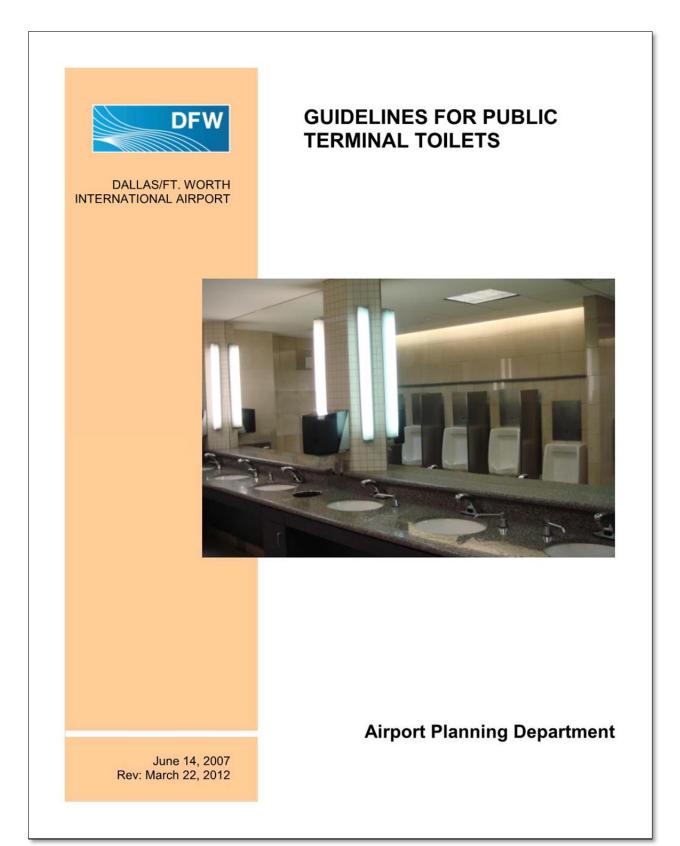
APPENDIX F

Restroom Design Guidelines / Standards Sample

Through the case study at Dallas/Ft. Worth International Airport (DFW) in Appendix C, the airport shared their "Guidelines for Public Terminal Toilets." This document is shown on the following pages. More airports are creating design standards for their facility, especially the restrooms. Standard layouts, products, and details provide continuity throughout the airport and streamline the design and construction processes. Other airports with guidelines on the Internet are listed in the Bibliography in Appendix H.



Introduction

Introduction

Customer satisfaction surveys have confirmed that restroom facilities are a major contributor to the passengers' satisfaction opinion of an airport. Cleanliness, general appearance, functional layout, and convenient availability (location) of the restroom facilities form the basis of their impressions. Therefore, special attention needs to be paid to the layout, material finishes, features and amenities of the public restrooms.

In an effort to provide the highest level of customer service, DFW has developed the following design criteria that document the standard appearance of public restrooms in the terminals. This criteria should be used when renovating, replacing or new construction of restroom facilities.

All proposed modifications or new construction shall comply with the requirements of the Airport's Design Criteria Manual (DCM) and all applicable building codes and shall be submitted to the Airport in accordance with the process identified in the Airport's Design Criteria Manual. This document does not supersede the requirements of any applicable code and/or regulation. Any conflicts between the requirements of this document and the Design Criteria Manual shall be directed to the Planning Department for resolution. In addition, the pictures and drawings in this document reflect the basis and intent of the design of the toilet rooms and are for illustration purposes only. They may not accurately reflect the actual physical condition, therefore are not for construction purposes, but must be applied to specific site situations.

Dimensions and details shown in this manual are for reference only. It is the responsibility of the designer to field verify the as-built conditions of the terminal prior to the start of the design process. Furthermore, it is the designer's responsibility to fully review the most current version of all codes and the Airport Design Criteria Manual. All work must comply with federal and state ADA regulations, DFW Airport Building Code Amendments, and all other applicable codes.

Information provided within this criteria manual is subject to change.



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1.0 Design Concepts

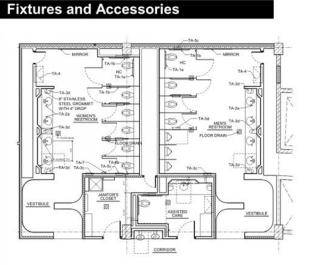
The following section defines the minimum design intent for the placement and design for toilet facilities within the Terminal Area.

1.1 Locations

Locations of toilet and support rooms will be dependent on the design location and requirements.

The guidelines for placement of toilet and support rooms are as follows:

- Restroom facilities should be evenly and conveniently distributed throughout the main public areas with a maximum walking distance of 150 feet to a restroom; therefore restrooms should be approximately 300 feet apart.
- b. When possible, each location should include; men, women, assistance rooms and a janitor's room for maintenance and clean-up storage. These four (4) rooms should always be grouped together and the respective entry points should be adjacent to each other so that they are visible to the passengers. The Assisted Care Room should be signed with the men's and women's handicap symbols. (See Diagram: #1 and #2)
- c. Circulation in rooms with larger numbers of fixtures should be laid out in a loop to avoid dead-end conditions.



(Refer to the Appendix for toilet accessories information)

DIAGRAM #1

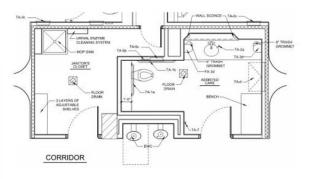
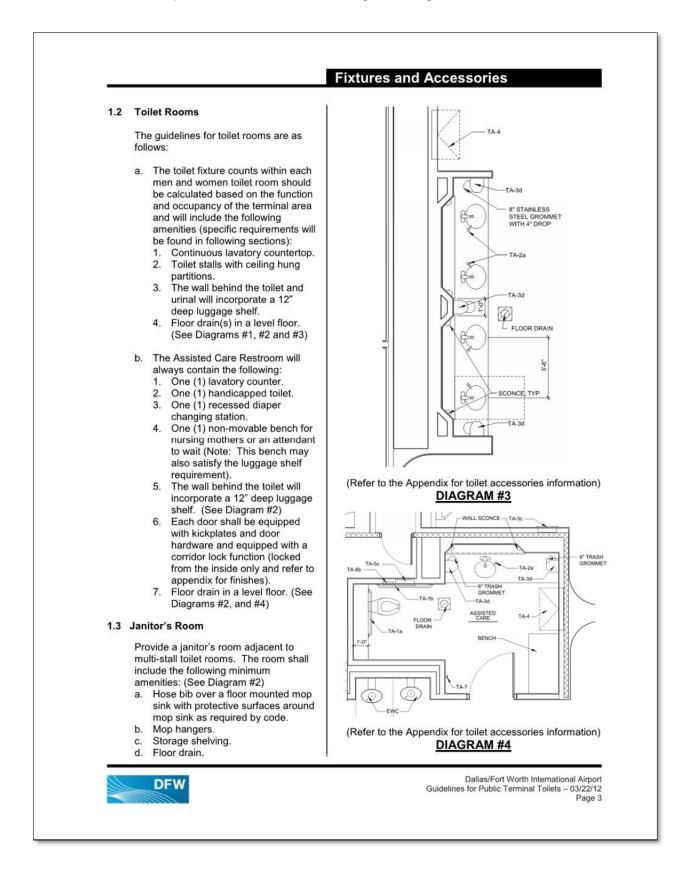
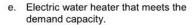


DIAGRAM #2

(Refer to the Appendix for toilet accessories information)







- f. Access door to toilet chase.
- g. The entrance door shall be equipped with kickplates on the push side of the door.

1.4 Entry Points / Signage

The guidelines for entry points are as follows: (See Diagram #5)

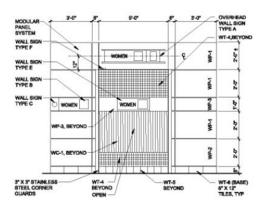
- The entries from the Terminal concourse/corridors should reinforce way finding by expressing a restroom queue.
- b. The entries into the toilet rooms must prohibit the direct visual pathways by use of a switchback entryway.
- c. The entries into the toilet rooms must be a minimum width of 4'-0".
- Entries should be designed to prevent line-of-sight from the public areas to the toilet areas.
- e. Inside the "T" access corridor shall be a transition area between the terminal and the toilet room. These transition walls shall be wall carpet and ceramic tile. (See Diagram #5 and #6)
- f. The finishes at eye level in the transition area should reinforce the overhead exterior signage package to confirm a passenger in headed into the correct room.
- g. The Terminal side or corridor walls at each toilet room entry point shall be designed using a 1/2" thick wall panelization system (by Marlite, or an approved equal).
- Orientation of the overhead sign shall be confirmed by the Airport. Signs should be installed as indicated in Diagram #5 and #6.



Fixtures and Accessories

ENTRY POINT PHOTO

DIAGRAM #5

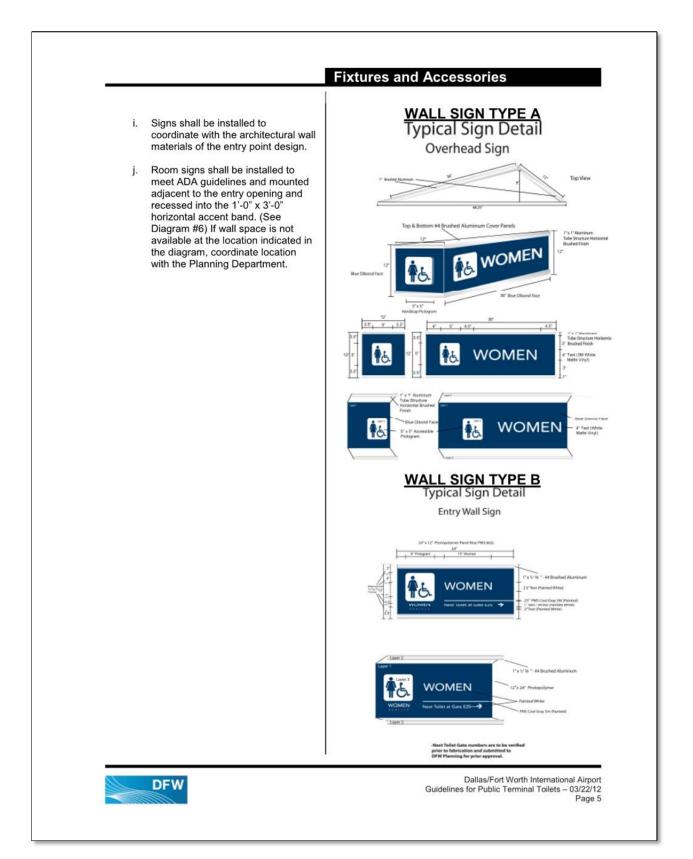


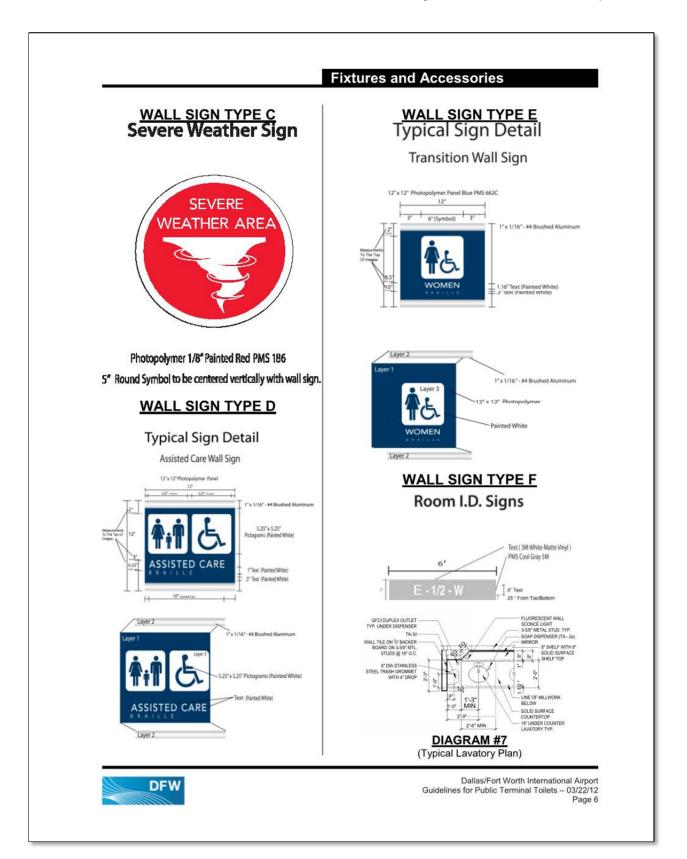
ENTRY POINT

DIAGRAM #6

(Refer to the Appendix for wall panel information)







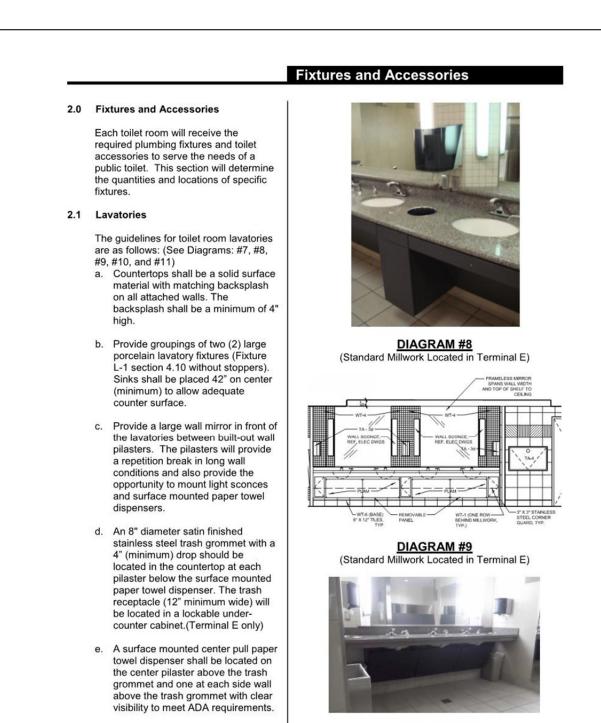
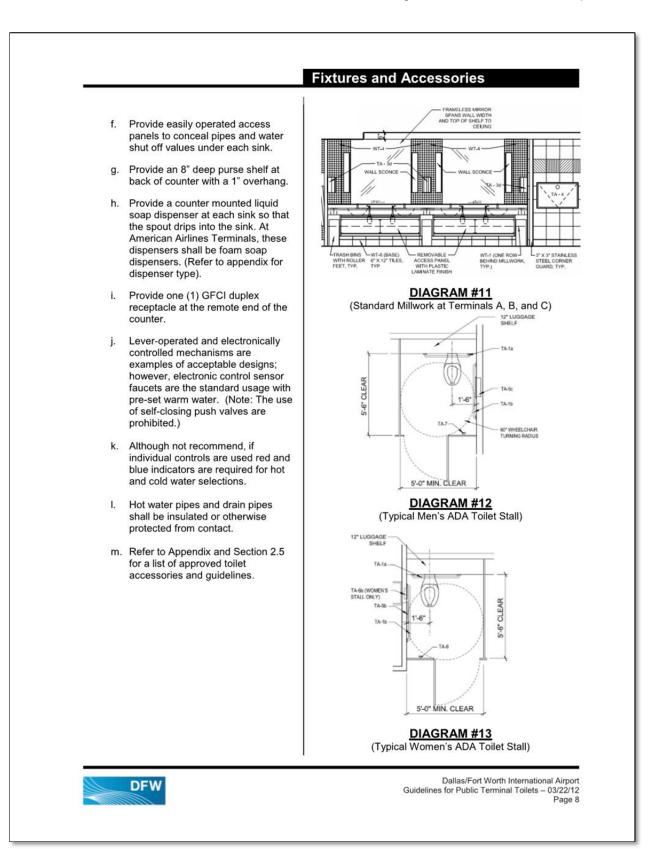
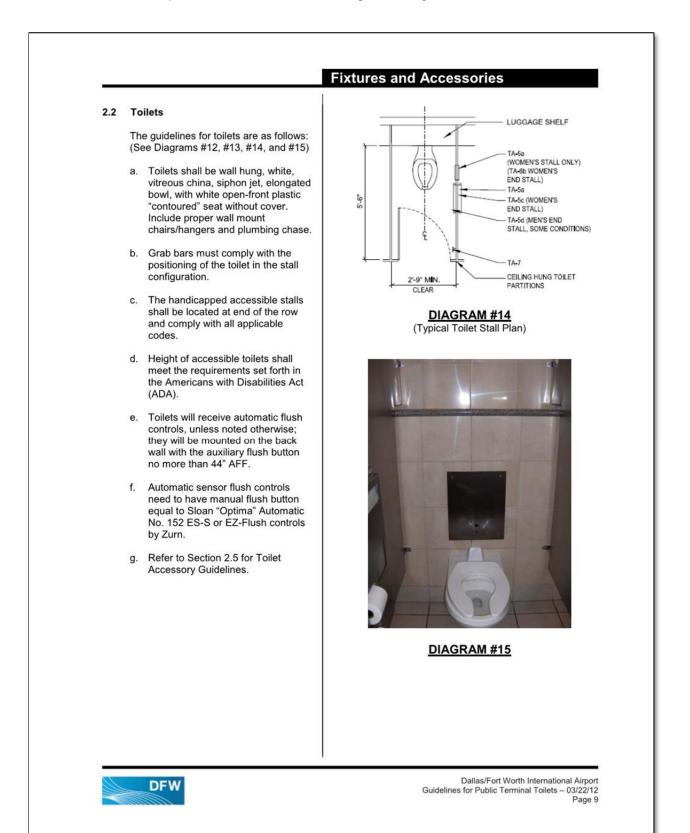
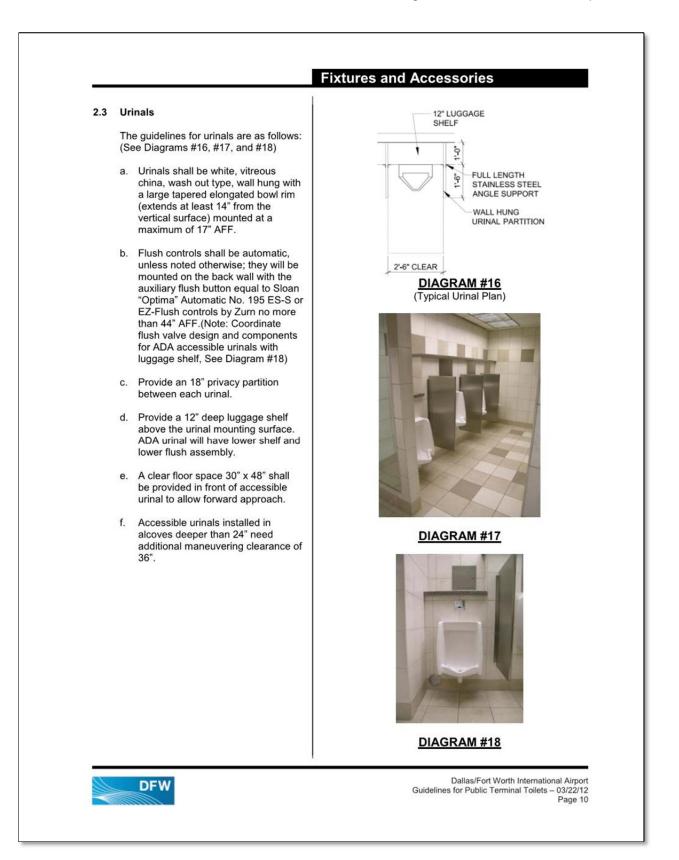


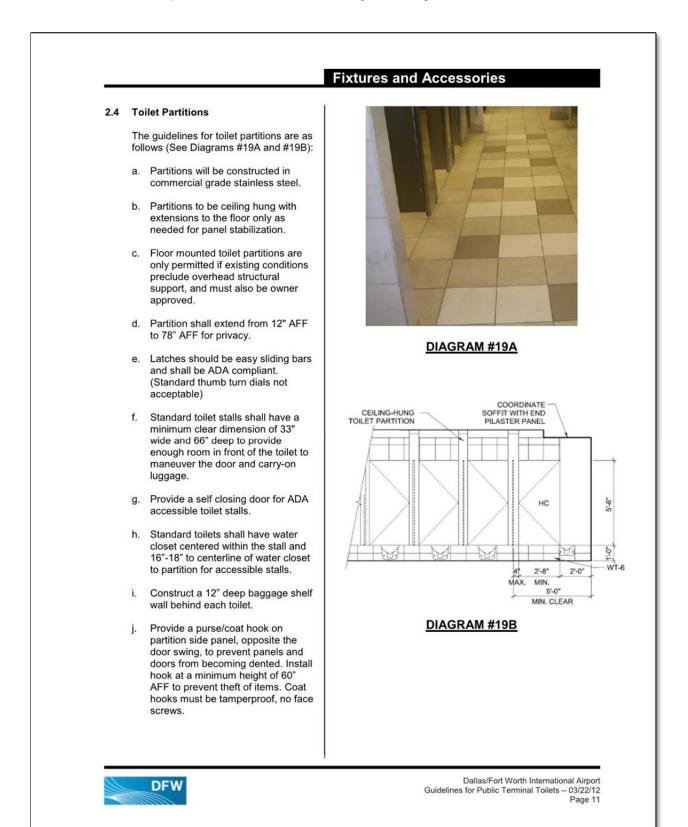
DIAGRAM #10 (Standard Millwork Located in Terminals A, B, & C)

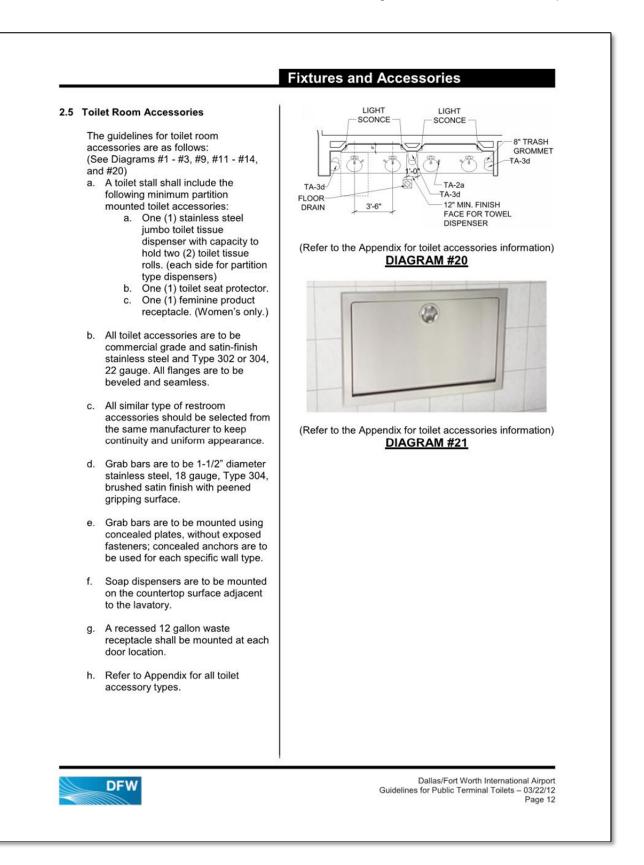


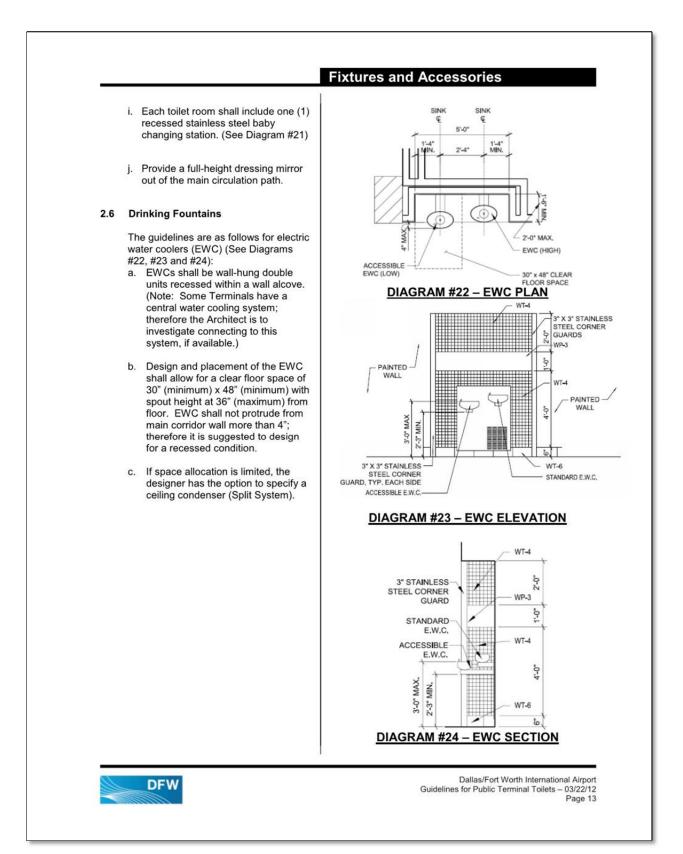


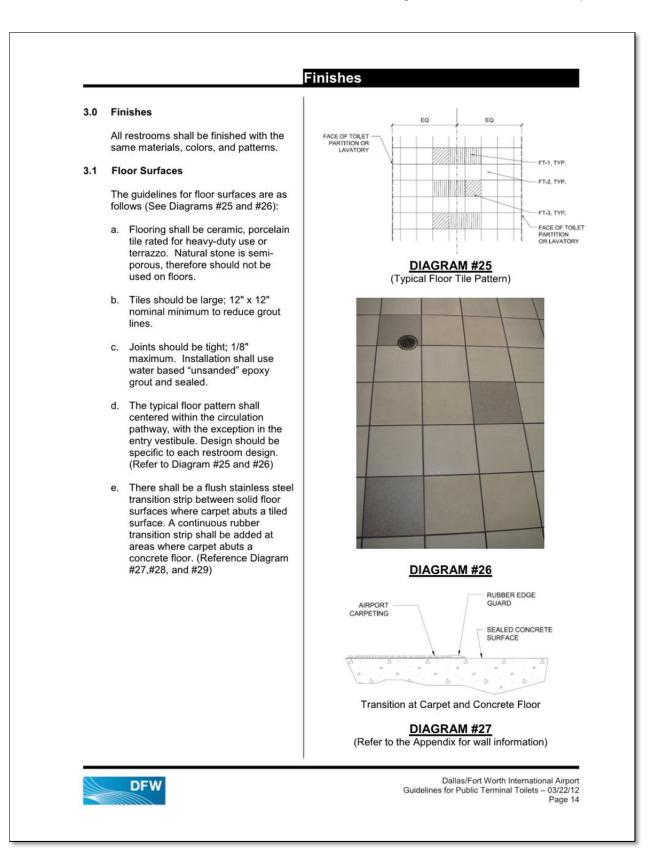


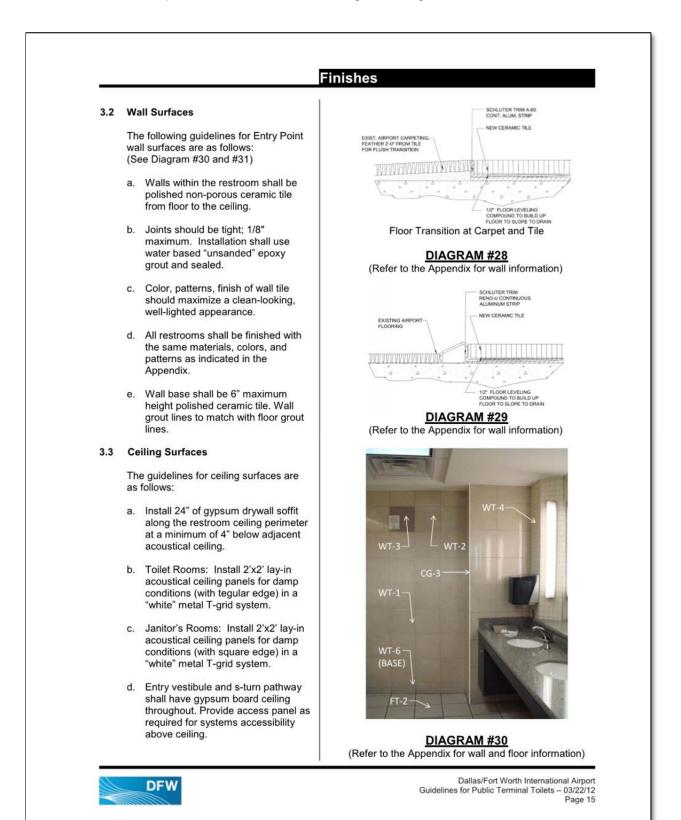


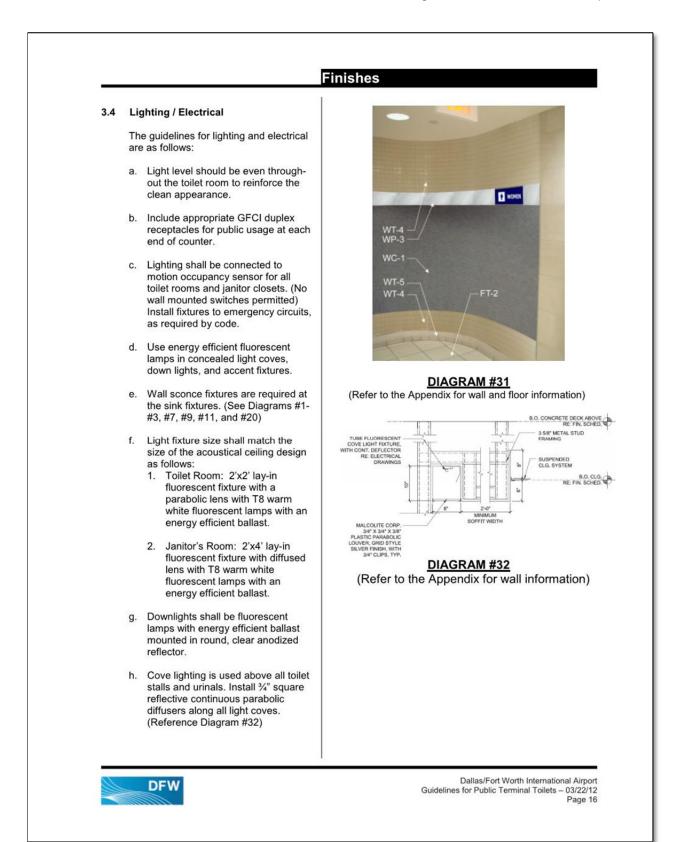


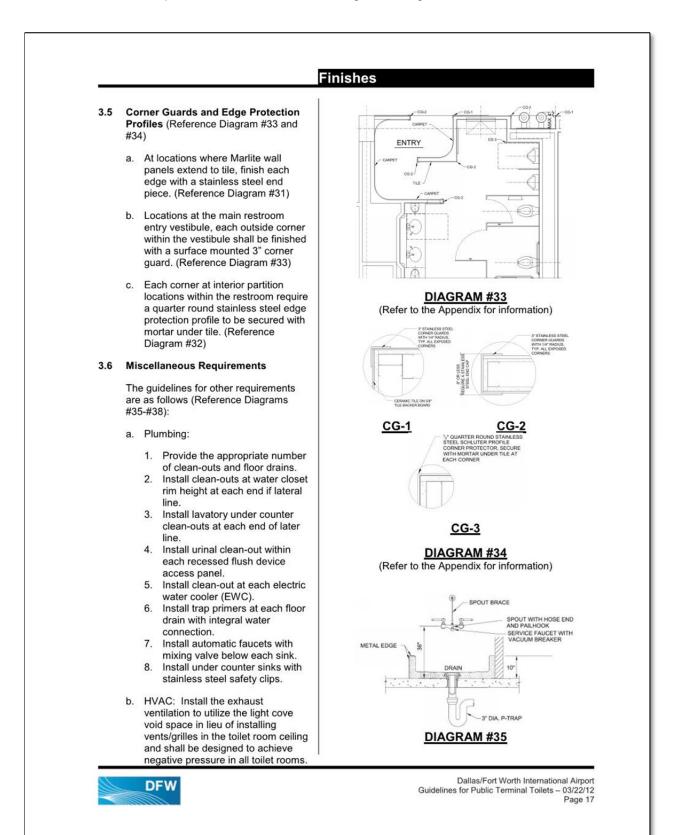


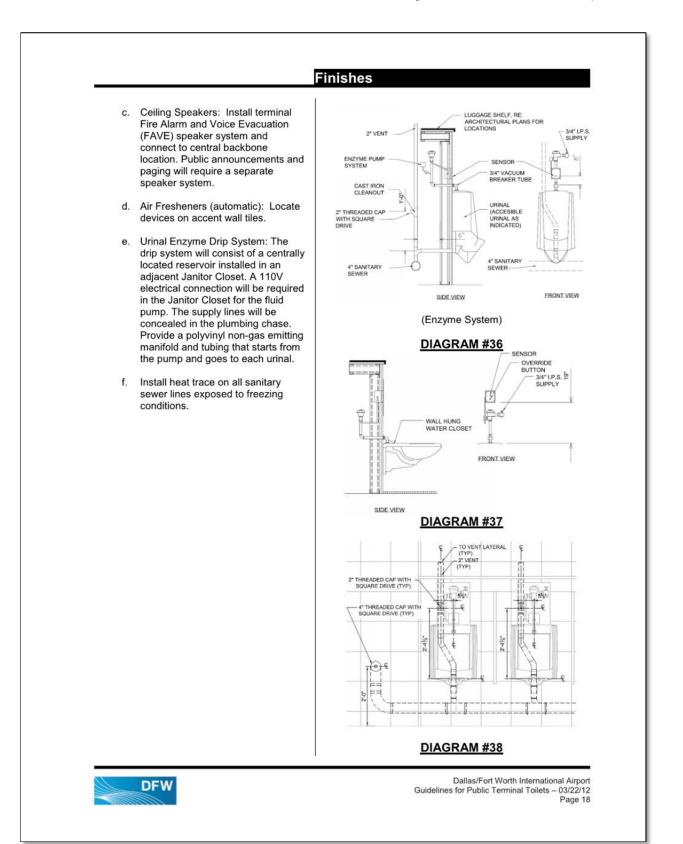












_		Appe	endix
4.0	APPENDIX	14.	(TA-6a) Partition Mounted Feminine Napkin
4.1	TOILET ACCESSORIES		Disposal (serves two stalls): B-354 by Bobrick. (TA-6b) Recessed Feminine Napkin Disposal: B-35
Acc	SPECIFICATIONS eptable manufacturer(s):		by Bobrick (TA-7) Surface Mounted Coat Hook: B-211 by
1.	Bobrick Washroom Equipment Co.	17	Bobrick. (TA-8) 34" Utility shelf with mop and broom holders
2.	American Specialties, Inc.	17.	and hooks: B-239 by Bobrick
	Approved Equal toilet accessories to be keyed the same.	18.	(TA-9) 28 Quart Wastebasket – Black: by Rubbermaid 2956
Acc	eptable product(s):	19.	(TA-10) Stainless Steel Door Bumper with plastic
	(TA-1a) 36" grab bars in toilet		end cap; mounted to outer lower corner of door
	compartments: B-6806.99 x 36 by Bobrick		where it comes in contact with adjacent wall or toile partition. Submittal required by Contractor for
	(TA-1b) 42" grab bars in toilet		approval.
	compartments: B-6806.99 x 42 by Bobrick (TA-2a) Lavatory Mounted Soap	4.2	CORNER GUARDS
	Dispenser: B-8226 by Bobrick (TA-2b) Lavatory Mounted Foam Soap		
	Dispenser: To be provided by the airline		ceptable manufacturer(s): InPro Corporation
	maintenance department and installed by		Blanke Corporation
	the contractor.	3.	Schluter Systems
	(TA-3a) Recessed Combination Paper Towel Dispenser and Waste Receptacle	Acc	ceptable product(s):
	(locate in high volume toilet rooms):	1.	(CG-1) 3" X 3" Satin finish Stainless Steel surface
	B-3944 by Bobrick		mounted corner guard, exposed edges and corner rounded; with pressure sensitive adhesive backing;
	(TA-3b) Surface Mounted Combination Paper Towel Dispenser and Waste		no exposed fasteners. Length: length of wall.
	Receptacle (locate in low volume toilet		The second s
	rooms): B-3699 by Bobrick	2.	(CG-2) Stainless Steel End Wall Guard surface mounted, exposed edges, and corner rounded; with
	(TA-3c) Recessed Waste Receptacle (locate in high volume toilet rooms):		pressure sensitive adhesive backing; no exposed
	B-3644 by Bobrick		fasteners. Width: width of wall up to 8". Length:
	(TA-3d) Surface Center Pull Paper Towel		length of wall.
	Dispenser (locate in high volume toilet rooms): GP58201 by Georgia Pacific TA-4) Recessed Stainless Steel Baby	4.3	WALL PROTECTION AND FLOOR TRANSITION PROFILES
	Changing Station: KB 110-SSRE CRE by	1	Schluter Systems
	Koala Bear Products	2.	Blanke Corporation
	(TA-5a) Partition Mounted Toilet Tissue and Seat Cover Dispenser (Capacity: Two	3.	InPro Corporation
	toilet paper rolls): B-347 by Bobrick	Acc	ceptable Product(s):
	(TA-5b) Partition Mounted Toilet Tissue	1.	(CG-3) Stainless Steel, Type 304, 18 gauge,
	and Seat Cover Dispenser (Flush on one side of partition to allow clearance for grab		exposed edges and corners; Schluter - Quadec, attach with mortar behind tile no exposed fasteners
	bar, Capacity: Two toilet paper rolls):		Length: length of wall. (See Section 3 Finishes for
	B-3471 by Bobrick		Detail) Installed in all exposed edge ceramic tile
	(TA-5c) Recessed Toilet Tissue and Seat Cover Dispenser (Capacity: Two toilet paper rolls): B-3474 by Bobrick		edge conditions lieu of 3" corner guard at high traffic locations.
	(TA-5d) Surface Mounted Toilet Tissue	2.	Stainless Steel, Type 304, 18 gauge, floor
	and Seat Cover Dispenser (Capacity: Two		transitions from tile to carpet; Schluter-Reno-U,
	toilet paper rolls): B-3479 by Bobrick (To be used in the men's restroom where		attach with mortar behind tile no exposed fasteners Length: length of wall opening. (See Section 3
	there is an even number of toilet stalls and the only option.)		Finishes for Detail)

		Append	lix
4.4 1	FLOOR MATERIAL FINISH INDEX	WT-1	Wall Tile 1
			Manufacturer: American Tile Supply
GROU			Collection: Micron
	Manufacturer: Tex Rite		Color: CCI 901
	Color: Natural Gray No. 2		Finish: Polished
			Size: 12"x12"
FT-1	Floor Tile 1		Location: Field wall tile
	Manufacturer: American Tile Supply		
	Collection: Micron	WT-2	Wall Tile 2
	Color: CCI 901	and a set	Manufacturer: Dal-Tile
	Finish: Matte		Collection: Diamante
	Size: 12" x12"		Color: PO26 Ghiacco
	Location: Floor accent tile		Finish: Polished
			Size: 12"x12"
FT-2	Floor Tile 2		Location: Accent wall tile
	Manufacturer: Dal-Tile		
	Collection: Diamante	WT-3	Wall Tile 3
	Color: PO26 Ghiacco		Manufacturer: Dal-tile
	Finish: Matte		Collection: Diamante
	Size: 12" x12"		Color: PO33 Corda
	Location: Floor field tile		Finish: Polished
FT-3			Size: 12"x12"
F1-3	Floor Tile 3		Location: Accent wall tile
	Manufacturer: Dal-Tile		Location. Accent wait the
	Collection: Diamante	WT-4	Wall Tile 4
	Color: PO33 Corda	VV 1-4	Manufacturer: Dal-Tile
	Finish: Matte		Collection: Permabrite
	Size: 12" x12"		
	Location: Floor accent tile		Color: 6465 Gloss Almond Finish: Polished
	WALL PANEL MATERIAL INDEX		Size: 2" x 2"
4.4	WALL PANEL MATERIAL INDEX		
WP-1	Wall Panel 1		Location: Accent wall tile in restroom entry and
	Manufacturer: Marlite		lavatory
	Collection: Modules	WAT F	Deee Wall Tile F
	Finish: SSM-400 Matt Aluminum	WT-5	Base Wall Tile 5
	Size: 2'-0" (tall) x 3'-0" (wide) max.		Manufacturer: Dal-Tile
			Collection: Diamante
WP-2	Wall Panel 2		Color: PO26 Ghiacco
	Manufacturer: Marlite		Finish: Polished
	Collection: Modules		Size: 6"x6"
	Finish: SSM-338 Moire Aluminum		Location: Accent wall tile at curved entry walls
	Size: 2'-0" (tall) x 3'-0" (wide) max.	14.000	Description of
		WT-6	Base Wall Tile 6
WP-3	Wall Panel 3		Manufacturer: Dal-Tile
	Manufacturer: Marlite		Collection: Diamante
	Collection: Modules		Color: PO26 Ghiacco
	Finish: SSM-364 Brushed Aluma		Finish: Polished
	Stainless		Size: 6"x12"
	Size: 1'-0" (tall) x varies		Location: Base wall tile
4.5	WALL MATERIAL FINISH INDEX	WC-1	Wall Carpet
			Manufacturer: Tretford
GROU	IT:		Style: Heavy contract cord carpet
	Manufacturer: MAPEI		Color: 527 Dried Lavender
	Color: Ivory 39		Height: Wainscot to extend 6' AFF
			Location: Transition Area: Wall covering when
		1	entering the Toilet Room



		Appe	endix
4.6	CEILING FINISH MATERIAL INDEX	4.9	DOOR HARDWARE
			Manufacturer: Schlage
CT-1	5 51		Color/Finish: #626 Satin Chromium Plated
	Manufacturer: Armstrong World		Product Number: SCH ND97BDRHO 626
	Industries		Location: Assistance Room
	Collection: Armatuff		
	Color: White	4.1	0 PLUMBING FIXTURES AND SPECIFICATIONS
	Finish: Medium Texture		tures succest for energific an existing items shall be the
	Edge: Square		tures except for specific specialty items shall be the
	Size: 2'x2' Location: Janitor's Room		ures listed or an Approved Equal, manufactured by nerican Standard, Kohler or an Approved Equal. All
	Location. Janitor's Room		table water components must be listed with
CT-2	Ceiling Tile Type 2		F/ANSI – 61.
	Manufacturer: Armstrong World	ING.	F/ANSI = 01.
	Industries	1	Water Closets (WC-1): American Standard
	Collection: Fine Fissured		2257.103 Afwall water-saver white vitreous china,
	Color: White		wall mounted, elongated siphon jet, 1-1/2" top spud
	Finish: Medium Texture		bowl trimmed with Church Model 9500SSC white
	Edge: Tegular		open front seat less cover, with check hinge and
	Size: 2'x2'		stainless steel posts. Sloan Royal Optima 152-1.28
	Location: Assistance Room, Men's		WB ES-S chrome plated quiet flush valve with
	Room and Women's Room		screwdriver stop, vacuum breaker and flush
4 7			connection. Closets to be supported by Josam,
4.7	LAVATORY FINISHES		Wade, Zurn or Smith cast iron chair carrier with lugs
cou	NTERTOP:		for floor and wall attachment and appropriate closet
	Manufacturer: Solid surface by		fitting as job requires.
	Silestone	_	Water Classife (MC 111), Came on MC 1 averat
	Color: Rasa Grey #1201; 3/4" thick	2.	Water Closets (WC-1H): Same as WC-1 except
	with square edge		mount toilet bowl at handicapped height as required by the latest edition of Texas Accessibility Standard
			and Americans with Disabilities Act. Mounting
BASI	E CABINET:		height for flush valve shall be as required by the
	Manufacturer: Plastic Laminate by		latest edition of Texas Accessibility Standards and
	Wilsonart		Americans with Disabilities Act. Handle position to
	Color: Graphite Nebula, 4623-60		be on clear space side of water closet.
	Matte Finish.	2	
4.8	PAINT FINISHES	5.	Urinals (U-1): American Standard 6515.005 "Washbrook" white vitreous china wall mounted 3/4
PT-1	Paint Type 1		top spud siphon jet urinal with flushing rim or an
	Manufacturer: Sherwin Williams		Approved Equal by Eljer or Kohler. Sloan Royal
	Color: Zurich White Satin - #SW7626		Optima 195-0.5 WB ES-S chrome plated quiet flush
	Finish: Flat – Premium Interior Finish		valve with screwdriver stop, vacuum breaker and
	Location: Ceilings, Soffits,		flush connection. Urinals to be supported on Josan
	Bulkheads, Janitors Closets, and non-		Wade, Zurn or Smith, cast iron chair carrier with
	public rooms		adjustable cast iron and steel frame, tubular legs,
			hanger and bearing plate lids for floor and wall
PT-2			attachment, threaded fixture studs with nuts and
	Manufacturer: Color Tex		washers.
	Color: # 13 Gray		
	Finish: Poly-shield Plus Coating	4.	Urinal (U-1H): Same as (U-1) except mounting
	Location: Interior Walls with public		height shall be as required by the latest edition of
	access		Texas Accessibility Standards and Americans with
PT-3	Paint Type 3		Disabilities Act. Handle position to be on clear on
5	Manufacturer: Color Tex		side of urinal.
	Color: PS50804		
	Location: Existing Concrete Columns		

5. Lavatory (L-1): American Standard 0496.221 Ovalyn 19" oval under counter mounted white vitreous china countertop lavatory, trimmed with grid strainer drain and Sloan Optima ETF-600 automatic faucet or an Approved Equal by Eljer or Kohler, chrome plated 17 gauge brass adjustable P-trap with clean-out plug and arm with escutcheon, loose key stops, rigid supplies, and offset supply pipes. Lavatory P-trap and angle valve assemblies shall be insulated with fully molded, "Truebro", HandiLav-Guard insulation kit, with 3-piece interlocking trap assembly and 2-piece interlocking angle valve assemblies or an Approved Equal. Fasteners shall be nylon-type supplied with kit.

- 6. Service Sink (SS-1): American Standard wall mounted sinks shall be white enameled cast iron, twenty (20) inches by twenty two (22) inches, blank back with wall hanger supports. Faucet shall be "Kohler" brand or equivalent wall-mounted rough plated faucet with valve units, vacuum breaker, wall brace, and threaded spout with pail hook. Trap shall be adjustable standard for three (3) inch pipe connection with cleanout plug and strainer, enameled inside.
- 7. Mop Sinks (MS): Precast terrazzo, engineered stone, or stainless steel floor mount mop sink, Model TSBC-6011, pearl gray, 12" high walls, stainless steel drain body, 3" combination dome strainer and lint basket, stainless steel caps on all curbs; Model 830-AA service faucet, chrome plated with vacuum breaker, adjustable wall brace, pail hook, 3/4" hose thread on spout, 8" centers; Model 832-AA hose and bracket, 30" x 5/8" HD hose, 18 gage 302 stainless steel bracket; Model 889-CC mop hanger, 24" x 3" stainless steel for three mops minimum; as manufactured by Fiat, Acorn Engineering or an Approved Equal.
- Electric Water Cooler (EWC):
 a. Fountain Model M8CR as
 - manufactured by Oasis or an Approved Equal by Elkay, Sunroc, Haws or Halsey Taylor: Recessed electric water cooler, barrier free, two level wheelchair accessible with



stainless steel top, vinyl on steel body, elevated anti-squirt bubbler with stream guard, automatic stream regulator, mounting bracket, refrigerated with integral air cooled condenser; capacity of 8.0 gal/hr of 50 degree F, 1/5 HP compressor.

9. Floor Drains:

Appendix

- a. Floor Drain (FD-1): Galvanized cast iron two piece body with double drainage flange, weep holes, reversible clamping collar and round, adjustable nickel-bronze strainer and trap primer connection; Figure 30000-A as manufactured by Josam or an Approved Equal by Smith, Wade or Zurn.
- Floor Drain (FD-2): Same as FD-1 except without trap primer connection for use in shower areas.
- c. Floor Drain (FD-3): Galvanized cast iron medium deep two-piece body with double drainage flange, non-puncturing flashing clamp collar, weepholes, bottom outlet, trap primer connection, round top and removable mediumdeep sediment bucket which supports a medium-duty anti-tilting secured cast iron grate with perimeter drainage slots, Figure 32320 as manufactured by Josam or an Approved Equal by Smith, Wade or Zurn.
- d. Floor Drain (FD-4): Galvanized cast iron twopiece body with double drainage flange, nonpuncturing flashing clamp collar, weepholes, bottom outlet, round top and removable shallow sediment bucket which supports a medium-duty anti-tilting secured cast iron grate with perimeter drainage slots, Figure 32120 as manufactured by Josam or an Approved Equal by Smith, Wade or Zurn.
- e. Hub Drain (HD): Cast soil pipe increaser fitting, service weight. Hub to be one size larger than spigot end. Conform to the requirements of ASTM A-74. Where required by local authorities, provide cast iron air gap, Josam Series 88900 or an Approved Equal by Smith, Wade or Zurn.
- Additional plumbing requirements are as follows:
 - Floor Cleanouts for Interior Finished Floor Areas: Coated cast iron body, internal gasketed ABS cleanout plug with adjustable ABS housing; round with scoriated cover Figure 56000 in service and maintenance areas; square with

		Appendix
	Nikaloy foot traffic cover Figure 56020 compatible with floor finish in finished floor areas or carpet clean-out cover where required; clean-outs shall be as manufactured by Josam or an Approved Equal by Smith, Wade or Zurn.	
b	Wall Cleanouts: Square cast Nikaloy access frame, anchor lugs, satin smooth secured cover, coated cast iron cleanout tee with recessed bronzed tapped plug, Josam Figure 58740 or an Approved Equal by Smith, Wade or Zurn.	
C.	Cleanouts for Exterior Surfaced Areas: Coated cast iron, internal gasketed ABS cleanout plug and adjustable ABS housing with scoriated secured round satin Nikaloy top, Josam Figure 56000 or an Approved Equal by Smith, Wade or Zurn.	
d	Cleanouts for Interior Unfinished Accessible Areas: Cast iron tee with threaded plug. Provide bolted stack clean-outs on vertical rainwater leaders.	
e	Water Hammer Arrestor: Unit shall include a stainless steel shell, hydro- pneumatic cushion of inert gas and bellows to absorb shock, Josam 75000 Series or an Approved Equal.	
f.	Plumbing fixtures and equipment shall be furnished and installed complete with trim and all other equipment required to connect with rough-in piping at floor and wall, unless specified otherwise.	
g	Chair carriers shall be furnished with all wall mounted fixtures.	
h	NO PVC PLUMBING PIPING PERMITTED PER DFW CODE AMENDMENT/ DESIGN CRITERIA. CAST IRON PLUMBING ONLY PERMITTED IN ABOVE FLOOR APPLICATIONS.	
	DFW	Dallas/Fort Worth International Airpor Guidelines for Public Terminal Toilets – 03/22/12