

Constitution and Independence Avenues

Historic Character

CONSTITUTION AVENUE

L'Enfant's Constitution Avenue was originally a creek, and then later channeled into a canal. It was a 90-foot-wide street by the late 19th century and became the grand thoroughfare we know today as a result of the standards established in the McMillan Plan and implemented through the 20th century. Along its entire length in the Northwest quadrant of the city, Constitution Avenue affords views of the Capital's most significant memorials and open space, national museums, and prominent federal and institutional buildings, designed by the leading architects and landscape architects of this era.

As monumental as these building are, they are also elements of larger ensembles that complement the size and scale of the avenue—the Mall museums, the Federal Triangle, and the West End. The avenue provides prime views of the White House, the Washington Monument Grounds, and the Lincoln Memorial. While the buildings in the Federal Triangle were constructed to the building line, the museums and the West End institutions are among the rare Washington buildings that are set back within generous green lawns. The character of the open space in these latter two ensembles is open, low, and landscaped. While the setting of the Federal Triangle buildings alludes to its urban context, the museums are clearly related to the National Mall and their position along this grand avenue. The West End buildings are carefully set back to extend the open and landscaped character of West Potomac Park across the avenue. The Constitution Avenue right-of-way is a contributing element of the historic L'Enfant Plan designation.

INDEPENDENCE AVENUE

Forming the southern edge of the National Mall, Independence Avenue was historically a 90-foot right-of-way called Avenue B. The avenue contains significant and architecturally varied national museums along the Mall and mid 20th-century federal office buildings to the south. The Agriculture South Building is by far the largest building on the avenue. Many of the Southwest Federal Center office buildings are set back behind paved plazas, reflecting the conventions of the Modern era of design and planning.

The Smithsonian Museum complex includes the colorful Arts and Industries Building, which preceded the sidewalk abutting its south façade; the fenced Enid Haupt Garden; the neoclassically sited Freer Gallery; the Hirshhorn Museum, whose round shape sweeps away from the avenue but whose podium defines the building line; and the Air and Space Museum, whose long length is mitigated by its architectural design. The Independence Avenue right-of-way is a contributing element of the historic L'Enfant Plan designation.

Existing Context

Constitution and Independence Avenues are major ceremonial streets that frame the National Mall. They are also major traffic arterials of eight lanes that provide off-peak parking. Constitution Avenue is an elegant boulevard lined with monumental buildings and wide sidewalks with generous lawn panels containing mature street trees. Independence Avenue differs from Constitution Avenue in that the sidewalk is much narrower with a sporadic and diverse mix of street trees; the building setbacks vary widely; and the architectural style of the buildings is diverse. These characteristics bring inconsistency to the character of this avenue.

Design Framework

The proposed streetscape design for both Constitution and Independence Avenues is intended to result in a continuous, dignified appearance, in keeping with the significance of these major avenues in the Nation's Capital. To the extent possible the appearance of these avenues should relate to one another. The streetscape design for both avenues (3rd to 15th Streets) incorporates a plinth wall located at the inside of the sidewalk. This wall is used as a unifying element along these avenues, consistent with the array of architectural styles.



Independence Avenue in front of the National Air and Space Museum

**Constitution Ave
Independence Ave**



Constitution Avenue at the Federal Triangle



CONSTITUTION AVENUE (5TH TO 15TH STREETS, NW)

The streetscape design proposed for both sides of Constitution Avenue (5th to 15th Streets, NW) incorporates a plinth wall on the inside of the existing sidewalk and will result in a streetscape that is similar to that which exists on the western portion of the avenue (west of 17th Street). Plinth walls exist within the Federal Triangle and a low coping stone is currently employed on the inside of the sidewalk around the Smithsonian museums that are located on this avenue. The plinth wall design would simply entail raising this coping stone and, where practical, backfilling.

More specifically, the coping stone located on the inside of the sidewalk on the Federal Triangle side of the avenue will be raised and backfilled. The anticipated height of the plinth wall is 2' - 6"; however, as is the case with the existing walls associated with the National Archives, it may be appropriate to increase this height. Likewise, the existing wall on the inside of the sidewalk on the Smithsonian side of the avenue is proposed to be raised and backfilled and/or buttressed so as to provide the required security barrier in this area.

Stone bollards and benches are incorporated at building entrances and at intersections. Retractable steel bollards and/or gate arms are recommended at vehicle entrances. Guardhouses, as required in these areas, are to be custom designed as appropriate to the building architecture or, as is the case with the Smithsonian Institution and National Gallery of Art, appropriate to the landscape setting.

INDEPENDENCE AVENUE (4TH TO 14TH STREETS, SW)

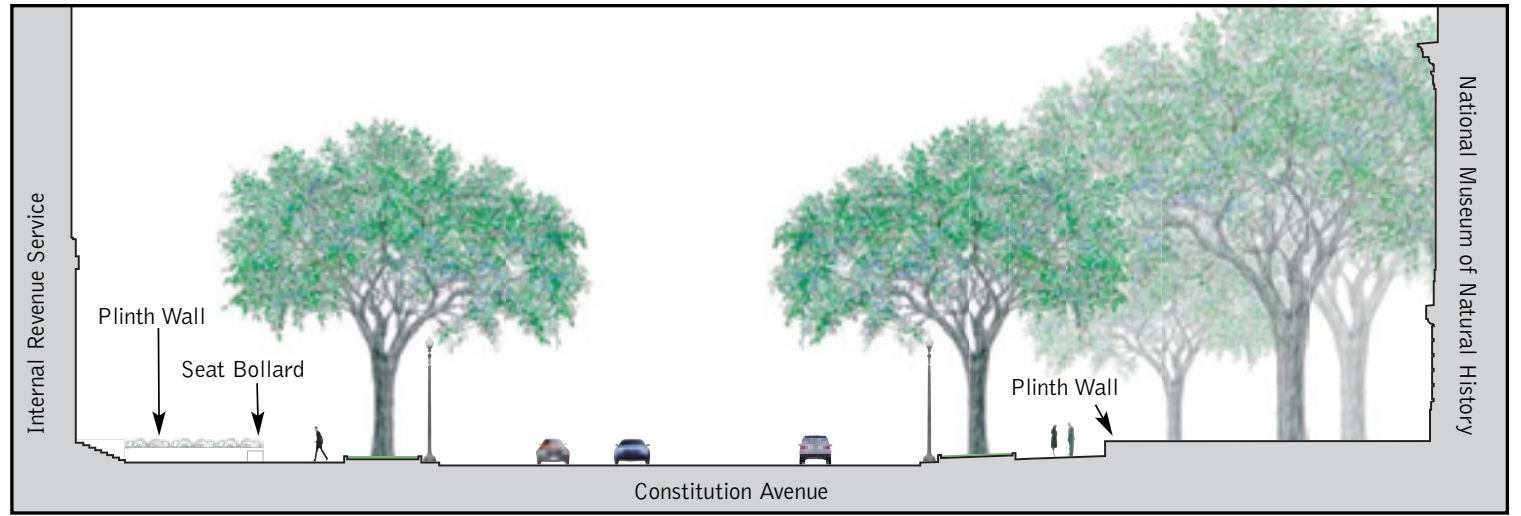
Improvements to Independence Avenue will include a comprehensive tree planting program, and a combination of plinth walls and custom-designed solutions. The plinth wall streetscape security solution can be applied to a significant proportion of the avenue. Many of the existing conditions on the south side of the avenue are similar to those on the north side of Constitution Avenue, e.g., building setbacks, elevation changes, etc. However, conditions on the north side of the avenue are considerably varied. In some locations, such as at the National Air and Space Museum, existing raised planters can be expanded, and at the Hirshhorn Museum, the existing walls may already constitute a secure perimeter.

Treatment at building entrances incorporates the same stone bollards, seat bollards, and benches as those recommended for Constitution Avenue. While these solutions may be adequate for a number of buildings, they will not suffice for those with minimal setbacks, where custom-designed solutions will be required.

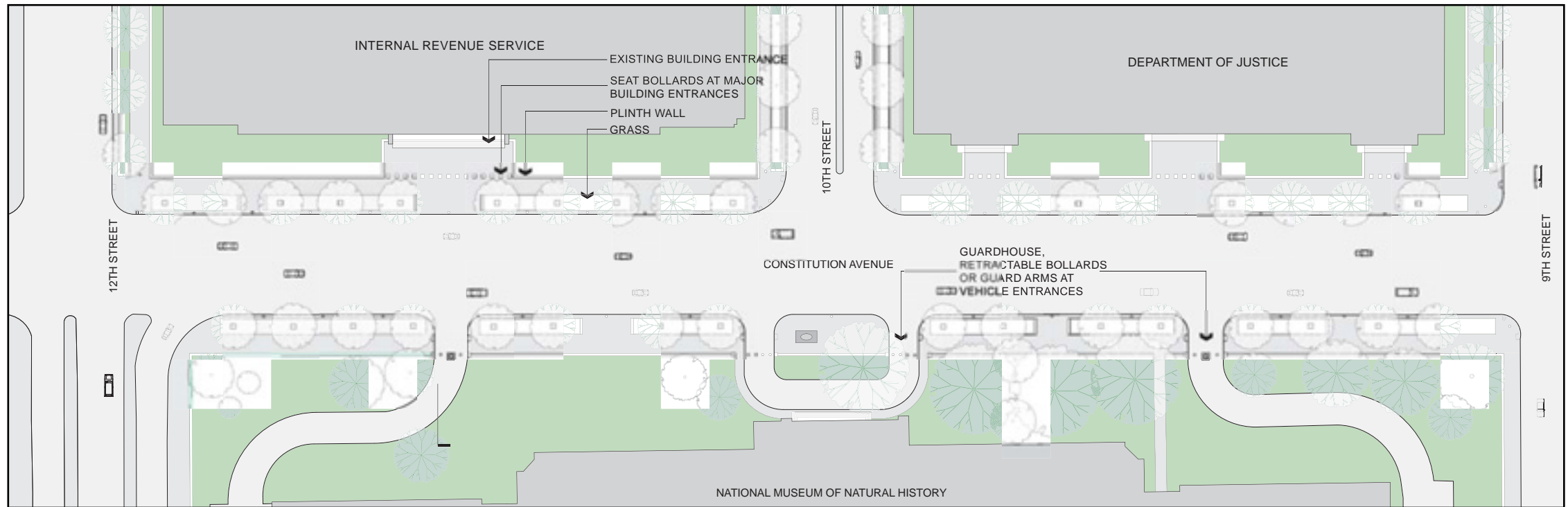
Constitution and Independence Avenues streetscape elements include:

- Plinth walls
- Marble or granite bench (2' 6" high, 2' 0" wide, 13' long)
- Marble or granite seat (2' 6" high, 3' 0" wide, length varies)
- Granite bollard (3' 0" high, 14" diameter) with 42" clear between bollards
- Stone wall (2' 6" high, varying width and length)
- Street trees (8" caliper Elm), as required

Constitution Avenue Solution

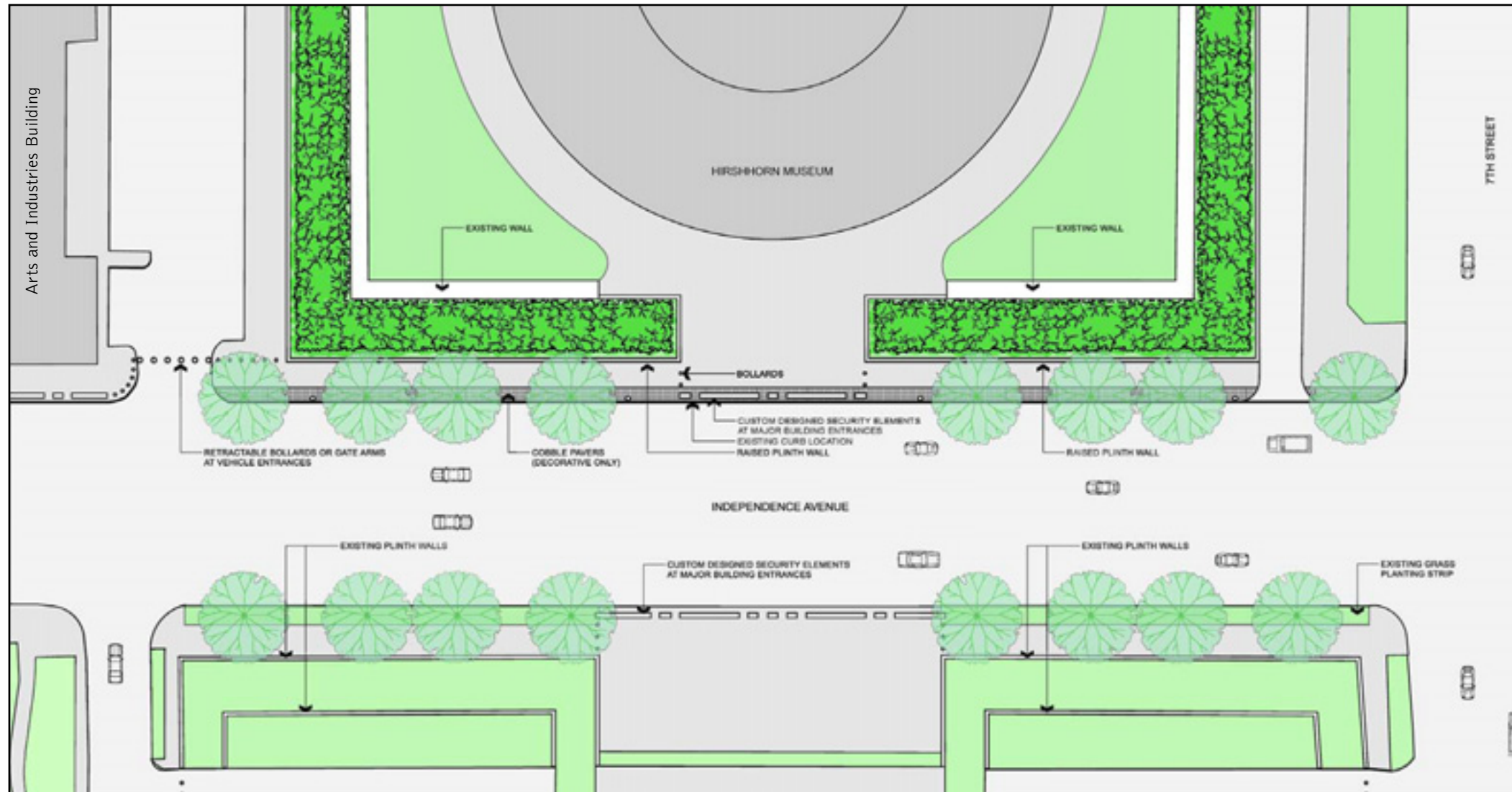


CONSTITUTION AVENUE (5TH-15TH) SECTION - PLINTH WALL



CONSTITUTION AVENUE (5TH-15TH) SAMPLE APPLICATION PLAN - PLINTH DESIGN

Independence Avenue Solution



INDEPENDENCE AVENUE (4TH-14TH) SAMPLE APPLICATION PLAN - PLINTH DESIGN

CONSTITUTION AVENUE (WEST OF 15TH STREET, NW)

There is no requirement for the provision of perimeter security on Constitution Avenue between 15th and 17th Streets, NW (adjacent to the Ellipse and the Washington Monument grounds) because of the adjacent parkland. The security perimeter for the Washington Monument has been established within 400 feet of the monument. In addition, there is no requirement to establish a security barrier on Independence Avenue west of 15th Street, SW as the avenue is also flanked by parkland.

No overall streetscape design is proposed on Constitution Avenue west of 17th Street, NW because no security requirement exists on the Constitution Gardens or Mall side of the avenue. The existing buildings on the north side are substantially set back and incorporate plinth walls at, or just inside, the sidewalk. Where required, these walls may need to be raised to meet security requirements. Stone bollards and benches are proposed to be custom-designed as appropriate to each of the major entrances of the buildings that require security improvements on this avenue.

A custom design for the entrance to the Federal Reserve Building on Constitution Avenue is illustrated as representative of the design concept proposed for the major building entrances on the avenue. The majority of the perimeter utilizes the existing plinth wall (located on the inside of the sidewalk). The entrance plaza is redesigned to include a large raised planter on either side of the existing walk (and steps) and incorporates stone benches and bollards. A recommended design consideration is to avoid locating bollards or other security components in close proximity to either the top or bottom of steps; thus, the benches are shown on the curb or street side of the sidewalk.

Streetscape elements proposed for the custom design of the entrance security at the Federal Reserve Building on Constitution Avenue include:

- Planter wall (4' 0" high, 1' 6" wide; match existing white marble)
- Paving (match existing entrance pattern)
- Marble or granite bench (2' 6" high, 2' 0" wide, 13' long)
- Marble or granite seat (2' 6" high, 3' 0" wide, length varies)
- Granite bollard (3' 0" high, 14" diameter), 42" clear between bollards



Constitution Avenue looking east toward the Federal Reserve

The National Mall – Jefferson and Madison Drives



View from the Mall looking north at the National Archives



View from the Mall looking north at the Museum of Natural History

Historic Character

The National Mall, with its magnificent memorials and museums, is identified throughout the world as the physical embodiment of the ideals of the United States. The Mall is the setting for our collective history and our public celebrations. From the formal cross-axis of the Mall to the informal configuration of the Tidal Basin, from the rectilinear Reflecting Pool to the informal curves of Constitution Lake, from the graceful rows of elms to the famous cherry trees, and from the museums to the ball fields, the Mall has many different characteristics, but is unified by its vast and open parkland.

The grounds that collectively comprise what is called "The Mall" (the National Mall, the Washington Monument Grounds, and West Potomac Park) are components of the L'Enfant and McMillan Plans. They and the historic buildings and structures on them are designated in the National Register of Historic Places for their historic and architectural significance; their association with noted architects, landscape architects, sculptors, and planners; their primacy in the plan and design of the Nation's Capital; and as the setting for national events.

Although the Mall has been extended and altered continuously during the past two centuries, reflecting the evolving history of the nation, it has become a mature landscape with established buildings, trees, features, and vistas. The buildings and structures, visited by millions of people annually, are among our most visible national symbols. The national museums and memorials have generous, landscaped settings. The museums are primarily oriented toward Madison and Jefferson Drives on the Mall.

Existing Context

Madison and Jefferson Drives are local streets that parallel the Mall from the Reflecting Pool at 3rd Street to the Washington Monument grounds at 14th Street. The buildings adjacent to these drives include the major museums of the Smithsonian Institution and the National Gallery of Art.

On Madison Drive, the American History and Natural History museums and the West Building of the National Gallery of Art—set back nearly 100 feet from the street—are similar in scale, massing and materials, and share an existing vocabulary of walls and planters that are recommended to be incorporated into the design of security. In contrast, the museums that line Jefferson Drive vary widely in massing and scale, and setbacks vary from virtually none (at the Smithsonian Castle) to more than 100 feet at the Department of Agriculture.



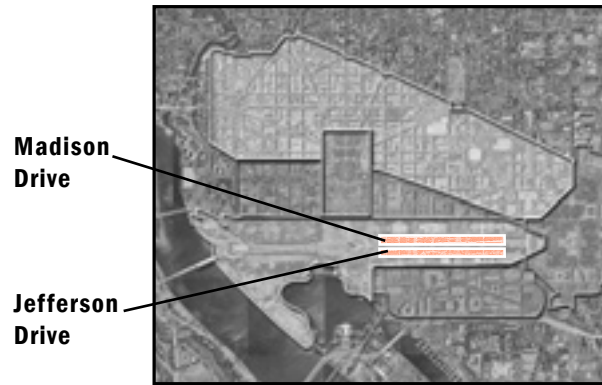
National Mall, looking west

Design Framework

Whereas the historic relationship of both Madison and Jefferson Drives is identical, and their streetscape designs should be maintained to the greatest extent possible, the buildings on Madison Drive have large setbacks and the majority of those on Jefferson Drive do not. While many of the same components may be incorporated, physical perimeter security design solutions will vary on these streets. With the exception of the proposed consistent plinth wall design for Madison Drive, security solutions identified as applicable to the majority of the museums on the Mall are recommended to be custom-designed.

A common landscape element that runs the length of Madison Drive is a wide coping stone curb located on the inside edge of the sidewalk. The security barrier is recommended at this location. The coping stone is proposed to be raised and used as the capstone of a new wall. The wall may be backfilled to the height of the existing retaining wall, resulting in a raised planter or plinth wall. Stone bollards, benches, and planters are proposed to be located on the entrance plazas in front of these major museums. Although the security design of these entrances will vary to complement the differences in architecture and site design, the same components are recommended throughout. Because a coping stone (curb) does not currently exist on the Madison Drive sidewalk of the East Building of the National Gallery of Art, the plinth wall solution may not be applicable in this location and a custom-designed solution may be required.

In addition, 4th Street between the East and West Buildings of the National Gallery presents a different and unique situation that will require a custom-designed streetscape security solution.



LEGEND




Sample Application Area



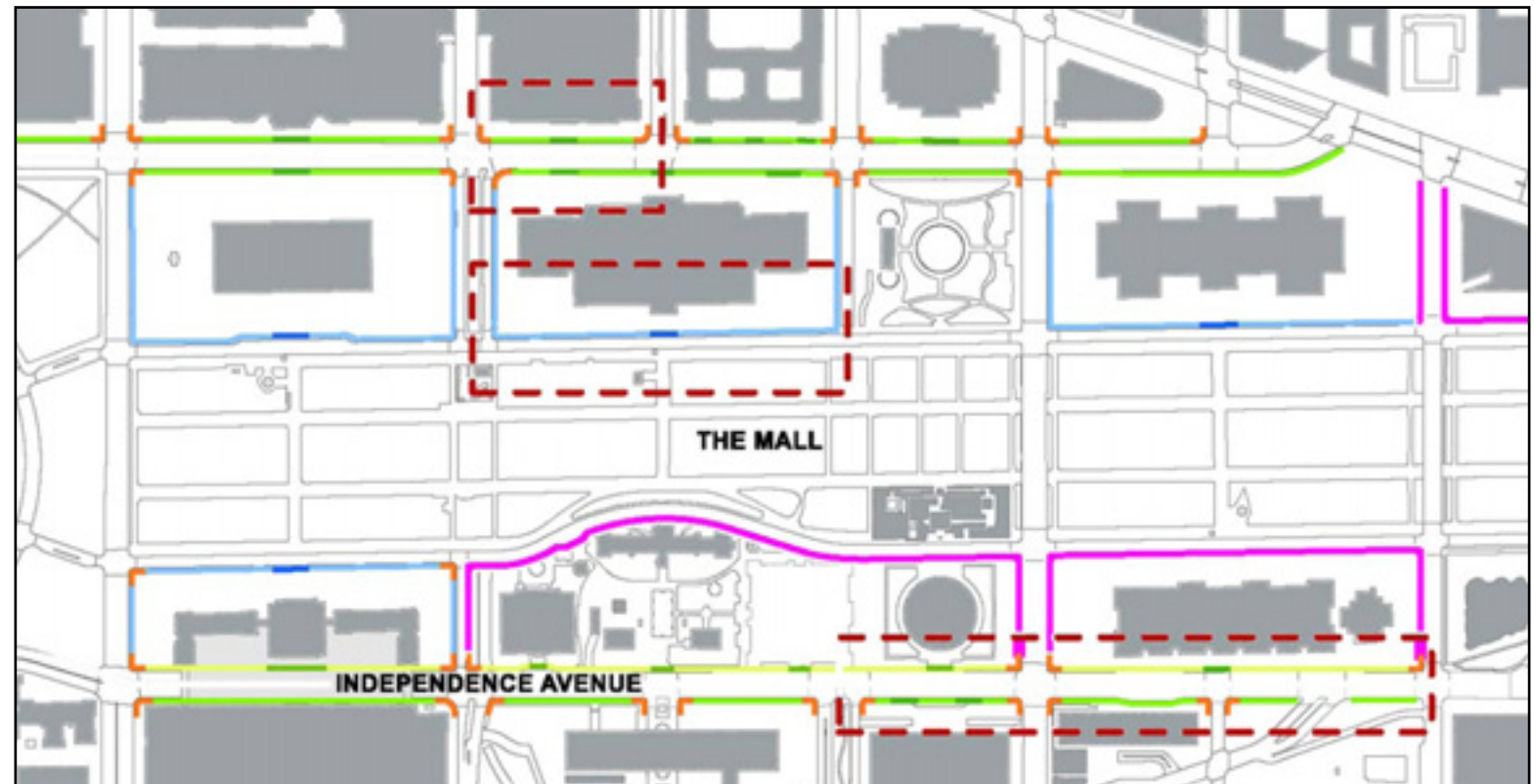
Corner Treatment

 Green Concept

 Plinth Design

 Street with less than 30 feet of stand-off distance

 Custom-Designed Solution



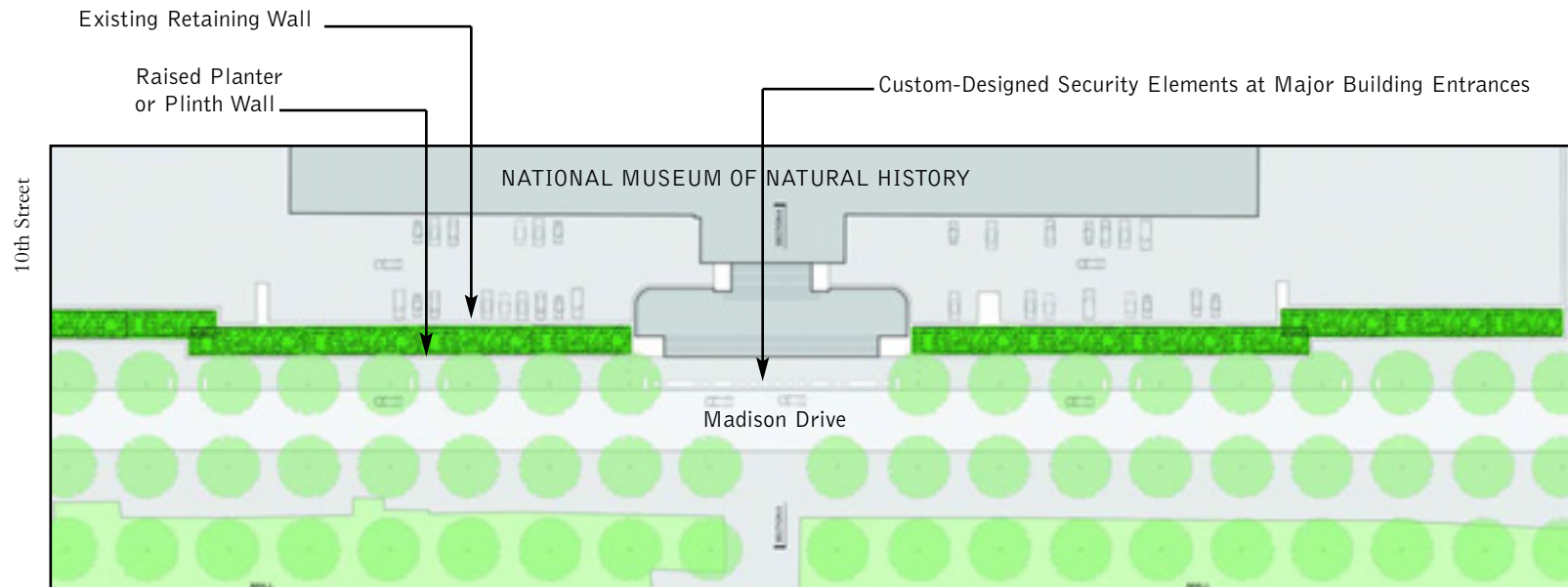
The design of perimeter security measures for the varying conditions that exist on Jefferson Drive will require a number of custom-designed solutions. Where there is little or no setback, stone bollards and/or benches are recommended. Given the monumental nature of these buildings and the significance of their major public entrances (both architecturally and functionally), security in these locations is recommended to be custom-designed using this family of security components.

Sample Applications

A plinth wall is illustrated on Madison Drive at the National Museum of Natural History (NMNH). A custom-design for the provision of entrance security is also illustrated at the main Mall entrance. Stone bollards, benches, and planters are located on the plaza at the entrance to this museum.

Streetscape elements proposed for Madison and Jefferson Drives include:

- Washington globe light (Bacon Twin 20), reuse existing
- Street trees (8" caliper Elm), infill existing, as required
- Coping wall (2' 6" high, 2' 0" wide) for the entire length of the existing coping stone curb
- Deciduous shrub (3' BB, full to ground) in planter behind wall
- Granite garden curb (6" high, 6" wide)
- Marble or granite bench (2' 6" high, 2' 0" wide, 7' 0" long)
- Marble or granite seat (2' 6" high, 3' 0" wide, length varies)
- Granite bollard (3' 0" high, 14" diameter) with 42" clear between bollards
- Stainless steel bollard (simple cylindrical form, 2' 6" high, 8" diameter) at 4' on-center



THE MALL SAMPLE APPLICATION PLAN – MADISON DRIVE PLINTH WALL AND CUSTOM-DESIGNED ENTRANCE SECURITY

Monuments and Memorials

The National Park Service (NPS) has determined that in addition to the requirement to provide security (perimeter and entrance) for the Washington Monument, where a security plan is currently under development, perimeter security is required for both the Lincoln and Jefferson Memorials. With the exception of establishing a vehicular barrier at the 17th Street ceremonial entrance to the World War II Memorial, no additional physical perimeter security is deemed necessary at this time for the other monuments and memorials located on the Mall or in West Potomac Park.

Historic Character

WASHINGTON MONUMENT

Standing at the cross-axis of the Mall, the Washington Monument is recognized and beloved as a symbol of the city that bears its founder's name. Originally designed by Robert Mills and constructed between 1848 and 1889, the obelisk and grounds were modified and completed by the U.S. Army Corps of Engineers, most notably without the elliptical colonnade that Mills had envisioned for its base. A generation later, the McMillan Plan proposed centering the monument within its setting at the crossing of the two axes of the Mall by embellishing the grounds with an elaborate Beaux Arts-style landscape plan of plantings, terraces, and water pools. The plan was not realized. The monument and its grounds, often referred to as a greensward, are at the center of the National Capital's Monumental Core and serve as a natural gathering place for events large and small, public and private. The Washington Monument was one of the first historic properties to be listed in the National Register of Historic Places in 1966. The monument and grounds are recognized as an element of the historic plan of Washington, D.C.

LINCOLN MEMORIAL

Facing the Washington Monument and the U.S. Capitol, the Lincoln Memorial forms the terminus of the McMillan Commission's extension of the Mall. Henry Bacon's design, ranked among the most beautiful buildings in Washington, is a neoclassical reinterpretation of a Greek temple form with columns in the Doric order. The marble and limestone building, on a high podium with monumental steps, is set within a circle that emphasizes the Mall axis through the elaborate landscaped and terraced base that extends to the Reflecting and Rainbow Pools. Selected through competition, the memorial was designed by 1913 and completed in 1922. Daniel Chester French's majestic sculpture of the seated Lincoln dominates the interior.

JEFFERSON MEMORIAL

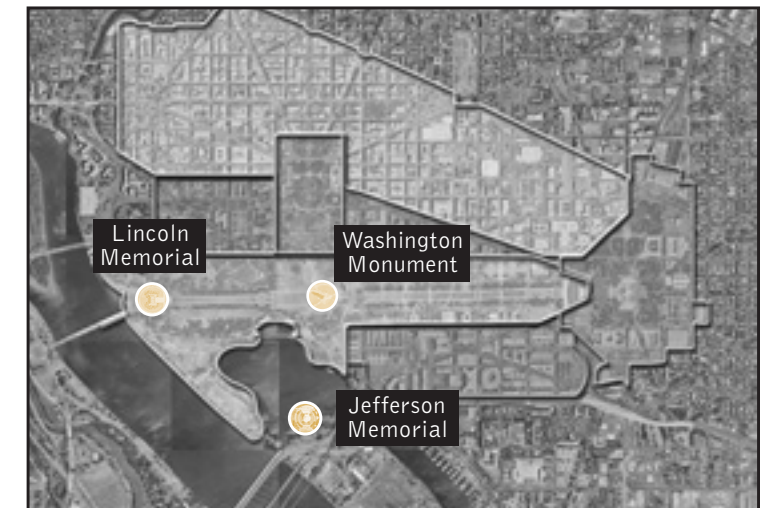
The Jefferson Memorial forms the southern terminus of the cross-axis of the Mall. The memorial was designed by John Russell Pope and completed in 1942—after his death—by Eggers and Higgins. The marble neoclassical rotunda reminiscent of Jefferson's own designs was famously controversial in its time but is admired today. The formal, classical memorial and its monumental terrace and steps are contrasted by its informal landscape plan by Frederick Law Olmsted, Jr., and its setting on the Tidal Basin. The dome and colossal statue of Jefferson by Rudolph Evans are the focus of magnificent views across the Basin from the White House and other axial points. The steps of the memorial provide magnificent views towards the Washington Monument and the city beyond.

Design Context

The Washington Monument and the Lincoln and Jefferson Memorials are surrounded by generous expanses of open space that exceed the minimum required standoff distances determined for these memorials. This response allows for flexibility in the design of the perimeter security solutions for these memorials, including the manipulation of topography and the creation of low walls, planters, and other elements that both complement and defer to their existing landscape and architecture.

Design Framework

Custom perimeter security designs as described in the following sections are recommended for these Memorials.



Washington Monument

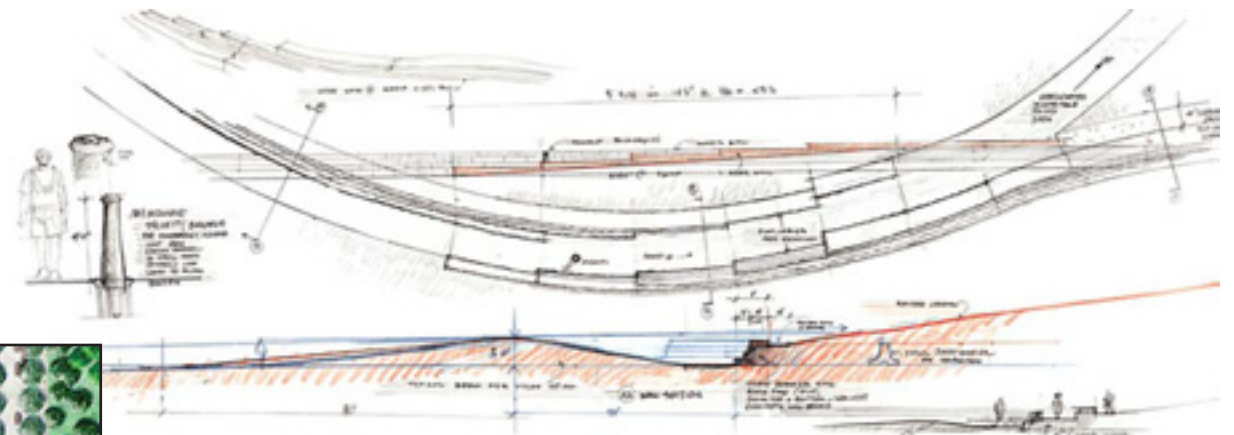
The Washington Monument is one of the nation's most prominent and visible symbols and one of Washington's most visited sites. The monument has also been the site of numerous threatening incidents, and could be the target of a future terrorist attack. Temporary security at the Washington Monument includes a ring of jersey barriers and a temporary visitor screening facility that is attached to the monument's entrance.

The National Park Service (NPS) has developed a concept plan for perimeter security improvements for the monument. The existing walkways would be reconfigured as a series of partial ovals extending east and west from the monument plaza. These walkways incorporate retaining or plinth walls to serve as the vehicular barrier; and individual removable bollards are located at the intersection of the walkways to allow access by service and emergency vehicles. This design concept is consistent with the principles set forth by the Interagency Security Task Force and, more specifically, those principles that have been proposed for the design of perimeter security for the monument. The Commission approved the proposed concept design plan on February 7, 2002 and will be considering final approval at a later date.

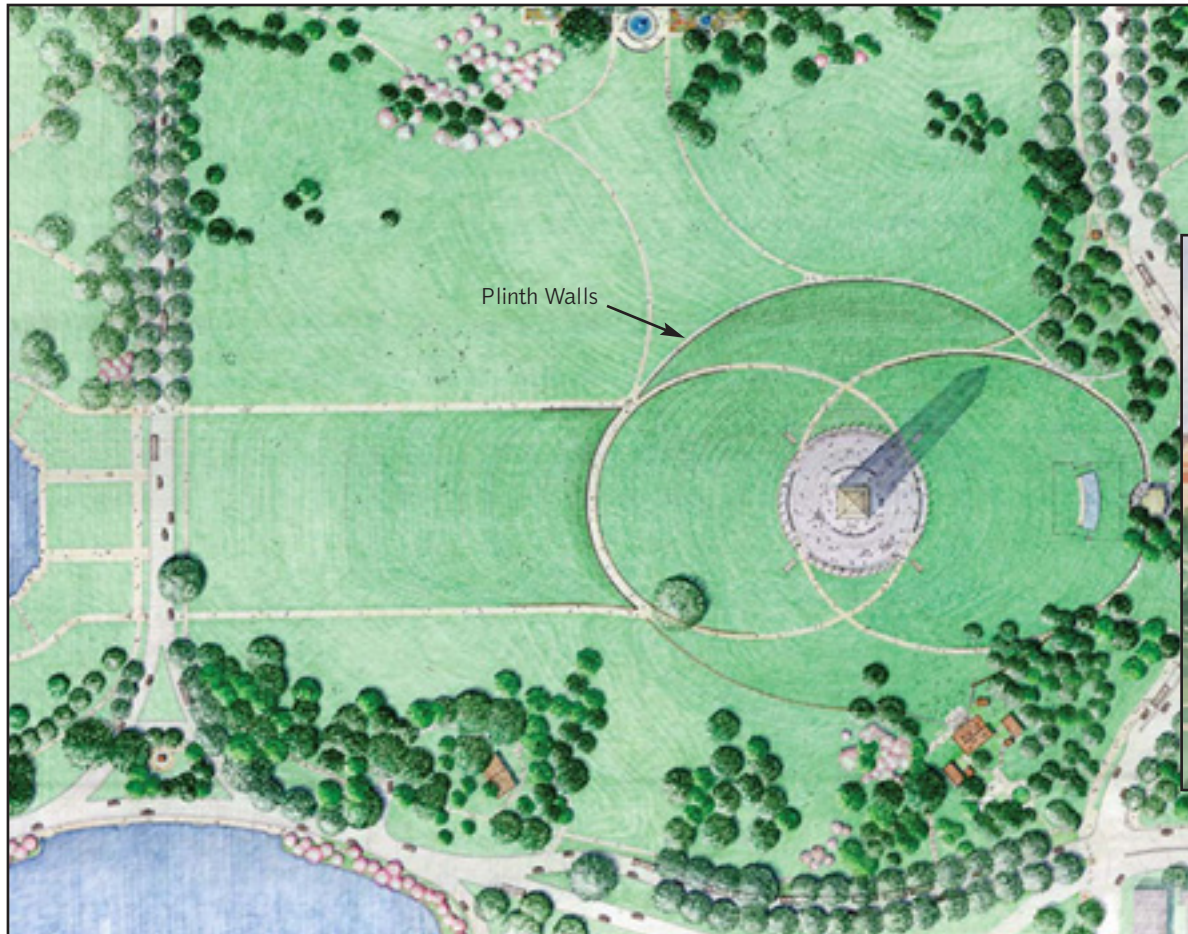


Existing temporary security measures





Concept detail of proposed walkways, plinth walls, and berms (grading)



Proposed walkways configured as a series of partial ovals extending east and west from the Washington Monument plaza would enhance pedestrian approaches.

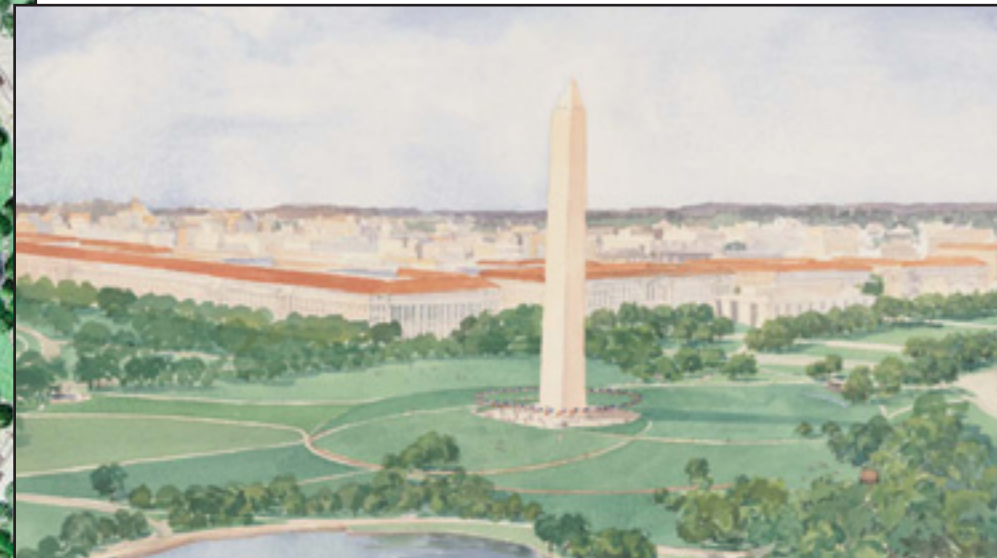


Illustration: Laurie Olin

Proposed Washington Monument grounds with redesigned walkways, plinth walls, and grading

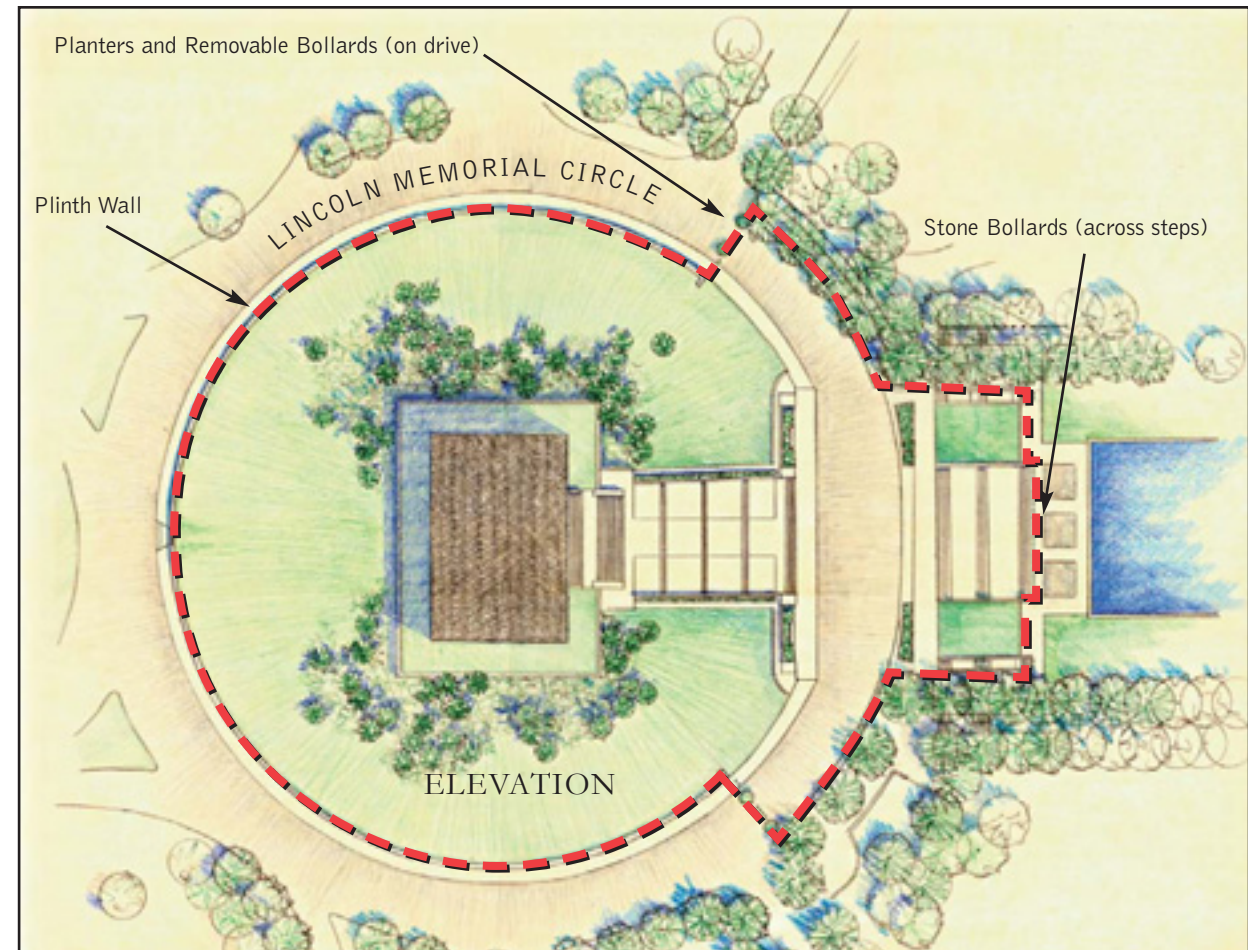


Lincoln Memorial

The proposed security design for the Lincoln Memorial consists of a low wall that encloses the circular mound upon which the memorial sits. The security perimeter extends across the Mall side of the closed portion of the circular roadway (incorporating bollards and planters), and continues in a line of metal bollards on the Mall side of this road to, and alongside, the steps leading to the Reflecting Pool. The security perimeter is completed across the axis of the Mall by placement of stone bollards at the foot of these steps.

Components proposed for the custom-design of security at the Lincoln Memorial include:

- New plinth wall (2' 6" high, 3' 0" wide, length varies), material and finish to match the existing exterior stone of the memorial
- Granite planter (3' 0" high, 1' 0" thick) with 5-7 multi-stem understory specimen trees
- Granite bollard (3' 0" high, 8" diameter, thermal finish) with 42" clear between bollards
- Stainless steel retractable bollard (simple cylindrical form, 2' 6" high, 8" diameter) at 4' on-center
- Re-grade slope and sod inside the wall



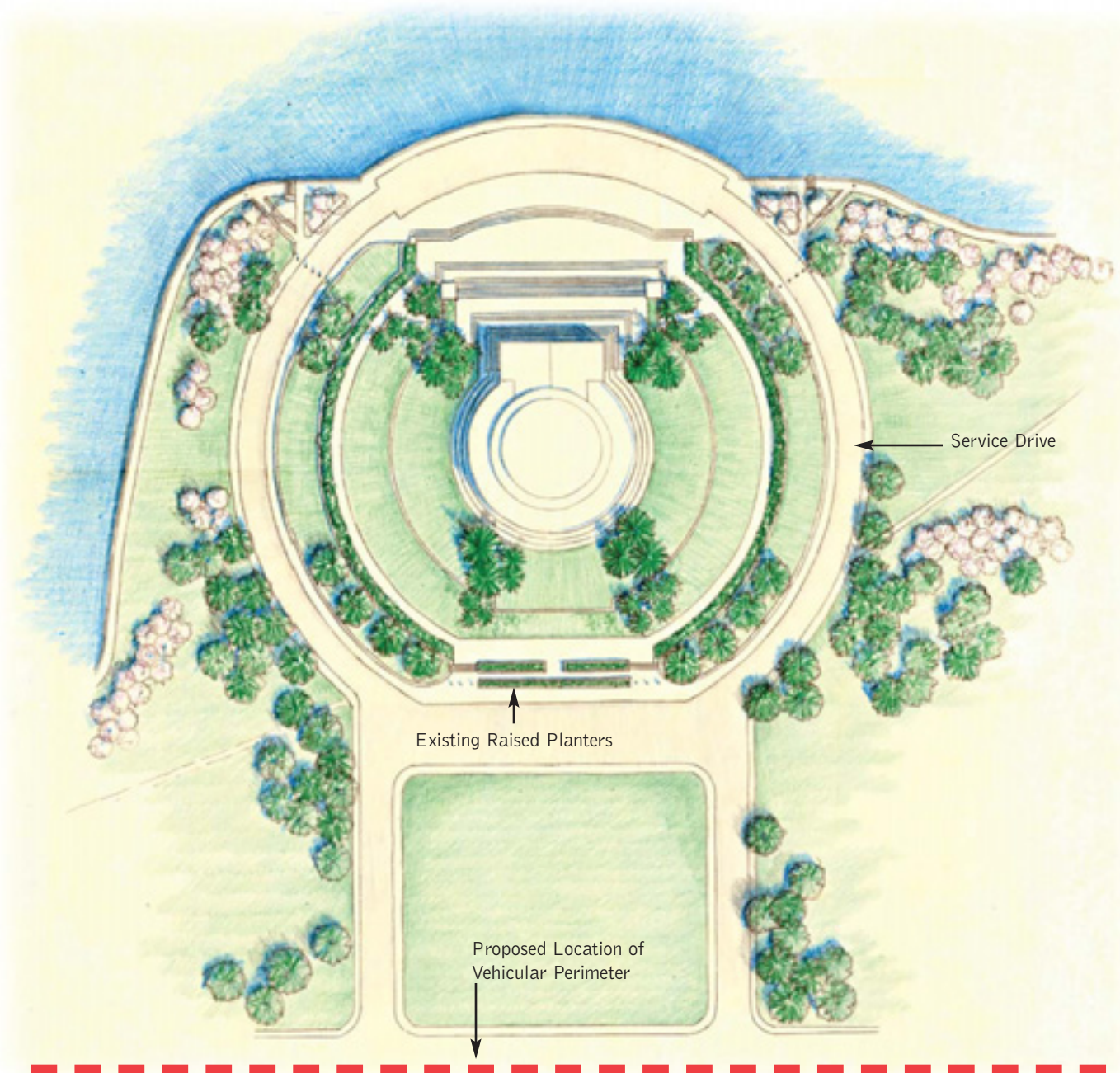
PROPOSED SECURITY ELEMENTS AT THE LINCOLN MEMORIAL



PLANTERS AND RETRACTABLE BOLLARDS ON LINCOLN MEMORIAL CIRCLE

Jefferson Memorial

Security design concepts for the Jefferson Memorial incorporate site grading, plinth or low retaining walls, and bollards. The most effective location for a vehicle perimeter is proposed along East Basin Drive at the eastern and southern edges of the memorial grounds. Final design solutions are recommended to incorporate a combination of these elements as dictated by varying site conditions. Designs are encouraged to fully integrate the perimeter design as an intrinsic part of the landscape, insuring that the vehicle barrier is unobtrusive when viewed in context with the memorial. Security should not compete with the memorial itself or detract from the pastoral landscape plan as envisioned by Frederic Law Olmsted, Jr.



EXISTING PLAN OF THE JEFFERSON MEMORIAL



West End

Historic Character

Comprising the buildings bounded by 17th Street to the east, Constitution Avenue to the south, 23rd Street to the west, and E Street to the north, the West End is dominated by large federal office buildings and a row of architecturally significant institutional buildings along 17th Street and Constitution Avenue. The largest and most dominant building in the West End is the Department of State's Harry S. Truman Building.



Constitution Avenue in front of the Federal Reserve Building

The National Register significance of the historic structures and places in the West End is derived from the social, architectural, and planning history of the area; the associations with significant historical events and movements; and the buildings' and area's contributions to the character of the city.

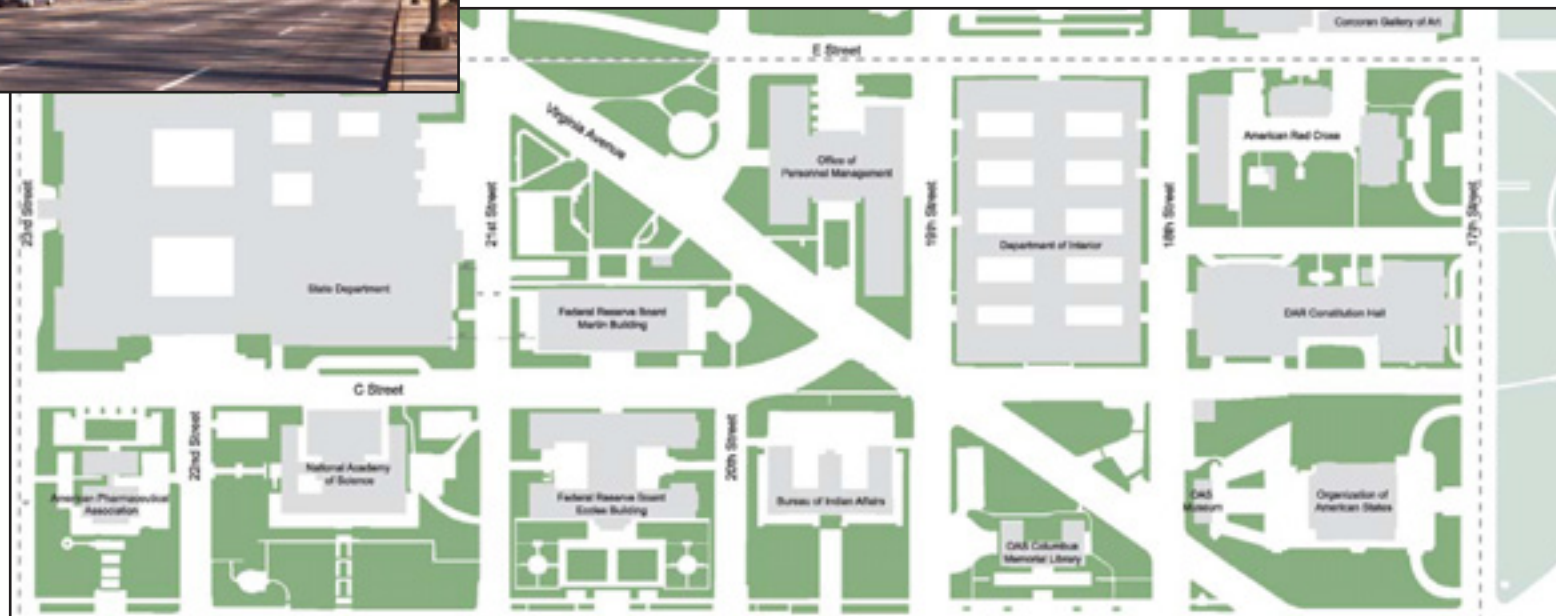
The federal government intended the area west of the White House to be an enclave of federal buildings, although the 1935 Plan for the Northwest Rectangle, championed by NCPD, was only partially executed over the years. Nevertheless, the area contains significant and monumental historic buildings such as Waddy B. Wood's Department of the Interior Building of 1936 and the State Department's mammoth "stripped classical" style building. The buildings in the area reveal their architects' desire in the late Beaux Arts era to create buildings that conveyed both the established federal image and more modern design sensibilities. The institutional buildings west of 17th Street and north of Constitution Avenue create their own sub-context. These impressive neoclassical style buildings are sited in an

expanse of open space, responding to the McMillan Plan's desire for a grand avenue adjacent to West Potomac Park and the Lincoln Memorial. These striking exemplary buildings precede the Northwest Rectangle Plan, and were contributed by notable architects such as Cret, Goodhue, and Pope.

Existing Context

Most buildings in the West End are located close to the street, except those buildings facing Constitution Avenue. These prominent buildings on large landscaped lots afford a range of design opportunities to incorporate perimeter security improvements. Other buildings with small setbacks and narrow sidewalks afford little opportunity for the design of required security solutions without consideration of vehicle restrictions or curb (parking) lane removal. The streetscape design of perimeter security is further complicated by the differing security requirements within this area.

The majority of the north-south streets are major connector streets and 18th, 19th, and 23rd Streets are major citywide arterial streets. The east-west streets primarily serve local traffic. Currently there are a number of temporary traffic restrictions, including the closures of C and D Streets adjacent to the State Department and the removal of parking around both the State Department and the Federal Reserve. A traffic analysis and assessment of the potential for traffic restrictions and curb lane removal is recommended in conjunction with the design of streetscape security solutions in this area.



WEST END AREA

Design Framework

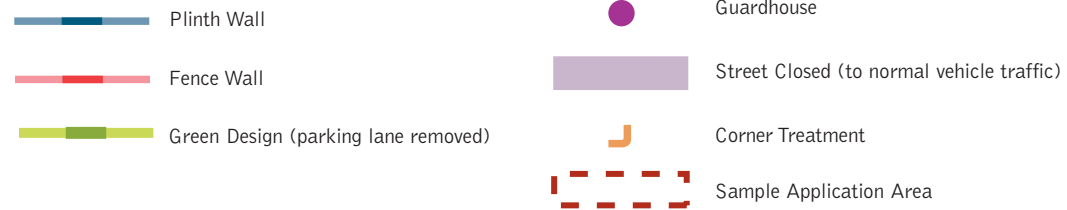
Streetscape designs proposed for the West End are intended to reinforce the green campus-like setting of the area. Streetscape designs include both green (bollards in plantings within the existing tree pits) and plinth security solutions and variations of the fence wall design proposed for the north-south streets in the Federal Triangle. These green and fence designs are proposed both with and without removal of the curb (parking) lanes.

The green solution consists of a line of bollards in the tree planting beds. New plantings are included to soften the introduction of these new elements. Bollards are incorporated on the sidewalk between the planting beds, at building entrances, and at intersection corners. Benches are used at the ends of the planting beds to emphasize the entrance plazas.

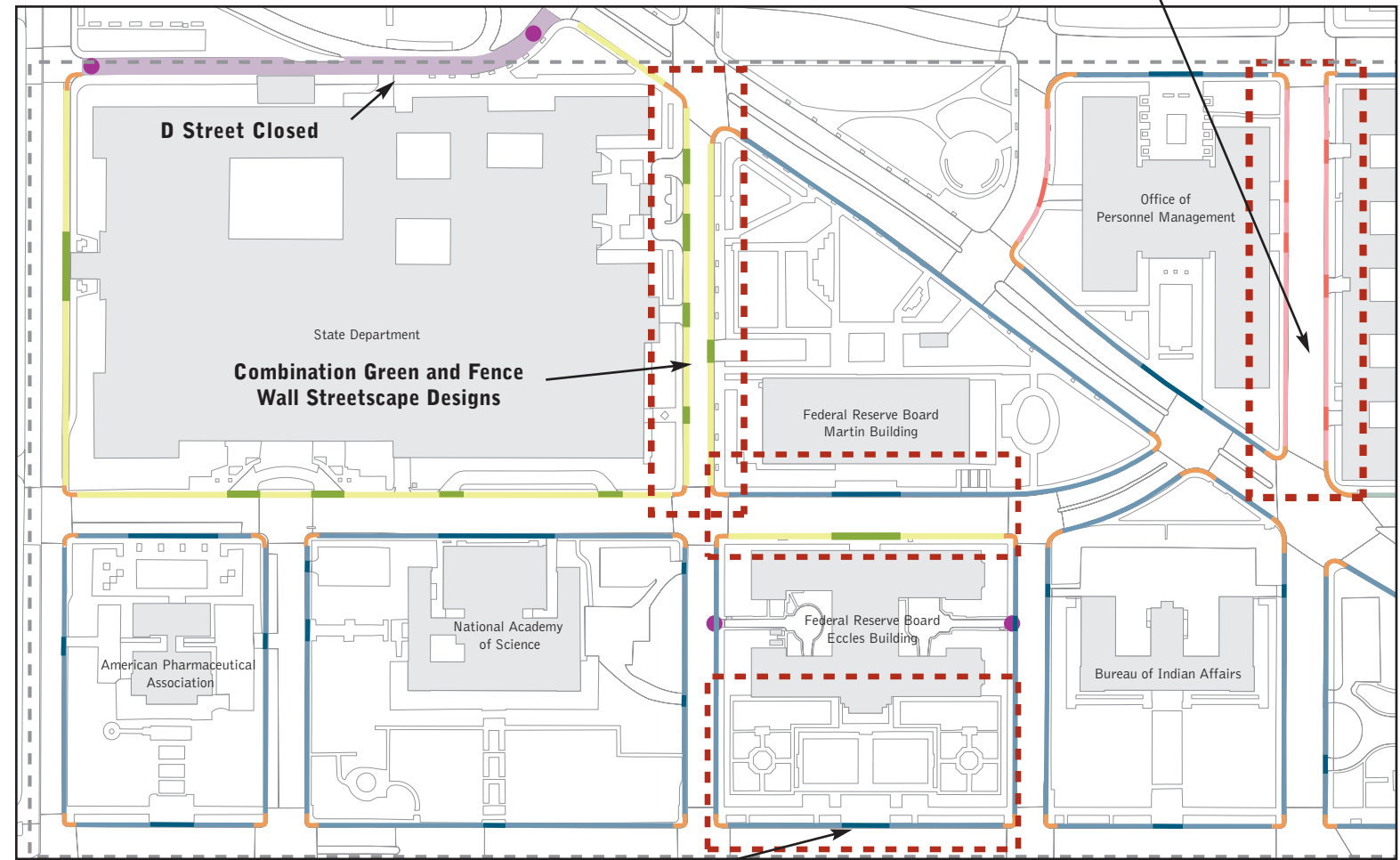
Constitution Avenue

In the West End, Constitution Avenue has wide sidewalks, a more or less continuous existing plinth or planter wall, and building setbacks that approach or exceed security standoff requirements. As discussed in the streetscape design for Constitution and Independence Avenues, proposed security improvements for the western portion of Constitution Avenue include the use of the existing plinth walls and the custom-design of security at the major public entrances to these monumental buildings. Security components include stone plinth and planter walls, stone benches, and bollards.

WEST END KEY PLAN LEGEND

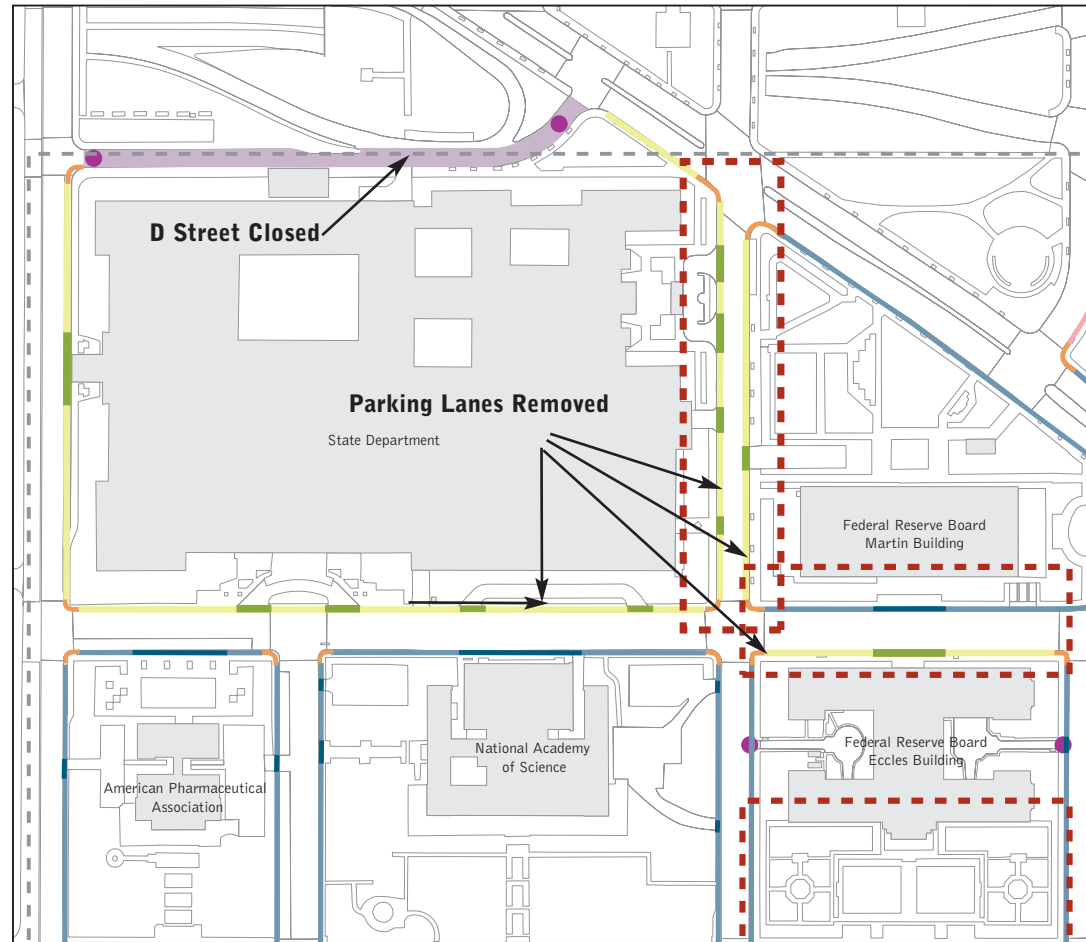


Fence Wall Streetscape Design



WEST END KEY PLAN

Plinth Wall and Custom-Designed Entrance Security



WEST END - PROPOSED STREET CLOSURE AND CURB PARKING LANE REMOVAL

Grid Streets

Variations of the plinth wall security design is recommended, as required, on the north-south streets (18th through 23rd Streets) between Constitution Avenue and C Street. Most of these blocks incorporate existing plinth or low walls that can be increased to the minimum required height. Where standoff distances are inadequate, alternatives include either the green design concept, (bollards in plantings at the existing tree line) or a fence wall solution at the curb (see the fence wall streetscape design concept proposed for 18th and 19th Streets at the Department of the Interior). Green streetscape design can be applied to any street in the West End. This design is, for all intents and purposes, the green streetscape design proposed for Maryland Avenue, SW.

Where additional standoff distance is required, green streetscape design is proposed to incorporate the existing parking lane. This solution is proposed on the south side of C Street from 20th to 21st Streets (adjacent to the Federal Reserve) and may also be applicable on C Street adjacent to the State Department (from 21st to 23rd Streets). Any restrictions to traffic operations will need to be mitigated through an overall mobility enhancement program that would include the development of secure, centralized parking facilities.

Several fence wall designs are also proposed for application in the West End. As with the green streetscape, these designs vary as to their location and may or may not include removal of curb/parking lanes. A fence wall is proposed at the curb adjacent to both the Department of the Interior and the Office of Personnel Management. From an urban design perspective, ideally, the fence would be located on the inside of the sidewalk (on the edge of the building yard); however, this may not provide the setback (standoff distance) necessary for these buildings.

On both 21st and 23rd Streets, adjacent to the State Department, security requirements necessitate taking the curb lane to ensure adequate standoff distance. The perimeter security solutions applied to these streets include variations of the fence wall streetscape design concept. Department of State security requirements are unique and specific aspects of these concepts may require custom-design.

Sample Applications

Illustrated streetscape design solutions in the West End include application of: the fence wall design to 19th Street between C and D Streets (adjacent to the Department of the Interior); green design, with removal of the parking lane, on C Street between 20th and 21st Streets (adjacent to the Federal Reserve); and variations of the fence wall design concept, with removal of the parking lanes, on 21st Street (adjacent to the Department of State).

FENCE WALL DESIGN (19TH STREET)

As illustrated, the streetscape design on 19th Street incorporates a metal fence at the curb. Granite pillars and bollards may be used as alternatives to metal posts and bollards. Although several examples of grillwork are illustrated, the design of the fence has yet to be determined. Other existing streetscape elements such as the street trees, Twin 20 light standards, etc., will remain.

Streetscape elements of the fence wall streetscape design include:

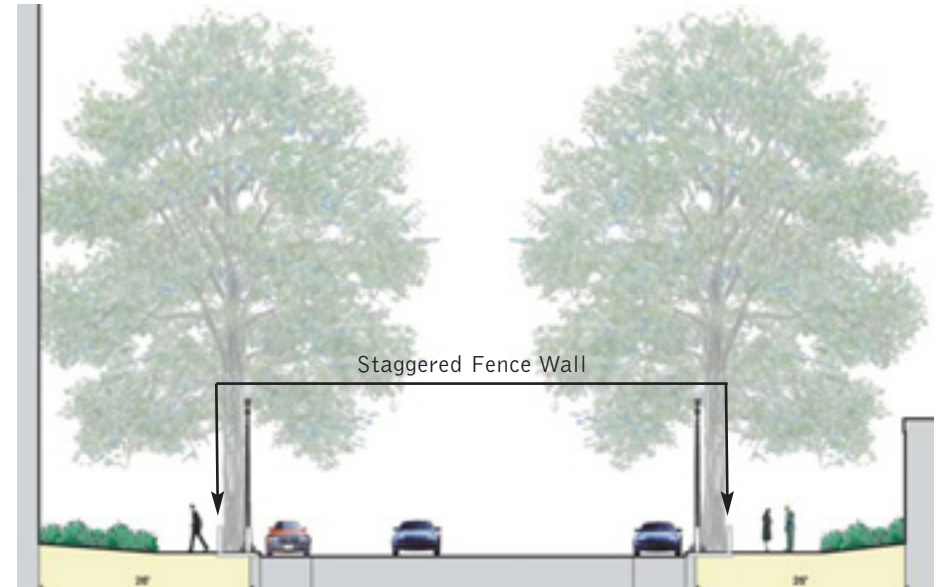
- Metal fence (2' 6" high, length varies)
- Metal or granite bollard (3' 0" high, 14" diameter at base) at 42" clear between bollards
- Metal retractable bollard (3' 0" high, 8" diameter), at 4' 0" on-center
- Gate arms (as per manufacturer's specification)



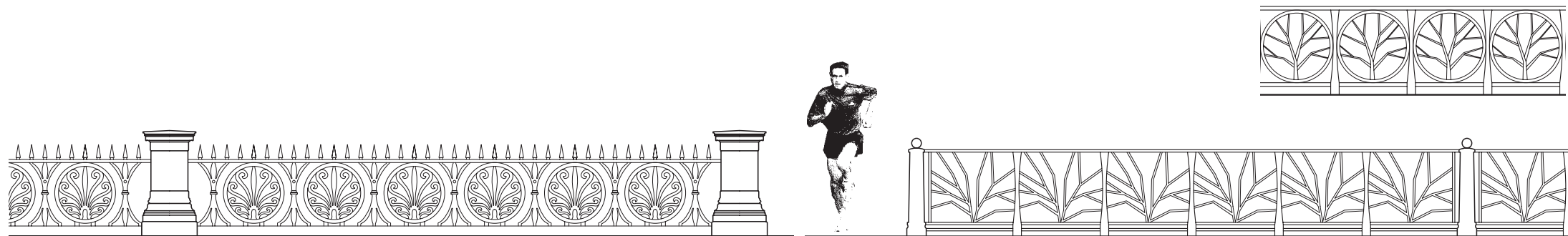
WEST END 19TH STREET, NW - SAMPLE APPLICATION PLAN - FENCE WALL DESIGN



WEST END ELEVATION 19TH STREET, NW - FENCE WALL DESIGN



TYPICAL SECTION - FENCE WALL DESIGN



FENCE WALL DESIGN OPTIONS

GREEN STREETScape DESIGN (C STREET)

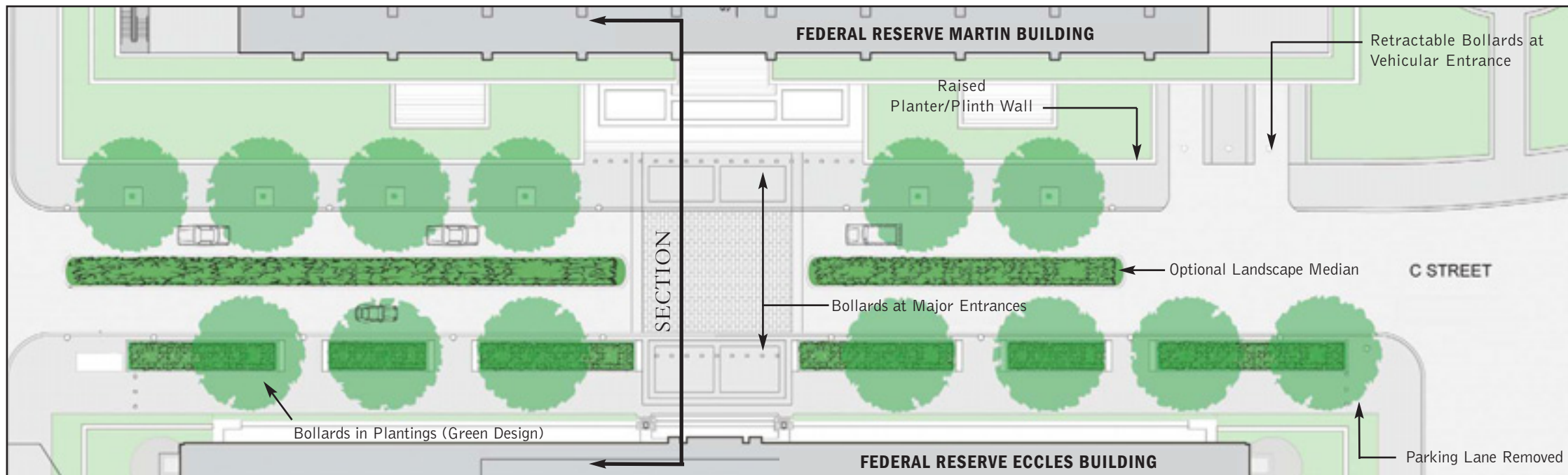
The streetscape design concept illustrated on C Street, between 20th and 21st Streets, removes the parking lane on the south side of the street and incorporates the green design security solution, i.e., bollards within plantings in the tree pits between the trees. Removal of the parking lane not only increases the standoff distance but is also necessitated in this area by the location of a large sewer main under the sidewalk that prohibits the foundation required for the installation of security measures.

The security perimeter on the north side of the street incorporates the existing plinth or planter wall. Security at the major entrances to these buildings is illustrated as custom-designed, incorporating the security components of bollards,

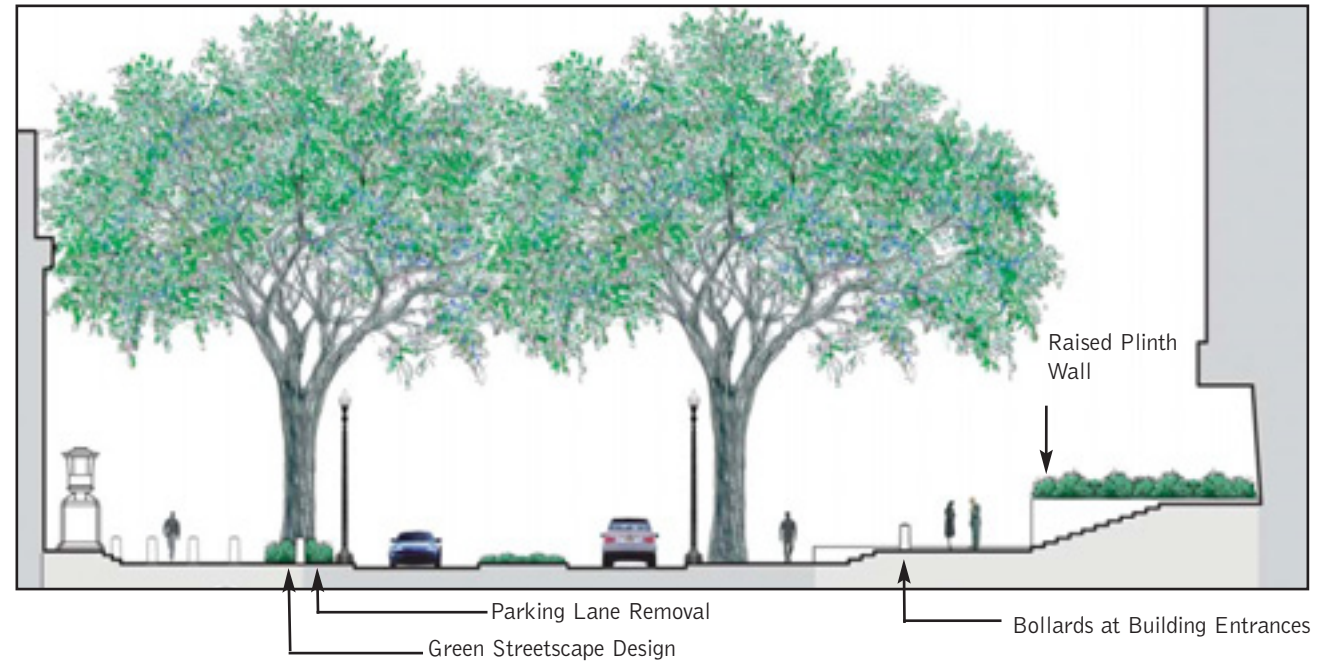
benches, and planters that are proposed elsewhere within the West End. The landscaped median in the street is shown as an amenity and is not intended as security.

Security components proposed for the streetscape design illustrated on C Street include:

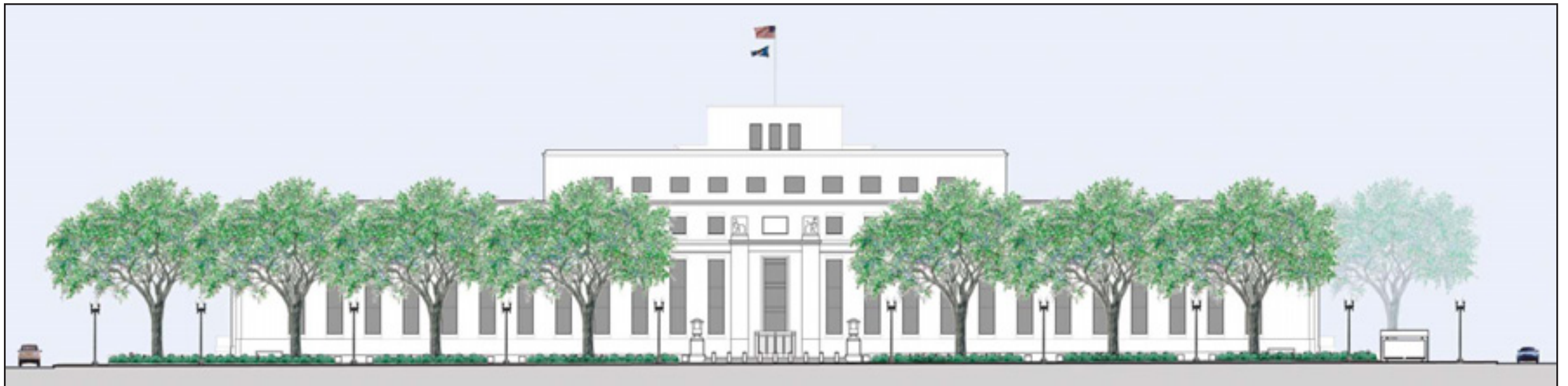
- Curb/parking lane removal
- Extension of the sidewalk (over removed parking lane)
- Extension of plinth wall (2' 6" high, length varies)
- Deciduous or evergreen plantings (3' BB, full to ground), in green design
- Granite bench (2' 6" high, 2' 0" wide, 7' 0" long)
- Granite seat (2' 6" high, 3' 0" wide, length varies)
- Granite bollard (2' 6" high, 14" diameter at base), at 42" between bollards
- Stainless steel retractable bollard (2' 6" high, 8" diameter) at 4' 0" on-center
- Street trees (8" caliper Elm) at 30 feet on-center (infill as required)



WEST END C STREET, NW - SAMPLE APPLICATION PLAN - GREEN AND PLINTH WALL STREETScape DESIGNS



WEST END SECTION AT C STREET, NW – GREEN AND PLINTH WALL DESIGNS



WEST END ELEVATION ON C STREET IN FRONT OF THE FEDERAL RESERVE BUILDING

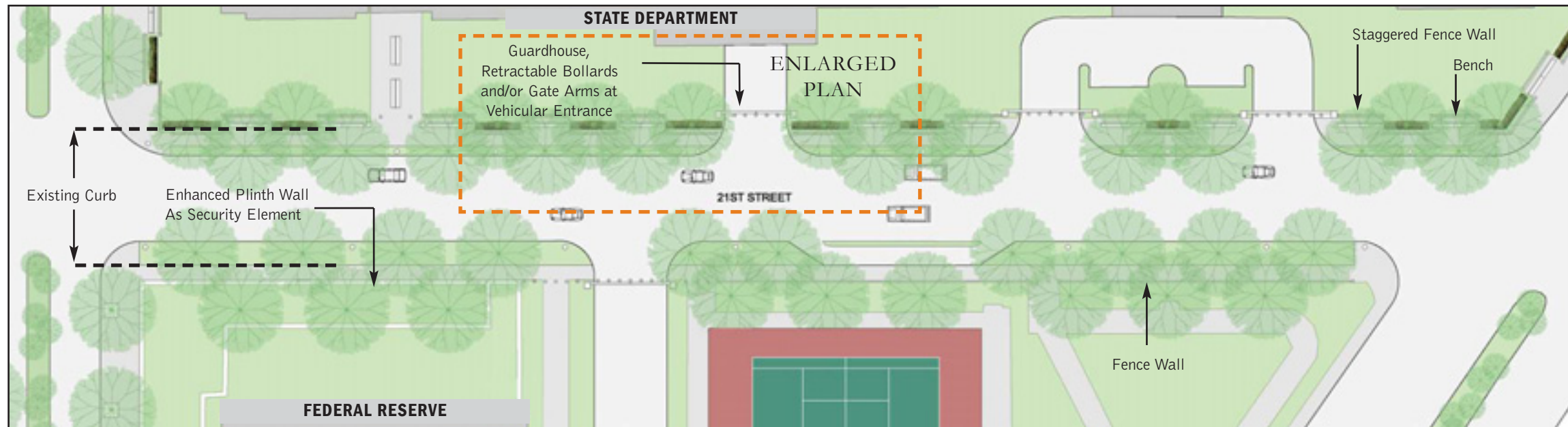
FENCE WALL CONCEPTS (21ST STREET)

The streetscape design illustrated on 21st Street, adjacent to the Department of State, includes removal of the parking lanes and the application of variations of the fence wall security solution.

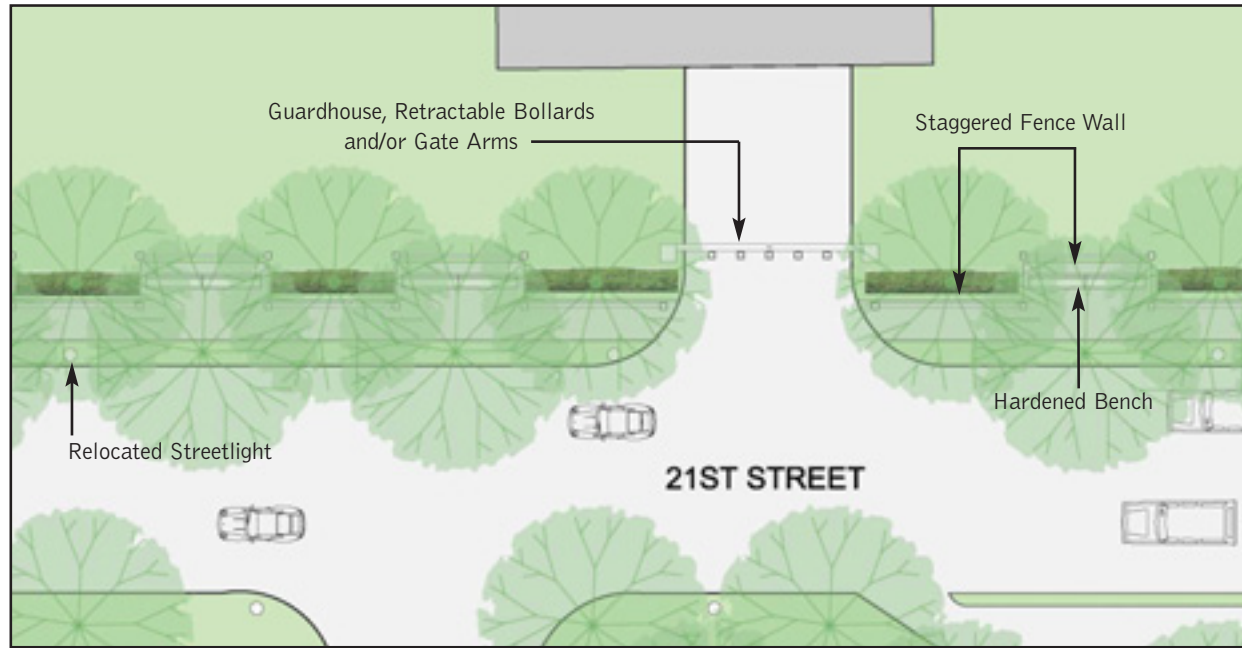
The staggered fence wall design locates the security perimeter at the inside edge of the sidewalk and includes a variety of components including: pillars, posts, benches, bollards, and gate arms. Plantings are also part of the fence wall streetscape design. An alternate illustration places the staggered fence wall at the curb, which may be a more desirable security solution, but a less desirable streetscape design. Although these designs are for illustrative purposes only and are not intended as final designs, they describe the streetscape elements considered appropriate to these concepts and to the West End.

Streetscape elements illustrated for application on 21st Street include:

- Curb/parking lane removal
- Extension of the sidewalk (over removed parking lane)
- Deciduous or evergreen plantings (3' BB, full to ground)
- Wood and metal bench (12' 0" long)
- Metal fence (2' 6" high, length varies)
- Granite bollard (2' 6" high, 14" diameter at base), at 42" between bollards
- Stainless steel retractable bollard (2' 6" high, 8" diameter) at 4' 0" on-center
- Stainless steel gate arms
- Street trees (8" caliper Oak) at 30 feet on-center (new and infill as required)



WEST END - 21ST STREET, NW - SAMPLE APPLICATION PLAN - STAGGERED FENCE WALL AND EXISTING PLINTH WALL DESIGNS

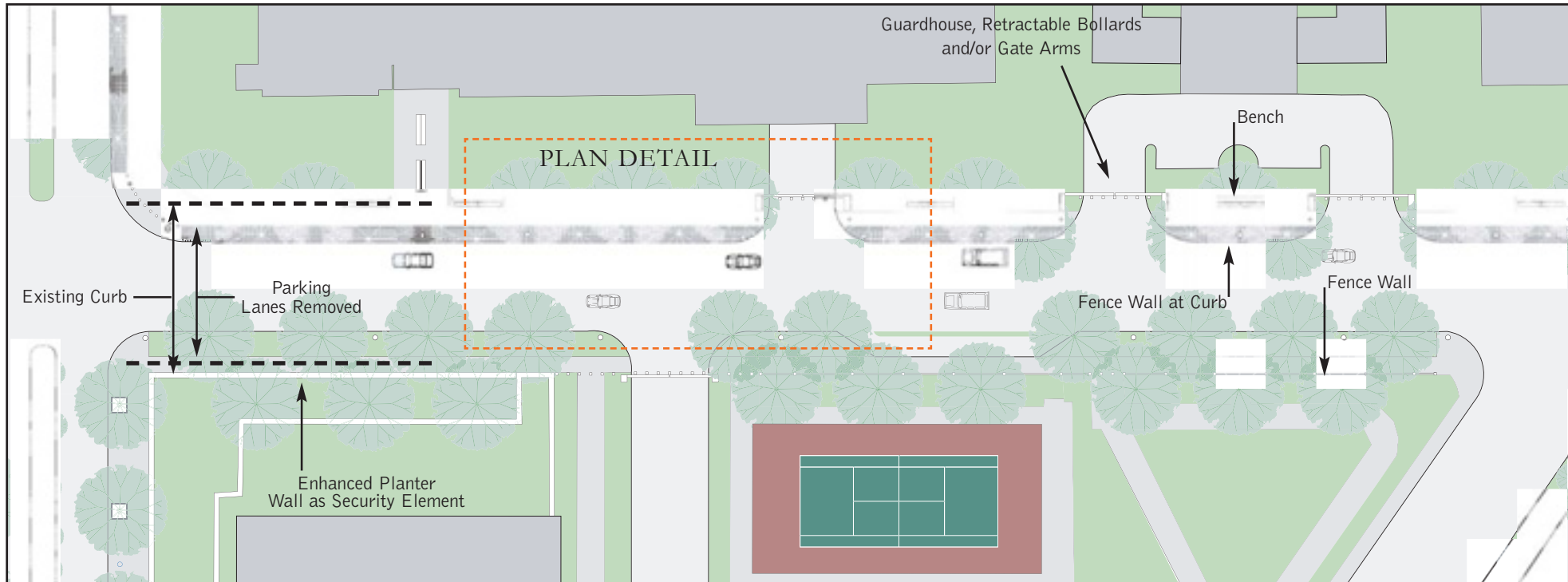


**ENLARGED PLAN-
STAGGERED FENCE
WALL DESIGN**

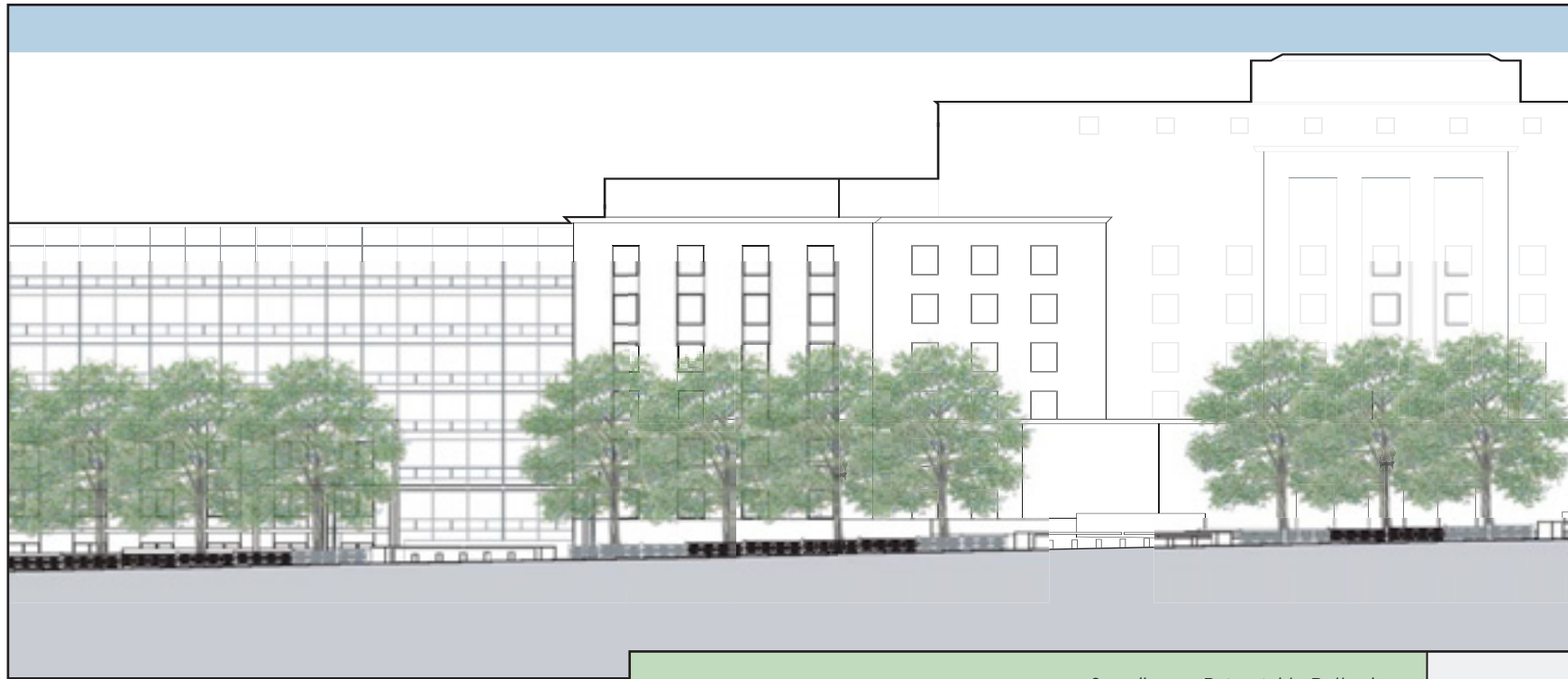


WEST END 21ST STREET, NW - SECTION - STAGGERED FENCE WALL DESIGN

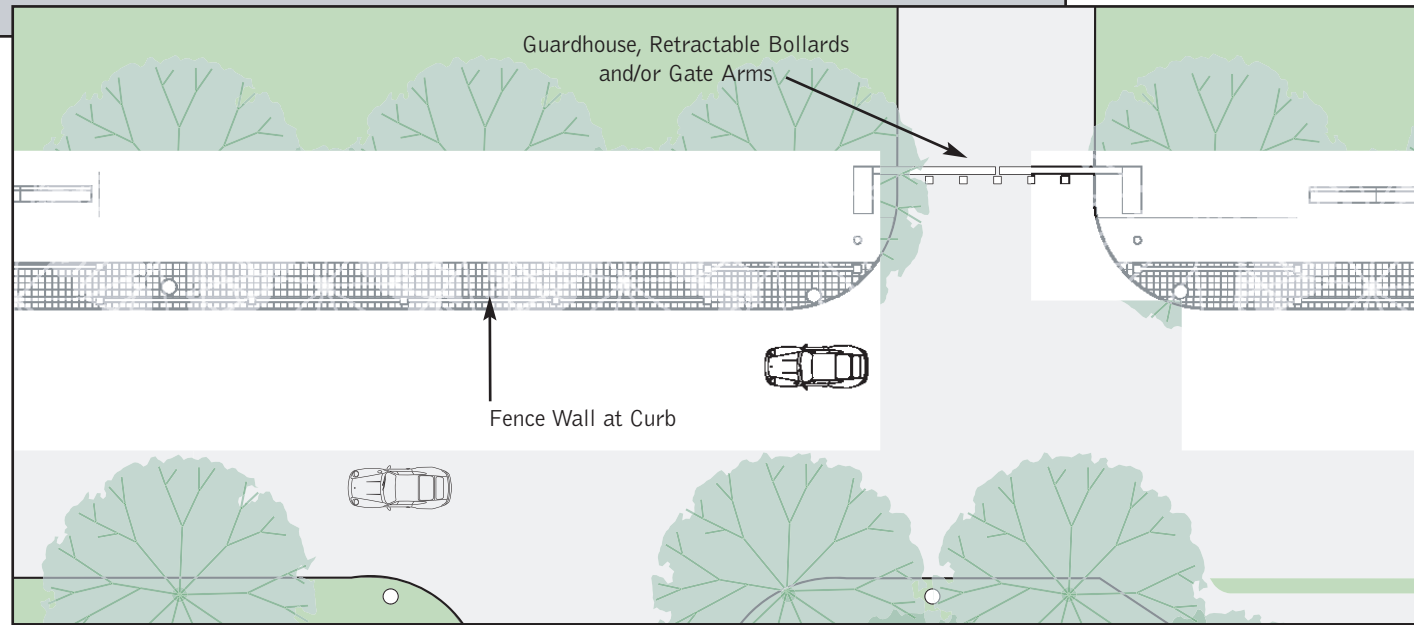
West End Alternative Solution



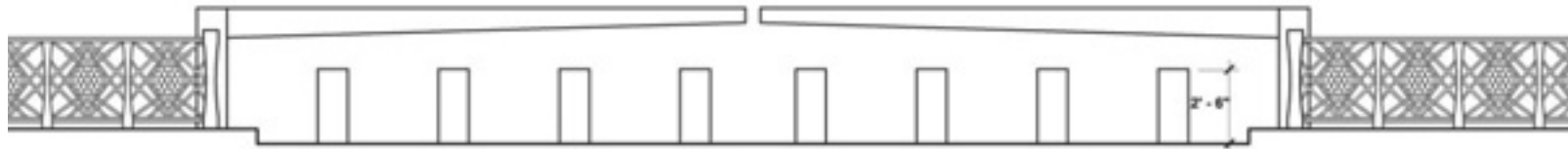
WEST END – 21ST STREET, NW – ALTERNATIVE SAMPLE APPLICATION PLAN – FENCE WALL AT CURB



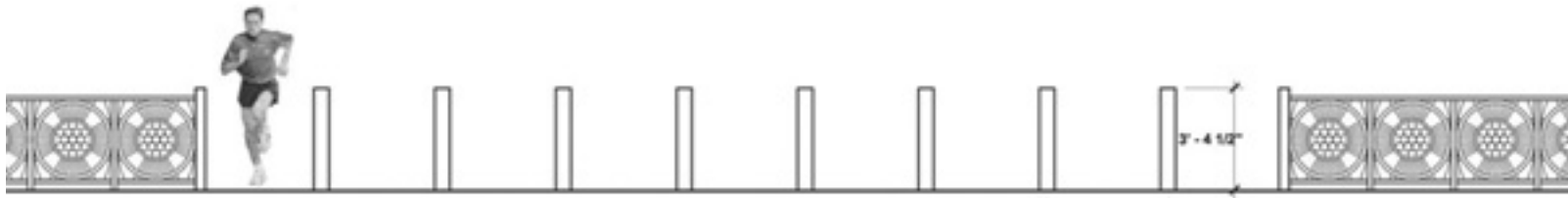
ELEVATION - FENCE WALL AT CURB



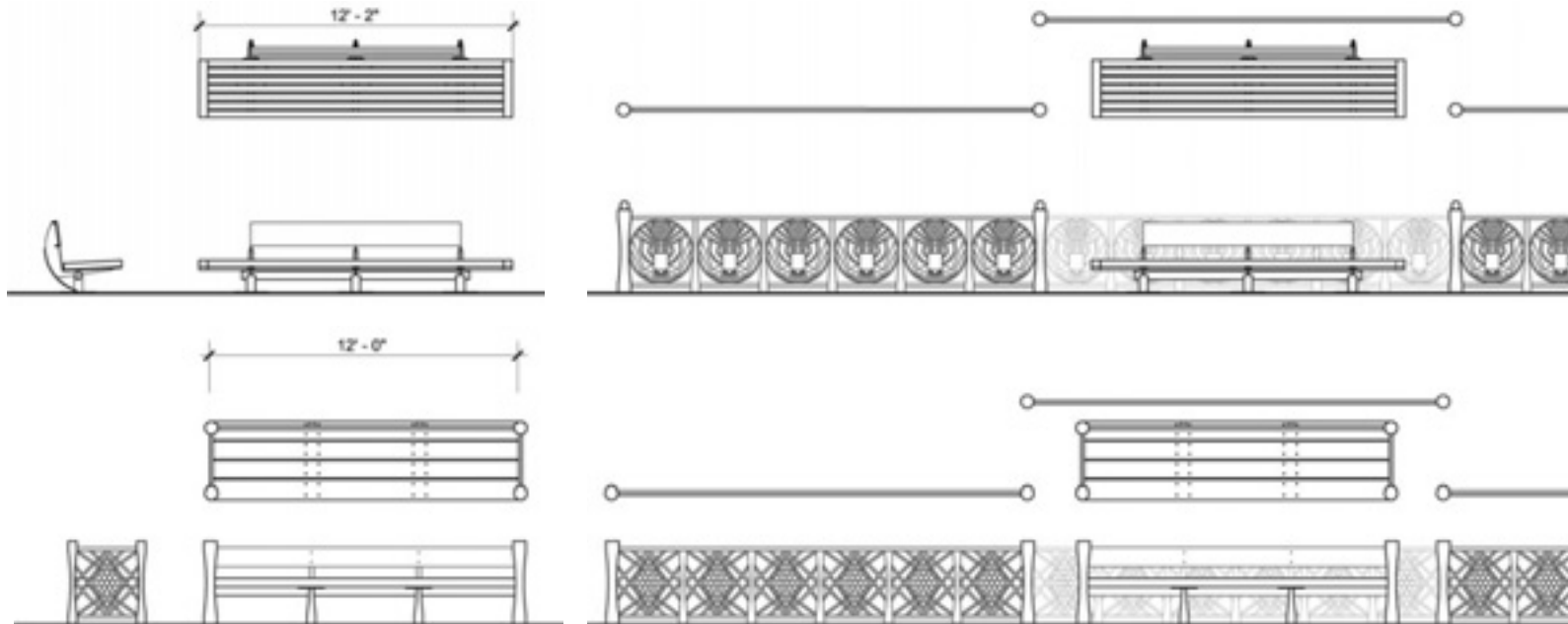
ELEVATION PLAN - FENCE WALL AT CURB



RETRACTABLE BOLLARDS AND GATE ARMS



BOLLARDS AT BUILDING ENTRANCES



BENCH AND WALL DESIGN OPTIONS

ADDITIONAL DESIGN CONSIDERATIONS

- Although standoff distance can be maximized at the curb, fence wall designs incorporating grillwork are more appropriately located on the inside of the sidewalk. Fencing at the curb also requires numerous breaks for pedestrian safety, egress, etc. The fence wall proposed for application at the curb on the north-south streets in the Federal Triangle may be applicable to this area.
- Any removal of curb lanes requires a comprehensive mobility and access strategy, including the development of secure, centralized, short-term parking facilities.
- The Department of State is unique in its security requirements and may require custom-designed security solutions.
- Proposed security components require engineering and testing to ensure that they satisfy security requirements.
- Underground utility locations are yet to be determined.