Chanter 7

Technical Appendix

This section provides details and technical specifications for the non-standard elements proposed by these guidelines.

Street Details

On streets with asphalt pavement (see Chapter 5), the design of the pavement, striping and concrete curb & gutter should be based on standard DDOT specifications and details. On streets with concrete pavement and granite curbs, the pavement design should be based on DDOT standard specifications and details, with the exception of joint spacing, finish texture and color. These should be as follows:

Spacing Expansion Joint: <u>Street</u> 16' O.C. perpendicular to curb, 19' O.C. parallel to curb

Sidewalk 16' O.C. perpendicular to curb, 20' O.C. parallel to curb

Spacing Control Joint: <u>Street</u> 16' O.C. perpendicular to curb, 9.5' O.C. parallel to curb

<u>Sidewalk</u> 8' O.C. perpendicular to curb, 5' O.C. parallel to curb

Finish texture: Street raked finish | Sidewalk medium broom finish

Color: "Moonstone" by Scofield | SC4275 SRI 36 | Integral Mix or DDOT approved equal

As noted elsewhere in these Guidelines, the intent is to match the color and texture of the existing streets, as shown in the photo below. Curb and gutter details are shown on the following pages. DDOT standards for striping should be followed.

Since the neighborhood will include both curbed and curbless streets, care should be taken to properly detail the transitions between these two conditions. In general, curbs should not transition on a radius or at a utility such as a curb inlet. Site grading will also need to be carefully coordinated in these locations.

Curbless streets will need to include tactile warning where the sidewalk abuts the roadway, and a trench drain immediately outside (i.e. closer to the centerline) the line of the flush curb. Acceptable tactile warning materials include gray or black concrete pavers, gray or black stone pavers, and cast iron plates.



Key

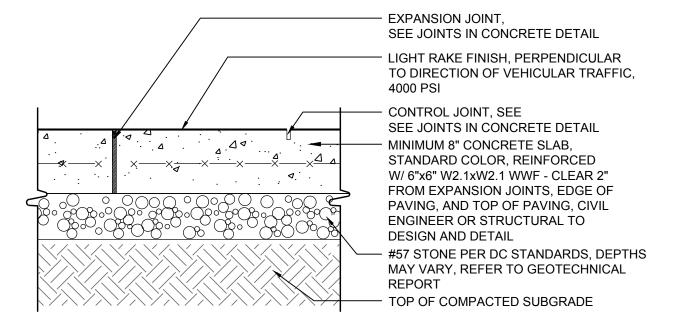
IIIIIIIIIII Curbless St with Trench Drains

IIIIIIIIIIIIIII Curbed St with Curb Inlets



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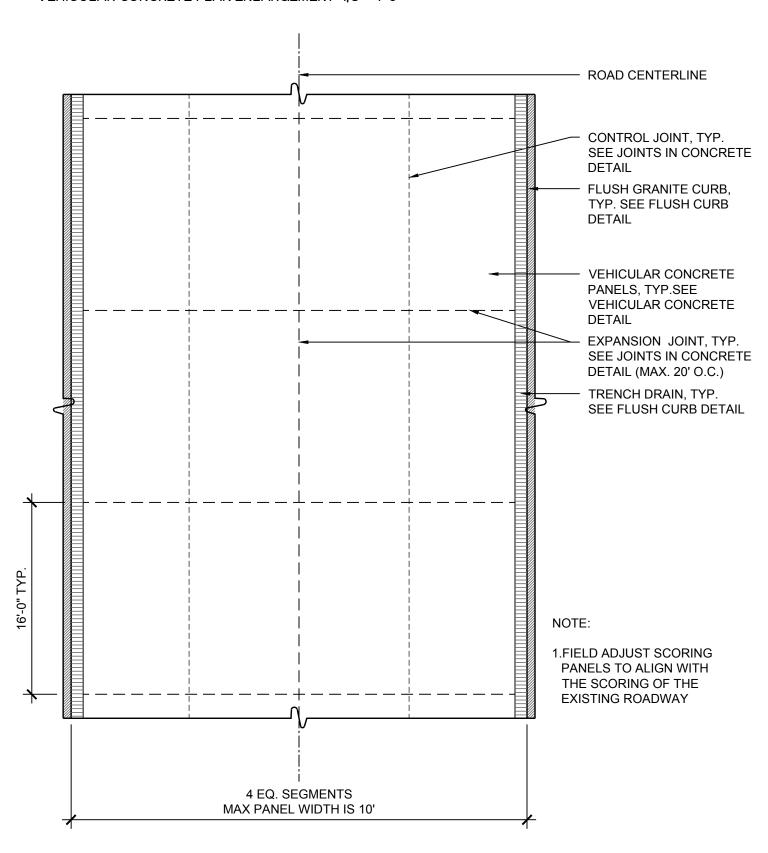
VEHICULAR CONCRETE: 1" = 1'-0"



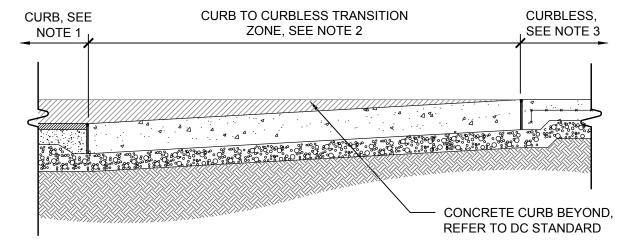
NOTES:

1. REFER TO PLAN FOR SCORING DIMENSIONS

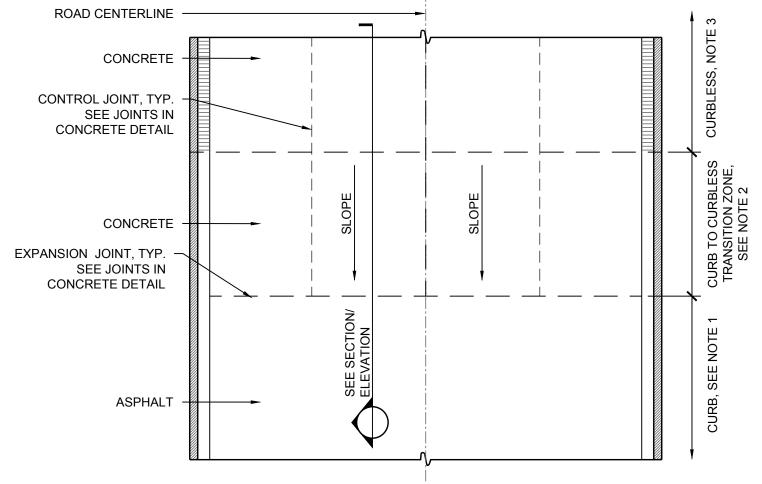
VEHICULAR CONCRETE PLAN ENLARGEMENT: 1/8" = 1'-0"



CURB TRANSITION (SECTION / ELEVATION): 3/8" = 1-0"



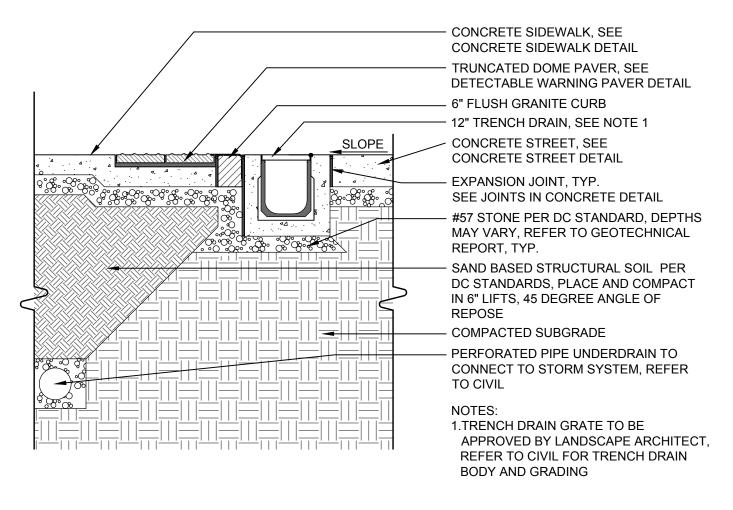
CURB TO CURBLESS TRANSITION (PLAN): 1/8" = 1'-0"



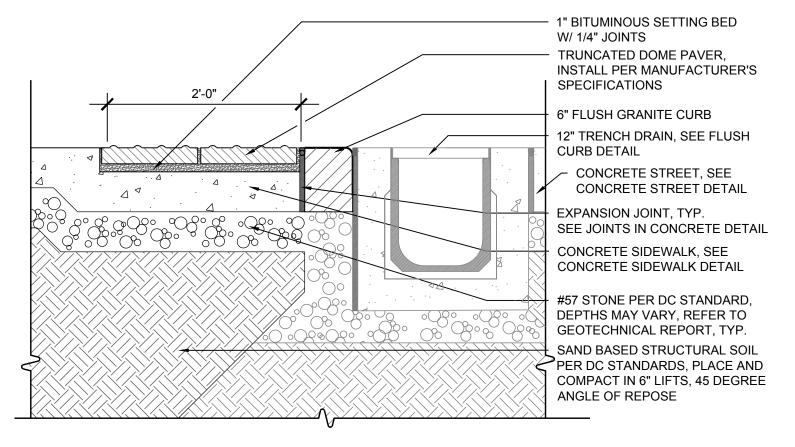
NOTES

- 1. REFER TO DC STANDARD FOR PCC CURB AND GUTTER WITH FLEXIBLE PAVEMENT
- 2. REFER TO DC STANDARD FOR SLOPE SPECIFICATIONS & PCC CURB AND GUTTER WITH CONCRETE PAVEMENT
- 3. REFER TO CONCRETE STREET DETAIL WITHIN THE GUIDELINES

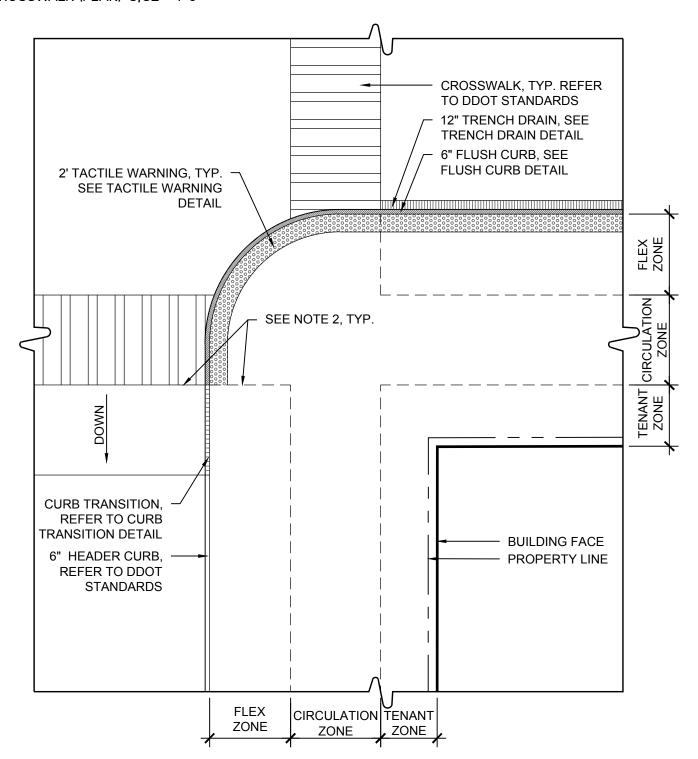
FLUSH CURB: 1/2" = 1'-0"



DETECTABLE WARNING PAVERS: 1" = 1-0"



CROSSWALK (PLAN): 3/32" = 1-0"



NOTES:

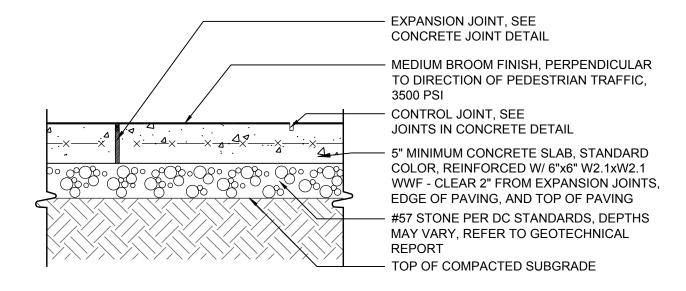
- 1. CONDITIONS VARY, REFER TO CURBLESS/ CURB STREET GRAPHIC AT BEGINNING OF CHAPTER 7.
- 2. CIRCULATION ZONE TO ALIGN WITH CROSSWALK.
- 3. CURB TRANSITION OCCURS BEYOND THE EDGE OF THE CROSSWALK WHEN A CURBLESS STREET INTERSECTS WITH A CURBED STREET.
- 4. TACTILE WARNING PAVERS ARE CONTINUOUS IN FLUSH CONDITIONS

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Sidewalk Hardscape Details

The materials used in the sidewalks should also take their inspiration from the materials in use throughout the neighborhood. This should primarily include broom-finished concrete, particularly in the tenant and circulation zones described in Chapter 5. Given the flexible nature of the flex zone, other materials such as wood decking and stone dust are also appropriate there.

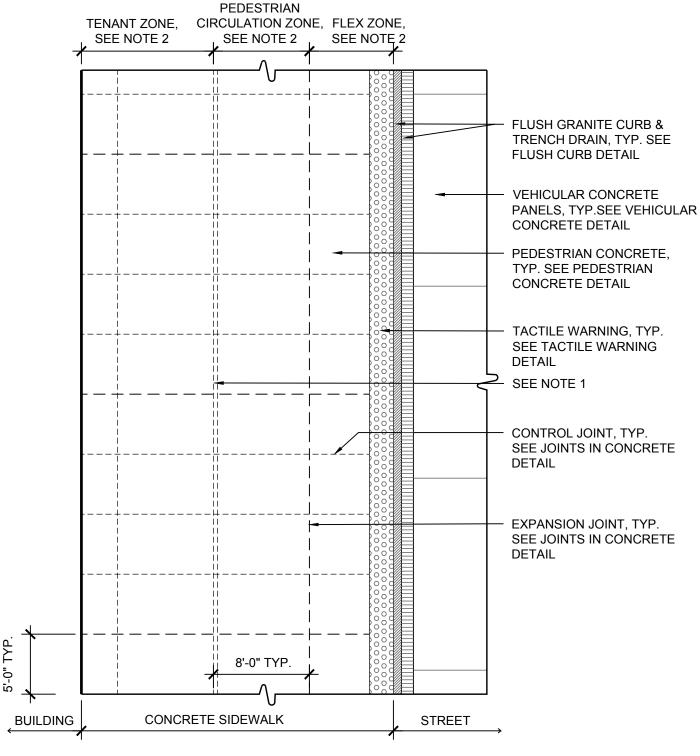
CONCRETE SIDEWALK: 1" = 1'-0"



NOTES:

1. REFER TO PLAN FOR SCORING DIMENSIONS

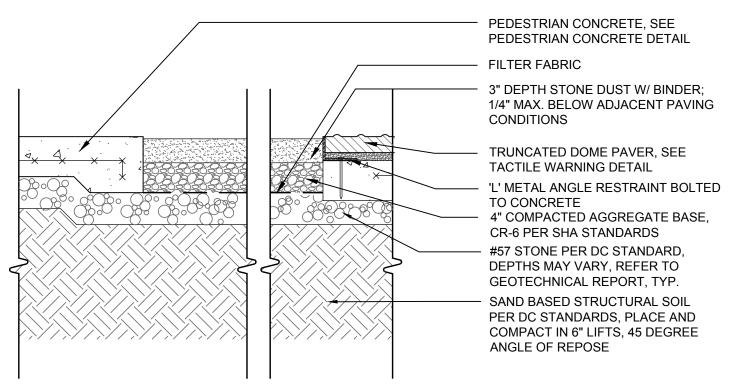
CONCRETE SIDEWALK PLAN: 1/8" = 1'-0" DeafSpace Design



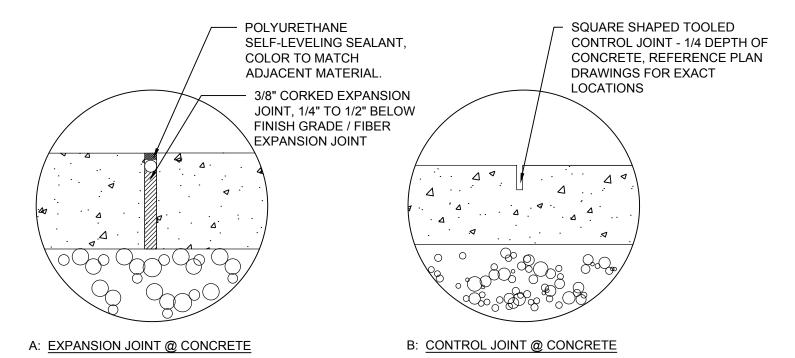
NOTES

- 1.VISUAL IMPAIRMENT DEMARCATION LINES (2 CONTROL JOINTS @ 4" APART) LOCATED TO THE INSIDE OF THE PEDESTRIAN ZONE CLOSEST TO THE BUILDING
- 2.SCORING PATTERN TO ALIGN WITH PEDESTRIAN, FLEX AND TENANT ZONE EXTENTS, REFER TO STREETSCAPE MATRIX
- 3.MINOR ADJUSTMENTS TO THE SCORING OF THE PANELS MAY BE APPROPRIATE TO BETTER ALIGN TO THE SCORING OF EXISTING SIDEWALK PANELS

STONE DUST- 1" = 1'-0"



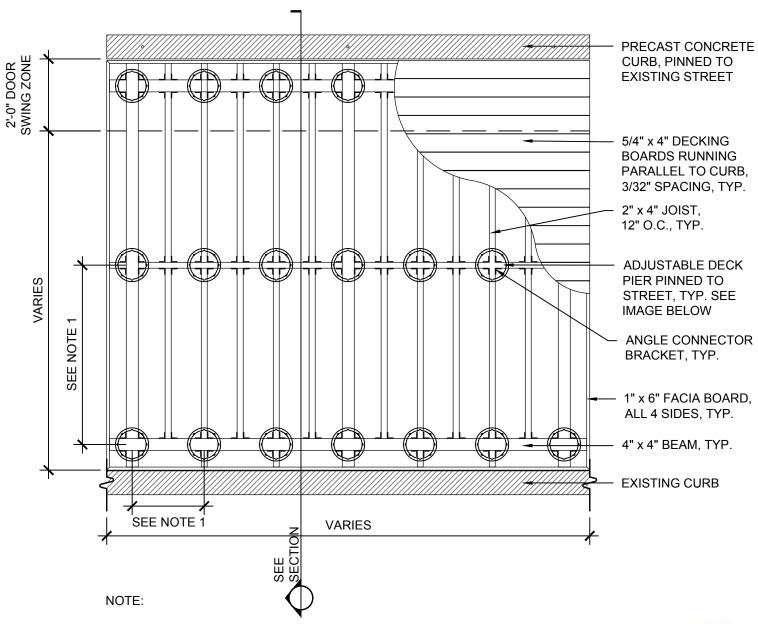
JOINTS IN CONCRETE: 3/8" = 1-0"



DECK INTERIM (PLAN): 3/8" = 1-0"

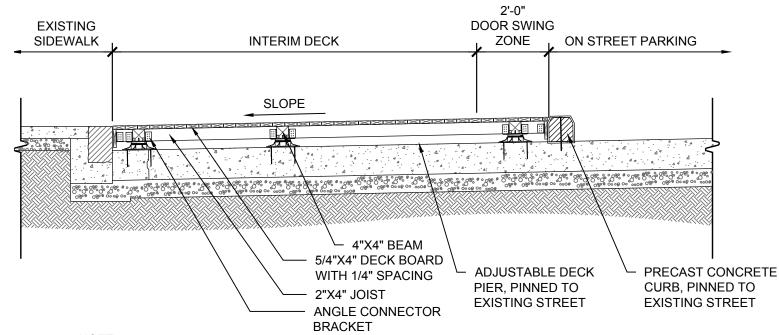


The decks make for excellent conversation nodes for ASL conversations as they allow for individuals communicating to get attention of the others through the vibratory message of a kick to the floor.



1. ADJUSTABLE DECK PIER ON CENTER SPACING DEPENDS ON TYPE OF PIER AND BEAM/JOIST THICKNESS THAT IS SELECTED

DECK INTERIM (SECTION): 3/8" = 1'-0"



NOTE:

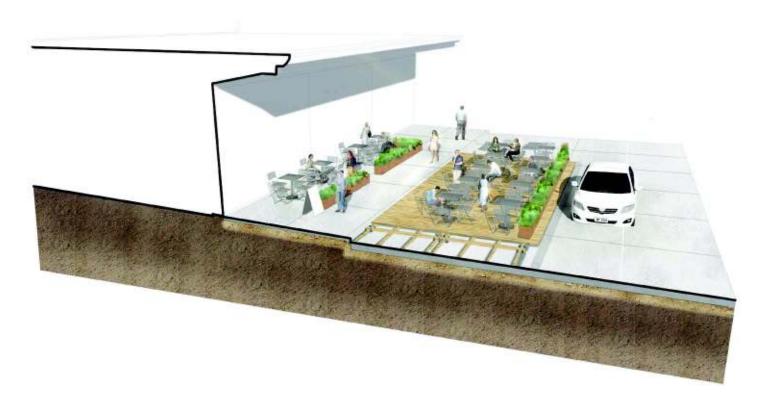
- 1. SLOPE OF DECK NOT TO EXCEED 2%
- 2. DOOR SWING ZONE SHALL BE FREE OF ANY OBSTRUCTIONS,
- PLANTER/FENCE OR SUITABLE BARRIER MUST DENOTE THE EDGE OF THE ZONE

Platform Decks

The need for a pedestrian clear path on the existing sidewalk means no space for larger areas of café seating. These can be located on the platform decks in the interim. The decks also have the effect of narrowing streets and traffic calming.







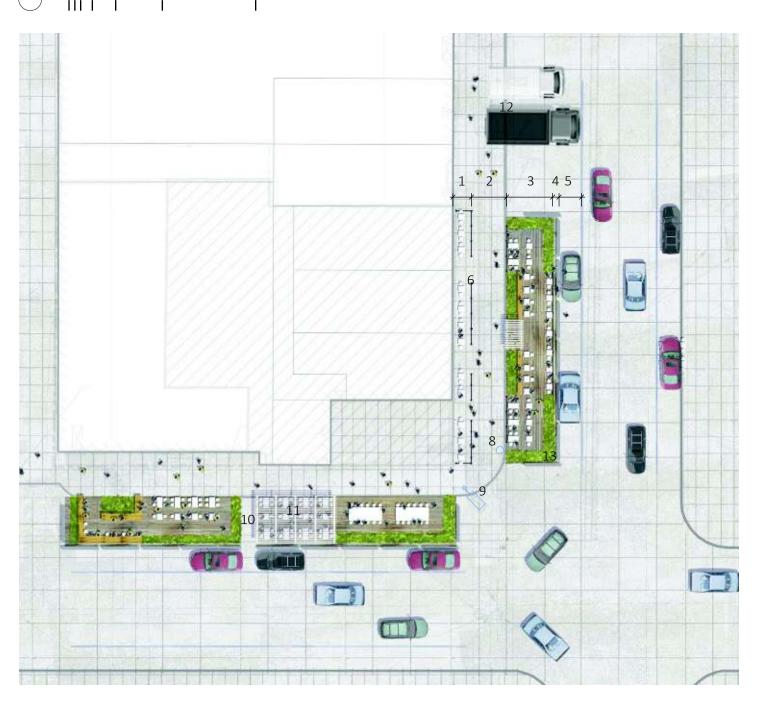
Key

- (1) 5' Tenant Zone
- (2) 10' Pedestrian Zone (7) Cafe Seating on Interim
- (3) 14' Flex Zone Deck Decks, Typ.
- (4) 2' Door Swing Zone
- (5) 8' Parallel Parking
- (8) Existing Fire Hydrant

(6) Abra Barricade, Typ.

(9) Existing Light

- (10) 5' Walk Connection to
 - Parallel Parking
- (11) Pergola
- (12) Existing Curb
- (13) Planting



Ch. 7 - Technical Appendix | Interim Measures
Union Market Streetscape Design Guidelines

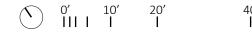
Flow Line

TRANSITION FROM HEADER CURB TO CURBLESS CONDITION

Phasing of streetscape improvements is due to disparate ownership, and a need to transition from existing conditions to new improvements. Curb transitions (1) will occur at a 45 degree angle establishing a flow line (4) between the existing and proposed curbs. Drain inlets will be placed at low points to intercept runoff from up the street. There's still space for curbside loading and head-in parking (8) where the curb is in its current location.

Key

- (1) Transition from Header Curb to Curbless
- (2) Existing Curb
- (3) Proposed Curb
- (4) Flow Line
- (5) Drain
- (6) Parallel Parking
- (7) Drive Lane
- (8) Existing Loading/ Head-in Parking

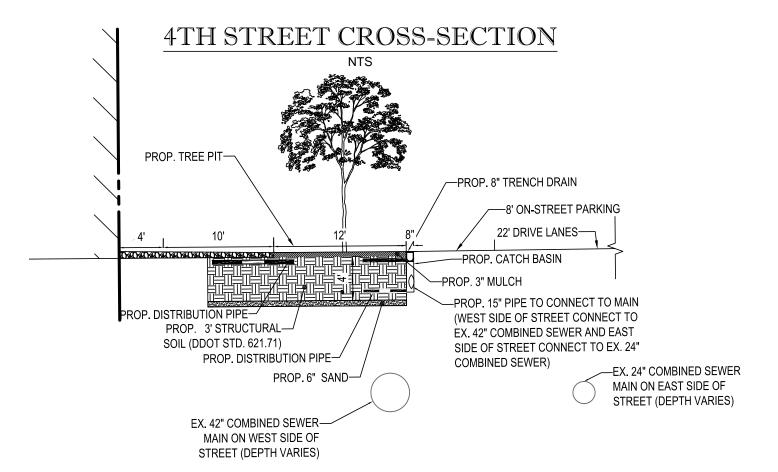


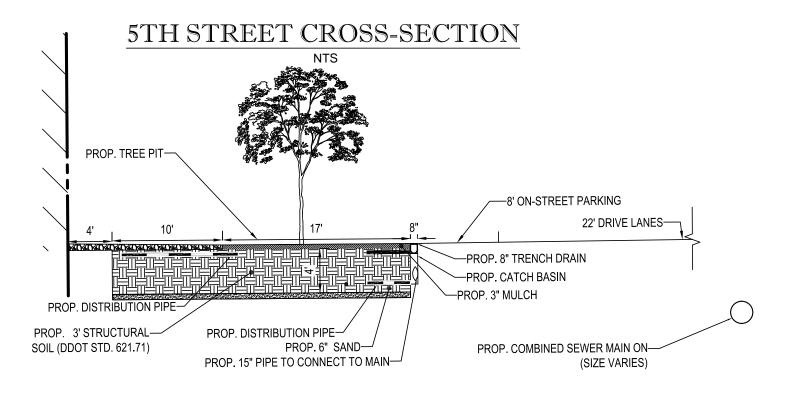


Stormwater Management Details

On the three streets with curbless sections, stormwater management should be provided in infiltration beds within the streetscape. These beds will need to be sized per Department of Energy and Environment (DOEE) regulations. Typical details are shown below, and generally include trench drains between the flex zone and the parallel parking. Trench drain covers should be ductile iron and have openings no larger than 0.25" in one direction.







Plant Materials

If a regular street tree spacing of 30′ – 45′ were used at Union Market, approximately 336 street trees would be planted within the neighborhood. As discussed elsewhere in the Guidelines, regular tree spacing would not be in keeping with the character of the Market streets, and the 113 tree deficit on these streets will need to be made up elsewhere. 6th Street will have 36 additional trees as part of the protected bikeway, and tightened tree spacing along Florida Avenue will result in 4 additional trees. The net result is that 73 trees will need to be planted outside the neighborhood by owners who build new streetscape on Neal Place, 4th Street and 5th Street.

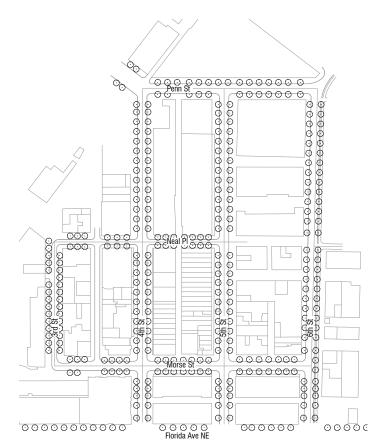
The Urban Forestry Administration (UFA) will work with owners to identify other locations in public space where the 73 trees should be planted; one possible location would be Brentwood Parkway between 6th Street and Mt. Olivet Road. As the total frontage along the Market Streets (including only the north side of Morse Street west of 4th Street) is 5700 LF, off site trees will be required at rate of one tree / 78 LF of new streetscape improvements.

Similar trees may be permitted when these selections are unavailable. Trees will be limbed up above eye level to establish clear site lines and allow for signed conversations, which is appropriate as a deafspace design principle.

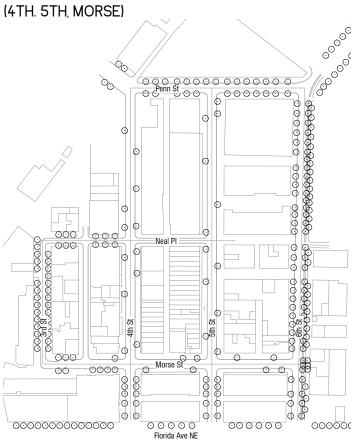
STREET TREE PALETTE

Street	Street Tree	Location	Height
4th St & 5t	h St		
	Catalpa	Flex Zone, Curb	40' -70'
	Black Locust	Flex Zone, Curb	30'-50'
	Eastern Hophornbeam	Flex Zone, Curb	25' -40'
	Fruitless Kentucky Coffee Tree	Flex Zone, Curb	50' -70'
6th St			
	American Elm	Curb, Bike Buffer	40'-50'
	Thornless Honey Locust	Curb, Bike Buffer	30' -70'
Penn St			
	Eastern Hophornbeam	Curb	25' -40'
	Turkish Hazel	Curb	40'-80'
Neal Pl			
	Green Hawthorn	Curb	25' -35'
Morse St			
	Chinkapin Oak	Flex Zone	40' -60'
	Green Hawthorn	Flex Zone	25' -35'
	River Birch	Flex Zone	40' -70'
	Thornless Honey Locust	Curb	30' -70'

TREE SPACING PER DDOT STANDARDS



POTENTIAL INCREASED TREE SPACING



Green Canopies

Architectural canopies are a distinctive element on the historic buildings at Union Market, and outlined elsewhere in the guidelines, new buildings on certain streets will be required to include canopies above the ground floor. Building owners are encouraged to consider planted canopies where feasible, as such canopies offer many environmental benefits, particularly on streets with a reduced number of street trees. These include for example stormwater management, urban heat island mitigation, and habitat production. Careful attention should however be paid to planting depths, sun exposure, plant selection, and irrigation needs to ensure long-term viability.

Green Walls

Whether in the form of planted walls or vines, green walls offer another opportunity to introduce plantings into the streetscape. As for green walls, attention should be paid to plant types, irrigation, and sun exposure to ensure long-term viability. Examples of green walls are shown below.

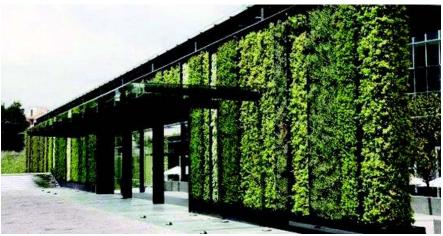
















Shrub + Perennial Palette

The design intent for plant selections should draw inspiration from the neighborhood as it exists today. Highly manicured or gardenesque planting schemes are discouraged in favor of looser, more informal designs. Some examples are shown at right.



ENGINEER TO CONFIRM

VOLTAGE

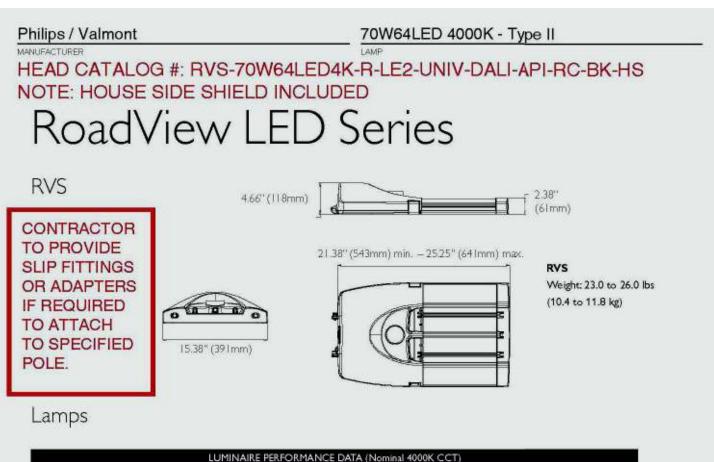
70W64LED 4000K - Type II

Voltage

UNIV (120-277)

Street Lights PeafSpace Design

In keeping with the existing character of the neighborhood, new light fixtures should be cobrahead types. The fixture below is a DDOT standard head, and should be used with a 20' pole to establish an appropriate scale. Photometrics will need to be approved by DDOT for individual projects, but in general this fixture has been specified to provide adequate lighting levels at 60' on center spacing, both sides of the street. Use of this fixture at a 60' spacing will provide appropriate lighting per AASHTO standards, for example, reducing glare and hot spots.



		Drive	THE RESERVE OF THE PERSON NAMED IN	PERFORMANCE DATA (No System Max system	Weight		Length		EPA		
Lamp	LEDs	Corrent			current (Amps)			in.			
35W32LED4K	32	350	3686	37	0.31	23	10.4	21.38	543	0.53	0.049
55W32LED4K	32	530	5327	56	0.47	23	10.4	21.38	543	0.53	0.049
72W32LED4K	32	700	6536	73	0.61	23	10.4	21,38	543	0.53	0.049
55W48LED4K	48	350	5397	53	0.44	23	10.4	21.38	543	0.53	0.049
80W48LED4K	48	530	7799	81	0.68	23	10.4	21.38	543	0.53	0.049
108W48LED4K	48	700	9570	105	0.88	23	10.4	21/38	543	0.53	0.049
70W64LED4K	64	350	6970	68	0.57	26	11.8	25.25	641	0.60	0.056
110W64LED4K	64	530	10072	104	0.87	26	11.8	25.25	641	0.60	0.056
90W80LED4K	80	350	8555	85	0.71	26	11.8	25.25	641	0.60	0.056
135W80LED4K	80	530	12363	129	1.08	26	11.8	25.25	641	0.60	0.056

*For Type III distribution. See photometric files for other distributions.

Constant Light Output, driver pre-programmed to achieve the same light intensity for the duration of the lifespan of the lamp* DALI Driver compatible with DALI control systems* Over The Life, driver pre-programmed to signal the end of lamp life* Dynadimmer override function for use with motion detector or other switching device *Only available with 120 - 277 volts. ** For all programmable options please consult the factory for details Receptade for photocell. Terminal block or shorting cap Luminaire options #2 - #14 AWG Surge API ANSI/NEMA wattage label OSL3W Motion detector (requires DMG or CDMG) Photoelectric cell, twistlock type includes receptacle PH8XL* Photoelectric Cell, Twist-lock Type, "Fail ON", extended life 10-year limited warranty from supplier Receptacle for a twist-lock photocell or shorting cap Strain relief * Not available with 347 and 480 volt. Luminaire accessory SPC* StarSense Photo-cell Control * Luminaire option RC is required with this accessory Finish options GY3 Specifications subject to change without notice. BK Black Consult factory for full details. Extrusion painted to match cast housing color selected above (standard extrusion color is anodized aluminum). PHILIPS Additional colors are available. Consult factory for complete specifications. HOUSE SIDE SHIELD LEDGINE INCLUDED

Philips / Valmont

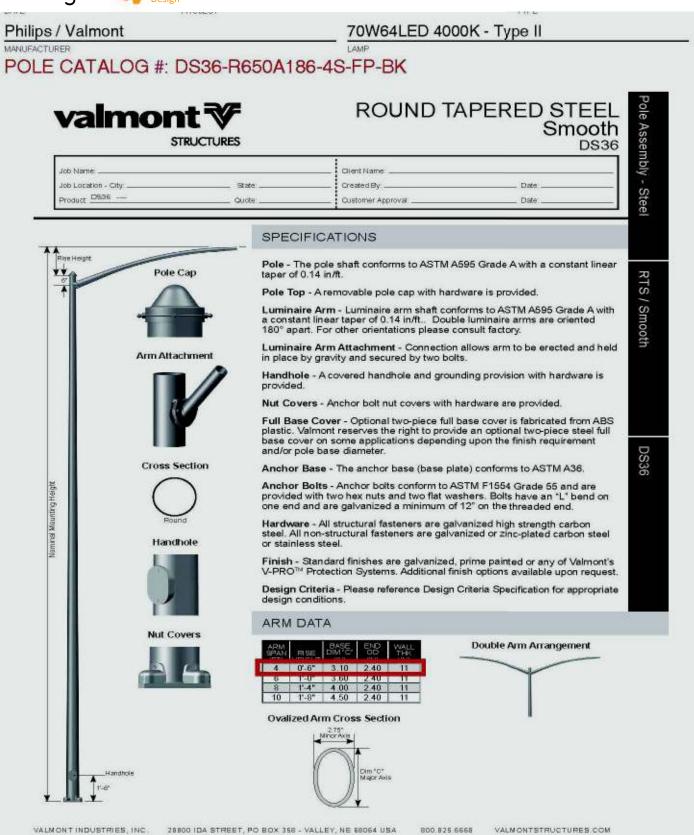
Optical systems / LED

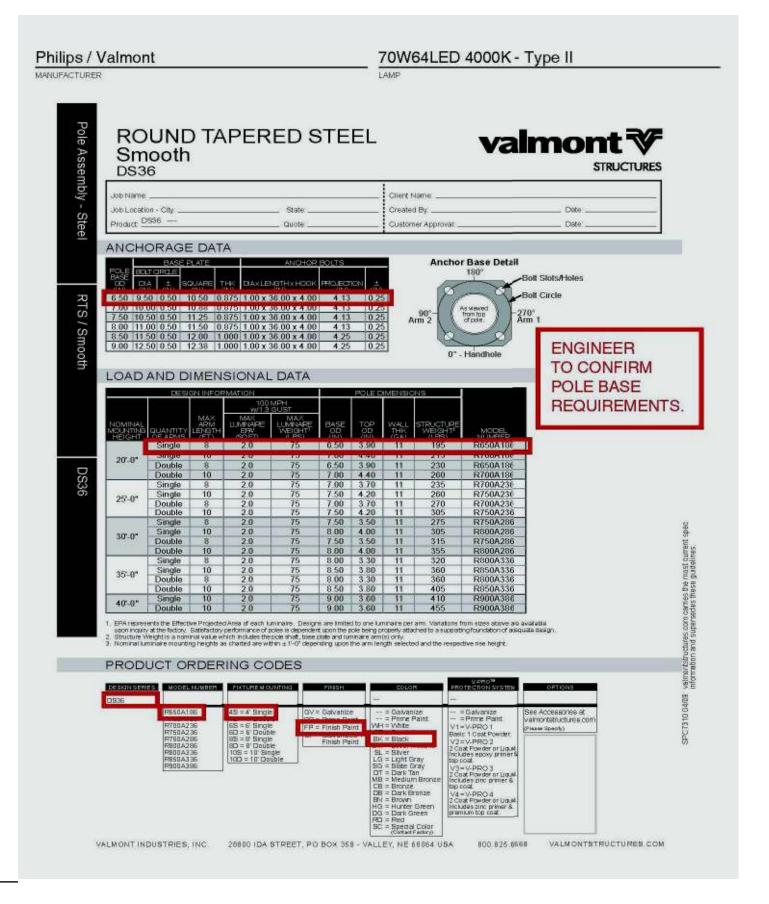
LE2 TYPE II / Asymmetrical distribution

LE3 TYPE III / Asymmetrical distribution

LE4 TYPE IV / Asymmetrical distribution







Benches W DeafSpace Design

Bench selections should take into account comfort and usability, and should also fit within the material palette used for other streetscape elements at Union Market. Wood, steel (rusted or painted black), powder-coated aluminum, stone and concrete are all appropriate materials. Finishes should be neutral (brown, black, gray) rather than highly chromatic. The details of the benches and other site furnishings may be massive or heavy, in keeping with the industrial character of the neighborhood. Benches may be arranged facing one another to facilitate conversations in ASL.













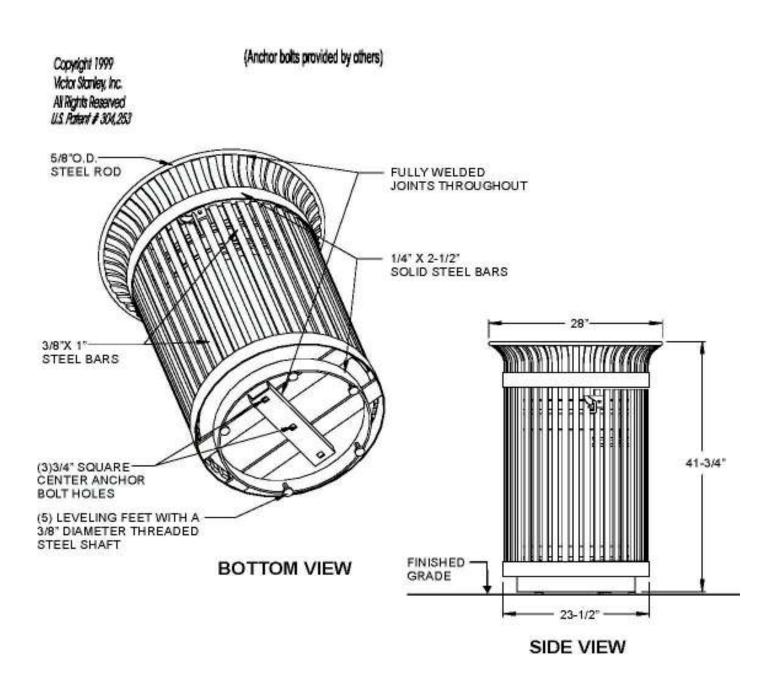


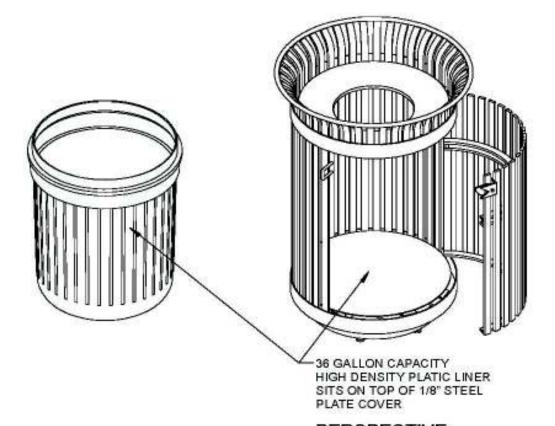


The images are intended to convey character, materiality and color.

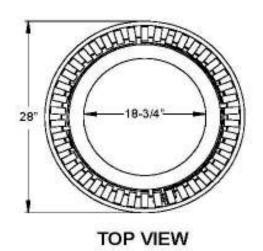
DC Standard Trash Can

Trash receptacles shall be wrought iron frame and electrostatically powder coated, with riveted steel lid and hinged door. Each receptacle shall be furnished with a hinged door fitted with a latch.









Bike Racks

Bike racks should also be chosen that fit within the material palette used for other streetscape elements at Union Market. As for benches, steel (rusted or painted black) and powder-coated aluminum are appropriate materials. Finishes should be neutral (brown, black, gray) rather than highly chromatic. The details of the bike racks may be massive or heavy, in keeping with the industrial character of the neighborhood.

Note that DDOT standards require that bike racks allow for two points of attachment to a bicycle, and that the size the bike rack components must permit the use of U-locks. "Toast-rack" type racks are not permitted.













Planters

Planters should fit within the material palette used for other streetscape elements at Union Market. Wood, steel (rusted or painted black), powder-coated aluminum, stone and concrete are all appropriate materials. Finishes should be neutral (brown, black, gray) rather than highly chromatic. The details of the planters may be massive or heavy, in keeping with the industrial character of the neighborhood.







The images are intended to convey character, materiality and color.

Cafe Fencing W DeafSpace Design

Outdoor cafes frequently require fencing, whether due to Alcoholic Beverage Regulation Administration (ABRA) regulations, fall protection, or other reasons. Fencing should be selected to fit within the material palette used for other streetscape elements at Union Market. Wood, steel (rusted or painted black) and powder-coated aluminum are all appropriate materials. Finishes should be neutral (brown, black, gray) rather than highly chromatic. The details of the benches and other side furnishings may be massive or heavy, in keeping with the industrial character of the neighborhood.

Note that ADA requires a bottom rail for cane detection.

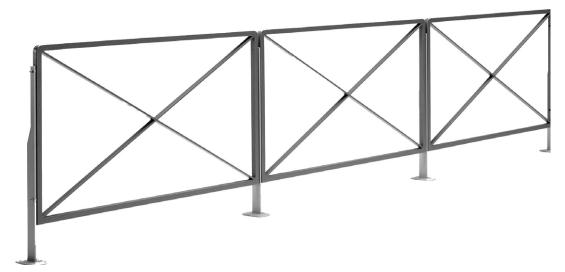


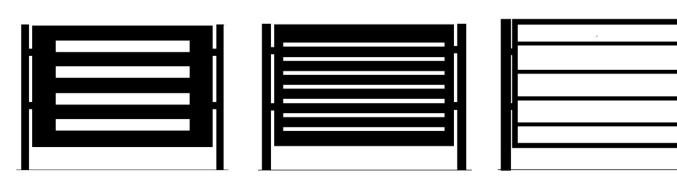












The images are intended to convey character, materiality and color. Café fencing needs to comply with ADA, must be a bottom rail within 21" of the ground.

Canopies, Umbrellas, Pergolas Websign



The flex zone offers rich opportunities for active programming, including outdoor vending and cafés (subject to approval by the appropriate agencies). In many cases these will be improved by overhead structures, whether in the form of umbrellas, canopies, shade structures, etc. Umbrellas may be selected with offset supports to improve site lines and facilitate conversations in ASL. Appropriate examples are shown below.











Market Sheds

The images are intended to convey character, materiality and color. Market sheds will only be permitted once there is an established Vending Development Zone.











