 Aspects of the NW Davis festival street include (clockwise from top left) gateway art pieces; lack of curbs to maximize flexibility; the ability to host public events day or night; and informal seating around planted areas.

“...a new experiment that uses traffic calming and unique streetscape features to create a street that can easily be converted to public use on weekends or special events.”

- streetfilms.org

FESTIVAL STREETS
PORTLAND, OR

Designer: SRG Partnership / Nevue Ngan Associates / Suenn Ho Design

Constructed: 2006
Right Of Way: 60 feet

Background/Function:
Located in Portland’s Old Town/Chinatown, these streets provide a flexible, public space able to accommodate festivals and fairs while still addressing the need for traffic movement through the city’s grid. The street has no curbs; bollards define the separation between shared and auto-free space.

Lessons:
Flexible right-of-way: In its day-to-day use, the streets have a common layout of sidewalks on both sides, parking lane and roadway, but the lack of curbs allows for all 60 feet to become pedestrian space during special events.

Decorative features and amenities: The street includes a variety of amenities that emphasize pedestrian scale and interest, such as scored concrete, entry planters with incorporated seating elements and gateway landscape elements.

The subtle differences in materials and intermittent street furnishings provide a subtle solution to ADA compliance.

Sharing of parking lane: Parking is consistent with the rest of downtown, but lacking any elevation change from sidewalk, is better suited to pedestrian inhabitation and promotes accessibility and informal sharing of the space.
“Green accessways will provide landscaped pedestrian and bicycle connections between the district’s interior and the riverfront.”
- South Waterfront Plan

Background/Function:
The South Waterfront is a new brownfield high-density development featuring alternative transportation, parks and trails, green building practices, and mixed-use retail. The two shared streets provide pedestrian and bicycle linkages to the new riverfront park.

Lessons:

Decorative paving to define space: The shared streets allow pedestrian/bike east/west access while also allow delivery/maintenance vehicle access. Decorative concrete, concrete brick pavers, concrete bands, and extensive planters break down perceived zone barriers and feelings of restricted access, turning these streets into spaces for all users. Pennoyer, the street on this page, is fronted by both residential and retail.

Reduced parking requirements: The plan includes shared parking between the office and residential uses in the development ratios area determined on a case-by-case basis. The majority of parking is in structures with some on-street parking on streets other than Pennoyer and Lane.

Very limited vehicular access: While it seems that the shared streets’ designs could allow for parking and more vehicular access. It seems the strong access controls are supported by residents and they are discussing increasing parking and access restrictions.
“Bicyclists tend to take full advantage of the shared space by riding side-by-side in the middle of the street, while pedestrians shade toward the space closer to the buildings that line the street.”
- former area resident

HASPELMATHSTRASSE
HANOVER, GERMANY

Designer: --
Constructed: --
Right Of Way: 35 feet

Background/Function:
Residential areas of Hanover Germany include fine-grain examples of neighborhood streets where space is shared by all users and alignment govern vehicle speed and the perception of shared space.

Lessons:
Mix of uses: Similar to the ‘woonerf’ concept (shared streets in Netherlands), the network of 35 foot wide alleyways serves a neighborhood of townhomes with pockets of neighborhood retail (such as the pizza service seen to the left).

Minimize level changes: Curbs, level changes and lane markings are generally absent, with street alignment and bollards instead defining this shared space.

Parking unique to street constraints: Parking is not managed, and is provided dependent on the width of the street where perpendicular parking is allowed at wider points in the street. The offset path of travel is conducive to traffic calming, a varied streetscape and some interesting sightlines.
Kalamazoo Outdoor Pedestrian Mall
Kalamazoo, MI

Designer: Victor Gruen (updated by EDAW)

Right Of Way: 65 feet

Background/Function:
This main street was America’s first outdoor shopping mall in 1959. Victor Gruen envisioned a car-free pedestrian experience. During the 1980’s and 1990’s concerns about vitality of retail led to a compromise and reintroduction of the automobile, a design for a barrier-free shared street was born in 1998.

Lessons:
Variation in material: Rolled curbs, differing paving patterns, wide sidewalks and planters create a varied ped-scape. Within its 65 foot right of way, 36 feet is devoted to pedestrians, with 14 additional feet of parking potentially being used as flexible space.

Use material change to define zone: Pedestrian zones generally have their own fired clay brick patchwork paving spilling out into the parking lane. Two concrete drainage swales visually separate the vehicle lane, but, along with rolled curbs, serves as the only separator within the right-of-way. Street furniture and raised planters with integrated seatwalls further define space.

Streetscape redesign: In 1998, EDAW designed a streetscape plan that blended the pedestrian and vehicular zones to create a shared street.

With an updated streetscape and southern access improvements designed by EDAW in 1998, the Kalamazoo outdoor pedestrian mall maintains its pedestrian dominated functionality introduced back in 1959. Note the differing paving patterns, planters and subtle level changes that define the pedestrian space.
A new plan for North Terry Avenue was realized in 2010 and relies heavily on breaking down the separations between pedestrian, vehicular and transit space. Note the material choices that define and unite each zone, with Brick as the unifying theme reflecting to the site's industrial past.

“The intent ... is to make Terry Avenue accessible to all people ... Pedestrians may be separated from areas where vehicles are allowed by a 2” or 4” curb, by a row of truncated domes per ADA specifications, or by a separator such as a planting area.”

- Terry Ave North Street Design Guidelines

**SOUTH LAKE UNION**

**SEATTLE, WA**

**Designer:** Gustafson Guthrie Nichol Ltd.

**Constructed:** 2010

**Right Of Way:** 75 feet

**Background/Function:**
This local street also includes a streetcar linkage from Downtown Seattle to Lake Union, passing through the Amazon headquarters. It is a pedestrian and bicycle-friendly street which has a design reflecting the area’s industrial past.

**Lessons:**

**Asymmetrical layout:** The asymmetrical layout of the street gives rise to a balanced approach to shared space. Within the 75 foot right of way, there is a space for pedestrians, parking, vehicle travel, tramway and parking. The width of each ‘zone’ varies, with the east pedestrian zone having a width up to 31 feet.

**Variation in material:** Brick pavers dominate the right-of-way, with exception of the west side pedestrian zone which is comprised of scored concrete. Often these material changes are at the same level as their surrounding zones. Exceptions being curbed planters and other moments of vehicle separation.

**Parking retained on one side:** On-street parking was retained on the east side, but reconfigured as back-in angled parking. As part of the Design Plan, the street was billed as being able to provide short-term parking for all existing and proposed uses.

**Relationship to ADA:** The street reflects an approach to ADA considerations that highlights the difficulty of achieving a truly shared space.
As a former delivery alley, Wall Street has been transformed into a shared street and a model for a narrow shared shopping street. Note the lack of curb and paving design that softens the hard edge between pedestrian and vehicle zones.

“The street is unique and provides a special environment...”
- Planner, City of Asheville

**WALL STREET**
**ASHEVILLE, NC**

**Designer:** --
** Constructed:** 1988
** Right Of Way:** 35 feet

**Background/Function:**
During the 1980’s the City of Asheville partnered with a single developer to rehabilitate the former historic downtown core. As a former delivery alley, Wall Street had the potential to become a boutique downtown retail district. What resulted was a developer-led project that created a shared street.

**Lessons:**
**Single level:** Occupying a single block, this narrow, shared space winds its way through boutique retail and pub restaurants. The pedestrian and vehicular zones are all one level and of similar natural stone paving. Tree planters and permanent bollards separate the pedestrian and vehicular spaces, but the street lends itself nicely to closure and pedestrian-only festivals.

**Parking on one side:** South side parallel parking was reintroduced in 1993 at the request of merchants who wished to gain drive-by customers, however it maintains the unique feeling of the street and actually serves to slow cars down. Nearby structured parking supplements the limited on-street options. Interestingly, the street still serves as a delivery alley as it had done for a century before.
“Great Streets accommodate pedestrians and slow moving traffic - and the occasional duck.”
- Eugene Downtown Plan

**DOWNTOWN**
**EUGENE, OR**

**Designer:** --

**Constructed:** last 20 years

**Right Of Way:** 60 feet

**Background/Function:**
The City of Eugene is known for its bicycle and pedestrian friendliness with established city-wide on-street and off-street networks. The downtown has been redeveloped to include several intersections (Broadway at Willamette as its major focus) that break down the barriers between bicycles, pedestrian and the automobile.

**Lessons:**

**Shared spaces:** Eugene’s downtown has established a program of shared spaces demarcated by brick areas. This includes not only crosswalks, but complete intersections that are at the same grade as the roadway, giving spatial priority to bikes and pedestrians. Warning strips mark the threshold where pedestrian and vehicle conflicts might occur. The paving patterns blend into adjacent public spaces emphasizing locations of pedestrian activity.

**Design potential of parking:** Downtown Eugene has an extensive network of bike and vehicle parking designed to de-emphasize on-street spaces and allow more shared space.

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Key intersections and main streets are provided shared space through brick crosswalks and plazas. Broadway at Willamette is at a single grade to facilitate shared space and provides seamless transition into the city plaza.
Palmer Street and Winthrop Street have both been reconfigured to be shared streets. Palmer is all one grade, whereas Winthrop relies on curbs and material change to define space within its shared right-of-way. Note the plan by Earth Tech which has clearly used material change and sidewalk width to define space.

Background/Function:
As part of the Harvard Square redevelopment project, both Palmer and Winthrop streets turned into shared streets from their humble beginnings of access alleyways. Inadequate pedestrian facilities spurred the decision to redesign these streets as shared spaces.

Lessons:
Access to multi-use: The streets lie in the Harvard Square design district and is central to Harvard University. Flanked by neighborhood and boutique retail and restaurants, these streets are key to allow all modes to access these services.

Paving to define zones: Material choice includes textured concrete cobble pavers and brick sidewalks. Palmer Street also includes innovative street furniture that both defines space and is functional.

Low posted speed: While vehicle speed is self-regulated in the surrounding area by numerous marked crossings and intersections, the shared streets are signed for 10 mph at the entries to the shared streets.

Supplemental parking: Parking for the area is provided by the Harvard Square parking garage just south of Winthrop Street. This allows for a relatively car-free shared street experience.
Central to St. Gallen, Switzerland, this district and shared street shirks the automobile in favor of a pedestrian-oriented space.

Background/Function:
As part of a design competition to create a public living room space in St. Gallen, Switzerland, an office building plaza was turned into a city lounge. As part of this revitalization, the four converging streets within the space were converted into shared space.

Lessons:
Integrate into city plaza: Border by 5-6 story office buildings, the center of St. Gallen has been transformed into a space that blurs the line between vehicle and pedestrian. This creates a plaza and shared street for all.

Controlled vehicle speed: Vehicle speed is very low due to the narrowed space for vehicles, scarce parking and the spectacular nature of the space. A red, rubberized surface, similar to a running track, defines the space. Signage and faint striping define the path of travel for vehicles.

Parking zones: Parking is allowed near the entrances to the space, but is not allowed within its core. Automobiles can traverse the space, but pedestrians and bicycles dominate the core space.

“[City Lounge is] a shared space designed to make cars behave like guests in a pedestrian space.”
- Christian Thomas, Int’l Federation of Pedestrians

Designer: Carlos Martinez and Pipilotti Rist

Constructed: 2007

Right Of Way: varies
Residents are benefitting from this shared-street pilot program. In addition to slowing traffic and increasing safety, the design allows occupying the street for recreation. Painted parking boxes offer prescribed car placement so that interference with driveway entries and island chicanes does not happen.

**Background/Function:**
In 2006, Seattle voters passed a nine-year, $365 million levy for transportation maintenance and improvements known as “Bridging the Gap.” 45th Avenue South is a block long pilot design that redefines the single-family neighborhood in which it lies. It does this by creating a traffic-calmed shared space.

**Lessons:**
- **Street without curbs:** The street maintains curbless configuration but maintains planter strips, scattered on-street parking (demarcated with painted boxes) and incorporates small landscaped islands (chicanes) that force cars to slow down via an altered path of travel.
- **Retain parking:** Parallel parking is retained for the resident’s use, but the new shared street improvements provide a quieter, safer and more pleasing street on which to live and recreate.
- **Simple low cost design:** This design shows how minimal investment can create the desired environment. Although it is not clear how ADA considerations are addressed.
“Brick, granite Belgian blocks for the “carriage way,” water-washed pebbles and thermal-finish granite (between the brick and blocks) combine to give Cady’s Alley a special character”
- Stephan Kelly, landscapeonline.com

As a former delivery alley, Wall Street has been transformed into a shared street and a model for a narrow shopping street. Note the change in paving and ways in which retail and residential frontage utilize the space.

Background/Function:
The area known as Cady’s Alley was redeveloped in the late 1990’s by a developer-led process involving individual architects. As a shared street and district it feels modern while still remaining authentic to its industrial past. Located in Georgetown’s design district, Cady’s Alley dates from Georgetown’s industrial past. Now a mixed-use retail center, the shared street serves as an access alleyway with fronting buildings and cafes. Residential above ground floor retail helps keep the alley a 24-hour attraction.

Lessons:
Decorative Paving: Brick pavers and natural stone pavers help define the pedestrian and vehicle zones respectively. However, the zones span a single grade and is largely unused by vehicles. Is the roughness of the vehicular emphasis area a viable solution to ADA issues?

Bollards to define loading: While parking is not allowed within Cady’s Alley, the retail center is supported by parking structures located to the north of the alley. Delivery and loading is allowed in wider areas defined with bollards, see photo to the left. This design approach can work with short term parking as well.
(NON-)PARKING DISTRICTS
VAUBAN
FREIBURG, GERMANY

Constructed: mid 1990’s
District Area: 94 acres

Background/Function:
Contrary to existing building practices, the idea of car-free living with car-free shared streets supplemented by perimeter parking structures became a reality with the Vauban development. Located in a suburb of Freiburg Germany, Vauban was developed to house 5,000 and employ 600. Vauban has been successful in terms of reducing vehicle presence in the area and private automobile ownership rates have plummeted amongst its residents.

Lessons:
Good connections and un-bundling the auto:
In addition to the fantastic transit connections to Freiburg, the main goal was to increase pedestrian walkability and bikability while reducing car use almost entirely. Several mechanisms allow this:
- car-free apartments with no parking requirement
- area tram for residents
- good connectivity to transit
- priority car share memberships for residents
- no parking at doorstep (only delivery allowed)

“70 percent of Vauban’s families do not own cars, and 57 percent sold a car to move here.”
- The New York Times
PORTLAND STATE UNIV.
PORTLAND, OR

**Background/Function:**
Many college campuses have car-free or reduced parking districts at their core. Portland State University is the perfect example of this development standard as it maintains the city grid while restricting car access and parking.

**Lessons:**

**Restrict access to streets:** In 1973 the campus closed off the park blocks to create a pedestrian and bicycle thoroughfare and was implemented as part of the campus plan. As such, the core campus area is dominated by pedestrian, streetcar, and service vehicle-only access. Removable bollards restrict access but can be removed to allow vehicles to enter.

**Place parking on the edge:** Parking is tightly controlled within the core of the district. Special permit and temporary delivery/maintenance parking is available but is not for the general public. Four perimeter parking structures are designed to handle parking demand and allow the core to remain car-free.

**Allow for transit:** The Portland Streetcar also runs through the core, ferrying students from other parts of the city. The design has been successful at creating a pedestrian and bicycle-dominated space, free from the hazards of automobile incursions.
LACLEDE’S LANDING
ST. LOUIS, MO

Constructed: --
District Area: 16 acres

Background/Function:
This public area in St. Louis was a former industrial riverfront area that the City chose to become an entertainment district with limited on-street parking opportunities.

Lessons:
Maintain historic fabric: The century-old narrow cobble streets and brick buildings has become decided retail and restaurant oriented, but their character remains intact. Undoubtedly the largest asset to the district is the limited on-street parking.

Perimeter parking: Limited on-street parking is supplemented by numerous surface lots surrounding the district (seen in aerial above), allowing a pedestrian friendly district while still allowing visitors to gain vehicular access to the space.
Unlike other parking districts, where parking is relegated to the perimeter, Granville keeps the waterfront clear by concentrating major parking at its core. Granville also has free boat parking, bicycle facilities and efficient bus service. Note the lack of grade changes on old Bridge Street below.

“Provisions shall be made, in the design of the streets, for pedestrians, bicyclists, vehicles, and on-street parking with due regard for the safety and separation of each.”
- Land Use Development Policies for Area 9

**Granville Island**
**Vancouver, Canada**

**Constructed:** 1973  
**District Area:** 38 acres  

**Background/Function:**  
Granville Island is one of Vancouver’s premier tourist and waterfront shopping districts and is managed by Canada Mortgage and Housing Corporation (CMHC).

**Lessons:**  
**Phased parking:** During its redevelopment over the past two decades, additional parking on the island was phased and re-evaluated to see if there really was a need for additional spaces (City of Vancouver Land Use Development Policies). Because of mode diversity (foot, bus, bike, ferry, private boat) parking was shown to not be a priority and was de-emphasized within the district. Spatially, the waterfront is left open, with parking focused within the district’s core.

**Diversity of parking options:** Parking options include paid passes, metered and free on-street spaces. However, time-limit regulations discourage street parking.

**Decrease visibility of parking:** CMHC manages parking through unique signage (international photographs) and dot striping which all try to minimize the visibility of vehicle parking. Core streets rely on dot striping and bollards to separate the pedestrian from the vehicle zone, while still providing the functionality of a shared street.
Redeveloping one of Vancouver’s industrial centers resulted in the Village on False Creek. As the 2010 Winter Olympic Village and current mixed-use village, the development focuses on creating a walkable, bikeable and transit-rich neighborhood, while de-emphasizing the automobile.

“...residential streets are extensions of the existing city grid, and, where possible, are to provide the primary access to underground parking to minimize vehicular circulation and usage.”

- SEFC Development Plan By-laws

Background/Function:
The City of Vancouver vision for Southeast False Creek (SEFC) was to “develop a neighborhood that is the model of sustainability, incorporating: strategic energy reduction; high-performance buildings; and high transit access” (City of Vancouver). As part of this vision, the automobile was de-emphasized, in favor of increased transit and bicycle infrastructure.

Lessons:
Reducing parking requirements: Partnering with private land owners, the City has implemented new parking requirements that have greatly reduced the required spaces and have increased the relative amount of “preferred” spaces for carpool, carsharing and residential/commercial /office shared spaces.

Unbundle parking: New parking bylaws have also promoted efforts to unbundle parking from residential units. That, along with a developer subsidized Community Transit Pass, have decreased the incidence of car dependence.

Structured parking: Parking within the district is generally underground and off-street. On-street parking is provided for delivery and service vehicles. It is not clear that this extent of parking removal from the streets is necessary for success, depends on market demand, see discussion of South Waterfront in Portland where some residents are asking for more restrictions for on-street parking.

(Non-)Parking Districts

Southeast False Creek
Vancouver, Canada

Designer: Various
Constructed: 2009
District Area: 80 acres

Parking is provided underground, transforming the street into a parking-free zone where riding a bicycle or walking is safe and a great way to get around.
FLEXIBLE STREETS
“...the ultimate revenge on the modern city: one less parking space, one more park.” - Architectural Record

**PARKLETS**

**SAN FRANCISCO, CA**

**Designer:** Various  
**Constructed:** Ongoing  
**Flex Space (reclaimed):** ~9 feet

**Background/Function:**
San Francisco is in the process of reclaiming its public right-of-way through the conversion of parking spaces into additional sidewalk, dining and recreation space (pavement to parks). Beginning in 2010, there are now 72 either built or in review. Many cities nationwide are adopting the idea that by reclaiming parking spaces can create a hub of vitality along the street.

**Lessons:**

**Reclaim parking space:** While a parking space has a width anywhere from 7 to 10 feet, the amount of spaces reclaimed can create a significant area for activities and are not limited to outdoor dining. In fact, designs are varied and interesting. Powell Street Promenade, designed by Walter Hood and funded by Audi, is an interesting modular space that is ADA accessible and incorporates benches and cafe tables as part of its design.

**Bike parking:** Rebar’s ‘walklet’ at 22nd and Bartlett is another modular example of how the pedestrian realm can benefit from reclaiming a space or two. Note that integrated bike parking potentially makes up for the lost vehicle space.
“The main street was reconfigured from a 4-lane arterial to a 3-lane pedestrian-oriented street with special “flexible zones.” These zones, which can be used either as patio space for an outdoor café or as curbside parking, give a distinct identity to the district.” - Freedman Tung + Sasaki

CASTRO STREET
MOUNTAIN VIEW, CA

Designer: Freedman Tung + Bottomley
Constructed: 1989
Right Of Way: 80 - 90 feet
Flex Space: 20 - 36 feet

Background/Function:
Mountain View’s downtown core was the site of one of the first ‘flexible street’ designs in the country. Freedman Tung + Bottomley saw the value in reducing the number of travel lanes and replacing them with flexible spaces that were more efficient at handling a diverse set of activities.

Lessons:
Blur the transition: Flexible spaces are defined by a stepped curb and decorative, stamped concrete. The parking lane is further segmented by tree plantings every two spaces and serve to provide shade and break the perception that this is vehicle-only space. These flexible spaces can accommodate outdoor dining, curbside parking or other uses approved by the City. Dual concrete gutters provide drainage but also visual separation from the asphalt vehicle lanes.

Shape parking to fit context: Along its length the parking lane varies from parallel to angled configuration and is under regulation of the Downtown Precise Plan where most parking is concentrated in public parking lots rather than these on-street flexible spaces.
“Wisteria-clad trellis and flexible parking zones, combined with decorative pedestrian scale street lighting... set the stage for a revitalized downtown core that functions as an arts and entertainment district and creates an improved setting for outdoor dining and special community events.” - Freedman Tung + Sasaki

**FIRST STREET**
**LIVERMORE, CA**

**Designer:** Freedman Tung + Bottomley  
** Constructed:** 2006  
**Right Of Way:** 93 feet  
**Flex Space:** 40 feet

**Background/Function:**
The revitalization of Livermore's commercial downtown core occurred in 2006 with a focus on creating a flexible street catering to vehicles, pedestrians, bicyclists and retail businesses alike.

**Lessons:**

- **Break up parking lane with plantings:** Within the 93 foot right-of-way is 40 feet of 'flexible' space that can be used as angled parking for the majority of the time, or used as outdoor dining, festivals or any other city approved activity. What helps break up the parking lane are tree plantings and trellis structures every two spaces.

- **Decorative paving to ease transition:** Decorative concrete and a stepped curb ease the transition into the pedestrian-only realm and provide a visual and tactile cue that this space serves a special purpose.

- **Limit vehicular access:** On-street parking was maximized by limiting parcel access from First Street and new parking garages immediately adjacent to the First Street corridor provide capacity during times of peak demand. The Downtown Specific Plan does not set reduced parking requirements, but does offer the option to reconfigure these ‘flexible’ parking lanes.
An asymmetrical street configuration provides flexible space with an east side sidewalk promenade.

Angled parking is provided and can easily be converted to outdoor dining space.

"... the “On Broadway” complex, was configured with broad dining terrace sidewalk and “flexible street” configuration with palm trees to serve as a special dining street."

- Freedman Tung + Sasaki

MIDDLEFIELD STREET
REDWOOD CITY, CA

Designer: Freedman Tung + Bottomley

Constructed: 2007
Right Of Way: 65 feet

Background/Function:
Also known as Cinema Streetscape, this one-block section of Middlefield Street was part of the “On Broadway” redevelopment which revitalized and transformed the area into a 20-theater multiplex cinema and restaurant complex originally recommended by the Downtown Precise Plan.

Lessons:
Plantings in parking area: This one-way section of Middlefield Street incorporates same-grade diagonal parking/flexible space with a travel lane and stepped sidewalk. The street also includes outdoor restaurant seating (which can be expanded into the flexible space), terraced sidewalk promenade, decorative planters, signature lighting columns and row of palm trees planted in the flexible zone to reduce perception that this is a car-only zone.

Paving defines space: Concrete pavers define the street and parking areas, with stamped concrete defining the sidewalk promenade.

Parking pricing and management parking: Parking is highly regulated under the new downtown parking management plan. Area demand is met by an underground facility under the theater. This plan reduced parking requirements and introduced other mechanisms unique to this area (market-rate pricing and computerized pricing and payment).