AGENDA	Tuesday, November 20, 2018	
Land Use Committee	4:30 PM*	
Sioux Falls City Council	Carnegie Town Hall	
	235 West 10th Street	

*The meeting will start following the adjournment of the 4 p.m. Informational Meeting

1. Call To Order

2. Approval of Minutes

A. Tuesday, September 18, 2018

3. Reports and Updates

A. Engineering Design Standards by Public Works staff
   Presentation: Approximately 60 minutes followed by discussion

4. Open Discussion

5. Public Comment

6. Adjournment

Date: 2018-11-20
SIRE Meeting ID: 2795
Meeting Type: Committee Meeting
Subtype: Land Use Committee
YouTube:
Agenda Item: Not Assigned
Item ID: 89715

City of Sioux Falls

Providing a Better Quality of Life for You!

MEMORANDUM

Date: Tuesday, November 20, 2018
To: Land Use Committee
From: Engineering Division of Public Works
Subject: Proposed Revisions to the Engineering Design Standards

CHAPTER 8: STREET DESIGN AND PAVEMENT THICKNESS

8.7 Vertical Alignment

8.7.4 Curb Returns. Minimum fall around curb returns shall be ~~one-half of one (0.5) percent~~ 0.6 percent but shall not exceed grades established by the Accessible Sidewalk Requirements Chapter of the Engineering Design Standards. (improve street drainage)

Table 8.1 Minimum Street Design Criteria (Minimum street grade is increased from 0.5% to 0.6%)

Table 8.1

Minimum Street Design Criteria

	Local			Collector		Arterial	
Design Elements	Residential Cul-de-sac **	Single Family	Commercial, Industrial, Multifamily	Minor	Major	Minor	Regional or Principal
24-hour Volumes (vpd)	500 or less	2000 or less	2500 or less	<5000	>5000	10,000	15,000
Design Speed (mph)	—	—	—	35	40	45	50
Driving Lanes	—	—	2	2	2-4	4	4 or more
Right-of-Way (ft.)	50	60	66	66	80	100 +	120 +
Roadway Width* (ft.) (1)	29	33	39	39	41 or 49	41-53	65 or more
Lane Width (ft.)	—	—	11	11	11	12	12
Curb & Gutter	6" vertical	6" vertical	6" vertical	6" vertical		6" vertical	
Min.-Max. Grade (%)	0.6 ~~0.5~~-8.0	0.6 ~~0.5~~-8.0	0.6 ~~0.5~~-8.0	0.6 ~~0.5~~-7.0		0.6 ~~0.5~~-6.0	
Curb Return Radii (ft.)							
- intersect local	13.5	13.5	13.5	20		–	
- intersect collector	20	20	20	25		30	
- intersect arterial				30		35	
Horizontal Curve Radius (ft.)	150	150	300	—		AASHTO Standards	
Vertical Alignment Control	AASHTO Standards						
Grade at Intersection*** (%)	See also Accessible Sidewalk Requirements Chapter						
- intersect local	3	3	3	—		—	
- intersect collector	2	2	2	2		—	
- intersect arterial				2		2	

* All dimensions are measured to back of curb.
** Nonresidential cul-de-sac dimensions will differ.
*** In addition to the intersection grade requirements listed on this table, intersection design must also comply with the pedestrian street crossing requirements outlined in the Accessible Sidewalk Requirements chapter of the Engineering Design Standards.

CHAPTER 10: WATER MAINS

10.1 General

10.1.1 Design Standards (added for clarification)

10.1.2. Construction Standards. Construction standards shall be the most recent ~~revision~~ version of the City of Sioux Falls Engineering Design Standards, City of Sioux Falls Code of Ordinance, Supplemental Standard Specifications and Standard Plates together with the latest addenda. (added for clarification)

10.1.10 Transmission water mains (~~12~~ 16 inches and greater) constructed under drainage structures whose single or multiple pipe dimensions exceed 4 feet in width shall be installed using the following guidelines.

10.1.12 No pipe smaller than 6 inches in diameter shall be installed as a fire service main. ~~A domestic service water line may be connected to the fire service main 6 inches, or greater, in diameter.~~ For mains that do not supply hydrants, sizes smaller than 6 inches shall be approved by the Fire Prevention Division. (conflict with Section 10.3.8)

10.2 Fire Hydrants

10.2.1 At arterial intersections, hydrants on the opposite side of the arterial street are not considered for purposed of the 500 feet hydrant spacing requirement. (Clarity provided for hydrant spacing requirements for local and collector streets at arterial street intersections)

10.2.6 A minimum of 3-feet clear space shall be maintained around the circumference (outside) of fire hydrants, except as otherwise required or approved by the Fire Prevention Division. This requirement pertains to ~~light poles,~~ posts, fences, vehicles, vegetative growth, trash, storage, mailboxes, and other materials or things shall not be placed or kept near fire hydrants in a manner that would prevent such fire hydrants from being immediately discernible and/or usable. A minimum of 15-feet clear space shall be maintained around the circumference (outside) of fire hydrants as it pertains to light, electric, or light poles. (added for clarification)

10.2.7 When fire hydrants are located outside City ROW and are subject to impact by motor vehicles, they shall be protected by guard posts, curb and gutter, or other approved means ~~shall be provided for hydrant protection~~. (added for clarification)

10.3 Valves

10.3.5 Perpendicular connections to existing mains shall be by means of a ~~s~~Smith ~~t~~Tap and tapping valve.

10.3.6 Valves and curb stops for domestic services shall be installed at least 20 feet away from the building. If the domestic service is extended ~~comes~~ off of the fire line, both services shall have a shutoff downstream of the location where the services separate.

10.3.8 Post Indicator Valves (PIV):
A domestic service water line may be connected to the fire service main 6 inches or greater in diameter. The domestic line shall be tapped on the water main side of the PIV valve. (added for connection requirements)

10.4 Meters

10.4.1 Water meters will be furnished and installed by the Sioux Falls Water Division ~~Department~~. The City will not be financially responsible for damaged or frozen meters.

10.4.2 Master meters for main line metering of industrial, commercial, and multifamily residential complexes shall be subject to the approval of the Sioux Falls ~~Engineering Department~~ Water Division. Authorization must be obtained from the Sioux Falls ~~Engineering Department~~ Water Division to allow the use of a master meter in lieu of individual meters. Metering systems shall be reviewed on an individual basis and shall include such auxiliary equipment as deemed necessary by the Sioux Falls ~~Engineering Department~~ Water Division. Systems may be required to provide heat, electrical power, and adequate ventilation. All master meter assemblies must also be constructed with adequate backflow prevention assemblies ~~as defined by the most current edition of the City of Sioux Falls *Cross-Connection Control Manual*~~.

10.5 Cross-Connection Control and Backflow Prevention

10.5.1 The City of Sioux Falls potable water system shall be protected from all cross connections by a backflow prevention assembly in accordance with the City of Sioux Falls Plumbing Code, the City of Sioux Falls Cross Connection Control Manual, and approved by the City of Sioux Falls Water Division.

10.7 Service Lines

10.7.6 If ~~newly developing~~ separately platted properties are replatted to a single unit, any additional water services that were separately installed shall be removed to the corporation stop on the City main at the expense of the owner, unless otherwise approved by the City of Sioux Falls Engineering Division ~~provided the final lift of asphalt or final surfacing has not been placed~~. (added for clarification)

10.7.7 ~~Polyethylene (PEX) pressure pipe and tubing will be acceptable for use as water service piping between the curb stop or valve and the water meter, except as defined in the *Uniform Plumbing Code*. PEX tubing will not be permitted within the City ROW or dedicated public water main utility easement.~~

All water service piping and fittings (1 inch – 2 inch) installed between the water main and curb stop shall meet the following requirements:

- Six-foot minimum depth of cover
- Minimum pressure rating of 250 psi
- Material of Type K soft copper tubing as specified in the City Supplemental Specifications, Section 300
- Copper pipe at all joints shall be flared.

All water service piping and fittings (1 inch – 2 inch) installed on the non-water main side of the curb stop shall meet the following requirements:

- Six-foot minimum depth of cover
- Minimum pressure rating of 250 psi
- Material shall be copper or polyethylene as specified in the Supplemental Standard Specifications for Water Main Construction, Section 300
- Service fittings (four inch and larger), ductile iron pipe (four inch and larger), and PVE pipe (four inch and larger) shall conform to Chapter 10 of the EDS, Water Mains

~~**10.7.8** Water service connections 2 inches and smaller will not be permitted on water mains 16 inches and larger unless otherwise approved by the City Engineer.~~ (redundant)

10.7.9 Any terminated water services shall be disconnected at the corporation stop or at the curb stop, as determined by the Sioux Falls Engineering Division.

~~**10.7.10** When water services are terminated, the contractor shall excavate down to within one foot on the owner side of the curb stop, pinch the service, and fold back the curb stop. The existing curb stop shall remain in place and set flush with proposed finished grade.~~ (conflict with other standards)

10.8 Material Specifications

10.8.1 Material specifications are included in the Supplemental Standard Specifications for Water Main Construction—Section 300. However, ~~ductile iron pipe is required to be used~~ pipes four inches and larger are required to be ductile iron with nitrile or fluorocarbon gaskets and pipes two inches and smaller are required to be copper in the Downtown Area, in state highways, and in all sites known to have soil contaminated by volatile organic compounds such as fuel and petroleum products or as directed by the City Engineer. All ductile iron pipe and fittings shall be encased in polyethylene regardless of soil conditions.

CHAPTER 11 DRAINAGE IMPROVEMENTS

11.1 Requirements for Storm Drainage Plans

11.1.6 Development Engineering Final Drainage Plan

11.1.6.2.o. Hydrological data for each drainage area.

~~9.~~ Maximum release rate of storm water generated by the development and post developed upstream properties. ~~If subdivision will discharge storm water onto undeveloped land, show the 5- and 100-year return storm for predevelopment conditions and post development conditions. The discharge rate may not exceed predeveloped rates unless City-owned conveyance structures of adequate size are contiguous and downstream of the discharge point.~~

~~10. If project size is over five acres and zoned non-single-family residential, all discharge from site must be at single-family rates.~~

11.7 Detention Storage

11.7.4 Maximum Release Rate

The detention pond volumes and release rate shall be designed to accommodate runoff generated by the development and post-developed upstream properties. The maximum release rates for storm water set forth in this chapter are to be effective for any site or subdivision accepted by City Engineering following January 1, 2019. Drainage System Cost Recovery and Regional Detention Charge platting fees, if applicable, are annotated by number to correlate to Table 1 Platting Fees Classification. *

~~The release rate from the detention pond cannot exceed predevelopment rates for the 5-year and 100-year return storm when discharge is conveyed onto undeveloped property unless City-owned conveyance structures of adequate size are contiguous and downstream of the proposed discharge points.~~

~~If project size is over five acres and is zoned non-single-family residential, all discharge from site cannot exceed single-family discharge rates for the 5- and 100-year return storm.~~

Storm water maximum release rate for 5-year and 100-year return design storm:

- Land use zoned non Single Family with <1 acre impervious **
  - Zoned runoff rate (1)
- Land use zoned non single family with >1 acre impervious ***
  - Single Family runoff rate (2)

  - 80% Single Family runoff rate (3)
- Sub-Regional storm water facilities runoff rate ****
  - Single family runoff rate (2)
  - 80% Single Family runoff rate (3)
- Discharge conveyed across undeveloped property ******
  - 80% pre-developed discharge

- Discharge conveyed across developed property
  - Existing conditions runoff rate
- Redevelopment
  - Existing conditions runoff rate *****
- Tributary to Regional stormwater facility *******
  - Zoned – Hydrologic design of Regional stormwater facility ***** (1)
  - Single Family runoff rate (2)
  - 80% Single Family runoff rate (3)

Table 1 (still to be created) Drainage System Cost Recovery/Regional Detention Charge Platting Fee Classification

1. Zoned per land use
2. Hybrid
3. Single Family

* Information is not intended to be inclusive of all potential situations. Reviewing authority has sole discretion to determine storm water maximum release rates. Examples are for general reference and parties are encouraged to contact City Engineer for clarification.

** Not tributary to Sub-Regional or Regional stormwater facility, runoff unto public ROW, conveyance is contiguous and adequate.

*** Not tributary to Sub-Regional or Regional stormwater facility, runoff unto public ROW, conveyance is contiguous and adequate.

**** Sub-Regional stormwater facilities are privately developed and not identified in City Master Drainage Plan or publicly funded

*****Information applies for discharge unto public conveyance system, conveyance is contiguous and adequate

****** Regional stormwater facilities are identified in City Master Drainage Plan. If Regional stormwater facility is not yet constructed or public controlled conveyance is not contiguous or adequate, interim stormwater facilities are required

******* Unless public controlled conveyance is not contiguous or adequate

CHAPTER 12 EROSION AND SEDIMENT CONTROL

12.1.3.1 *Erosion and Sediment Control Plan* Narrative Report

7. **Erosion and sediment control measures.** A description of the methods described in the Sioux Falls *Erosion and Sediment Control* standard plates, which will be used to control erosion and sediment on the site. The erosion and sediment control narrative should be phased to reflect the major planned construction stages of the project.

    a. Major site grading

    b. Public infrastructure improvements

    c. Individual lot development

    Additional measures as necessary to control air emissions like dust from construction activities and minimize site run-on to the project site.

8. **Construction site nonstructural control measures.** A description of the methods described in the Sioux Falls *Erosion and Sediment Control* chapter, which will be used to control storm water pollution, erosion, sediment, and spills on the site. Description to include a statement emphasizing the need to preserve and place existing topsoil and minimizing soil compaction where possible. During the construction process, the Primary Responsible Person ~~developer~~ is responsible for maintaining all compliance documentation records.

12. **Training.** Training shall be provided as necessary to ensure compliance with the *Erosion and Sediment Control Plan.*
a. Training is recommended at least annually for employees and responsible parties. (new language and replaces existing Section 12)

~~17.~~18. **Signature Page and Statement.** Signature page for Primary Responsible Person ~~owner/developer and~~ may also Include the general contractor acknowledging the review and acceptance of responsibility for the erosion and sediment control, and a statement by the professional engineer acknowledging responsibility for the preparation of the *Erosion and Sediment Control Plan*.

12.1.3.2 Erosion and Sediment Control Plan Sheet

13. **Proposed Erosion and Sediment Controls** ~~**Plans of all drainage features.**~~ ~~Show all~~ Clearly depict all structural and nonstructural erosion and sediment controls for all phases of development. The plan shall also show paved areas, retaining walls, cribbing, planting, temporary or permanent soil erosion control measures, or other features to be constructed in connection with, or as a part

of, the proposed work, together with a map showing the drainage area of land tributary to the site and estimated two-year runoff of the area served by all drains.

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17. Accurate Depiction of Phasing

Erosion control plan must clearly depict the erosion control phasing, such as clearly detailing controls intended for use during rough grading and controls to be implemented during utility installation. (new section)

12.1.3.3.3 Sediment Control on Subdivision

a. ~~Owner/Developer~~ Primary Responsible Party manages individual lots as minor impact construction sites in compliance with appropriate ordinances and standards.

c. Disturbed areas from soil disturbance activities have reached the following soil stabilization and management:

i. Areas still owned or managed by the subdivision Primary Responsible Party ~~owner/developer~~ shall meet permanent revegetation in accordance with Sections 12.2.3, 12.2.3.1, and 12.2.3.3 (Permanent Revegetation).

12.3 Sediment Control

12.3.3 Sediment Entrapment Facilities

12.3.3.2 Filter Strips. Vegetated filter strips cause deposition of sediment within the area of vegetation. Buffer strips of natural vegetation can be left at the time of site grading, or can be created by using sod. A dense ground cover is necessary or runoff will channelize within the area. The filter strips shall be a minimum of 50 feet in width. Variances may be considered when the natural buffer between the disturbed area(s) and receiving waters is less than 50 feet, a combination of undisturbed buffer and erosion and sediment control is required.

12.7 Maintenance

If new erosion and sediment controls or repairs are necessary, work must be completed before the next anticipated storm event or no later than seven (7) calendar days whichever is first. (add for clarification)

12.9 Inspections

The permittee shall assure ~~that~~ qualified personnel inspect the site at least once every seven (7) calendar days or once every fourteen (14) calendar days and within 24 hours of ~~the end~~

precipitation exceeding 0.25 inches ~~of a storm that is 0.5 inch or greater~~ or snow melt generating runoff ~~event that cause~~ causing surface erosion to confirm plan compliance. Where runoff is unlikely due to winter conditions, such inspections shall be conducted at least once per month. Based on the results of the inspection, the plan shall be revised and implemented, in no case later than seven (7) calendar days following the inspection.

Compliance documentation is the responsibility of the ~~owner/developer/contractor~~ Primary Responsible Person as identified in Section 12.1.3.1.

CHAPTER 13 PLAN SUBMITTALS

13.2.3. Development Engineering Plan

13.2.3.5 Drainage

9. Maximum Release Rate of stormwater generated by the development and post-developed upstream properties. ~~If subdivision will discharge storm water onto undeveloped land, show predevelopment flow rates for the 5- and 100-year return storm for predevelopment conditions and post development conditions.~~

~~**10.** If project size is over five acres and zoned non single family residential, all discharge from site must be at single family rates.~~

~~2.10 If project size is over five acres and zoned non single family residential, all discharge from the site must be at single family rates.~~

CHAPTER 15 ROADWAY LIGHTING

15.2 **Design and Construction Process**

15.2.1. http://www.siouxfalls.org/public-works/engineering/construction-mgmt/resources/specs-policies-manuals. (added this website hyperlink)

15.4 Lighting Design

Table 15-1: (updated table for luminaire type allowed per roadway classification and deleted pole spacing due to redundancy)

Table 15-1: Guidance for Design and Installation of Roadway Lighting Systems

Roadway Classification[1]	Local—Residential	Local—Commercial	Collector—Residential	Collector—Commercial	Collector—Commercial	Arterial
Roadway Width (BC = back of curb to back of curb) (ROW = right of way)	33' BC 60' ROW	39' BC 66' ROW	39' BC 66' ROW	41' BC 80' ROW	49' BC 100' ROW	BC = Per Design 100'-120' ROW
Luminaire Pole Distribution	One Sided	One Sided	One Sided	One Sided or Staggered	One Sided or Staggered	Median and staggered preferred; or Per Design
Pole Mounting Height[2]	30'	30'	30'	40'. 50' allowed per approval.	40'. 50' allowed per approval.	40'. 50' allowed per approval.
Pole Arm Length	8'	8'	8'	8'. 12' allowed on 50' poles per approval.	8'. 12' allowed on 50' poles per approval.	8'. 12' allowed on 50' poles per approval.
~~Pole Spacing~~	~~Class A~~	~~Class B~~	~~Class B~~	~~Class C~~	~~Class C or Per Design~~	~~Class D or Per Design~~
Luminaire	Class A	Class B	Class B/Class C	Class C/Class D	Class C/Class D ~~Or per design~~	Class D or Per Design
Conduit	PVC or innerduct	PVC or innerduct	PVC or innerduct	PVC or innerduct	PVC or innerduct	PVC or innerduct
Wire[3]	4/4/4/4 Aluminum Wire	2/2/2/4 Aluminum Wire	2/2/2/4 Aluminum Wire	2/2/2/4 Aluminum Wire	2/2/2/4 Aluminum Wire	2/2/2/4 Aluminum Wire
Pole Support	Not applicable. Direct Bury Pole.	Concrete footing with breakaway transformer bases				
Concrete Footing	Not applicable. Direct Bury Pole.	2' diameter. 6' depth.		2' diameter. 6' depth. 8' depth allowed for 50' poles per approval.		
Meter Pedestal	Standard meter pedestal with 4/0 AL triplex wire from transformer.					

1 1—Roadway Classification guidance can also be found in Chapter 8 of the City's Engineering Design Standards and from the City's Access Management Plan website http://siouxfallsmpo.org/files/9113/7825/2507/SiouxFalls_MajorStreetPlan.pdf.
2—The pole mounting height is the distance from the roadway surface to the luminaire.
3—See Section 15.14 of Chapter 15 of the City's Engineering Design Standards for guidance on wire sizes.

- Updated website in table footer for 2017 Street Map location. http://www.siouxfalls.org/-/media/Documents/planning/2017-master-st-plan.

- 15.4.5. Table 15-2: Updated table to use 7 pins for Class A and Class B luminaires.

Table 15-2: Luminaire Schedule*	
Class A: Local – Residential (100 W HPS Equivalent)	**Class B: Local - Commercial (150 W HPS Equivalent)** **Collector - Residential (150 W HPS Equivalent)**
• Shall have a Type II lighting distribution. • Shall have a BUG rating of B1-U0-G2. • Shall have photocontrol receptacle with ~~3~~ 7 pins. • Shall obtain a 0.3 fc (foot-candle) average and a 6:1 average to minimum ratio • Leotek GCJ1-20G-580 or approved equal	• Shall have a Type II lighting distribution. • Shall have a BUG rating of B2-U0-G2. • Shall have photocontrol receptacle with~~3~~ 7 pins. • Shall obtain a 0.6 fc (foot-candle) average and a 4:1 average to minimum ratio
Class C: Collector - Commercial (250 W HPS Equivalent)	**Class D: Arterial (400 W HPS Equivalent)**
• Shall have a Type III lighting distribution. • Shall have a BUG rating of B2-U0-G3. • Shall have photocontrol receptacle with 7 pins. • Shall obtain a 0.7 fc (foot-candle) average and a 4:1 average to minimum ratio	• Shall have a Type III lighting distribution. • Shall have a BUG rating of B3-U0-G5. • Shall have photocontrol receptacle with 7 pins. • Fixture shall obtain obtains a 1.2 fc (foot-candle) average and a 3:1 average to minimum ratio
* Luminaires shall be LED, Multi-Volt 120-277V, 4000K Color Temperature. * See Table 15-4 below for roadway classifications. * A Lamp Loss Factor (LLF) value of 0.80 shall be used for the photometric calculations for the LED fixtures.	

15.11 **Material Specifications**

15.11.1: Added a website hyperlink for the Specifications location. http://www.siouxfalls.org/public-works/engineering/construction-mgmt/resources/specs-policies-manuals.

15.11.2: Added a website hyperlink for the Checklist location. http://www.siouxfalls.org/public-works/engineering/construction-mgmt/resources/forms-permits.

CHAPTER 16 ACCESSIBLE SIDEWALK REQUIREMENTS

All changes are requested by Federal Highway Administration.

16.1 Introduction: (Added new section referencing the IBC.)

16.1.3 International Building Code (IBC).

The International Building Code or IBC is promulgated and published by the International Code Council (ICC). The IBC is revised and published in a three-year code cycle and has been adopted by the City of Sioux Falls, with amendments and additions outlined in City Ordinance Chapter 150. The IBC provides and establishes minimum standards and regulations for commercial building systems to safeguard the public health and safety in the built environment. The IBC outlines accessibility requirements for accessible entrances from the sidewalk within the public right-of-way to buildings (including Title II

and Title III buildings.) Site development, redevelopment, and right-of-way construction projects that adjoin accessible entrances shall meet IBC requirements.

16.6 Standards for Accessibility

16.6.4.3 Curb Ramp Design Considerations:

4) "T" Intersections: (Add guidance for crossings at "T" intersections.)

If a pedestrian access route exists at a "T" intersection, then separate curb ramps should be provided at all quadrants. Engineering judgment shall be used in determining the feasibility of providing separate curb ramps at all quadrants of a "T" intersection. Factors to consider include, but not be limited to: physical constraints (for example: driveway approach), volume of pedestrian traffic, alternate pedestrian crossing locations, and crossing safety.

16.6.7 Ramps: (Add a new section with guidance on ramps outside of the public right-of-way. Already required per IBC, but included here for convenience.)

16.6.7.1 Technical Requirements:

1) General: Any part of a pedestrian access route with a slope greater than 5% that is not adjacent to a street is considered a ramp and shall comply with this section. It is recommended to provide a walkway with stairs in addition to the walkway with ramps for use by those individuals for whom distance presents a greater barrier than steps.

2) Running Slope. Ramp runs shall have a running slope between 5% minimum and 8.3% maximum.

3) Cross Slope: The cross slope of ramp runs shall be 2% maximum**.**

4) Width: The clear width of a ramp run and, where handrails are provided, the clear width between handrails shall be 3 feet minimum.

5) Rise: The rise for any ramp run shall be 2.5 feet maximum.

6) Landings: Ramps shall have landings at the top and the bottom of each ramp run.

a) Slope: Landing slopes shall be 2% maximum in any direction.

b) Width: The clear width of the landing shall be at least as wide as the widest ramp run leading to the landing.

c) Length: The landing clear length shall be 5 feet long minimum.

7) Change in Direction: Ramps that change direction between runs at landings shall have a clear turning space (5 feet by 5 feet minimum).

8) Handrails: Ramp runs with a rise greater than 6 inches shall have handrails complying with PROWAG.

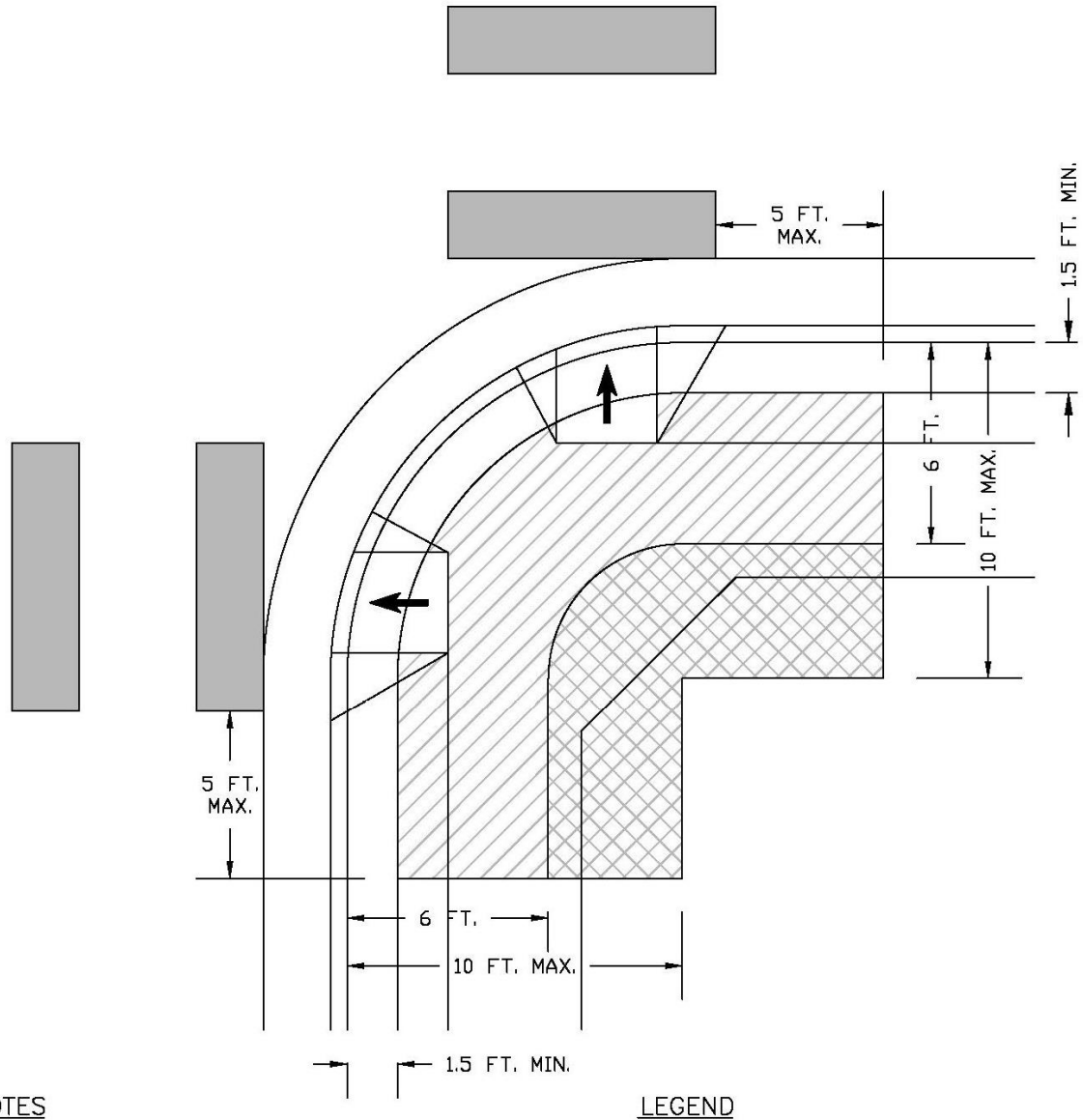
9) Edge Conditions: Ramps and landings with drop-offs shall have curbs, walls, railings, or projected surfaces that prevent people from slipping off the ramp. Curbs shall be a minimum of 2 inches high.

16.8 ~~Accessible~~ Pedestrian ~~Signals~~Push Buttons at Curb Ramps (Clarification on a few requirements involving pedestrian push buttons. Includes adoption of recent Manual on Uniform Traffic Control Devices (MUTCD) guidance.)

16.8.2 Pedestrian push-buttons should be located as follows:

- Where two push-buttons are provided, the push-buttons should have at least 10 feet of separation from each other. If two accessible pedestrian push-buttons must be less than 10 feet apart or on the same pole, each button shall meet the APS push-button equipment requirements outlined in the MUTCD.
- The centerline of the push-button shall be mounted 42 inches above the clear ground space.
- Where a clear ground space allows a parallel (side) approach to a push button, a side reach of 10 inches (maximum) over a curb or obstruction is permitted.
- The push-button poles shall not interfere with the minimum clear width of the ~~PAR~~pedestrian access route.

Figure 16.11 (Moved existing figure from Standard Plates for reference)



NOTES

* PUSHBUTTONS SHALL BE MOUNTED PARALLEL TO CROSSWALKS.
* THERE SHALL BE AT LEAST 10 FEET OF SEPARATION BETWEEN PUSHBUTTON LOCATIONS.
* ONLY ONE PUSHBUTTON SHALL BE MOUNTED ON A PUSHBUTTON POLE.

LEGEND

RECOMMENDED PUSHBUTTON LOCATIONS.

IF RECOMMENDED PUSHBUTTON LOCATIONS ARE IMPRACTICAL, THIS AREA IS ACCEPTABLE.

16.9 On-Street Parking (Accessibility) (Title clarification. Subsequent update of section and figure sections for the remainder of the chapter.)