Estimates Program (PEP) produces annual estimates of the population for the United States and each of its states, including Puerto Rico. According to the 2012 PEP estimates the percentage of the U.S. population above the age of 65 was 13.7%, compared to 18.2% in Florida. Florida had the highest percentage of people over the age of 65, with West Virginia having the second highest and Alaska having the lowest.

Table 3: State Percentages of Population over Age 65 Compared to US in 2012 (PEP 2012)

	United States	Florida	West Virginia	Alaska
<b>Total Population</b>	308,896,460	19,011,070	1,826,512	708,946
<b>Percent Over 65</b>	13.7%	18.2%	16.8%	8.5%
<b>National Ranking</b>	N/A	1	2	51

Figure 2 shows a side by side comparison of the percentage of elderly and disabled for a select number of states. These are the states with the highest and lowest percentages of elderly and disabled populations. Although the percentages are from two different surveys and should not be compared directly, it can be used to see which states have a higher or lower number of both elderly and disabled populations. It is important to note that West Virginia had a very high percentage for both disabled and elderly populations, as shown in Figure 2.

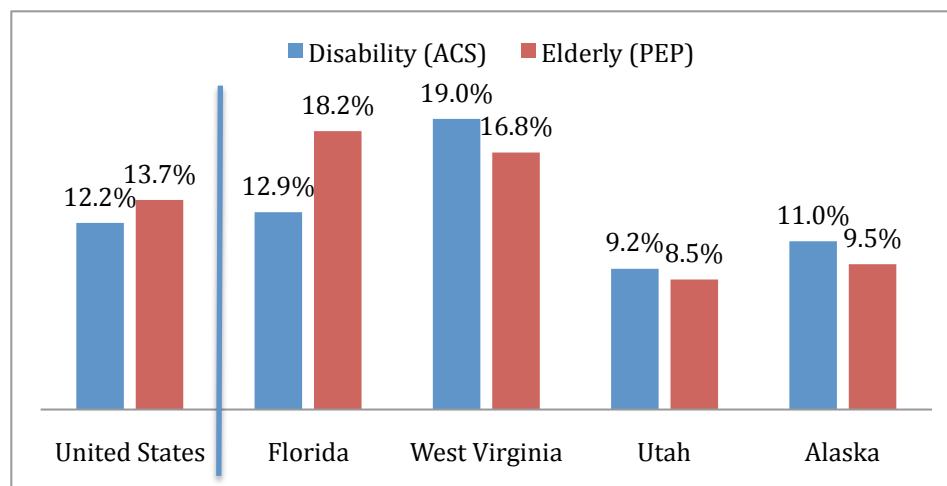


Figure 2: Percentage of Disabled (ACS) and Elderly Populations (PEP) in 2012

Not only is there currently a large percentage of elderly in Florida, but this number is continuing to grow. It is anticipated that the number of Americans aged 65 and older will be doubled by 2050 (US Census Bureau). The rapid aging of the U.S. population is being driven by two factors: Americans are living longer lives than in previous decades and, given the baby boom after World War II, there are proportionately more older adults than in previous generations. Mobility, defined as the ability to move around effectively and safely in the environment, is fundamental to the health and well-being of older adults (Center for Disease Control and Prevention 2013). Types of mobility includes being able to transfer from a bed to a chair, walking for leisure and completion of daily tasks, engaging in other activities associated with work and play, exercising, driving a car, and using other forms of passenger transport. With increases in medical technology, the elderly populations, as well as some of the disabled population below age 65, are becoming more independent and able to be mobile without the assistance of a caregiver.

#### 5.4. Tourism Industry

The large tourism industry in Florida may also suggest a need for more stringent accessibility requirements due to an increased number of people using these tourism related facilities and sites. Governor Rick Scott announced that in 2013 approximately 95 million people visited the state of Florida, which is an increase of 3.5% over 2012. Rick Scott has claimed that for every 85 people that visit Florida, one more job is created in the state. The State of Florida strives to have a higher number of visitors each year in order to increase spending and create jobs, meaning the number of people using these tourism related facilities is expected to grow.

Florida's Office of Economic and Demographic Research develops reports on the tax revenues that are available for State spending. For the 2012-2013 Fiscal Year approximately \$4.3 billion, or 17%, of the total state revenue was from the tourism industry. The Florida Statutes provide definitions for "theme-park or recreation complex" and "resort condominium", which are included in the Florida Accessibility Code but are not defined in the ADA Standards. A theme park or entertainment complex is defined as a complex comprised of at least 25 contiguous acres owned and controlled by the same business entity and which contains permanent exhibitions and a variety of recreational activities and has a minimum of 1 million visitors annually. A resort condominium is any unit or group of units in a condominium, cooperative, or time-share plan which is rented more than three times a calendar year for periods of less than 30 days or which is advertised or held out to the public as a place regularly rented for periods of less than 30 days. These types of facilities, as well as hotels and other tourism related facilities, in Florida are used by a large number of people, and therefore may need to have slightly stricter or expanded requirements than the ADA Standards.

### **5.5. Explanation and Recommendations for Florida Specific Items**

The University of Florida hired ADA consultant James Terry of Evan Terry Associates to help determine a technical basis for the Florida specific items and whether or not these items are necessary. Jim Terry is a member of the Board of Directors for the National Association of ADA Coordinators and has served on the Access Board's Committee for Accessibility Standards for Assembly Areas and has worked for over 20 years as an outside expert for the US Department of Justice. He was chosen based on his extensive experience with the ADA Standards and the access standards used in every other state as well as for his access to technical documents used for the development of the ADA Standards. There are a total of 21 items in the Florida Accessibility Code that are more stringent than the ADA provisions. For each of these items, the University of Florida has provided 1) the statute number along with the direct statute language, 2) the FACBC section number, 3) an explanation and technical basis for the item, and 4) a recommendation as to whether the item should be expanded, reduced, or kept the same. A summary of all of the Florida Specific Items, along with the University of Florida's recommendation can be seen in Appendix 8.1. In the cases where other states have similar provisions to that of Florida, the excerpts of the state's code can be seen in Appendix 8.2.

**Applicability – FL Statute 553.504(1)**

*“(1) All new or altered public buildings and facilities, private buildings and facilities, places of public accommodation, and commercial facilities, as those terms are defined by the standards, subject to this part, must comply with this part.”*

**Reference FACBC section:** 101.1.2

**Discussion:** The Florida Accessibility Code for Building Construction states that all new or altered public buildings and facilities, private buildings and facilities, places of public accommodation, and commercial facilities are subject to the code and must comply with the code. The buildings and facilities subject to the code are noted in Section 101.1.3 where it lists places of public accommodation, commercial facilities, state and local government facilities, private clubs and residential buildings. This statute expands the coverage of buildings in the 2010 ADA Standards by adding coverage for “private buildings and facilities” which includes private clubs’ and religious entities’ facilities not covered by the ADA. Florida statute 553.505 specifically states that private clubs are governed by the FACBC.

**University of Florida’s Recommendation:** No change.

**Residential Bathrooms – FL Statute 553.504(2)**

*“(2) All new single-family houses, duplexes, triplexes, condominiums, and townhouses shall provide at least one bathroom, located with maximum possible privacy, where bathrooms are provided on habitable grade levels, with a door that has a 29-inch clear opening. However, if only a toilet room is provided at grade level, such toilet room must have a clear opening of at least 29 inches.”*

**Reference FACBC section:** 233.3.6

**Discussion:** The FACBC expands coverage beyond the ADA and federal Fair Housing obligations by requiring all new single-family houses, duplexes, triplexes, condominiums, and townhouses to provide at least one bathroom with a door that has a 29 inch clear opening on each habitable grade level. If only a half bath is provided at grade level, it shall have a clear opening of 29 inches. The Americans with Disabilities Act Standards require any building built after 1992 to be “readily accessible to and usable by” those with disabilities; however it does not apply to private housing, unless that housing was funded through state and local government housing programs. Also, the Fair Housing Act only applies to multifamily housing. The ADA Standards only cover specific types of housing units that are used as transient lodging or are covered dwelling units because of public entity involvement.

People with limited physical capabilities, including those with disabilities and elderly, often require special features in housing and public areas that are not included in the building codes. According to AARP Inc., about 90% of people over age 65 indicate they want to stay in their homes as long as possible, and four out of five believe their current home is where they will always live (Farber and Shinkle, 2011). This provision also makes residential facilities “visitable” by people with disabilities which allows older people to remain more physically and socially active during their increasingly longer lives. Having accessible building standards for residential structures will allow older Americans with disabilities to remain in their homes longer without having to spend money on retrofitting or move into costlier, sometimes publically funded, assisted care facilities. Due to the high percentage of people over age 65 in Florida, it is wise to leave this provision in the Florida Accessibility Code.

Several other states have statutes that encourage designers and developers to install features that make it easier for adults to age in place. For example, in Minnesota all new construction of single-family homes, duplexes, triplexes, and townhouses that are financed through the state’s Housing Finance Agency must include basic visitability access into the design and construction. Visitability is defined as a “dwelling so that people with mobility impairments may enter and comfortably stay for duration” (Farber and Shinkle 2011). Some of these features include entry-level hallways that are wide enough for mobility devices, ramped or beveled door thresholds, reachable electrical outlets and light switches, and accessible bathrooms. It is always less expensive to include these types of features when building new homes than when retrofitting existing homes.

**University of Florida’s Recommendation:** No change.

**Doors - FL Statute 553.504(3)**

*“(3) Notwithstanding the requirements in s. 404.2.9 of the standards, exterior hinged doors must be designed so that such doors can be pushed or pulled open with a force not exceeding 8.5 foot pounds.”*

**Reference FACBC section:** 404.2.9(3)

**Discussion:** The Florida Accessibility code requires that exterior hinged doors be designed such that they can be pushed or pulled open with a force not exceeding 8.5 pounds. The ADA Standards do not list a maximum force requirement for opening exterior doors and/or gates. The ADAAG Manual, a guide to the Americans with Disabilities Act Accessibility Guidelines developed by the U.S. Architectural and Transportation Barriers Compliance Board, states that a maximum opening force is not specified for exterior swing doors because the force required by the building code usually exceeds an “accessible” resistance. The maximum force pertains to the continuous application of force necessary to fully open a door, not the initial force needed to overcome the inertia of the door. The physics behind mechanical doors requires the opening force to exceed the closing force and typically there is a closer (a spring or other device) that stores the energy used to open the door until the door begins to close. The efficiency of this operation is about 60%, meaning that an 8.5 pound opening force becomes a 5 pound closing force (Steinfeld and Danford 1993). Five other states have similar requirements as follows:

California –	5 lb max. (8.5 lb max. for additional doors in the same location)
Illinois -	8.5 lb max.
Massachusetts –	15 lb max.
Oregon -	8.5 lb max. (15 lb max. at exterior stairway doors in pressurized stair enclosures)
Washington –	10 lb max.

The current FACBC exterior door opening force limit exceeds the 5 pound maximum considered suitable for many people with disabilities. However, it is consistent with several other states with similar limits and providing automatic door openers may be the only practical alternative for ensuring the usability of exterior doors by those who cannot manage the 8.5 pounds of opening force.

**University of Florida’s Recommendation:** The language should be changed to say “*exterior hinged doors must be designed, constructed, and maintained so that such doors...*”

**Hotels, Motels, and Condominium Features – FL Statute 553.504(4)**

*“(4) In motels and hotels a number of rooms equaling at least 5 percent of the guest rooms minus the number of accessible rooms required by the standards must provide the following special accessibility features: a) Grab rails in bathrooms and toilet rooms that comply with s. 604.5 of the standards; b) all beds in designed accessible guest rooms must be an open-frame type that allows the passage of lift devices; c) Water closets that comply with section 604.4 of the standards.”*

**Reference FACBC section: 806.4**

**Discussion:** The FACBC requires that an additional number of rooms, besides the number of rooms given in Table 224.2 of the code, have additional special accessibility features: grab bars at toilet fixtures in the bathrooms and toilet rooms that comply with Section 604.5, all beds in designated accessible guest rooms shall be open-frame type that allows the passage of lift devices, and water closets that comply with section 604.4 for toilet seats. The FACBC has expanded the number of guestrooms with accessibility features to 5% which is more than the ADA and other states. Due to the increasing number of people with disabilities and aging baby boomers who wish to travel without strong caregivers to assist them with transfers, the number of rooms needed to have accessible features is expected to expand. Requiring the full 5% of all guestrooms to have all of the same mobility features required by the ADA would increase the costs of those facilities but having these additional features would accommodate many of the people who might not be able to reserve a fully accessible room but could be functionally accommodated by a room with these features.

Many hotel beds are placed on stationary platforms which limit access for lifts and also prevent the bed from being moved should someone need a wider accessible route. California has a similar requirement for an open frame under a percentage of transient lodging beds in the 2013 California Building Code (Section 11B-806.2.3.1), requiring a 7 inch clearance under the bed. This clearance height was based off of data gathered by Access Compliance Services in 2000 and updated in 2010. The way FACBC Section 224.6.3 and 806.4 are currently written, the requirement for open-frame beds might not be interpreted to apply to the fully accessible mobility feature rooms required by Table 224.2.

The DOJ has received many complaints from travelers with mobility disabilities about beds in accessible hotel rooms and, in response, is intending to issue a proposed rule that would regulate these beds. However, the lodging industry has already expressed concern about this possible rule. Hotels report receiving complaints about non-disabled guests being assigned accessible rooms with grab bars or beds that are too low. Hotels sometimes even offer complimentary amenities to appease non-disabled guests who are unhappy about their accessible room assignments. Nonetheless, these features facilitate safe access for people with disabilities whereas they may only be perceived as a slight inconvenience (or an opportunity for a price negotiation) by guests who do not need the features.

**University of Florida’s Recommendation:** It is highly recommended that the requirements be rewritten to clearly require open-frame beds to be provided in the fully accessible mobility feature guest rooms (as well as the rooms with additional accessible features) since those rooms are designed to more fully accommodate people who most need the lifting devices. We further recommend that the FACBC specify the minimum clear height under the bed “that allows the passage of lift devices”.



**Lavatory – FL Statute 553.504(5)(a)**

*“(5) Notwithstanding ss. 213 and 604 of the standards, required bathing rooms and toilet rooms in new construction shall be designed and constructed in accordance with the following:*

- (a) The wheelchair accessible toilet compartment must contain an accessible lavatory within it, which must be at least 19 inches wide by 17 inches deep, nominal size, and wall-mounted. The lavatory shall be mounted so as not to overlap the clear floor space areas required by s. 604 of the standards for the wheelchair accessible toilet compartment and comply with s. 606 of the standards. Such lavatories shall be counted as part of the required fixture count for the building.”*

**Reference FACBC section:** 604.8.1.6

**Discussion:** This section of the FACBC states that in new construction the wheelchair accessible toilet compartment shall contain a lavatory within it and gives specific dimensions and location requirements. The 2010 ADA Standards do not require the wheelchair accessible toilet compartment to contain the lavatory within it. This FACBC provision is designed to accommodate at least five specific needs of people with disabilities: 1) People who need to use digital manipulation during toileting and wish to clean their hands before appearing outside of their compartment afterwards; 2) People who have had incontinence accidents and wish to clean themselves up in the privacy of a toilet compartment rather than in an open multiuser toilet room; 3) Caregivers who provide assistance with toileting functions who may become soiled and need to wash up without leaving their client alone; 4) Adults with small children who may not be of the same gender and/or who need to be corralled in one place for all toileting and wash-up functions; and 5) Clients with caregivers who may be of the opposite sex but who have no unisex or single user toilet room available to use that would afford more privacy to other toilet room users. As medical technology continues to improve and people with more severe disabilities are able to get out of medical, assisted care facilities, and their homes, the number of people who will need these types of toilet compartments will continue to increase.

FACBC Section 213.3.4 requires that the lavatory in the accessible toilet compartment be at least 19 inches wide and 17 inches deep and be wall mounted. Because of the limited space in toilet compartments, a wall-mounted lavatory allows the use of the knee and toe clearance below the lavatory to be included in the Circular Turning Space (FACBC 304.3.1) or at one end of either the base or one arm of the T-Shaped Turning Space (FACBC 304.3.2). While the Florida lavatory requirement and water closet placement apply only to new construction, they are desirable for all wheelchair accessible compartments and should be considered where feasible.

**University of Florida’s Recommendation:** No change

**Water Closet – FL Statute 553.504(5)(b)**

*“(5) Notwithstanding ss. 213 and 604 of the standards, required bathing rooms and toilet rooms in new construction shall be designed and constructed in accordance with the following:*

*(b) The accessible water closet within the wheelchair accessible toilet compartment must be located in the corner, diagonal to the door.”*

**Reference FACBC section:** 604.8.1.7

**Discussion:** The Florida statute requires that in new construction the accessible water closet within the wheelchair accessible compartment be located in the corner, diagonal to the door. The ADA Standards state the doors shall be located in the front partition or in the side wall or partition furthest from the water closet. The FACBC is a rewording of the ADA requirement for slightly greater clarity. An accessible compartment does not necessarily have full door maneuvering clearance on the inside of the compartment so the additional space is needed to enter the stall without heading straight into the toilet fixture. The diagonal approach gives the user room to get in and close the door. This language, like the ADA language, does not recognize the possibility that equivalent usability would be provided in a larger compartment with additional space in front of the compartment door that offered full maneuvering clearance. In our opinion, this recognition is not necessary because equivalent facilitation is allowed by the Standard. Because, a toilet room must have full door maneuvering clearances on the inside of the door and a full turning space inside the toilet room, the diagonal requirement is unnecessary for toilet rooms.

**University of Florida’s Recommendation:** No change

**Barriers – FL Statute 553.504(6)**

*“(6) Barriers at common or emergency entrances and exits of business establishments conducting business with the general public that are existing, under construction, or under contract for construction which would prevent a person from using such entrances or exits must be removed.”*

**Reference FACBC section: 202.3.3**

**Discussion:** This statute requires that barriers at common or emergency entrances and exits of places conducting business with the general public which would prevent use of such entrances and exits be removed. This requirement is for business establishments that are existing, under construction, or under contract for construction. Under the ADA and FACBC, “barriers” come in at least eight types. They include:

- 1) “Security barriers” found at 206.8 such as bollards, checkpoints, and security devices;
- 2) Cane-detectable “barriers” under protruding objects and areas with low headroom to warn people who are blind of non-detectable hazards as described at 307.4;
- 3) Generic physical “barriers” (found at the 810.6 Advisory) like counters and low walls that prevent braille sign readers from approaching close enough to touch tactile signs;
- 4) Edge protection “barriers” at drop-offs found at 1005.3 and 1005.3.1;
- 5) Curbs and similar “barriers” at the edges of fairways to keep golf cars from driving on the grass (1006.3.2);
- 6) Transportation vehicle barriers discussed in 36.310 of the Title III regulations;

They also include two broader types of “barriers” that we believe are the ones referred to by this section of the statute:

- 7) Physical conditions that limit program access, often called “barriers,” that are referenced at 35.150 (d) in the ADA Title II regulations and described as “physical obstacles in the public entity's facilities that limit the accessibility of its programs or activities to individuals with disabilities”; and
- 8) Architectural and communication “barriers” that are structural in nature and are subject to the readily achievable barrier removal obligation as referenced in 36.304 of the ADA Title III regulations (with 21 example types listed).

The following is an advisory in the Florida Building Code that explains the purpose of barrier removal provisions in the FACBC:

**“The Federal “Barrier Removal” Mandate and the Florida Accessibility Code for Building Construction**

“Section 101.2 of the Florida Accessibility Code for Building Construction addresses the effect of the Code on removal of barriers in existing buildings. Federal law and regulations mandate “Barrier Removal,” Florida law and the Florida Accessibility Code do not. The Florida Accessibility Code is invoked for “Barrier Removal” only when alterations are made to a facility to comply with the federal mandate either voluntarily or as directed by a federal enforcement action ([28 C.F.R. 36 Subpart E](#)). The effect of the Florida Accessibility Code is to apply Florida accessibility criteria to barrier removal measures employed to comply with the federal mandate.

“The US Department of Justice (DOJ) regulation 28 C.F.R. s. 36.304 for “Barrier Removal” implements the federal law mandate by requiring *public accommodations* to remove architectural barriers in existing facilities that are structural in nature, where removal is “readily achievable.” The mandate applies to all existing facilities including those not undergoing an alteration for some purpose. The DOJ regulation establishes guidance on “readily achievable” measures and requires compliance with the alterations requirements of the ADA Standards for Accessible

Design (ADA Standards). It also provides exceptions to application of the ADA Standards to better match the "readily achievable" standard for "Barrier Removal."

"Section [553.508, Florida Statutes](#), requires removal of architectural barriers conducted pursuant to the DOJ regulation to comply with the alterations requirements of the Florida Accessibility Code, "...unless compliance would render the removal not readily achievable." The law both defers to the DOJ regulation to require "Barrier Removal" in existing facilities and maintains the federal "readily achievable" standard for alterations undertaken to comply with "Barrier Removal." The DOJ regulation exceptions for application of the ADA Standards to barrier removal measures are incorporated in section 202.6.1 of the Florida Accessibility Code so the Code approach to "readily achievable" is consistent with the DOJ regulation. These Code exceptions apply only to alterations undertaken to remove architectural barriers pursuant to the DOJ regulation."

At 36.304(g), the Title III regulations say "The requirements for barrier removal under § 36.304 shall not be interpreted to exceed the standards for alterations." This reference to the upper limit of the definition is the closest that the ADA regulations and standards come to actually defining the broad types of barriers that we believe are referenced by the obligation in 553.504(6). The US Department of Justice has issued technical assistance stating that "architectural barriers" are any conditions that fail to meet the requirements for alterations in existing facilities. To make certain that the definition is broadly interpreted, they further defined existing facilities as "a facility in existence on any given date, without regard to whether the facility may also be considered newly constructed or altered under this part."

FACBC's language at **101.2 "Effect on Removal of Barriers in Existing Facilities"** along with similar language at 202.6 "**Architectural Barrier Removal**" adds the following caveat to the general obligation for barrier removal:

Removal of architectural barriers, pursuant to 28 C.F.R. s. 36.304, from *buildings*, structures or *facilities* shall comply with this code's requirements for alterations unless compliance would render the removal not *readily achievable*. In no instance shall the removal of an architectural barrier create a significant risk to the health or safety of an individual with a *disability* or others.

It is important to note that, due to the difficulty and/or expense of providing accessibility at many pre-existing entrances and exits, the 1991 ADA Standards specifically exempted existing exits from access requirements during alteration projects in section 4.1.6(1)(g). The 2010 ADA Standards references Chapter 10 of the International Building Code for its requirements for accessible means of egress. The IBC also exempts existing exits from the requirements to provide accessibility. The obligation under the ADA and the IBC to provide an accessible path of travel to altered areas requires only one accessible path of travel so it does not apply to exits except for the primary entrance route when it is also used for egress. Due to the language of 553.504(6), the FACBC, at 207.1.1, eliminates these exceptions in Florida. As far as we know, this obligation does not occur in any other state or jurisdiction in the US. In existing facilities it may be very difficult and/or expensive to meet the apparent obligations of this section of the statute.

Any building constructed after the effective dates of any versions of the ADA Standards and the FACBC would have been expected to meet the requirements for accessible entrances and exits that were in effect at the time. Those standards had scoping language that usually required fewer accessible entrances and fewer accessible exits than the language of 553.504(6) seems to imply. Although 553.504(6) does not use the words "all" or "every," its language does not appear to be limited to any partial scope of coverage.

Another uncertainty that could be clarified in the statute is the definition of "business establishments conducting business with the general public." None of these are defined terms in the FACBC. Does this, for example, apply to telemarketing offices or other businesses that conduct business with the general public but only using mail or electronic methods? Or does it only apply to businesses where the public is physically present in the facilities? Is it referring to the code definition of business occupancies or to businesses as defined in an ownership, tax, or legal sense? Are not-for-profit organizations considered

businesses for this purpose? Does it apply to other occupancies, such as assembly or institutional facilities when they are built, owned, or operated by businesses of the type(s) defined?

The language of the statute that has been copied into the FACBC at 202.3.3, 206.4.1, 206.5, and 207.1.1 requiring barrier removal at “common or emergency entrances and exits of business establishments conducting business with the general public that are existing, under construction, or under contract for construction” does not specifically say whether its barrier removal requirement is subject to the readily achievable obligation limitation in the FACBC at 101.2 and 202.6 or not. We believe that these and any other limitations on the entrances and exits barrier removal obligation should be documented and clarified in the next version of the FACBC. A list of the most common questions about the interpretation and application of this requirement should be developed based on the past experience of the FBC and enforcing authorities having jurisdiction (ASJs). Each of the most common questions should be answered either in revised language of the statute, the next version of the FACBC, or in advisories.

**University of Florida’s Recommendation:** The requirements of this statute should be reduced such that existing exits are exempt from the requirements to provide accessibility or the FACBC should specify that the barrier removal at common emergency exits and entrances requirement is subject to the readily achievable obligation limitation. This change might be tempered by making it subject to approval by the AHJ. Define “business establishments conducting business with the general public” for greater clarification.

DRAFT

**Parking Spaces –553.5041(2)**

*“(2) State agencies and political subdivisions having jurisdiction over street parking or publicly owned or operated parking facilities are not required to provide a greater right-of-way width than would otherwise be planned under regulations, guidelines, or practices normally applied to new development.”*

**Reference FACBC section:** 208.2.5 Exception

**Discussion:** See section titled ‘Parking Spaces – 553.5041(4)(a)&(b)’

**University of Florida’s Recommendation:** No change.

**Parking Spaces –553.5041(3)**

*“(3) Designated accessible spaces shall be designed and marked for the exclusive use of individuals who have a severe physical disability and have permanent or temporary mobility problems that substantially impair their ability to ambulate and who have been issued a disabled parking permit under s. 316.1958 or s. 320.0848 or a license plate under s. 320.084, s. 320.0842, s. 320.0843, or s. 320.0845.”*

**Reference FACBC section:** 208.3.1

**Discussion:** See section titled ‘Parking Spaces – 553.5041(6)’

**University of Florida’s Recommendation:** No change.

**Parking Spaces –553.5041(4)(a)&(b)**

*“(4) The number of accessible parking spaces must comply with the parking requirements in s. 208 of the standards and the following:*

*(a) There must be one accessible parking space in the immediate vicinity of a publicly owned or leased building that houses a governmental entity or a political subdivision, including, but not limited to, state office buildings and courthouses, if parking for the public is not provided on the premises of the building.*

*(b) There must be one accessible parking space for each 150 metered on-street parking spaces provided by state agencies and political subdivisions.”*

**Reference FACBC section:** 208.2.5

**Discussion:** This statute requires there to be one accessible parking space in the immediate vicinity of a publicly owned or leased building that houses a government entity or political subdivision if parking for public is not provided. There also must be one accessible parking space for each 150 metered on-street parking spaces provided by state agencies and political subdivisions. There is an exception that says “State agencies and political subdivisions having jurisdiction over street parking or publicly owned or operated parking facilities are not required to provide a greater right-of-way width than would otherwise be planned under regulations, guidelines, or practices normally applied to new development.”

The ADA only requires accessible parking spaces where parking spaces are provided. This was a decision made at the federal level to allow more local control over parking requirements. For instance, some cities allow large new facilities to be built without providing any parking to encourage people who use those facilities to take public transportation and walk. The ADA Standards do not cover on-street parking in the public right of way, however this requirement is likely to be included in the upcoming ADA Public Right-of-Way (PROW) Guidelines and Standards.

The Access Board has recently said that they expect to release the final PROW Guidelines in 2014. We suggest that the FACBC adopt PROW requirements that are at least as accommodating as the Guidelines adopted by the Access Board as they have spent two decades working with public entities, traffic engineers, federal agencies, and people with disabilities to develop a guideline that balances the needs of all of the stakeholders. It is likely that the Standards adopted by DOT and DOJ will closely mirror the Board’s Final Guidelines. If the Access Board’s Final Guidelines are not published in time for Florida’s adoption in this code cycle, consider modifying the FACBC requirements for on-street parking spaces in this code cycle to at least be compliant with all of the scoping requirements in Section R214 of the Proposed Guidelines published July 26<sup>th</sup>, 2011.

**Section R214 On-Street Parking Spaces** - Where on-street parking is provided on the block perimeter and the parking is marked or metered, accessible parking spaces complying with R309 shall be provided in accordance with Table R214. Where parking pay stations are provided and the parking is not marked, each 6.1 m (20.0 ft) of block perimeter where parking is permitted shall be counted as one parking space.

Total Number of Marked or Metered Parking Spaces on the Block Perimeter	Minimum Required Number of Accessible Parking 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 and over	4% of total

Table R214 of Proposed Rights of Way Guidelines

A public entity is defined as: (1) any State or local government; (2) Any department, agency, special purpose district, or other instrumentality of a State or States or local government; and (3) The National Railroad Passenger Corporation, and any commuter authority (as defined in section 103(8) of the Rail Passenger Service Act).

Public entities have an obligation to provide program access and parking is usually considered an element of program access. It is suggested to change the FACBC Section 208.2.5.1 and 208.2.5.2 to read "There must be" a minimum of "one accessible parking space ..." This will help to avoid a conflict with the Program Access requirement that is not limited to one accessible parking space in the vicinity of publicly owned or leased buildings and not limited to one accessible parking space per each 150 metered on-street parking spaces. These changes will also make it easier for the FACBC to be certifiable as equivalent to the ADA Standards when the new PROW Standards are adopted and incorporated into it.

**University of Florida’s Recommendation:** Adopt on-street parking scoping standards at least equivalent to the upcoming or the Proposed PROW Guidelines and change FACBC Sections 208.2.5.1 and 208.2.5.2 to read "*There must be a minimum of one accessible parking space ...*"



**Parking Spaces – FL Statute 553.5041(4)(c)**

*“(4) The number of accessible parking spaces must comply with the parking requirements in s. 208 of the standards and the following:*

*(c) The number of parking spaces for persons who have disabilities must be increased on the basis of demonstrated and documented need.”*

**Reference FACBC section: 208.2**

**Discussion:** The FACBC says that parking spaces complying with 502 shall be provided in accordance with Table 208.2, which gives the number of required accessible spaces based on the total number of spaces provided. Under this section of the statute, the number of parking spaces for people with disabilities must be increased above those required in the chart “on the basis of demonstrated and documented need.” The ADA requirements in the chart are the same. The requirement for an increase in spaces is similar to the ADA Title II requirement for program access. Title II § 35.150 states that “a public entity shall operate each service, program, or activity so that the service, program, or activity, when viewed in its entirety, is readily accessible to and usable by individuals with disabilities...” Public entities have an obligation to provide program access and parking may be considered an element of program access. The provision about increasing accessible parking spaces was at one time attached to Section "208.2.5 Parking Spaces Provided by State Agencies and Political Subdivisions" to meet the requirements of program access per, § 35.150 Existing facilities (a) General. This change was made by Florida House of Representatives in 1997 (HB 1385 220-155-97). As written now it applies to all parking, both public accommodations and public entities. Considering the number of people with disabilities in certain parts of Florida who have disabled parking permits or license plates, this expansion of the chart's minimum requirements, especially at facilities where people with disabilities are a high percentage of the users (such as healthcare facilities and senior's centers) makes a lot of sense.

**University of Florida's Recommendation:** No change.

**Access Aisle – FL Statute 553.5041(5)(a)**

*“(5) Accessible perpendicular and diagonal accessible parking spaces and loading zones must be designed and located to conform to ss. 502 and 503 of the standards.*

*(a) All spaces must be located on an accessible route that is at least 44 inches wide so that users are not compelled to walk or wheel behind parked vehicles except behind his or her own vehicle.”*

**Reference FACBC section: 502.3**

**Discussion:** Florida requires all accessible spaces to be located on an accessible route that is 44 inches wide and it must be designed so that users are not compelled to walk or to wheel behind parked vehicles. The ADA requires a 36” minimum width for the accessible route, however there are 5 other states that have a similar width requirements to Florida’s. Washington has a 44” min requirement and California, Minnesota, Massachusetts, and North Carolina each have a 48” minimum requirement. The upcoming PROW Standards are currently proposed to increase the minimum width of the "Pedestrian Accessible Route" to 48" clear in the public right of way. The ADA Standards also do not require that the route be located such that users aren't compelled to walk behind vehicles, however, a non-binding advisory in the ADA Standards says:

**Advisory 502.3 Access Aisle.** Accessible routes must connect parking spaces to accessible entrances. In parking facilities where the accessible route must cross vehicular traffic lanes, marked crossings enhance pedestrian safety, particularly for people using wheelchairs and other mobility aids. Where possible, it is preferable that the accessible route not pass behind parked vehicles.

California has a similar requirement to Florida’s. This provision mandates a critical safety feature, often with little or no space penalty in new facilities. The heads of wheelchair users and little people who use accessible spaces often cannot be seen through the side and back windows of larger vehicles and other vehicles with restricted visibility. Many people with disabilities are not capable of moving quickly enough to get out of the way when drivers don't see them and begin backing out. Although this is a good provision for new facilities, it may be difficult or impossible to comply with it in existing facilities where tight sites and existing construction may limit design options.

**University of Florida’s Recommendation:** No change.

**Parking Spaces – FL Statute 553.5041(5)(b)**

*“(5) Accessible perpendicular and diagonal accessible parking spaces and loading zones must be designed and located to conform to ss. 502 and 503 of the standards.*

*(b) If there are multiple entrances or multiple retail stores, the parking spaces must be dispersed to provide parking at the nearest accessible entrance. If a theme park or an entertainment complex as defined in s. 509.013(9) provides parking in several lots or areas from which access to the theme park or entertainment complex is provided, a single lot or area may be designated for parking by persons who have disabilities, if the lot or area is located on the shortest accessible route to an accessible entrance to the theme park or entertainment complex or to transportation to such an accessible entrance.”*

**Reference FACBC section:** 208.3.1

**Discussion:** This section of the FACBC gives exceptions to the accessible parking requirements, which include theme park accessible parking. Theme parks usually have staffed lots and specific capabilities to meet the needs of people with disabilities more efficiently and effectively using methods that provide equivalent usability to what would be provided by strict compliance with the basic provisions of the ADA and the FACBC. As mentioned previously, Florida has a very large tourism industry, therefore clarification on how this type of parking may be handled is necessary. This exception seems to provide that clarification without penalizing entities who have developed more efficient ways of providing equivalent or better convenience and safe access for people with disabilities.

See also section titled ‘Parking Spaces – FL Statute 553.5041(5)(a)’.

**University of Florida’s Recommendation:** No change.

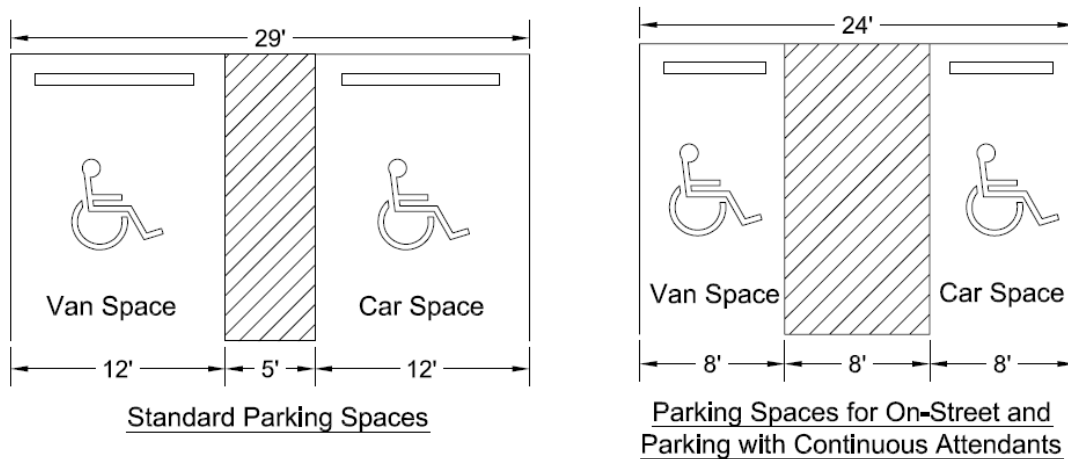
**Parking Spaces – FL Statute 553.5041(5)(c)1**

*“(5) Accessible perpendicular and diagonal accessible parking spaces and loading zones must be designed and located to conform to ss. 502 and 503 of the standards.*

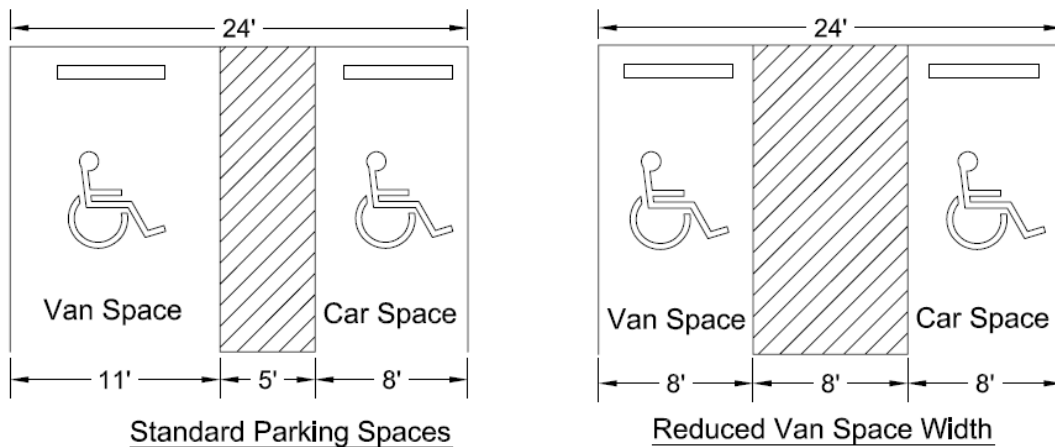
*(c)1. Each parking space must be at least 12 feet wide. Parking access aisles must be at least 5 feet wide and must be part of an accessible route to the building or facility entrance. The access aisle must be striped diagonally to designate it as a no-parking zone.”*

**Reference FACBC section: 502.2**

**Discussion:** Florida requires all accessible parking spaces to be at least 12 ft. wide while the ADA requires at least 8 ft. of width for car spaces and at least 11 ft. of width for van spaces. Both FACBC and ADA require a minimum 60 in. wide access aisle, with a few exceptions. In Florida, on-street parking or parking in complexes with continuous attendants, car spaces are permitted to be 8 ft. wide and van spaces are permitted to be 8 ft. wide with an 8 ft. access aisle. The ADA allows the van parking spaces to be reduced to no less than 8 ft. wide if they are served by an 8 ft. minimum width access aisle.



*Figure 3: Current FACBC Accessible Parking Space Requirements*



*Figure 4: Current ADA Accessible Parking Space Requirements*

Vans with lift devices are very common among wheelchair and scooter users who cannot transfer from

their mobility aids. According to the Access Board's ADAAG, at 4.6.3, for vans with side-mounted lifts, a combined width of almost 17 feet is often needed for the deployment and use of side-mounted lifts. The Board-sponsored Accessible Parking and Loading Zones Project conducted tests with various lift, van, and wheelchair combinations. It was found that a combined parking space and aisle width of 204 in. (or 17ft) was needed in order to permit the lifts or ramps to be deployed and still leave room for a person using a wheelchair or other mobility aid to exit the lift platform or ramp. The ADA requirements give a minimum of 16 ft for the combined width of the van parking space and access aisle, which may not satisfy the needs of some lift users. The FACBC requires a minimum of 17 ft for the combined width, which will allow adequate room for most lift users.

When answering the question "Is the current width requirement in the FACBC needed for all accessible parking spaces?" the FBC should look at the user groups who need the spaces and their demographics, the possible approaches to providing accessible spaces, and the costs of providing or failing to provide enough usable spaces for people with disabilities. There are three different primary user groups who need accessible parking, and three different approaches to providing them. The first user group includes power wheelchair and scooter users who drive vans with side-mounted lifts that need a total of at least 16' (ADA) of clear width to park, deploy, and exit their lifts. The extra foot of width provided by the FACBC is very helpful, particularly where a curb or wall forms one side of the space/aisle combination or where adjacent cars are not carefully parked in their spaces. The second user group includes mobility assistance device users who transfer from their car seat to their wheelchair, walker, or other device on the side of the vehicle. They typically need at least a total of 13'-0" (ADA) to be able to consistently open their car door wide enough, position the device appropriately, and make this transition safely without damaging adjacent vehicles with their car door or device. This space also allows sufficient space for an assistant, if needed, to help them with the transition. The third user group who has disabled parking permits includes people with disabilities that limit their ability to easily or safely walk long distances. In many areas, this will be the majority of permit holders and they usually do not require an access aisle at all unless their parking spaces are less than about 9'-0" wide.

The three approaches to handling the accessible parking space requirement are: 1) Make them all universal parking spaces that can accommodate all three user groups. This is the Florida approach that is also followed by Illinois, Minnesota, and New York. 2) Based on demographics, split the total number of required accessible parking spaces between the wider van accessible spaces and the narrower standard accessible spaces with the hope that users who don't need the wider van spaces will leave them for van users (the ADA approach); and 3) Create a tiered parking permit system that reserves appropriately-sized spaces or some combination of sizes for each of the user groups. A variation on this last approach is currently used by some retailers to accommodate pregnant mothers. It is also used by some colleges and universities on game days to accommodate a larger number of vehicles with disabled parking permits in parking spaces closest to their stadiums without reducing the number of close-in spaces to provide unneeded access aisles for every space.

Based on the research of the Victoria Transport Policy Institute (VTPI), it is estimated that the average annual cost of a standard surface parking space is about \$1,000 per space and the average cost of a structured parking space is about \$3,000 per space. These costs include parking facility land, construction and operating costs, plus indirect costs such as stormwater management costs. Using annualized parking costs per space provided by VTPI, the decision to provide all universal spaces in Florida rather than simply meeting the minimum ADA requirements is probably costing entities in the state over a hundred million dollars a year. By requiring all car accessible spaces to be 9'-0" wide with a 5' access aisle and van accessible spaces to be 12'-0" wide with a 5' access aisle, the state of Florida could possibly save as much as \$300,000,000 a year. See Appendix 8.3 for these calculations. Typically the van and car space will share an access aisle and there must be at least one van space for every six or fraction of 6 accessible spaces. Also, perhaps it is time for Florida to start looking at a two-tiered space type in larger parking lots and a revised disabled permit program that will better assure availability of fully accessible spaces with access aisles for users of mobility assistance devices while still accommodating all of the people who need to be close to an entrance but don't need an access aisle.

**University of Florida's Recommendation:** The provision should be reduced to permit 9'-0" wide car

DRAFT

spaces and require one van space that is 12'-0" wide for every 6 or fraction of 6 accessible spaces. The state of Florida should also look into having a tiered accessible parking permit system, where people who do not need an access aisle and who do not have a van accessible decal cannot park in the van accessible spaces. The van accessible decals would be given to anyone who needs an access aisle. It would allow healthcare providers who want to give their patients with mobility limitations more tailored accessible parking permits and keep those who don't need access aisles from filling up the van accessible parking spaces when demand is highest. Additionally or alternatively, in certain types of facilities where the total number of people with permits is larger than can be accommodated by the Standards, aisle-free accessible parking spaces close to the entrance(s) might be provided in addition to the minimum ADA-required spaces to take some of the pressure off of the spaces that people who transfer to mobility devices must have.

**Parking Spaces – FL Statute 553.5041(5)(c)2**

*“(5) Accessible perpendicular and diagonal accessible parking spaces and loading zones must be designed and located to conform to ss. 502 and 503 of the standards.*

*(c) 2. The parking access aisles are reserved for the temporary exclusive use of persons who have disabled parking permits and who require extra space to deploy a mobility device, lift, or ramp in order to exit from or enter a vehicle. Parking is not allowed in an access aisle. Violators are subject to the same penalties imposed for illegally parking in parking spaces that are designated for persons who have disabilities. A vehicle may not be parked in an access aisle even if the vehicle owner or passenger is disabled or owns a disabled parking permit.”*

**Reference FACBC section:** 208.3.1

**Discussion:** See section titled ‘Parking Spaces – 553.5041(6)’

**University of Florida’s Recommendation:** No change.

**Parking Spaces – FL Statute 553.5041(5)(c)3**

*“(5) Accessible perpendicular and diagonal accessible parking spaces and loading zones must be designed and located to conform to ss. 502 and 503 of the standards.*

*(c) 3. Notwithstanding any other provision of this subsection, a **theme park or an entertainment complex** as defined in s. 509.013 in which continuous attendant services are provided for directing individuals to marked accessible parking spaces or designated lots for parking by persons who have disabilities, may, in lieu of the required parking space design, provide parking spaces that comply with ss. 208 and 502 of the standards.”*

**Reference FACBC section:** 208.3.1 Exceptions 3 and 4

**Discussion:** See section titled ‘Parking Spaces – FL Statute 553.5041(5)(b)’.

**University of Florida’s Recommendation:** No change.

**Parking Spaces – FL Statute 553.5041(5)(d)**

*“(5) Accessible perpendicular and diagonal accessible parking spaces and loading zones must be designed and located to conform to ss. 502 and 503 of the standards.*

*(d) **On-street parallel parking spaces** must be designed to conform to ss. 208 and 502 of the standards, except that access aisles are not required. Curbs adjacent to such spaces must be of a height that does not interfere with the opening and closing of motor vehicle doors. This subsection does not relieve the owner of the responsibility to comply with the parking requirements of ss. 208 and 502 of the standards.”*

**Reference FACBC section:** 502.2.1

**Discussion:** The Florida Accessibility Code requires on-street parallel parking spaces to comply with sections 208 and 502 of the ADA Standards for Accessible Design. Curbs adjacent to such spaces must be of a height that does not interfere with the opening and closing of motor vehicle doors. This curb design requirement, because it does not provide any specific details about vehicle doors, is not likely producing the desired results. The FACBC does not require an access aisle for on-street parking, per the exception at ss. 502.3. The ADA Standards do not cover on-street parking in the public right of way, however this requirement is likely to be included in the upcoming ADA Public Right-of-Way (PROW) Guidelines and Standards. The Access Board has recently said that they expect to release the final PROW Guidelines in 2014. We suggest that the FACBC adopt PROW requirements that are at least as accommodating as the Guidelines adopted by the Access Board as they have spent two decades working with public entities, traffic engineers, federal agencies, and people with disabilities to develop a guideline that balances the needs of all of the stakeholders. It is likely that the Standards adopted by DOT and DOJ will closely mirror the Board’s Final Guidelines. If the Access Board’s Final Guidelines are not published in time for Florida’s adoption in this code cycle, consider modifying the FACBC requirements for on-street parking spaces in this code cycle to at least be compliant with all of the detailed requirements in Section R309 of the Proposed Guidelines published July 26<sup>th</sup>, 2011.

**University of Florida’s Recommendation:** Provision should specify a maximum curb height and mirror the adopted or Proposed PROW Guidelines in R309.



**Removing Parking Barriers – FL Statute 553.5041(5)(e)1&2**

*“(5) Accessible perpendicular and diagonal accessible parking spaces and loading zones must be designed and located to conform to ss. 502 and 503 of the standards.*

*(e)1. The removal of architectural barriers from a parking facility in accordance with 28 C.F.R. s. 36.304 or with s. 553.508 must comply with this section unless compliance would cause the barrier removal not to be readily achievable. If compliance would cause the barrier removal not to be readily achievable, a facility may provide parking spaces at alternative locations for persons who have disabilities and provide appropriate signage directing such persons to the alternative parking if readily achievable. The facility may not reduce the required number or dimensions of those spaces or unreasonably increase the length of the accessible route from a parking space to the facility. The removal of an architectural barrier must not create a significant risk to the health or safety of a person who has a disability or to others.*

*(e)2. A facility that is making alterations under s. 553.507(2) must comply with this section to the maximum extent feasible. If compliance with parking location requirements is not feasible, the facility may provide parking spaces at alternative locations for persons who have disabilities and provide appropriate signage directing such persons to alternative parking. The facility may not reduce the required number or dimensions of those spaces, or unnecessarily increase the length of the accessible route from a parking space to the facility. The alteration must not create a significant risk to the health or safety of a person who has a disability or to others.”*

**Reference FACBC section:** 208.1.1 and 208.1.2

**Discussion:** When performing readily achievable barrier removal under the ADA obligation at 36.304 from a parking facility, the FACBC requires the removal of those barriers to be done in compliance with the FACBC Standards unless compliance would cause the barrier removal not to be readily achievable. Noncompliance with the strict technical requirements of the FACBC or ADA Standards is allowed if it would not be readily achievable to meet the full technical Standards but the solution improves access without creating a significant safety hazard for people with disabilities or others. When making alterations to a facility to provide an accessible path of travel to an altered area pursuant to section 303(a) of the ADA Law and section 202.4 of the FACBC and ADA Standards, that work must also fully comply unless technically infeasible.

However, if full compliance with the parking requirements on the shortest accessible route to the accessible entrances they serve would cause the barrier removal to be not readily achievable, or the required alterations work would be technically infeasible, then, under this section of the statute and the FACBC, a facility may provide parking spaces at alternative locations for persons who have disabilities and provide appropriate signage directing such persons to the alternative parking if readily achievable and not technically infeasible. The facility may not reduce the required number or dimensions of those spaces or unreasonably increase the length of the accessible route from a parking space to the facility.

This provision in the FACBC clarifies how Florida building officials should handle ADA readily achievable barrier removal and path of travel compliance efforts when the closest parking spaces cannot be made fully compliant. The FACBC language basically mirrors the ADA regulatory language for dealing with technical infeasible conditions and readily achievable difficulties and adds that reasonably close relocation with directional signage is allowed but not a reduction in the number or size of the accessible spaces with their full access aisles. This provision will typically be applied due to slope or space problems and primarily reflects the typical preference of power wheelchair and scooter users who use lift-equipped vans but not the typical preferences of manual wheelchair users and ambulatory people who have limited speed, balance, and/or endurance, who often use walkers, canes, or crutches, and who would usually prefer closer spaces to the extra-wide FACBC spaces. In our opinion, when all of the closest parking spaces in existing facilities cannot be made fully compliant due to slope or space

DRAFT

limitations, a portion of them might be relocated to where the wider spaces can be provided, but some should also be left on the shortest accessible route, even if they will not all be able to meet the full new construction slopes and widths.

**University of Florida's Recommendation:** Provide some fully compliant spaces at an alternative location as well as some partially compliant spaces on the shortest accessible route when providing all fully compliant accessible spaces on the shortest accessible route is technically infeasible or not readily achievable.

**Markings – FL Statute 553.5041(6)**

*“Each such parking space must be striped in a manner that is consistent with the standards of the controlling jurisdiction for other spaces and prominently outlined with blue paint, and must be repainted when necessary, to be clearly distinguishable as a parking space designated for persons who have disabilities. The space must be posted with a permanent above-grade sign of a color and design approved by the Department of Transportation, which is placed on or at least 60 inches above the finished floor or ground surface measured to the bottom of the sign and which bears the international symbol of accessibility meeting the requirements of s. 703.7.2.1 of the standards and the caption “PARKING BY DISABLED PERMIT ONLY.” Such a sign erected after October 1, 1996, must indicate the penalty for illegal use of the space. Notwithstanding any other provision of this section, in a theme park or an entertainment complex as defined in s. 509.013 in which accessible parking is located in designated lots or areas, the signage indicating the lot as reserved for accessible parking may be located at the entrances to the lot in lieu of a sign at each parking place. This subsection does not relieve the owner of the responsibility of complying with the signage requirements of s. 502.6 of the standards.”*

**Reference FACBC section:** 502.6.1

**Discussion:** The FACBC requires specific marking patterns for the parking spaces and access aisles. The access aisle must be striped diagonally and the parking spaces must be consistent with the controlling jurisdiction and outlined in blue paint. Each space must be posted with a sign displaying the caption “PARKING BY DISABLED PERMIT ONLY” with the penalty for illegal use indicated as well. The ADA requires access aisles to “be marked as to discourage parking in them” but does not give specific striping patterns or other marking requirements. Recognizing that many state and local requirements are already in place regarding markings, the ADA says in an advisory:

**Advisory 502.3.3 Marking.** The method and color of marking are not specified by these requirements but may be addressed by State or local laws or regulations. Because these requirements permit the van access aisle to be as wide as a parking space, it is important that the aisle be clearly marked.

Blue pavement paint is also specified by Indiana, California, and New Mexico. Some jurisdictions also require the words “No Parking” to be stenciled in the access aisles and/or the International Symbol of Accessibility to be stenciled in the parking spaces. If Florida decides to add any additional markings, it is most helpful if they are located in the rear of the parking spaces or access aisles immediately adjacent to the drive aisle.

**University of Florida’s Recommendation:** No change.

**Vertical Accessibility – FL Statute 553.509**

*“(1) This part and the Americans with Disabilities Act Standards for Accessible Design do not relieve the owner of any building, structure, or facility governed by this part from the duty to provide vertical accessibility to all levels above and below the occupiable grade level, regardless of whether the standards require an elevator to be installed in such building, structure, or facility, except for:*

- (a) Elevator pits, elevator penthouses, mechanical rooms, piping or equipment catwalks, and automobile lubrication and maintenance pits and platforms.*
- (b) Unoccupiable spaces, such as rooms, enclosed spaces, and storage spaces that are not designed for human occupancy, for public accommodations, or for work areas.*
- (c) Occupiable spaces and rooms that are not open to the public and that house no more than five persons, including, but not limited to, equipment control rooms and projection booths.*
- (d) Theaters, concert halls, and stadiums, or other large assembly areas that have stadium-style seating or tiered seating if ss. 221 and 802 of the standards are met.*
- (e) All play and recreation areas if the requirements of chapter 10 of the standards are met.*
- (f) All employee areas as exempted in s. 203.9 of the standards.*
- (g) Facilities, sites, and spaces exempted by s. 203 of the standards.*

*(2) However, buildings, structures, and facilities must, as a minimum, comply with the Americans with Disabilities Act Standards for Accessible Design.”*

**Reference FACBC section: 201.1.1**

**Discussion:** The FACBC requires the owner of any building, structure or facility governed by the Florida Statutes to provide vertical accessibility to all levels above and below the occupiable grade level, regardless of whether the standards require an elevator to be installed. Due to the limited dispersal requirements in the 1991 ADA Standards, the older versions of the Florida Accessibility Code did not exempt large assembly areas from the vertical accessibility requirements. Similarly, the 1991 ADA Standards had few details for accessibility requirements for play and recreation areas, and employee areas so they, too, had no exemptions. Because of this, there were many requests for waivers submitted due to the normal infeasibility of providing accessibility to all levels in many of these types of facilities. With the much greater attention to dispersal requirements and other details in the 2010 ADA Standards, these facility types were exempted in the recent version of the code.

All buildings, structures, and facilities must, as a minimum, comply with the American with Disabilities Act Standards for Accessible Design. Due to the extremely large number of types of facilities and spaces in the built environment and the rewording of the elevator exceptions in 553.509, there are places where application of the Florida Statutory exceptions, the FACBC exceptions, and the 2010 ADA Standards are mismatched and confusing. Also, because the statute does not seem to use standard Florida Building Code language, there is additional confusion. For example, the exception at 553.509(1)(b) that covers “unoccupiable spaces”... “that are not designed for human occupancy” is confusing. First, it seems to be redundant, but on second look, it’s not clear if the word “that” separates two parallel types of spaces or somewhat overlapping ones. Many public accommodations and work areas have unoccupiable enclosed spaces and storage spaces. It would be helpful to clarify whether those storage spaces are covered by the exception or not.

In another example, the exception to the vertical access requirement in 553.509(1)(c) applies to ALL of the specified types of small spaces and rooms while the similar ADA exception only applies to that type of room or space when it occurs as a full story in a two story public entity’s facility (ADA Standards 206.2.3 Exception 2). That means that this exception is less restrictive than what is allowed by the ADA Standards. It should, therefore be uncertifiable as equivalent to the ADA Standards. See Advisories in the FACBC at Section 206.2.3 for other differences and further details.

Other states that expand the elevator requirements beyond what is required by the ADA include California, Texas, Maryland, and Vermont. As stated above on other sections, the decision to make

DRAFT

Florida more accessible than what is required in the rest of the country is at least partially one that should consider the impact it will have on tourism and retirement populations. The opposition will come primarily from people and businesses who are trying to minimize their costs of compliance.

**University of Florida's Recommendation:** Revise wording in statute 553.509(1)(b) to clarify what is being required. The vertical access requirement of 553.509(1)(c) should be made at least equivalent to the ADA standards. Other than this, no other change is recommended.

**Vertical Clearance for Vehicles – FL Statute 553.511**

*“Every nonresidential structure built on or after January 1, 1991, which is designed to use covered or underground parking as the primary available parking space shall design the covered or underground parking facility to maintain a minimum height for the portion of the street-accessible level of the parking facility directly over van-accessible parking spaces and for providing ingress and egress to such parking spaces of at least 8 feet 2 inches. Signs shall be posted to warn operators of handicapped-equipped vans that they cannot pass beyond a certain point due to height limitations. If compliance with this minimum height clearance requirement will cause the structure to exceed local height limitations imposed by local zoning, planning, or fire ordinances, or will result in the imposition of any additional requirements of such ordinances, the structure may exceed the height limitation specified in those particular codes as necessary to comply with the requirements of this section and is exempt from such additional requirements. Structures for which the plans were sealed by an architect prior to January 1, 1991, are exempt from this section.”*

**Reference FACBC section: 502.5**

**Discussion:** The ADA Standards s. 502.5 requires that parking spaces for vans and access aisles and vehicular routes serving them must provide the same vertical clearance of 98 inches. The slight language differences between the Statute at 553.511 and section 502.5 of the ADA and the FACBC between “the portion of the street-accessible level of the parking facility directly over van-accessible parking spaces and for providing ingress and egress to such parking spaces” and “Parking spaces for vans and access aisles and vehicular routes serving them” seem to be inconsequential from an accessibility standpoint. The ADA Standards do not require warning signage at the point where the parking structures height limitations would prevent accessible vans from passing but Advisory 502.5 suggests that signs provided at entrances to parking facilities informing drivers of clearances and the location of van accessible parking spaces can provide useful customer assistance. Finally, as expected, the ADA does not address any parking structure height restrictions that may be imposed by local codes and ordinances.

The January 1, 1991 exemption from the height limitation in this section could be read as a limitation on the requirement to perform barrier removal in pre-1991 parking structures to provide van accessible parking spaces with the 98” vertical clearance. That might be an exemption that would prohibit a certification of equivalency by DOJ since the limitations on barrier removal requirements for “program access” under Title II and “where readily achievable” under Title III typically refer to the alterations requirements of the Standards for their details. Although the alterations requirements would provide an exception for technical infeasibility where raising essential elements of the structural frame would be required in an existing facility, it is sometimes possible to lower the ground floor slab to provide the 98” clear height. Lowering the slab might not qualify for the technical infeasibility exception, even in pre-1991 parking structures.

**University of Florida’s Recommendation:** Clarify that the exemption for pre-1991 facilities is not a limitation on the obligation to provide program access by public entities under section 35.150 or for places of public accommodation to perform readily achievable barrier removal under section 36.304 of the ADA regulations.

## **6. Conclusion**

The University of Florida has given recommendations based on data available online and from the knowledge and resources of the ADA contractor. While most of the Florida specific items do not need to be changed, a few are recommended to either be reduced or expanded. It is recommended that the provisions for the removal of architectural barriers and parking space widths be reduced. The provisions for curbs adjacent to on-street parking spaces and the removal of parking barriers should be expanded. It is also suggested that the language be changed for clarification of requirements in the following provisions: door opening force, additional hotel and motel features, and vertical accessibility.

Because this is a politically driven issue, the views of specific contractors or disability organization were not taken into consideration. It is suggested that the Florida Building Commission meet with contractors and disability organizations in the state of Florida to get their perspective on the recommendations. Evan Terry Associates has provided a list of questions that should be considered when developing accessibility standards, as seen in Appendix 8.4. Ultimately, the resolution of these questions should be informed by technical information but the decisions about where to draw the lines and define the specific standards should be made through a political process.

## 7. References

Americans With Disabilities Act of 1990. Pub. L. 101-336. 26 July 1990. 104 Stat. 328.

ADA Amendments Act of 2008. Pub. L. 110-325. 25 September 2008.

Centers for Disease Control and Prevention (2013). "The State of Aging and Health in America 2013." Centers for Disease Control and Prevention, US Department of Health and Human Services, Atlanta, GA. <[http://www.cdc.gov/features/agingandhealth/state\\_of\\_aging\\_and\\_health\\_in\\_america\\_2013.pdf](http://www.cdc.gov/features/agingandhealth/state_of_aging_and_health_in_america_2013.pdf)>

Disability Rights Education and Defense Fund. "Beds in Accessible Sleeping Rooms." Disability Rights Education and Defense Fund, Berkeley, California. <<http://dredf.org/anprm/beds-in-accessible-sleeping-rooms.shtml>>

Farber, N., and Shinkle, D. (2011). "Aging in Place: A state Survey of Livability Policies and Practices." AARP Public Policy Institute, Washington D.C. <<http://assets.aarp.org/rgcenter/ppi/liv-com/aging-in-place-2011-full.pdf>>

FBC (2012). "Florida Accessibility Code for Building Construction". Florida Building Commission, Tallahassee, Florida. <[http://www.floridabuilding.org/fbc/committees/accessibility/aac/Changes\\_to\\_Law/Florida\\_Accessibility\\_Code\\_2012\\_ICC\\_FINAL.pdf](http://www.floridabuilding.org/fbc/committees/accessibility/aac/Changes_to_Law/Florida_Accessibility_Code_2012_ICC_FINAL.pdf)>

Laws of Florida ch. 2011-222 s. 22-29 (2011). <<http://laws.flrules.org/2011/222>>

Office of Economic and Demographic Research (EDR). (2013). "Detailed Revenue Report FY1213." <[http://edr.state.fl.us/Content/revenues/reports/detailed-revenue-report/detailrpt\\_final1213.pdf](http://edr.state.fl.us/Content/revenues/reports/detailed-revenue-report/detailrpt_final1213.pdf)>

State of Florida. (2013). "Gov. Rick Scott: Another Record Year for Florida Tourism" <<http://www.flgov.com/gov-rick-scott-another-record-year-for-florida-tourism-2/>>

Steinfeld, E. and Danford, G. (1993). "Automated Doors: Towards Universal Design". The Center for Inclusive Design and Environmental Access, School of Architecture and Planning, Buffalo, New York. <<http://idea.ap.buffalo.edu/publications/Articles%20and%20Publications%20-%20see%20alex%20with%20questions/AUTOMATED%20DOORS.pdf>>

United States Department of Justice (2010). "2010 ADA Standards for Accessible Design." Washington, D.C.

United States Access Board (2002). "ADA Accessibility Guidelines (ADAAG)". Washington, D.C. <<http://www.access-board.gov/guidelines-and-standards/buildings-and-sites/about-the-ada-standards/background/adaag#purpose>>

United States Census Bureau (2014): "Disability". United States Census Bureau, Washington, D.C. <<https://www.census.gov/people/disability/>>.

United States Census Bureau, American Community Survey (2012). "Percent of People with a Disability: United States, States, and Puerto Rico." United States Census Bureau, Washington, D.C. <[http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS\\_12\\_1YR\\_R1810.US01PRF&prodType=table](http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_12_1YR_R1810.US01PRF&prodType=table)>.

United States Census Bureau, Population Estimates Program (2014). "Population Estimates". U.S. Census Bureau, Washington, D.C. <<https://www.census.gov/popest/>>.

Victoria Transport Policy Institute (2013). "Transportation Cost and Benefit Analysis II – Parking Costs."



DRAFT

Victoria Transport Policy Institute Victoria, British Columbia, Canada. <<http://www.vtpi.org/tca/tca0504.pdf>>

VISIT FLORIDA. (2012). "Research". <<http://www.visitfloridamediablog.com/home/florida-facts/research/>>

DRAFT

## **8. Appendices**

### **8.1. Summary of UF's Recommendations for the Florida Specific Items**

See attached spreadsheet.

## 8.2. Code Language from States Exceeding the 2010 ADA Standards

This appendix gives the code language for the various states' accessibility codes that are more stringent than the ADA standards. The code title is in red text and the applicable sections of the code are highlighted in yellow.

### **Exterior Door Force Limits - FL Statute 553.504(3)**

#### **2012 Florida Accessibility Code for Building Construction**

**404.2.9 Door and Gate Opening Force.** Fire doors shall have a minimum opening force allowable by the appropriate *administrative authority*. The force for pushing or pulling open a door or gate other than fire doors shall be as follows:

1. Interior hinged doors and gates: 5 pounds (22.2 N) maximum.
2. Sliding or folding doors: 5 pounds (22.2 N) maximum.
3. Exterior hinged doors shall be designed so that such doors can be pushed or pulled open with a force not exceeding 8.5 pounds (37.8 N).

These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door or gate in a closed position.

**Advisory FL404.2.9 Door and Gate Opening Force.** The maximum force pertains to the continuous application of force necessary to fully open a door, not the initial force needed to overcome the inertia of the door. It does not apply to the force required to retract bolts or to disengage other devices used to keep the door in a closed position.

Florida law, s.553.504(6), F.S., establishes requirements for exterior door opening force.

#### **2013 California Building Code**

**11B-404.2.9 Door and gate opening force.** The force for pushing or pulling open a door or gate other than fire doors shall be as follows:

1. Interior hinged doors and gates: 5 pounds (22.2 N) maximum.
2. Sliding or folding doors: 5 pounds (22.2 N) maximum.
3. *Required fire doors: the minimum opening force allowable by the appropriate administrative authority, not to exceed 15 pounds (66.7 N).*
4. Exterior hinged doors: 5 pounds (22.2 N) maximum.

These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door or gate in a closed position.

#### **Exceptions:**

1. *Exterior doors to machinery spaces including, but not limited to, elevator pits or elevator penthouses; mechanical, electrical or communications equipment rooms; piping or equipment catwalks; electric substations and transformer vaults; and highway and tunnel utility facilities.*
2. *When, at a single location, one of every 8 exterior door leaves, or fraction of 8, is a powered door, other exterior doors at the same location, serving the same interior space, may have a maximum opening force of 8.5 pounds (37.8 N). The powered leaf(s) shall be located closest to the accessible route.*

#### **Massachusetts Access Code**

**26.8.1 Doors:** These forces apply only to opening the door, not to the effort required to retract latch bolts or disengage other devices that may hold the door in a closed position.

- a. exterior hinged doors: 15 lbs.
- b. interior hinged doors: five lbs.
- c. sliding or folding doors: five lbs.

**Exception:** Fire doors shall have the minimum opening force allowable by the appropriate administrative authority.

### Washington Access Code

**51-50 1101.2.3 (ANSI09 Section 404.2.8) (Rev.7-1- 2013) Door-Opening Force.** Fire doors shall have the minimum opening force allowable by the appropriate administrative authority. The force for pushing or pulling open doors other than fire doors shall be as follows:

1. Interior hinged door: 5.0 pounds (22.2 N) maximum
2. Interior sliding or folding doors: 5.0 pounds (22.2 N) maximum
3. Exterior hinged, sliding or folding door: 10.0 pounds (44.4 N) maximum

**Exception:** Interior or exterior automatic doors complying with Section 404.3 of ICC A117.1.

### Illinois

**IL400.310(j)(10) Door Opening Force.** The maximum force for pushing or pulling open a door shall be as follows:

- (A) Fire doors shall have the minimum opening force allowable by the appropriate administrative authority.
- (B) Other doors:
  - (i) exterior hinged doors: 8.5 lbf (37.8N);
  - (ii) interior hinged doors: 5 lbf (22.2N);
  - (iii) sliding or folding doors: 5lbf (22.2N).

These forces do not apply to the force required to retract latch bolts or disengage other devices that may hold the door in a closed position.

### Oregon

**IBC09-1101.2.2.5 (OR Amd) Door Opening Force** – ICC A117.1 Section 404.2.8. ICC A117.1 Section 404.2.8 is deleted in its entirety and replaced with the following: The opening force of doors along an accessible route shall be as follows:

1. Exterior doors: 8 1/2 pounds-force (lbf) (37.8 N).
2. Interior doors: 5 pounds-force (lbf) (22.2 N).
3. Stairway doors at pressurized stair enclosures: 15 pounds (6.8 kg) at exterior doors.
4. Where environmental conditions require greater closing pressure, power-operated doors shall be used within the accessible route.
5. Fire doors shall have the minimum force necessary to close and latch the door.

### Transient Lodging Beds to Allow the Use of Lifts – FL Statute 553.504(4)

#### 2012 Florida Accessibility Code for Building Construction

**224.6.3 Buildings, Structures, or Facilities Licensed as a Hotel, Motel, or Condominium Pursuant to Chapter 509, F.S.** All *buildings*, structures, or *facilities* licensed as a hotel, motel, or condominium pursuant to chapter 509, F.S., a number of rooms equaling at least 5 percent of the guest rooms minus the Total Number of Required (*accessible*) Rooms required by Table 224.2 shall provide special accessibility features of 806.4.

**806.1 General.** *Transient lodging* guest rooms shall comply with 806. Guest rooms required to provide mobility features shall comply with 806.2. Guest rooms required to provide communication features shall comply with 806.3.

All *buildings*, structures, or *facilities* licensed as a hotel, motel or condominium pursuant to chapter 509, F.S., shall comply with 806.4.

**806.4 Hotel, Motel and Condominium Special Accessibility Features.** This section does not relieve the owner of the responsibility of providing *accessible* rooms in conformance with Section 224 and 806 of

this code. In all *buildings*, structures and *facilities* licensed as a hotel, motel or *resort condominium* pursuant to Chapter 509, F.S., a number of rooms equaling at least 5 percent of the guest rooms minus the Total Number of Required (*accessible*) Rooms required by Table 224.2 shall provide the following additional special accessibility features:

- (i) Grab rails in bathrooms and toilet rooms which comply with Section 604.5.
- (ii) All beds in designed *accessible* guest rooms shall be open-frame type that allows the passage of lift devices.
- (iii) Water closets that comply with section 604.4.

### 2013 California Building Code

**11B-806.2.3.1 Personal lift device floor space.** *There shall be a clear space under the bed for the use of a personal lift device. The clear space shall extend under the bed parallel to the long side and be adjacent to an accessible route. The clear space shall extend to points horizontally 30 inches (762 mm), vertically 7 inches (178 mm) and not more than 12 inches (305 mm) from the head and foot end of the bed.*

### Accessible Route Serving Parking Access Aisles - FL Statute 553.5041(5)(a)

### 2012 Florida Accessibility Code for Building Construction

**208.3.1 General...** All spaces must be located on an *accessible* route that is at least 44 inches (1118 mm) wide and so that users are not compelled to walk or wheel behind parked vehicles except behind his or her own vehicle...

#### **Advisory 208.3.1 General...**

...Accessible routes from accessible parking to accessible entrances are required to be 44 inches wide minimum. Exceptions are established for the Florida specific requirements only (indicated by gray shading) for theme parks and entertainment complexes by added exceptions 3 and 4.

**502.3 Access Aisle...** All spaces must be located on an *accessible* route that is at least 44 inches (1118 mm) wide so that users are not compelled to walk or wheel behind parked vehicles except behind his or her own vehicle.

### 2013 California Building Code

**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.*

**DSA Advisory 11B-502.7.1 Arrangement.** Accessible parking spaces located so that the accessible route passes behind parked vehicles create a safety hazard, especially for wheelchair users. Wheelchair users traveling behind parked vehicles may be obscured from the view of drivers backing out of parking spaces, especially when passing behind high profile vehicles. This section requires that persons with disabilities not be required to travel behind parking spaces other than the one in which they have parked.

**11B-403.5.1 Clear width.** Except as provided in Sections 11B-403.5.2 and 11B-403.5.3, the clear width of walking surfaces shall be 36 inches (914 mm) minimum.

#### **Exceptions:**

1. The clear width shall be permitted to be reduced to 32 inches (813 mm) minimum for a length of 24 inches (610 mm) maximum provided that reduced width segments are separated by segments that are 48 inches (1219 mm) long minimum and 36 inches (914 mm) wide minimum.
2. The clear width for walking surfaces in corridors serving an occupant load of 10 or more shall be 44 inches (1118 mm) minimum.
3. The clear width for sidewalks and walks shall be 48 inches (1219 mm) minimum. When, because of right-of-way restrictions, natural barriers or other existing conditions, the enforcing agency determines that compliance with the 48-inch (1219 mm) clear sidewalk width would

- create an unreasonable hardship, the clear width may be reduced to 36 inches (914 mm).*
4. *The clear width for aisles shall be 36 inches (914 mm) minimum if serving elements on only one side, and 44 inches (1118 mm) minimum if serving elements on both sides.*

### Minnesota

**ANSI03-403.5.3 (MN Add) Exterior Walking Surfaces.** Walking surfaces with a slope not steeper than 1:20 that are a part of an exterior accessible route shall be 48 inches (1220 mm) wide minimum.

### North Carolina

**IBC09-1104.1 (NC 2009 Add) Site arrival points.** Accessible routes within the site shall be provided from public transportation stops; accessible parking; accessible passenger loading zones; and public streets or sidewalks to the accessible building entrance served. The exterior accessible path of travel shall be fixed, firm, non-slip and minimum 48" inches wide. Where handrails are provided, the measurement shall be between the handrails.

**IBC09-1104.2 (NC 2009 Add) Within a site.** At least one accessible route shall connect accessible buildings, accessibility facilities, accessible elements and accessible spaces that are on the same site. The exterior accessible path of travel shall be fixed, firm, non-slip and minimum 48" inches wide. Where handrails are provided, the measurement shall be between the handrails.

### Washington

**WAC 51-50-1101.2.2 (ANSI 2009, Section 403.5) (Rev. 7-1-2013) Clear width of accessible route.** Clear width of an accessible route shall comply with ICC A117.1 Section 403.5. For exterior routes of travel, the minimum clear width shall be 44 inches (1118 mm).

### Massachusetts

#### MA22.1 GENERAL

Walkways shall include but not be limited to all walks, sidewalks, overpasses, bridges, tunnels, underpasses, plazas, courts and other pedestrian pathways, and shall comply with the following requirements:

#### MA22.2 WIDTH

Width of walkways shall be not less than 48 inches (48"= 1219mm), excluding curb stones. An unobstructed path of travel shall be provided which is at least 36 inches (36" = 914mm) clear, excluding curb stones.

#### Universal Parking Spaces – FL Statute 553.5041(5)(c)1

#### 2012 Florida Accessibility Code for Building Construction

**502.2 Vehicle Spaces.** Each parking space must be at least 12 feet (3658 mm) wide shall be marked to define the width, and shall have an adjacent access aisle complying with 502.3. See section 406.5 *curb ramp* location.

**Exception:** For on-street parallel parking spaces and theme parks or an entertainment complex in which are provided continuous attendant services or designated lots for parking by persons who have disabilities: Car parking spaces shall be permitted to be 96 inches (2440 mm) wide minimum; Van parking spaces shall be permitted to be 96 inches (2440 mm) wide minimum where the access aisle is 96 inches (2440) wide minimum and shall be designated "van accessible" ; Alternatively, van parking spaces shall be permitted to be 132 inches (3350 mm) wide minimum where the access aisle is 60 inches (1525 mm) wide minimum and shall be designated "van accessible".

**Advisory 502.2 Vehicle Spaces.** Pursuant to s.553.512, F.S., Florida requirements, except

s.553.5041(c)1 parking space and access aisle width, may be waived down to the requirements of the ADA Standards for Accessible Design. No waivers are required for on-street parallel parking spaces and theme parks or an entertainment complex in which are provided continuous attendant services or designated lots for parking by persons who have disabilities pursuant to ss.553.5041(5)(c)3. and (d), F.S., and the Exception to 502.2.

**502.3.1 Width.** Access aisles serving car and van parking spaces shall be 60 inches (1525 mm) wide minimum.

### Illinois

**400.310(c)(3) Dimensions and Markings.** Each parking space, except on-street spaces, shall consist of a sixteen foot wide parking space including an eight foot wide diagonally striped access aisle. Adjacent parking spaces shall not share a common access aisle (see Illustration B, Fig. 9(a)). In the alternative, all required parking spaces may be provided in conformance with "Universal Parking Design" (ADAAG Appendix A4.6.3), except that such spaces shall not utilize a shared access aisle with an adjacent space (ADAAG 4.1.2(5)(b) Exception.). Under Universal Parking Design, all accessible spaces are sixteen feet wide, including a space eleven feet (132 in., 3350 mm) wide with a five foot (60 in., 1525 mm) diagonally striped access aisle (see Illustration B, Fig. 9(b)). A high quality yellow paint recommended by the paint manufacturer for pavement striping shall be used. Each parking space shall have its own access aisle and all access aisles shall blend to a common level with an accessible route. Parking spaces and access aisles shall be level with surface slopes not exceeding 1:50 (2%) in all directions. (ADAAG 4.6.3) Minimum vertical clearance of 98 in. (2490 mm) at the parking space and along at least one vehicle access route to such spaces from site entrance(s) and exit(s) shall be provided. (ADAAG 4.6.5)

### Minnesota

**ANSI03-502.2 (MN Amd) Vehicle space size.** Car and van parking spaces shall be 96 inches (2440 mm) minimum in width.

**ANSI03-502.4.2 (MN Amd) Width.** Access aisles serving car and van parking spaces shall be 96 inches (2440 mm) minimum in width.

**ANSI03-502.4.4 (MN Amd) Marking.** Access aisle shall be marked with the designation "No Parking." Where access aisles are marked with lines, the width measurements of access aisles and adjacent parking spaces shall be made from the centerline of the markings.

**EXCEPTION:** Where access aisles or parking spaces are not adjacent to another access aisle or parking space, measurements shall be permitted to include the full width of the line defining the access aisle or parking space.

### New York

**ANSI03-502.2 Vehicle Space Size.** Car parking spaces shall be 96 inches (2440 mm) minimum in width. Van parking spaces shall be 132 inches (3350 mm) minimum in width.

**EXCEPTION:** Van parking spaces shall be permitted to be 96 inches (2440 mm) minimum in width where the adjacent access aisle is 96 inches (2440 mm) minimum in width.

**1106.1.1 (Rev. 2010) Access aisles.** Accessible parking spaces shall be in conformance with ICC/ANSI A117.1 except that spaces shall be provided with access aisles at least 8 feet (2440 mm) in width.

**EXCEPTION:** Van parking spaces shall be permitted to be 96 inches (2440 mm) minimum in width where the adjacent access aisle is 96 inches (2440 mm) minimum in width.

**1106.1.1 (Rev. 2010) Access aisles.** Accessible parking spaces shall be in conformance with ICC/ANSI A117.1 except that spaces shall be provided with access aisles at least 8 feet (2440 mm) in width.

### Parking Space Markings – FL Statute 553.5041(6)

## 2012 Florida Accessibility Code for Building Construction

**502.6 Identification.** Parking space identification signs shall include the International Symbol of Accessibility complying with 703.7.2.1. Signs identifying van parking spaces when required by 502.2 shall contain the designation “van accessible.”

**502.6.1** Each such parking space must be striped in a manner that is consistent with the standards of the controlling jurisdiction for other spaces and prominently outlined with blue paint, and must be repainted when necessary, to be clearly distinguishable as a parking space designated for persons who have disabilities. The space must be posted with a permanent above-grade sign of a color and design approved by the Department of Transportation, which is placed on or at least 60 inches (1525 mm) above the finished floor or ground surface measured to the bottom of the sign and which bears the international symbol of accessibility and the caption “PARKING BY DISABLED PERMIT ONLY.” Such a sign, erected after October 1, 1996, must indicate the penalty for illegal use of the space. Any provision of this section to the contrary notwithstanding, in a theme park or an entertainment complex as defined in Section 509.013 in which accessible parking is located in designated lots or areas, the signage indicating the lot as reserved for accessible parking may be located at the entrances to the lot in lieu of a sign at each parking place.

**Advisory 502.6 Identification.** The required “van accessible” designation is intended to be informative, not restrictive, in identifying those spaces that are better suited for van use. Enforcement of motor vehicle laws, including parking privileges, is a local matter.

Parking space and access aisle configurations required for all accessible parking by Florida law, s.553.5041, F.S., meet the van accessible space requirements of the ADA Standards for Accessible Design. Therefore, no accessible space is more suitable than any other accessible space for “van accessible” parking. Florida law only requires “van accessible” parking signs in parking structures where van parking may be limited to the first level accessible spaces.

Florida accessible parking signs must include indication of the penalty for illegal parking in addition to the accessible parking symbol required by the ADA Standards for Accessible Design.

## Indiana

### IN-IC 5-16-9-4 Specifications of parking spaces and access facilities

Sec. 4.(a) Except as provided in subsection (b), the size and location of parking spaces required under this chapter must conform to the following standards:

(6) An accessible parking space and an access aisle must be designated with blue lines.

## 2013 California Building Code

**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.

**DSA Advisory 11B-502.3.3 Marking.** The requirement that the hatching at the loading and unloading access aisle be a suitable contrasting color to the parking space is intended to ensure that the hatching is visually distinct from the background to which it is applied, and thus can be more easily seen. As hatching is generally recognized as a no-parking area, this difference in contrast assists drivers by providing a conspicuous visual deterrent to parking in the loading and unloading access aisle.

Asphalt is often the parking surface material used at accessible parking spaces. Asphalt is generally considered to be fairly dark in appearance. In order to provide a suitable contrasting color at the hatched area of the loading and unloading access aisle, a light color hatching should be used at locations where asphalt is the parking surface material. Although white paint is preferred (and traditionally the color most often used), its use is not mandatory under the California Building Code (CBC).

In order to provide a suitable contrast at the hatched area of the loading and unloading access aisle in locations where light concrete is used as the parking surface material (such as at concrete parking



garages), a dark color hatching should be used. Although blue paint is preferred, its use is not mandatory under the California Building Code (CBC).

### New Mexico

**NMAC 14.7.2.19 J(3)** Add the following new provision at the end of section 1110.3:

(a) 7. accessible parking spaces required by section 1106 shall provide pavement markings in compliance with the following sections 7.1 and 7.2;

...

(c) 7.2 the access aisle shall be clearly marked by diagonal, blue pavement striping.

### Illinois

**400.310(c)(3) Dimensions and Markings.** Each parking space, except on-street spaces, shall consist of a sixteen foot wide parking space including an eight foot wide diagonally striped access aisle. Adjacent parking spaces shall not share a common access aisle (see Illustration B, Fig. 9(a)). In the alternative, all required parking spaces may be provided in conformance with "Universal Parking Design" (ADAAG Appendix A4.6.3), except that such spaces shall not utilize a shared access aisle with an adjacent space (ADAAG 4.1.2(5)(b) Exception.). Under Universal Parking Design, all accessible spaces are sixteen feet wide, including a space eleven feet (132 in., 3350 mm) wide with a five foot (60 in., 1525 mm) diagonally striped access aisle (see Illustration B, Fig. 9(b)). A high quality yellow paint recommended by the paint manufacturer for pavement striping shall be used. Each parking space shall have its own access aisle and all access aisles shall blend to a common level with an accessible route. Parking spaces and access aisles shall be level with surface slopes not exceeding 1:50 (2%) in all directions. (ADAAG 4.6.3) Minimum vertical clearance of 98 in. (2490 mm) at the parking space and along at least one vehicle access route to such spaces from site entrance(s) and exit(s) shall be provided. (ADAAG 4.6.5)

### Connecticut

**ANSI03-502.2 (CT Amd) Vehicle space size.** Parking spaces designated for persons with disabilities shall be as near as possible to a building entrance or walkway. Accessible automobile parking spaces shall be 15 feet in width including 5 feet of cross hatch. Accessible van spaces shall be 16 feet in width including 8 feet of cross hatch. Cross hatched portions shall not be shared between spaces.

### Massachusetts

#### 23.4 PARKING SPACES.

**23.4.6 Access aisles:** All accessible spaces shall have access aisles that comply with the following:

e. Access aisles shall be clearly marked by means of diagonal stripes.

### Minnesota

**ANSI03-502.4.4 (MN Amd) Marking.** Access aisle shall be marked with the designation "No Parking."

Where access aisles are marked with lines, the width measurements of access aisles and adjacent parking spaces shall be made from the centerline of the markings.

**EXCEPTION:** Where access aisles or parking spaces are not adjacent to another access aisle or parking space, measurements shall be permitted to include the full width of the line defining the access aisle or parking space.

### Vertical Accessibility

#### 2012 Florida Accessibility Code for Building Construction

**206.2.3 Multi-Story Buildings and Facilities.** At least one accessible route shall connect each story and mezzanine in multi-story buildings and facilities.

Notwithstanding the requirements and exceptions of this section, section 201.1.1 shall apply.

**EXCEPTIONS:**

1. Reserved.
2. Reserved.
3. Reserved.
4. Reserved.
5. Reserved.
6. Reserved.
7. Reserved.

**2010 ADA Standards**

**206.2.4 Spaces and Elements.** At least one accessible route shall connect accessible building or facility entrances with all accessible spaces and elements within the building or facility which are otherwise connected by a circulation path unless exempted by 206.2.3 Exceptions 1 through 7.

**EXCEPTIONS:**

1. Raised courtroom stations, including judges' benches, clerks' stations, bailiffs' stations, deputy clerks' stations, and court reporters' stations shall not be required to provide vertical access provided that the required clear floor *space*, maneuvering *space*, and, if appropriate, electrical service are installed at the time of initial construction to allow future installation of a means of vertical access complying with 405, 407, 408, or 410 without requiring substantial reconstruction of the *space*.
3. Accessible routes shall not be required to connect mezzanines where buildings or facilities have no more than one story. In addition, accessible routes shall not be required to connect stories or mezzanines where multi-story buildings or facilities are exempted by 206.2.3 Exceptions 1 through 7.

**Advisory 206.2.4 Spaces and Elements.** Accessible routes must connect all spaces and elements required to be accessible including, but not limited to, raised areas and speaker platforms.

**Advisory 206.2.4 Spaces and Elements Exception 1.** The exception does not apply to areas that are likely to be used by members of the public who are not employees of the court such as jury areas, attorney areas, or witness stands.

**2013 California Building Code** (Refer to ADA Stds. above to see which exceptions were reserved.)

**11B-206.2.4 Spaces and elements.** At least one accessible route shall connect accessible building or facility entrances with all accessible spaces and elements within the building or facility, *including*, which are otherwise connected by a circulation path unless exempted by *Section 11B-206.2.3* Exceptions 1 through 7.

**Exceptions:**

1. *Reserved.*
2. In assembly areas with fixed seating required to comply with *Section 11B-221*, an accessible route shall not be required to serve fixed seating where wheelchair spaces required to be on an accessible route are not provided.
3. *Reserved.*

**Texas Accessibility Standard**

**TX Technical Memorandum 2012-03 (Eff. 11-15-2012) Shopping Centers or Shopping Malls**

If a private building or facility (as defined by TAS 106.5.46) meets the criteria of TAS 106.5.60 for a "shopping center or shopping mall" and it has more than one story, an accessible route is required by 206.2.3, Exception 1 to all stories and to all mezzanines.

This accessible route is required regardless of whether or not there is at least one sales or service establishment on the mezzanine level. In other words, the type of spaces provided on a mezzanine level does not alleviate the obligation to provide the required accessible route.

If, however, the retail space is located in a one story building or facility with a mezzanine, an accessible route is not required to the mezzanine based on TAS 206.2.4, Exception 3.

This clarification has been confirmed by the Department with the U. S. Access Board and does not

constitute a substantive change to the compliance requirements of TAS 206.2.3, Exception 1.

**206.2.3 Multi-Story Buildings and Facilities.** At least one accessible route shall connect each story and mezzanine in multi-story buildings and facilities.

**EXCEPTIONS:** 1. In private buildings or facilities that are less than three stories or that have less than 3000 square feet (279 m<sup>2</sup>) per story, an accessible route shall not be required to connect stories provided that the building or facility is not a shopping center, a shopping mall, the professional office of a health care provider, a terminal, depot or other station used for specified public transportation, an airport passenger terminal, or another type of facility as determined by the Attorney General.

**206.2.4 Spaces and Elements.** At least one accessible route shall connect accessible building or facility entrances with all accessible spaces and elements within the building or facility which are otherwise connected by a circulation path unless exempted by 206.2.3 Exceptions 1 through 7.

**EXCEPTIONS:** 3. Accessible routes shall not be required to connect mezzanines where buildings or facilities have no more than one story. In addition, accessible routes shall not be required to connect stories or mezzanines where multi-story buildings or facilities are exempted by 206.2.3 Exceptions 1 through 7.

## Maryland

**MD.02.07C(2)(a)** For new construction, accessibility shall be assured for the second story of a two-story nonresidential building if the gross floor area of the second story exceeds 4,000 square feet.

**MD.02.07C(2)(b)** For alterations to an existing nonresidential building with a second story that has a gross floor area between 4,000 square feet and 8,000 square feet, existing accessibility to the second story shall be maintained.

**MD.02.07C(2)(c)** For alterations to an existing nonresidential building with a second story that has a gross floor area that exceeds 8,000 square feet, existing accessibility to the second story shall be assured.

## Vermont

Vermont Access Rules: –delete & replace- 206.2.3. Exception 1, and §36.401(d) (page 20) Elevator, New Construction: In public buildings, an accessible route by elevator or platform lift is not required for:

(b) A two-story retail establishment with a total of 15,000 square feet or less.

–delete & replace- §36.404 (page 25) Elevator, Alterations to Existing Buildings: In public buildings, an accessible route by elevator or platform lift is not required for:

(b) A two-story retail establishment with a total of 15,000 square feet or less.

Vermont Access Rules: –delete & replace- 206.2.3. Exception 1, and §36.401(d) (page 20) Elevator, New Construction: In public buildings, an accessible route by elevator or platform lift is not required for:

(d) A story/floor less than 1,000 square feet. in area, unless a healthcare provider as required by federal law. Storage, stairwell, and mechanical spaces are exempt from the 1,000 square foot calculation.

–delete & replace- §36.404 (page 25) Elevator, Alterations to Existing Buildings: In public buildings, an accessible route by elevator or platform lift is not required for:

(d) A story/floor less than 1,000 square feet. in area, unless a healthcare provider as required by federal law. Storage, stairwell, and mechanical spaces are exempt from the 1,000 square foot calculation.

Vermont Access Rules: –delete & replace- 206.2.3. Exception 1, and §36.401(d) (page 20) Elevator, New Construction: In public buildings, an accessible route by elevator or platform lift is not required for:

(f) Story/floor used for storage that is accessed only on an infrequent basis, or is not occupiable

–delete & replace- §36.404 (page 25) Elevator, Alterations to Existing Buildings: In public buildings, an accessible route by elevator or platform lift is not required for:

(f) Story/floor used for storage that is accessed only on an infrequent basis, or is not occupiable.

### 8.3. Calculations for FACBC Universal Parking Savings

Based on the research of the Victoria Transport Policy Institute (VTPI), it is estimated that the average annual cost of a standard surface parking space is about \$1,000 per space and the average cost of a structured parking space is about \$3,000 per space. These costs include parking facility land, construction and operating costs, plus indirect costs such as stormwater management costs. Using annualized parking costs per space provided by VTPI, the decision to provide all universal spaces in Florida rather than simply meeting the minimum ADA requirements is probably costing entities in the state over a hundred million dollars a year. By requiring all car accessible spaces to be 9'-0" wide with a 5' access aisle and van accessible spaces to be 12'-0" wide with a 5' access aisle, the state of Florida could possibly save as much as \$300,000,000 a year.

Adjusted round number figures based on ETA assumptions and 2013 VTPI study	
20,000,000	Florida Population
0.60	Rough average number of non-residential off-street parking spaces per person (may be significantly underestimated)
3%	Assumed % of total parking that is accessible parking
360,000	Calculated off-street, non-residential accessible parking spaces in FL
\$ 3,000	Average annualized cost per structured parking space
15%	Percent of total structured spaces
\$ 1,000	Average annualized cost per surface parking space
85%	Percent of total surface spaces
\$ 1,300	Total average annualized cost per parking space
\$ 2,094	Assuming 12' wide standard spaces with 5' access aisles (29' wide pairs) of FACBC Universal accessible spaces, average annual cost of accessible spaces
0.79	Size reduction factor per pair of accessible spaces reduced to 9' + 5' access aisle (23' wide pairs)
1,661	Assuming 9' wide standard spaces with 5' wide access aisles (23' wide pairs) accessible spaces, average annual cost of accessible spaces
50%	Assumed % of accessible FACBC parking spaces that could be reduced from 12' wide Universal spaces to 9' wide standard car spaces (This percentage may be greater because only 1/6 of accessible spaces are required to be van spaces)
<b>\$ 299,000,000</b>	Calculated annualized savings available due to reduction from all FACBC Universal Spaces to ADA minimum spaces with one extra foot of width.

#### 8.4. Accessibility Standards Development Consideration

The following was provided by Jim Terry at Evan Terry Associates, P.C.

Writing an accessibility standard requires the authors to balance a large number of often conflicting considerations for each detailed issue they review. These questions are technical, demographic, economic, and political. Some of those considerations are listed below. They should be considered for every single technical requirement being considered for inclusion in or elimination from the standards.

- 1) What is the particular barrier type that restricts or blocks safe access for people with disabilities?
- 2) Are any developments underway that will likely change the impact of this barrier type on people with disabilities or others? For example, the function of pay telephones has mostly been replaced by cell phones and TDDs by smartphones.
- 3) What types of disabilities are affected by this barrier type?
- 4) How many people are currently affected by the current problem and proposed solutions
  - a. By disability type,
  - b. By the extent or degree of disability (most disabilities are a matter of degree), and
  - c. Including people who do not have disabilities (the universal design effect that counters some of the costs)?
- 5) What are the predictions for the future demographics of each of these disability types among projected Florida users over the expected lives of the facilities being designed under the Standard?
- 6) What does research show about the impact of the barrier type in its various permutations on people with disabilities across the broad spectrum of each of those disabilities? For example, when reviewing FL Statute 553.504(2), how many wheelchair and scooter users cannot consistently maneuver safely through a range of door clear widths between, say, 27" and the 32" minimum required by the ADA Standards? How many people with other disabilities have what types of difficulties with those same door widths? A similar example that would yield different results would be the usability of various exterior route widths for 553.5041(5)(a).
- 7) What types of alternatives and solutions are available to reduce or eliminate the current discriminatory practices?
- 8) How effective are the alternatives and proposed solutions at eliminating or effectively reducing barriers?
- 9) What is the relative cost of the proposed measures compared to current practice?
- 10) How disruptive are the proposed solutions when compared to current practice?
- 11) What are the dangers of current practice when compared to the proposed solutions for
  - a. People with disabilities and
  - b. Others?
- 12) What are any other positive and negative effects of the proposed solutions on
  - a. People with disabilities,
  - b. Others who visit the facilities as customers and program participants,
  - c. Facility employees, owners, and managers,
  - d. Everyone else?

Ultimately, the resolution of these questions should be informed by technical information but the decisions about where to draw the lines and define the specific standards should be made through a political process.

**8.5. Janet Fay's Timesheet**

Date	Time In	Time Out	Hours	Description
1/9/14	1:00 PM	3:00 PM	2	Met with faculty to discuss projects and Scope of Work
1/13/14	10:30 AM	12:30 PM	2	Researched people involved with ADA development for Advisory Panel
1/14/14	11:30 AM	1:30 PM	2	Looked for resources to be used in this project, ordered book
1/27/14	11:00 AM	1:00 PM	2	Researched Florida Law Ch. 2011-222.22-.29 to find 7 Florida specific items
1/28/14	11:30 AM	1:30 PM	2	Researched Florida Law Ch. 2011-222.22- .29 to find 7 Florida specific items
1/29/14	10:30 AM	1:30 PM	3	Outlined 7 Florida-specific items and met with Dr. Prevatt to discuss.
1/30/14	11:30 AM	1:30 PM	2	Created spreadsheet to organize differences
1/31/14	1:00 PM	2:30 PM	1.5	Read through ADA Guidelines to find the different requirements given
2/3/14	11:00 AM	1:00 PM	2	Read through ADA Guidelines to find the different requirements given
2/4/14	11:30 AM	1:00 PM	1.5	Created powerpoint presentation for 2/5 FBC Project meeting
2/5/14	11:00 AM	3:15 PM	4.25	Finished powerpoint, FBS Project meeting to discuss progress
2/6/14	11:00 AM	12:00 PM	1	Reviewed comments from meeting and committee discussion documents
2/7/14	12:30 PM	4:30 PM	4	Reviewed code development documents, tried to find recent articles
2/10/14	10:30 AM	1:30 PM	3	Helped Dr. Prevatt contact proposed advisory panel, researched articles
2/11/14	11:30 AM	1:30 PM	2	Researched vertical accessibility
2/12/14	10:30 AM	12:00 PM	1.5	Met with Prevatt to discuss what to include in the interim report,
2/13/14	11:30 AM	1:30 PM	2	Tried to find scholarly articles about the recent FL laws, researched contact information for contractor associations in FL
2/14/14	10:00 AM	11:00AM	1	Talked with Mo Madani about how to proceed with project
2/17/14	3:30 PM	4:30 PM	1	Tried to find articles, started formatting interim report
2/18/14	2:30 PM	4:30 PM	2	Contacted Jim Terry about assessing differences
2/19/14	10:30 AM	12:30 PM	2	Outlined what to include in interim report, wrote "Background" section
2/20/14	11:30 AM	1:30 PM	2	Started writing "Executive Summary" for interim report
2/24/14	10:30 AM	1:30 PM	3	Wrote "Demographic Differences" section for interim report
2/25/14	11:30 AM	1:30 PM	2	Wrote "Demographic Differences" section for interim report
2/26/14	10:30 AM	12:30 PM	2	Wrote "Tourism Industry" section for interim report
2/27/14	11:30 AM	1:30 PM	2	Wrote "History" section for interim report
2/28/14	10:30 AM	2:30 PM	4	Edited rough draft, meeting with Mo Madani to discuss all FBC projects
3/5/14	11:00 AM	1:00 PM	2	Researched tourism industry facts, organized resources section
3/10/14	10:30 AM	12:30PM	2	Edited Interim Report
3/11/14	11:30 AM	2:30 PM	3	Spoke with Jim Terry to discuss progress on report
3/12/14	10:30 AM	12:30 PM	2	Edited Interim Report
3/13/14	11:30 AM	2:30 PM	4	Added Jim Terry's findings to Interim report, organized report for submission
3/14/14	10:30 AM	2:30 PM	4	Finish formatting report for submission, weekly meeting with Prevatt
3/17/14	10:30 AM	12:00 PM	1.5	Researched other sources for disability demographics
3/18/14	11:30 AM	1:00 PM	1.5	Read paper on differences between ACS Survey and US Census
3/19/14	11:30 AM	1:30 PM	2	Researched other sources for disability demographics
3/23/14	10:30 AM	11:30 AM	1	Emailed Jim Terry about demographics. Researched US Census

DRAFT

3/25/14	10:30 AM	12:30 PM	2	Wrote recommendations for FL Statute 553.504 (3)
3/28/14	10:30 AM	11:30 AM	1	Wrote recommendations for FL Statute 553.504 (4)
3/31/14	10:30 AM	12:30 PM	2	Researched recommendations for FL Statute 553.504 (4)
4/1/14	11:30 AM	1:00 PM	1.5	Researched recommendations for FL Statute 553.504 (5)
4/3/14	11:30 AM	1:30 PM	2	Wrote recommendations for FL Statute 553.504 (6)
4/7/14	9:30 AM	1:30 PM	4	Created presentation for TAC, wrote recommendations for FI Statutes
4/8/14	11:30 AM	2:30 PM	3	Edited presentation for TAC, wrote explanation for FL items
4/9/14	7:30 AM	10:30 AM	3	Attended TAC meeting, wrote explanation for FL items
4/10/14	11:30 AM	1:30 PM	2	Wrote recommendations for FL specific items
4/11/14	1:30 PM	3:30 PM	2	Wrote recommendations for FL specific items, weekly meeting
4/14/14	10:30 AM	1:00 PM	2.5	Wrote recommendations for FL specific items
4/15/14	11:00 AM	12:00 PM	1	Wrote recommendations for FL specific items
4/16/14	10:30 AM	12:30 PM	2	Sent recommendations to ETA for comments, reviewed old FBC Accessibility
4/17/14	11:30 AM	1:30 PM	2	Read vertical accessibility waivers, interpreted code
4/21/14	10:30 AM	12:30 PM	2	Reviewed non-binding interpretations of accessibility code
4/22/14	11:30 AM	1:30 PM	2	Edited final report, research articles
4/23/14	10:00 AM	12:00 PM	2	Researched why code provisions for residential structures may be reqd
4/24/14	10:00 AM	2:00 PM	2	Wrote recommendations for FL specific items
4/28/14	9:00 AM	11:00 AM	2	Wrote recommendations for FL specific items
4/29/14	9:15 AM	11:30 AM	2.25	Emailed Jim Terry, edited Report
4/30/14	10:00 AM	12:00 PM	2	Researched FL Specific Items
5/5/14	10:30 AM	1:00 PM	2.5	Added to recommendations
5/6/14	11:00 AM	1:00 PM	2	Created CAD drawing for parking spaces, reviewed accessibility waivers
5/7/14	11:00 AM	2:00 PM	3	Read Accessibility Waivers from previous committee meetings
5/8/14	11:00 AM	1:00 PM	2	Read Accessibility Waivers from previous committee meetings
5/9/14	10:00 AM	11:30 AM	1.5	Researched vertical accessibility
5/12/14	9:00 AM	11:00 AM	2	Send emails to FBC and contractor, vertical accessibility
5/13/14	11:00 AM	1:00 PM	2	Formatted final report, researched architectural barriers
5/14/14	10:30 AM	12:30 PM	2	Researched architectural barriers act
5/15/14	12:00 PM	2:00 PM	2	Revisited demographics, assessed different surveys
5/16/14	10:45 AM	12:45 PM	2	Formatted final report, researched architectural barriers
5/19/14	9:00 AM	10:00 AM	1	Discussed formatting of final report with Prevatt
5/20/14	10:30 AM	1:30 PM	3	Edited report per Prevatt's comments, talked to Terry about contributions
5/21/14	10:00 AM	1:00 PM	3	Read through Jim Terry's report, edited for review by Prevatt and TAC
5/22/14	10:00 AM	1:00 PM	3	Formatted final report, summarized recommendations for each item
5/27/14	10:00 AM	1:00 PM	3	Wrote exec summary, wrote recommendations for parking and vert access
5/28/14	10:00 AM	11:30 AM	1.5	Added Jim Terry's recommendations to report
5/28/14	1:30 AM	3:30 PM	2	Discussed report with Jim Terry and Prevatt before sending to Mo Madani
5/29/14	10:15 AM	1:15 PM	3	Edited report per comments of Prevatt and Terry
6/2/14	10:45 AM	12:45 PM	2	Proofread final report, sent to Mo Madina for review

DRAFT

6/3/14	12:00 PM	1:00 PM	1	Added references, edited report
6/4/14	8:45 AM	11:45 AM	3	Discussed draft with Mo and Jeff Gross, researched cost analysis
6/5/14	10:00 AM	1:00 PM	3	Literature review
6/9/14	10:30 AM	1:00 PM	2.5	Literature review
6/10/14	10:30 AM	1:00 PM	2.5	Literature review, cost analysis
6/11/14	10:30 AM	1:00 PM	2.5	Cost analysis, finalized report
6/12/14	10:30 AM	1:00 PM	2.5	Edited report for final submission

**Total        185.5**