

TRAFFIC ENGINEERING

SITE PLAN REVIEW

MANUAL

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Section I - Introduction

The plan review process has been developed to facilitate design professionals who submit plans for future construction in the City of Savannah to understand the review process and required design guidelines. The main issues related to Traffic Engineering Standards for new developments are as follows:

- How a development project will affect the City of Savannah's Local Transportation System.
- Safe and efficient ingress and egress to the new development.
- Safe and efficient internal traffic circulation.

Section II - Plan Review Process

Upon receipt from Development Services Office, plans and/or plan revisions are forwarded to the Traffic Engineering Civil Engineer who reviews the plans.

The Traffic Engineering Civil Engineer performs a review based on a checklist as shown in Appendix "C". Specific problems or issues that need to be addressed will be entered into the Sight Plan Review (SPR) database which is maintained by the Development Services Office.

When the plan is accepted and the review process is completed by the Traffic Engineering Dept., the acceptance will be entered into the SPR database and email notifications sent to users in the database associated with the project.

Section III - Evaluation of Development Plans

The review of plans includes, but is not limited to the following issues:

- Driveways - residential, commercial, industrial; spacing, dimensions, opposing driveways, distances to intersections, alignment, radii, paving, sight distance;
- Acceleration/Deceleration lane requirements;
- Parking - Dimensions, American Disabilities Act (ADA) requirements, curbing and other protective devices;
- Internal Circulation - Interior driveways and walkways, design vehicle dimensions for interior roadways;
- Loading Facilities - Signs and markings, dimensions, design vehicle dimensions for maneuvering space;
- Traffic signing and pavement markings;
- Traffic Impact Study – Warrants and analysis;
- Street lighting;
- ADA requirements for accessibility routes.

Section IV - Design Guidelines

Driveways provide access to property and are a service to the traveling public. Vehicles entering or leaving driveways may disrupt the flow of traffic on the street and cause accidents, thereby infringing on the public to travel the roadway. Since the primary purpose of urban streets is to facilitate the movement of traffic, all driveways should be restricted to locations where movement into and out of them will cause as little conflict as possible. They should be designed for safe and orderly traffic flow.

This document presents design requirements and specifications on key issues related to development requirements. However, developmental plans must also comply with the latest ADA requirements, AASHTO publications, City of Savannah Standard Construction Details, *ITE Trip Generation*, the *Manual on Uniform Traffic Control Devices*, and the NCHRP Report 383, *Intersection Sight Distance*.

A. General Requirements

Development plans must include as a minimum the following conditions:

1. Location Map and North arrow.
2. Plans should be drawn in a 1" = 20' scale.

3. Show all existing and new driveways including adjacent and opposing driveways.
4. Show proposed driveway dimensions and the intersecting angle of the driveway to the street centerline.
5. Show distance measurements to intersecting streets and adjacent properties.
6. Width of existing streets and property lines including City right-of-way.
7. Location of existing and proposed buildings, signs, etc.
8. The posted speed limit.
9. Sight distances from each proposed driveway.
10. A note stating that "ADA requirements will need to be met per current standards at time of construction".

B. Driveways

1. Design Requirements

Driveway design dimensions are summarized in Table I and Figure I for driveways serving primarily passenger cars. When significant numbers of semi trailer combination trucks are expected, the driveway should be designed to accommodate the truck turning movements. Refer to the City of Savannah website for Standard construction details and typical driveway details. <http://www.savannahga.gov/cityweb/webdatabase.nsf>

a. Driveway width for Residential Applications

The minimum width of a driveway shall be 12 feet and the maximum width shall be 24 feet.

b. Driveway width for Commercial or Industrial Applications

The width shall be 24-feet wide as a minimum for a two-way driveway and the maximum width shall be 36-feet for commercial use and 45-feet for industrial use.

c. Multi-lane access driveways

Multi-lane driveways with islands separating the right turn movements from the left and/or straight through movements, as well as center islands to separate in and out movements will be permitted for major developments that have the potential of generating over 150 vehicles during the peak hour. Good engineering judgment should be applied based on site specifications.

d. Driveway Spacing

Limiting access to public road right-of-way is a design feature. Traffic movements entering and exiting developments conflict with through street traffic movements. The intent is to minimize the conflict by restricting the number, location and geometrics of driveway openings. The frequency of conflicts is reduced because the number of possible conflict points is limited to legal, defined driveway openings. This enhances both the safety and capacity of the street as preference is given to the through traffic. The impact to points

of congestion, such as major intersections, can be kept to a minimum by not allowing driveways within the functional limits of the intersection.

Driveways for major development sites, which may eventually become signalized, must be located a minimum of 1,320 feet apart to provide traffic signal coordination.

On local and collector streets residential driveways shall be set back not less than 25 feet from point of tangency of curb radii of the intersection of two streets and shall be set back not less than 5-feet from the intersection of two property lines or such lines extended, whichever is the less restrictive.

Between the curb return for any two driveways serving the same property, there shall be at least twenty feet of curb; except that this distance may be reduced to as little as five feet where it is demonstrated that restricted frontages makes this necessary in order to provide not more than two adequate driveways for the property.

On arterial streets a residential driveway shall be set back not less than one-hundred-fifty feet from the intersection of two streets. However, where the lot size does not permit the driveway access to be located one hundred fifty feet from the end of the curb return, the access shall be located the maximum distance possible from the end of the curb return.

	Dimension (Ref Fig 1)	Residential	Commercial	Industrial
Width ¹	W			
- Minimum		12	20	24
- Maximum		24	36	45
Right Turn Radius	R			
- Minimum		5	20	30
- Maximum		15	50	50
Minimum spacing				
- From Property Line	P	5	15	15
- From Street Corner	C	20	150	150
- Between Driveways	S			
- Local		10	20	20
- Collector		60	100	100
- Arterial		150	175	175

¹Minimum width of Commercial and Industrial applies to one-way operation

Closely spaced adjacent driveways should be combined into a joint access to improve on access management along the roadway.

Table 1. Driveway dimensions.

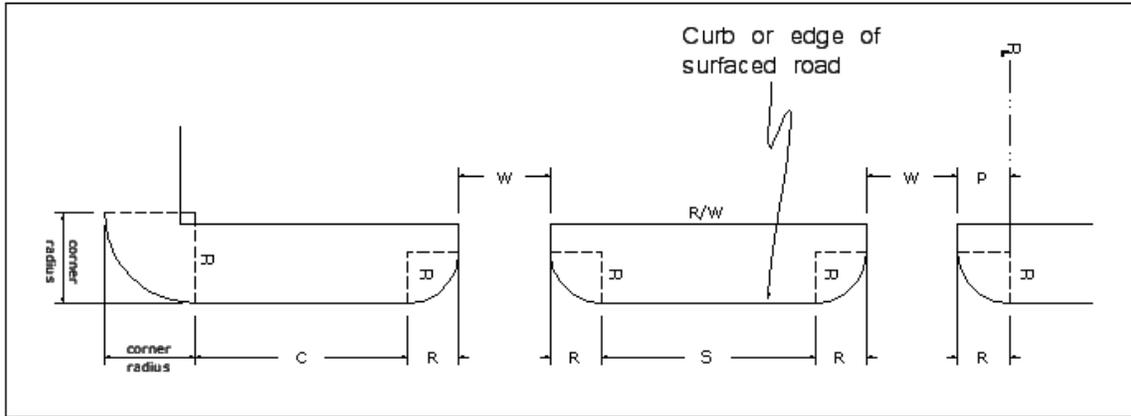


Figure 1. Driveway dimensions.

e. Driveway Alignment

Opposing driveways should preferably be aligned. Where commercial lots are not large enough to allow access on opposite sides of the street to be aligned, the center of driveways not in alignment will be as shown in Figure 2 and Table 2. Greater distances may be required if needed for left-turn storage lanes.

PREVAILING SPEED, MPH	DRIVEWAY SPACING MINIMUM, Ft
25	125
30	125
35	150
40	185
45	230
50	275
55	350
60	450
65	550

Table 2. Driveway spacing.

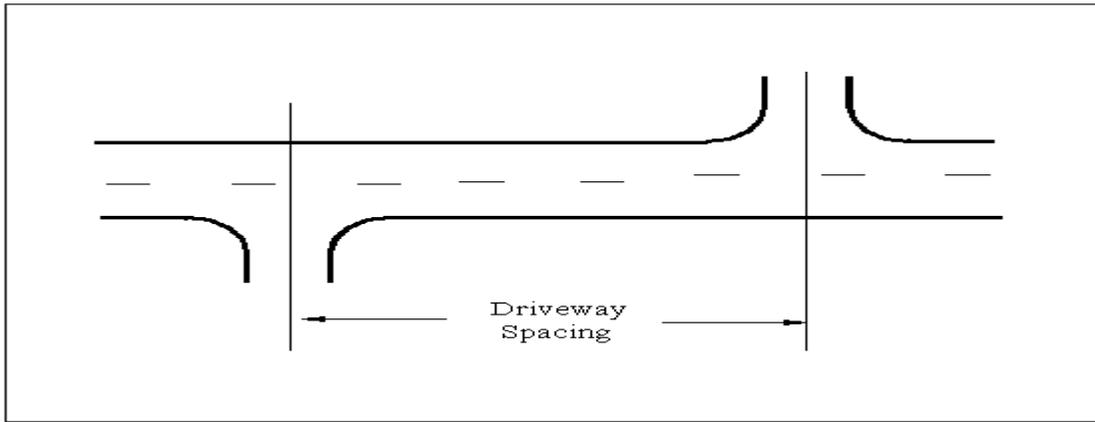


Figure 2. Driveway spacing.

f. Angle of Intersection

The approach angle of a driveway should generally be a right angle to avoid line of sight restrictions. The minimum angle of intersection is shown in Table 3.

Driveway Use	Minimum Angle of Intersection (Degrees)
Residential	70
Commercial	85
Significant Truck Traffic	88
Right In / Right out – all types	70

Table 3. Angle of intersection.

2. Sight Distance Requirements

The sight distance as used for driveways should be measured from a point fifteen feet from the edge of the travel way at a height of 3.5 feet above the surface of the roadway to an object on the centerline of the street 3.5 feet above the surface of the street, as illustrated in Figure 3. Table 4 gives the minimum sight distance acceptable for permitting a driveway.

Sight distance at intersections shall be computed as specified by the *Policy on Geometric Design of Highways and Streets*, 2001 or later edition, published by the American Association of State Highway and Transportation Officials.

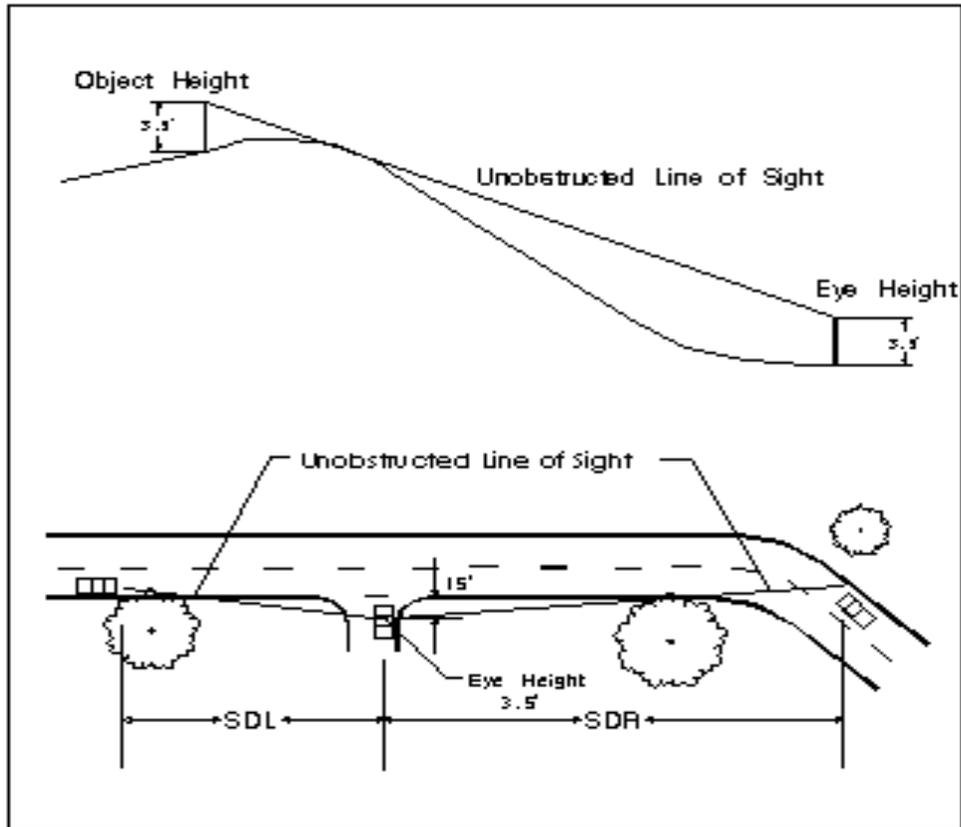


Figure 3. Sight distance requirements.

SIGHT DISTANCE					
Arterial Speed, MPH	2 Lane	3 and 4 Lanes		5 and 6 Lanes	
	SDL=SDR	SDL	SDR	SDL	SDR
30	335	350	375	400	420
35	390	410	440	465	490
40	445	470	500	530	560
45	500	530	560	595	630
50	555	590	625	660	700
55	610	650	685	730	770
60	665	705	750	795	840
65	720	765	810	860	910

Table 4. Sight distance requirements

Note: The sight distances in the table is for a stopped vehicle turning left onto a two lane undivided road. Allowances for additional lanes, medians and grade will need to be calculated using the NCHRP Report 383, *Intersection Sight Distance*, and the current edition of AASHTO, *A Policy on Geometric Design*

3. Acceleration /Deceleration Lane Requirements

When required, such lanes must be constructed by the developer at no cost to the City. Acceleration lanes may be required at locations where grade, sight distance or traffic is such that the Traffic Engineering Department determines it is needed.

Deceleration lanes will be required for all commercial driveways unless the following conditions are met:

The proposed entrance does not have restricted sight distance and,

- (a) the current traffic on the road of the proposed drive is less than 2,500 VPD (vehicles per day);
- (b) the trip generation for the entrance will be less than 150 VPD.

The width of deceleration/acceleration lanes shall be 12-feet. Guidelines for the length of the deceleration lane are shown in Table 5. Variances in the length of the lanes will be based on vehicular volume, speed, geometrical constraints and site generated traffic.

Speed, mph	Full Width Storage, ft	Taper, ft
25		50
30	75	50
35	100	50
40	150	50
45	175	100
50	225	100
55	250	100
60	300	100
65	350	100

Table 5. Minimum right turn deceleration lengths.

Acceleration lanes will be provided with a 50-foot taper, as illustrated in Figure 4.

4. Median Openings

The median spacing for divided highways is shown in Table 6. Median openings will only be allowed if warranted and if the opening will not be detrimental to traffic on the main road.

Condition	Median Opening Spacing	
	Desirable	Minimum
Rural	2,640	1,320
Urban	1,320	660

Table 6. Median opening spacing.

The control radius for left turns with a median opening is 50 feet. The minimum turning path is 48 feet for passenger cars. The radius and turning path are illustrated in Figure 5.

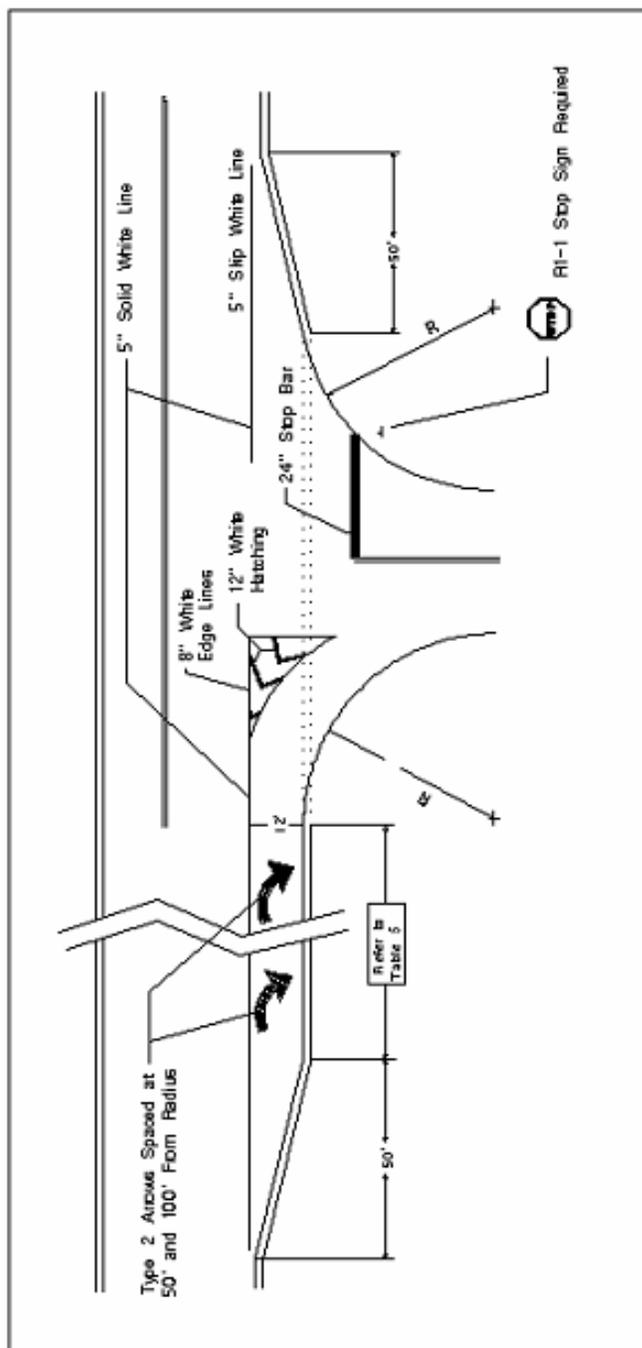


Figure 4. Right turn deceleration lane.

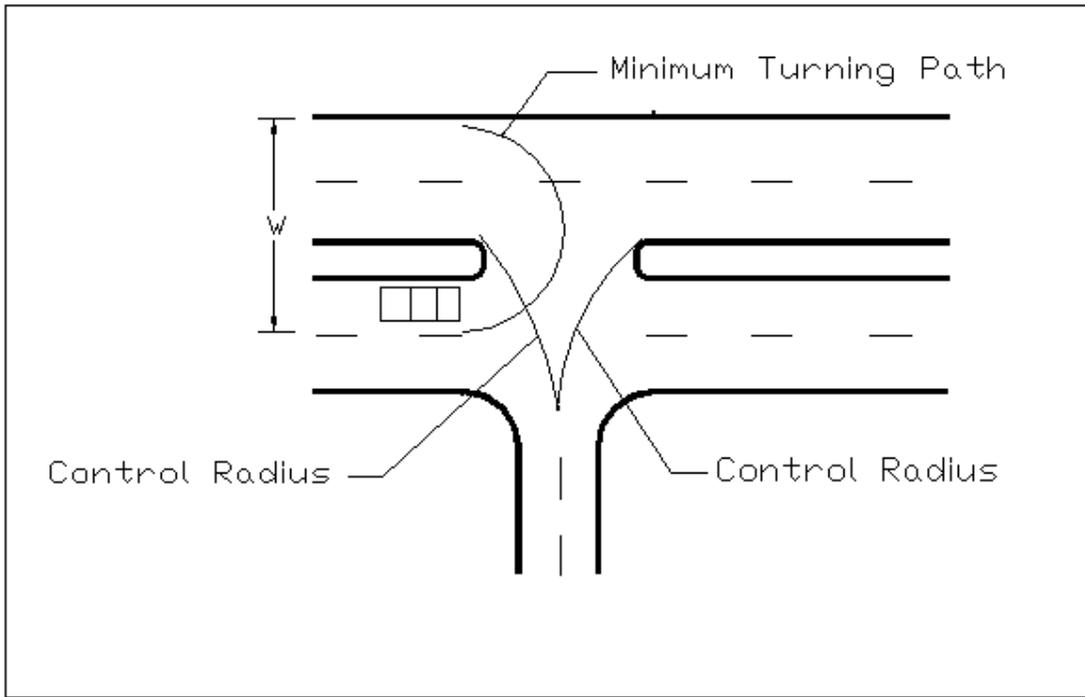


Figure 5. Median openings.

5. Right In / Right Out Driveways

Raised islands prevent left turns with right in / right out driveways. A typical design is shown in Figure 6.

6. Left Turn Lane Requirements

Left turn lanes must be constructed by the developer at no cost to the City when the traffic volumes shown in Table 7 are met, or when field conditions such as sight distance or prevailing speed require a left turn lane or left turn bypass lane in order to not compromise safety or Level of Service.

	2 Lanes On Main Road		> 2 Lanes on Main Road	
Prevailing Speed (MPH):	≤ 40 MPH	> 40 MPH	≤ 40 MPH	> 40 MPH
Main Road ADT	8,000	4,000	10,000	8,000
Daily Left Turning Volume	300	200	300	200

Table 7. Left turn lane warrants.

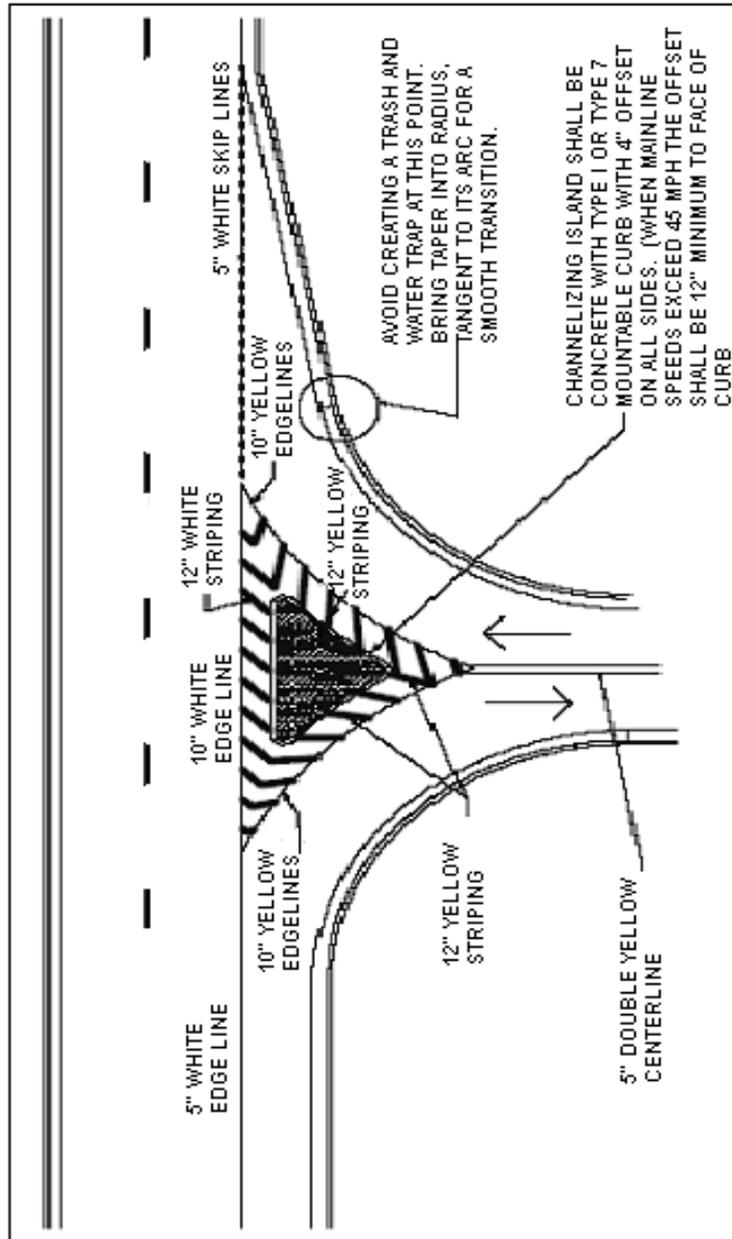


Figure 6. Typical right in / right out driveway.

7. Multilane Access Driveway

Islands at an intersection channel traffic into the allowed turning movements. If there are pedestrians, the islands should be raised to provide refuge. Accessibility requirements will need to be met. Refer to Figure 7.

8. Pavement Design

Driveways shall be paved to preserve their operating characteristics. As a minimum, paving shall extend to the edge of the City right-of-way or to the end of the curb radii. For commercial and industrial applications the pavement should extend as a minimum of fifty-feet beyond the end of the driveway curb radii and no physical impediments shall be present for a minimum of forty-five feet.

C. SITE DESIGN

The design of subdivisions and private developments needs to incorporate elements to facilitate the movement of vehicles and pedestrians by providing information and minimizing the potential for conflicts.

1. Signing and Pavement Marking

All traffic signs shall be high intensity or wide angle prismatic reflective sheeting on aluminum sign blanks and mounted on square tubing or U-channel posts. All materials shall meet Georgia Standard Specifications. All sign posts placed in concrete must have a hole formed, drilled or sawed in the concrete.

All pavement markings installed within the City Right of Way shall be thermoplastic and meet the guidelines of the Federal Highway Agency's Manual on Uniform Traffic Control Devices. <http://mutcd.fhwa.dot.gov/pdfs/2003r1/pdf-index.htm>

2. Internal Circulation - City Code Section 8-3082 (e), (f), (l)

Internal traffic circulation within the site shall be properly marked and signed according to the latest edition of the *Manual of Uniform Traffic Control Devices*.

All off-street parking, off street loading and service areas shall be separated from walkways, sidewalks, streets and lanes by curbing or other protective devices. Private walkways shall be no less than four (4) feet in width. Interior driveways shall be at least 25-feet wide where used with 90 degree angle parking. Where used with parallel parking, or where there is no parking, interior driveways shall be at least 10-feet wide for one-way traffic movement and at least 20-feet wide for two-way traffic movement.

All interior roadways must be designed to accommodate the type of vehicle that will use and service the facility. All turning radii must be large enough to accommodate service trucks.

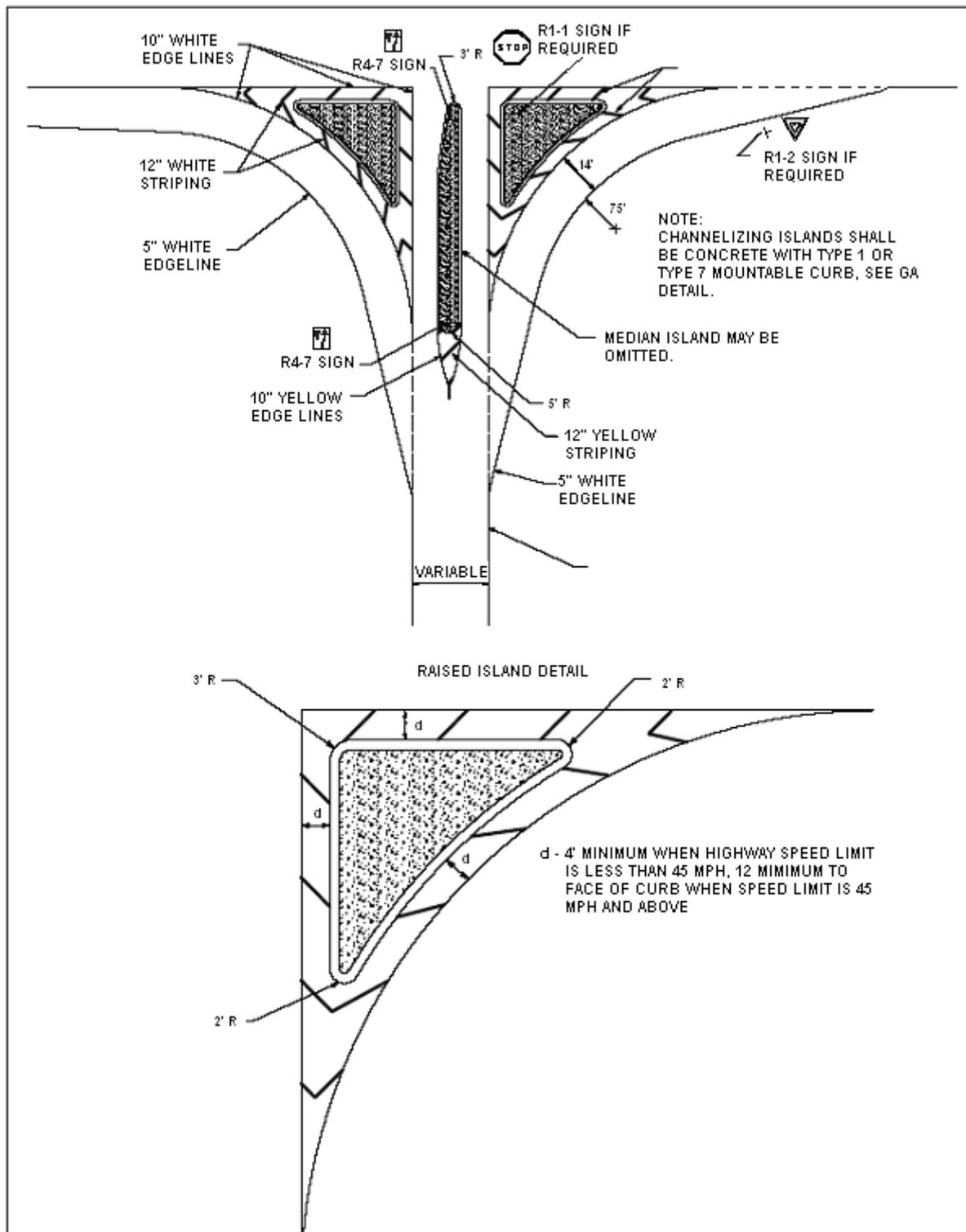


Figure 7. Entrance Channelization

3. Loading Facilities - City Code Section 8-3082 (w),(y);

On site passenger loading zones as well as freight zones shall be properly signed and marked. Truck loading facilities shall be designed to ensure that all truck maneuvering is performed onsite of development. The design of truck turnaround areas must accommodate largest type of expected vehicle. See Figure 5 for minimum space requirements. The turning path must be shown on the plans.

The truck loading berth shall be at least 12-feet wide with at least 15-feet overhead clearance. The length of the loading berth shall be at least 48-feet or shall be a length such that the horizontal distance from the front of a dock for back-in parking to the limiting boundary of the loading and unloading areas shall be not less than twice the overall length of the longest vehicle expected to use the facility.

4. Vision Clearance at Intersections

City Code Section Sec. 8-3013:

“On corner lots within all zoning districts, except in B-C-1, B-B, and R-I-P-A zoning districts, no fence, shrubbery or other obstruction to traffic sight vision, except utility poles or light or sign standards, shall encroach into an area as measured from three feet above the level of the adjacent driving surface to ten feet above the level of the adjacent driving surface, within a triangular area formed by the intersection of the right-of-way lines of two streets or railroads, or a street intersection with a railroad right-of-way line, and a diagonal line which intersects the right-of-way lines at two points, each 40 feet distance from the intersection of the right-of-way lines or, in the case of a rounded corner, from the point of intersection of their tangents except where site conditions require greater or lesser setbacks as determined by the city engineer.”

5. Street Design

Subdivision streets must be designed per Savannah City Code Section 8-2022:

“Except as hereinafter provided, all streets established in any subdivision shall comply with the following general provisions:

- (a) *Continuation of existing street pattern.* The arrangement of streets in a subdivision shall provide for the alignment with, or the continuation of, or the appropriate projection of existing principal streets in surrounding areas.
- (b) *Street jogs.* Street jogs or centerline offsets in the horizontal alignment of streets across intersections of less than 150 feet shall be prohibited.
- (c) *Intersections.* The centerline of no more than two streets shall intersect at any one point. Streets shall be laid out so as to intersect as nearly as possible at right angles, and no streets shall intersect any other street at less than 60 degrees. Curved streets shall have a minimum tangent of 100 feet at intersections.

- (d) *Streets intersecting with major arterials and secondary arterials.* New street entrances on roads designated or classified as major arterials shall be not less than 1,700 feet apart, and new street entrances on roads designated or classified as secondary arterials shall be not less than 500 feet apart. Provided, however, that the MPC may reduce these requirements whenever it determines that such action will not be contrary to the purposes of this chapter.
- (f) *Minimum curb and street radius.* The lot line radius at intersecting streets shall be not less than 20 feet. The centerline radius of all curvilinear streets shall be not less than 75 feet.
- (g) Permanent dead-end streets. Cul-de-sacs, designed to be permanent, shall not be longer than 800 feet from the nearest street right-of-way line with which it intersects to the center of its circular turnaround. Dead-end streets, designed to be such permanently, shall be provided at the closed end with a turnaround having an outside roadway diameter of not less than 80 feet, and a right-of-way diameter of not less than 100 feet.
- (h) Temporary dead-end streets which extend for a distance greater than 200 feet shall be provided with a temporary turnaround having a diameter of 80 feet.
- (s) Design and construction specifications for streets.

Tangents between curves (minimum) -100 ft.”

6. Roundabouts

Roundabouts shall be designed in accordance with the FHWA [Roundabouts: An Informational Guide](#).

D. BICYCLE RACKS WITHIN THE RIGHT- OF- WAY

Subsequent to the Administrative Rule adopted by the Bureau of Facilities pursuant to Rulemaking Authority, the City of Savannah Traffic Engineering Department issues permits for bicycle racks within the public right-of-way. Right of Way Permits may be obtained for bicycle racks that are standard design as well as approved original design art racks on sidewalks that meet City of Savannah sidewalk requirements. Approved racks must allow the frame and one wheel to be locked to the rack with a high-security, U-shaped shackle lock if both wheels are left on the bicycle.

1. Design Standards

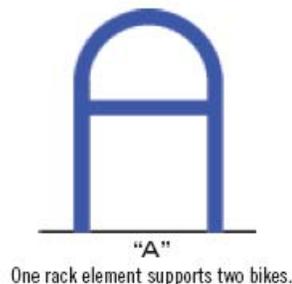
- (a) All public sidewalks have a minimum clear passage for pedestrians. A five foot minimum of unobstructed sidewalk is required on all city streets in accordance with the Georgia Accessibility Code for Buildings and Facilities.¹

¹ 120-3-20-.14(4) If an accessible route has less than 60 inches (1525 mm) clear width, then passing spaces at least 60 inches by 60 inches (1525 mm by 1525 mm) shall be located at reasonable intervals not to exceed 200 feet (61 m).

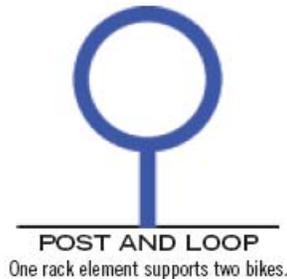
- (b) The rack should be aligned with existing street furniture, tree wells, etc., so as not to block the clear path of pedestrian traffic or the doors of vehicles parked at the curb.
- (c) The minimum sidewalk corridor for placement of a bike rack is ten feet.
- (d) If the above requirements cannot be provided the City Traffic Engineer may reduce the required area if the following criteria is met: 1) adjacent curb parking is prohibited 2) the rack is no closer than two feet from the curb and 3) the rack is no closer than one foot six inches from the through pedestrian zone. Exceptions to the required area will be reviewed on a case by case basis.
- (e) A minimum bicycle space two feet wide (2 feet from center of one space to center of adjacent spaces) and six feet long is provided.
- (f) A five foot access aisle is provided.
- (g) Each space must allow all types of locks, including U-shaped locks to lock the bicycle frame and wheel(s) to the rack.
- (h) Spaces must be clearly designated for each bicycle.

2. **Permitted Bicycle Rack Designs**

- (a) Simple designs that can fit into limited spaces.
- (b) Designs that park two bicycles, facing opposite directions, parallel to the rack.
- (c) Racks in parallel series need to be four feet apart to provide adequate access to each bicycle.
- (d) Inverted U racks should be a minimum of 30 inches long (36" is optimal) to prevent two bicycles parked on opposite sides facing in opposite directions from interfering with each other. Narrower inverted U racks (18 – 24 inches) will generally be used for one bike, not two.



- (e) Racks should be 30 – 32 inches in height as heights over 36” can interfere with handlebars.
- (f) “Post and loop” racks are also recommended.



3. Permit Procedure

After obtaining an Encroachment Permit from the Mayor and Aldermen the following steps should be followed by any private individual or business seeking to incorporate bicycle racks in a public right-of-way:

Please allow up to four days to complete the Bike Permit Process.

- (a) Identify the potential site for bicycle rack installation.
- (b) Complete a Right-of-Way Permit Application as well as a separate document including the following information to the Traffic Engineering Department:
 1. A site plan showing a north arrow, street names, sidewalk configuration and dimensions, pertinent street furniture and features, on-street parking adjacent to the proposed rack, an exact location of the proposed rack, orientation on site and rack type.
 2. Name and street address of the business or organization requesting the rack.
 3. Contact name and phone number.
- (c) The Traffic Engineering Department reviews the Right-of-Way Permit Application and supplemental information to ensure compliance with the rules set forth above. The project may be approved or approved pending compliance with staff findings. Traffic Engineering staff will work with each request to ensure optimal bike rack design, safety and location.

To request a Right-of-Way Permit Application, visit www.savannahga.gov and follow the link to “City Forms.” Fax your completed Application along with Supplemental Information to 912.525.1535.

E. PARKING REQUIREMENTS - City Code Section 8-3082, 8-3082 (a3)

The design of off-street parking facilities shall be based on the parking usage of the facility, as follows:

Class	Typical Uses
A	Retail customers, visitors, banks, fast foods, and other high turnover.
B	Visitors, office employees, residential, hospitals, schools..

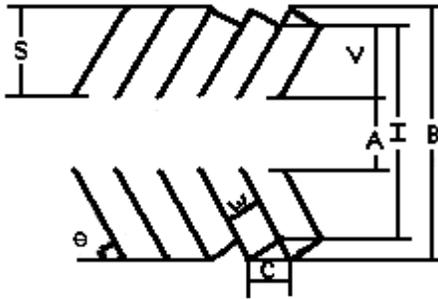


Figure 8. Parking dimensions.

The minimum parking lot dimensions are shown in the following tables for standard and compact vehicles.

1. Parking Dimensions - Standard Vehicles

Parking Class	Stall Width W	Stall Width Parallel to Aisle C	Stall Depth to Interlock V	Stall Depth to Wall S	Aisle Width A	Wall to Wall B	Interlock to Interlock I
One way aisle - 45 degrees							
A	9.0	12.7					
B	8.5	12.0	14.5	16.5	15	48.0	44.0
One way aisle - 60 degrees							
A	9.0	10.4					
B	8.5	9.8	16.5	18.0	18.0	54.0	51.0
Two way aisle – 60 degrees							
A	9.0	10.4					
B	8.5	9.8	16.5	18.0	26.0	62.0	59.0
One way aisle - 75 degrees							
A	9.0	9.3					
B	8.5	8.8	17.5	18.5	22	59	57
Two way aisle - 90 degrees							
A	9.0	9.0					
B	8.5	8.5	17.5	17.5	26.0	61.0	61.0

Parallel parking

A	8.0	20.0	11.0
B			

Table 8. Parking dimensions for standard vehicles.

2. Parking Dimensions - Compact Vehicles

Up to twenty percent of the off-street parking spaces for a use requiring twenty-five or more off-street parking spaces may be designed for compact cars subject to the following conditions:

Parking spaces for compact cars shall be clearly marked with the words “compact car only,” and such parking spaces shall comply with the following design standards:

Parking Class	Stall Width W	Stall Width Parallel to Aisle C	Stall Depth to Interlock V	Stall Depth to Wall S	Aisle Width A	Wall to Wall B	Interlock to Interlock I
One way aisle - 45 degrees							
A	8.0	11.3					
B	7.5	10.6	12.3	14.2	13.0	42.0	38.0
One way aisle - 60 degrees							
A	8.0	9.3					
B	7.5	8.7	14.0	15.4	15.0	46.0	43.0
Two way aisle – 60 degrees							
A	8.0	9.3					
B	7.5	8.7	14.0	15.4	21.0	52.0	50.0
One way aisle - 75 degrees							
A	8.0	8.3					
B	7.5	7.8	15.1	16.0	17.0	49.0	47.0
Two way aisle - 90 degrees							
A	8.0	8.0					
B	7.5	7.5	15.0	15.0	21.0	51.0	51.0
Parallel parking							
A							
B	8.0	20.0			11.0		

Table 9. Parking dimensions for compact vehicles

Any parking lot or facility serving a commercial or industrial use, public facility or multifamily development shall provide a specified number of reserved parking spaces designated for handicapped use, as set forth below. Each parking space shall be not less than nine-feet wide and must have an adjacent access aisle width of five-feet minimum. An access aisle may be shared by two adjoining parking spaces. The parking spaces shall maintain a depth

of twenty feet.

3. Parking Space Requirements for the Handicapped and Disabled

ADA requirements will need to be met that are current at time of construction in compliance with the Georgia Accessibility Code for Buildings and Facilities, this Manual, and Savannah Standard Construction Details.

A. Minimum Number of Accessible Parking Spaces

Total Number of Parking Spaces Provided (per lot)	(Column A) Total Minimum Number of Accessible Parking Spaces (60" & 96" aisles)	Van-Accessible Parking Spaces with min. 96" wide access aisle	Accessible Parking Spaces with min. 60" wide access aisle
1 to 25	1	1	0
26 to 50	2	1	1
51 to 75	3	1	2
76 to 100	4	1	3
101 to 150	5	1	4
151 to 200	6	1	5
201 to 300	7	1	6
301 to 400	8	1	7
401 to 500	9	2	7
501 to 1000	2% of total parking provided in each lot	<u>1/8 of Column A*</u>	<u>7/8 of Column A**</u>
1001 and over	20 plus 1 for each 100 over 1000	<u>1/8 of Column A*</u>	<u>7/8 of Column A**</u>

* one out of every eight accessible spaces

**seven out of every eight accessible parking spaces

Exceptions at facilities providing medical care and facilities providing other services for persons with mobility impairments

Exception 1: Outpatient units and facilities: 10 percent of the total number of parking spaces provided serving each such outpatient unit or facility;

Exception 2: Units and facilities that specialize in treatment or services for persons with mobility impairments: 20 percent of the total number of parking spaces provided serving each such unit or facility.

B. Accessible Parking Spaces for Cars

1. Accessible parking spaces for cars have at least a 60-inch-wide access aisle located adjacent to the designated parking space. The access aisle is just wide enough to permit a person using a wheelchair to enter or exit the car.

Refer to Appendix A for the Savannah Standard Construction Drawing showing an accessible parking space for cars with a 96 inch wide designated parking space and a 60 inch wide min. marked access aisle with detectable warnings.

2. Georgia standard handicap parking sign with the international symbol of accessibility mounted seven feet above pavement elevation so it can be seen while a vehicle is parked in the space. Refer to Appendix A for the Savannah Standard Construction Drawing showing the handicap parking sign and installation.



Figure 9. Handicap parking sign.

3. If the accessible route is located in front of the space, install wheel-stops to keep vehicles from reducing width below 36 inches.
4. Access aisle of at least 60-inch width must be level (1:50 maximum slope in all directions), be the same length as the adjacent parking space(s) it serves and must connect to an accessible route to the building. Ramps must not extend into the access aisle.
5. Boundary of the access aisle must be marked. The end may be a squared or curved shape.

6. Two parking spaces may share an access aisle.

C. Van-Accessible Parking Spaces



1. 96" min. width access aisle, level (max. slope 1:50 in all directions), located beside the van parking space

Refer to Appendix A for the Savannah Standard Construction Drawing showing an accessible parking space for vans with a 96 inch wide designated parking space and a 96 inch wide minimum marked access aisle with detectable warnings.

2. Sign with "van accessible" and the international symbol of accessibility mounted seven feet above grade so the sign can be seen when a vehicle is parked in the space.

Refer to Appendix A for the Savannah Standard Construction Drawing showing the handicap parking sign and installation.

3. Min. 114 inch high clearance at van parking space, access aisle, and on vehicular route to and from van space.

D. Location

1. Accessible parking spaces must be located on the shortest accessible route of travel to an accessible facility entrance. Where buildings have multiple accessible entrances with adjacent parking, the accessible parking spaces must be dispersed and located closest to the accessible entrances.
2. When accessible parking spaces are added in an existing parking lot, locate the spaces on the most level ground close to the accessible entrance. An accessible route must always be provided from the accessible parking to the accessible entrance. An accessible route never has curbs or stairs, must be at least 3- feet wide, and has a firm, stable, slip-resistant surface. The slope along the accessible route shall not be greater than 1:12 in the direction of travel.

3. Accessible parking spaces may be clustered in one or more lots if equivalent or greater accessibility is provided in terms of distance from the accessible entrance, parking fees, and convenience. Van-accessible parking spaces located in parking garages may be clustered on one floor (to accommodate the 114 inch minimum vertical height requirement).

F. TRAFFIC IMPACT STUDY

1. Study Warrants

A traffic impact study may be required if one of the following conditions is met:

a. Land Use Intensity Warrant

This warrant is met when 175 residential lots or 100 peak hour trips are generated.

b. Level-of-Service Warrant

This warrant is satisfied when Level of Service (LOS) "D" exists on the adjacent street, or the proposed development causes the LOS to drop to a "D". LOS determination should be in accordance with the procedures described in the TRB Highway Capacity Manual.

c. Roadway Modifications Warrant

This warrant is met when the proposed development is expected to significantly impact a road segment identified for improvement in the Transportation Improvement Program. It is also met when projected traffic will require modifications to the roadway system, such as turn lanes and deceleration lanes, to accommodate site generated traffic.

d. Special Cases

This warrant is satisfied when traffic generated from the development compromises the existing roadway system and may create safety, operational or other traffic problems in the vicinity of the site. This includes, but is not limited to, proposed driveways located within the functional limits of intersections, sight distance restrictions, requests for median openings, and recurring accidents on the adjacent street.

2. Study Procedure

The impact study should be conducted under the supervision of a licensed and experienced traffic/transportation engineer. The study report will need to be certified. Required components of a traffic impact study are:

a. Land Uses

A description of the land uses in the proposed development and any known proposed uses for other property in the surrounding area.

b. Existing Transportation System

A description of the existing transportation system with the study area and its existing capacities and structural ability to carry the additional traffic being generated.

c. Trip Generation

Trip generation estimations of the daily vehicular traffic, street am and pm peak hour volumes, and site am and pm peak hour volumes are to be obtained using the most recent edition of the ITE Trip Generation manual. Adjustments must be made for pass-by trips and mixed use internal capture.

d. Trip Distribution

Show method of trip distribution on existing street roadway network.

e. Recommendations

Identify measures to be implemented by the developer to mitigate the traffic impact, including onsite, proposed entrances and offsite roadway improvements.

f. Improvement Analysis

Show proposed programming of physical and operational improvements to accommodate site traffic.

Additional analysis may be required and is site specific. This information includes:

g. Traffic signal warrant analysis using the FHWA Manual on Uniform Traffic Control Devices. The analysis is to include the distance from existing signals in the study area.

h. Internal circulation and parking.

i. Safety analysis which may include accident experience, restricted sight distance, pedestrians and bicycles.

j. Capacity analysis and required storage at all proposed access points and intersections within the study area, using the current edition/version of the Highway Capacity Manual/Software.

k. Neighborhood impacts, including cut through traffic, increased delay and proposed mitigation.

l. Distance from existing median openings if a median opening is being requested.

m. Queuing if the proposed driveway is with the functional limits of an intersection.

G. STREET LIGHTING REQUIREMENTS

1. The proper use of lighting results in safety, welfare, economic and social benefits for the public.

The lighting plan needs to be designed by the Consultant per Savannah Code Sec. 8-2022 Streets:

“Except as hereinafter provided, all streets established in any subdivision shall comply with the following general provisions:

- (x) Street lighting. The developer shall be required to provide a street lighting system as part of the subdivision development plan. The street lighting system shall be located, designed, and installed in accordance to the plans, specifications, and standards set forth by the city traffic engineer. The actual installation of the lighting system shall be performed by the electric service provider, and the developer shall pay the electrical service provider the pole contribution-in-aid charges of \$135.00 or whatever the current tariff is as set forth in the public service commission tariff.”
2. Traffic Engineering requires a street lighting plan to be submitted with the subdivision design showing illumination levels expressed in foot candles, proposed fixtures/wattage, and proposed poles. Failure to submit a lighting plan will inhibit plan approval.
3. Lighting is to be provided for all streets, lanes, and alleys within, and adjacent to, the subdivision.
4. Actual installation of the lighting system shall be performed by the electric service provider with the developer paying the costs of installation.
5. The developer shall pay the monthly electrical service charges until the streets are turned over to the City for maintenance. Figure 10 is the transfer agreement that must be filled out and submitted to Traffic Engineering to request the lights being turned over to the City.
6. Minimum illumination levels for street lighting are provided in Table 10.

<u>Area Type</u> (per SPD)	<u>Minimum Illumination Level</u> (foot candles)
All Intersections	1.0 ¹
All Mid-block Pedestrian Crossings	1.0 ¹
High Crime Area	0.25 ²

High Density – Low Crime	0.04 ²
Low Density – Low Crime	0.02 ²

¹ Measured at pavement level.

² Measured at 4.0' above pavement level.

Table 10. Street Illumination Requirements.

Outdoor Lighting Account Transfer Agreement

Current Customer's Name: _____ Tel # _____

Service Address: _____

_____ Zip Code _____

Account number #: _____

Lights installed date: _____

Description and type of lights to be transferred: _____

-----This section to be completed by assuming party-----

The City of _____ agrees to assume responsibility for the lights listed below.

Light description	No Lamps	OH/ UG	Equipment Amt	Regulated Energy Amt	Total Charge

Please select your billing preference:

Please add these lights to the master lighting account number _____.

Please create a new account for the lights above.

Please add lights to account # _____.

Based on the information provided above, I _____ hereby authorize Georgia Power to transfer and bill the lights mentioned above to the City of _____ Effective _____.

Authorized Signature

Date

Title

Internal:

Rose/Sapp/Moody

Check one: Change to Gov't Regulated

Remains Unregulated

Figure 10. Outdoor Lighting Transfer Agreement.

H. GEORGIA ACCESSIBILITY CODE REQUIREMENTS

1. Purpose of Checklist

In order to insure that City and private development projects are in compliance with the latest American Disabilities Act of 1990 (ADA) guidelines, the Georgia Accessibility Code, the Access Boards Guidelines for Public Rights of Way (Prowac) and the City of Savannah Standard Construction Details, this checklist has been developed to inform contractors, engineers and architects on design and construction accessibility standards.

2. Applicability of Checklist

The Georgia Accessibility Code for Buildings and Facilities has incorporated ANSI A117.1, with exceptions, for all buildings and facilities that are covered by Titles II and III of the Americans with Disabilities Act of 1990.

3. ADA Codes

Section 504 of the Rehabilitation Act of 1973 and Title III of the ADA), covers private entities that operate public accommodations. New construction and renovations, as well as barrier reduction required to achieve program accessibility, must be undertaken in accordance with established accessibility standards. The ADA established minimum guidelines that must be followed when undertaking new construction and/or alterations. These guidelines are called the Americans with Disabilities Act Accessibility Guidelines (ADAAG). The ADA also requires that where a state or local code provides for a more stringent standard of accessible design, that standard is to be used. These standards, although similar to ADAAG, are not identical. Where the Georgia Accessibility Code for Buildings and Facilities is more stringent, it is noted with the symbol GA on the checklist. In situations where the City of Savannah Standard Construction Details provides for a stricter standard it is noted with the symbol SAV. Within the City of Savannah Right of Way the guidelines established by the U.S. Department of Transportation (Prowag) apply, since the USDOT in a Memorandum dated January 23, 2006 has determined that the “guidelines are the currently recommended best practices”.

The following accessibility checklist is provided to assist covered entities in locating possible accessibility deficiencies in site plan design and is not intended to be a comprehensive list of all accessibility requirements.

Note that compliance with these standards at some sites may need to be achieved through alternate means. (e.g. within the Historical District or existing features that that cannot be readily modified) “The City of Savannah Private Property Access Ramp Encroachment Criteria, Procedures and Specifications” is included in Appendix B. Finally, always consult the applicable standard prior to initiating any construction.

ADA Accessibility Checklist For New Construction And Renovations

Date: _____ Reviewer: _____ Project Name: _____ SPR# _____						
_____ Construction Plan Review _____ Pre-con _____ Final Inspection						
Copy give to: _____ Firm: _____ Initial: _____ Date: _____ _____ Firm: _____ Initial: _____ Date: _____						
Code	Site Component PARKING	Design: Compliant	Design: Not Compliant	N/A	Possible Action	Inspection Procedure
GA 120-3- 20- .17(5)	Does the entrance to the parking area provide vertical clearance 114 inches on at least one route?				___ Remove vertical obstacle.	Measure vertical obstacle from finished grade to base of overhead
GA 120-3- 20- .07(e)1, 2	Are there adequate accessible parking spaces? (Refer to Table 1)				___ Create accessible spaces.	Count all accessible spaces-refer to Table 1
GA 120-3- 20- .07(e)4	If a facility providing medical care or services for mobility are parking space exceptions met? (Refer to Table 1 exceptions)				___ Create accessible spaces.	Count all accessible spaces-refer to Table 1 for exceptions

Code	Site Component PARKING	Compliant	Not Compliant	N/A	Possible Action	Inspection Procedure
GA 120-3- 20- .07(e)1, 2	Are the accessible parking spaces located closest to the accessible route and accessible entrance?				___ Relocate accessible spaces.	Visually inspect for plan compliance.
GA 120- 3-20- .7(3)	Does the accessible space(s) measure 96 inches, level and no greater than 1:50 slope?				___ Restructure space and access aisle.	Measure width of space from center of stripes bordering space. Measure slope with inclinometer
GA 120- 3-20- .7(3)	Do the access aisles have a cross slope less than 1:50?				___ Decrease cross slope.	Measure cross slope with inclinometer. Visually inspect surface and compare with what was approved on plans.
GA 120- 3-20- .17(3)	Do access aisle(s) measure 60 inches wide and van accessible access aisle(s) 96 inches wide?				___ Restructure space and access aisle.	Measure width of aisle by measuring from center of stripes bordering space.
SAV P14	Is the accessible space identified with a permanently installed sign 7 feet above grade which meets Detail P14?				___ Install proper signage.	Check plans for location and correctness of sign. Measure from finished grade to bottom of installed sign-this distance should be 7 ft.
SAV P14	Is the van accessible space identified with a permanently installed "van accessible" supplemental plat below the accessible sign?				___ Install "van accessible sign.	Make sure sign is installed if called for in construction plans.

Code	Site Component PARKING	Compliant	Not Compliant	N/A	Possible Action	Inspection Procedure
SAV P15	Do the accessible spaces and aisles have the correct pavement marking design and color?				___ Install pavement markings.	Check the proper ADA design and colors of the spaces have been used.
GA 120-3- 20- .17(6)	Is there a passenger pick up and drop off zone? If so, is there at least one passenger loading zone which measures 20 feet long with a 5 feet wide access aisle parallel to the vehicle pull up space and at the same level with slope not exceeding 1:50 in all directions?				___ Establish or modify accessible passenger loading zone. ___ Access aisle is the beginning of the accessible route.	If there is a zone-measure length and width of loading zone. Check slope of access aisle using inclinometer.
Code	Site Component ACCESSIBLE ROUTE (Not located within R/W)	Compliant	Not Compliant	N/A	Possible Action	Inspection Procedure
GA 120-3- 20- .07(a)	Is there an accessible route provided on the site from public transportation stops on or adjacent to the site?				___ Provide handicap ramps or ramps if needed. ___ Establish accessible route.	If there is a public transportation stop on or adjacent to site, the accessible route needs to be 36" minimum width, 5% maximum slope and has necessary handicap ramps and landing areas.
GA 120-3- 20- .07(a)	Is there an accessible route provided from a passenger loading zone, if provided?				___ Provide handicap ramps or ramps if needed. ___ Establish accessible route.	Make sure the route is ADA compliant by measuring width of route, height clearance and slope.

Code	Site Component ACCESSIBLE ROUTE (Not Located within R/W)	Compliant	Not Compliant	N/A	Possible Action	Inspection Procedure
GA 120-3- 20- .07(a)	Is there an accessible route provided on the site from public streets or sidewalks adjacent to the site?				<input type="checkbox"/> Provide handicap ramps or ramps if needed. <input type="checkbox"/> Establish accessible route.	Make sure the route is ADA compliant by measuring width of route, height clearance and slope.
GA 120-3- 20- .07(b)	Does at least one accessible route connect all accessible buildings and accessory uses located at the same site?				<input type="checkbox"/> Establish accessible connecting routes.	Make sure the route is ADA compliant by measuring width of route, height clearance and slope.
GA 120-3- 20- .14(3)	Do the access aisles connect to an accessible pedestrian route with a minimum clear and unobstructed width of 36 inches?				<input type="checkbox"/> Establish accessible route connection. <input type="checkbox"/> Remove any obstructions.	Make sure access aisles have handicap ramp(s) and the route meets minimum ADA Standards of width and slope.
GA 120-3- 20- .14(4)	If the accessible route is less than 60 inches wide, is a 60 inches x 60 inches passing space provided every 200 feet?				<input type="checkbox"/> Widen route to 60 inches. <input type="checkbox"/> Install 60" x 60" passing space	Measure 200' from top of handicap ramp(s) along accessible route- passing area should be located at this point or before. Also refer to plans regarding location of passing zones if they apply.
GA 120-3- 20- .14(7)	Except for ramps, are all slopes along the accessible route no greater than 1:20 and have cross slopes no greater than 1:50?				<input type="checkbox"/> Decrease slope. <input type="checkbox"/> Provide alternate route.	Measure slope (1:20) and cross slope (1:50) using an inclinometer at several locations for consistency over length of route.

Code	Site Component ACCESSIBLE ROUTE	Compliant	Not Compliant	N/A	Possible Action	Inspection Procedure
GA 120-3- 20- .15(1)	If any object is protruding more than 4" into the accessible route, can it be detected by a person with a visual disability using a cane? ²				<ul style="list-style-type: none"> — Remove obstacle — Move path around obstacle. — Add cane-detectable base that extends to the ground. 	Check the accessible routes for anything protruding into the route. The protrusion should be removed if possible, or the route deviated around the obstacle. This should be addressed in the field before any sidewalk or pathway is formed.
GA 120-3- 20- .16(1)	Is the route surface firm, stable, and slip resistant?				<ul style="list-style-type: none"> — Create firm, stable, slip resistant surface. 	Check ramp detail on plans to establish type of ramp, type of surface and type of detectable warning to be used for each ramp on the site. Check ramp surfaces for stability and slip resistance.
GA 120-3- 20- .16(2)	Does surface have no level changes greater than ¼ inch?				<ul style="list-style-type: none"> — Between ¼ inch and ½ inch, bevel with a slope no greater than 1:2. — If greater than ½ inch, provide a ramp. 	Make sure there are no areas that are uneven or sticking up that could create a tripping hazard (tripping areas are usually around the detectable warning and where ramp meets edge of pavement). If a hazard is detected it must be beveled or removed and replaced correctly.
GA 120-3- 20- .16(4)	Are there any grates along the accessible route? If so, the maximum opening is ½ inch perpendicular to direction of travel				<ul style="list-style-type: none"> — Replace grate to meet criteria. 	If grates exist measure openings. If greater than 1/2" or not perpendicular to direction of travel remove and install proper grates.

Code	Site Component Accessible Route	Compliant	Not Compliant	N/A	Possible Action	Inspection Procedure
GA 120-3- 20- .19(1)	Does the accessible route have ramps at no greater than 1:12 slope? ¹				<ul style="list-style-type: none"> ___ Install handicap ramps ___ Install ramp. 	Measure the slope of the ramps using an inclinometer. If slope is greater than 1:12, then ramps is not compliant and should be removed and replaced with a ramp with correct slope.
Code	Site Component Ramps ³	Compliant	Not Compliant	N/A	Possible Action	Inspection Procedure
GA 120-3- 20- .18(2)	Is ramp flush with connecting grade?				<ul style="list-style-type: none"> ___ Smooth out top and bottom of ramp to curb creating an even surface. 	Check area where ramp meets edge of pavement and/or sidewalk. Both of these edges should be clean, straight cuts and completely flush with existing grade. If not, remove and replace.
GA 120-3- 20- .18(2)	Is the slope of the gutter or road surface adjacent to the curb ramp(s) or accessible route no greater than 1:20?				<ul style="list-style-type: none"> ___ Adjust slope of adjacent surface. 	Due to the amount of street overlays, a preliminary jobsite inspection of the proposed location of the ramps should be done and measurements taken of the street or gutter slope so steps can be taken to provide the correct slope. If not, then the ramp(s) will have to be removed and reinstalled with proper grade.
GA 120-3- 20- .18(10)	Are ramps located at crosswalks wholly contained within the markings, excluding any flared sides?				<ul style="list-style-type: none"> ___ Adjust location of ramp or crosswalks. 	Ramps should be centered within crosswalks. If not, and there are no reasons why they aren't centered, ramps should be reinstalled in correct location.

Code	Site Component Ramps ³	Compliant	Not Compliant	N/A	Possible Action	Inspection Procedure
GA 120-3-20-.18(10)	Is it not possible to construct curb ramps parallel to vehicular flow?				___ Install diagonal ramps per Figure 15(c).	This will probably be addressed in plan review-if it is not possible then diagonal ramps should be installed. The Inspector needs to make sure the ramps are ADA compliant and the crosswalk marking are per Figure 15(c).
GA 120-3-20-.19(2)	For every 30 inch maximum ramp rise, is a level landing equal to the ramp width and 5 foot long present?				___ Create landing.	This area should measure equal to the actual width of the ramp and 5 ft. long and will be used a wheelchair turning area. The Inspector needs to measure the width and length of the landing area to make sure it is compliant.
GA 120-3-20-.19(3)	Does the ramp have 36 inches clear width?				___ Widen ramp to a minimum of 36 inches.	Measure width of ramp. If it is less than 36" then ramp shall be widened to a minimum width of 36".
GA 120-3-20-.19(4)	Is there a level landing located at the top and bottom of the ramp (width equal to ramp width, length 5 feet)?				___ Create landing.	Measure ramp width and length of landing area at top and bottom of ramp. If landing areas do not conform then they should be created.
GA 120-3-20-.19(4)(c)	If the ramp changes direction, is there a 5 foot by 5 foot landing provided?				___ Create landing 5 foot x 5 foot. ___ Establish an alternate route.	The Inspector needs to establish if a 5' x 5' landing has been installed where the ramp changes directions.
GA 120-3-20-.19(4)(d)	If a doorway is located on the landing, does the area comply with 120-2-20-.04(6)?				___ Increase area.	Measure area for conformance with 120-2-20-.24(6).

Code	Site Component Ramps ³	Compliant	Not Compliant	N/A	Possible Action	Inspection Procedure
GA 120-3-20-.19(5)	Do all ramps longer than 6 feet or a rise greater than 6 inches have handrails on both sides?				___ Install handrails.	Measure length of ramp for compliance, if 6 ft. or greater make sure handrails have been installed on both sides.
GA 120-3-20-.19(5)	Do handrails meet the requirements of GA 120-3-20-.19(5)?				___ Readjust or replace handrails.	Check handrails for compliance with GA 120-3-20-.19(5).
GA 120-3-20-.19(6)	Is the ramp slope no greater than 1:20, the cross slope no greater than 1:50, and the surface meets the requirements of GA 120-3-20-.16?				___ Re surface. ___ Create a maximum 1:12 ramp slope and 1:50 cross -slope for water drainage.	Use an inclinometer to measure slope. Refer to GA 120-3-20-.16 for surface. No loose or spalled edges should be present when inspecting ramps.
GA 120-3-20-.19(7)	Does ramp or landing have adequate edge protection? ⁴				___ Establish edge protection.	Measure edge protection.
SAV P06 SAV P06 B	Do curb ramps have detectable warnings?				___ Add detectable warning.	Refer to City of Savannah detail for the type of detectable warning required. Measure the width and length (a minimum of 2 ft. by 4 ft). Make sure that the warning surface itself conforms to the city specification.
Code	Site Component Accessible Right of Way	Compliant	Not Compliant	N/A	Possible Action	Inspection Procedure
Prowag R301.3.1	Is the minimum continuous and unobstructed clear width 4', exclusive of curb?				___ Widen sidewalk or remove obstructions.	Measure width.

Prowag R301.3. 2	Are 5' x 5' passing spaces provided every 200' if the continuous width is less than 5'?				— Provide passing spaces every 200'	Measure width.
Prowag R301.4. 1	Is the cross slope of a pedestrian access route 2% maximum?				— Adjust cross slope to meet the maximum.	Measure cross slope.
Prowag R301.4. 2	Does the access route exceed the grade of the adjacent street?				— Adjust the grade to not exceed the adjacent street grade.	Measure grade.
Prowag R301.5. 2	Are there edges greater than 1/4"?				— Edges between 1/4" and 1/2" need to be beveled. — Greater than 1/2" is not allowable.	Measure edges.
Prowag R301.7. 1	Are walkway joints and/or grate openings greater than 1/2"?				— Grout joints. — Replace grates.	Measure openings.
Prowag R303.2. 1.3	Is a minimum of 4' x 4' flat landing provided at the top of curb ramps?				— Landing area can be part of sidewalk or other accessible area.	Measure landing and slope.
Prowag R303.2. 1.4	Are the flared sides of curb ramps 10% or flatter when a pedestrian path crosses the curb ramp?				— Adjust slope.	Measure slope.
Prowag R303.3. 3	Are grates, access covers, other appurtenances located within the curb ramps, landings or gutters?				— Relocate grates, access covers and other appurtenances.	Inspect.

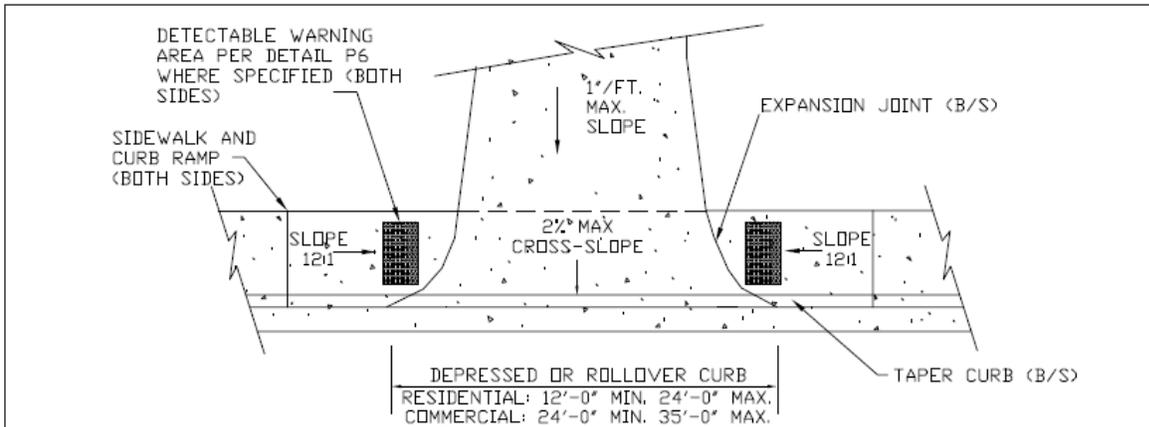
Prowag R406.8	Is edge protection provided on ramps? (does not include curb ramps)				<input type="checkbox"/> The surface of the ramp extends 12" beyond the inside face of the handrail; or <input type="checkbox"/> 4" curb or barrier	Inspect.
Prowag R408	Have handrails been provided on both sides of stairs and ramps when the rise exceeds 6"?				<input type="checkbox"/> Provide handrails that meet GA 120-3-20-.19(5).	Inspect.

Notes:

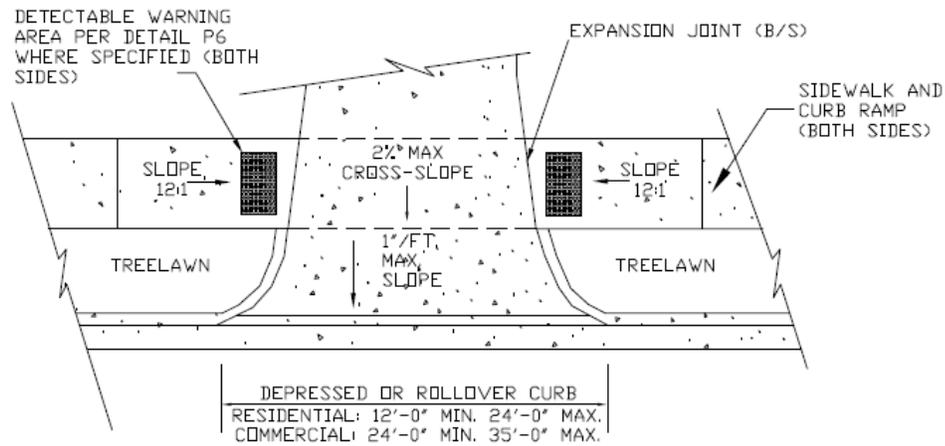
- ¹ The Georgia Accessibility Code provides for exceptions when space limitations prohibit the use of a 1:12 slope when altering existing building and facilities. In those situations, a ramp may have a slope and rise as follows: (1) A slope between 1:10 and 1:12 is allowed for a maximum rise of 6 inches. (2) A slope between 1:8 and 1:10 is allowed for a maximum rise of 3 inches. A slope steeper than 1:8 is NOT allowed.
- ² An object must be within 27 inches from the ground to be detected by a cane. Objects hanging or mounted overhead must be higher than 80 inches to provide clear head room. Protruding objects shall not reduce the clear width or an accessible route or maneuvering space.
- ³ Per 4.8.1, any slope greater than 1:20 along an accessible route is considered a ramp. In new construction and alterations the LEAST possible slope shall be used when building a ramp.
- ⁴ Edge protection is not needed if ramp and landing are protected with vertical guardrails or extended platform 12 inches beyond both handrails.

Appendix A

Standard Construction Details



PLAN VIEW W/O TREELAWN



PLAN VIEW W/ TREELAWN

NOTES:

1. COMPACT DRIVEWAY BASE MATERIAL IN CITY RIGHT-OF-WAY 100% (ASTM-D698) AS PER SECTION 02200, PART 3.01B OF CITY TECHNICAL SPECIFICATIONS.
2. CONCRETE DRIVEWAY SHOULD BE NO LESS THAN 6" THICK IN CITY RIGHT-OF-WAY AS PER SECTION 03300 CHAPTER 1.3 AND REINFORCED WITH FIBERMESH AS PER SECTION 03300 CHAPTER 5 WITH A COMPRESSIVE STRENGTH OF NOT LESS THAN 5000 PSI AS PER SECTION 03300, CHAPTER 3.2.
3. SLOPE OF DRIVEWAY TO STREET TO BE NO MORE THAN 1" PER FOOT EXCEPT ALONG ACCESSIBLE ROUTE CROSS-SLOPE CAN BE NO MORE THAN 2%.
4. 2'x4' TRUNCATED DOME BRICK DETECTABLE WARNINGS MAY BE REQUIRED ON BOTH SIDES OF THE DRIVEWAY ALONG THE ACCESSIBLE PATH IF SPECIFIED. REFER TO DETAILS P6 AND P6B FOR DETECTABLE WARNING SPECIFICATIONS.

STANDARD CONSTRUCTION
DETAILS



DRIVEWAY DETAIL

PLATE NUMBER:

P05A

APPROVED:

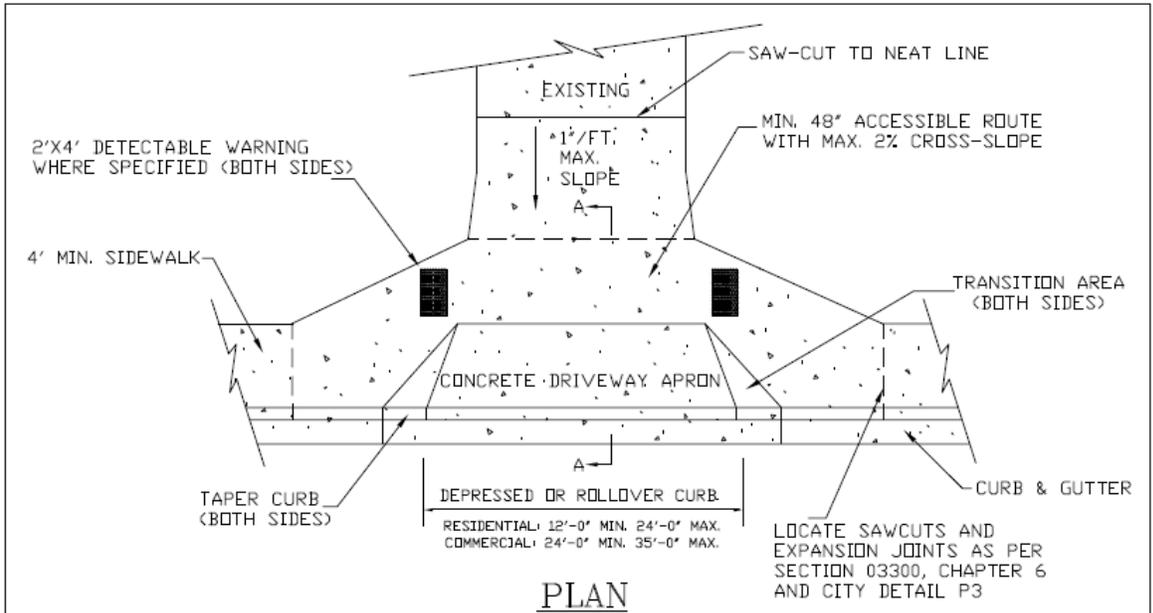
SIGNATURE ON FILE
CITY ENGINEER

SCALE:

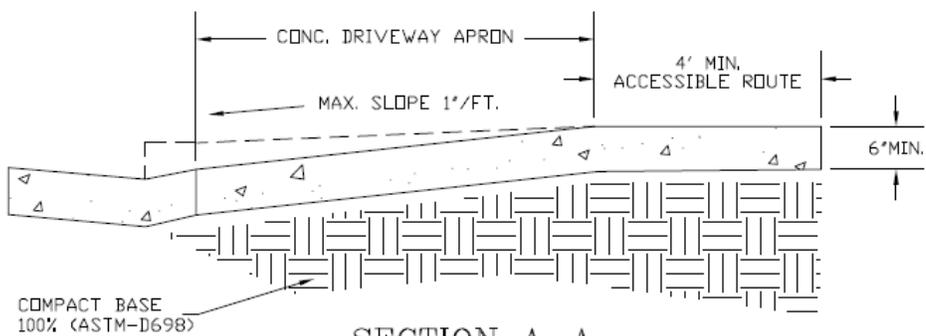
N.T.S.

DATED:

FEBRUARY 2009



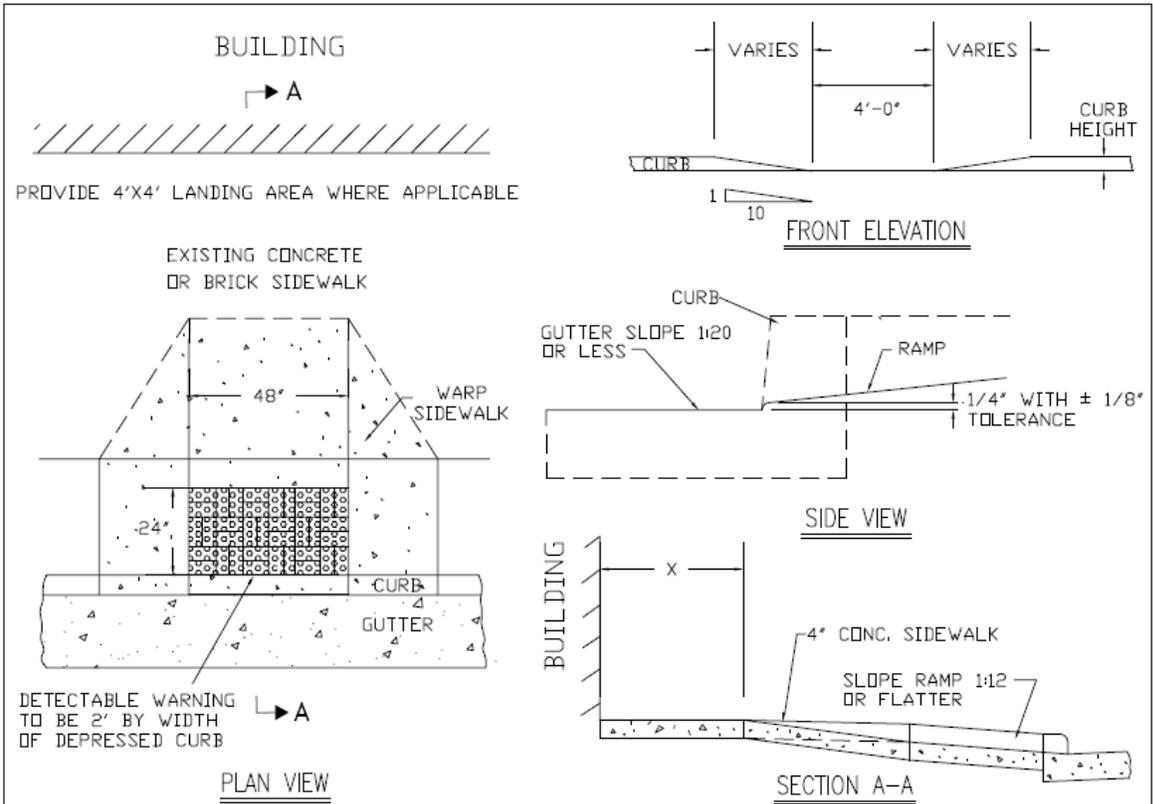
PLAN



SECTION A-A

- NOTES:
1. COMPACT DRIVEWAY BASE MATERIAL IN CITY RIGHT-OF-WAY 100% (ASTM-D698) AS PER SECTION 02200, PART 3.01B OF CITY TECHNICAL SPECIFICATIONS.
 2. CONCRETE DRIVEWAY SHOULD BE NO LESS THAN 6" THICK IN CITY RIGHT-OF-WAY AS PER SECTION 03300 CHAPTER 1.3 AND REINFORCED WITH FIBERMESH AS PER SECTION 03300 CHAPTER 5 WITH A COMPRESSIVE STRENGTH OF NOT LESS THAN 5000 PSI AS PER SECTION 03300, CHAPTER 3.2.
 3. SLOPE OF DRIVEWAY TO STREET TO BE NO MORE THAN 1" PER FOOT EXCEPT ALONG ACCESSIBLE ROUTE CROSS-SLOPE CAN BE NO MORE 2%.
 4. 2'x4' TRUNCATED DOME BRICK DETECTABLE WARNINGS MAY BE REQUIRED IF SPECIFIED. REFER TO DETAILS P6 AND P6B FOR WARNING AREA SPECIFICATIONS.

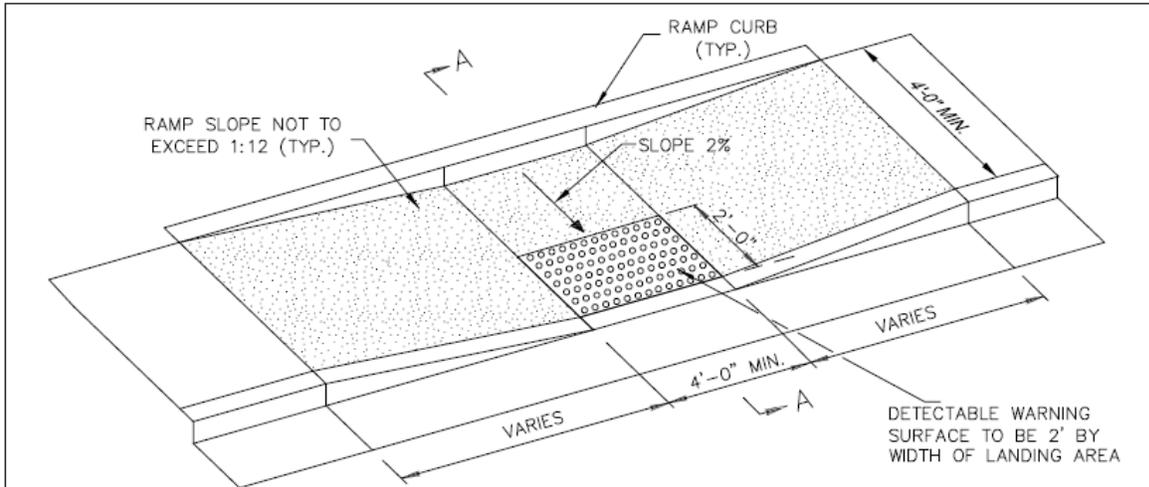
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<p>DRIVEWAY DETAIL</p>	
<p>APPROVED: _____ SIGNATURE ON FILE CITY ENGINEER</p>	<p>SCALE: N.T.S. DATED: FEBRUARY 2009</p>
<p>PLATE NUMBER: P05B</p>	



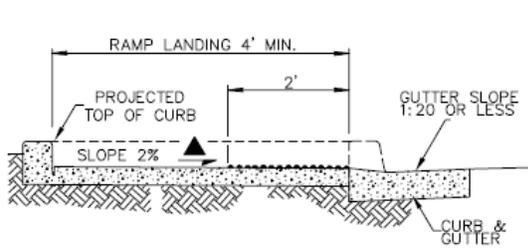
NOTES:

1. HANDICAP RAMP CONSTRUCTION SHALL CONFORM TO ALL FEDERAL, STATE AND CITY OF SAVANNAH CODES AND SPECIFICATIONS.
2. SURFACES SHALL MEET THE GUIDELINES OF THE ADA STANDARDS FOR ACCESSIBILITY, APPENDIX A, PART 36.
3. WHERE SIDEWALK IS FLUSH WITH BACK OF CURB, DELETE ADDITIONAL 4' CONCRETE SIDEWALK AND TRANSITION THE CURB AND SIDEWALK SUCH THAT THE MAXIMUM SLOPE OF THE RAMP AND TRANSITION SIDEWALK IS 1:12.
4. THE FLARED SIDES MUST HAVE A 1:10 SLOPE. IF THE DISTANCE X IS LESS THAN 48", THEN THE SLOPE OF THE FLARED SIDES SHALL NOT EXCEED 1:12.
5. THE SLOPE OF THE GUTTER MUST NOT EXCEED 1:20 ADJACENT TO THE RAMP.
6. DETECTABLE WARNING SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCHES, A HEIGHT OF NOMINAL 0.2 INCHES AND A CENTER TO CENTER SPACING OF NOMINAL 2.35 INCHES AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES. IF THE SIDEWALK AND RAMP ARE CONSTRUCTED OF CONCRETE, THE WARNING AREA SHALL BE RED BRICK IN COLOR. IF THE SIDEWALK AND RAMP ARE CONSTRUCTED OF RED BRICK, THE WARNING AREA SHALL BE GRAY IN COLOR. THE COLOR USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.
7. BRICK PAVERS SHALL BE SET IN A WET MORTAR BED. THE BED SHALL BE PLACED ON CONCRETE. THE CONCRETE SHALL BE A MINIMUM OF FOUR INCHES THICK.

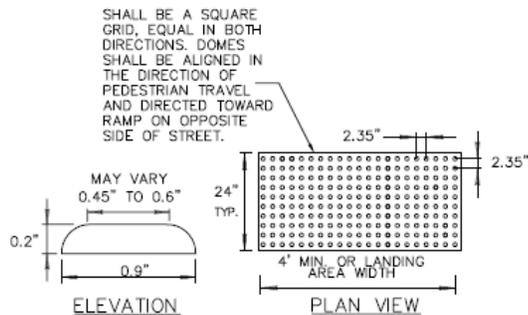
<p>STANDARD CONSTRUCTION DETAILS</p>	
<p>HANDICAP RAMP</p>	
<p>APPROVED: _____ SIGNATURE ON FILE CITY ENGINEER</p>	<p>SCALE: N.T.S. DATED: FEBRUARY 2009</p>
<p>PLATE NUMBER: P06</p>	



ISOMETRIC VIEW OF RAMP



SECTION A-A



DETECTABLE WARNING DETAIL

NOTES:

1. HANDICAP RAMP CONSTRUCTION SHALL CONFORM TO ALL FEDERAL, STATE AND CITY OF SAVANNAH CODES AND SPECIFICATIONS.
2. SURFACES SHALL MEET THE GUIDELINES OF THE ADA STANDARDS FOR ACCESSIBILITY, APPENDIX A, PART 36.
3. THE SLOPE OF THE GUTTER MUST NOT EXCEED 1:20 ADJACENT TO THE RAMP.
4. DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A DIAMETER OF NOMINAL 0.9 INCHES, A HEIGHT OF NOMINAL 0.2 INCHES AND A CENTER TO CENTER SPACING OF NOMINAL 2.35 INCHES AND SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES. IF THE SIDEWALK AND RAMP ARE CONSTRUCTED OF CONCRETE, THE WARNING AREA SHALL BE RED BRICK IN COLOR. IF THE SIDEWALK AND RAMP ARE CONSTRUCTED OF RED BRICK, THE WARNING AREA SHALL BE GREY IN COLOR. THE COLOR USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.
5. BRICK PAVERS SHALL BE SET IN A WET MORTAR BED. THE BED SHALL BE PLACED ON CONCRETE. THE CONCRETE SHALL BE A MINIMUM OF FOUR INCHES THICK.

STANDARD CONSTRUCTION
DETAILS



TYPE B HANDICAP RAMP

PLATE NUMBER:

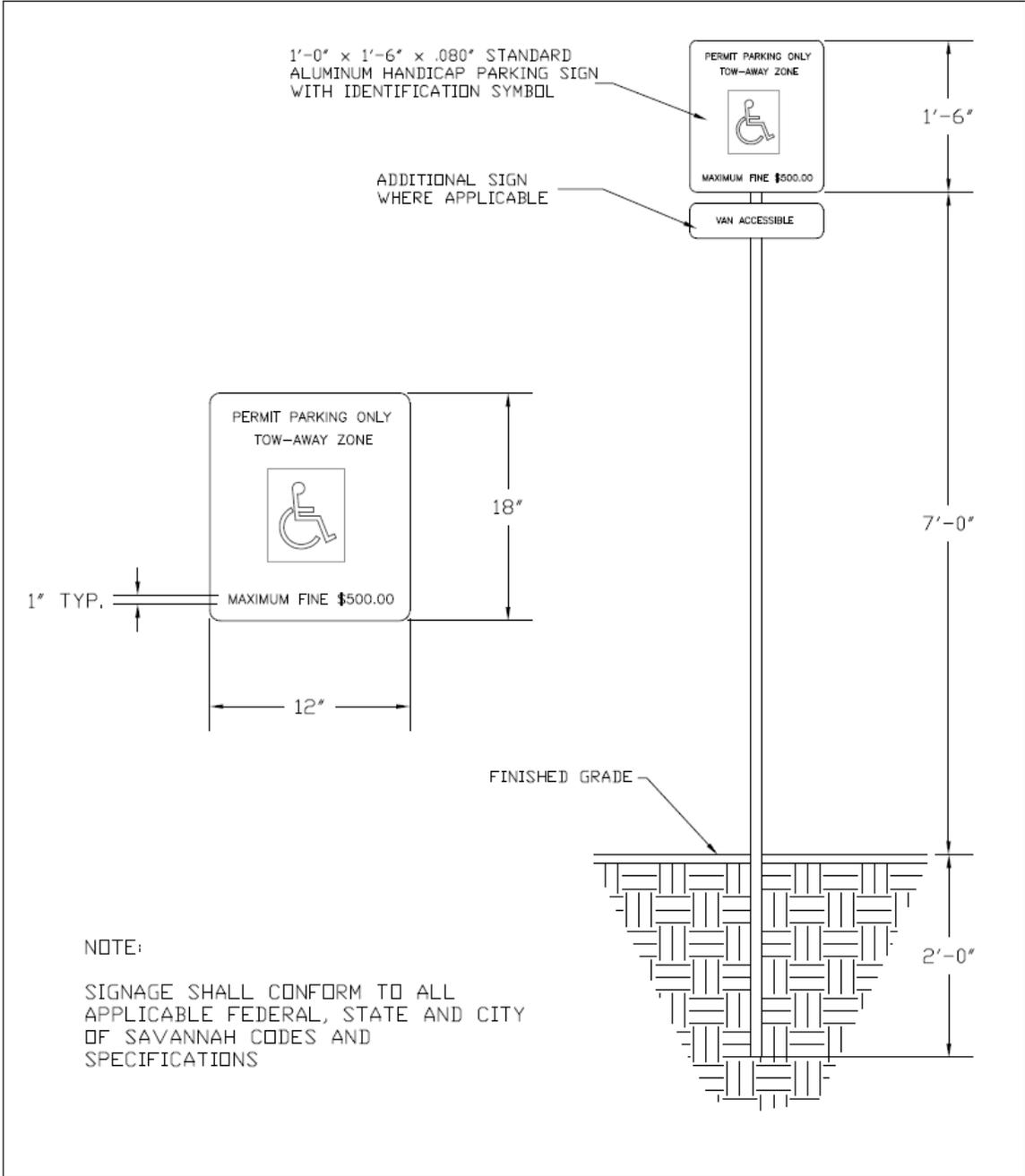
P06B

APPROVED:

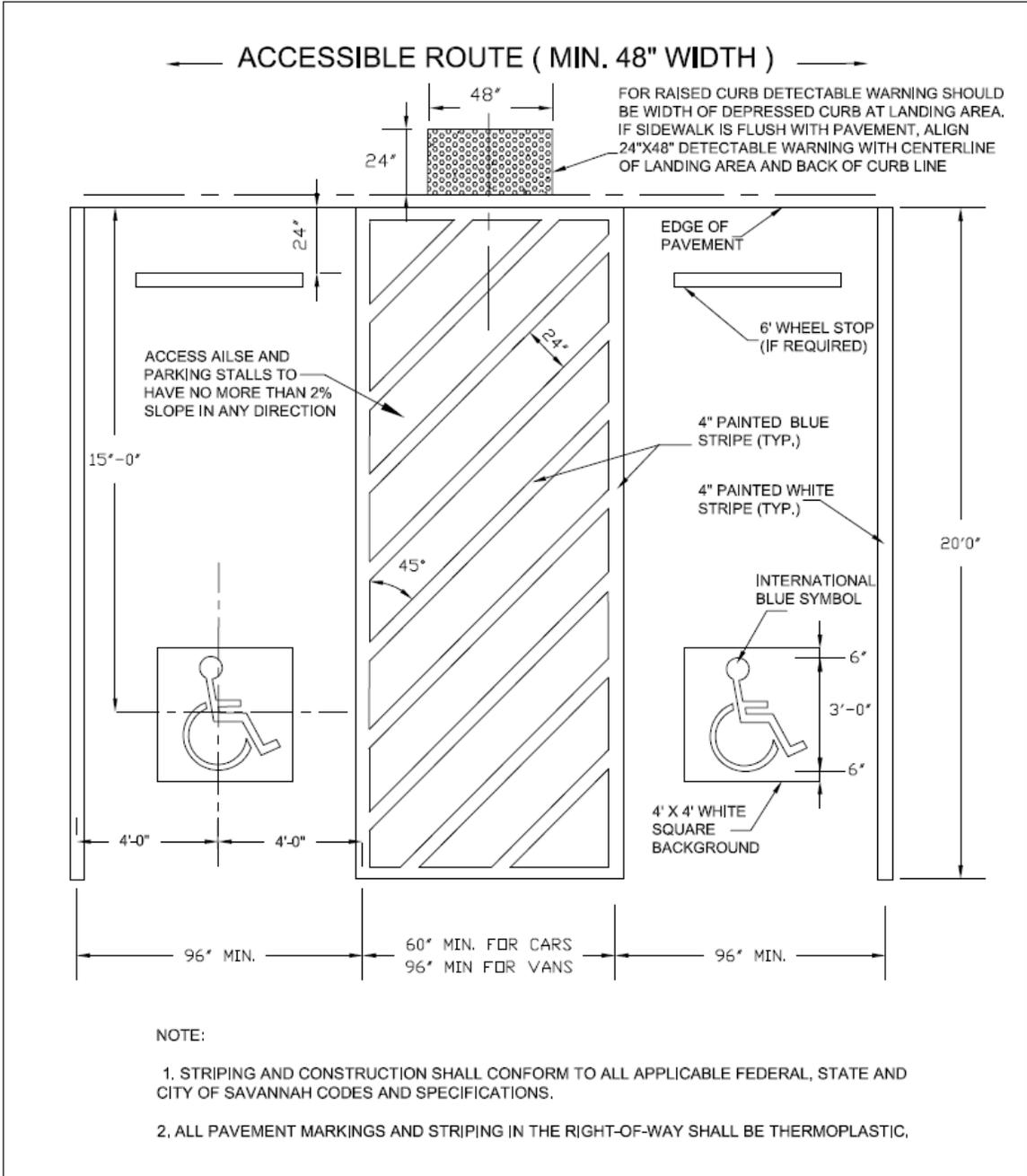
SIGNATURE ON FILE
CITY ENGINEER

SCALE: N.T.S.

DATE: FEBRUARY 2009



STANDARD CONSTRUCTION DETAILS		
HANDICAP PARKING SIGN DETAIL		PLATE NUMBER: P14
APPROVED:	SIGNATURE ON FILE _____ CITY ENGINEER	SCALE: N.T.S. DATE: JANUARY 2009



<h2 style="margin: 0;">STANDARD CONSTRUCTION DETAILS</h2>		
<h3 style="margin: 0;">ADA HANDICAP PARKING SPACE STRIPING DETAIL</h3>		<small>PLATE NUMBER:</small> <b style="font-size: 1.5em;">P15
<small>APPROVED:</small> 	<small>SIGNATURE ON FILE</small> <hr style="width: 80%; margin: 0 auto;"/> <small>CITY ENGINEER</small>	<small>SCALE:</small> N.T.S. <small>DATE:</small> FEBRUARY 2009

Appendix B

Private Property Access Ramp Encroachment

The City of Savannah Private Property Access Ramp Encroachment Criteria, Procedures and Specifications

Purpose:

To define a coordinated process for providing ADA compliant access to private business when that access might necessitate modification to the City of Savannah right-of-way.

Policy:

- It is the responsibility of both private property owners and the City of Savannah through Title II and Title III obligations to provide Americans with Disabilities Act (ADA) access to respective structures owned by each entity to the maximum extent feasible. Whenever readily achievable, access to privately-owned structures should be provided within the private property boundaries. This may be possible through modification or addition to the existing structure.
- It is the responsibility of private property owners to examine the physical and architectural features, especially the front portions of interior rooms, to determine if internal modifications are not practicable or reasonable in cost. Whenever determined, it will be reviewed by the City of Savannah.
- Public sidewalks should be free of undulations, grade changes, obstacles to the free flow of pedestrian traffic and should not deviate from pedestrian expectations.
- The requesting party who wishes to encroach into the City of Savannah's rights-of-way in order to provide an ADA accessible entrance to a structure must have considered design avenues available through the ADA that are readily achievable as defined in the ADA Title III regulations and which meet the spirit of the Law. The ADA allows variances to minimum specifications based on certain criteria as established by the Department of Justice. If a design can meet these variance criteria, then that design should be used and the need for an encroachment in the right-of-way is no longer necessary. In those cases in which the access cannot meet minimum specifications or variances as set forth in the regulations or be readily achievable, consideration will be given for encroachment into the public rights-of-way for the purpose of installing accessible entrances to private property. Code of Federal Regulations, Part 36, [ADA Standards for Accessible Design](http://www.usdoj.gov/crt/ada/stdspdf.htm), commonly known as ADA Accessibility Guidelines (ADAAG), may be accessed and downloaded at <http://www.usdoj.gov/crt/ada/stdspdf.htm>.

- Requests for encroachment into the public right-of-way for purposes of ADA access will only be permitted under the following circumstances:
 - § An ADA compliant entry to the premises constructed on the interior of the building is not "reasonably" achievable.
 - § The encroachment on the public right-of-way would not create a safety hazard.
- Requests for encroachment into the public right-of-way for purposes of ADA access will be evaluated based upon the following items:
 - § Public Safety
 - § Impact Upon Right-of-Way and Adjacent Property
 - § Impact Upon Historical Surroundings and Buildings
 - § Compatibility with Adjacent Property
 - § Feasibility
- A performance bond and maintenance agreement will be required prior to approval of encroachment. The performance bond will be in the amount estimated by the City to correct or complete the access design and include a right of entry document allowing the same. The property owner will be required to accept maintenance responsibility in perpetuity, by written agreement, of the access structure and any attachments, such as hand railings, even that portion that extends into the public right-of-way.

Design Standards for ADA Access Encroachment:

Ref: 28, Code of Federal Regulations, Part 36, ADA Standards for Accessible Design or City of Savannah, <http://www.usdoj.gov/crt/ada/stdspdf.htm> detail PO6.

1. Designs must comply with the latest ADA minimum or variance specifications. (ADAAG)
 Alternate minimum requirements may apply for structures which meet the criteria for Historic Preservation as defined in 28, Code of Federal Regulations, Part 36, ADA Standards for Accessible Design, section 4.1.7, Accessible Buildings: Historic Preservation.
2. City of Savannah minimum specifications:
 - a) Slopes within the boundaries of the ramp, ref: Sect 4.8 (ADAAG)
 Longitudinal slopes shall be • 16:1 (fig.1) and lateral slopes shall be • 12:1 (fig.2).
 - b) Sidewalk cross slopes, ref: Sect.4.3.7 (ADAAG)
 Cross slopes (lateral) shall not exceed 1:50 (2%)
 - c) DESIRABLE distances between longitudinal slope returning to existing sidewalk between two ramps is 25 feet.

An alternative scalloped design (fig.3) may be allowable, conditional upon site location (isolated) and/or physical barriers to standard design.

- d) Minimums and maximums shall not be reduced/increased.
- e) Curb height may not be adjusted to meet requirements. Upon approval, curb cuts may be closed to aid in design requirements.
- f) No appurtenances will be allowed which would interfere with the movement of pedestrians, delivery of goods or otherwise create unsafe conditions as determined by the city.
- g) Adjacent property access may not be infringed.
- h) The design must incorporate existing materials, materials that are to be used in a currently planned city project or materials similar to those adjacent to the site which would establish continuity.

Procedures to Obtain City Approval of Property Owner's Access Plan:

1. The property owner shall submit to the City's Inspection Director an Engineering Report stamped by a Registered Engineer/Architect that includes a recommendation for ADA compliant access to the property. The Director will review the report and render response either in agreement with the plan or suggested modifications within 21 business days of submission. If it is determined that access is feasible within the property boundaries, plans will then be submitted to the Inspections Department.
2. If the determination by the Inspections Director is that access is technically infeasible within the property boundaries, the owner must submit a petition and engineering plans to the City's Real Property Coordinator. The petition and plans will be forwarded to various City departments for review, as a minimum to the departments of Traffic Engineering and Street Maintenance. Reviewing departments may contact the owner or consultant to obtain clarification. Each department will make comments and recommendations to the Real Property Coordinator who will compile all responses into a single report for the City Manager's review within 30-days of submission.
3. Upon City Manager approval, and within 15 days of receipt by the City Manager, the petition will be placed on the next City Council agenda.

Permitting:

If City Council approves the encroachment, the owner or designated representative, must obtain a permit to construct within the rights-of-way from the Traffic Engineering Department. The application must include a signed maintenance agreement, performance bond, and a copy of the modified deed and plat indicating property owner

maintenance responsibility. If approved, such permit will be issued within 30 days of submittal of application.

Construction:

1. A City of Savannah Construction Inspector will perform inspections during the construction to assure quality control and will approve/disapprove the completed structure within 10 days of completion. All conditions stated within the permit and included in the accepted plans, must be adhered to during construction. Upon approval, the Construction Inspector will sign off on the Maintenance Agreement and will cause the return of escrow monies to the appropriate entity.
2. If disapproved, the owner will correct all punch list items in order to obtain approval. Failure to do so within a 30-day period will cause forfeiture of the performance bond and corrective action by the City. In either instance, the maintenance agreement will remain in force.

Key Player and Contacts for Assistance:

Consultation regarding location of Access

Inspections Department
Gamble Bldg. 2nd Floor
6 E. Bay Street
Savannah, GA 31401
ph. 912-651-6530

Call for Petition to Encroach:

Clerk of Council, 1st Flr., City Hall
P.O. Box 1027
Savannah, GA. 31402
ph. 912-651-6441

Encroachment Petition Submittal:

Laurie-Jean Stellberg
P.O.Box 1027
Savannah, Ga 31402
ph. 912-651-6510

Design Review:

Street Maintenance Department
702 Stiles Avenue
Savannah, GA 31415
ph. 912-651-6571

Traffic Engineering Department
1100 West Gwinnett Street
Savannah, GA 31415
ph. 912-651-6600

Fig. 2 Side View

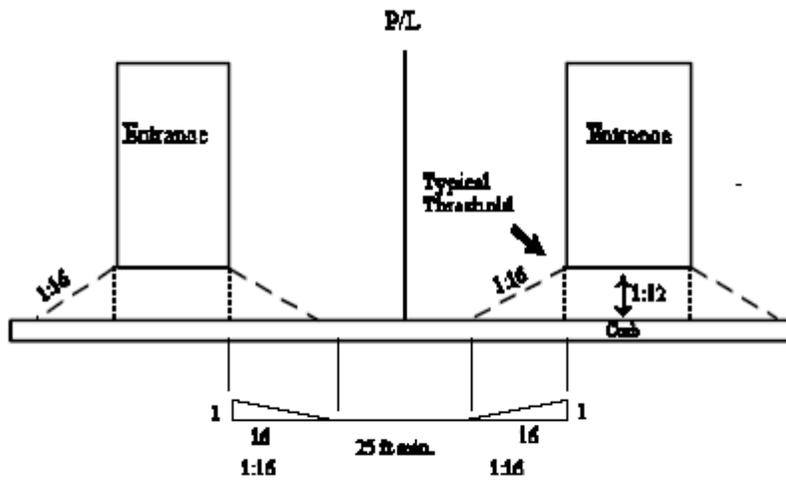
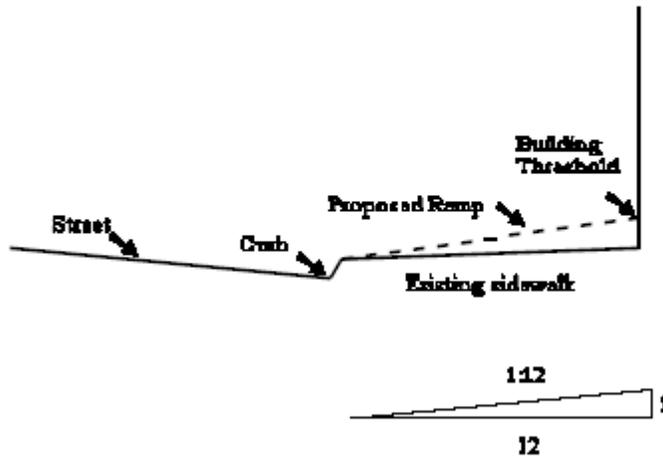
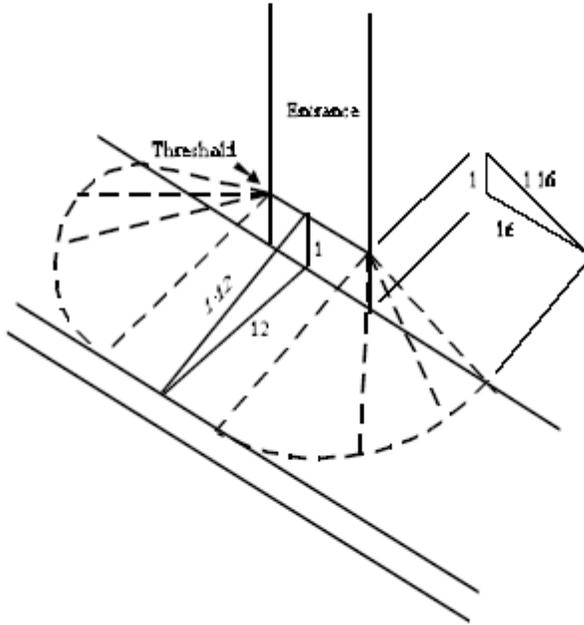


Fig.1 Front View

Figure 3. Scalloped Design



Appendix C

SPR Checklist

SPR CHECKLIST

Project Name: _____

Date: _____

Project No.: _____

Reviewer: _____

Acceptable	Needs Revision	Not Applicable	Description
Site Plan			
			Location map.
			Dimension/scale.
			Sight distance at the proposed driveway/street shown and sufficient information to review.
			Engineer certification that horizontal and vertical sight distance meets AASHTO requirements.
			Traffic impact study.
			Entrance design is adequate.
			Landscaping does not restrict sight distance.
			Correct speed limit and regulatory signs.
			Street name sign detail.
			Traffic signal impact, if applicable.
			Internal truck routing/circulation.
			Required sidewalk.
			Pavement width 27' bc-bc
			Parking space/aisle dimension.
			Pavement markings thermo.
			Roundabouts per USDOT "Roundabouts: An Informational Guide"
ADA Compliance			
			Current handicap ramp detail.
			H/C space signing/pavement marking.
			Number of H/C spaces.
			Accessible route
			Other ADA:
Street Lighting			
			Included.
			To scale.
			Meets minimum requirements.