MEMORANDUM OF AGREEMENT
BETWEEN THE FEDERAL HIGHWAY ADMINISTRATION,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
THE INDIANA DEPARTMENT OF TRANSPORTATION, AND
THE INDIANA STATE HISTORIC PRESERVATION OFFICER
SUBMITTED TO THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
PURSUANT TO 36 C.F.R. Section 800.6(b)(iv)
REGARDING THE I-65/I-70 NORTH SPLIT
INTERCHANGE RECONSTRUCTION PROJECT
IN INDIANAPOLIS, CENTER TOWNSHIP, MARION COUNTY, INDIANA
DES. NOS. 1592385 and 1600808

WHEREAS the Federal Highway Administration ("FHWA") proposes to reconstruct the I-65/I-70 North Split interchange as well as replace/rehabilitate bridges and replace pavement south along I-65/I-70 to the Washington Street interchange, west along I-65 to approximately Alabama Street (to Illinois Street along 11th and 12th Streets); and, east along I-70 to approximately the bridge over Valley Avenue (west of the Keystone Avenue/ Rural Street interchange) for the I-65/I-70 North Split Interchange Reconstruction Project (North Split Project) in Indianapolis, Center Township, Marion County, Indiana; and

WHEREAS the North Split Project is subject to Section 106 of the National Historic Preservation Act (54 U.S.C. § 306108) and its implementing regulations (36 C.F.R. Section 800 [2017]) and Section 110(f) of the National Historic Preservation Act; and

WHEREAS the FHWA, in consultation with the Indiana State Historic Preservation Officer ("Indiana SHPO"), has defined the North Split Project's original area of potential effects ("APE") for aboveground resources, as the term is defined in 36 C.F.R. Section 800.16(d), to an irregularly shaped area including the construction limits and an area approximately 0.25–0.5 mile around the construction limits of the project, with the distance varying based on the viewshed; as well as expanded areas along the following street segments: Fall Creek Parkway (from 38th Street south to College Avenue), College Avenue (from Fall Creek Parkway south to the original APE), West Street (from the I-65 interchange south to the I-70 interchange), Missouri Street (from West Street south to the I-70 interchange), Pennsylvania Street (south from the original APE to Madison Avenue), Madison Avenue (from Pennsylvania Street to the I-70 interchange), St. Clair Street (from the original APE west to West Street), Fort Wayne Avenue (from the original APE south to St. Clair Street), East Street (from the original APE south to the original APE), Washington Street (from Rural Street west to the original APE), Rural Street (from the I-70 interchange south to Washington Street), and Massachusetts Avenue (from the original APE east to Rural Street) as shown in Attachment A; and

WHEREAS the FHWA, in consultation with the Indiana SHPO, has defined the North Split Project APE for archaeological resources, as the term defined in 36 C.F. R. Section 800.16(d), to be the area within the construction right-of-way; and

WHEREAS the FHWA, in consultation with the Indiana SHPO, has found that the historic properties listed below are within the APE; and

- Herron-Morton Place Historic District
- Old Northside Historic District
- Saint Joseph Neighborhood Historic District
- Chatham-Arch Historic District
- Massachusetts Avenue Commercial Historic District
- Lockerbie Square Historic District
- Fletcher Place Historic District
- Cottage Home Historic District
- Arsenal Technical High School Historic District
- Indianapolis Park and Boulevard System Historic District
- Indianapolis Public Library Branch No. 6 (NR-2410; IHSSI # 098-296-01173)
- Prosser House (NR-0090; IHSSI # 098-296-01219)
- Bals-Wocher House (NR-0146; IHSSI # 098-296-01375)
- Wyndham (NR-0616.33; IHSSI # 098-296-01367)
- Pierson-Griffiths House (Kemper House) [NR-0203; IHSSI # 098-296-01368]
- Calvin I. Fletcher House (NR-0694; IHSSI # 098-296-01369)
- Pennsylvania Apartments (NR-0616.26; IHSSI # 098-296-01379)
- The Myrtle Fern (NR-0616.25; IHSSI # 098-296-01389)
- The Shelton (NR-0616.23; IHSSI # 098-296-01390)
- Cathcart Apartments (NR-0616.09; IHSSI # 098-296-01391)
- Lodge Apartments (NR-0616.19; IHSSI # 098-296-01392)
- Plaza Apartments (NR-0616.27; IHSSI # 098-296-01393)
- The Ambassador (NR-0616.03; IHSSI # 098-296-01394)
- Central Library of Indianapolis-Marion County Public Library (NR-0085; IHSSI # 098-296-01395)
- The Burton (NR-0616.08; IHSSI # 098-296-01396)
- The Vera and The Olga (NR-0725; IHSSI # 098-296-01415)
- Independent Turnverein (NR-0641; IHSSI # 098-296-01428)
- Cole Motor Car Company (NR-0332; IHSSI # 098-296-01651)
- Gaseteria, Inc. (NR-2266)
- Manchester Apartments (NR-1406)
- Sheffield Inn (NR-1373)
- Delaware Court (NR-0616.11; IHSSI # 098-296-01370)
- The Spink (Renaissance Tower Historic Inn) [NR-0616.28; IHSSI # 098-296-01385]
- William Buschman Block (NR-0897; IHSSI # 098-296-01353)
- Morris-Butler House (NR-2027; IHSSI # 098-296-14219)
- John W. Schmidt House (The Propylaeum) [NR-2043; IHSSI # 098-296-14063]
- Pearson Terrace (NR-0695; IHSSI # 098-296-01373)
- Benjamin Harrison Home/Presidential Site (NR-2066; IHSSI # 098-296-14057)
- James Whitcomb Riley House (NR-2067; IHSSI # 098-296-20038)
- Martin Luther King, Jr. Park
- School #27–Charity Dye Elementary School (NR-1560; IHSSI # 098-296-01309)
- Holy Cross/Westminster Historic District
- Marion County Bridge No. 2520L; NBI No. 4900233

- John Hope School No. 26 (IHSSI # 098-296-01212)
- James E. Roberts School No. 97 (IHSSI # 098-296-01220)
- Knights of Pythias (IHSSI # 098-296-01378)
- Fame Laundry (IHSSI # 098-296-01421)
- Stutz Motor Car Company (IHSSI # 098-296-01426)
- St. Rita's Catholic Church Parish Complex (AL062)
- Saints Peter and Paul Cathedral Parish Historic District
- Windsor Park Neighborhood Historic District

WHEREAS the FHWA, in consultation with the Indiana SHPO, has determined, pursuant to 36 C.F.R. Section 800.4(c), that the properties listed below are eligible for inclusion in the National Register of Historic Places ("NRHP"):

- Martin Luther King, Jr. Park
- School #27–Charity Dye Elementary School (NR-1560; IHSSI # 098-296-01309)
- Holy Cross/Westminster Historic District
- Marion County Bridge No. 2520L; NBI No. 4900233
- John Hope School No. 26 (IHSSI # 098-296-01212)
- James E. Roberts School No. 97 (IHSSI # 098-296-01220)
- Knights of Pythias (IHSSI # 098-296-01378)
- Fame Laundry (IHSSI # 098-296-01421)
- Stutz Motor Car Company (IHSSI # 098-296-01426)
- St. Rita's Catholic Church Parish Complex (AL062)
- Saints Peter and Paul Cathedral Parish Historic District
- Windsor Park Neighborhood Historic District

WHEREAS the properties listed below are listed in the NRHP; and

- Herron-Morton Place Historic District
- Old Northside Historic District
- Saint Joseph Neighborhood Historic District
- Chatham-Arch Historic District
- Massachusetts Avenue Commercial Historic District
- Lockerbie Square Historic District
- Fletcher Place Historic District
- Cottage Home Historic District
- Arsenal Technical High School Historic District
- Indianapolis Park and Boulevard System Historic District
- Indianapolis Public Library Branch No. 6 (NR-2410; IHSSI # 098-296-01173)
- Prosser House (NR-0090; IHSSI # 098-296-01219)
- Bals-Wocher House (NR-0146; IHSSI # 098-296-01375)
- Wyndham (NR-0616.33; IHSSI # 098-296-01367)
- Pierson-Griffiths House (Kemper House) [NR-0203; IHSSI # 098-296-01368]
- Calvin I. Fletcher House (NR-0694; IHSSI # 098-296-01369)
- Pennsylvania Apartments (NR-0616.26; IHSSI # 098-296-01379)

- The Myrtle Fern (NR-0616.25; IHSSI # 098-296-01389)
- The Shelton (NR-0616.23; IHSSI # 098-296-01390)
- Cathcart Apartments (NR-0616.09; IHSSI # 098-296-01391)
- Lodge Apartments (NR-0616.19; IHSSI # 098-296-01392)
- Plaza Apartments (NR-0616.27; IHSSI # 098-296-01393)
- The Ambassador (NR-0616.03; IHSSI # 098-296-01394)
- Central Library of Indianapolis-Marion County Public Library (NR-0085; IHSSI # 098-296-01395)
- The Burton (NR-0616.08; IHSSI # 098-296-01396)
- The Vera and The Olga (NR-0725; IHSSI # 098-296-01415)
- Independent Turnverein (NR-0641; IHSSI # 098-296-01428)
- Cole Motor Car Company (NR-0332; IHSSI # 098-296-01651)
- Gaseteria, Inc. (NR-2266)
- Manchester Apartments (NR-1406)
- Sheffield Inn (NR-1373)
- Delaware Court (NR-0616.11; IHSSI # 098-296-01370)
- The Spink (Renaissance Tower Historic Inn) [NR-0616.28; IHSSI # 098-296-01385]
- William Buschman Block (NR-0897; IHSSI # 098-296-01353)
- Morris-Butler House (NR-2027; IHSSI # 098-296-14219)
- John W. Schmidt House (The Propylaeum) [NR-2043; IHSSI # 098-296-14063]
- Pearson Terrace (NR-0695; IHSSI # 098-296-01373)
- Benjamin Harrison Home/Presidential Site (NR-2066; IHSSI # 098-296-14057)
- James Whitcomb Riley House (NR-2067; IHSSI # 098-296-20038)

WHEREAS the FHWA, in consultation with the Indiana SHPO, has determined pursuant to 36 C.F.R. Section 800.5(a) that the North Split Project will have an adverse effect on the Old Northside Historic District, the Morris-Butler House, the Saint Joseph Neighborhood Historic District, the Chatham-Arch Historic District, the Massachusetts Avenue Commercial Historic District, and the Lockerbie Square Historic District; and

WHEREAS the FHWA has consulted with the Indiana SHPO in accordance with Section 106 of the National Historic Preservation Act (54 U.S.C. § 306108) and its implementing regulations (36 C.F.R. Section 800) to resolve the adverse effect on the Old Northside Historic District, the Morris-Butler House, the Saint Joseph Neighborhood Historic District, the Chatham-Arch Historic District, the Massachusetts Avenue Commercial Historic District, and the Lockerbie Square Historic District; and

WHEREAS the public was given an opportunity to comment on the undertaking's adverse effect in a notice published on December 24, 2019 in the *Indianapolis Star*; and

WHEREAS the FHWA has invited the Advisory Council on Historic Preservation ("Council") to participate in the project, pursuant to 36 C.F.R. Section 800.6(a)(1), in an email dated March 26, 2018; and

WHEREAS the Council has elected to participate in consultation in a letter dated April 3, 2018; and

WHEREAS the FHWA, in consultation with the Indiana SHPO, has invited the Indiana Department of Transportation ("INDOT") to participate in the consultation and to become a signatory to this Memorandum of Agreement ("MOA"); and

WHEREAS the Benjamin Harrison Presidential Site has participated in consultation and elected to become an invited signatory to this MOA; and

WHEREAS Keep Indianapolis Beautiful, Inc. has participated in consultation and elected to become an invited signatory to this MOA; and

WHEREAS the following agencies, organizations, or individuals have participated in the consultation; and

- Indiana Landmarks
- National Park Service, Midwest Region
- Historic Urban Neighborhoods of Indianapolis
- Indianapolis Historic Preservation Commission
- Indianapolis Department of Metropolitan Development
- Indianapolis Department of Public Works
- Old Northside Neighborhood Association
- Saint Joseph Historic Neighborhood Association
- Chatham-Arch Neighborhood Association
- Lockerbie Square People's Club
- Windsor Park Neighborhood Association
- Holy Cross Neighborhood Association
- Cottage Home Neighborhood Association
- Cottage Home BOD
- Massachusetts Avenue Merchants Association
- Mayor's Neighborhood Advocate, Area 10
- Hendricks Commercial Properties
- NESCO Land Use
- Fountain Square Neighborhood Association
- John Boner Neighborhood Centers
- Patricia and Charles Perrin (property owners)
- North Square Neighborhood Association
- Luke Leising (property owner)
- American Institute of Architects
- Fletcher Plan Neighborhood Association
- Southeast Neighborhood Land Use Committee
- Martindale Brightwood Community Development Corporation
- Interstate Business Group
- National Trust for Historic Preservation

- Sandy Cummings (property owner)
- Old Near Westside/Ransom Place
- Riley Area Development Corporation
- Miami Tribe of Oklahoma

WHERAS Consulting parties have participated in consultation as identified in Attachment B; and

NOW, THEREFORE, the FHWA and the Indiana SHPO agree that, upon FHWA's approval of the North Split Project, the North Split Project shall be implemented in accordance with the following stipulations in order to take into account the effect of the North Split Project on historic properties.

STIPULATIONS

FHWA, in coordination with INDOT, shall ensure that the following measures are carried out:

I. PROFESSIONAL QUALIFICATIONS

A. In consultation with the Indiana SHPO, INDOT shall ensure that all work performed pursuant to this MOA is performed or supervised by a qualified individual and/or team(s) that meet the Secretary of the Interior's Professional Qualification Standards as outlined in Appendix A to 36 C.F.R. 61 for history, archaeology, architectural history, architecture, and/or historic architecture, as appropriate.

B. The individual and/or team(s) performing or supervising the archaeology investigations shall have supervisory experience in the prehistoric and historic archaeology of the central Indiana region. All work performed or supervised by such person or persons shall be conducted pursuant to the provisions of Indiana Code 14-21-1, 312 Indiana Administrative Code 21, 312 Indiana Administration Code 22, and the most current "Guidebook for Indiana Historic Sites and Structures Inventory-Archaeological Sites."

II. MITIGATION MEASURES

A. Tree Preservation and Plantings

1. FHWA and INDOT shall ensure project elements, including tree and vegetation plantings, are designed in accordance with the North Split Project Aesthetic Design Guidelines (Attachment C). Minor modifications may be made if approved by FHWA and INDOT as long as they are within the spirit of the Aesthetic Design Guidelines.

2. FHWA and INDOT and/or its consultants shall provide a draft landscape and side slope plan (including scaled cross sections for each adjacent

historic district) for consulting party review and comment at two points during the design process.

a) Consulting parties are identified in Attachment B of the Draft MOA.

b) Comment periods will be 30 days.

c) The first comment period will be for an initial review and comment.

d) The second comment period will be to show how comments were addressed, allow comments on revisions, and solicit input regarding any remaining questions.

e) FHWA and INDOT shall make a good faith effort to address comments and shall provide responses regarding how or why comments were addressed or not addressed.

f) FHWA and INDOT shall have one consulting party meeting within each comment period to provide information and solicit feedback from consulting parties.

g) FHWA and INDOT shall have at least one neighborhood meeting within each comment period to solicit feedback from adversely affected historic districts. Residents of the Old Northside, Saint Joseph, and Chatham-Arch neighborhoods shall be the focus of the neighborhood meetings; however, the meetings will be open to the general public.

h) FHWA shall have the authority for final approval of actions regarding the implementation of aesthetic and landscaping measures.

3. INDOT shall develop a landscape maintenance plan for three years after tree and shrub planting.

4. INDOT shall engage Keep Indianapolis Beautiful, Inc. as a landscape advisor to provide recommendations and/or services for tree and shrub planting, monitoring, and maintenance for three years after planting.

5. INDOT shall replace trees and shrubs that do not survive during the first three years after planting.

6. INDOT shall identify “Do Not Disturb” areas within the project limits in order to preserve existing trees (Attachment C). The “Do Not Disturb”

areas shall be marked with silt fence and signage. The only work that can occur in the "Do Not Disturb" areas is the installation of new drainage connections (to existing pipes). No clearing of trees 2-inch diameter at breast height (dbh) or greater shall be allowed in the "Do Not Disturb" areas. The "Do Not Disturb" areas shall be at the following locations:

a) Within the existing right-of-way of northbound I-65 adjacent to the Old Northside Historic District and Morris Butler House from College Avenue to Alabama Street. INDOT shall identify a work zone, where construction work can occur, which extends 15 feet north of the proposed retaining wall within this area. Vegetation within the existing right-of-way north of that shall be in the "Do Not Disturb" area.

b) Portions of the existing right-of-way of southbound I-65 where groups of mature trees are present, adjacent to the Saint Joseph Neighborhood and Chatham-Arch Historic Districts from College Avenue to Delaware Street.

c) Portions of the existing right-of-way of southbound I-65/westbound I-70 where trees have been planted, adjacent to the Lockerbie Square Historic District from Michigan Street to New York Street.

7. If trees within the "Do Not Disturb" areas do not survive within one (1) year of the conclusion of construction activity within fifteen (15) feet of the area, INDOT shall plant replacement trees, at 2-inch dbh or greater in size, at a ratio of three to one (three replacement trees for each tree that does not survive). The replacement trees shall be planted in the "Do Not Disturb" areas if space allows.

8. Outside of the "Do Not Disturb" areas, INDOT shall plant shrubs and trees (if appropriate for the slope and location) at the following locations:

a) Within the 15-foot work zone north of I-65 northbound from College Avenue to Alabama Street.

b) The side slope of southbound I-65 between Alabama Street and College Avenue.

c) If the existing vegetation is removed during construction, along the western side slope of I-65/I-70 south of the interchange from 10th Street south to St. Clair Street.

9. INDOT shall plant trees 2-inch dbh or greater in size. This includes trees both in and out of the "Do Not Disturb" areas.

B. Connectivity Improvements

1. FHWA and INDOT shall ensure project elements, including underpass treatments, are designed in accordance with the North Split Project Aesthetic Design Guidelines (Attachment C). Minor modifications may be made if approved by FHWA and INDOT as long as they are within the spirit of the Aesthetic Design Guidelines.

2. FHWA shall have the authority for final approval of actions regarding the implementation of connectivity improvements.

3. To improve connectivity between adversely affected historic districts, INDOT shall make the following connectivity improvements:

    a) Between the Old Northside and Saint Joseph Neighborhood Historic Districts, improvements to the Alabama Street underpass shall include new lighting on the bridge, sidewalk pavers, and signage along Alabama Street identifying each neighborhood.

    b) Between the Old Northside and Saint Joseph Neighborhood Historic Districts, improvements to the Central Avenue underpass shall include a wider bridge opening (65 feet to at least 76 feet), wider sidewalks, sidewalk pavers, new lighting with upgraded fixtures on the bridge, vertical bridge walls, elimination of drainage from the bridge above on to the street and sidewalks, and space for murals.

    c) Between the Old Northside and Chatham-Arch Historic Districts, improvements to the College Avenue underpass shall include wider bridge openings (79 feet to at least 87 feet), wider sidewalks, sidewalk pavers, new lighting with upgraded fixtures on the bridge, vertical bridge walls, elimination of drainage on to the street and sidewalks, and space for murals.

4. INDOT shall provide $100,000 to the Benjamin Harrison Presidential Site towards the construction of the Old Northside Connector, a pedestrian and bicycle path to connect the alley south of the Benjamin Harrison Presidential Site to Pennsylvania Street. This stipulation will be implemented through an agreement between INDOT and the Benjamin Harrison Presidential Site.

5. INDOT shall construct a temporary detour for the Monon Trail during construction. The portion of the detour within the O'Bannon Soccer Park and within INDOT right-of-way west to College and under the College Avenue bridges will remain as a permanent feature to improve connectivity between the Old Northside and Chatham-Arch Historic Districts.

6. INDOT shall install "No Construction Traffic" and "Local Traffic Only" signs at the entrance to the brick portion of 10th Street from Delaware Street to Central Avenue to protect the brick portion of 10th Street from construction traffic.

7. INDOT and its design-builder shall avoid the limestone curbs and street trees along 12th Street, north of I-65 northbound, during all construction activities. If damage occurs to the limestone curbs as a result of the North Split Project construction, INDOT shall repair the limestone curbs.

C. Vibration

1. To avoid damage to historic properties, INDOT shall ensure a Construction Vibration Monitoring and Control Plan ("Plan") is developed by the design-builder prior to beginning any construction activities. The Plan shall at least include all buildings within historic properties or districts within 140 feet of project construction activities. The Plan will include the following key elements:

   a) Identifying buildings that are sensitive to vibration;

   b) Conducting pre-construction surveys of residences, historic buildings, and other vibration-sensitive structures in the project corridor to determine the appropriate vibration limits for the type of structure and conditions of the structure;

   c) Developing and implementing a vibration monitoring program for construction activities;

   d) Conducting post-construction surveys;

   e) Phasing construction activities that create vibration so that multiple sources of vibration do not occur at the same time;

   f) Prohibiting or limiting certain activities that create higher vibration levels during specific nighttime hours;

   g) Developing a method for responding to community complaints; and,

   h) Keeping the public informed of proposed construction schedules, and identifying activities known to be a source of vibration.

2. Maximum thresholds for historic properties that shall not be exceeded are shown in Table 1 below. The values are presented in terms of peak particle velocity (PPV), the accepted method for evaluating the potential for damage.

Table 1. Construction Vibration Thresholds (PPV)

Type of Structure	Ground-borne Vibration Impact Level (PPV)
Fragile (non-engineered timber and masonry buildings)	0.20 in/sec
Extremely Fragile (buildings, ruins, ancient monuments)	0.12 in/sec

3. INDOT and/or its consultants shall provide the Plan to the North Split consulting parties (Attachment B) for a 30-day review period. The design-builder will be required to respond to consulting party comments.

4. In the event vibration damage does occur as a result of the North Split Project construction activities (as evidenced by the pre- and post-construction surveys), the design-builder will be responsible for the cost and repair of any vibration damage to historic properties. Any repairs shall be coordinated with the Indiana SHPO to ensure they are carried out in accordance with the Secretary of Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. This will be contingent on property owners allowing pre and post construction surveys of their buildings.

5. Where access to privately owned property is necessary for monitoring or damage repair, consent shall be obtained prior to entry.

III. TREATMENT OF ARCHAEOLOGICAL RESOURCES

A. Statutory and Regulatory Standards

1. The studies completed pursuant to Stipulation III.D shall demonstrate a level of effort consistent with the 36 C.F.R. part 800 regulations in effect on the date upon which the last of the required signatories has signed this MOA and provide FHWA with the information to determine, in consultation with the Indiana SHPO, which archaeological properties are eligible for inclusion in the NRHP. FHWA shall acknowledge and seek the special expertise of any federally recognized Indian Tribes which have previously entered into consultation in assessing the eligibility of historic properties that may possess religious and cultural significance to them.

2. In implementing Stipulation III.A through III.E., INDOT may consult with the consulting parties listed in Attachment B and others identified in accordance with the 36 C.F.R. part 800 regulations in effect on the date upon which this MOA is fully executed.

3. In accordance with Section 304 of the NHPA and the 36 C.F.R. part 800 regulations in effect on the date upon which this MOA is fully executed INDOT and its consultants, shall ensure that sensitive information regarding the nature and location of human remains and grave goods, and the location, character, and ownership of archaeological sites is kept confidential from the public.

4. In ensuring that any human remains and grave goods identified are treated in a sensitive, respectful, and careful manner, INDOT shall be guided by the Council's "Policy Statement Regarding Treatment of Human Remains and Grave Goods" (February 23, 2007) and the Native American Graves Protections and Repatriation Act ("NAGPRA") regulations set forth in 43 C.F.R. part 10, and other guidelines as appropriate.

5. If any human remains are encountered during the project, work shall cease in the immediate area and the human remains left undisturbed. INDOT shall contact the county coroner and law enforcement officials immediately, and the discovery must be reported to the Indiana SHPO within two (2) business days. The discovery must be treated in accordance with Indiana Code 14-21-1 and 312 Indiana Administrative Code 22. Work at this site shall not resume until a plan for the treatment of the human remains is developed and approved in consultation with the Indiana SHPO, the INDOT Cultural Resources Office, and any appropriate consulting parties.

6. Modification or modifications ("modifications") to the Project which fall outside of the archaeological APE shall be subject to archaeological identification and evaluation and assessment per Stipulations III.B. and III.C. If FHWA determines that the modifications have the potential to cause adverse effects on archaeological resources, then FHWA shall treat the archaeological resource in accordance with Stipulation III.E.

7. Any dispute regarding the report(s) shall be resolved in accordance with Stipulations IV.A.

B. Identification & Evaluation

1. Before commencing ground-disturbing activities in the Project archaeological APE, INDOT shall complete the identification and evaluation of archaeological properties in accordance with applicable Federal and State standards and guidelines listed in Stipulations I and III.A.

2. INDOT and/or its consultants shall investigate any additional locations where ground-disturbing activities are proposed or where they may occur within temporary easements and permanent right of way.

3. INDOT shall prepare and distribute a final Identification and Evaluation report in accordance with Stipulations I and III.A.

4. Upon completion of the evaluation, FHWA shall follow the procedures set forth in the 36 C.F.R. part 800 regulations in effect on the date upon which this MOA is fully executed which shall include updated documentation described in those regulations, if it is determined that no historic properties shall be affected.

5. If FHWA and the Indiana SHPO agree that any archaeological resources identified are not NRHP eligible, then no further action is necessary under the terms of this MOA and FHWA's responsibilities under Section 106 are fulfilled.

6. If FHWA determines any of the NRHP criteria are met and the Indiana SHPO agrees, the archaeological resource shall be considered eligible for the NRHP and treated in accordance with the Stipulations III.C - III.E.

7. If FHWA and the Indiana SHPO do not agree on NRHP eligibility, FHWA shall follow the procedures identified in accordance with Stipulation IV.A.

C. Assessment of Effects

1. In consultation with the Indiana SHPO, federally recognized Indian Tribes that may ascribe traditional cultural and religious significance to affected properties, and other parties whom FHWA deems appropriate, FHWA shall determine if the North Split Project shall adversely affect archeological properties determined eligible for inclusion in the NRHP pursuant to the 36 C.F.R. part 800 regulations in effect on the date upon which this MOA is fully executed.

2. If, in consultation with the Indiana SHPO, federally recognized Indian Tribes that may ascribe traditional cultural and religious significance to affected properties, and other parties whom FHWA deems appropriate, FHWA determines the Project may adversely affect NRHP-eligible archeological properties, then FHWA shall make reasonable efforts to avoid or minimize the adverse effect. If, after this consultation, FHWA determines it is not possible to avoid or minimize adverse effects, then FHWA shall treat the archaeological resource in accordance with Stipulation III.E. of the MOA.

3. Any dispute regarding the determination of effects on NRHP-eligible archaeological properties shall be resolved in accordance with applicable Federal and State standards and guidelines listed in Stipulation IV.A.

D. Additional Investigations

1. All archaeological investigations shall be conducted according to applicable Federal and State standards and guidelines listed in Stipulations I and III.A

2. To maximize the opportunity to avoid adverse effects, the required archaeological investigations shall be conducted as soon as practicable upon securing the appropriate rights to access property.

3. INDOT, in consultation with the Indiana SHPO, and other parties deemed appropriate by INDOT, shall take reasonable measures to avoid disinterment and disturbance to human remains and grave goods of religious and cultural significance to Native Americans, including investigations associated with modifications of the North Split Project.

4. Upon completion of any additional investigations, FHWA shall complete the identification and evaluation of archaeological resources for inclusion in the NRHP in accordance with applicable Federal and State standards and guidelines in consultation with the Indiana SHPO and appropriate consulting parties and federally recognized Indian Tribes.

E. Treatment

1. If FHWA, in consultation with the Indiana SHPO, federally recognized Indian Tribes that may ascribe traditional cultural and religious significance to affected properties, and other parties whom FHWA deems appropriate, determines that an adverse effect cannot be avoided or minimized, then FHWA shall develop and implement a Treatment Plan(s), as part of the above consultation, to mitigate the adverse effects to an archeological resource on a site-by-site basis. The implementation of the Treatment Plan(s) must be completed for each site prior to the initiation of any North Split Project construction activities within a segment that could affect that site.

IV. ADMINISTRATIVE PROVISIONS

A. Dispute Resolution

1. If the Indiana SHPO or any invited signatory to this MOA should object in writing to the FHWA regarding any action carried out or proposed with respect to the North Split Project or implementation of this MOA, then the FHWA shall consult with the objecting party to resolve this objection. If after such consultation the FHWA determines that the objection cannot be resolved through consultation, then the FHWA shall forward all documentation relevant to the objection to the Council, including the FHWA's proposed response to the objection. Within forty-five (45) days

after receipt of all pertinent documentation, the Council shall exercise one of the following options:

a) Provide the FHWA with a staff-level recommendation, which the FHWA shall take into account in reaching a final decision regarding its response to the objection; or

b) Notify the FHWA that the objection will be referred for formal comment pursuant to 36 C.F.R. Section 800.7(c), and proceed to refer the objection and comment. The FHWA shall take into account the Council's comments in reaching a final decision regarding its response to the objection.

2. If comments or recommendations from the Council are provided in accordance with this stipulation, then the FHWA shall take into account any Council comment or recommendations provided in accordance with this stipulation with reference only to the subject of the objection. The FHWA's responsibility to carry out all actions under the MOA that are not the subjects of the objection shall remain unchanged.

B. Post-Review Discovery

In the event that one or more historic properties--other than the historic properties listed above--are discovered or that unanticipated effects on historic properties are found during the implementation of this MOA, the FHWA shall follow the procedure specified in 36 C.F.R. Section 800.13, as well as IC 14-21-1-27 and IC 14-21-1-29, by stopping work in the immediate area and informing the Indiana SHPO and the INDOT Cultural Resources Office of such unanticipated discoveries or effects within two (2) business days. Any necessary archaeological investigations will be conducted according to the provisions of IC 14-21-1 and 312 IAC 21, and the most current *Guidebook for Indiana Historic Sites and Structures Inventory – Archaeological Sites*.

C. Modification or Modifications ("Modifications") of the Project with Respect to Aboveground Resources

If the North Split Project is modified after a finding of effect has been issued and this MOA has been executed, then FHWA shall review the North Split Project modifications and proceed by complying with IV.C.1. and, if appropriate, IV.C.2. References to FHWA also apply to INDOT, wherever INDOT is authorized to act on FHWA's behalf.

1. FHWA shall determine whether any modifications have the potential to cause adverse effects on aboveground resources, if any are found to exist within the area in which the modifications may cause effects.

a) If FHWA determines that the project modifications do not have the potential to cause adverse effects on aboveground resources, then FHWA or INDOT shall document that determination in its records,

and no further review or consultation with respect to those modifications' effects on aboveground properties is required for purposes of this MOA.

b) If FHWA determines that the project modifications have the potential to adversely affect aboveground resources, then FHWA or INDOT shall proceed to review the modifications in accordance with Stipulation IV.C.2.

c) Prior to determining whether the project modifications have the potential to adversely affect aboveground resources, FHWA may submit, for the Indiana SHPO's files, copies of reports generated as a result of modifications or may request the opinion of the Indiana SHPO about identification, evaluation, effects assessment or avoidance, minimization or mitigation, or about any other issue under federal or state preservation or archaeological law pertaining to the project, provided that such a request for an opinion is not substituted for formal consultation under Stipulation IV.C.2. The Indiana SHPO shall have thirty (30) days to respond to such a request.

2. If FHWA determines that project Modifications have the potential to cause adverse effects on aboveground resources, then FHWA shall re-open the Section 106 consultation process in accordance with the 36 C.F.R. part 800 regulations that are in effect on the date upon which this MOA has been signed by the last of all required and invited signatories.

a) The re-opened consultation shall occur with regard only to:

(i) Adverse effects assessment, or avoidance, minimization or mitigation of adverse effects related to the project modifications, for previously-evaluated aboveground properties within the APE, or:

(ii) Identification, evaluation, adverse effects assessment, or avoidance, minimization or mitigation of adverse effects related to the project modifications, for aboveground properties, within the area added to the APE, as a result of the expansion of the APE.

b) FHWA shall consult with the consulting parties listed in Attachment B and other parties, as appropriate, except to the extent that the public disclosure of information about resources is withheld or limited for archaeological resources.

c) FHWA shall issue a new finding, supported either by revised documentation or by an update to the documentation, regardless of

whether additional, or different kinds of, adverse effects have been found to result from the Modifications of the project.

D. Amendment

Any signatory to this MOA may request that it be amended, whereupon the parties shall consult to consider the proposed amendment. 36 C.F.R. 800.6(c)(7) shall govern the execution of any such amendment.

E. Duration

If the terms of this MOA have not been implemented by December 31, 2030, then this MOA shall be considered null and void. In such an event, the FHWA shall so notify the parties to this MOA and, if it chooses to continue with the North Split Project, then it shall reinitiate review of the North Split Project in accordance with 36 C.F.R. Sections 800.3 through 800.7.

F. Termination

1. Any signatory to this MOA may terminate it by providing thirty (30) days notice to the other parties, provided that the parties shall consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination.

2. In the event of termination, the FHWA shall comply with 36 C.F.R. Sections 800.3 through 800.7 with regard to the review of the North Split Project.

The execution of this MOA by the FWHA, INDOT, Council, the Indiana SHPO, the Benjamin Harrison Presidential Site, and Keep Indianapolis Beautiful, Inc., and the implementation of its terms evidence that the FHWA has afforded the Council an opportunity to comment on the North Split Project and its effect on historic properties and that the FHWA has taken into account the effects of the North Split Project on historic properties.

SIGNATORIES (required):
FEDERAL HIGHWAY ADMINISTRATION
INDIANA STATE HISTORIC PRESERVATION OFFICER
ADVISORY COUNCIL ON HISTORIC PRESERVATION

INVITED SIGNATORIES:
INDIANA DEPARTMENT OF TRANSPORTATION
BENJAMIN HARRISON PRESIDENTIAL SITE
KEEP INDIANAPOLIS BEAUTIFUL, INC.

(Optional) CONCURRING PARTIES:

- Indiana Landmarks
- National Park Service, Midwest Region
- Historic Urban Neighborhoods of Indianapolis
- Indianapolis Historic Preservation Commission
- Indianapolis Department of Metropolitan Development
- Indianapolis Department of Public Works
- Old Northside Neighborhood Association
- Saint Joseph Historic Neighborhood Association
- Chatham-Arch Neighborhood Association
- Lockerbie Square People's Club
- Windsor Park Neighborhood Association
- Holy Cross Neighborhood Association
- Cottage Home Neighborhood Association
- Cottage Home BOD
- Massachusetts Avenue Merchants Association
- Mayor's Neighborhood Advocate, Area 10
- Hendricks Commercial Properties
- NESCO Land Use
- Fountain Square Neighborhood Association
- John Boner Neighborhood Centers
- Patricia and Charles Perrin (property owners)
- North Square Neighborhood Association
- Luke Leising (property owner)
- American Institute of Architects
- Fletcher Plan Neighborhood Association
- Southeast Neighborhood Land Use Committee
- Martindale Brightwood Community Development Corporation
- Interstate Business Group
- National Trust for Historic Preservation
- Sandy Cummings (property owner)
- Old Near Westside/Ransom Place
- Riley Area Development Corporation
- Miami Tribe of Oklahoma

MEMORANDUM OF AGREEMENT
BETWEEN THE FEDERAL HIGHWAY ADMINISTRATION,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
THE INDIANA DEPARTMENT OF TRANSPORTATION, AND
THE INDIANA STATE HISTORIC PRESERVATION OFFICER
SUBMITTED TO THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
PURSUANT TO 36 C.F.R. Section 800.6(b)(iv)
REGARDING THE I-65/I-70 NORTH SPLIT
INTERCHANGE RECONSTRUCTION PROJECT
IN INDIANAPOLIS, CENTER TOWNSHIP, MARION COUNTY, INDIANA
DES. NOS. 1592385 and 1600808

REQUIRED SIGNATORY
FEDERAL HIGHWAY ADMINISTRATION

By: _____ Date: _____
Mayela Sosa, Division Administrator

MEMORANDUM OF AGREEMENT
BETWEEN THE FEDERAL HIGHWAY ADMINISTRATION,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
THE INDIANA DEPARTMENT OF TRANSPORTATION, AND
THE INDIANA STATE HISTORIC PRESERVATION OFFICER
SUBMITTED TO THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
PURSUANT TO 36 C.F.R. Section 800.6(b)(iv)
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INTERCHANGE RECONSTRUCTION PROJECT
IN INDIANAPOLIS, CENTER TOWNSHIP, MARION COUNTY, INDIANA
DES. NOS. 1592385 and 1600808

REQUIRED SIGNATORY

INDIANA STATE HISTORIC PRESERVATION OFFICER

By: _____ Date: _____
Chris Smith, Deputy Director

MEMORANDUM OF AGREEMENT
BETWEEN THE FEDERAL HIGHWAY ADMINISTRATION,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
THE INDIANA DEPARTMENT OF TRANSPORTATION, AND
THE INDIANA STATE HISTORIC PRESERVATION OFFICER
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INTERCHANGE RECONSTRUCTION PROJECT
IN INDIANAPOLIS, CENTER TOWNSHIP, MARION COUNTY, INDIANA
DES. NOS. 1592385 and 1600808

REQUIRED SIGNATORY

ADVISORY COUNCIL ON HISTORIC PRESERVATION

By: _____ Date: _____
John Fowler, Executive Director

MEMORANDUM OF AGREEMENT
BETWEEN THE FEDERAL HIGHWAY ADMINISTRATION,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
THE INDIANA DEPARTMENT OF TRANSPORTATION, AND
THE INDIANA STATE HISTORIC PRESERVATION OFFICER
SUBMITTED TO THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
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INTERCHANGE RECONSTRUCTION PROJECT
IN INDIANAPOLIS, CENTER TOWNSHIP, MARION COUNTY, INDIANA
DES. NOS. 1592385 and 1600808

INVITED SIGNATORY

INDIANA DEPARTMENT OF TRANSPORTATION

By: _____ Date: _____
Laura Hilden, Environmental Services Director

MEMORANDUM OF AGREEMENT
BETWEEN THE FEDERAL HIGHWAY ADMINISTRATION,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
THE INDIANA DEPARTMENT OF TRANSPORTATION, AND
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INTERCHANGE RECONSTRUCTION PROJECT
IN INDIANAPOLIS, CENTER TOWNSHIP, MARION COUNTY, INDIANA
DES. NOS. 1592385 and 1600808

INVITED SIGNATORY

BENJAMIN HARRISON PRESIDENTIAL SITE

By: _____ Date: _____
Charles Hyde, President and CEO

MEMORANDUM OF AGREEMENT
BETWEEN THE FEDERAL HIGHWAY ADMINISTRATION,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
THE INDIANA DEPARTMENT OF TRANSPORTATION, AND
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INTERCHANGE RECONSTRUCTION PROJECT
IN INDIANAPOLIS, CENTER TOWNSHIP, MARION COUNTY, INDIANA
DES. NOS. 1592385 and 1600808

INVITED SIGNATORY

KEEP INDIANAPOLIS BEAUTIFUL, INC.

By: _____ Date: _____
Jeremy Kranowitz, President and CEO

MEMORANDUM OF AGREEMENT
BETWEEN THE FEDERAL HIGHWAY ADMINISTRATION,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION,
THE INDIANA DEPARTMENT OF TRANSPORTATION, AND
THE INDIANA STATE HISTORIC PRESERVATION OFFICER
SUBMITTED TO THE ADVISORY COUNCIL ON HISTORIC PRESERVATION
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INTERCHANGE RECONSTRUCTION PROJECT
IN INDIANAPOLIS, CENTER TOWNSHIP, MARION COUNTY, INDIANA
DES. NOS. 1592385 and 1600808

Optional: **CONCURRING PARTY**

By: _____ Date: _____
Name, Title

Attachment A – Area of Potential Effect Map

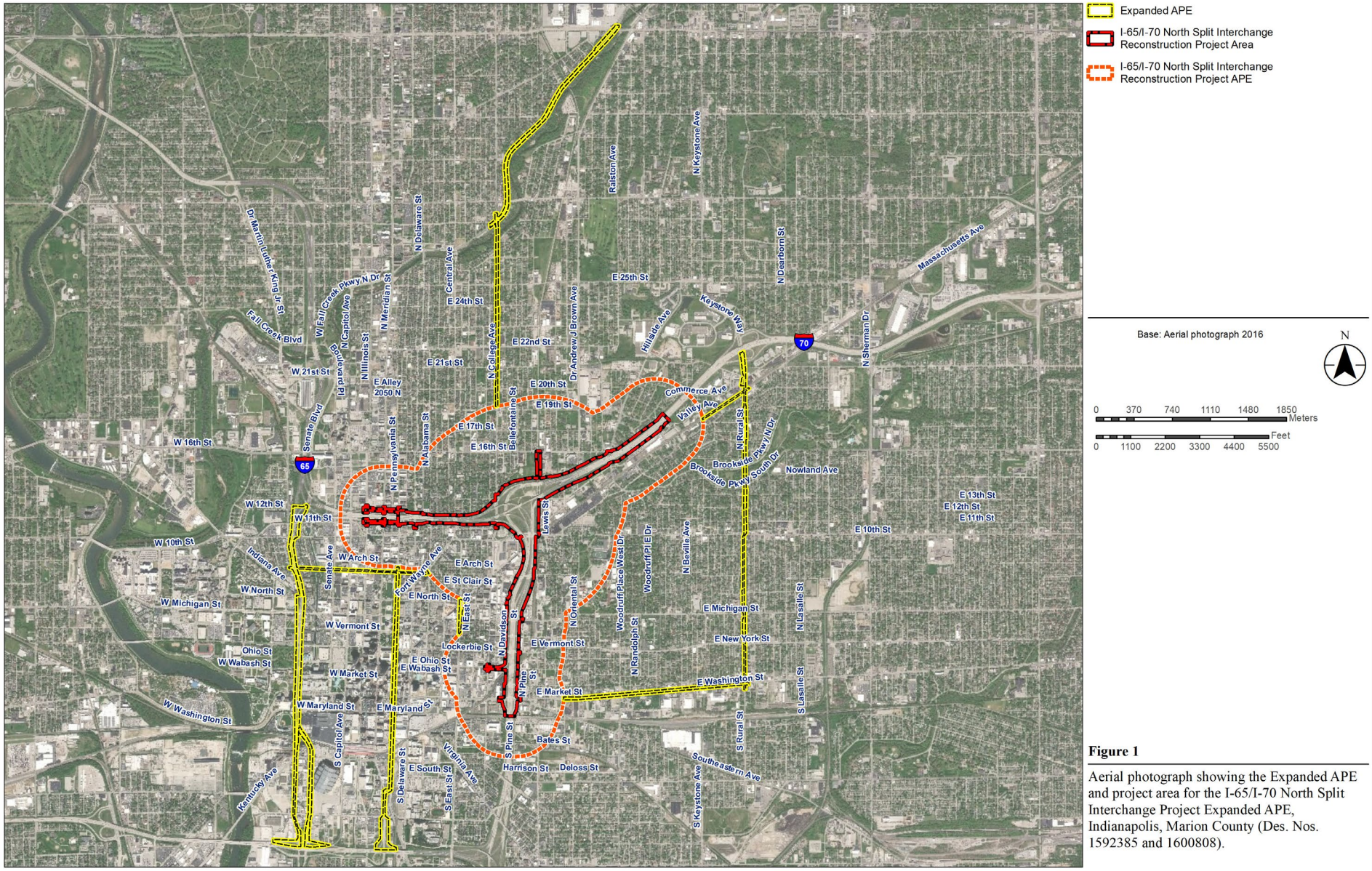


Figure 1

Aerial photograph showing the Expanded APE and project area for the I-65/I-70 North Split Interchange Project Expanded APE, Indianapolis, Marion County (Des. Nos. 1592385 and 1600808).

Attachment B – Consulting Party List

Organization	Contact Name	Title	E-Mail
IDNR-Division of Historic Preservation and Archaeology	Chad Slider	Deputy State Historic Preservation Officer	CSlider@dnr.IN.gov
IDNR-Division of Historic Preservation and Archaeology	Wade Tharp	Archaeologist	WTharp1@dnr.IN.gov
Indiana Landmarks	Mark Dollase	Vice President of Preservation Services	mdollase@indianalandmarks.org
Indiana Landmarks	Marsh Davis	President	mdavis@indianalandmarks.org
National Park Service, Midwest Region	Alesha Cerny	Historian/Cultural Resources	alesha_cerny@nps.gov
Historic Urban Neighborhoods of Indianapolis	Marjorie Kienle		mlkienle@indy.rr.com
Historic Urban Neighborhoods of Indianapolis	Garry Chilluffo		garry@chilluffo.com
Historic Urban Neighborhoods of Indianapolis/Indiana Landmarks	Chad Lethig	Secretary/Indianapolis Preservation Coordinator	clethig@indianalandmarks.org
Indianapolis Historic Preservation Commission	Meg Purnsley	Administrator, Indianapolis Historic Preservation Commission/City of Indianapolis	Meg.Purnsley@indy.gov
Indianapolis Department of Metropolitan Development	Brad Beaubien	Principal Planner	Brad.Beaubien@indy.gov
Indianapolis Department of Public Works	Melody Park	Chief Engineer	Melody.Park@indy.gov
Old Northside Neighborhood Association	Garry Elder	President	eldergarry@sbcglobal.net

Organization	Contact Name	Title	E-Mail
Old Northside Neighborhood Association	Nancy Inui		nsinui@ameritech.net
Old Northside Neighborhood Association	Travis Barnes		travis@hoteltangowhiskey.com
Benjamin Harrison Presidential Site	Charles A. Hyde	President and CEO	chyde@bhpsite.org
St. Joseph Historic Neighborhood Association	Mark Godley	President	mgodley@chestnut.org
Chatham Arch Neighborhood Association	Shawn Miller	President	canaindy@gmail.com
Lockerbie Square People's Club	Jeffrey Christoffersen		jeff@thechristoffersens.com
Windsor Park Neighborhood Association, Inc.	Jen Eamon	President	wearewindsorpark@gmail.com
Holy Cross Neighborhood Association	Jen Higginbotham		Jen_Higginbotham@yahoo.com
Holy Cross Neighborhood Association	Pat Dubach		pdubach@redev.net
Holy Cross Neighborhood Association	Kelly Wensing		kellywensing@gmail.com
Holy Cross Neighborhood Association	Jason Rowley		jrowley@hanson-inc.com
Cottage Home Neighborhood Association	Crystal Rehder	President, Cottage Home Neighborhood Indianapolis	cottagehomeneighborhood@gmail.com
Cottage Home BOD	Jim Jessee		jamesjessee102@gmail.com
Massachusetts Avenue Merchants Association	Meg Storrow		storrow@storrowkinsella.com
Mayor's Neighborhood Advocate, Area 10	Ruth Morales		ruth.morales@indy.gov
Hendricks Commercial Properties	Gavin Thomas	Vice President of Development	Gavin.Thomas@hendricksgroup.net

Organization	Contact Name	Title	E-Mail
NESCO Land Use	David Hittle		davidhittle@gmail.com
Fountain Square Neighborhood Association	Desiree Calderella	President	fsna1835@gmail.com
John Boner Neighborhood Centers	Jon Berg	IndyEast Promise Zone Director	jberg@jbncenters.org
Property Owners	Patricia and Charles Perrin		pperrin@indy.rr.com
North Square Neighborhood Association	Jordan Ryan		jordanblairryan@gmail.com
Keep Indianapolis Beautiful, Inc.	Joe Jarzen	Vice President of Program Strategy	jjarzen@kibi.org
Property Owner	Luke Leising		luke@guidondesign.com
American Institute of Architects	Mark Beebe		mbeebe@lancerbeebe.com
Fletcher Place Neighborhood Association, Inc.	Glenn Blackwood		glennblackwood@gmail.com
Southeast Neighborhood Land Use Committee	Jim Lingenfelter		jimlingenfelter@five2fivedesign.com
Martindale Brightwood Community Development Corporation	Amina Pierson	Executive Director	apierson@mbcdc.org
Interstate Business Group	Paul Knapp		pknapp@yandl.com
National Trust for Historic Preservation	Betsy Merritt	Deputy General Council	emerritt@savingplaces.org
Advisory Council on Historic Preservation	Sarah Stokely	Program Analyst	sstokely@achp.gov
Advisory Council on Historic Preservation	Mandy Ranslow	FHWA Liaison/Program Analyst	mranslow@achp.gov

Organization	Contact Name	Title	E-Mail
St. Joseph Neighborhood Property Owner	Sandy Cummings		sandycummings2003@yahoo.com
Old Near Westside/Ransom Place	Denise Halliburton		d_halliburton@hotmail.com
Old Northside Neighborhood Association	Hilary Barnes		hitalyor09@gmail.com
Riley Area Development Corporation	Chelsea Humble	North Mass Program Manager	chelsea.humble@rileyarea.org
Tribes			
Miami Tribe of Oklahoma	Diane Hunter	THPO	dhunter@miamination.com

Attachment C – North Split Aesthetic Design Guidelines

ATTACHMENT 6-1
NORTH SPLIT
AESTHETIC DESIGN GUIDELINES

INDIANA DEPARTMENT OF TRANSPORTATION
I-65/I-70 NORTH SPLIT PROJECT
FEBRUARY 25, 2020

Request for Proposals
Technical Provisions
Addendum #3

TABLE OF CONTENTS

DESIGN GUIDELINES

COLOR

CHART:	APPLICATION:
Color A1: RGB: 128, 128, 128 Color A2: RGB: 204, 204, 204 Color A3: RGB: 240, 240, 240	**CONCRETE (A)** • Bridge Monuments, Piers & Caps • Bridge Rails & Parapets • Sign Structure Supports • Retaining Walls • Bridge Abutment Walls
Color B1: RGB: 187, 179, 159 Color B2: RGB: 252, 219, 181	**CONCRETE (B)** • Noise Barrier Panels, Caps & Posts
Color C: RGB: 55, 95, 95	**CONCRETE & STEEL (C)** • Bridge Beam/Girder (Color shall be applied at locations where metallizing is not required)
Color D: RGB: 65, 64, 66	**METALS (D)** • Ornamental Lights • Sign Lettering • Noise Barrier Posts
Color E: RGB: 219, 195, 135	**ACCENT (E)** • Wall Detailing • Corner Monument Detailing • Relief Texture

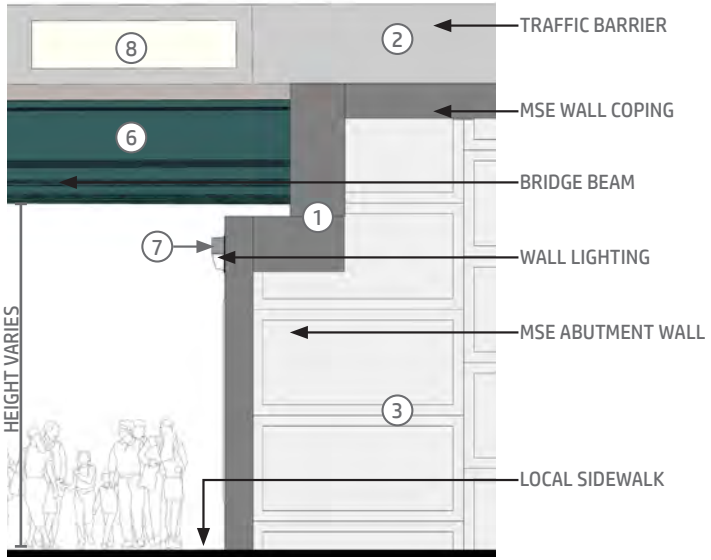
RGB STANDS FOR:
RED (R)
GREEN (G)
BLUE (B)

STANDARD ABUTMENT

NOTE: Number of down-lighting and column lighting shall be determined in accordance with the technical provisions and project standards.

COLOR LEGEND: *SEE COLOR SECTION*

1 COLOR A1	5 COLOR B2
2 COLOR A2	6 COLOR C
3 COLOR A3	7 COLOR D
4 COLOR B1	8 COLOR E



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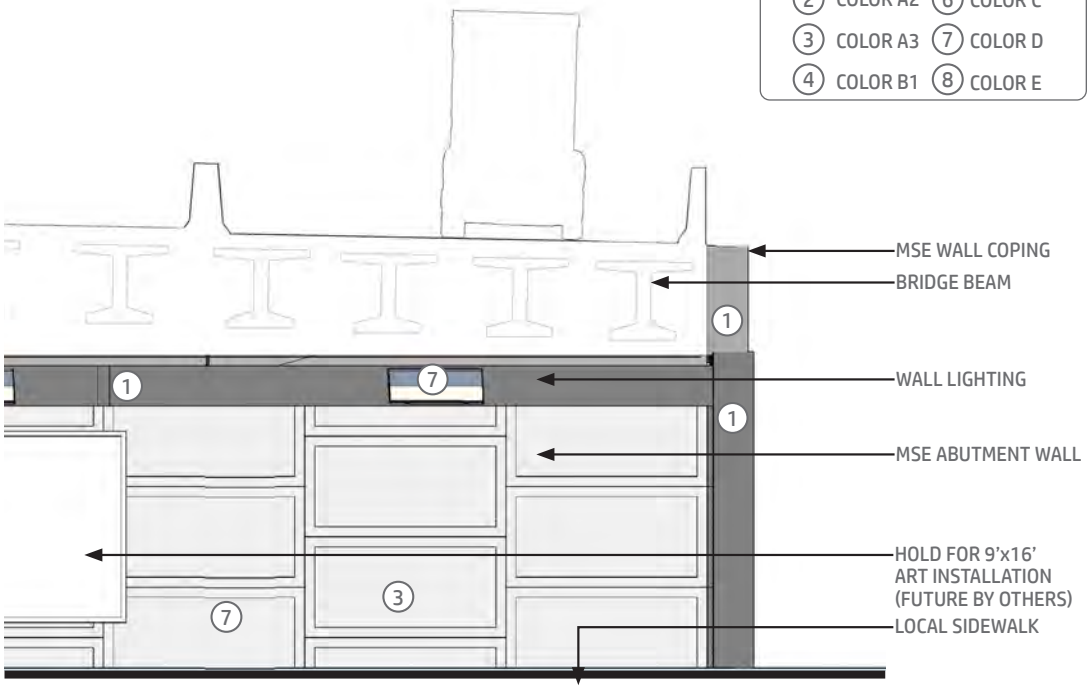


CROSS SECTION ENLARGEMENT (TYPICAL)

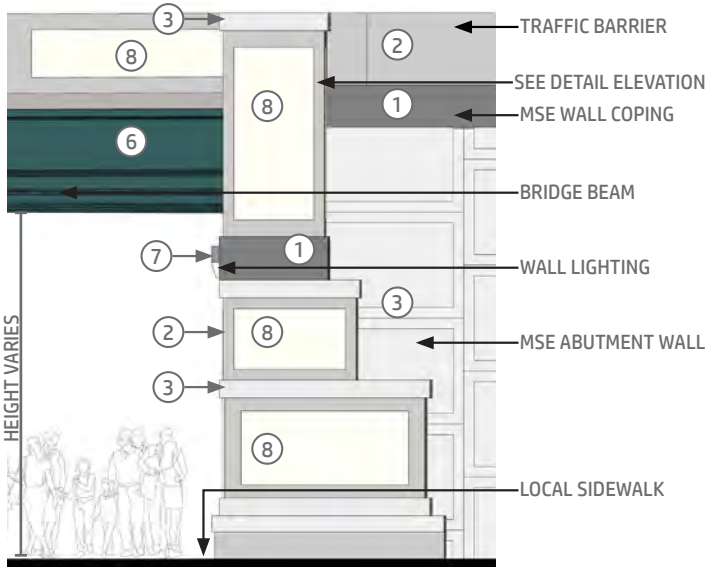
CROSS SECTION ELEVATION (TYPICAL)

MINOR MONUMENT ABUTMENT

NOTE: Number of down-lighting and column lighting shall be determined in accordance with the technical provisions and project standards.

COLOR LEGEND: *SEE COLOR SECTION*

1 COLOR A1	5 COLOR B2
2 COLOR A2	6 COLOR C
3 COLOR A3	7 COLOR D
4 COLOR B1	8 COLOR E



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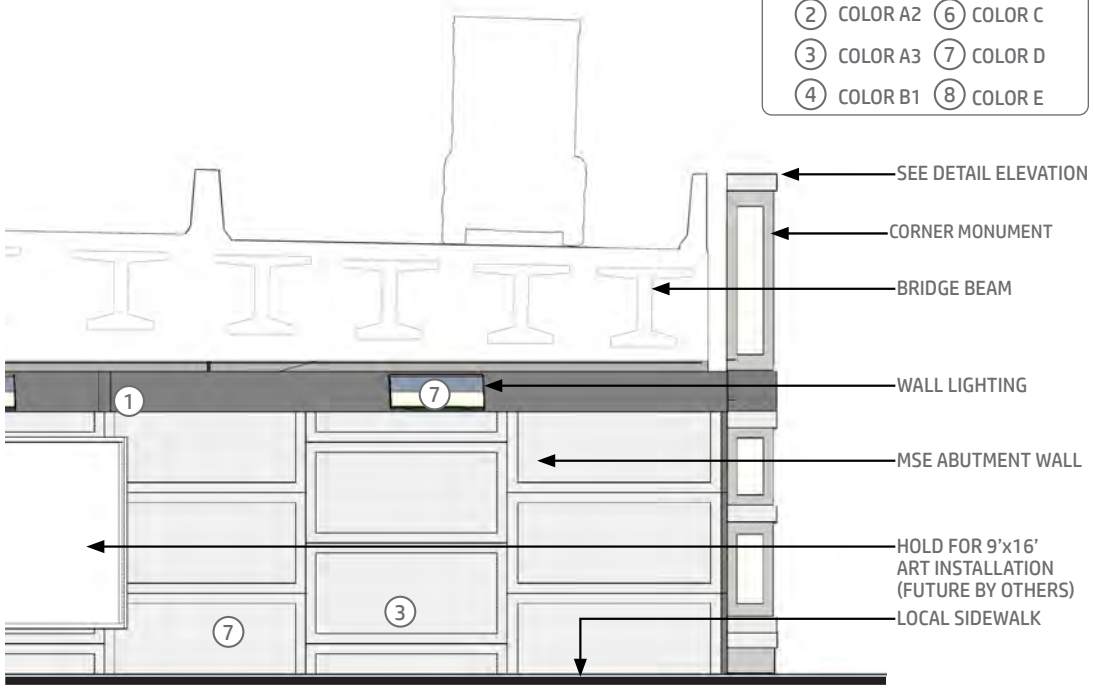
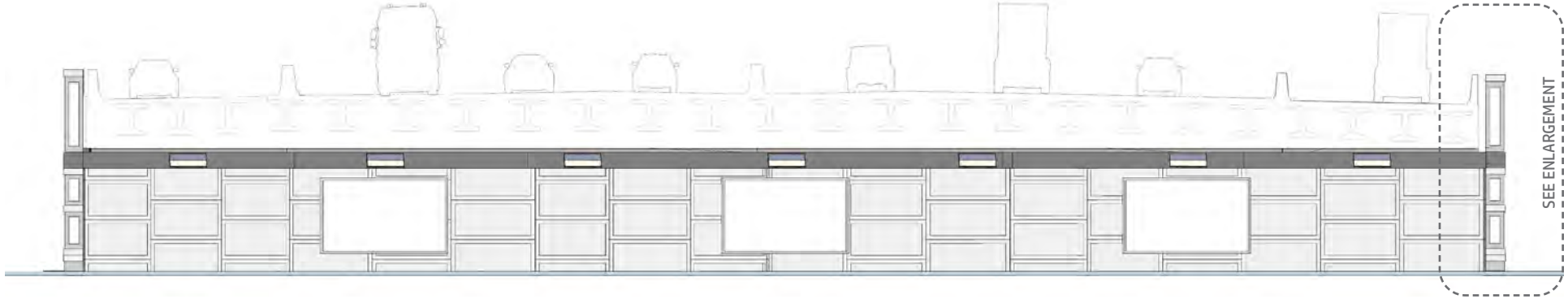


CROSS SECTION ENLARGEMENT (TYPICAL)



CROSS SECTION ELEVATION (TYPICAL)

SCHEMATIC DETAILS

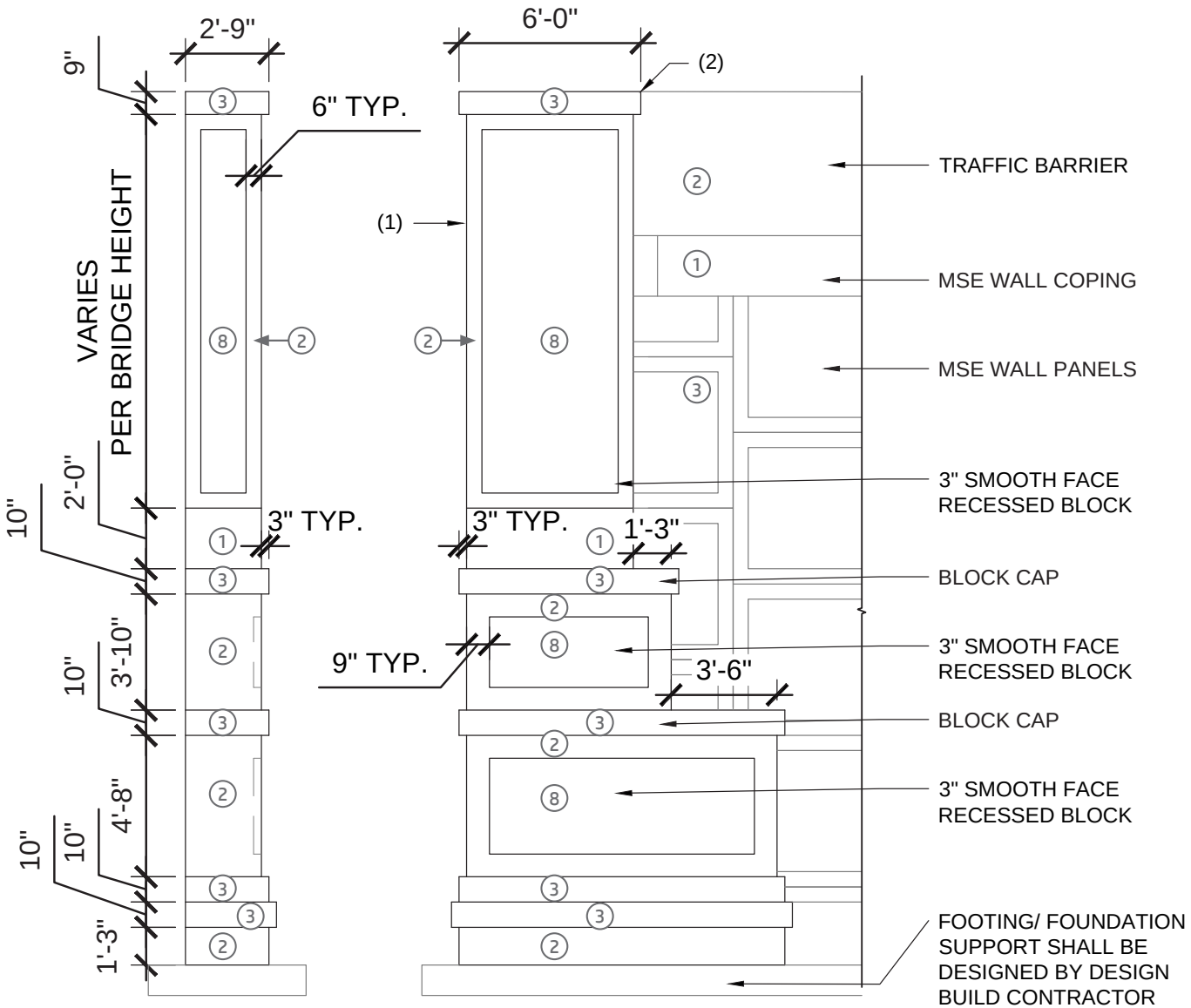
MINOR MONUMENT ABUTMENT

COLOR LEGEND: *SEE COLOR SECTION*

(1) COLOR A1	(5) COLOR B2
(2) COLOR A2	(6) COLOR C
(3) COLOR A3	(7) COLOR D
(4) COLOR B1	(8) COLOR E

LEGEND:
(1) MONUMENT FACE SHALL BE FLUSH WITH FRONT FACE OF MSE ABUTMENT WALL PRECAST COPING
(2) CAP SHALL BE FLUSH WITH TRAFFIC BARRIER.

NOTE: STRUCTURAL CONCRETE AND REINFORCING DESIGN AND DETAILING REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE DESIGN-BUILD CONTRACTOR IN ACCORDANCE WITH THE TECHNICAL PROVISIONS AND PROJECT STANDARDS.



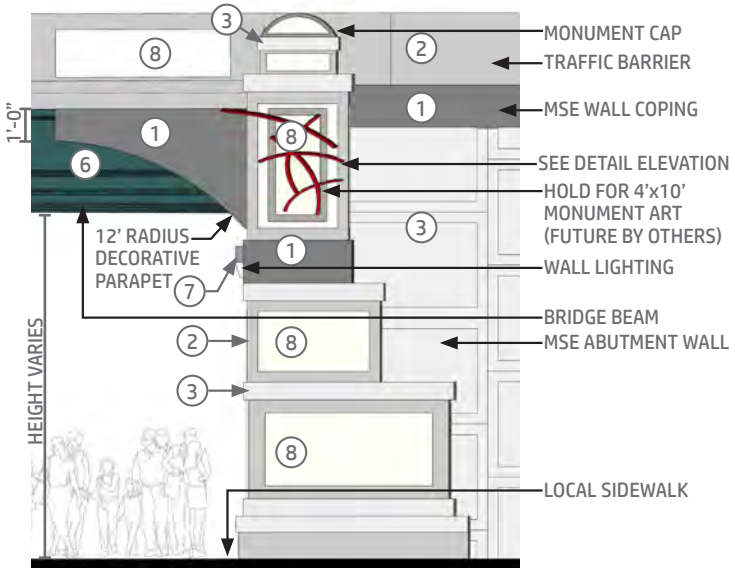
DETAIL ELEVATION (TYPICAL)

MAJOR MONUMENT ABUTMENT

NOTE: Number of down-lighting and column lighting shall be determined in accordance with the technical provisions and project standards.

COLOR LEGEND: *SEE COLOR SECTION*

1 COLOR A1	5 COLOR B2
2 COLOR A2	6 COLOR C
3 COLOR A3	7 COLOR D
4 COLOR B1	8 COLOR E



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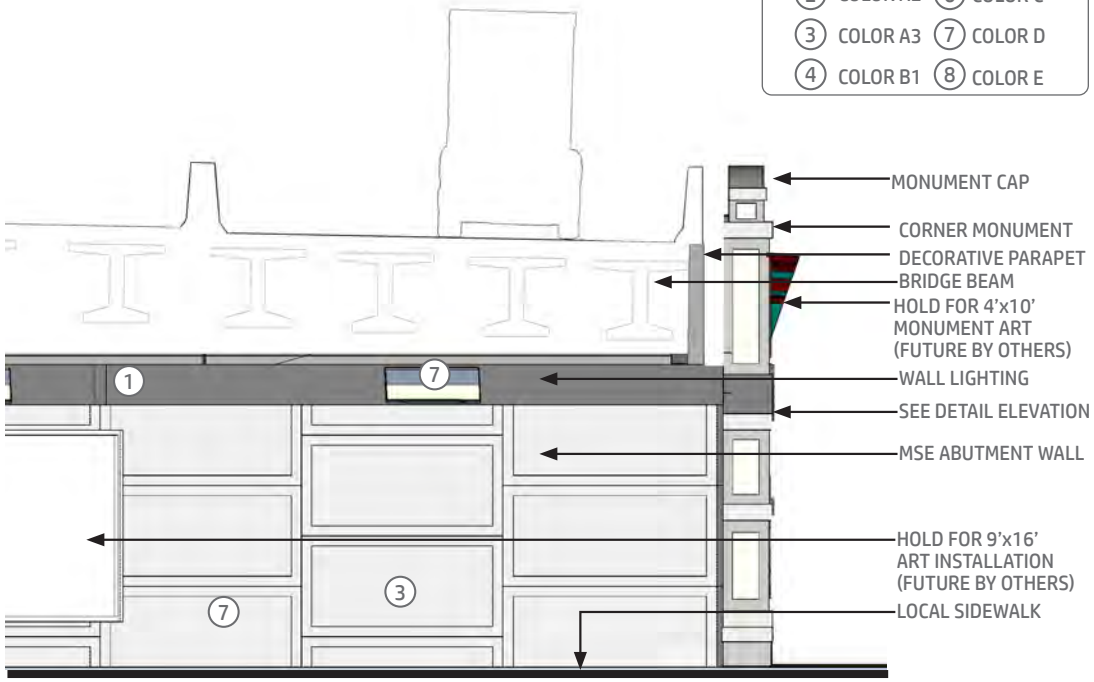

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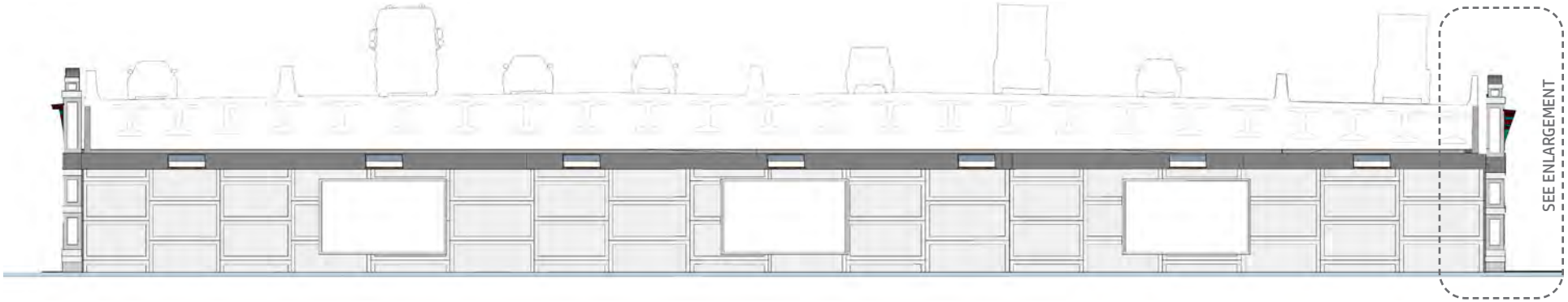


CROSS SECTION ELEVATION (TYPICAL)

SCHEMATIC DETAILS

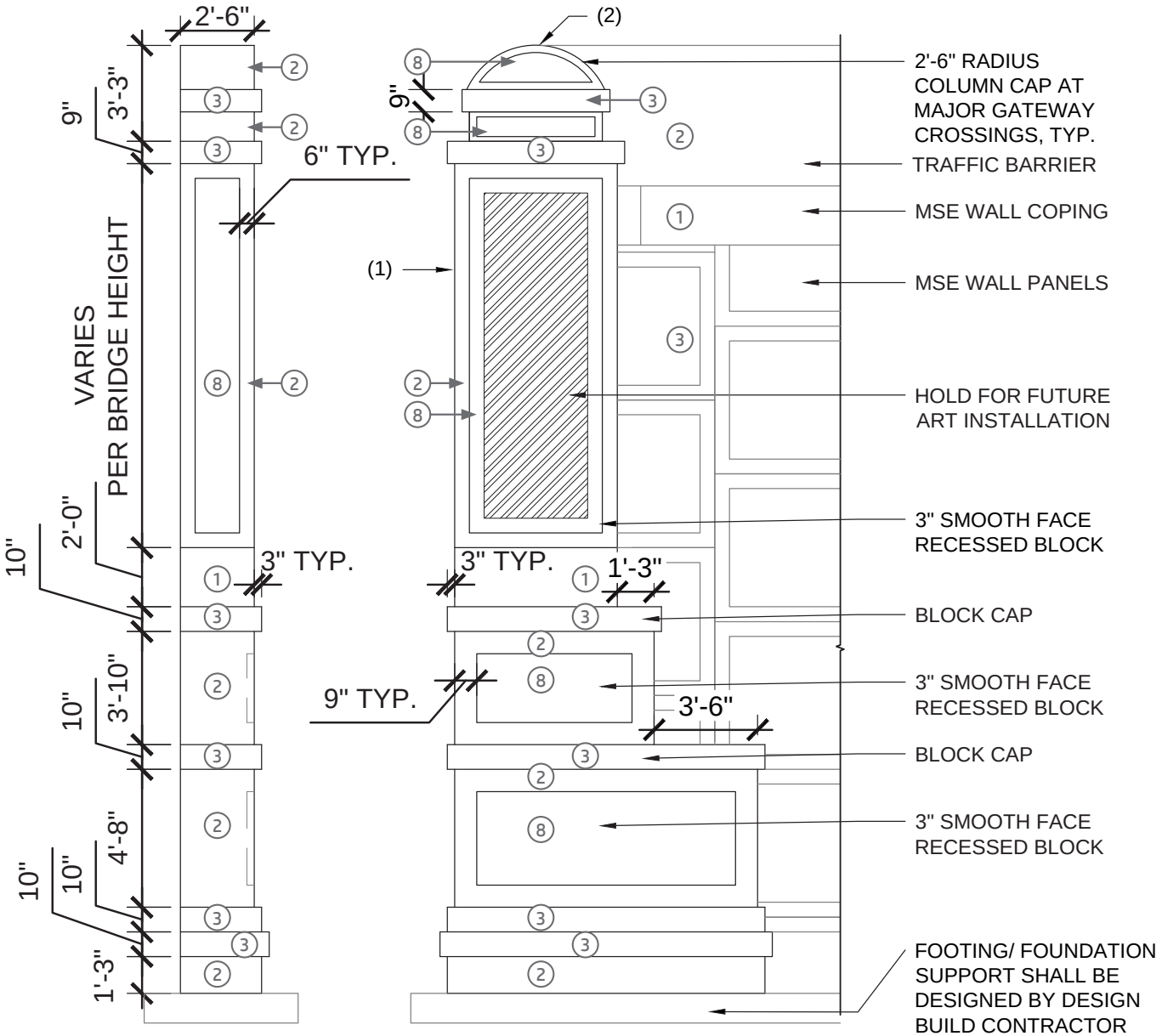
MAJOR MONUMENT ABUTMENT

COLOR LEGEND: *SEE COLOR SECTION*

(1) COLOR A1	(5) COLOR B2
(2) COLOR A2	(6) COLOR C
(3) COLOR A3	(7) COLOR D
(4) COLOR B1	(8) COLOR E

LEGEND:
(1) MONUMENT FACE SHALL BE FLUSH WITH FRONT FACE OF MSE ABUTMENT WALL PRECAST COPING.
(2) CAP SHALL BE FLUSH WITH TRAFFIC BARRIER.

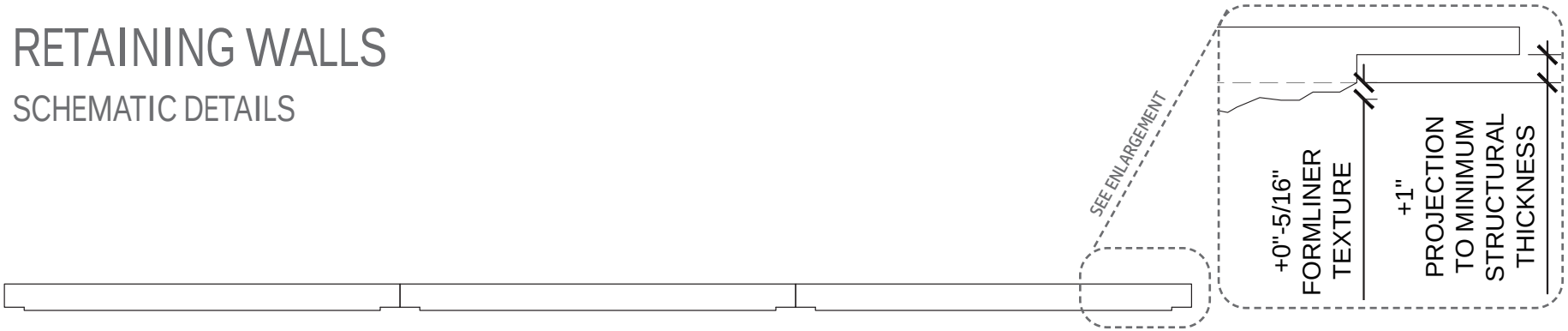
NOTE: STRUCTURAL CONCRETE AND REINFORCING DESIGN AND DETAILING REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE DESIGN-BUILD CONTRACTOR IN ACCORDANCE WITH THE TECHNICAL PROVISIONS AND PROJECT STANDARDS.



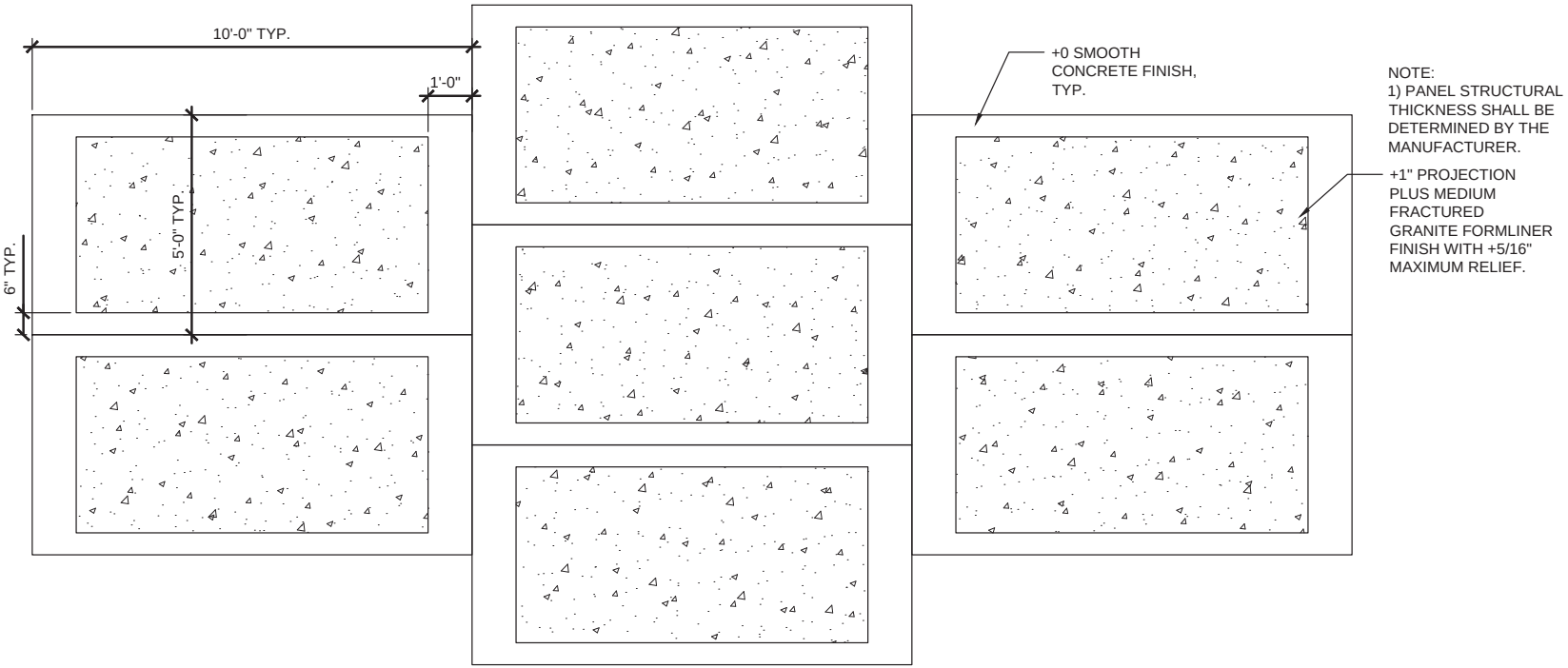
DETAIL ELEVATION (TYPICAL)

RETAINING WALLS

SCHEMATIC DETAILS



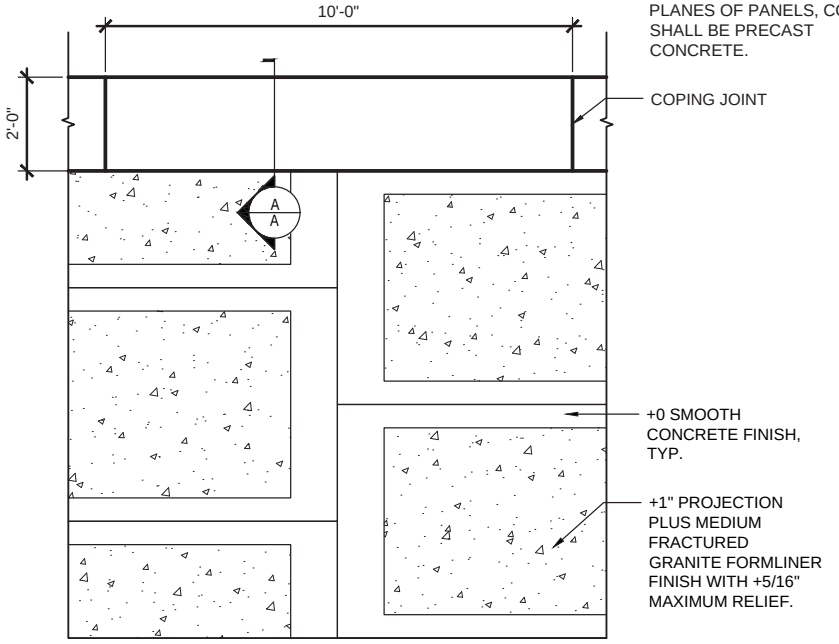
PLAN (TYPICAL)



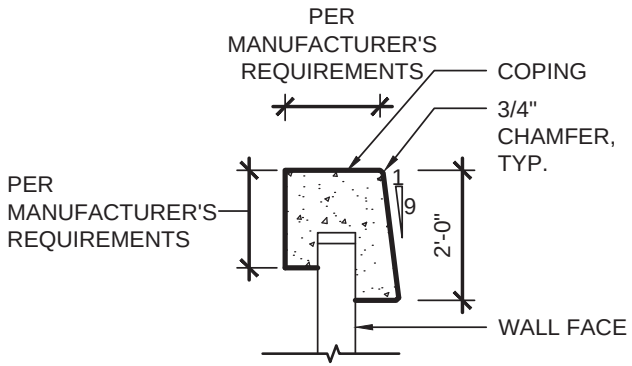
ELEVATION (TYPICAL)

RETAINING WALLS

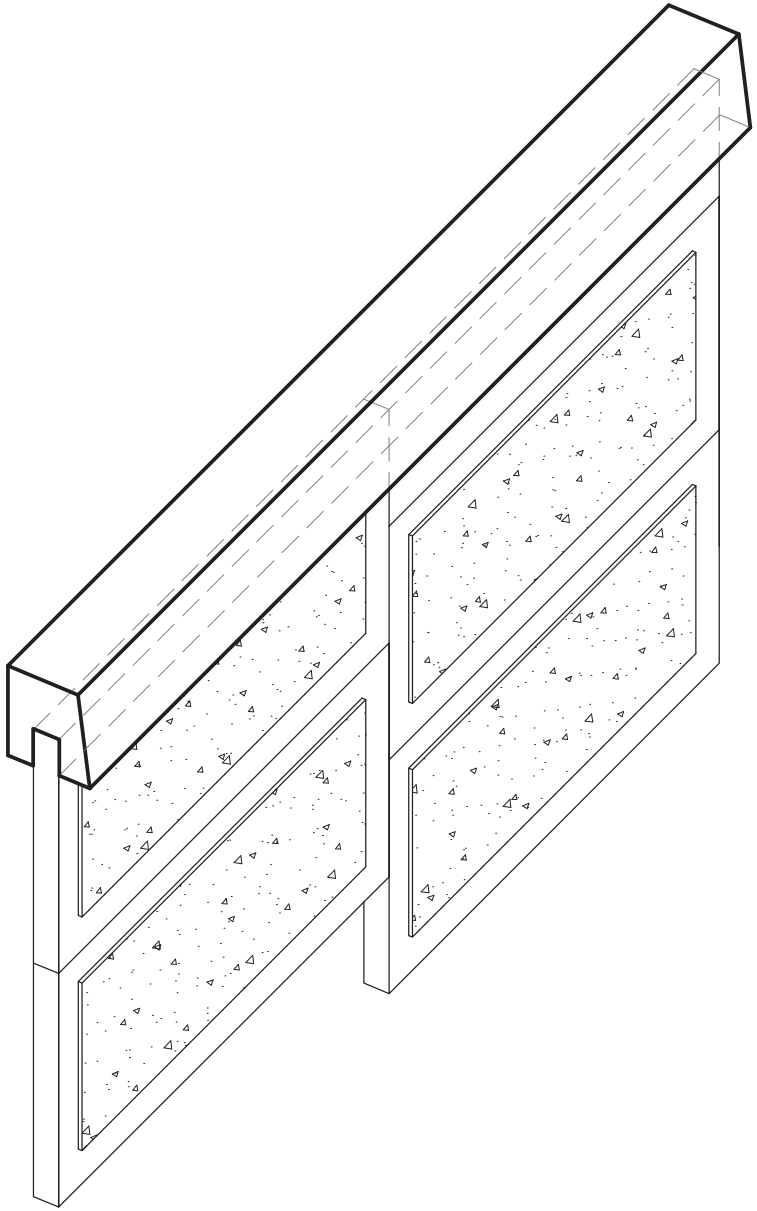
SCHEMATIC DETAILS



ELEVATION COPING WITH PANEL(TYPICAL)



SECTION A- COPING (TYPICAL)

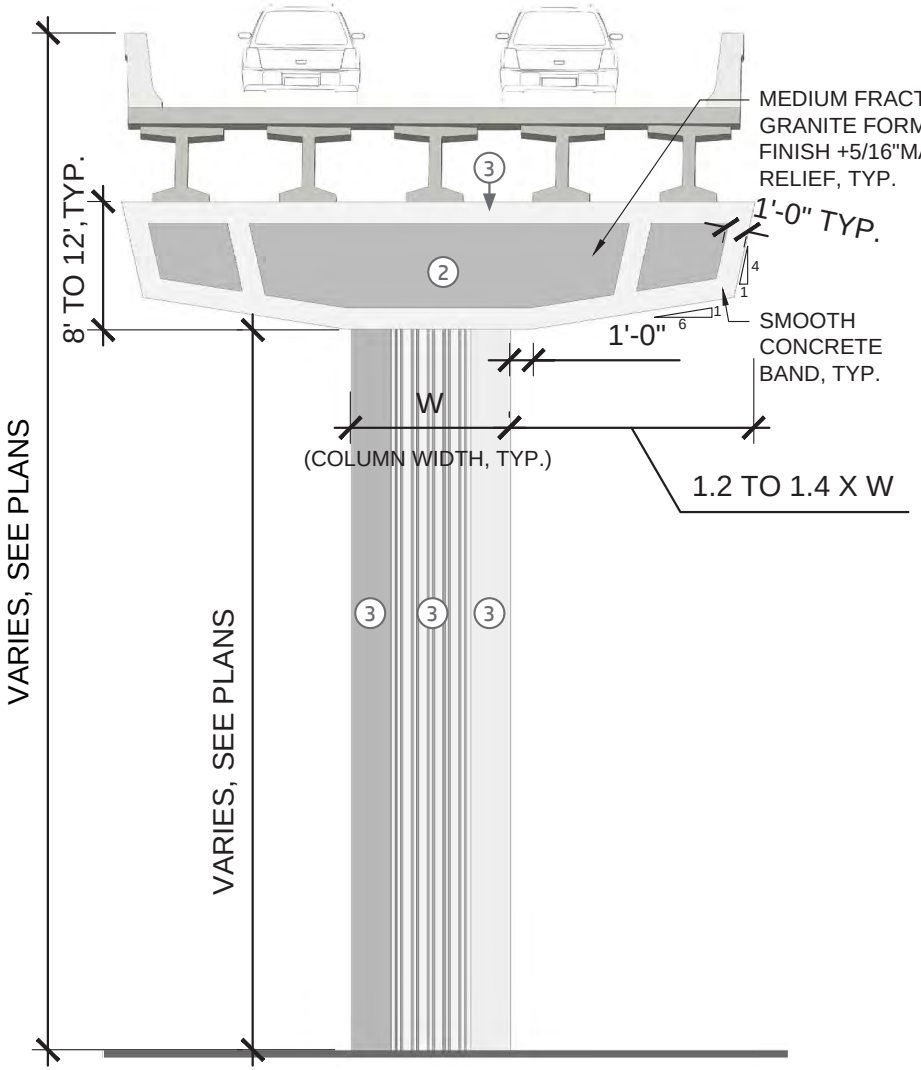


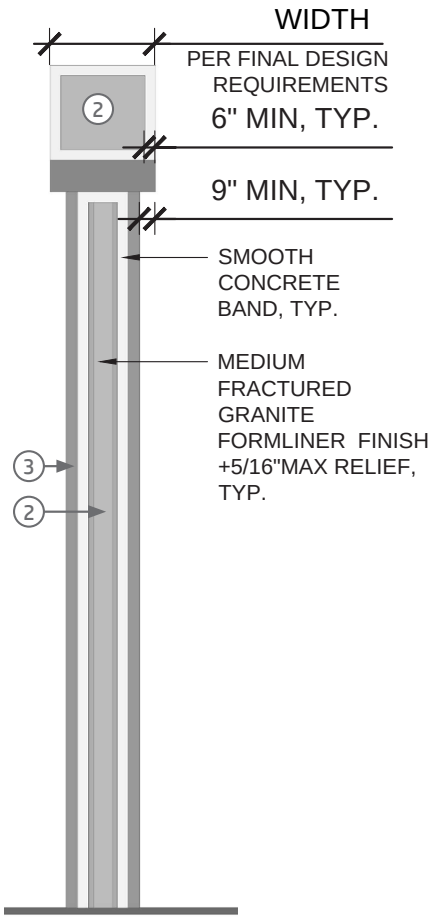
ISOMETRIC-COPING WITH PANEL (TYPICAL)

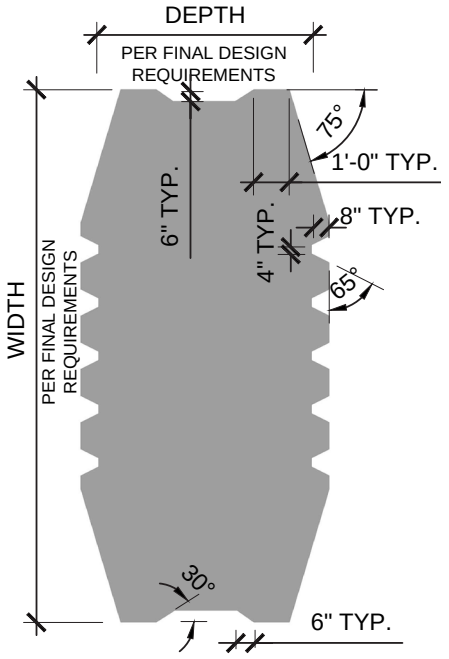
SINGLE COLUMN

COLOR LEGEND: *SEE COLOR SECTION*

1 COLOR A1	5 COLOR B2
2 COLOR A2	6 COLOR C
3 COLOR A3	7 COLOR D
4 COLOR B1	8 COLOR E



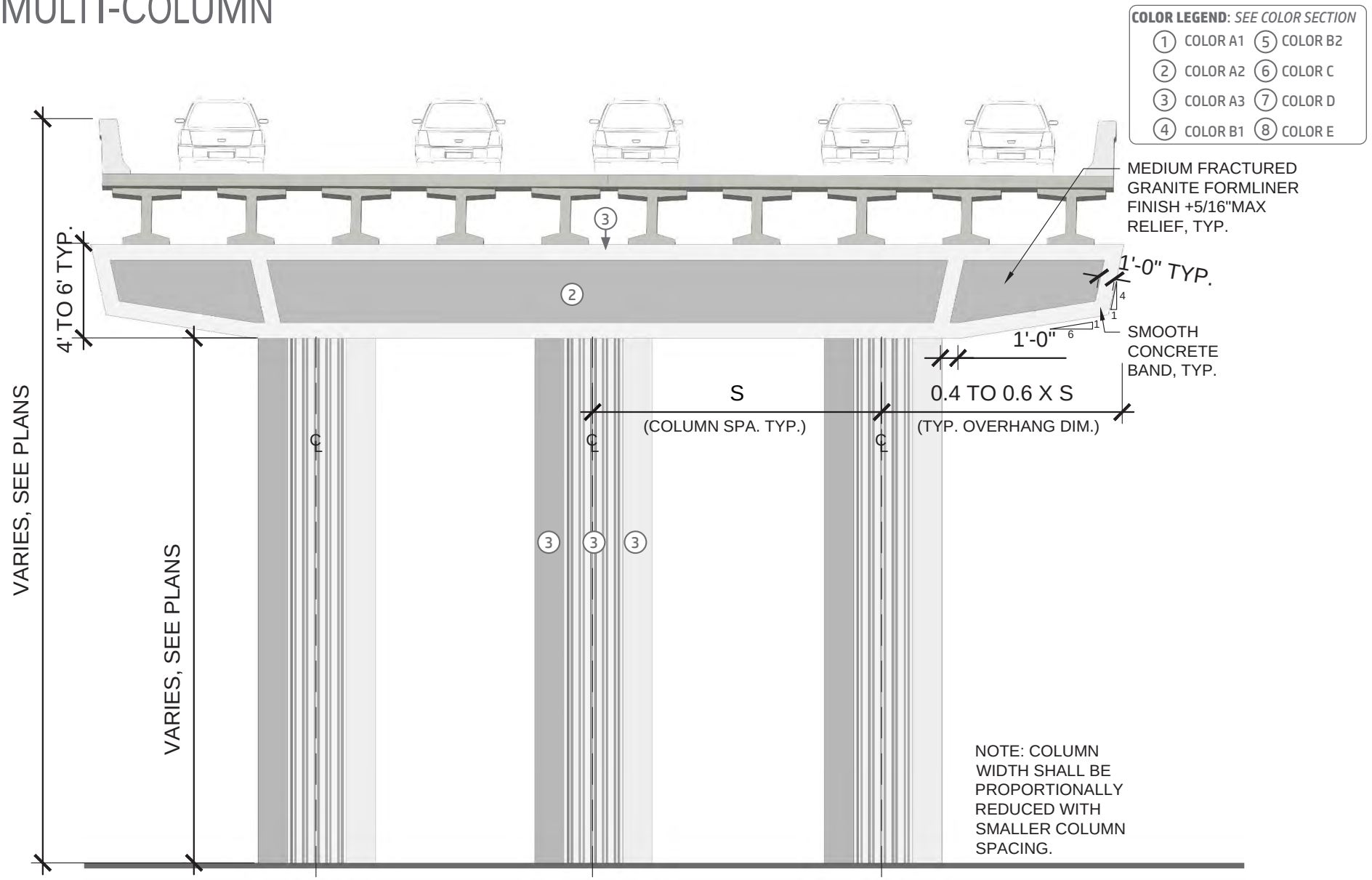




FRONT & SIDE ELEVATION MAXIMUM HEIGHT (TYPICAL)

COLUMN CROSS SECTION (TYPICAL)

MULTI-COLUMN



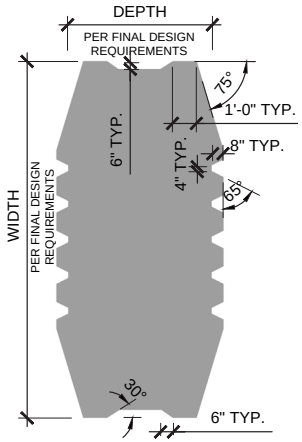
FRONT ELEVATION (TYPICAL)

STRADDLE BENT

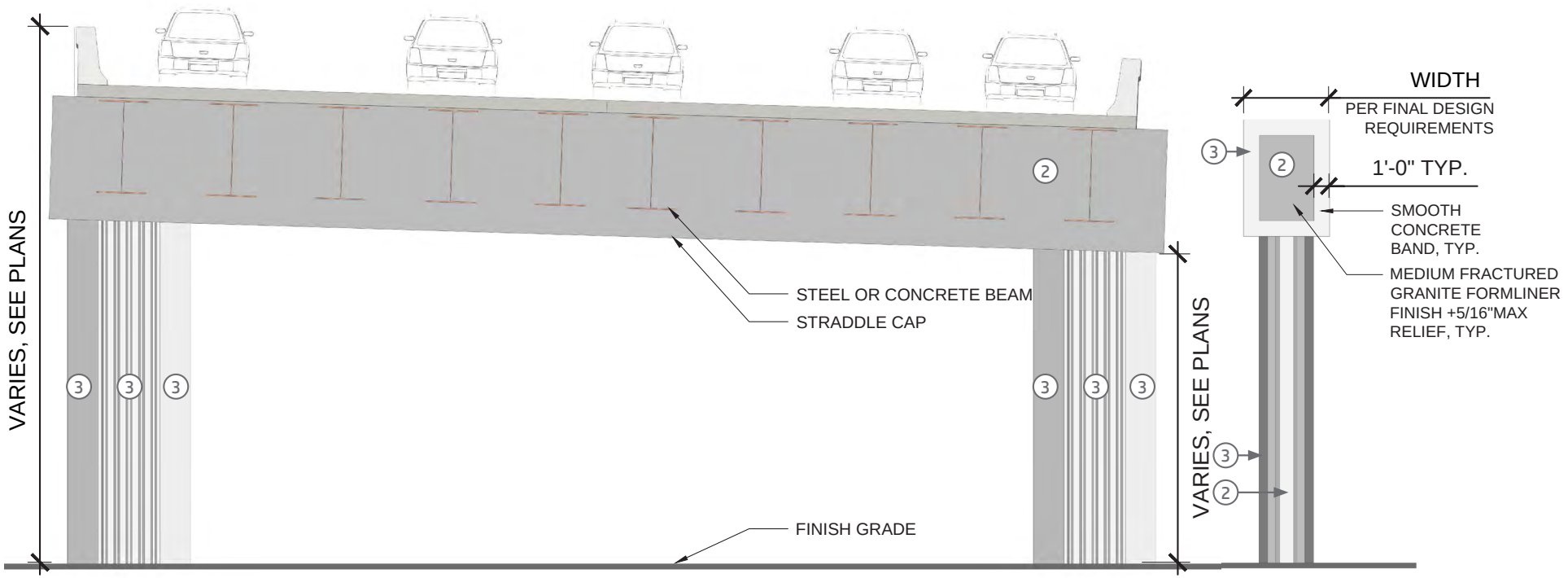
RECTANGULAR

COLOR LEGEND: *SEE COLOR SECTION*

(1) COLOR A1	(5) COLOR B2
(2) COLOR A2	(6) COLOR C
(3) COLOR A3	(7) COLOR D
(4) COLOR B1	(8) COLOR E



COLUMN CROSS SECTION (TYPICAL)



VARIATION 1: FRONT & SIDE ELEVATION (TYPICAL)

MAJOR GATEWAY SURFACING SUMMARY

- A consistent 3’-0” wide asphalt block paver band shall be constructed immediately adjacent to the back of curb and parallel to the roadway. Materials shall be a “ground finish”. Color shall resemble Hanover A80044 or approved equal.
- Asphalt block paver bands (or other vehicular-rated paver type) shall be constructed perpendicular to the roadway. Paver bands are to be 3’-0” wide at 19’-0” O.C. maximum. Materials should be be a “ground finish”. Color shall resemble Hanover A80046 or approved equal.
- Standard concrete pavement will separate each perpendicular asphalt paver band. All concrete surfaces shall be scored as indicated on the following drawings and receive a standard broom finish.

TREATMENT PATTERNS


RUNNING BOND PATTERN


SAW CUT JOINTS


COLOR BANDING


ACCENT COLORS


HEAVY DUTY

MAJOR GATEWAY SURFACING SCHEMATIC DETAILS

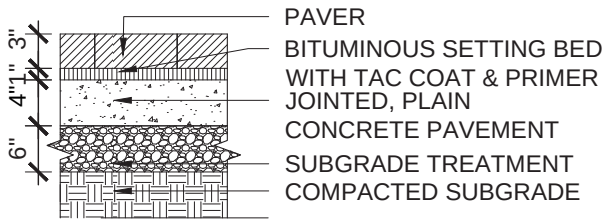
Major Gateway Pedestrian Surfaces

In addition to the Roadway Surfaces and the Minor Gateway and Standard Pedestrian Surfaces, Major Gateway Pedestrian Surface areas utilize both concrete and specialty pavement treatments to highlight and emphasize the pedestrian environment.

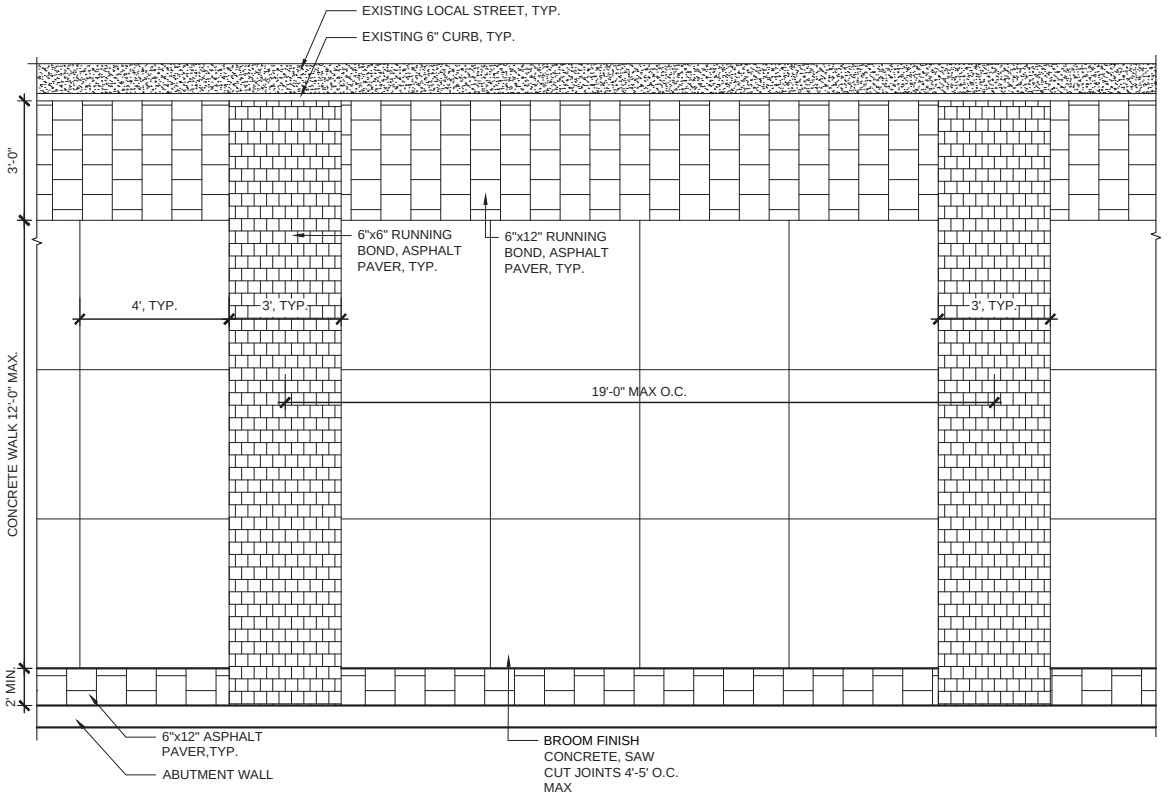
Major Gateway treatments occur at New York Street, Central Avenue, College Avenue, Alabama Street, 10th Street, Commerce Avenue, Michigan Street, and Washington Street.

Major Gateway Pedestrian Surfaces: Recommended Manufacturers

- Hanover Architectural Products
- Belgard Pavers & Hardscapes
- Or Approved Equal



SURFACING SECTION VIEW (TYPICAL)



SURFACING PLAN VIEW (TYPICAL)

LIGHTING

Design Summary

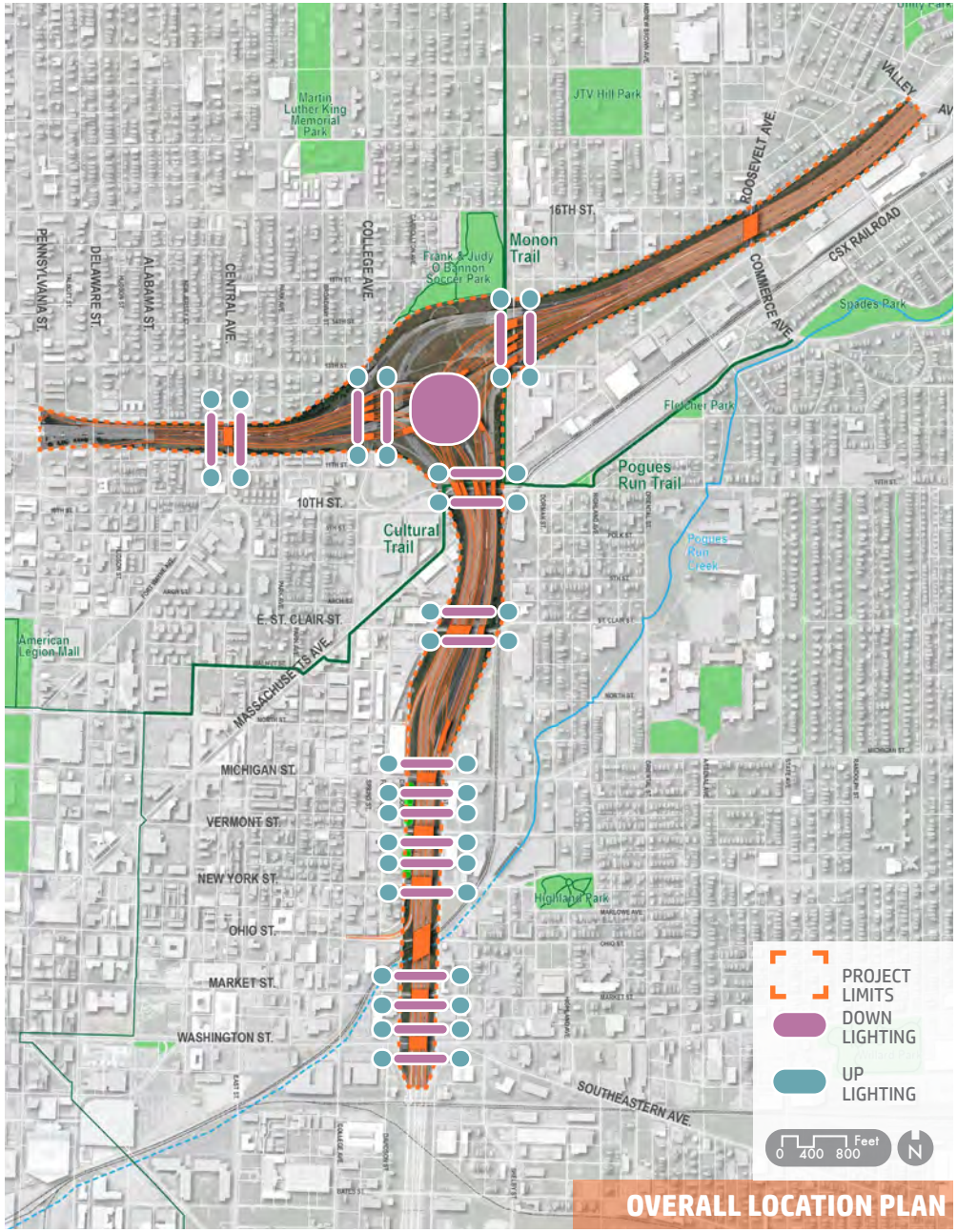
The recommended lighting types include two distinct treatment options that respond to the needs of vehicles, pedestrians, bicyclists and adjacent property owners. These two lighting types shall include:

1. Down Lighting

2. Up Lighting

Each are further discussed on the following pages.

NOTE: Down Lighting in underpass must meet pedestrian lighting standards.

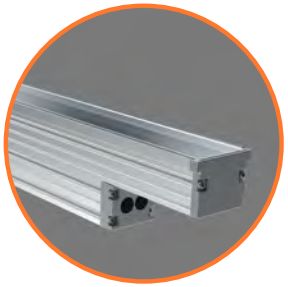


DOWN LIGHTING

Wall Mounted:

Bar Style down lighting shall be surface mounted to abutment wall coping to achieve pedestrian level lighting requirements. Mock-up shall be required for approval.

APPROPRIATE FIXTURES



TARGETTI | JEDI COMPACT IP67 INTEGRAL

BEGA | LED WALL WASHER

LED LINEAR | XOOLUM IP67

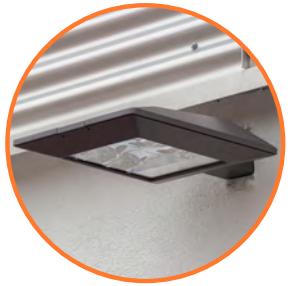
Column Mounted:

Down lighting shall be mounted to the pier cap. Aesthetic light wash shall be directed vertically down the column and horizontally across the bridge underside.

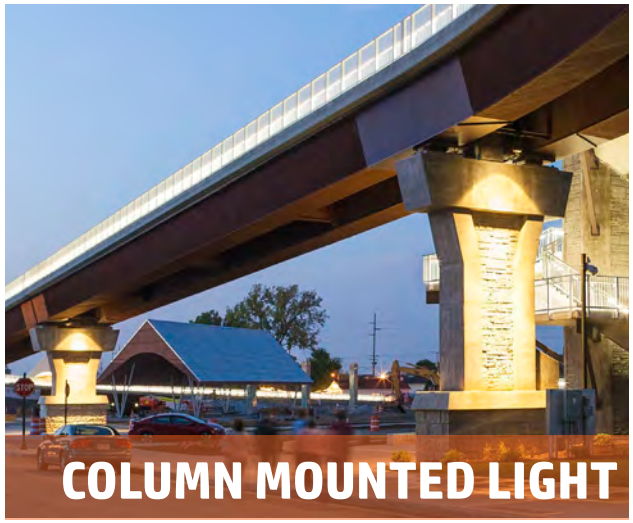
APPROPRIATE FIXTURES

BEGA | LED WALL WASHER

BEGA | LED COMPACT FLOOD



SELUX | AVANZA

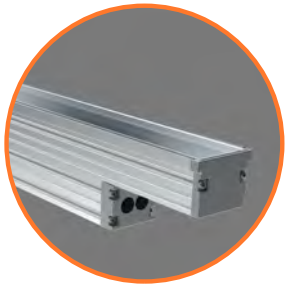


UP LIGHTING

BAR LIGHT:

Bar style up lighting shall be recess mounted to monument for tamper resistance and achieve uniform aesthetic lighting wash across entire monument. Mock-up shall be required for approval.

APPROPRIATE FIXTURES



TARGETTI | JEDI COMPACT IP67 INTEGRAL

BEGA | LED WALL WASHER

LED LINEAR | XOOLUM IP67

SPOT LIGHT:

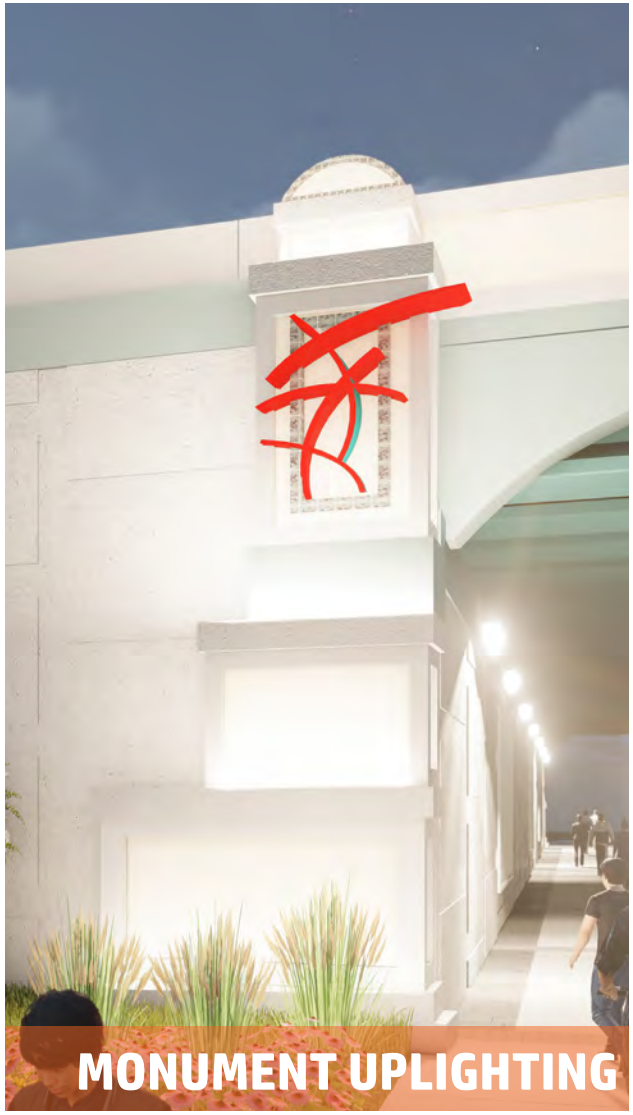
Spot style up lighting shall be ground mounted in a concrete base and achieve focused aesthetic lighting wash at location of future art in upper third of monument. Mock-up shall be required for approval.

APPROPRIATE FIXTURES

TERON CIMMARON LED

HOLOPHANE PSLED

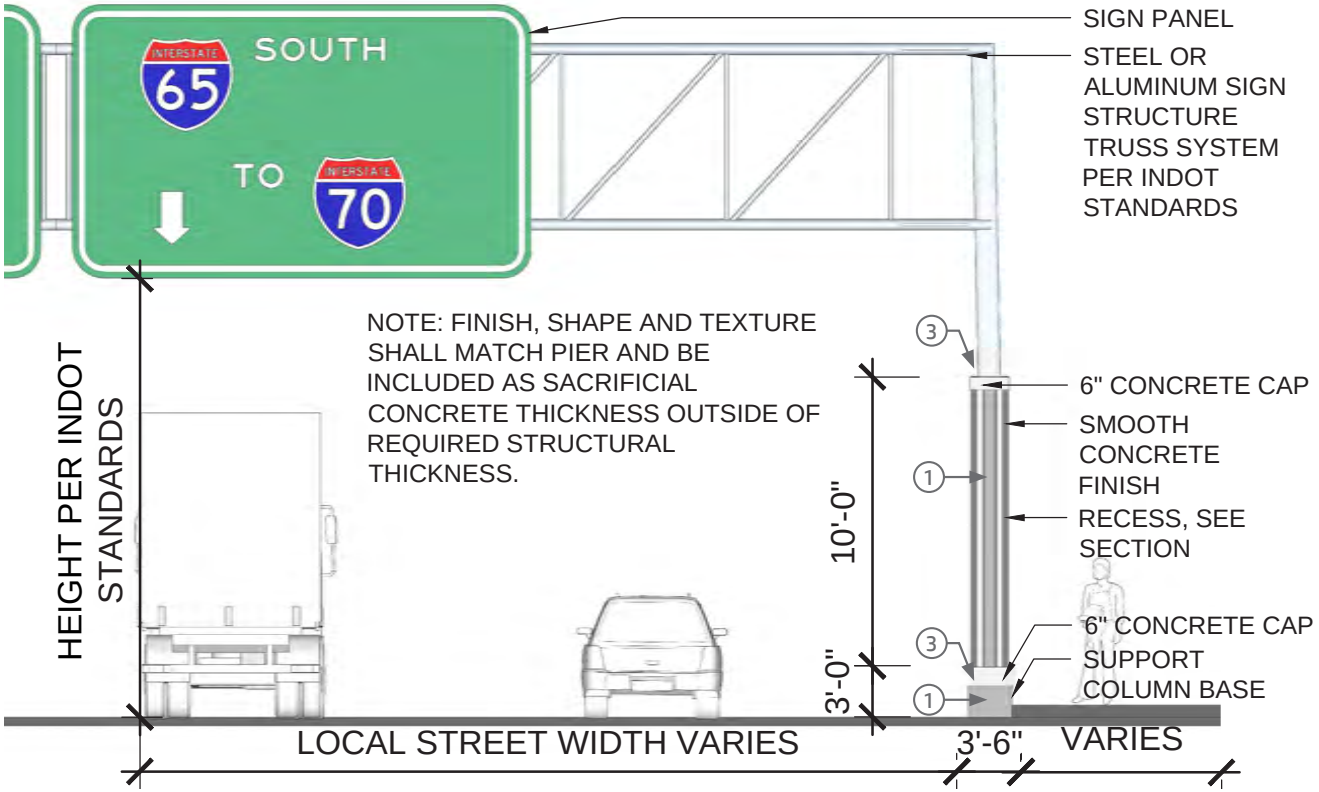
BEGA | LED COMPACT FLOOD



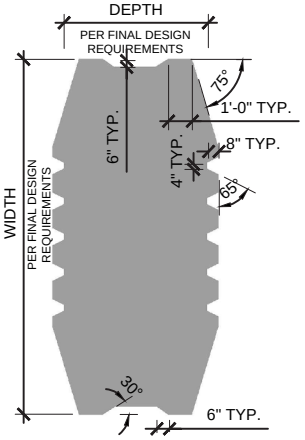
OVERHEAD BOX TRUSS SIGN ON LOCAL STREETS

COLOR LEGEND: *SEE COLOR SECTION*

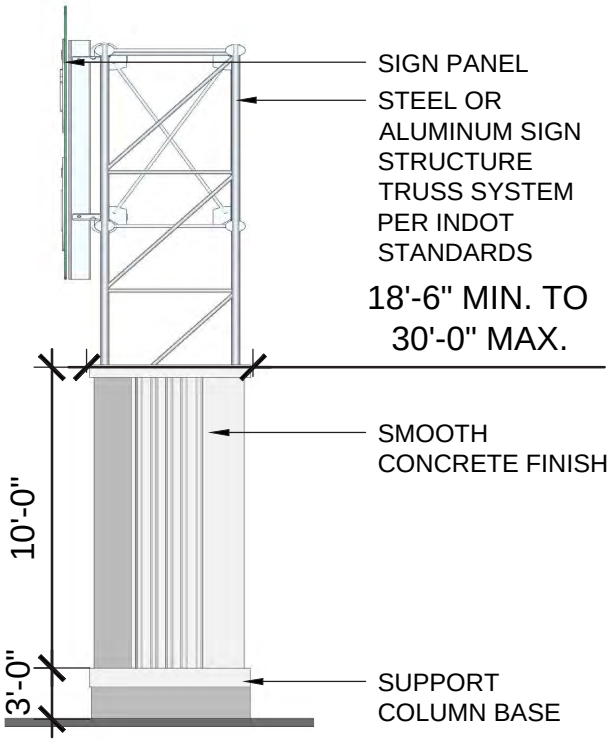
1 COLOR A1	5 COLOR B2
2 COLOR A2	6 COLOR C
3 COLOR A3	7 COLOR D
4 COLOR B1	8 COLOR E



FRONT ELEVATION (TYPICAL)



COLUMN CROSS SECTION, TYP.

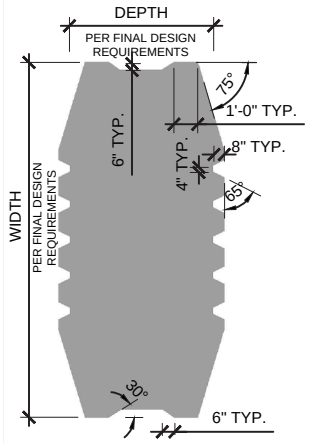


SIDE ELEVATION (TYPICAL)

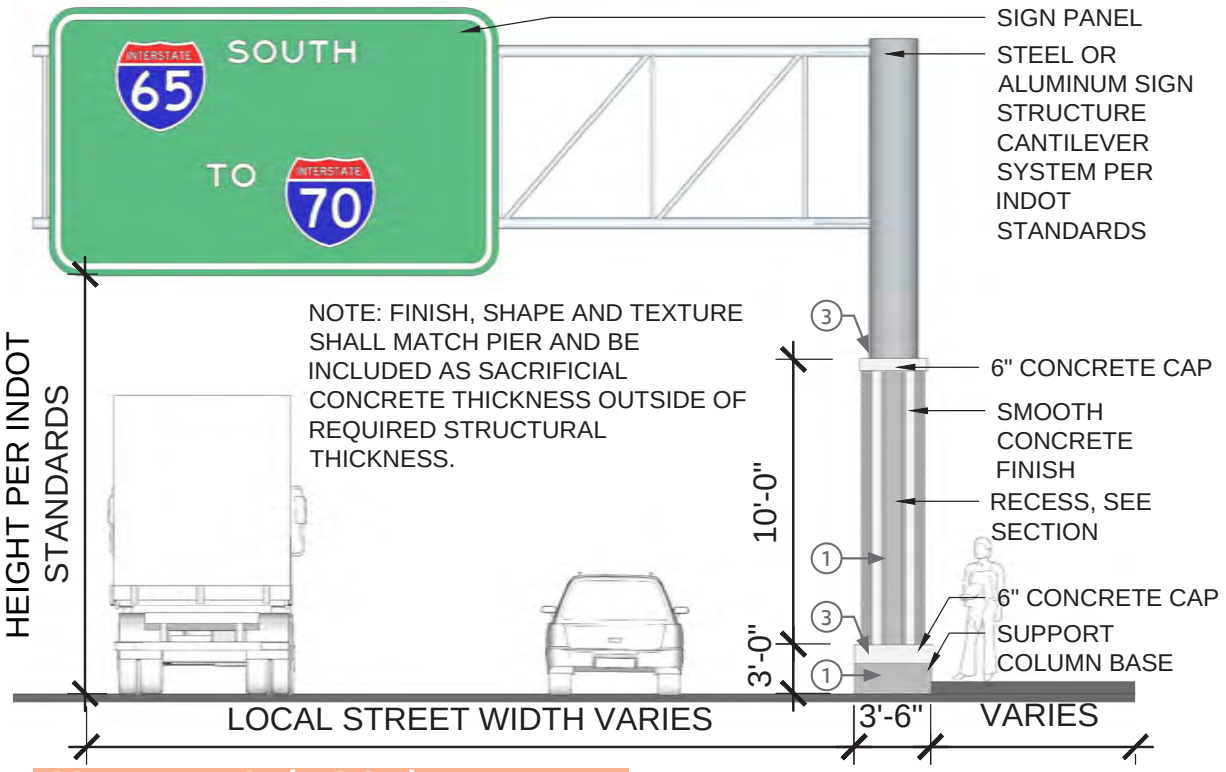
OVERHEAD CANTILEVER SIGN ON LOCAL STREETS

COLOR LEGEND: *SEE COLOR SECTION*

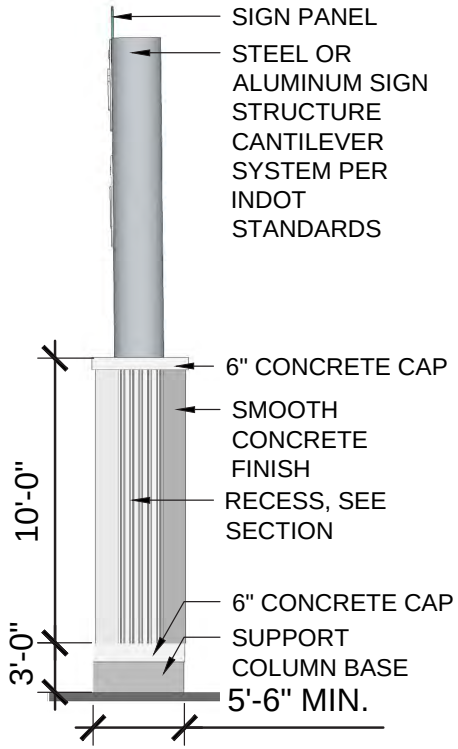
1 COLOR A1	5 COLOR B2
2 COLOR A2	6 COLOR C
3 COLOR A3	7 COLOR D
4 COLOR B1	8 COLOR E



COLUMN CROSS SECTION, TYP.



FRONT ELEVATION (TYPICAL)

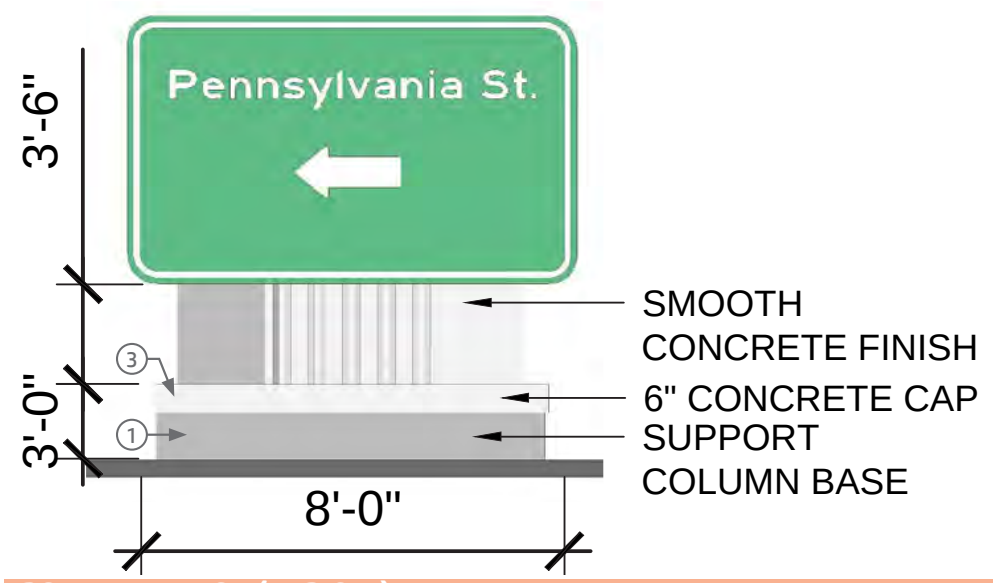


SIDE ELEVATION (TYPICAL)

GROUND- MOUNTED PANEL SIGN AT LOCAL STREETS

COLOR LEGEND: *SEE COLOR SECTION*

(1) COLOR A1	(5) COLOR B2
(2) COLOR A2	(6) COLOR C
(3) COLOR A3	(7) COLOR D
(4) COLOR B1	(8) COLOR E

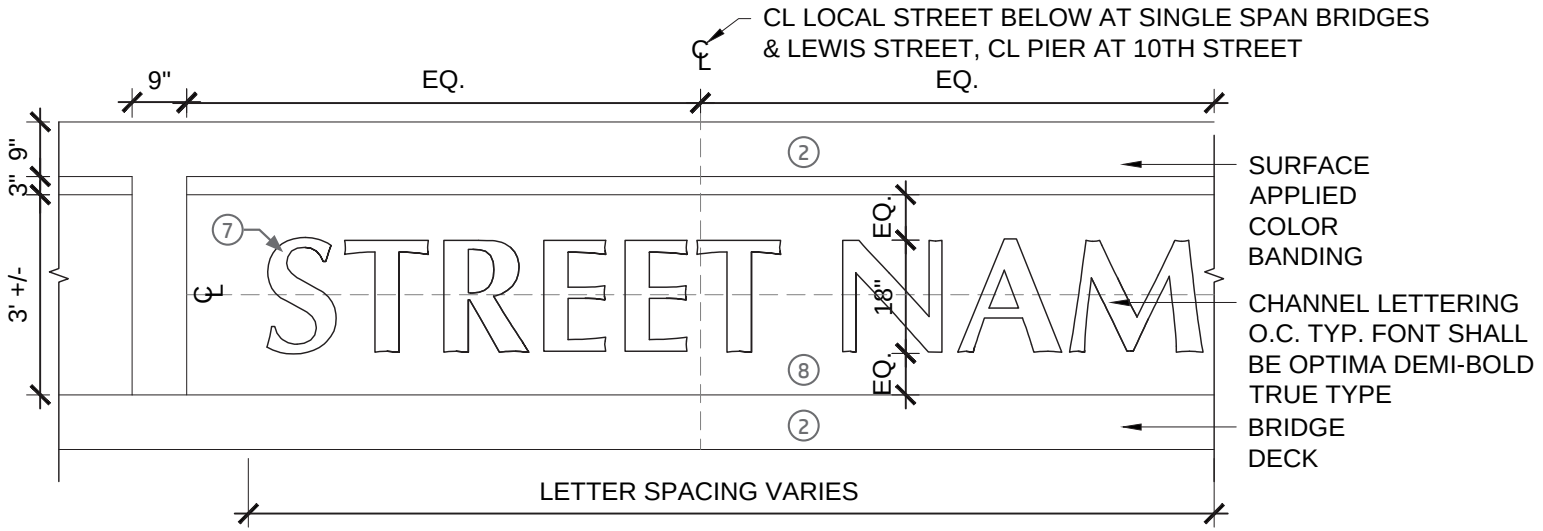


FRONT ELEVATION (TYPICAL)

TRAFFIC BARRIERS

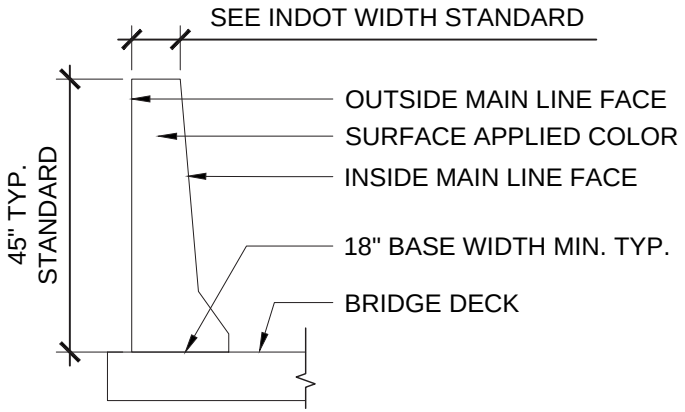
COLOR LEGEND: *SEE COLOR SECTION*

(1) COLOR A1	(5) COLOR B2
(2) COLOR A2	(6) COLOR C
(3) COLOR A3	(7) COLOR D
(4) COLOR B1	(8) COLOR E

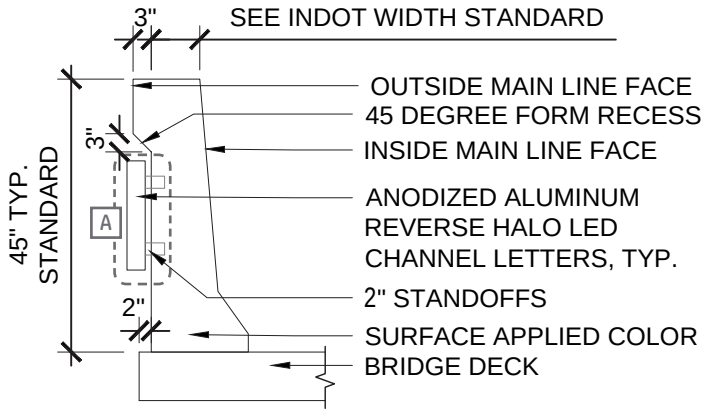


OUTSIDE FACE ELEVATION (TYPICAL)

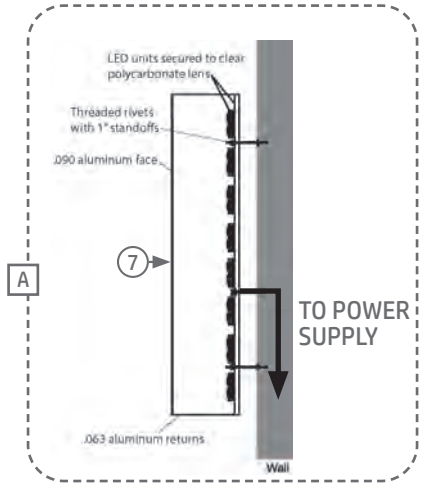
NOTE: *STRUCTURAL DESIGN OF LETTERING CONNECTION TO BARRIER SHALL BE THE RESPONSIBILITY OF THE DESIGN-BUILD CONTRACTOR IN ACCORDANCE WITH THE TECHNICAL PROVISIONS AND PROJECT STANDARDS.*



STANDARD BARRIER CROSS SECTION (TYPICAL)



SIGN BARRIER CROSS SECTION (TYPICAL)

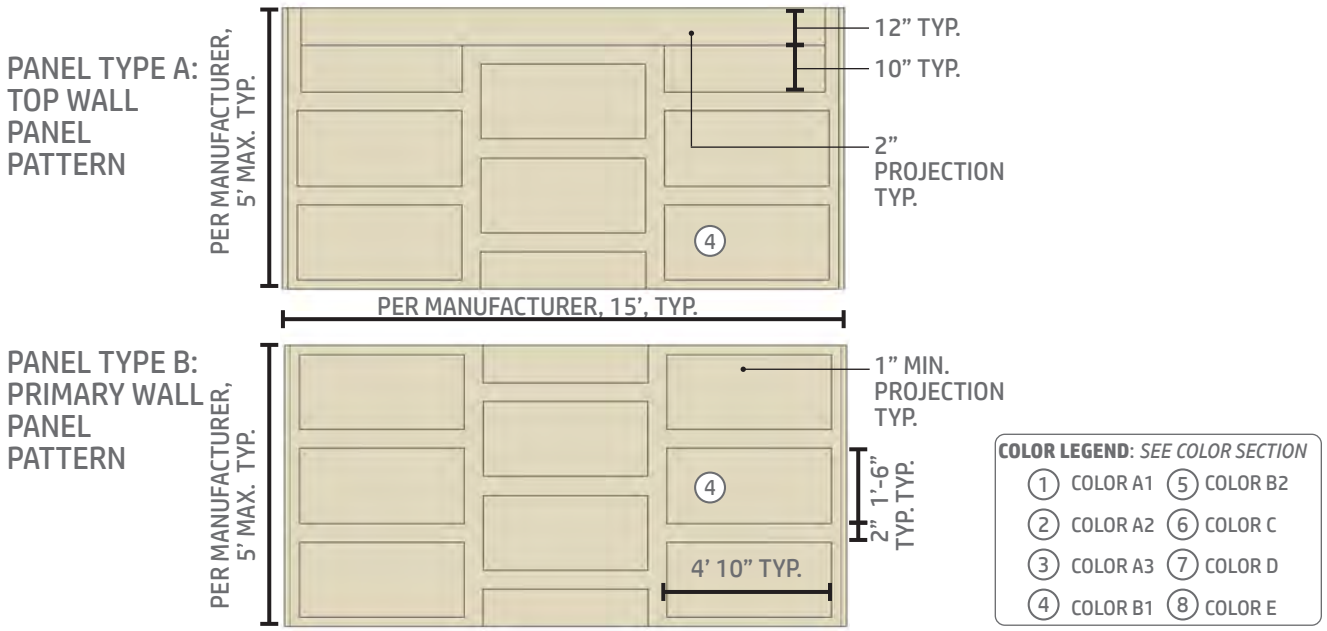


REVERSE HALO CHANNEL LETTER

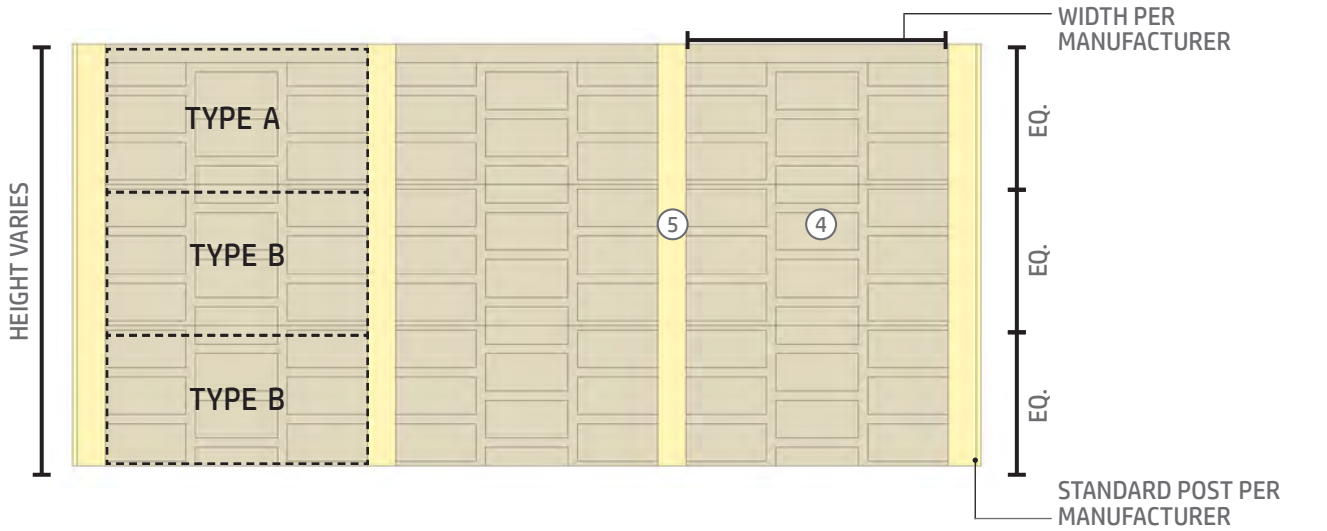
SOUND BARRIERS

Characteristics

- Panel patterns shall be proportionally scaled to meet manufacturer's requirements.
- Panel textures, colors and patterns shall be visually consistent with MSE walls.



SOUND BARRIER PANEL TYPES (TYPICAL)



SOUND BARRIER FRONT ELEVATION (TYPICAL)

FENCING

Fencing shall be chain-link with black vinyl coating and meet height requirements between 4’ and 6’, with 6’ fencing used adjacent to the Monon Trail.

6’ Black Vinyl-Coated Chain Link Fence

4’ Black Vinyl-Coated Chain Link Fence

Fencing Setback from Walkways

BRIDGES OPENINGS

Overview:
With the reconstruction of the I-65/I-70 North Split interchange, the bridges that pass over local city streets will be replaced as part of this project. Thirteen downtown city streets are directly affected by the project. When the project is complete, all existing streets will still function as through streets with the interstate remaining elevated, bridging over the local streets.

The proposed design of the bridge opening infrastructure provides wider underpass openings, creating a safer and more inviting environment for accommodating pedestrians and vehicles.

Bridge Opening Types

Three bridge opening types were developed for local roadway connections. These bridge opening types shall be:

1. **Major Gateway Bridge Openings:** These bridge openings signify the most visible and highly used connections under the interstate. They shall function as neighborhood gateways, arterial street enhancements, and access points to the interstate.
2. **Minor Gateway Bridge Openings:** These bridge openings occur at collector and neighborhood streets and shall be visually similar to the Major Gateway Bridges.
3. **Standard Bridge Openings:** These bridge openings are essentially the base build condition. These bridges are more utilitarian and shall occur at bridges within the interchange, interior bridges sandwiched between a set of Major or Minor Bridges, or other areas where there is little or no pedestrian activity.

The bridge opening types shall contain a basic level of design enhancements proposed as part of the project, including wider sidewalks to encourage pedestrian connectivity, bridge abutment walls to reduce sidewalk edge encampment and loitering, traffic barriers with place making and wayfinding elements, and enhanced underpass lighting and visibility. The structural bridge components shall be designed to highlight the engineering and materials of the bridge components, allowing the engineering design to add to the overall visual interest of the underpass. While not overly detailed, integrating this level of ornamentation at the bridge openings enhances the character and overall visual impact to the infrastructure.

With the exception of only a few locations, all bridge openings cross over a local roadway. In the instance where a bridge opening crosses over a shared use trail, rail line, or on-ramp, the bridge structure aesthetic enhancements shall be applied while the ground plane enhancements shall not be applied due to varying conditions.

MAJOR GATEWAY BRIDGES

Design Summary:

Major Gateway Bridges provide crossing of I-65/I-70 over collector and arterial streets. To accomplish this, the following summarize the general characteristics of the Major Gateway Bridges:

- Provide safe, efficient and accommodating pedestrian and bicycle facilities at the local street level to improve connectivity.
- Apply enhanced treatments to abutment corner monuments, and traffic barriers while maintaining visual consistency to the Minor and Standard Underpass Bridges.

Locations:

The major gateway bridges within the project shall be at the following locations, as illustrated on the corridor map:

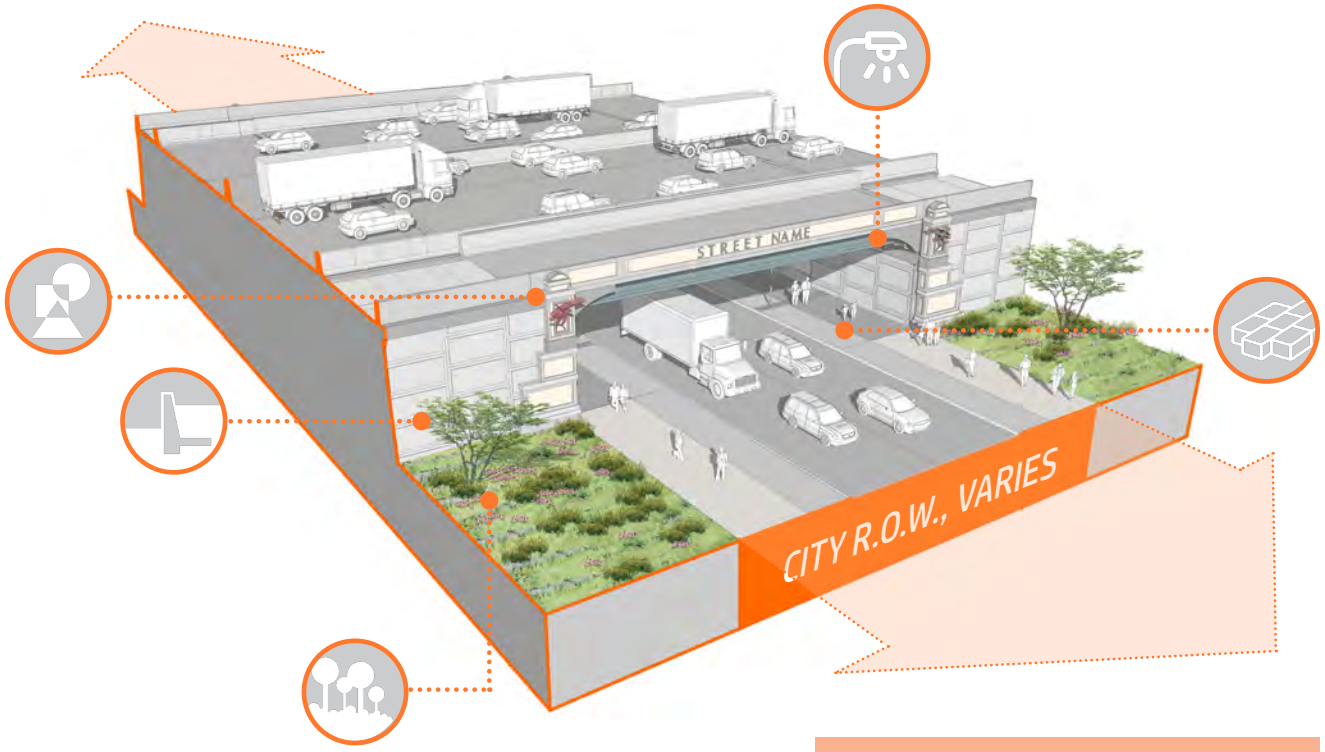
- 10th Street (double span)
- Central Avenue (single span)
- College Avenue (single span)
- Lewis Street/ Monon Trail (double span)
- New York Street (Single Span)
- Michigan Street (single span)
- Washington Street (single span)

MAJOR GATEWAY BRIDGES

Application Summary:
This bridge type is influenced and inspired by local landmarks, civic identity and historic forms within the context of downtown and surrounding neighborhoods' architecture. The Major Gateway Bridge design builds upon the decorative and detailed character utilizing texture and shapes found in the surrounding context that celebrate the capitol city. It provides an opportunity for the integration of future public art within the public realm.

COMPONENT USE:
Design enhancements for Major Gateway Bridges shall include the following:

- Abutment Walls
- Lighting
- Surfacing
- Landscape
- Public Art Spaces

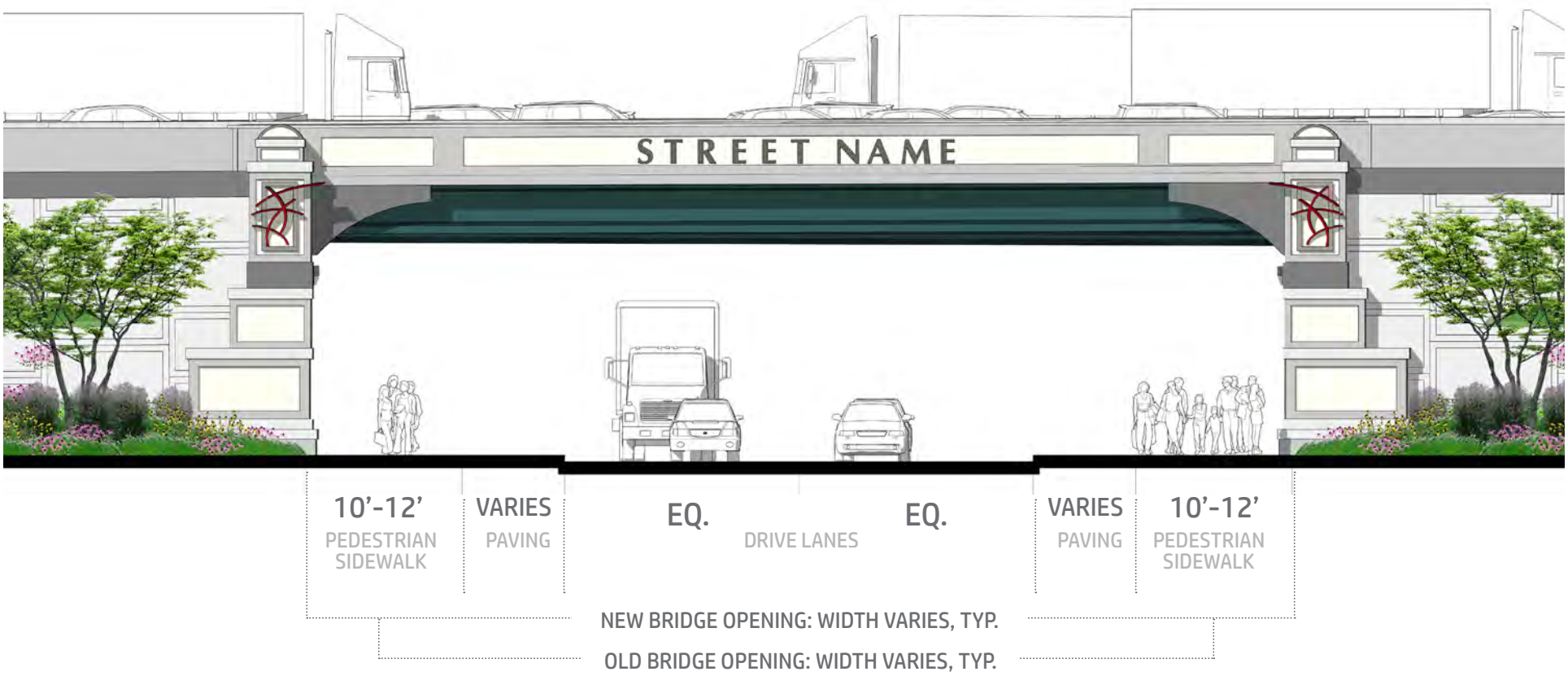


TYPICAL COMPONENT APPLICATION

MAJOR GATEWAY BRIDGE APPLICATION SINGLE SPAN

NOTES:

1. CORNER MONUMENTS ONLY REQUIRED ON THE OUTSIDE OF EXTERIOR BRIDGES FOR A TOTAL OF 4 PER CROSSING.

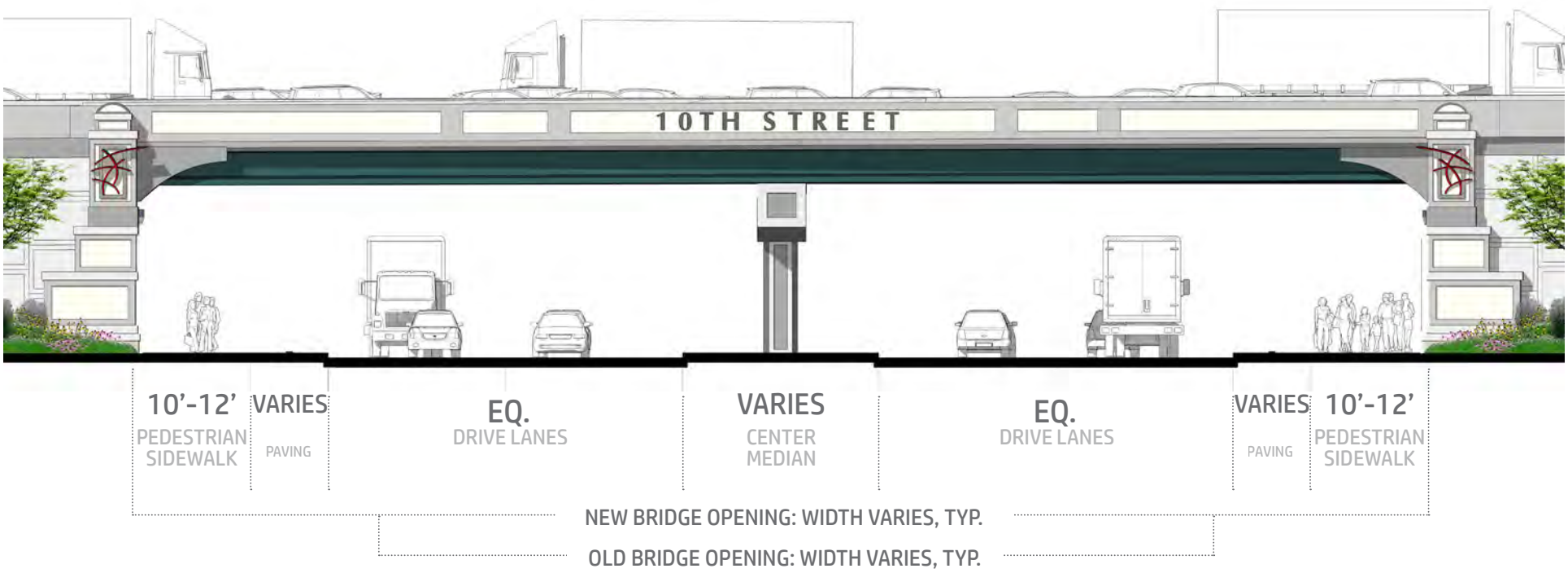


TYPICAL MAJOR GATEWAY BRIDGE ELEVATION

MAJOR GATEWAY BRIDGE APPLICATION DOUBLE SPAN, TYPICAL

NOTES:

1. CORNER MONUMENTS ONLY REQUIRED ON THE OUTSIDE OF EXTERIOR BRIDGES FOR A TOTAL OF 4 PER CROSSING.

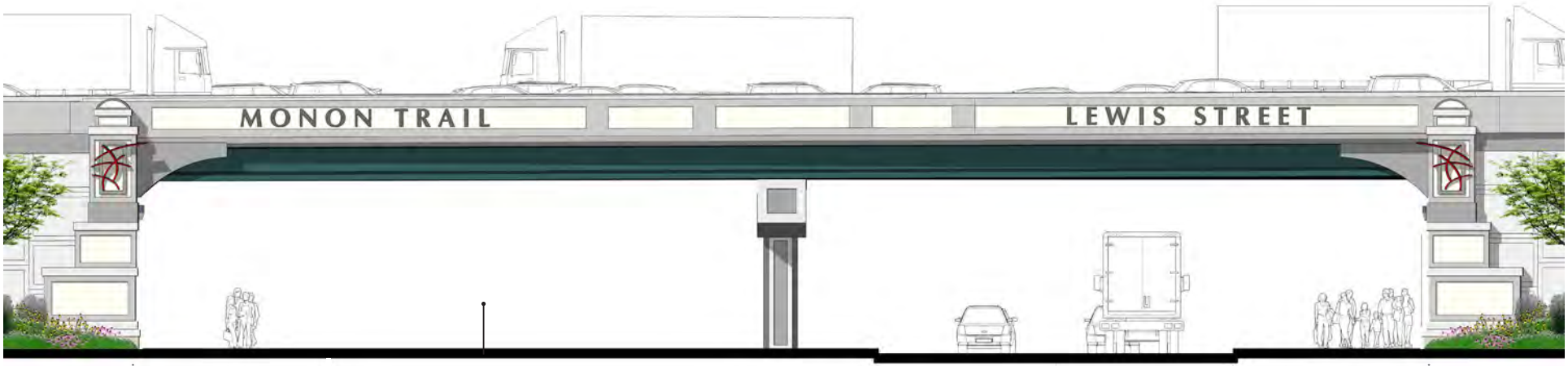


TYPICAL MAJOR GATEWAY BRIDGE ELEVATION

MAJOR GATEWAY BRIDGE APPLICATION DOUBLE SPAN AT MONON & LEWIS STREET

NOTES:

1. CORNER MONUMENTS ONLY REQUIRED ON THE OUTSIDE OF EXTERIOR BRIDGES FOR A TOTAL OF 4 PER CROSSING.



TYPICAL MAJOR GATEWAY BRIDGE ELEVATION


STREET NAME

MINOR GATEWAY BRIDGES

Design Summary:

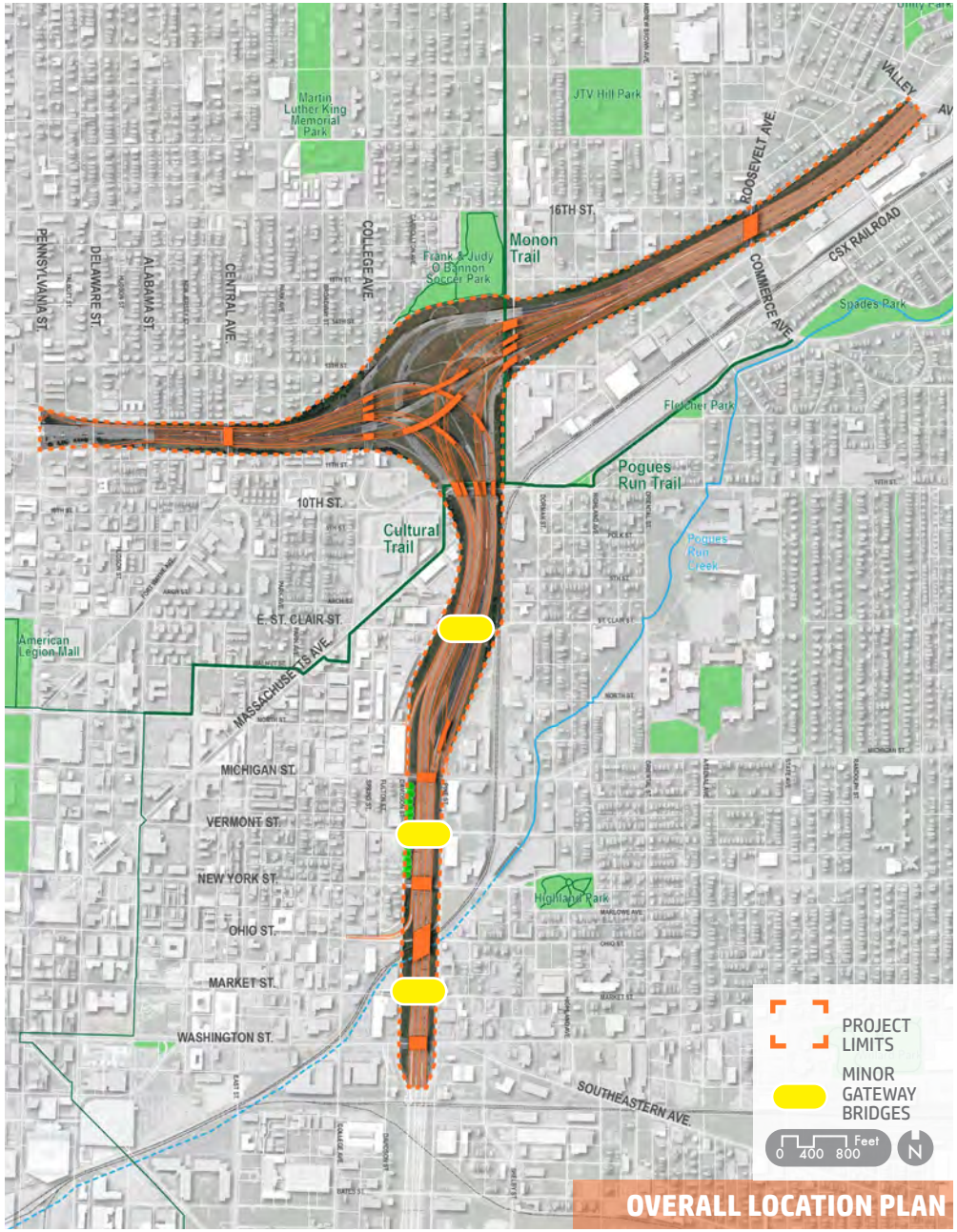
Minor Gateway Bridges provide crossing of I-65/I-70 over smaller-scaled less traveled local streets. The following summarizes the general characteristics of the Minor Underpass Bridges:

- Provide safe, efficient and accommodating pedestrian and bicycle facilities through the underpasses at the local street level to improve connectivity.
- Apply simplified treatments to abutment corner monuments, and traffic barriers while maintaining visual consistency to the Major and Standard Underpass Bridges.

Locations:

The bridges identified within the project that shall be considered Minor Gateways, as illustrated on the corridor map:

- Market Street
- Vermont Street
- St. Clair Street

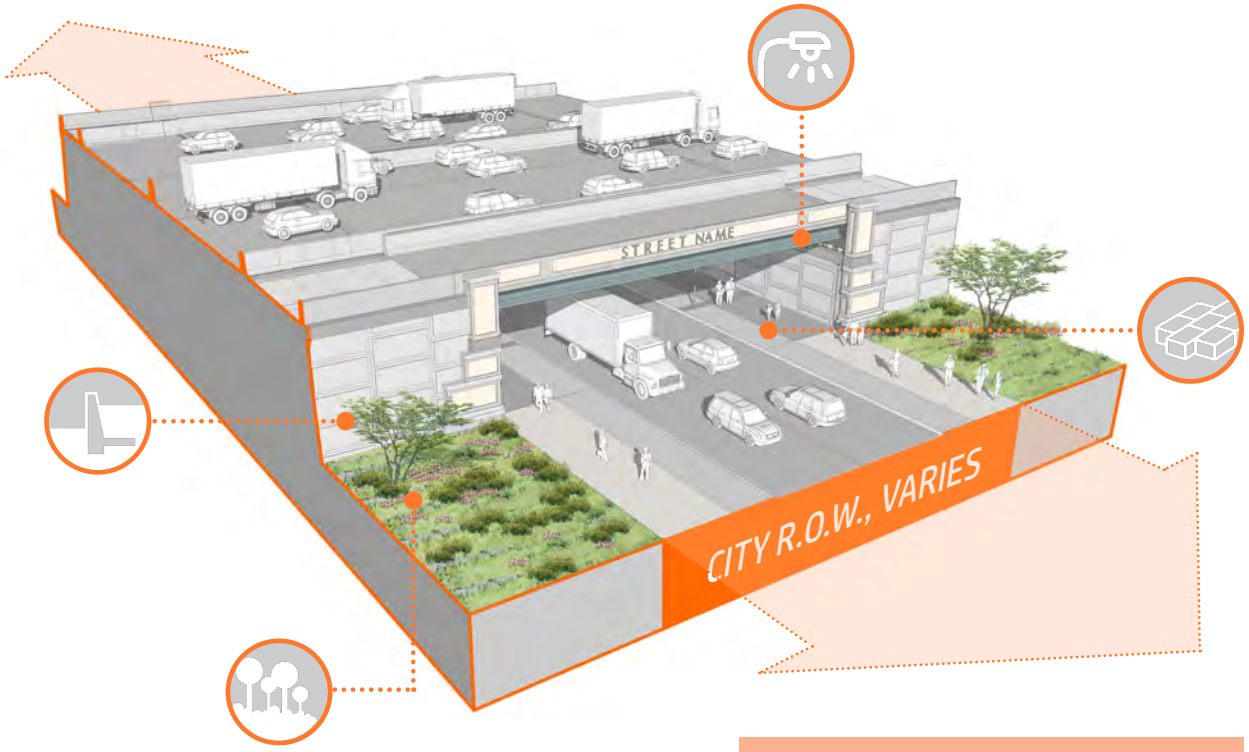


MINOR GATEWAY BRIDGES

Application Summary:
This bridge type is also influenced by landmarks, identity and historic forms within the downtown and surrounding neighborhood context. The Minor Gateway Bridge design simplifies aspects of the major gateway counterpart, while still utilizing texture and shapes found in the surrounding neighborhood that celebrate the capitol city. The consistency in infrastructure features provides for the project's visual uniformity.

COMPONENT USE:
Design treatments for Minor Gateway Bridges shall include the following:

- Abutment Walls
- Lighting
- Surfacing
- Landscape

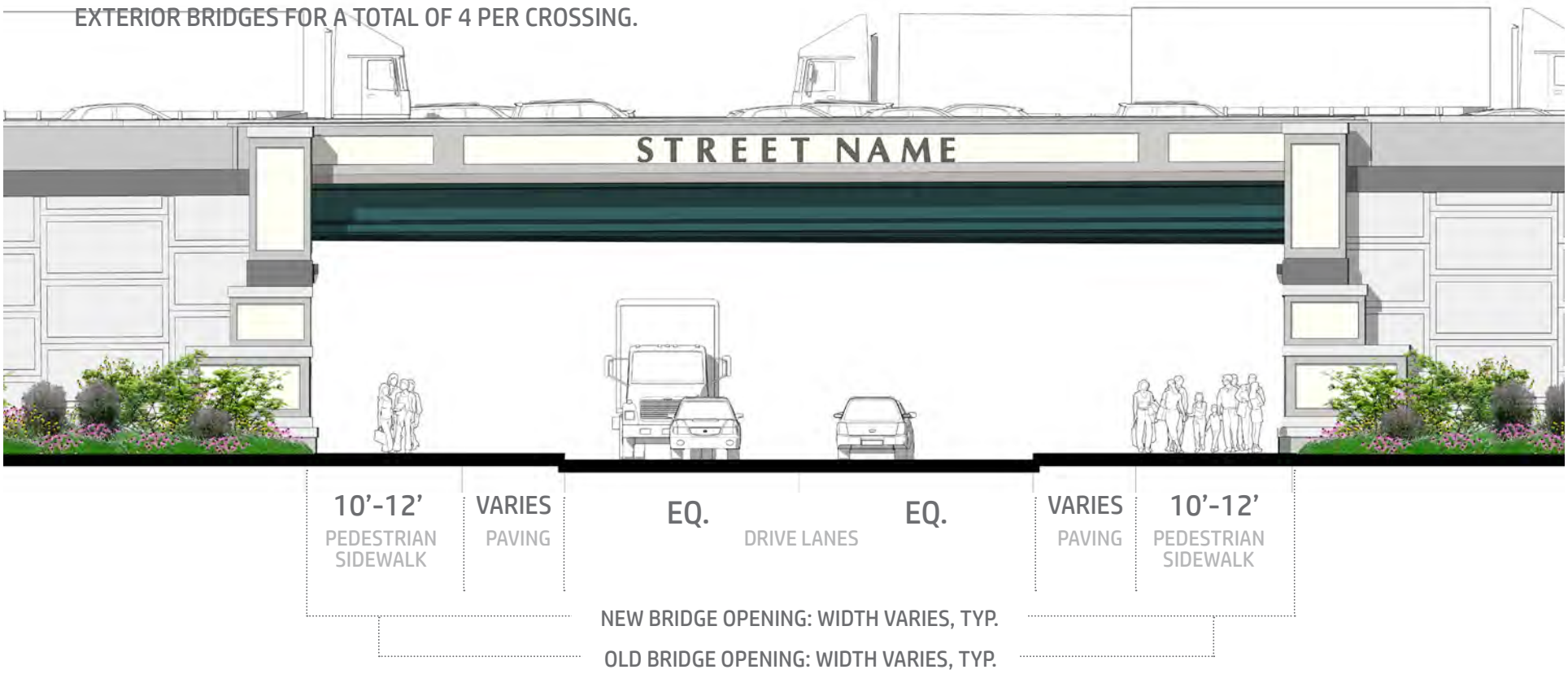


TYPICAL COMPONENT APPLICATION

MINOR GATEWAY BRIDGE APPLICATION

NOTES:

1. PLANTING AND LIGHTING BUFFER ZONES ONLY REQUIRED AT ST. CLAIR STREET CROSSING.
2. CORNER MONUMENTS ONLY REQUIRED ON THE OUTSIDE OF EXTERIOR BRIDGES FOR A TOTAL OF 4 PER CROSSING.



TYPICAL MINOR GATEWAY BRIDGE ELEVATION

STANDARD UNDERPASS & SURFACES

Design Summary:

Standard Underpass Bridges provide crossing of I-65/I-70 over local streets. The following summarize the general characteristics of the Standard Underpass Bridges:

- Provide safe, efficient and accommodating pedestrian and bicycle facilities at the local street level to improve connectivity.
- Apply simplified treatments with visual consistency to the Major and Minor Underpass Bridges.

Standard Underpass Locations:

The bridges identified within the project that shall receive the standard underpass treatment at the following locations, as illustrated on the corridor map:

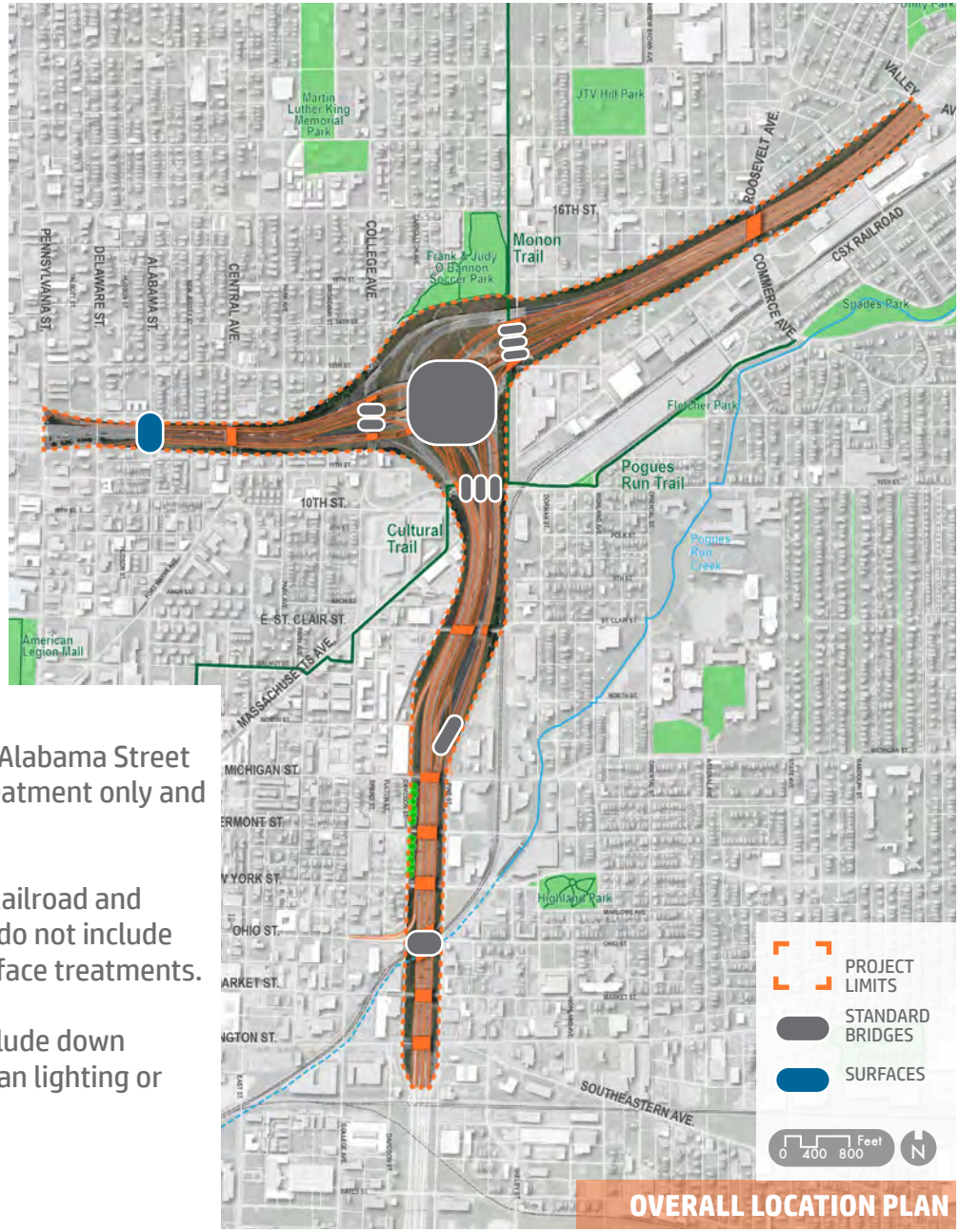
- College Avenue (2 internal bridges)
- 10th Street (3 internal bridges)
- Pine Street (1 straddle bent)
- Lewis Street/ Monon Trail (3 internal bridges)
- Ohio Street & CSX Railroad (3 bridges)
- Interchange (all bridge locations)

Treatment Notes:

The Standard Bridge at Alabama Street shall recieve surface treatment only and no pedestrian lighting.

The Ohio Street & CSX Railroad and the Pine Street bridges do not include pedestrian lights or surface treatments.

Interchange bridges include down lighting but no pedestrian lighting or surface treatments.



STANDARD UNDERPASS BRIDGES

Application Summary:

This bridge type is a simplified version of the three types. It is to be used in conditions where visibility is less significant or it is less visible, such as between two Major or Minor Gateway Bridges if the bridge span requires multiple bridge decks. This bridge is intended to maintain visual uniformity and continue to enhance the design aesthetic within the project area.

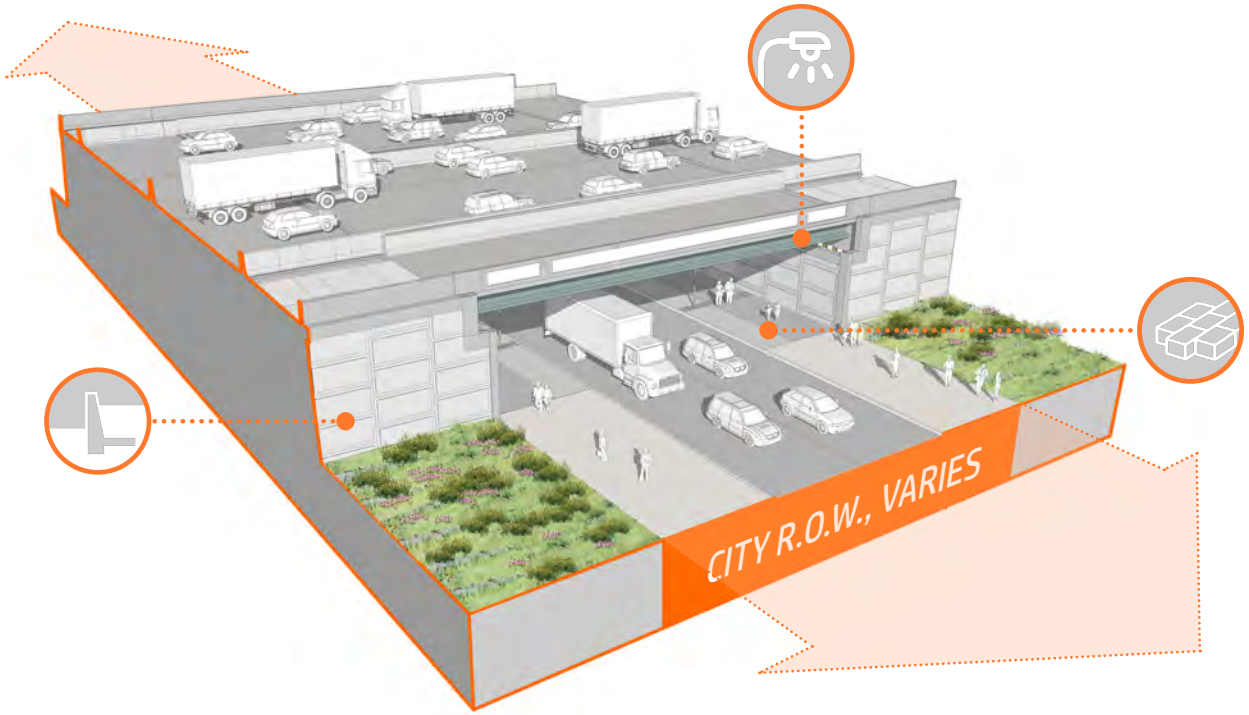
COMPONENT USE:

Standard Bridge treatments shall include the following components:

- Abutment Walls
- Lighting
- Surfacing

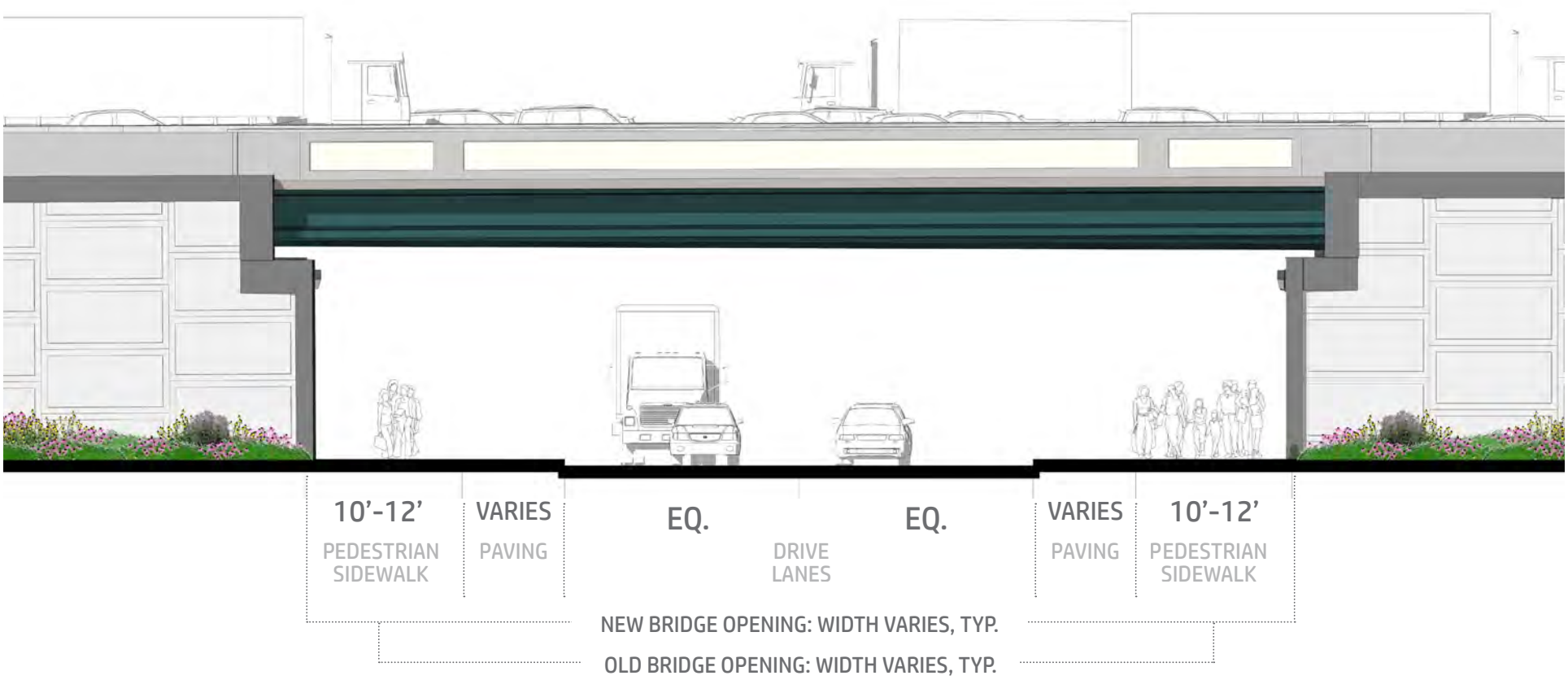
NOTE:

Local level surface treatments will not apply to interchange bridges and ramp bridges where no pedestrian facilities currently exist.



TYPICAL COMPONENT APPLICATION

STANDARD UNDERPASS BRIDGE APPLICATION



TYPICAL STANDARD BRIDGE ELEVATION

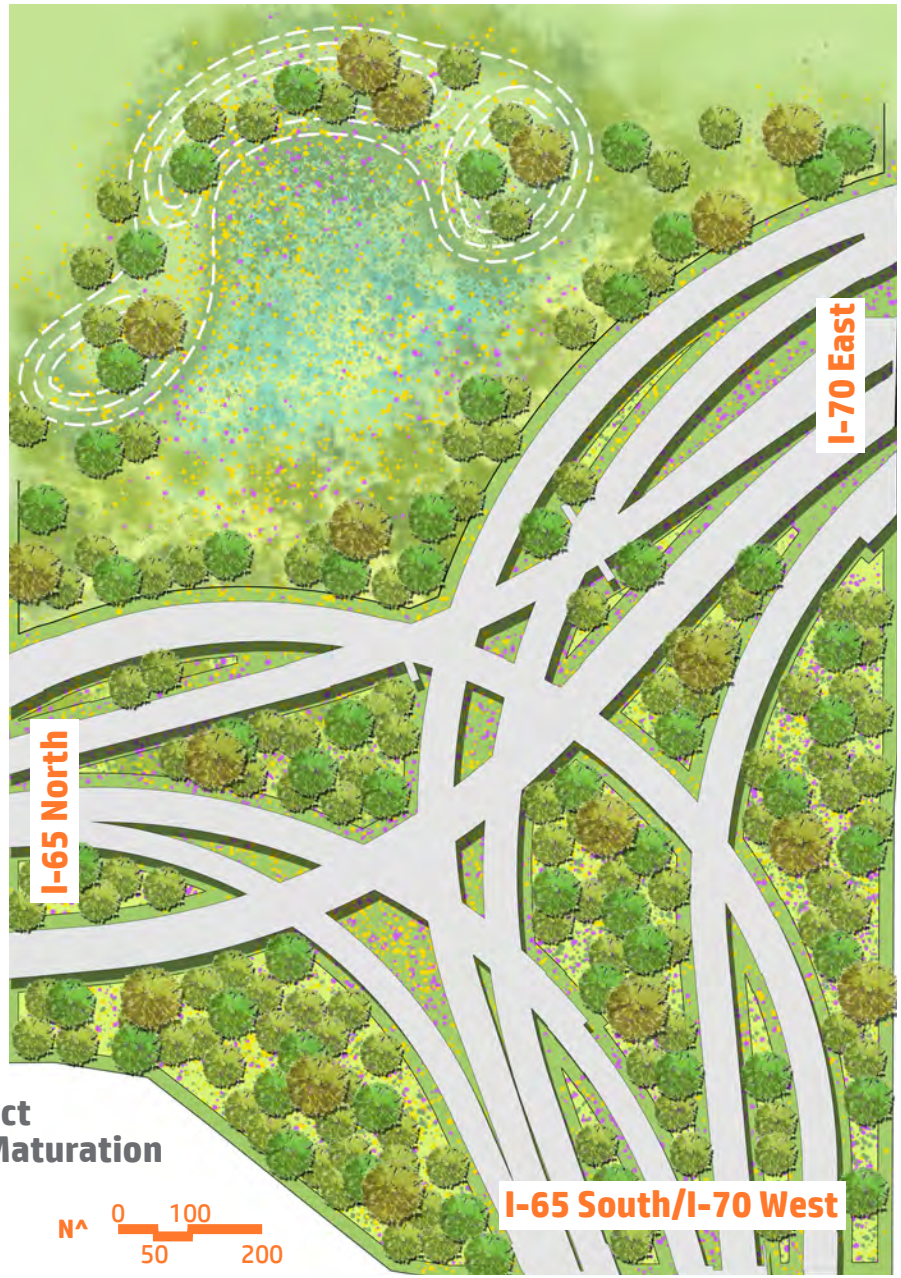
LANDSCAPE INTRODUCTION

Landscape Summary

This section of the North Split Aesthetic Design Guidelines provides direction for landscape form and function, evaluating how vegetative aesthetic treatments can also serve the needs for the INDOT-owned interstate, the City-owned local streets and the surrounding communities.

Information gained from neighborhood workshops and surveys during the Context Sensitive Solutions process of the I-65/I-70 North Split Project indicated that the public preferred a more naturalistic approach to landscape design with many referring to the term “urban forest.” This urban forest concept has been considered as part of the design guidelines - found in *Interchange Plantings* of this section.

This document also recognizes the existence of INDOT standards, as well local groups (such as Keep Indianapolis Beautiful) and resources for achieving the proposed design.



I-65/I-70 North Split Project
Interchange Plantings at Maturation

LANDSCAPE OVERVIEW

Landscape Design Typology

The landscape palette includes a range of treatments that focus primarily on native plant selections to enhance the aesthetic appeal of the interchange. The design concept places plant species within urban conditions that best represent their naturally occuring plant communities. The typologies for the landscape treatment include:

- Tree Preservation Areas as "The Nature Reserve"
- 10' Buffer-Zones as "The Lawn"
- Side Slope Plantings as "The Uplands"
- Screen Plantings as "The Woodlands"
- Interchange Plantings as "The Prairie's Edge"
- Detention Basin Plantings as "The Wetlands"

Typology 1: Tree Preservation

Tree Preservation Areas protect trees that are deemed "significant" to the landscape. Tree preservation areas were determined through the Section 106 Consultation Process and are included in the final "Do Not Disturb" areas for the project site.

Typology 2: 10' Buffer-Zone

The 10' Buffer-Zone is intended to maintain a set-back for plantings so there is no interference between the landscaped areas and roadway functions.

Typology 3: Side Slope Plantings

Plants, rather than extended infrastructure, can be used for erosion control and soil stabilization along the interstate embankments as a cost-effective and less-infrastructure dependent option.

Typology 4: Screen Plantings

Plants can minimize the appearance of sound barriers from adjacent residences.

Typology 5: Interchange Plantings

Plants can give purpose to expansive spaces, within and around the interchange, in a manner that is low-cost and less maintenance intensive, while still providing visual interest.

Typology 6: Detention Basin Plantings

Plants allow for the filtration and infiltration of storm water on site. As such, a heavily planted area for the purpose of stormwater detention - a dry extended detention basin - is favored over a traditional retention pond for the benefits it can offer the urban landscape.

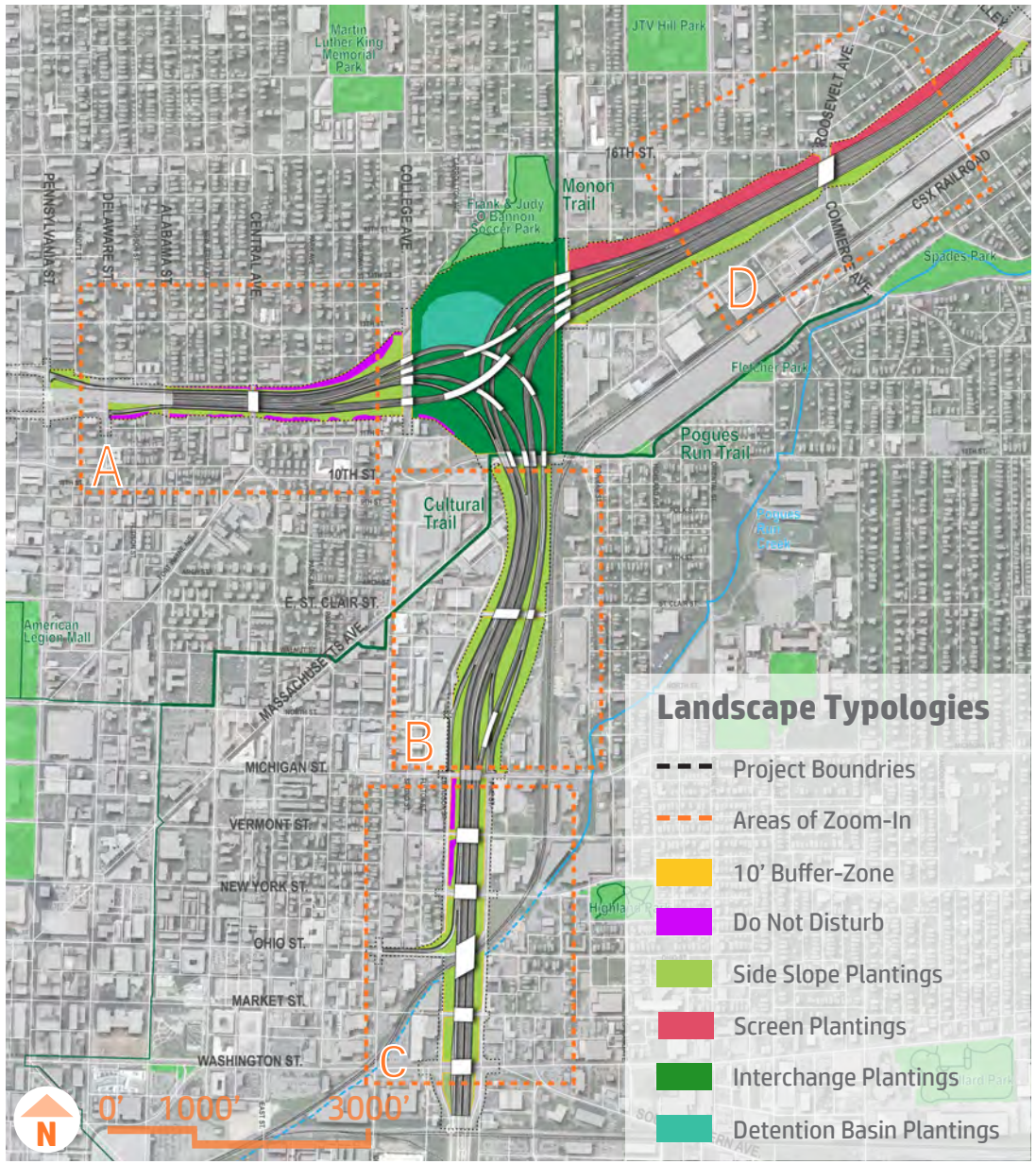
LANDSCAPE OVERVIEW

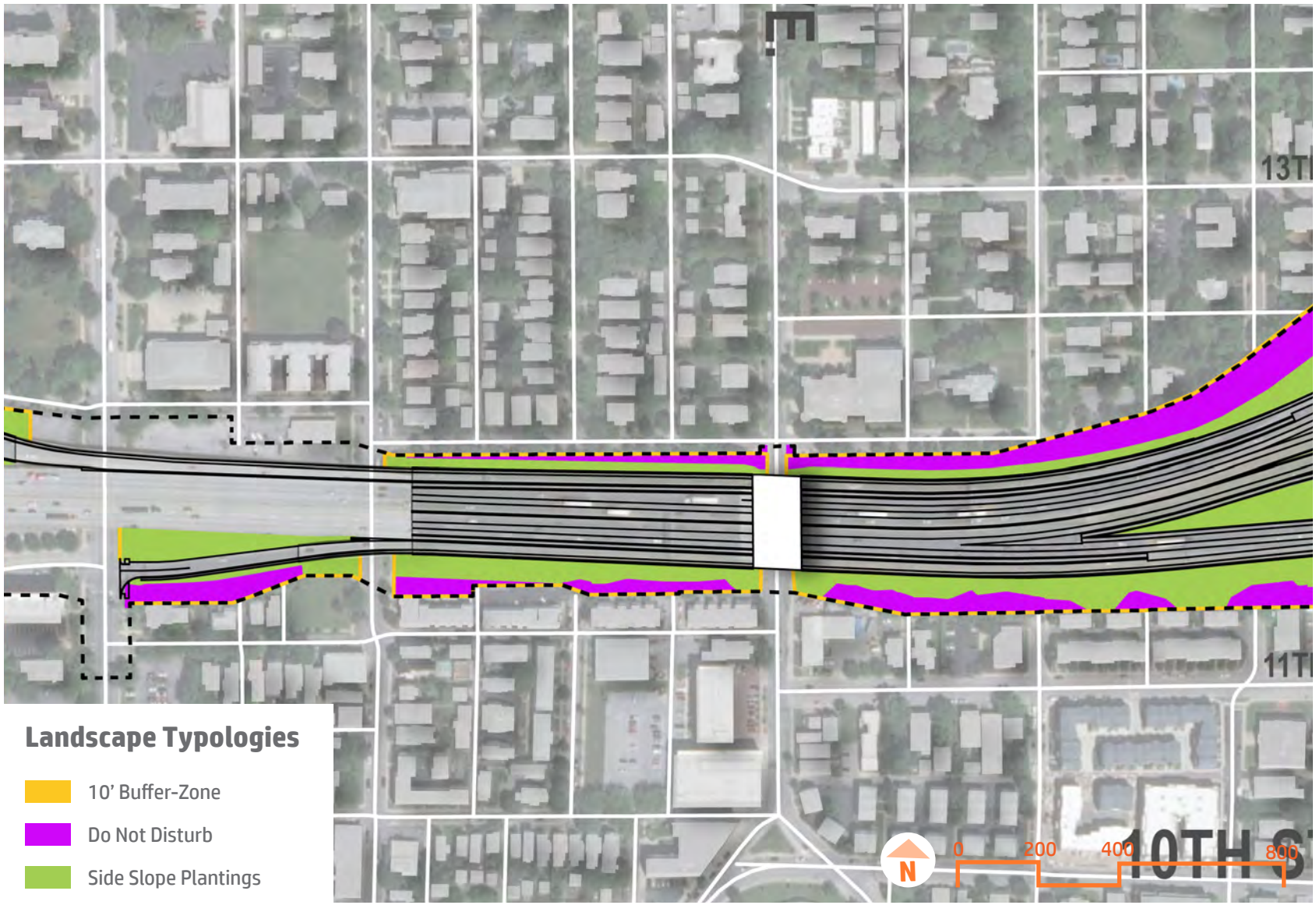
Design Summary

The landscape palette shall utilize a range of treatments that focus on native plant selections to enhance the interchange and overall corridor. The graphic on the right identifies **general** areas of appropriateness for landscape treatment typologies. Final typologies may vary depending on the final engineering considerations of the interstate and associated structures.

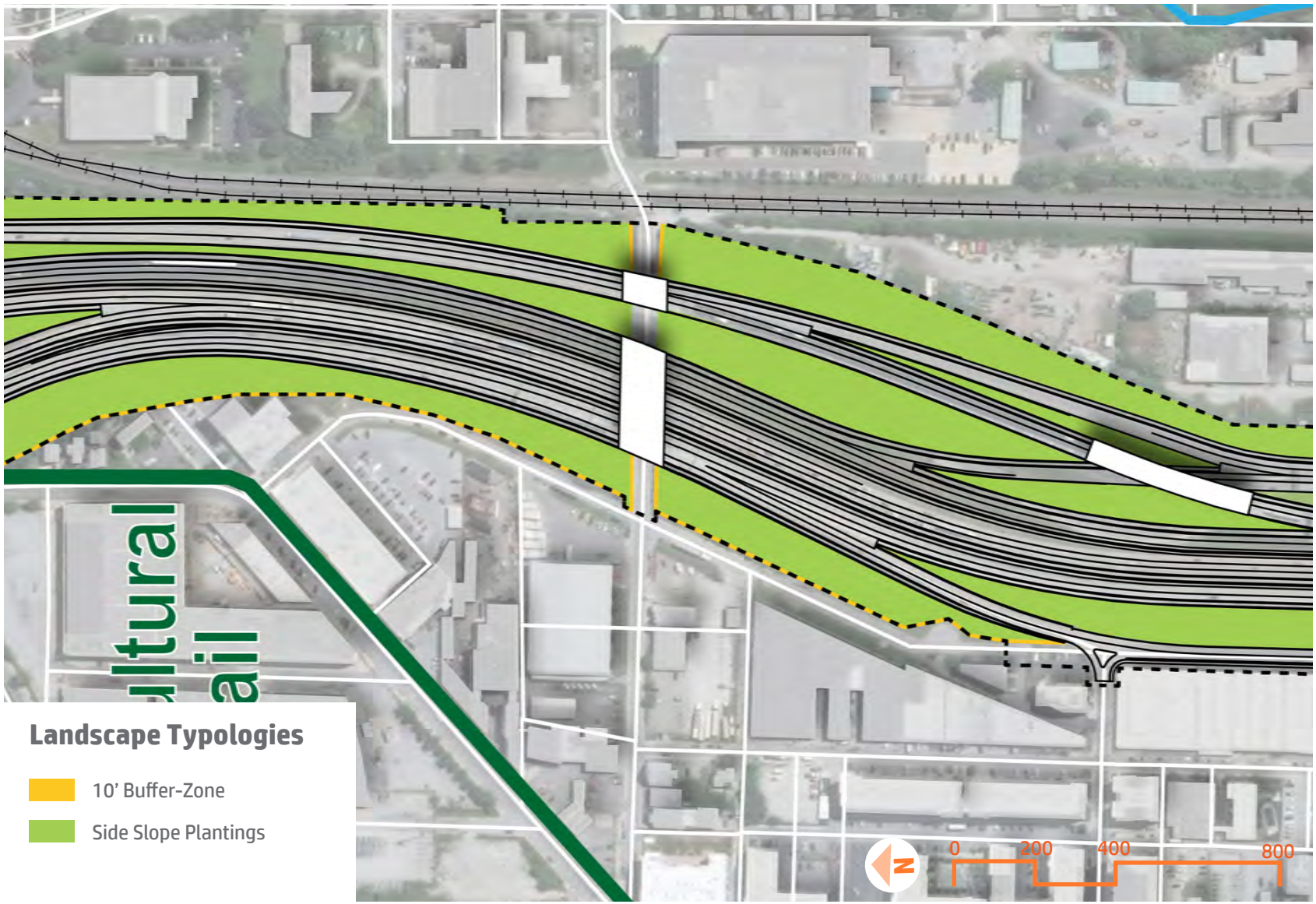
Guidelines

- Use native, low-maintenance plants whenever possible
- Soften urban elements of the corridor with a naturalized placement of plants
- Provide a diverse palette of plants species

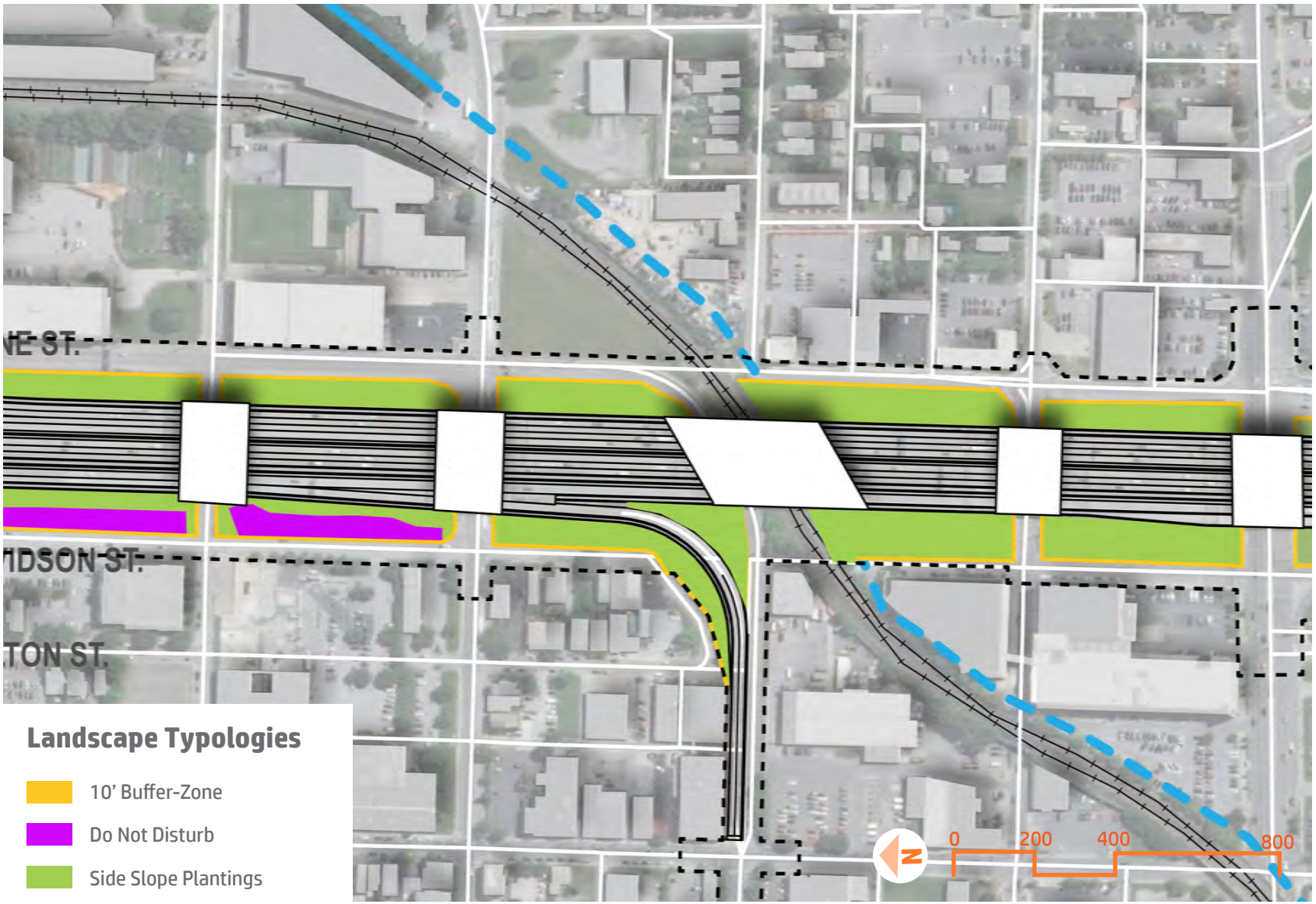



Landscape Typologies
10' Buffer-Zone
Do Not Disturb
Side Slope Plantings
N
0
200
400
800
13TH
11TH
10TH ST

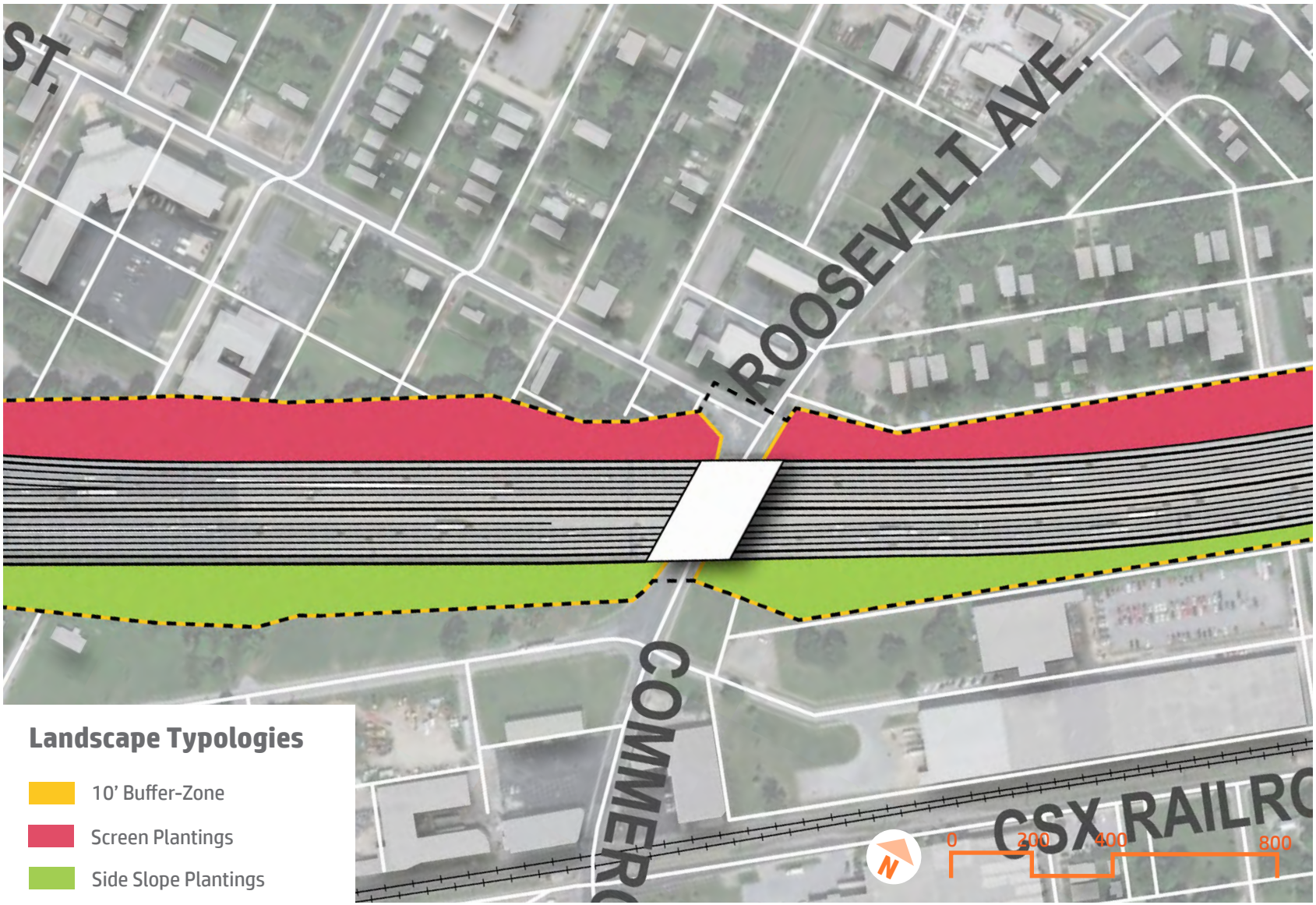
A. WEST LEG



B. SOUTH LEG BETWEEN 10TH STREET AND MICHIGAN STREET



C. SOUTH LEG BETWEEN MICHIGAN STREET AND WASHINGTON STREET


ST.
ROOSEVELT AVE.
COMMER
CSX RAILRO
Landscape Typologies
10' Buffer-Zone
Screen Plantings
Side Slope Plantings
N
0
200
400
800

D. EAST LEG

QUANTITIES FOR COST ESTIMATING

Summary

The information provided outlines the total square feet of each typology and then the square feet of each plant material that makes up the typology. The square footage follows the design guidelines and parameters of placement for all plant material.

Seed coverage and on-center plant spacing are provided, and shall be followed for the unique conditions of each typology.

The plantings will follow Keep Indianapolis Beautiful's (KIB) planting standard of 15' on-center maximum spacing for all deciduous shade and ornamental trees. Evergreen screen trees will differ at a 10' on-center maximum spacing. Small deciduous and evergreen shrubs will be planted at 4' on-center, while large deciduous shrubs will be planted at 8' on-center. Plugs will be planted at 6" on-center.

Typology 1: Tree Preservation Areas Approximate Total Square Feet: 187,300

Typology 2: 10' Buffer-Zone Approximate Total Square Feet: 247,600

NO-MOW, ECO-LAWN SEED MIX **Square Feet of Coverage: 247,600**

Coverage applied at a rate of 220 PLS (Pure Live Seed) pounds per acre.

Typology 3: Side Slope Plantings Approximate Total Square Feet: 1,528,200

SLOPE STABILIZATION SEED **MIX Square Feet of Coverage: 1,528,200**

Coverage applied at a rate of 60 PLS (Pure Live Seed) pounds per acre

NATIVE GRASSES **Square Feet of Coverage: 68,400**

Plugs, Planted 6" On-Center

NATIVE FORBS **Square Feet of Coverage: 68,400**

Plugs, Planted 6" On-Center

SMALL SHRUBS **Square Feet of Coverage: 278,280**

Minimum 3-Gallon Container, Planted 4' On-Center

LARGE, DECIDUOUS SHRUBS **Square Feet of Coverage: 278,280**

Minimum 3-Gallon Container, Planted 8' On-Center

ORNAMENTAL TREES **Square Feet of Coverage: 278,280**

5-6' Tall, Planted at 15' On-Center

SHADE TREES **Square Feet of Coverage: 278,280**

Minimum 2" Caliper, Planted at 15' On-Center

QUANTITIES FOR COST ESTIMATING

Typology 4: Screen Plantings

Approximate Total Square Feet: 378,500

SLOPE STABILIZATION SEED MIX **Square Feet of Coverage: 378,500**

Coverage applied at a rate of 60 PLS (Pure Live Seed) pounds per acre

LARGE, DECIDUOUS SHRUBS **Square Feet of Coverage: 23,655**

Minimum 3-Gallon Container, Planted 8' On-Center

ORNAMENTAL TREES **Square Feet of Coverage: 23,655**

5-6' Tall, Planted at 15' On-Center

COLUMNAR TREES **Square Feet of Coverage: 23,655**

Minimum 2" Caliper, Planted at 10' On-Center

SHADE TREES **Square Feet of Coverage: 23,655**

Minimum 2" Caliper, Planted at 15' On-Center

EVERGREEN TREES **Square Feet of Coverage: 189,250**

Minimum 6' Tall, Ball and Burlap Planted at 10' On-Center

QUANTITIES FOR COST ESTIMATING

Typology 5: Interchange Plantings

Approximate Total Square Feet: 1,476,900

***PRAIRIE SEED MIX* Square Feet of Coverage: 1,476,900**

Coverage applied at a rate of 40 PLS (Pure Live Seed) pounds per acre

***NATIVE WILDFLOWER SEED MIX* Square Feet of Coverage: 1,476,900**

Coverage applied at a rate of 5 PLS (Pure Live Seed) pounds per acre

***ORNAMENTAL TREES* Square Feet of Coverage: 492,300**

5-6' Tall, Planted at 15' On-Center

***SHADE TREES* Square Feet of Coverage: 984,600**

Minimum 2" Caliper, Planted at 15' On-Center

Typology 6: Detention Basin Plantings

Approximate Total Square Feet: 437,700

***STORMWATER SEED MIX* Square Feet of Coverage: 291,800**

Coverage applied at a rate of 35 PLS (Pure Live Seed) pounds per acre

***PRAIRIE SEED MIX* Square Feet of Coverage: 145,900**

Coverage applied at a rate of 40 PLS (Pure Live Seed) pounds per acre

***LARGE, DECIDUOUS SHRUBS* Square Feet of Coverage: 145,900**

Minimum 3-Gallon Container, Planted 8' On-Center

***SHADE TREES* Square Feet of Coverage: 145,900**

Minimum 2" Caliper, Planted at 15' On-Center

TYPOLOGY 1: TREE PRESERVATION AREAS

Design Intent

Tree Preservation Areas protect trees that are deemed "significant" to the landscape. The tree preservation areas are included in the final "Do Not Disturb" areas for the project site.

Further details about tree preservation in the I-65/I-70 North Split Project can be referenced from the Section 106 Consultation Process and should correspond with the final "Do Not Disturb" project limits.

Design Concept 'The Nature Reserve'

Protect trees throughout all phases of construction, keeping valued natural elements existing within the city.

Benefits

- Retain visual interest
- Protect environmental health
- Provide erosion control

Tree Values

Trees provide lifelong environmental and aesthetic benefits that improve community quality of life. Trees add value to their surroundings by preserving water and soil quality, removing pollutants from the air, lowering surface and air temperatures and providing habitat for wildlife. While trees are some of our most valuable urban assets, they are vulnerable to environmental conditions.

Tree Protection

Trees have basic needs for survival and growth. Water and soil nutrients must be managed to maintain their health, safety and appearance. If not properly protected, construction activities such as soil compaction, grading, improper root and limb pruning, bark injury, incorrect storage of construction materials and dumping of waste can cause stress and damage to trees. However, in most cases, trees will survive if separated from construction equipment and materials.

Various professionals are involved in protecting trees throughout the construction process, including arborists, landscape architects, engineers, planners and municipal agencies. Protecting trees takes time, money and communication. All phases of construction should include tree protection procedures.

According to the Penn State Extension's *A Guide to Preserving Trees in Development Projects*, Tree preservation occurs during the entire construction process:

Pre-construction

- Tree inventory
- Planning, design, negotiations
- Removals
- Staking of construction footprints under trees—required limb pruning
- Insect control or other care
- Fencing preserved trees

Construction

- Communication and education
- Protection zones
- Required root pruning
- Maintenance of fencing
- Monitoring tree health
- Tree care

Post-Construction

- Communication and education
- Protecting
- Tree care

*Locations for the tree preservation areas can be found in the map on page 40.

TYPOLOGY 2: 10' BUFFER-ZONES

10' Buffer-Zones

The 10' Buffer-Zones are intended to maintain a set-back for plantings so there is no interference between the landscaped areas and roadway functions, as well as providing unobstructed views.

Design Concept 'The Lawn'

The Buffer-Zones provide a uniform edge around all plantings allowing for a "naturalized" look, while keeping a manicured appearance of turf amongst the urban context. This appearance is created through the use of a "low-to-no-mow" seed mix.

Benefits

- Minimizes costs associated with mowing and maintenance
- Creates a safe, open buffer zone along the roadway
- Provides order to naturalized plantings

Why 10' Buffer-Zones?

The buffer zone is located in the areas between the back-of-curb along all local roadways and plantings, between property owner lines and plantings, and between any trails/walks and plantings. Along roadways, this area helps to increase visibility for drivers at road edges and corners. They are flexible-use spaces offering potential driver and pedestrian amenities, such as street trees and sidewalks, that are dependent upon context conditions. Ten feet was determined an appropriate buffer width, however, this width is able to change with the unique context conditions.

SUGGESTED SEED MIX COMPOSITION:

NO-MOW, ECO-LAWN SEED MIX

The mix shall include, but is not limited to, an equal blend of the following species and be applied at a rate of 220 PLS (Pure Live Seed) pounds per acre.

Shoreline Creeping Red Fescue exhibits both salt tolerance and Rapid Blight resistance, as well as excellent heat and drought tolerance.

Class One Creeping Red Fescue thrives in both sun and shade with little to no irrigation and performs well in high heat and under reduced maintenance.

SR3150 Hard Fescue is among the most heat and drought tolerant of all fine fescues and requires minimal water and fertilization in both sun and shade.

Quatro Sheep Fescue is low growing and establishes rapidly from seed, yet it's one of the slowest growing grasses available. It also exhibits excellent drought and heat tolerance.

Carson Chewings Fescue makes a very high quality turf and is the most competitive of the fine fescues helping to crowd out weeds.

Eco-lawn natural appearance on slope.

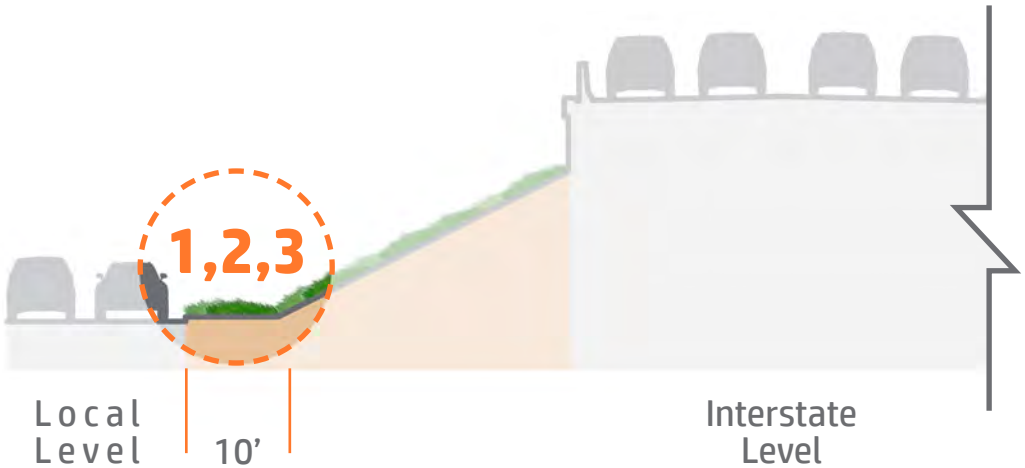
Eco-lawn mown versus natural appearance.

TYPOLOGY 2: 10’ BUFFER-ZONES

Standard Condition: Buffer-Zone Lining Local Level Roadway Edges

Potential Condition: Street Tree at Local Level as part of the Buffer-Zone

Potential Condition: Street Tree and Pedestrian Walk at Local Level as part of the Buffer-Zone



Note: The Buffer-Zones also occur in the areas between side slopes and property lines, as well as along the edge of any trails/walks.

10’ Mown-Buffer-Zone Scenarios

TYPOLOGY 3: SIDE SLOPE PLANTINGS

Design Intent

Plants, rather than extended infrastructure, can be used for erosion control and soil stabilization along the interstate embankments as a cost-effective and less-infrastructure dependent option.

Design Concept: 'The Uplands'

Species of the upland plant community provide a root system for erosion control measures and adapt to the constructed terrain.

Benefits

- Unifies the east, west and south legs through repetition of plant massing and grouping
- Addresses erosion control concerns with an aesthetic solution
- Minimizes costs associate with mowing and maintenance
- Supports native flora and fauna

SUGGESTED SEED MIX COMPOSITION:

SLOPE STABILIZATION SEED MIX

The seed mix shall include deep-rooted, native species suited for sloped sites and erosion control with the following composition:

Approximately 20% Permanent Grass/ Sedge Species Seed and 80% Temporary Cover Species Seed applied at a rate of approximately 60 PLS (Pure Live Seed) pounds per acre.

This planting application shall be used along the east, west and south interstate leges, in areas where steepness of grade creates erosion control concerns and locations where design can rely on the use of planted slopes rather than built structures for retention of terrain. Tree canopies CANNOT overhang the interstate level roadway.

Side Slope Plantings General Guidelines:

- Plantings (unrelated to seed mixes) should be staggered in mass and placed parallel to contours, dispersing run-off rather than concentrating water flow between plant rows.
- Species with deep and/or wide spreading roots should be incorporated for soil stabilization.
- Broadleaf species should be incorporated to help with impact dispersion of rainfall.
- Protective covering should be used to protect seed from weather and wildlife until maturation - erosion control blankets, vegetated core logs, cover crop, etc.

Cardno Native Plant Nursery
Slope Stabilization Seed Mix

Minnesota Dept. of Transportation
Slope planting - forbs & grasses.

Minnesota Dept. of Transportation
Slope planting - forbs and grasses.

TYPOLOGY 3: SIDE SLOPE PLANTINGS

Suggested Species Summary

The North Split Aesthetic Design Guidelines document provides suggestions for expanded plant palettes, some outside of standard INDOT and KIB plantings, that respond to the design concept of each typology. This is applicable to the suggested mixes and species for all typologies.

SUGGESTED PLANT SPECIES:

Native Grasses
Plugs, Planted 6" On-Center
- Sideoats Grama (*Bouteloua curtipendula*)
- Switchgrass (*Panicum virgatum*)
- Little Bluestem (*Schizachyrium scoparium*)
- Prairie Dropseed (*Sporobolus heterolepis*)

Native Forbs
Plugs, Planted 6" On-Center
- Butterfly Weed (*Asclepias tuberosa*)
- Purple Coneflower (*Echinacea purpurea*)
- New England Aster (*Symphyotrichum novae-angliae*)
- Yellow Coneflower (*Ratibida pinnata*)

Small Evergreen Shrubs
Minimum 3-Gallon Container, Planted 4' On-Center
- Juniper (*Juniperus virginiana* 'Grey Owl')

Small, Deciduous Shrubs
Minimum 3-Gallon Container, Planted 4' On-Center
- Black Chokeberry (*Aronia melanocarpa*)
- New Jersey Tea (*Ceanothus americanus*)
- Virginia Sweetspire (*Itea virginica)*
- Fragrant Sumac (*Rhus aromatica*)


Switchgrass


Little Bluestem


Prairie Dropseed


Asclepias tuberosa


Echinacea Purpurea


New England Aster


Grey Owl Juniper


Chokeberry

TYPOLOGY 3: SIDE SLOPE PLANTINGS

SUGGESTED PLANT SPECIES (continued):

Large, Deciduous Shrubs
Minimum 3-Gallon Container, Planted 8' On-Center

- Winterberry (*Ilex verticillata*)
- Smooth Sumac (*Rhus glabra*)
- Arrowwood Viburnum (*Viburnum dentatum*)

Ornamental Trees
5-6' Tall, Planted at 15' On-Center

- Serviceberry (*Amelanchier x grandiflora*)
- Redbud (*Cercis canadensis*)
- Flowering Dogwood (*Cornus florida*)
- Green Hawthorn (*Crataegus viridis*)

Shade Trees
Minimum 2" Caliper, Planted at 15' On-Center
See "Shade Trees" under *Typology 4: Screen Plantings* section for Appropriate Species


Itea virginica


Fragrant Sumac


Winterberry


Smooth Sumac


Arrowwood Viburnum


Serviceberry

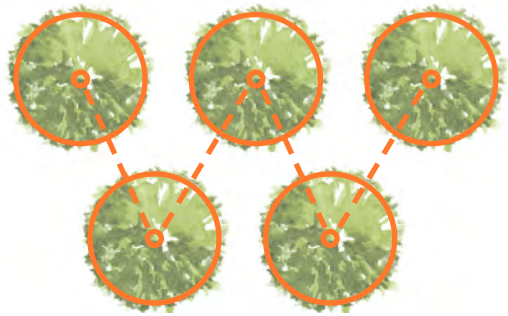

Redbud


Flowering Dogwood

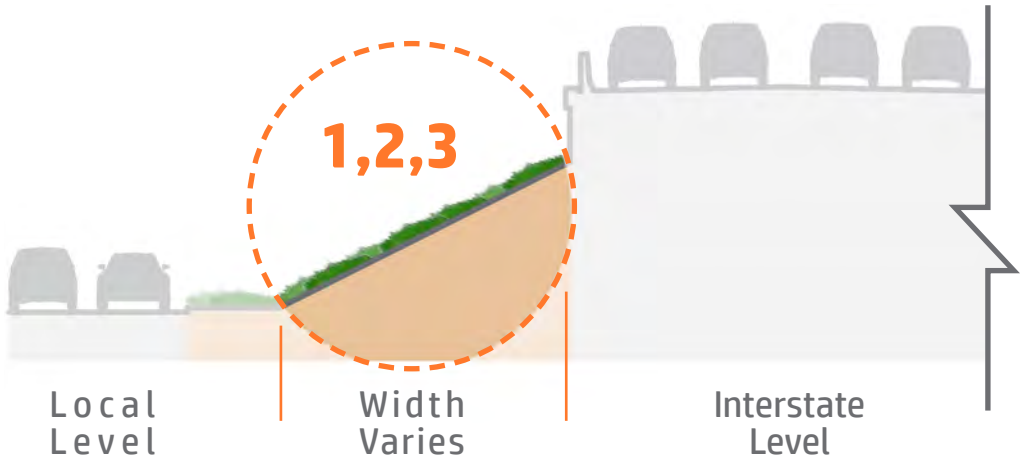

Green Hawthorn

TYPOLOGY 3: SIDE SLOPE PLANTINGS

Deep-rooted, native plants create a fibrous root system for embankment stabilization.



Staggered planting layouts for shrubs & trees assist with erosion control.



Side Slope Plantings Scenarios

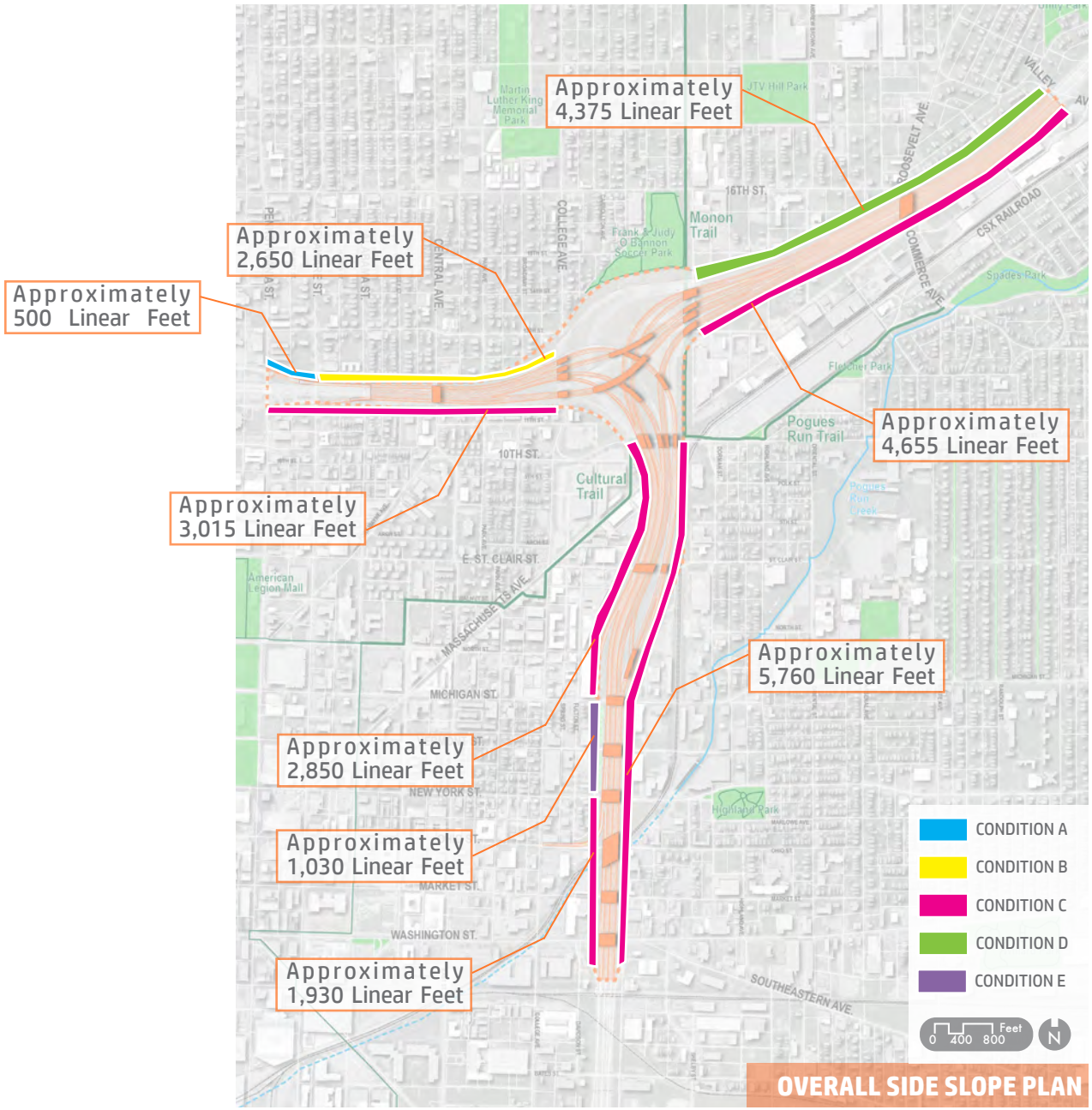
TYPOLOGY 3: SIDE SLOPE PLANTINGS

Interstate Street View Looking North (Approaching I-70 East Leg) of Slope Plantings

TYPOLOGY 3: TYPICAL SIDE SLOPE CONDITIONS

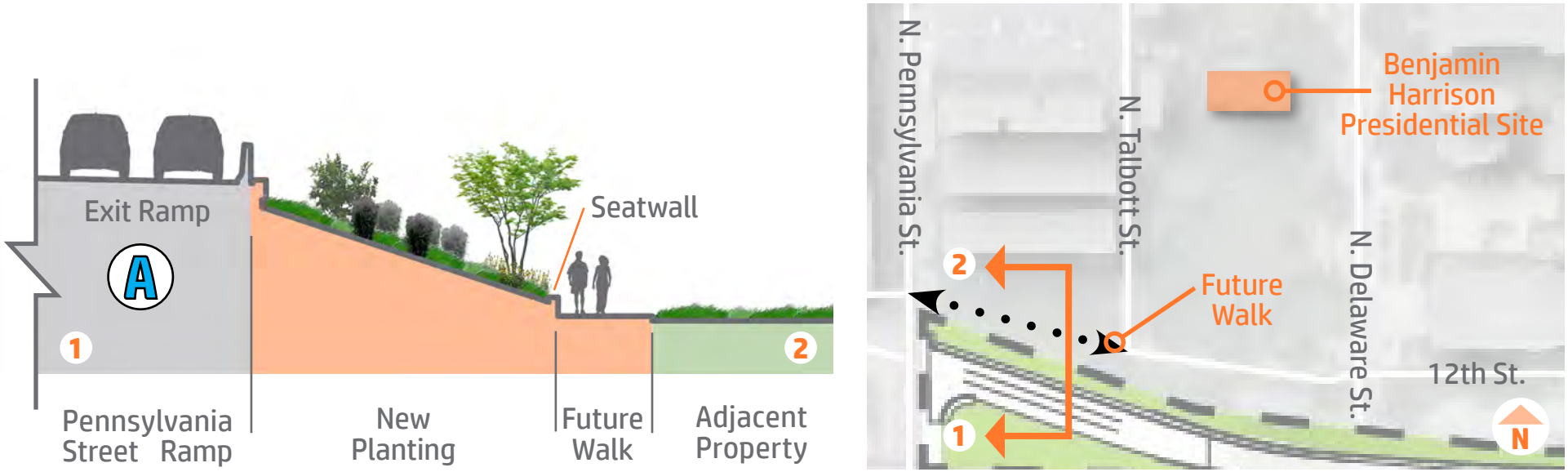
Characteristics of Slopes

- Integrate landform design, grading, drainage and detention basin configuration with landscaping of interchange
  - Grade embankments to slopes that are safely maintainable and eliminate rip-rap
  - Configure ditches, swales, and detention basins to appear natural



OVERALL SIDE SLOPE PLAN

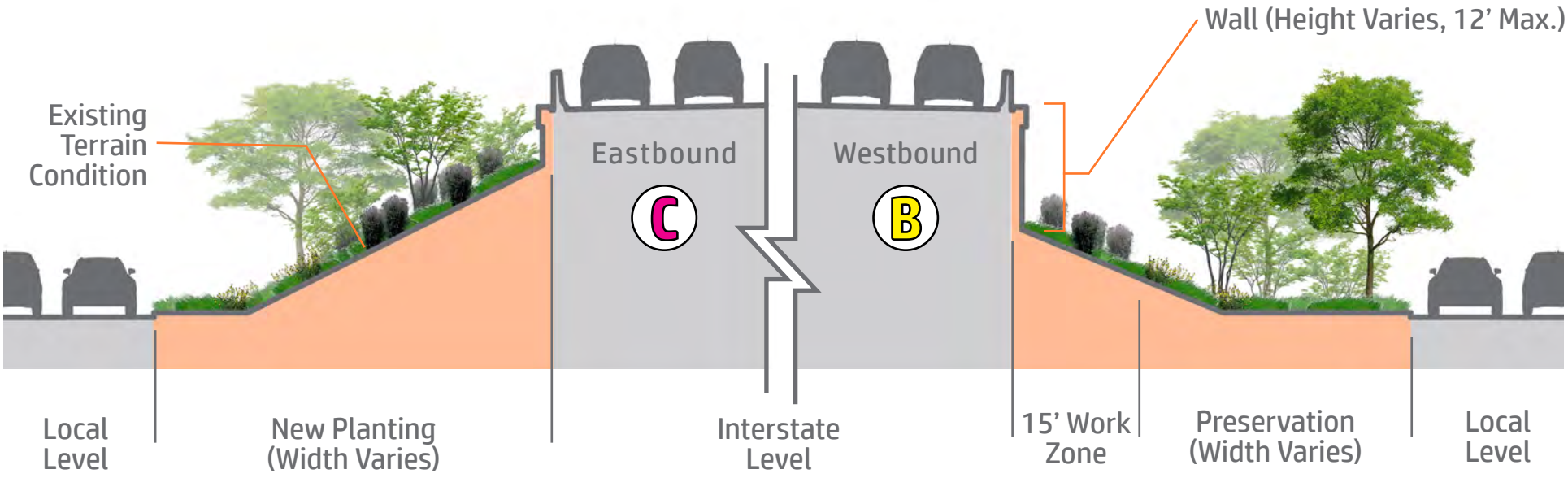
TYPOLOGY 3, CONDITION A

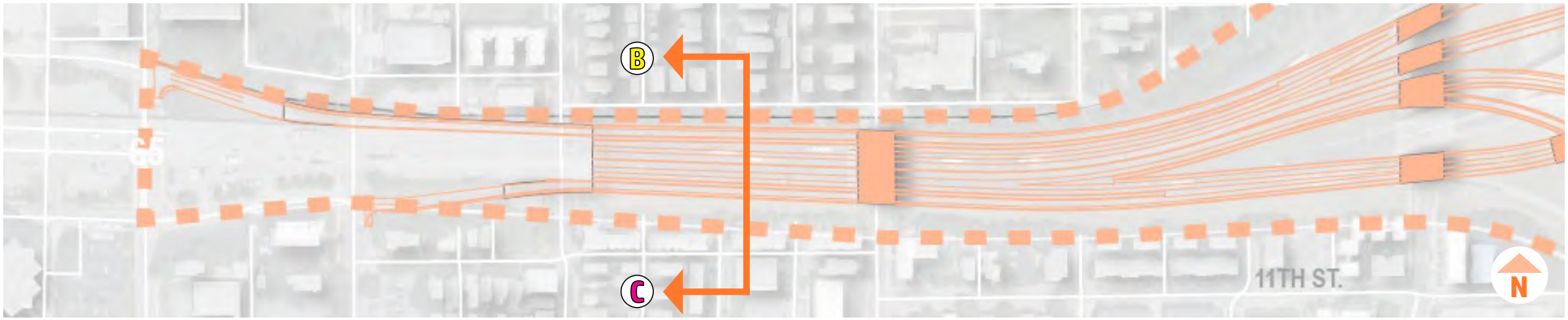


West Leg Pennsylvania Street Ramp Side Slope Conditions (Not to Scale)

*Note: Construction of the future walk will be completed by others, outside of the project Right of Way, and its distance in relation to the seatwall is subject to change.

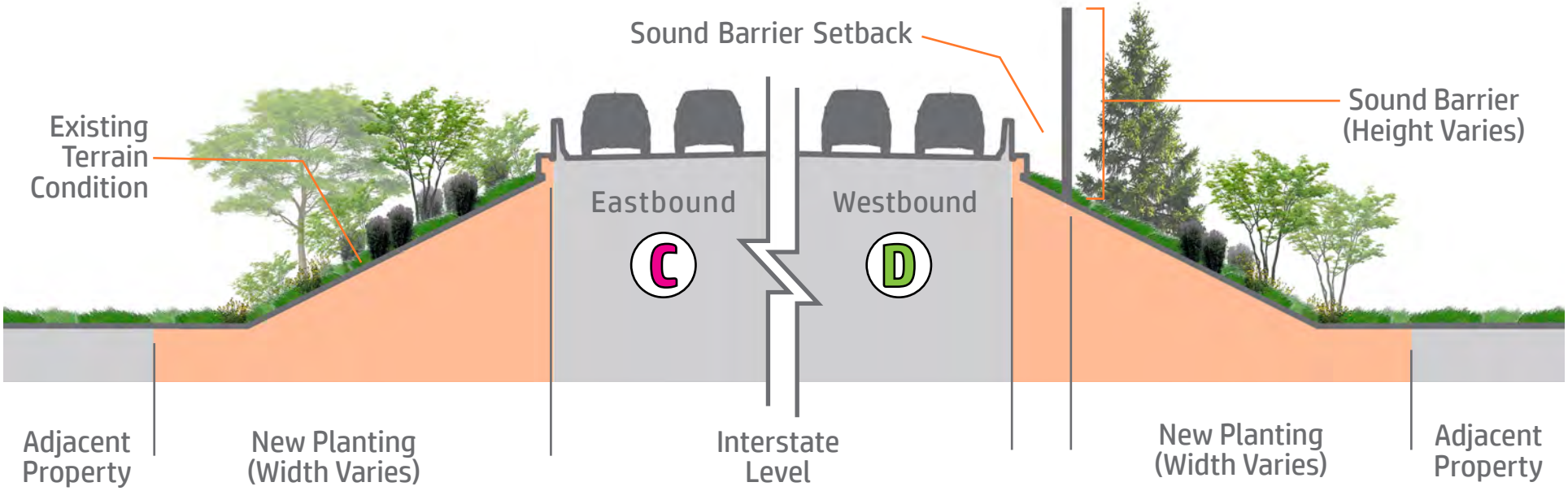
TYPOLOGY 3, CONDITIONS C & B

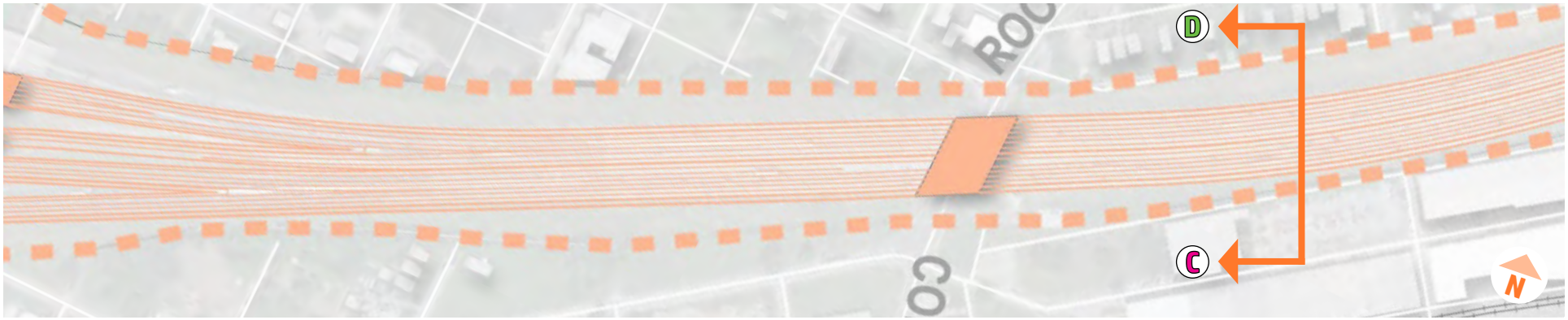




West Leg Slope Conditions (Not to Scale)

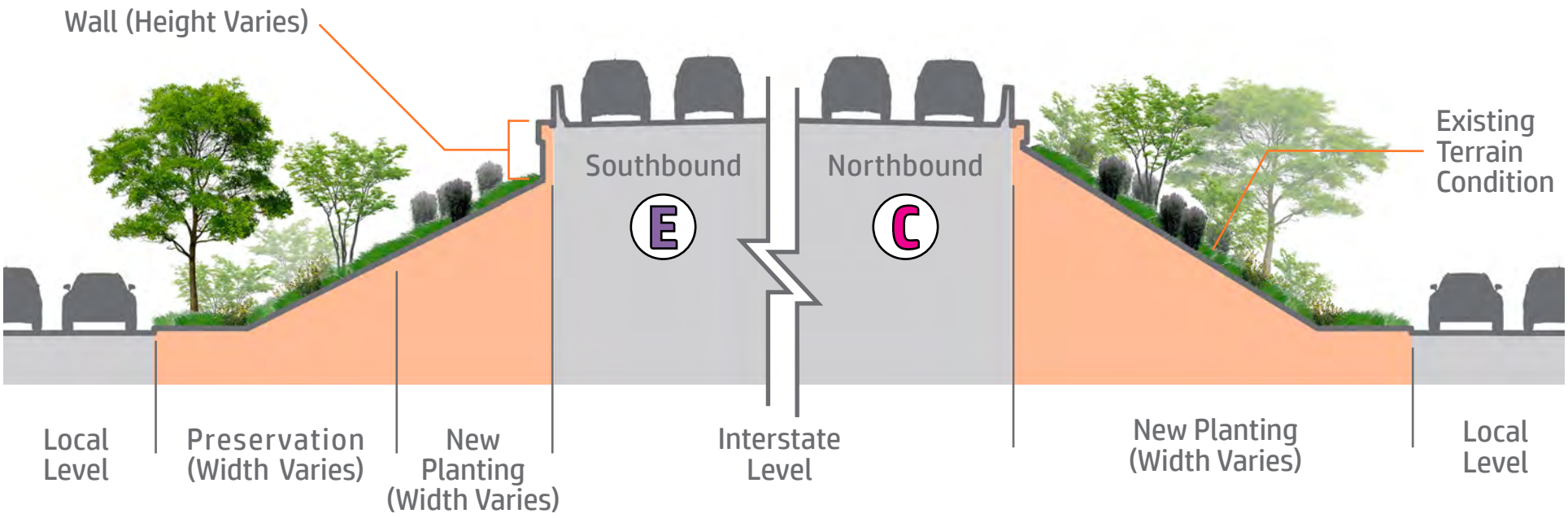
TYPOLOGY 3, CONDITIONS C & D

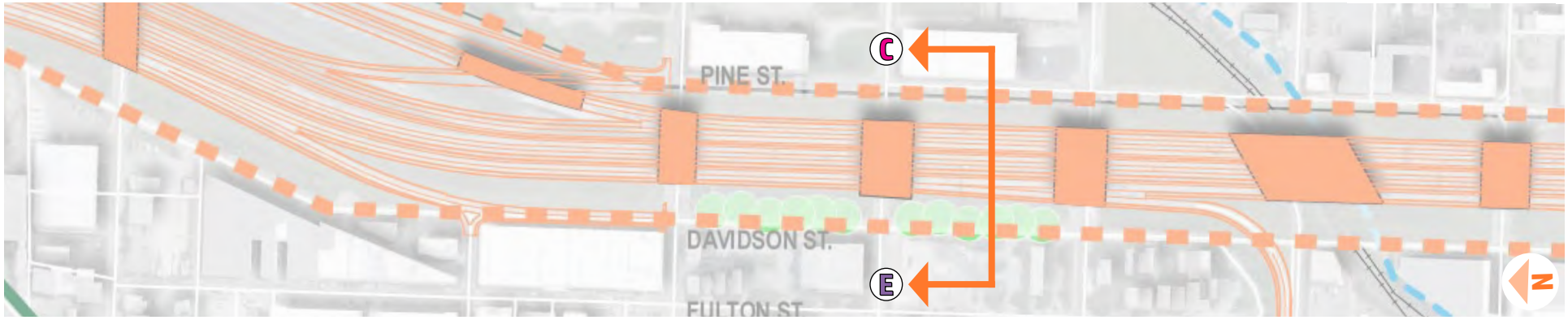




East Leg Slope Conditions (Not to Scale)

TYPOLOGY 3, CONDITION E & C





South Leg Slope Conditions (Not to Scale)

TYPOLOGY 4: SCREEN PLANTINGS

Design Intent

Plants can minimize and soften the appearance of sound barriers.

Design Concept: 'The Woodlands'

The massing of evergreen and deciduous plants at the base of sound barriers can create a natural backdrop that mimics a woodland edge transition, when viewed from adjacent properties.

Benefits:

- Reduces the visual prominence of sound barriers
- Creates a visually interesting buffer and soft edge
- Offers a natural backdrop to neighboring communities

Screen Plantings General Design Guidelines:

- Plantings to screen should be used to mitigate scale between the interstate and neighborhoods.
- Screens need to have a vertical emphasis to provide maximum screening coverage.
- Arrangement should provide pedestrian and vehicular overhead along walks, trails, and roadways - at local street fronts.
- Plantings should include a 2:1 ratio of evergreen to deciduous species, offering year-round screening.
- Species variation is important but may require focus on deciduous varieties that are columnar in form for plants to fit the allotted space.
- Plantings will be placed along side slopes, at the base of sound barriers.

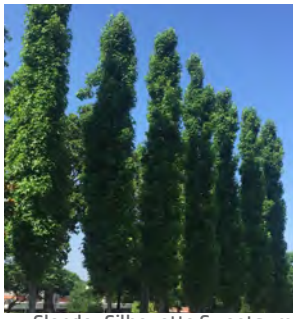
SUGGESTED SPECIES:

Large, Deciduous Shrubs
See "Large, Deciduous Shrubs" under the *Typology 3: Side Slope Plantings* section for Appropriate Species

Ornamental Trees
See "Ornamental Trees" under the *Typology 3: Side Slope Plantings* section for Appropriate Species

Columnar Trees (applicable to narrow locations)
Minimum 2" Caliper, Planted at 15' On-Center

- Sweetgum (*Liquidambar styraciflua* 'Slender Silhouette')
- Pin Oak (*Quercus palustris 'Green Pillar'*)
- Freeman Maple (*Acer x freemanii 'Armstrong'*)
- European Hornbeam (*Carpinus betulus 'Fastigiata'*)


Slender Silhouette Sweetgum


Green Pillar Pin Oak


Freeman Maple


Upright European Hornbeam

TYPOLOGY 4: SCREEN PLANTINGS

SUGGESTED SPECIES (continued):

Shade Trees (applicable along local street front)
Minimum 2" Caliper, Planted at 15' On-Center

- Red Maple (*Acer rubrum*)
- Honey Locust (*Gleditsia triacanthos var. inermis*)
- Red Oak (*Quercus rubra*)
- American Elm (*Ulmus americana* 'Princeton')

Shade Trees Installation Guidelines

- Trees should be placed so that canopies do not overhang the interstate level.
- Trees should be placed to grow together upon maturation.


Red Maple


Red Oak


Honeylocust


American Elm

Evergreen Trees
Minimum 6' Tall, Ball and Burlap Planted at 10' On-Center

- Arborvitae (*Thuja* 'Green Giant')
- Red Cedar (Juniperus virginiana 'Burkii')
- Red Cedar (Juniperus virginiana 'Canaertii')

Evergreen Trees Installation Guidelines

- Trees should be placed so bases do not overhang the buffer-zone.
- Trees should be placed to grow together upon maturation.

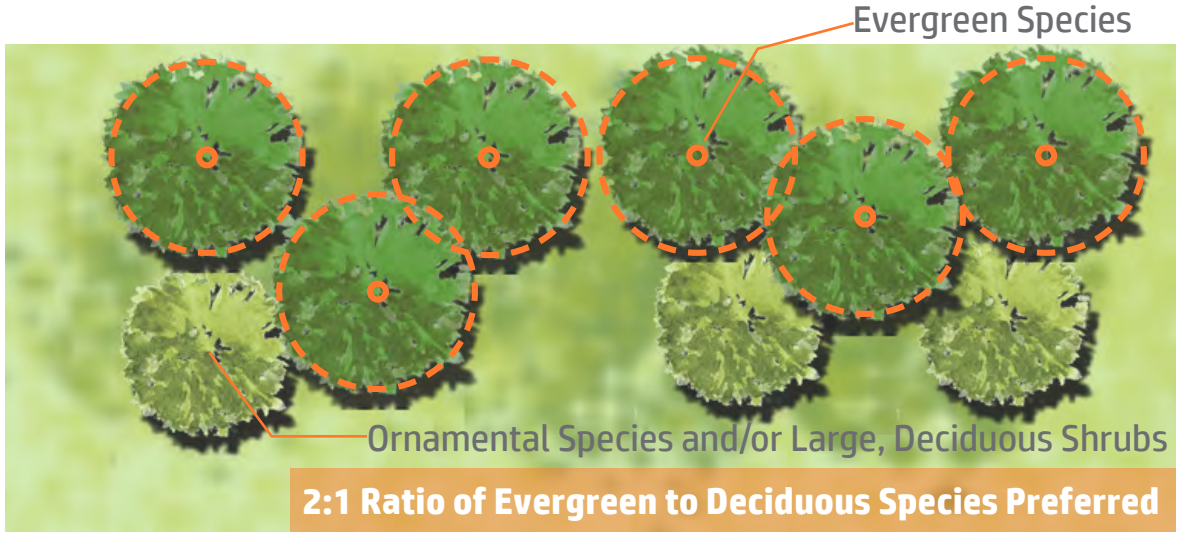

Green Giant Arborvitae


Burkii Eastern Red Cedar


Canaertii Eastern Red Cedar

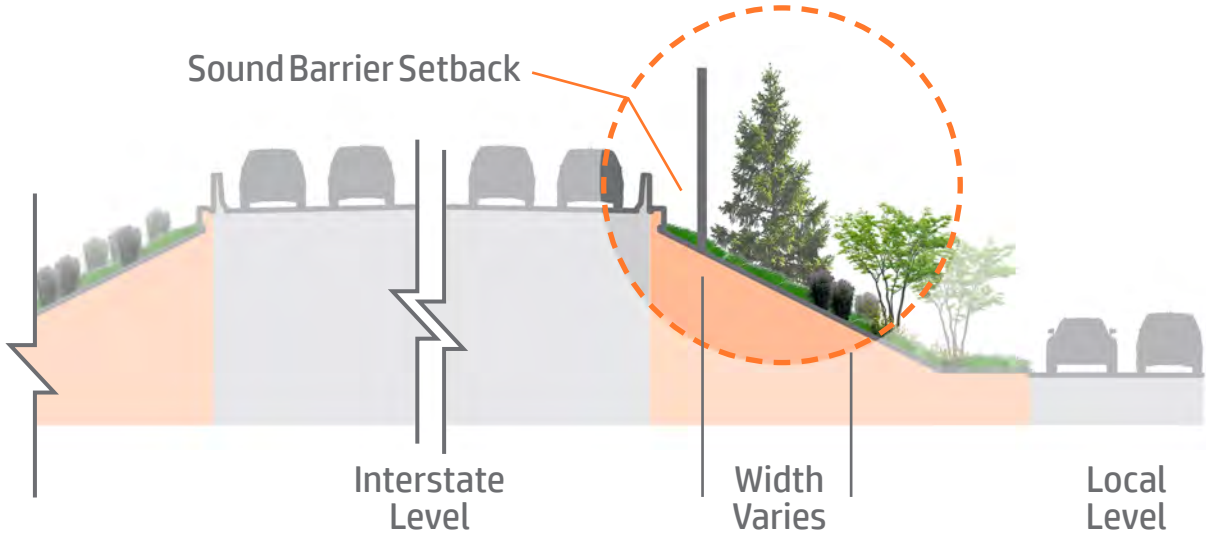
TYPOLOGY 4: SCREEN PLANTINGS

Spacing between screen tree plantings to be a min. of 10'. Plants should be staggered in placement, as seen in diagram on page 54.



2:1 Ratio of Evergreen to Deciduous Species Preferred

Trees (particularly evergreen species) shall be placed so that they grow together to form a "green wall". A 2:1 ratio of evergreen to deciduous species is needed in order to achieve this effect as well as a maximum spacing of 10' on-center. Any location where a sound barrier is implemented, a screen will be used to camouflage and soften the appearance.



Screen Plantings with Sound Barrier

TYPOLOGY 5: INTERCHANGE PLANTINGS

Design Intent

Plants can give purpose to expansive spaces in a manner that is low in cost and required maintenance, but high in visual quality. Over time, the maturation of trees in this area will create a more dense canopy that will begin to take on characteristics of some stakeholder desires to create an "urban forest." This is essentially the heavy massing of trees to create an urban vegetative treatment style.

Design Concept: 'The Prairie's Edge'

The seeding and planting of large, open areas with mixes of native grasses, sedges and forbs, as well as a variety of tree species, responds to the public's desire for a natural-feel landscape juxtaposed against the urban setting.

SUGGESTED SEED MIX COMPOSITION:

PRAIRIE SEED MIX

This planting application shall be used in areas within the interchange.

The mix shall include native prairie grasses, sedges and floweirng species that provide color throughout the growing season and act as food sources for birds, butterflies and insects with the following composition:

Approximately 20% Permanent Grass/Sedge Species Seed, 10% Forb Species Seed and 70% Temporary Cover Species Seed applied at a rate of approximately 40 PLS (Pure Live Seed) pounds per acre.

NATIVE WILDFLOWER SEED MIX

This planting application shall be used to supplement the *Prairie Seed Mix*, offering more color and diversity in blooming species, particularly during prairie establishment.

It shall include quick-blooming, native wildflowers that are beneficial to native bees and pollinators with the following composition:

100% Flowering Forb Species Seed applied at a rate of approximately 5 PLS (Pure Live Seed) pounds per acre.

Seed Mix Installation Guide

- Protective covering shall be used to protect seed from weather and wildlife.
- Installation recommendations from the supplier shall be followed.

Prairie Mix in bloom.

Native Wildflower Seed Mix.

Prairie planting early to late summer.

Prairie planting late summer to early fall.

TYPOLOGY 5:
INTERCHANGE PLANTINGS

Benefits

- Softens the road infrastructure with large, plant massing
- Unifies the interchange with the legs in repetition of seed species
- Minimizes costs associated with mowing and maintenance
- Supports native flora and fauna

SUGGESTED SPECIES:

Shade Trees (applicable to the interchange 'urban forest')
Minimum 2" Caliper, Planted at 15' On-Center

- Tulip Tree (*Lirodendron Tulipifera*)
- American Beech (*Fagus grandifolia*)
- Black Gum (*Nyssa sylvatica*)
- American Linden (*Tilia americana*)
- Sugar Maple (*Acer saccharum*)
- Red Maple (*Acer rubrum*)
- Honey Locust (*Gleditsia triacanthos var. inermis*)
- Red Oak (*Quercus rubra*)
- American Elm (*Ulmus americana* 'Princeton')

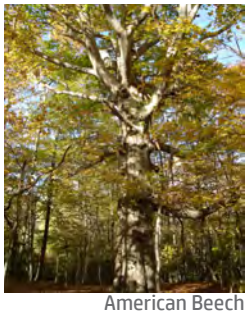
Ornamental Trees (grouped along the edges of the No-Tree-Buffer-Zones, as shown on the next two pages)
5-6' Tall, Planted at 15' On-Center

- Serviceberry (*Amelanchier x grandiflora*)
- Redbud (*Cercis canadensis*)
- Flowering Dogwood (*Cornus florida*)
- Green Hawthorn (*Crataegus viridis*)

Interchange Tree Installation Guidelines

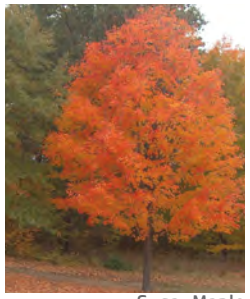
- Trees should be planted in a grid pattern at a maximum of 15' o.c.
- Trees with messier seeds/fruits are planted further within the interchange.


Tulip Tree

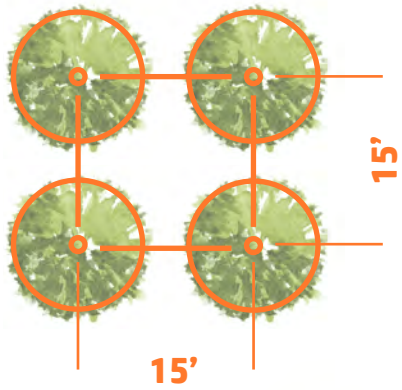

American Beech


Black Gum

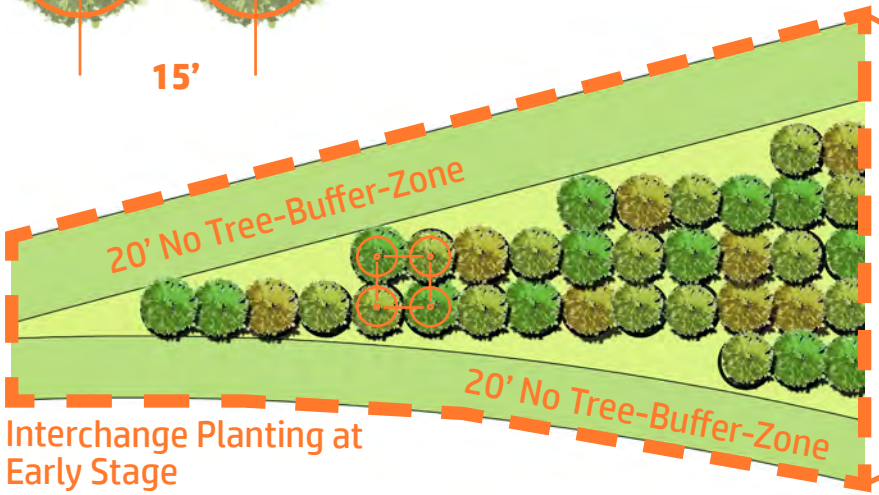

American Linden


Sugar Maple

TYPOLOGY 5: INTERCHANGE PLANTINGS, CANOPY TREES



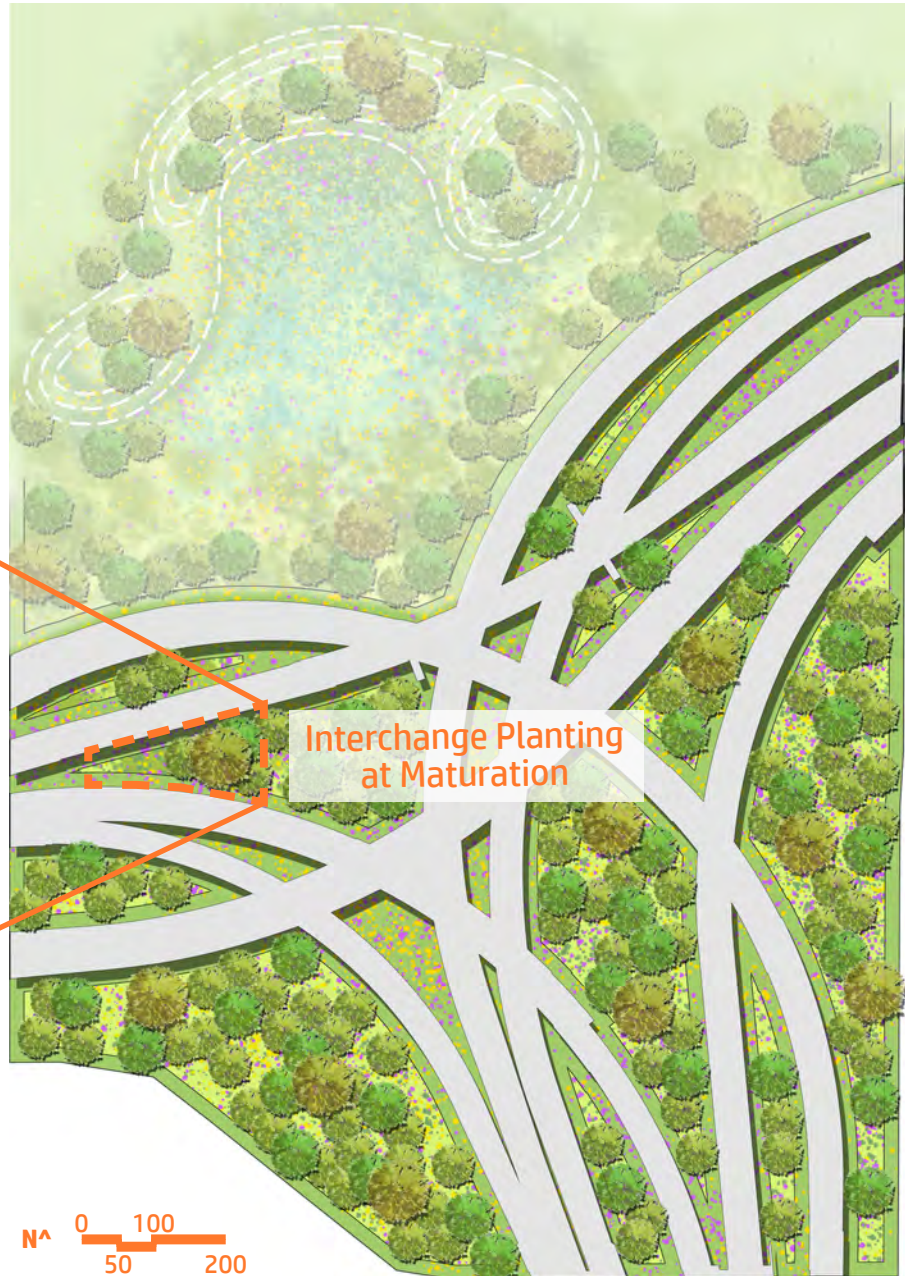
The illustrations to the left and below show the use of a fractured grid pattern for the placement of trees within the interchange.



Interchange Planting at Early Stage

The approach to planting such a space shall be one of restorative quality - planting large quantities in close proximity - where survival of the fittest tree specimen will result in a naturalistic appearance. The interchange planting will follow Keep Indianapolis Beautiful's (KIB) planting standard of 15' on-center maximum spacing.

Canopy Tree Grid Arrangement



TYPOLOGY 5: INTERCHANGE PLANTINGS, CANOPY TREES

The 20' No-Tree-Buffer-Zone within the interchange is a similar concept to *Typology 2: 10' Buffer-Zone* seen along the local roadways. This 20' No-Tree-Buffer Zone (occuring along the edge of all interstate roadways) is a continuation of the chosen seed mixes that extends from the inner portion of the interchange under any interchange bridges. This zone is void of planted trees, and any interior trees shall be planted so that mature canopy widths DO NOT impede the interstate roadway.

Aerial View Looking Towards Downtown of the Interchange Plantings

TYPOLOGY 6: DETENTION BASIN PLANTINGS

Design Intent

A heavily planted area for the purpose of stormwater detention - a dry extended detention basin - is favored over a traditional retention pond for benefits it offers the urban landscape.

Design Concept: 'The Wetlands'

A detention basin to resemble that of a wetland environment will provide more aesthetic value to the site, minimize the amount of standing water and allow even infiltration.

Benefits

- Filtrates pollutants from storm water runoff
- Allows for infiltration of otherwise standing water
- Designed alternative to traditional systems, offering aesthetic value
- Blends "natural" and urban environments
- Supports local flora and fauna

Seed Mix Composition:

STORMWATER SEED MIX

This planting application shall be used within the interchange for vegetated swales and in lieu of a retention pond.

The seed mix must tolerate highly fluctuating water levels and poor water quality associated with urban stormwater runoff with the following composition:

Approximately 10% Permanent Grass/Sedge Species Seed, 5% Forb Species Seed and 85% Temporary Cover Species Seed applied at a rate of approximately 35 PLS (Pure Live Seed) pounds per acre.

PRAIRIE SEED MIX

See *Typology 5: Interchange Plantings* section for Appropriate Seed Mix

The *Prairie Seed Mix* can be incorporated with the *Stormwater Seed Mix* in the upper third of basins that experience long, dry periods.

Detention Basin General Design Guidelines:

- Basin design should conform to regulations set by INDOT and local stormwater ordinances (IDEM Storm Water Quality Manual).
- Construct of basins should allow for the slow infiltration of water, with standing water persisting for no less than 24 hours and no longer than 72.
- Basins should be graded in a way that resembles a natural pond bed, having curvilinear and undulating forms.
- Bio-retention areas should be included at inlets/outlets of basins.
- Basin size should be dictated by the watershed coverage of collected runoff.
- Overall shape and side slopes should follow a 4:1,or flatter, ratio in construct.

Economy Prairie Seed Mix - Yellow Coneflower

Stormwater Seed Mix - Crested Oval Sedge

Naturalized Stormwater Detention Basin

TYPOLOGY 6: DETENTION BASIN PLANTINGS

SUGGESTED SPECIES:

Large, Deciduous Shrubs
Minimum 3-Gallon Container, Planted 8' On-Center

- Sandbar Willow *(Salix interior)*
- Gray Dogwood (*Cornus racemosa*)
- Spicebush *(Lindera benzoin)*
- Elderberry *(Sambucus canadensis)*

Shade Trees
Minimum 2" Caliper, Planted at 15' On-Center

- Bald Cypress (*Taxodium distichum var. distichum*)
- Swamp White Oak *(Quercus bicolor)*
- Black Willow *(Salix nigra)*
- Pin Oak *(Quercus palustris)*


Sandbar Willow


Gray Dogwood


Spicebush


Elderberry

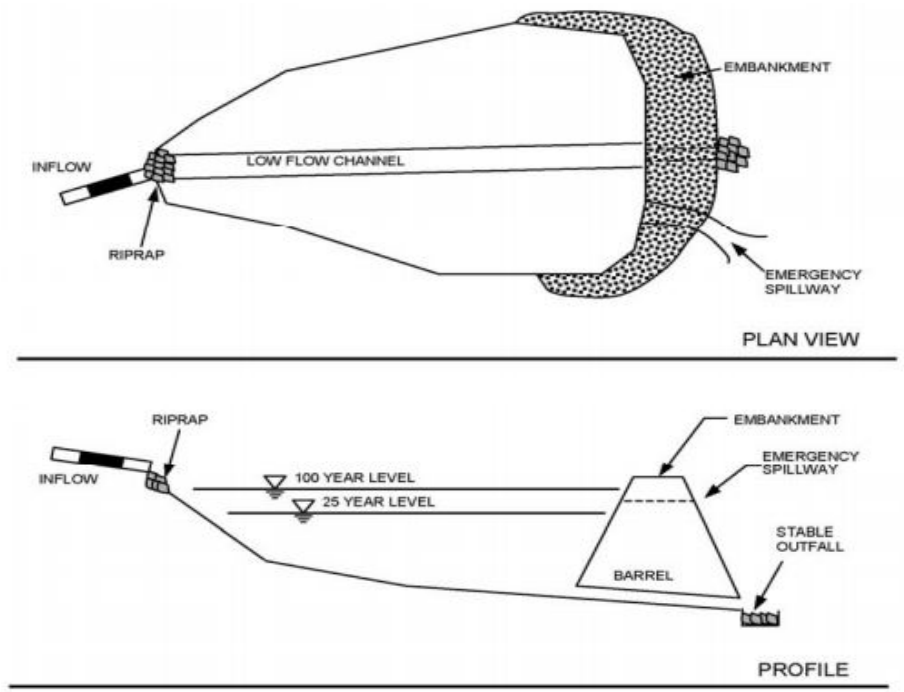

Bald Cypress


Swamp White Oak


Black Willow


Pin Oak

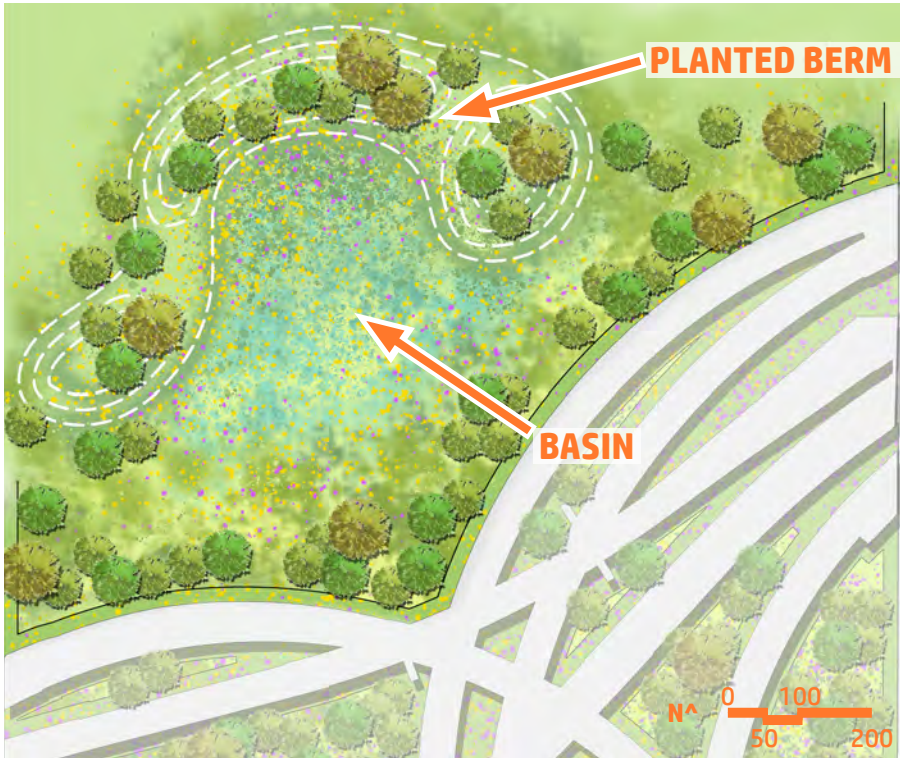
TYPOLOGY 7: DETENTION BASIN PLANTINGS



Source: Georgia Stormwater Managment Manual, 2001

The conceptual details above show an overview of how such a basin would be arranged. The area north of the interchange - space gained through the shrinking footprint of the new design - provides a perfect location for this to occur. A sculpted berm can provide aesthetic and functional value in the separation of the basin from public activities of the Frank & Judy O'Bannon Soccer Park.

Detention Basin Conceptual Design



University of Illinois
Planted Driy-Detention Basin