



AESTHETIC GUIDELINES

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MOBILITY35 AESTHETIC GUIDELINES

The Mobility35 Aesthetic Guidelines identify aesthetic concepts and solutions through treatments to structural and roadside components along the I-35 corridor from Georgetown to San Marcos. The Guidelines will be utilized to facilitate communication amongst the public, designers, developers and contractors. The aim of this document is to support a clear understanding and common language regarding aesthetic treatments to the corridor as the project(s) are designed and constructed.

The planned transportation improvements vary in complexity throughout the corridor. Some aesthetic enhancements are corridor wide. Other enhancements are indicative of the six cities along I-35. In four out of the six cities, existing intersection or interchange aesthetics are the basis for planned projects:

- Georgetown - US 29
- Round Rock - SH 45N
- Buda - Main Street
- Kyle - Center Street

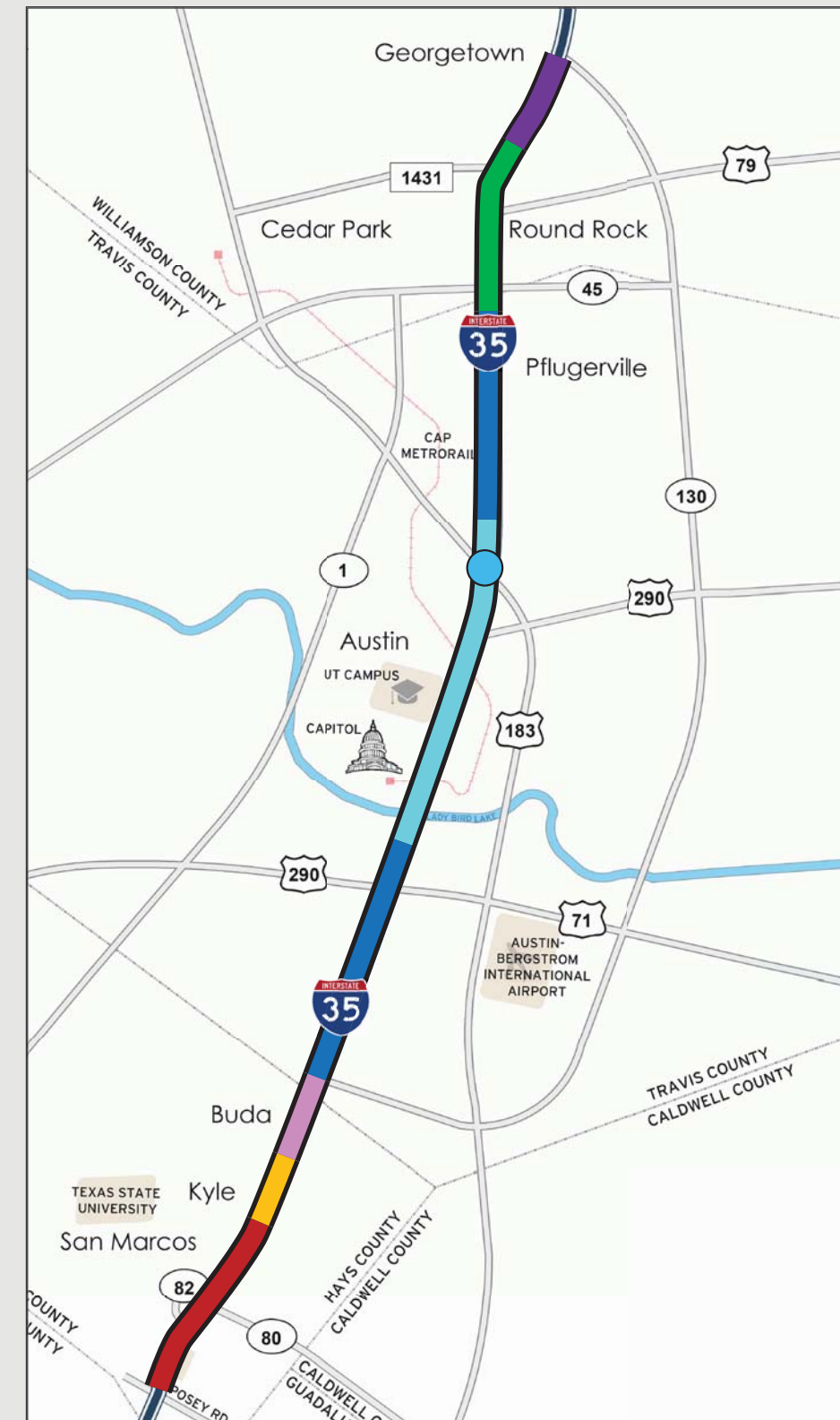
In Austin, the Ben White Boulevard interchange is the basis for the majority of the aesthetics. There are two unique areas within Austin - US 183 and Central Austin that will have separate aesthetics. Any improvements to the US 183 interchange shall complement the existing aesthetics. A separate public process determined aesthetic enhancements for Central Austin. The City of San Marcos is in the process of improving their I-35 infrastructure aesthetics as evident at Aquarena Springs Drive and Yarrington Bridge Road. This document is intended to serve as a communication tool with city stakeholders.

Photos and details of the existing or complementary treatments are provided within each segment of this document.

GENERAL AESTHETIC CONSIDERATIONS

- Aesthetic enhancements shall not negatively affect the structural integrity of any component.
- All aesthetic enhancements shall not compromise the safety of facility motorists, pedestrian, and bicyclists.
- Aesthetics will be seen from a variety of vehicular speeds, elevations and directions. The aesthetics should employ scale, level of detail, depth of reveal/relief and color befit to those conditions in which the motorists, pedestrians, bicyclists will be viewing them.

PROJECT LIMITS





I. CORRIDOR WIDE AESTHETICS (Pgs 1-7)

- Noise Walls
- Illumination
- Bicycle, Pedestrian and Shared Use Path Facilities
- Tree Protection
- Landscape
- Irrigation

- Retaining and Abutment Walls
- Bridge Railing
- Ornamental Trellis at Bridge Rail
- Hardscape
- Existing Aesthetics to Remain
- Illumination
- Landscape & Irrigation

II. KEY MAP (Pg 8)

III. GEORGETOWN (Pgs 9-15)

- Bridge Bents
- Bridge Details
- Bridge Beams
- Retaining and Abutment Walls
- Safety Barriers
- Hardscape

V. BUDA (Pgs 43-48)

- Bridge Bents
- Bridge Beams
- Retaining and Abutment Walls
- Safety Barriers
- Hardscape

III. ROUND ROCK (Pgs 16-22)

- Bridge Bents
- Bridge Beams
- Retaining Walls
- Abutment Walls
- Safety Barriers
- Hardscape

VI. KYLE (Pgs 49-55)

- Bridge Bents
- Bridge Beams
- Retaining and Abutment Walls
- Safety Barriers

IV. AUSTIN (Pgs 23-42)

1. City of Austin (SH 45N to Rundberg Ln., Woodland Ave. to SH 45SE)

- Bridge Bents
- Bridge Beams
- Retaining and Abutment Walls
- Hardscape

2. US 183

- The construction of the US 183 direct connectors shall complement existing aesthetics.

3. CENTRAL AUSTIN (Rundberg Ln. to Woodland Ave.)

- Concept for Aesthetics
- Bridge Bents
- Intersection Treatments
- Sign Structures

VI. SAN MARCOS (Pgs 56-61)

- Bridge Bents
- Bridge Beams
- Retaining and Abutment Walls
- Safety Barriers
- Hardscape

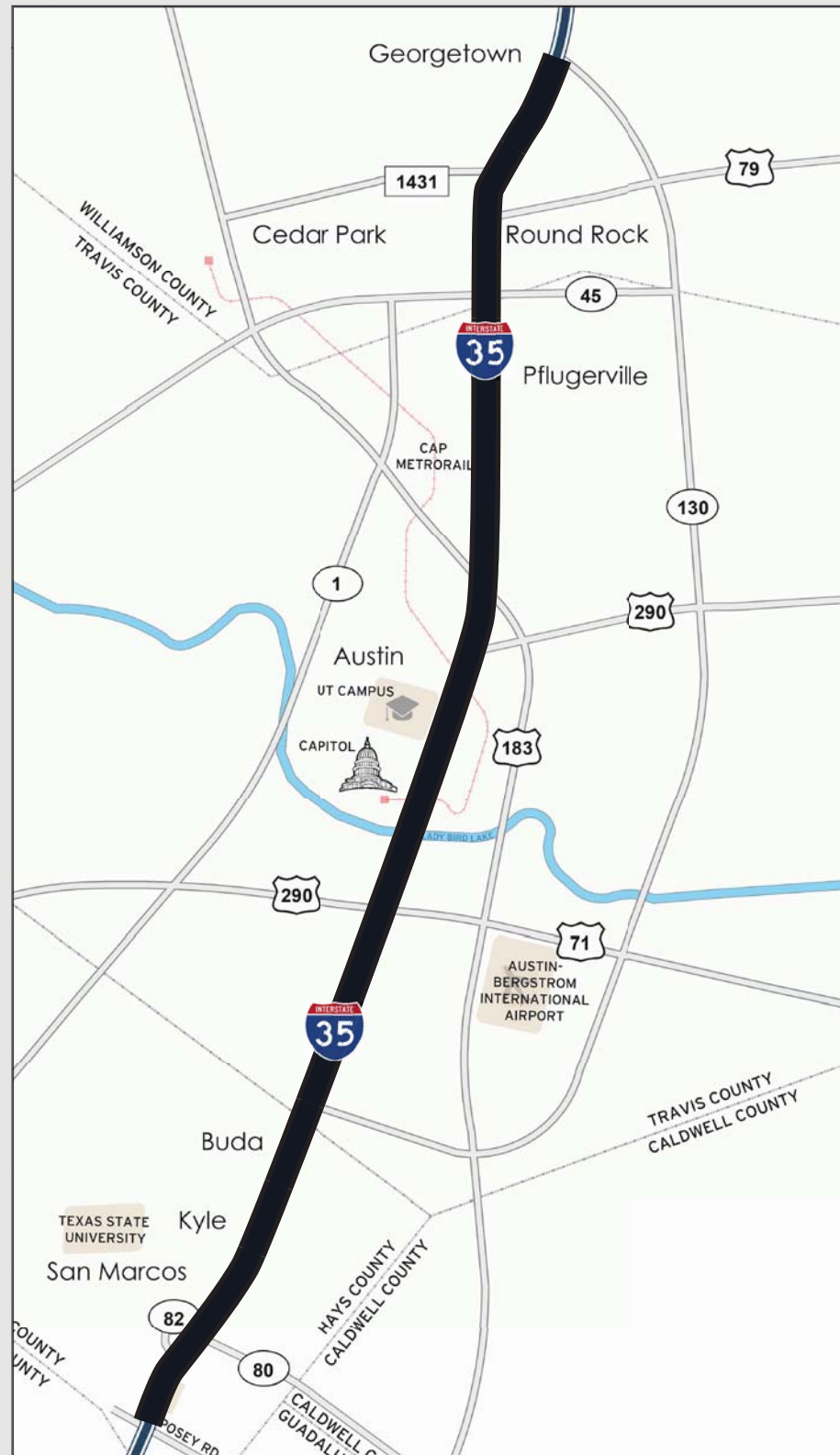


CORRIDOR WIDE AESTHETICS

The limits of the Mobility35 corridor are from SH 130 to Posey Road.

The following component aesthetics are defined in this chapter:

- NOISE WALLS
- ILLUMINATION
- BICYCLE, PEDESTRIAN AND SHARED USE PATH FACILITIES
- TREE PROTECTION
- LANDSCAPE
- IRRIGATION



NOISE WALL

Noise wall need, locations, height, and type shall be determined in accordance with the National Environmental Policy Act (NEPA).

Where noise walls and buildings within the public right-of-way are less than 10 feet apart, concrete riprap shall be placed between the two structures. This treatment shall facilitate access to utilities and reduce maintenance concerns.

Noise wall design shall consider accommodations for removable panels where conditions may not allow enough clearance for equipment access between the walls, utilities and other site structures. Any removable panels shall appear identical to permanent panels.

The noise wall design shall address sloping grades. The distance between the bottom of the wall panels and the finished grade shall be a maximum of four inches and average of two inches. Where slopes are too steep retaining walls would be required to meet these requirements, the finish grade shall meet maximum rip rap or grass slope requirements at columns. Where the wall needs to step in height, it shall step in constant intervals of four, eight or 12 inches until a level section of at least three panels is incorporated. After the level section of panels, the next slope change is addressed in constant intervals.

When walls are equal to or greater than 12 feet in height, transition panels are to be installed at the beginning and end of every noise wall as seen in Figures A.1 - A.3. The shortest transition panel shall be a minimum height of eight feet, and panels will step in intervals of four feet until the overall NEPA-required wall height is met. If the required wall height can be met with less than a four-foot increment before meeting the required height, the shortest interval shall occur in the last panel before the final wall height is achieved. For instance, a wall that needs to be 19 feet tall shall have an eight, 12 and 16 foot transition panel before the 19-foot tall wall panels are constructed.

If a dip in the ground plane occurs, an additional panel shall be added to the bottom of the wall, regardless of the wall height determined by the noise analysis at that location. This panel shall have the same formliner texture as the retaining wall aesthetic identified by the city.

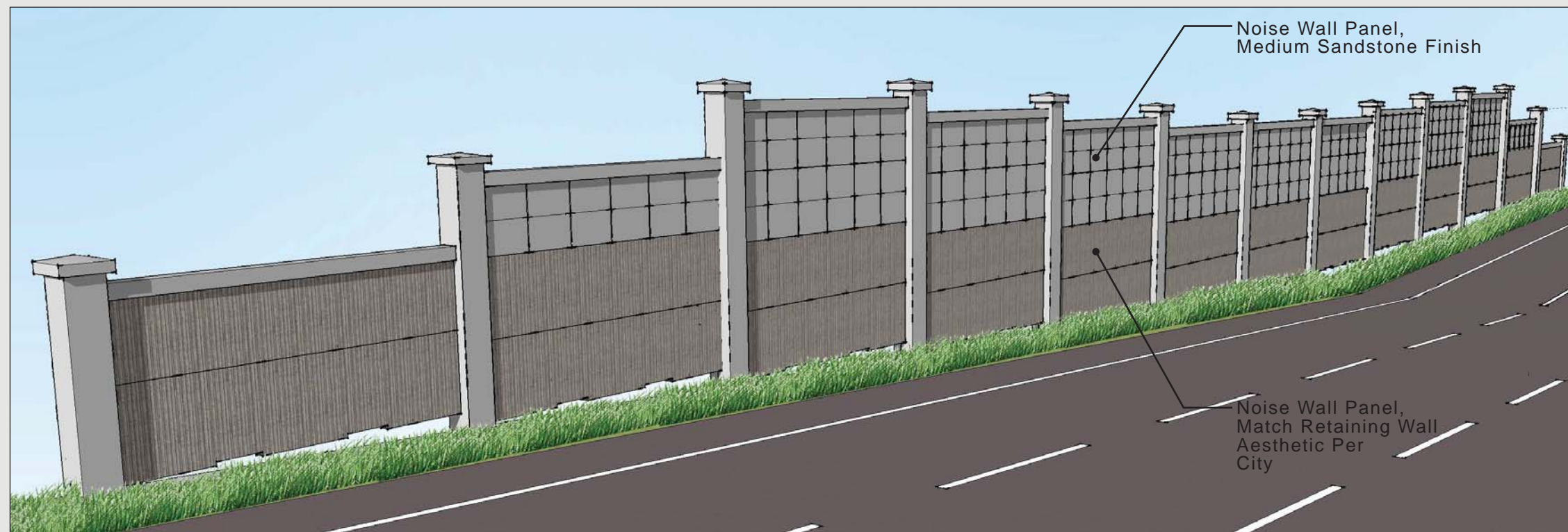


Fig A.1- Isometric View of a Noise Wall

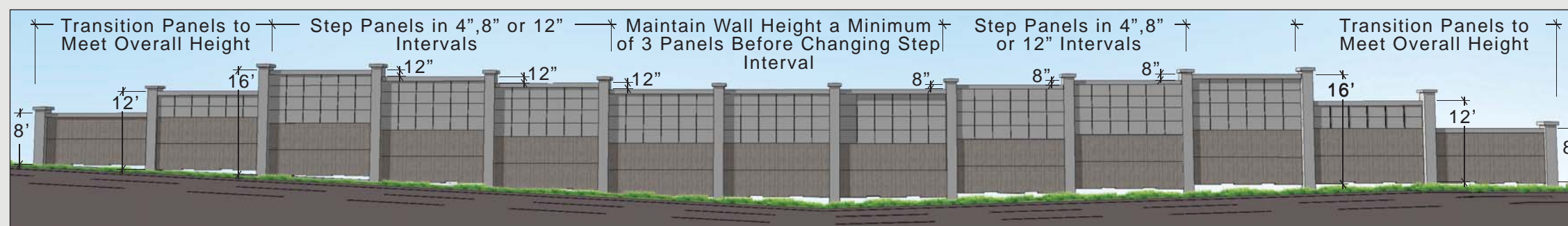


Fig A.2- Noise Wall Elevation with Transition Panels on Sloping Grades - 16' Height Wall

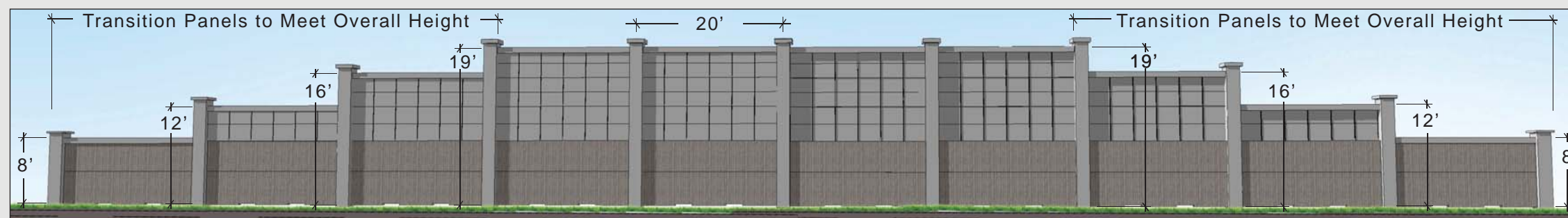


Fig A.3- Noise Wall Elevation with Transition Panels - 19' Height Wall

ILLUMINATION

Use TxDOT standards for lighting fixtures within the Mobility35 corridor. Fixture types shall remain consistent with existing lighting applications. In Figure A.7 conduit on columns, caps and slab is shown surface mounted. For new columns and caps, embed PVC conduit in concrete. Refer to TxDOT “Roadway Illumination Details” for further details.

The Central Austin corridor provides additional guidance for illumination.



Fig A.4- Single Arm Cobrahead



Fig. A.5- Double Arm Cobrahead



Fig A.6- High Mast Illumination With Optical Lighting Fixture Assembly



Fig A.7- Mounted Cobrahead Safety Lighting Fixture Under Bridge

BICYCLE, PEDESTRIAN AND SHARED USE PATH FACILITIES

Figures A.8-A.18 are representative of varying bicycle and pedestrian enhancements planned throughout the corridor. Bicycle and pedestrian facility aesthetic treatments apply to retaining walls, ADA handrails and roadway buffers, where necessary. For retaining wall applications along shared use paths, refer to Table A.1. Table A.2 specifies treatments of ADA handrails along sidewalks; refer to TxDOT standard PRD-13 for details. Where pedestrian rails are needed along shared use paths, TxDOT standard type “E” shall be used. Five treatments are proposed where a buffer or gap exists between the roadway and the shared use path. The varying treatments are defined by the distance between the two facilities and whether or not a physical barrier exists. The buffers are described as:

- less than two feet from curb (Fig A.13)
- less than two feet from traffic barrier (Fig A.14)
- two feet up to five feet from traffic barrier (Fig A.16)
- greater than five feet from curb or traffic barrier
- two feet up to five feet from curb (Fig A.15)

Corresponding hardscape figures illustrate the condition, paver laying pattern and color. Where the distance between the edge of the shared use path and back of curb or traffic barrier is greater than five feet, grass seed or sod shall be used. Refer to hardscape aesthetics for treatment under bridges in each city.

Design and construction of pedestrian and shared use paths shall be in accordance with all applicable standards. Treatments included herein are intended for aesthetic purposes only.

Curb ramps shall contain a detectable warning surface that consists of raised truncated domes per ADA and TAS requirements. Materials, width, depth and location of detectable warning surface shall be in accordance with TxDOT standards. Color shall be a dark brown or dark red in accordance with TxDOT standards.

| WALL HEIGHT | SITE CONDITIONS |
|---------------------------------|--|
| Less than 3 feet tall in Height | Smooth Concrete Finish |
| More than 3 feet tall in Height | Complement Aesthetic/Texture of Retaining Wall in Region |

Table A.1- Shared Use Path Wall Matrix

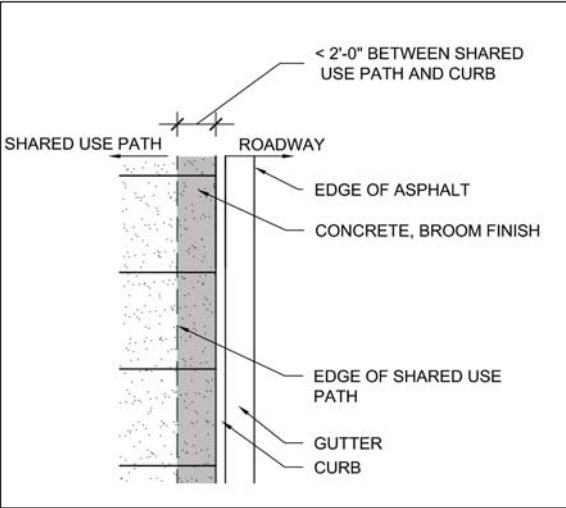


Fig A.13- Shared Use Path Roadway Buffer, Less than 2 Feet from Curb, No Traffic Barrier Present

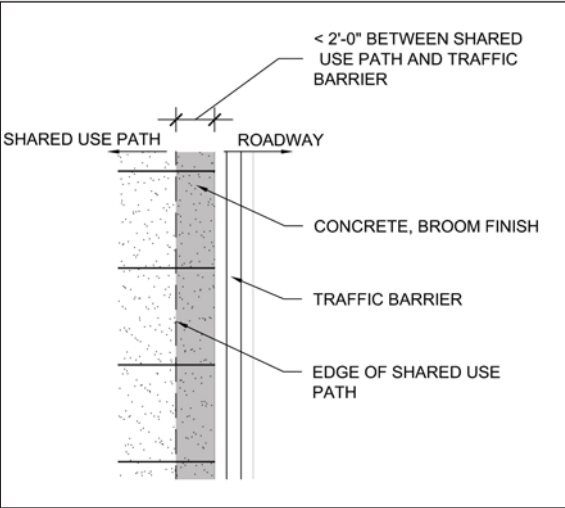


Fig A.14- Shared Use Path Roadway Buffer, Less than 2 Feet from Traffic Barrier

Table A.2- ADA Handrail Matrix

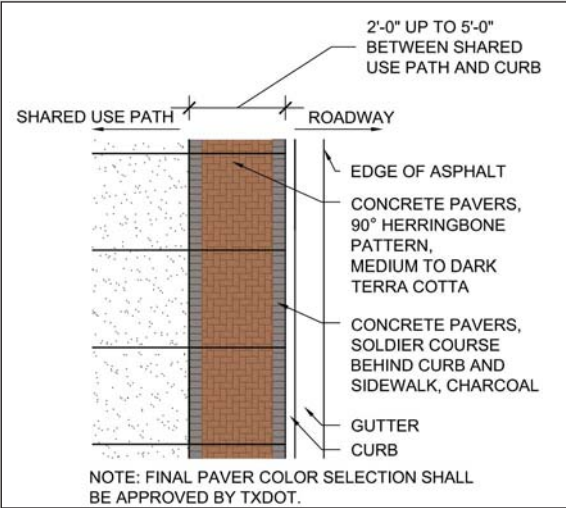


Fig A.15- Shared Use Path Roadway Buffer, 2 Feet to 5 Feet from Curb, No Traffic Barrier Present

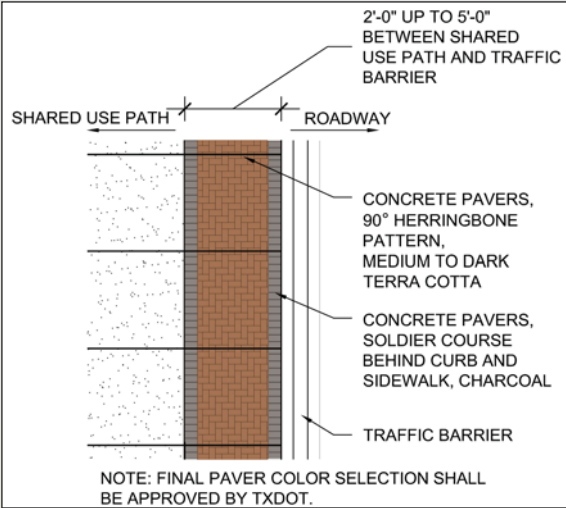


Fig A.16- Shared Use Path Roadway Buffer, 2 Feet to 5 Feet, from Traffic Barrier



Figs A.8-A.12 Pedestrian Facilities Include ADA Ramps, Crosswalks, Sidewalks, and Hardscape Paving (clockwise from upper left)



Fig A.17- Bicycle Paths



Fig A.18- Bicycle Lanes



TREE PROTECTION

If a tree/trees in the Right of Way is/are determined to be protected, the contractor should follow the current City of Austin standard notes for tree and natural area protection below.

CITY OF AUSTIN STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION:

1. All trees and natural areas shown on plan to be preserved shall be protected during construction with temporary fencing.
2. Protective fences shall be erected according to City of Austin Standards for Tree Protection.
3. Protective fences shall be installed prior to the start of any site preparation work (clearing, grubbing or grading), and shall be maintained throughout all phases of the construction project.
4. Erosion and sedimentation control barriers shall be installed or maintained in a manner which does not result in soil build-up within tree drip lines.
5. Protective fences shall surround the trees or group of trees, and will be located at the outermost limit of branches (drip line), for natural areas, protective fences shall follow the limit of construction line, in order to prevent the following:
 - A. Soil compaction in the root zone area resulting from vehicular traffic or storage of equipment or materials;
 - B. Root zone disturbances due to grade changes (greater than 6 inches cut or fill), or trenching not reviewed and authorized by the city arborist;
 - C. Wounds to exposed roots, trunk or limbs by mechanical equipment;
 - D. Other activities detrimental to trees such as chemical storage, cement trunk cleaning, and fires.
6. Exceptions to installing fences at tree drip lines may be permitted in the following cases:
 - A. Where there is to be an approved grade change, impermeable paving surface, tree well, or other such site development, erect the fence approximately 2 to 4 feet beyond the area disturbed;
 - B. Where permeable paving is to be installed within a tree's drip line, erect the fence at the outer limits of the permeable paving area (prior to site grading so that this area is graded separately prior to paving installation to minimized root damage);
 - C. Where trees are close to proposed buildings, erect the fence to allow 10 feet of work space between the fence and the building.
 - D. Where there are severe space constraints due to tract size, or other special requirements, contact the local cities arborist to discuss alternatives.

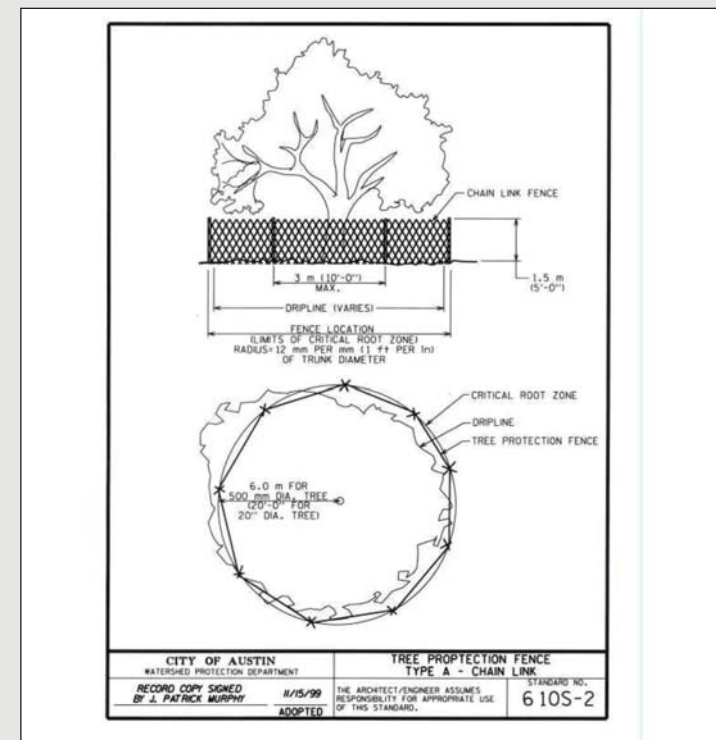


Fig A.19- Chain Link Tree Protection Fence

LANDSCAPE

The landscape plan shall provide landscape plantings that establish continuity along the corridor. Tree and shrub/ornamental grass planting quantities are minimums.

Plant material that creates sight hazards to facility users is prohibited. Vegetation shall meet setback and sight triangle requirements. No vegetation shall be placed where pruning will be required in the future to maintain safe sight-distances. Do not place plants near merging lanes. All trees shall be located a minimum of 30 feet from back of curb. All shrubs and ornamental grasses shall be located a minimum of 15 feet from the back of curb. If there is no curb, measure from edge of pavement. No planting of trees, shrubs, ornamental grasses or groundcover shall occur in locations that receive shade from approach or corridor bridges for more than six hours of the day during the growing season.

Trees located along bicycle and pedestrian facilities shall meet all TxDOT requirements for tree clearances, tree spacing, avoiding sight hazards, planting on slopes and maintenance. Minimum on center spacing for all trees shall be 16 feet. All trees associated with bicycle and pedestrian facilities shall be located a minimum of 30 feet from back of curb. If there is no curb, measure from edge of pavement.

Landscape planting beds are areas that include plant material such as trees, shrubs, ornamental grasses or groundcovers. 18 inch wide, 6 inch deep mow curbs shall separate planting beds and turf grass. Two or more adjacent trees planted less than 15 feet on center are considered a tree grove and shall be contained by a mow curb as specified above. Turf grass shall not be located within plant beds or tree groves. The use of steel edging is prohibited. Where mow curbs are used to separate turf grass and plant bed or tree grove, the curb shall facilitate ease of mowing. Angular mow curb are prohibited. Curvilinear mow curbs are preferred.

Plantings shall be relocated in suitable locations, provided overall plant quantities remain intact when slopes exceed 4:1, when the back of curb to ROW width is less than 25 feet, or 25 foot or greater clearances are impaired by ancillary structures and/or utility conflicts.

Trees shall be three inch caliper or larger. All shrubs and ornamental grasses shall be three gallon or larger. If a three gallon size is not readily available in the region, TxDOT approval will be required for an alternate installation of three one-gallon plants in lieu of each proposed three-gallon plant.

Landscape design shall consider low maintenance and low water use for all projects.

Prior to planting, all landscape planting/tree beds shall be treated with herbicides from TxDOT's approved materials list.

Note: The Central Austin corridor provides alternate or additional guidance.



Fig A.20- Tree Plantings



Fig A.21- Tree Plantings



Fig A.22- Planting Bed



Fig A.23- Planting Bed and Mow Curb



IRRIGATION

- All landscape planting beds and trees shall have drip irrigation with power controllers. All irrigation improvements shall be of operational quality for a minimum of 5 years.
- The contractor shall be responsible for obtaining all permits and licenses required, and for the payment of all fees necessary for the installation and operation of the irrigation system.
- Irrigation systems shall maintain a distance between trees and structures equal to or greater than the radius of the mature dripline.
- Contractor shall provide TxDOT with an irrigation design and submittals for review and approval.
- Irrigation controller(s) location(s) shall be approved by TxDOT.
- Irrigation controller(s) shall be A.C. powered.

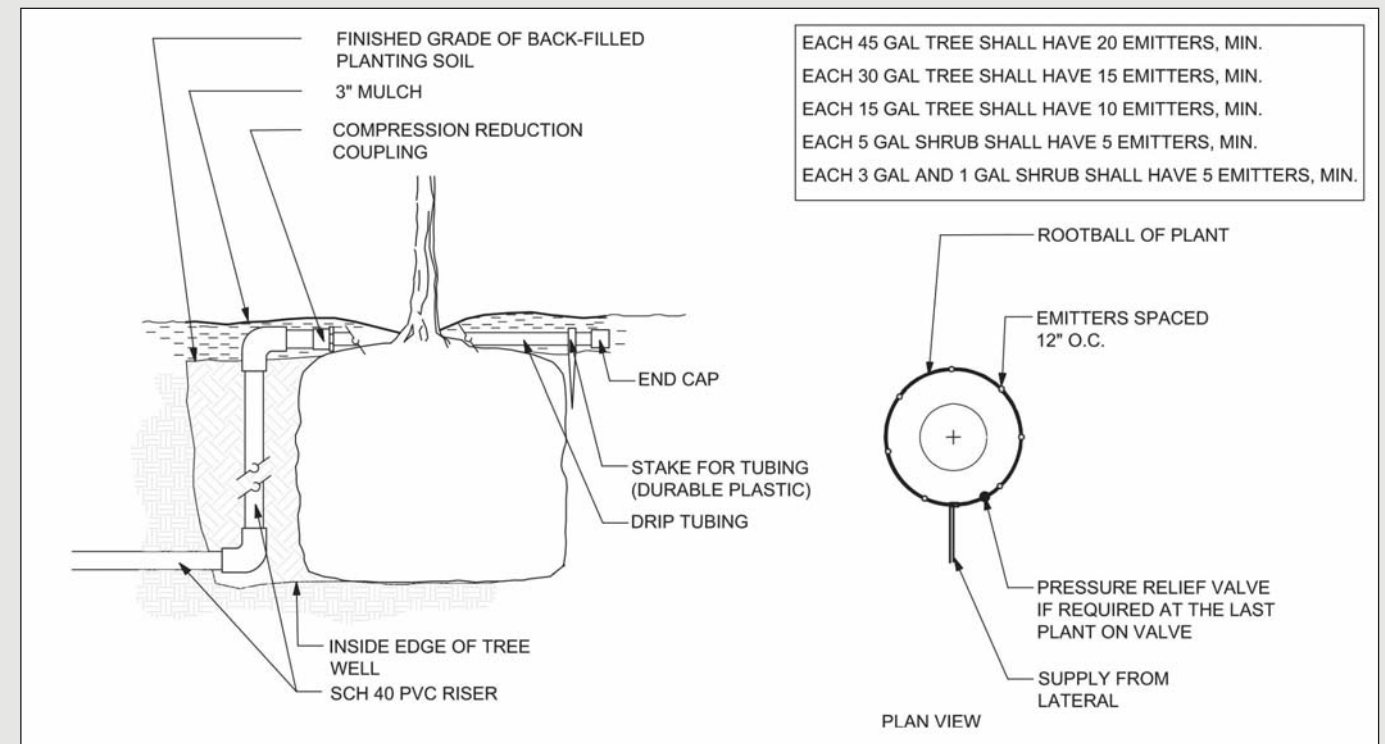


Fig A.24- Typical Installation of Drip Irrigation at Trees

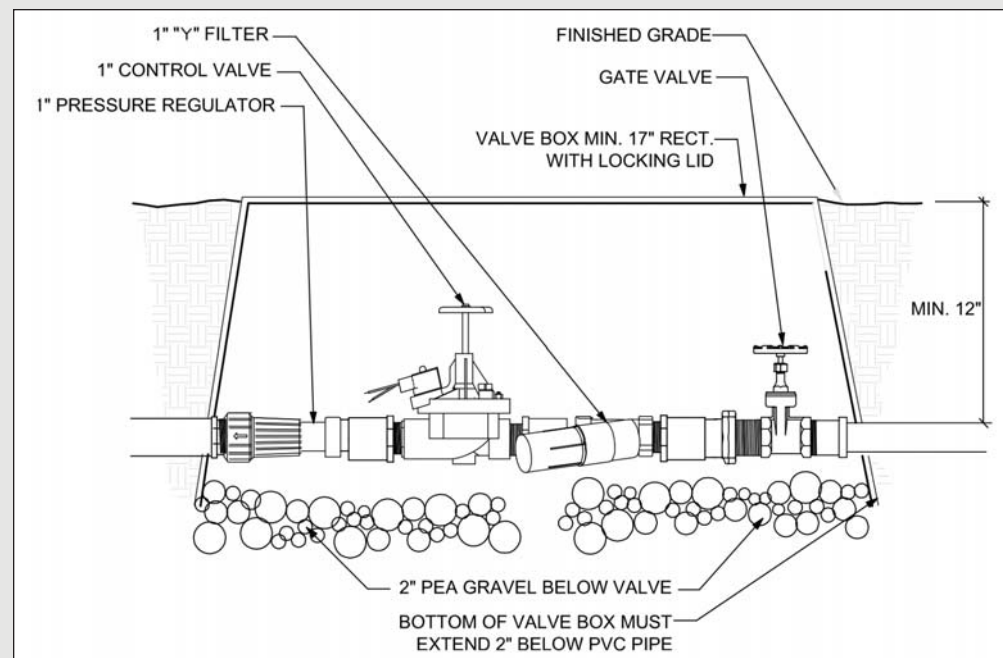


Fig A.25- Irrigation Valve Assembly

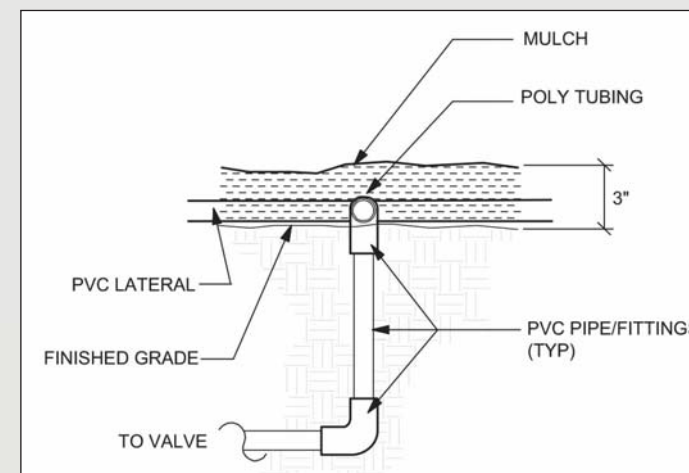
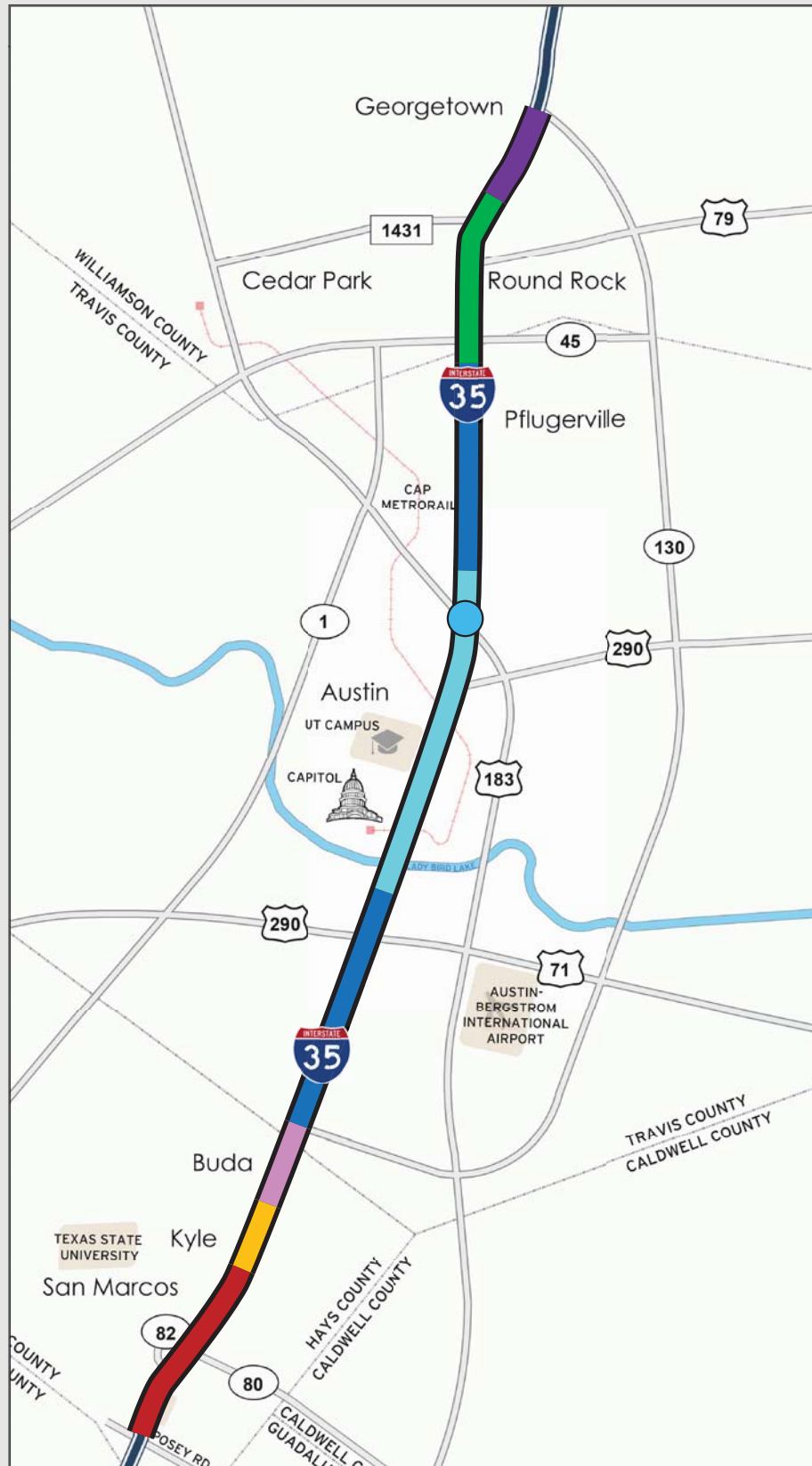


Fig A.26- Typical Drip Irrigation PVC/Header Connection



GEORGETOWN



ROUND ROCK

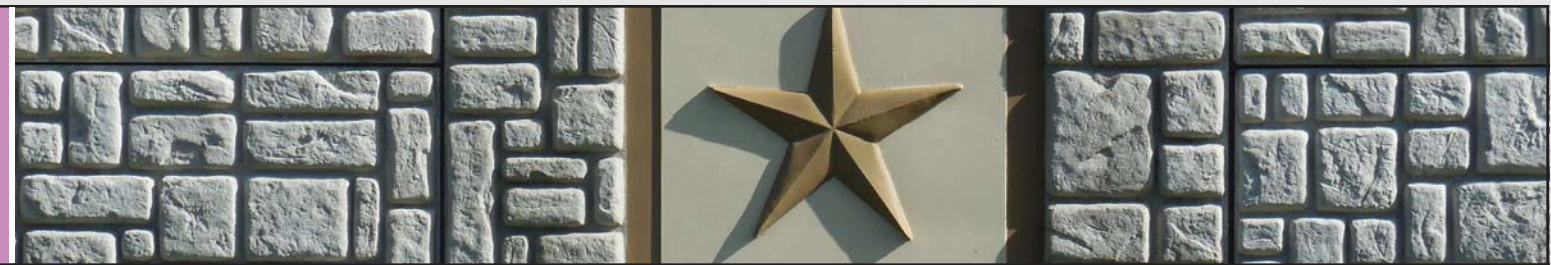


CITY OF AUSTIN

US 183 | CENTRAL AUSTIN



BUDA



KYLE



SAN MARCOS





GEORGETOWN



The limits of the Georgetown Mobility35 corridor are from SH 130 to RM 111.

The following structural component aesthetics are defined in this chapter:

- BRIDGE BENTS
- BRIDGE END DETAILS
- BRIDGE BEAMS
- RETAINING/ABUTMENT WALLS
- SAFETY BARRIERS
- HARDSCAPE

Color Palette



Creamy Opaque Sealer, SW 7012



Camelback Opaque Sealer, SW 6122



Believable Buff Opaque Sealer, SW 6120



BRIDGE BENTS

Bridge bents in Georgetown shall complement the opaque sealer color, texture, shape, and architectural details of the bridge bents at the SH 29 turnaround bridges.

Where an intersection is constructed with separate bridge structures for main lanes and turnarounds, the main lanes bridge shall complement the multi-column bent as seen in Figure 1.1. The turnaround bridges shall both complement the multi-column bent with the single bell tower detail as seen in Figure 1.2.

If an intersection is constructed with one bridge deck for main lanes and turnarounds, it shall complement the bell tower treatment of a multi-bridge configuration. A bell tower detail shall be located on each end of the multi-column bent as seen in Figures 1.3-1.4

| BENT TYPES | FIGURE |
|--|--------|
| Multi-Column Bent | 1.1 |
| Multi-Column Bent with Bell Tower Detail | 1.2 |

Table 1.1- Bridge Bent Matrix

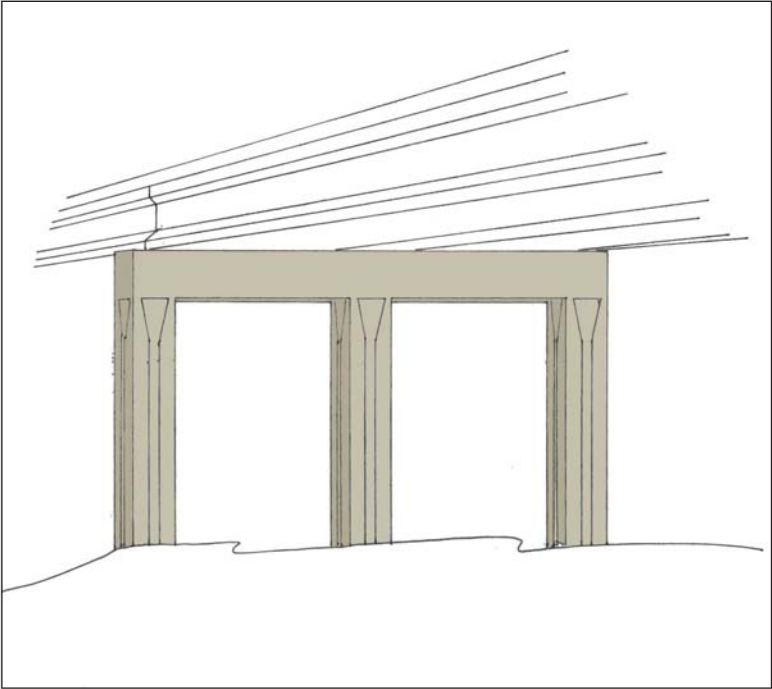


Fig. 1.1- Multi-Column Bent



Fig 1.2- Multi-Column Bent with a Single Bell Tower Detail

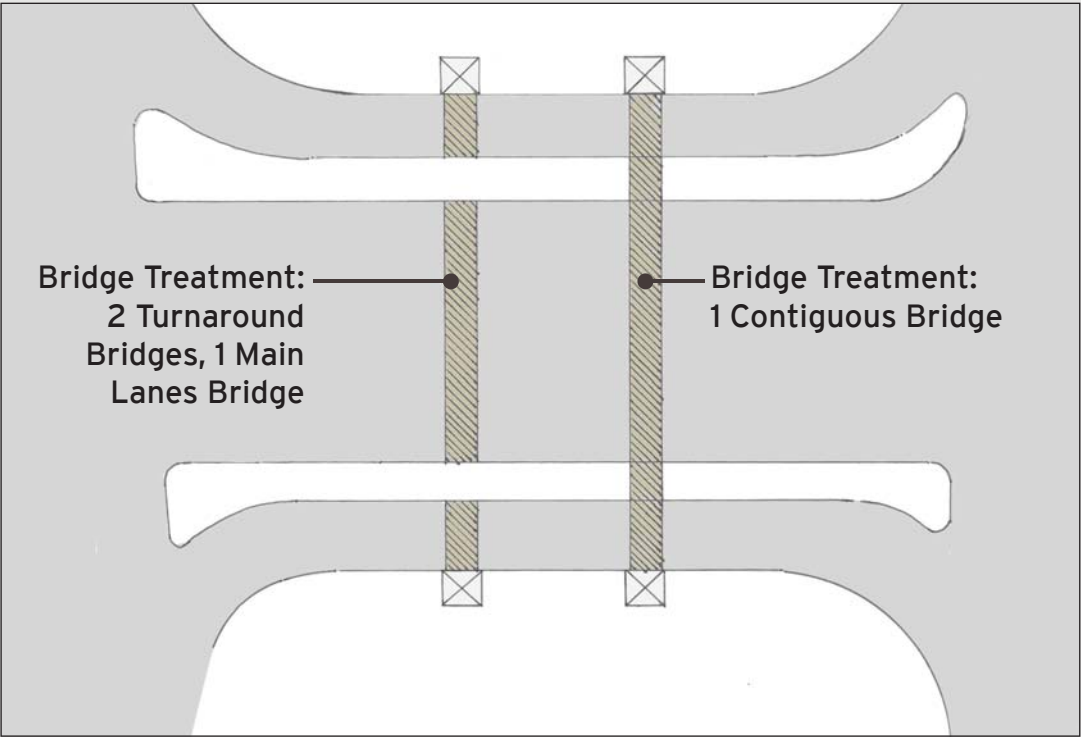


Fig. 1.3- Bridge Treatments

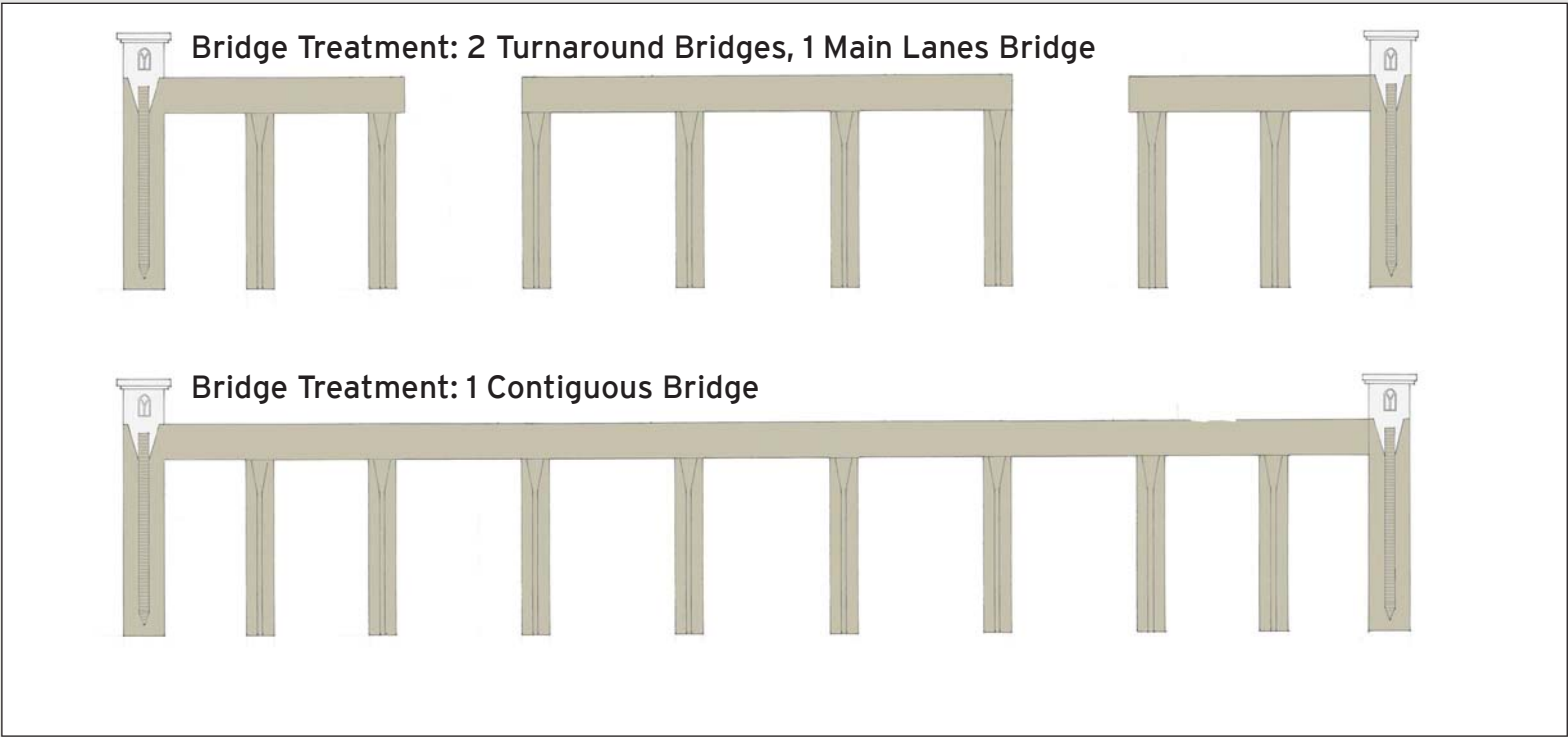


Fig. 1.4- Elevation of Bridge Treatments

BRIDGE END DETAILS

Bridge end details in Georgetown shall complement the aesthetics of those at the Highway 29 turnaround bridge. Utilize the opaque sealers to complement existing, see Figure 1.5.



Fig 1.5- Square Belltower Bridge End Detail, tan and white sealer

BRIDGE BEAM

Bridge beams in Georgetown shall complement the aesthetics of those at the Highway 29 turnaround bridge. Where concrete “I” beams are used at bridge crossings, believable buff opaque sealer (Sherwin Williams 6120) shall be applied, at minimum, to the outer faces of the bridge beams as seen in Figure 1.6.



Fig. 1.6- Concrete “I” Beam, Tan Sealer Along Outer Face of Beam

RETAINING AND ABUTMENT WALLS

Retaining and abutment walls in Georgetown shall complement the aesthetics of the SH 29 turnaround bridge. Retaining and abutment walls shall have a bush hammer texture with one horizontal reveal midpanel, as seen in Figure 1.7. Believable buff opaque sealer (Sherwin Williams 6120) shall be applied. Concrete columns shall have a smooth texture with reveals as seen in Figure 1.8. Camelback opaque sealer (Sherwin Williams 6122) shall be applied. Abutment walls will have a smooth texture and no horizontal reveal mid-panel, as seen in Figure 1.9. Believable buff opaque sealer (Sherwin Williams 6120) shall be applied.

Aesthetic treatments on retaining walls shall be as stated above regardless of type of wall.



Fig 1.7- MSE Retaining Wall with Reveals and Concrete Columns



Fig. 1.8- Concrete Columns



Fig 1.9- MSE Panel Abutment Wall, Concrete Panel Bridge Ends, and Coping



Fig 1.10- Retaining Wall Reveals



SAFETY BARRIERS

Safety barriers in Georgetown shall complement the aesthetics of the SH 29 turnaround bridges. Concrete coping shall have believable buff opaque sealer (Sherwin Williams 6120) applied, as seen in Figure 1.11. Concrete traffic barriers with concrete coping shall have a creamy opaque sealer (Sherwin Williams 7012) applied, as seen in Figure 1.12. Concrete traffic barriers with arch openings shall have a smooth texture, as seen in Figure 1.13. Creamy opaque sealer (Sherwin Williams 7012) shall be applied.

| SAFETY BARRIER TYPES | SITE CONDITIONS |
|--|---|
| Concrete Coping (Figure 1.11) | Retaining Wall, No Vehicular Traffic Present |
| Concrete Traffic Barrier with Coping (Figure 1.12) | Retaining Wall, Vehicular Traffic Present |
| Concrete Traffic Barrier with Arch Openings (Figure 1.13) | Bridge |

Table 1.2- Safety Barrier Matrix



Fig 1.11- Concrete Coping



Fig 1.12- Concrete Traffic Barrier with Concrete Coping



Fig. 1.13- Concrete Traffic Barrier with Arch Openings

HARDSCAPE

At split-grade roadway intersections, concrete pavers shall be used between sidewalks and curbs and in medians. Pavers shall be terra cotta rectangular concrete units set in a herringbone pattern, as seen in Figures 1.14 and 1.15.

At ramp gores, use Class B concrete rip rap to a depth of 5 inches, as seen in Figure 1.16.



Fig 1.14- Concrete Pavers at Traffic Median



Fig 1.15- Herringbone Pattern



Fig 1.16- Concrete Rip Rap at Ramp Gore



ROUND ROCK

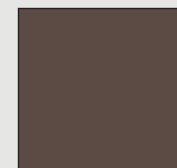


The limits of the “Round Rock” Mobility35 corridor are from RM 111 to SH 45N.

The following structural component aesthetics are defined in this chapter:

- BRIDGE BENTS
- BRIDGE BEAMS
- RETAINING WALLS
- ABUTMENT WALLS
- SAFETY BARRIERS
- HARDSCAPE

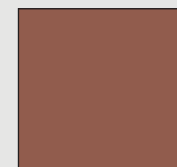
Color Palette



Burnt Umber Opaque Sealer, FS 30045



French Roast Opaque Sealer, SW 6069



Burnt Sienna Opaque Sealer, FS 30109

BRIDGE BENTS

Bridge bents in Round Rock shall have ashlar texture on two faces of each column to complement those of SH 45N and I-35. Unlike SH 45N, an opaque sealer shall not be applied to the ashlar textured panels. Refer to Table 2.1 for aesthetics per bent type.

| BENT TYPES | FIGURE |
|--|--------|
| Hammerhead | 2.1 |
| Multi-Column (Direct Connector Underpass) | 2.2 |
| Multi-Column (Standard Bridge Underpass) | 2.3 |
| Inverted "T" | 2.4 |
| Inverted "T", Multi-Column | 2.5 |
| Straddle | 2.6 |
| Cantilever | 2.7 |

Table 2.1- Bridge Bent Matrix



Fig. 2.4- Inverted "T" Bent



Fig. 2.5- Multi-Column Inverted "T" Bent



Fig. 2.1- Hammerhead Bent



Fig. 2.2- Multi-Column Bent with Mask Wall (Direct Connector Underpass)



Fig. 2.3- Multi-Column Bent with Mask Wall (Standard Bridge Underpass)



Fig. 2.6- Straddle Bent



Fig. 2.7- Cantilever Bent (Mod.): Cantilever Bent to complement aesthetic of Existing Bents (Figure 2.1, From SH 45SE)

BRIDGE BEAMS

Bridge beams at cross bridges in Round Rock shall complement the aesthetics of those at SH 45N and I-35 in North Austin.

Where concrete “I” beams are used at bridge crossings in Round Rock, burnt umber opaque sealer (Federal Standard 30045) shall be applied to the outer face and bottom faces as seen in Figures 2.7 and 2.8.

Existing weathered steel beams in Round Rock are not coated with opaque sealer and as a result, have been a maintenance concern. All future weathered steel beams at cross bridges shall be painted with opaque sealer “French Roast” (Sherwin Williams 6069) to complement the weathered steel color, as seen in Figure 2.9.

Opaque sealer shall not be applied to mainlane beams.



Fig. 2.7- Concrete “I” Beam



Fig. 2.8- Concrete “I” Beam



Fig. 2.9- Existing Weathered Steel Beam

RETAINING WALLS

Retaining walls shall complement the aesthetic of retaining walls at SH 45N and I-35 in North Austin. MSE retaining walls shall have a random ashlar texture. No opaque sealer shall be applied as seen in Figure 2.10. Signature MSE panels shall have a random ashlar texture with a Texas graphic reveal. The Texas graphic shall have with no opaque sealer. Location of signature MSE panels shall occur in the second MSE panel column from the bridge end on both sides of the bridge.

Bridge end details shall be a combination of tapered concrete cap and stone veneer column. No opaque sealer shall be applied. Stone and concrete colors, column shape and architectural details shall complement those seen in Figure 2.10.

Aesthetic treatments on retaining walls shall be as stated above regardless of wall type.

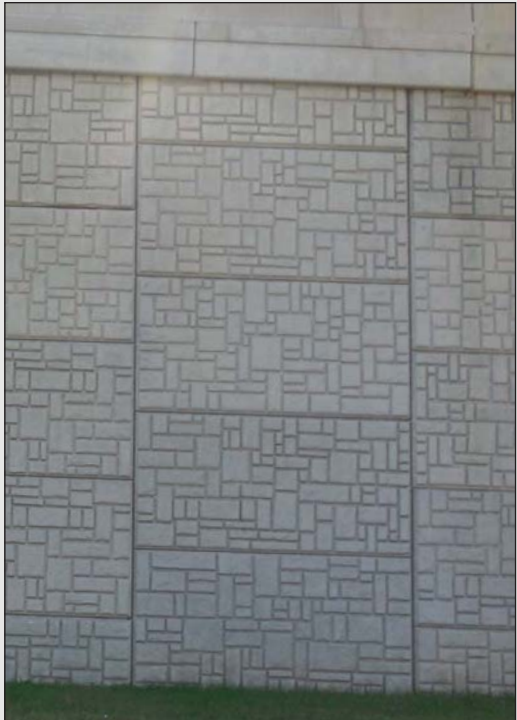


Fig 2.10- MSE Retaining Wall



Fig 2.11- Signature MSE Panel

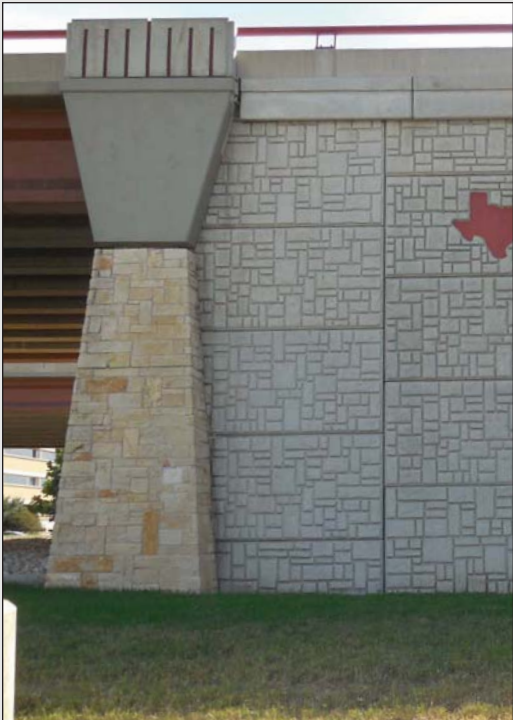


Fig 2.12- Bridge End Detail

ABUTMENT WALLS

Abutment walls shall complement the aesthetics seen at SH 45N at I-35. MSE abutment wall panels shall have an ashlar texture, no opaque sealer and be framed at the top of wall by smooth textured concrete. Existing wall base panels shall be excluded from future Round Rock abutment walls as seen in Figure 2.13.

Note the relationship of the bridge end details with the abutment wall as seen in Figure 2.14.

Abutment Wall (Mod.)



Fig 2.13- MSE Abutment Wall, (Image modified to reflect the removal of the wall base panel)



Fig 2.14- Bridge End Detail

SAFETY BARRIERS

Safety barriers in Round Rock shall complement the aesthetics of SH 45N and I-35 in North Austin.

Concrete coping shall not have an opaque sealer, as seen in Figure 2.18. Concrete traffic barriers (T551) shall not have an opaque sealer as seen in Figure 2.18.

Bridge rails located on concrete traffic barriers shall have a burnt sienna opaque sealer (Federal Standard 30109) applied, as seen in Figure 2.18.

| SAFETY BARRIER TYPES | SITE CONDITIONS |
|--|--|
| Concrete Coping (Figure 2.15) | Retaining Wall, No Vehicular Traffic Present |
| Concrete Traffic Barrier with Coping (Figure 2.17) | Retaining Wall, Vehicular Traffic Present |
| Concrete Traffic Barrier (Figure 2.16) | Bridge, No Bicycle/ Pedestrian Traffic Present |
| Traffic Barrier with Bridge Railing (Figure 2.18) | Bridge, No Bicycle/ Pedestrian Traffic Present |

Table 3.2- Safety Barrier Matrix



Fig 2.15- Concrete Coping



Fig 2.16- Concrete Traffic Barrier



Fig 2.17- Concrete Traffic Barrier with Coping



Fig 2.18- Concrete Traffic Barrier with Bridge Railing

HARDSCAPE

At split-grade roadway intersections, concrete pavers shall be used between sidewalks and curbs and in medians. Pavers shall be an array of natural colors set in a specialty pattern to complement those seen in Figure 2.19. A soldier course shall be set behind the back of curb, as seen in Figure 2.20.

At ramp gores, use Class B concrete rip rap to a depth of 5 inches, as seen in Figure 2.21.



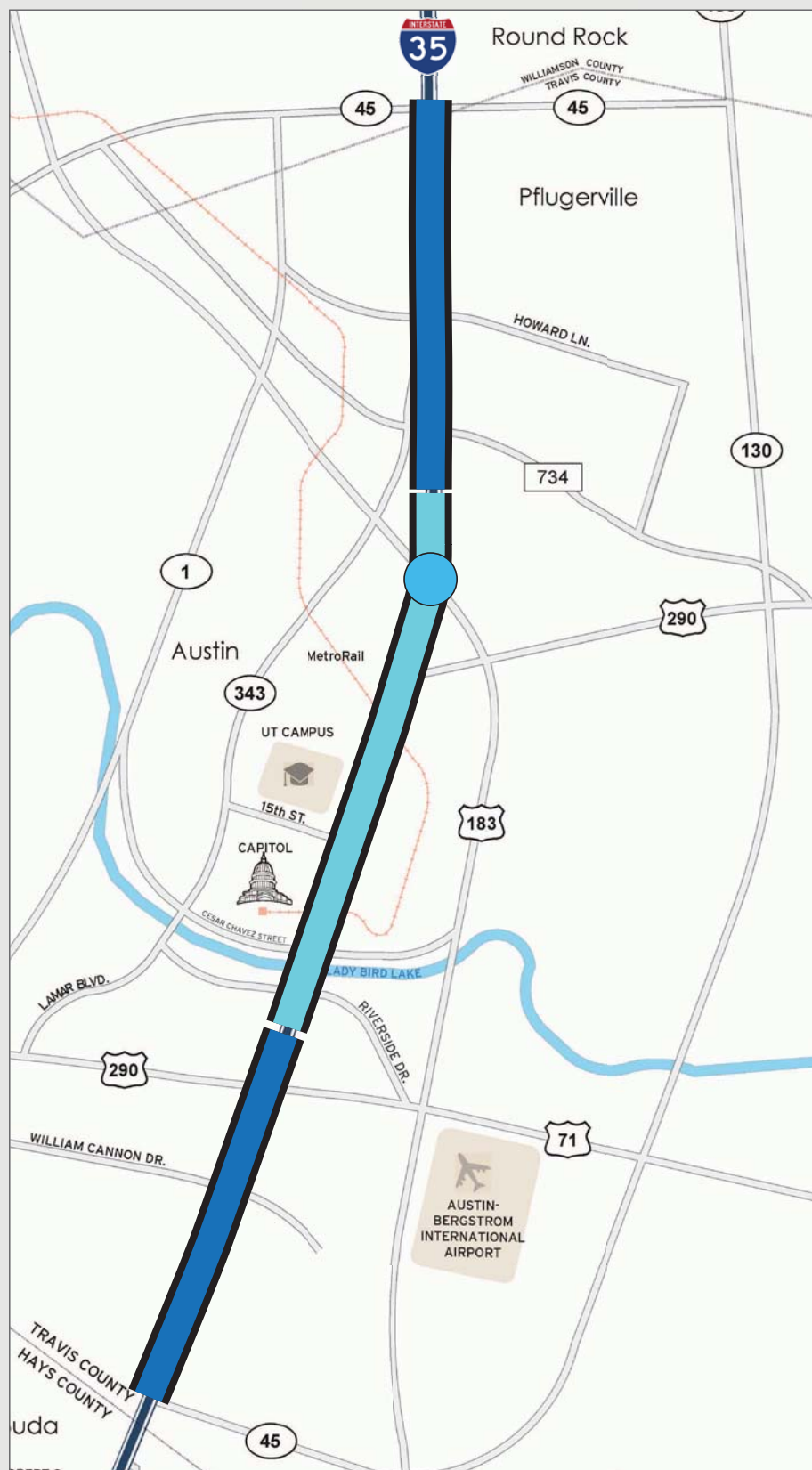
Fig 2.19- Specialty Pattern



Fig 2.20- Concrete Pavers at Traffic Median



Fig 2.21- Concrete Rip Rap at Ramp Gore

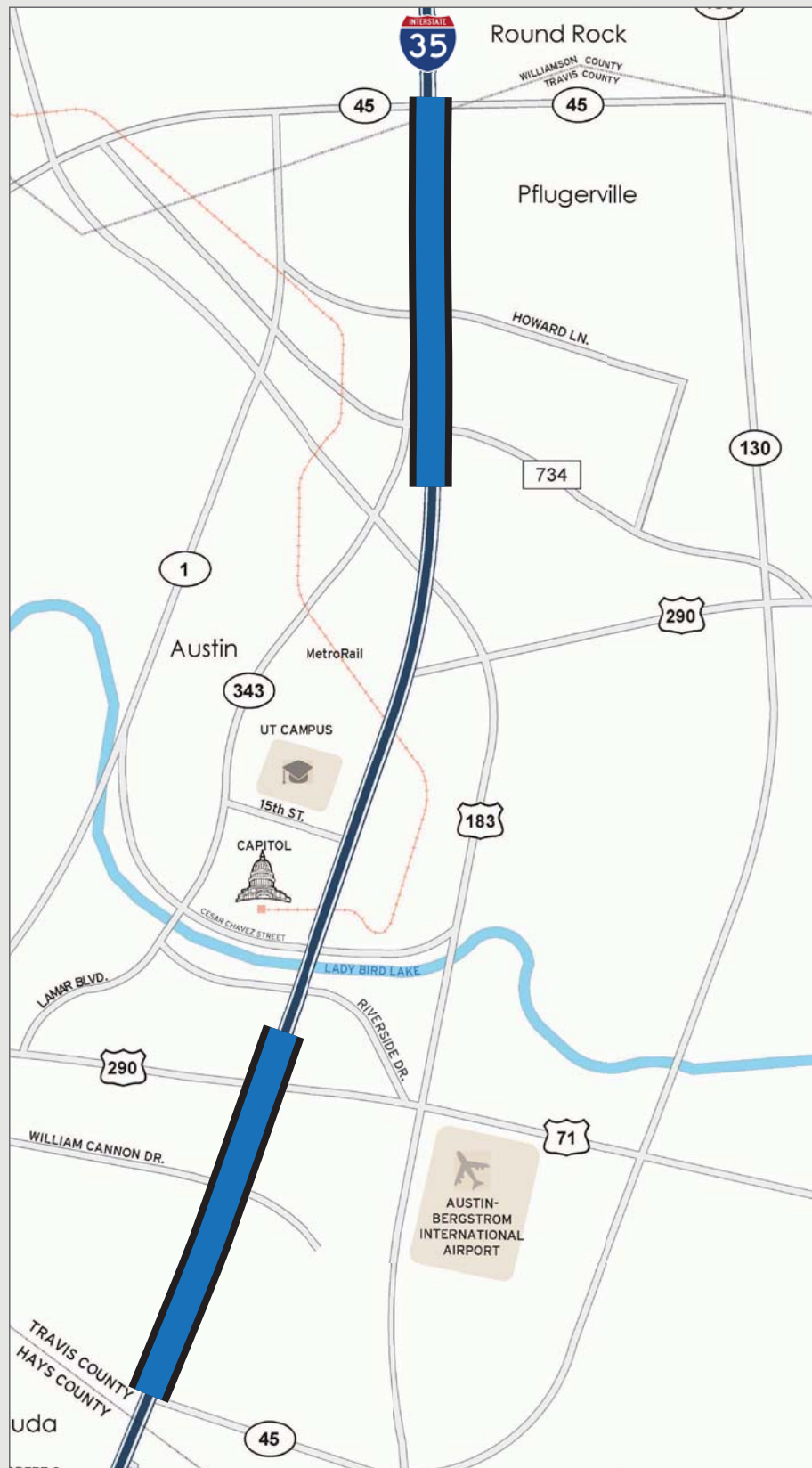


AUSTIN



The aesthetics for the Austin Mobility35 corridor have been subdivided into three categories:

- City of Austin (SH 45N to Rundberg Ln., Woodland Ave. to SH 45SE)
- US 183
- Central Austin (Rundberg Ln. to Woodland Ave.)



CITY OF AUSTIN



The limits of the City of Austin are subdivided into two sections:

- SH 45N to Rundberg Ln.
- Woodland Ave. to SH 45SE

Aesthetic treatments shall remain consistent throughout the City of Austin project limits. The following structural component aesthetics are defined in this subsection:

- BRIDGE BENTS
- BRIDGE BEAMS
- RETAINING AND ABUTMENT WALLS
- SAFETY BARRIERS
- HARDSCAPE

BRIDGE BENTS

Bridge bents in the City of Austin shall complement the texture, form, shape and architectural details of the bents at I-35 and Ben White Boulevard. Opaque sealer and Texas Seal shall not be applied to new bent construction. Refer to Table 3.1 for bent aesthetic types.

| BENT TYPES | FIGURE |
|----------------------------|--------|
| Hammerhead | 3.1 |
| Multi-Column | 3.2 |
| Inverted "T" | 3.3 |
| Inverted "T", Multi-Column | 3.4 |
| Straddle | 3.5 |
| Cantilever | 3.6 |

Table 3.1- Bridge Bent Matrix



Fig. 3.1- Typical Hammerhead Bent with Rectangular "Longhorn" Column



Fig. 3.2- Multi-Column Bent with Rectangular "Longhorn" Column



Fig. 3.3- Inverted "T" Bent, with "Longhorn" Column and Five Star Bent Cap



Fig. 3.4- Inverted "T", Multi-Column Bent, with Square "Longhorn" Columns and Five Point Star Bent Cap



Fig. 3.5- Straddle Bent with "Longhorn" Column

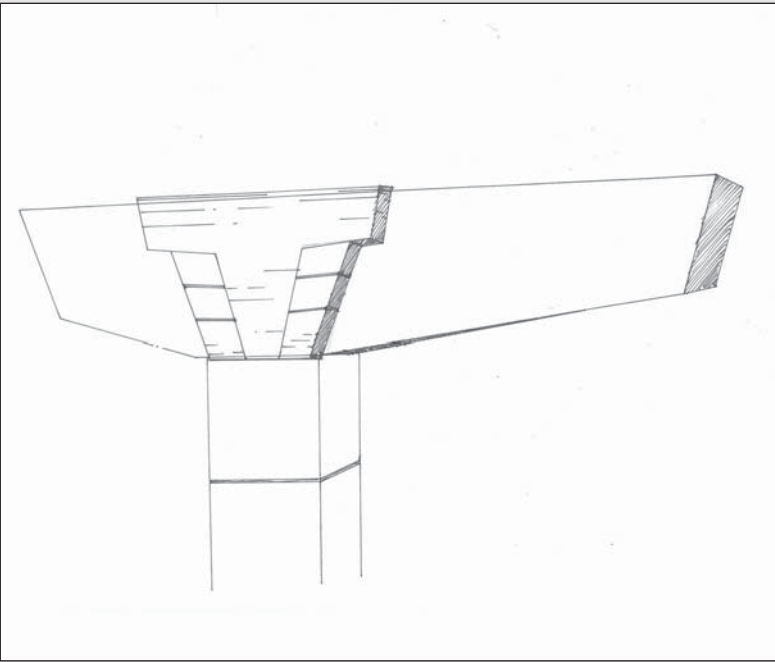


Fig. 3.6- Cantilever Bent to Match Aesthetics of Existing Bent Figure 3.1

BRIDGE BEAMS

Bridge beams in the City of Austin shall complement the aesthetics of the existing I-35 corridor. Where concrete “I” beams are used, opaque sealer shall not be applied, as seen in Figure 3.7.



Fig. 3.7- Concrete “I” Beam

RETAINING AND ABUTMENT WALLS

Retaining walls in the City of Austin shall have an ashlar texture with no opaque sealer as seen in Figure 3.8. Signature mechanically stabilized earth (MSE) panels shall have an ashlar texture with a Texas graphic reveal as seen in Figure 3.9. The ashlar pattern shall be approved by the TxDOT North Travis Area Office. The Texas graphic shall occur on both sides of the structure and shall also be approved by the TxDOT North Travis Area Office. Aesthetic treatments on retaining walls shall be as stated above whether method of wall construction is cast-in-place (CIP) or MSE.

If an existing wall will be extended, exception may be taken to the proposed wall aesthetic treatment. When an existing wall is extended, the TxDOT North Travis Area Office will, on a case-by-case basis, determine if an existing wall aesthetic will be continued and to what extent. Common existing treatments in Austin include ashlar MSE panels, fractured fin MSE panels, CIP fractured fin with concrete banding, and CIP exposed aggregate with concrete banding as seen in Figures 3.10-3.13.

Construction of the US 183 direct connectors shall complement existing aesthetics within the limits of the interchange, see page 30 for further details.

PROPOSED



Fig 3.8- Ashlar Texture, MSE Panels



Fig 3.9- Ashlar Texture, Signature MSE Panel

EXISTING



Fig 3.10- Yager Ln.,
Ashlar, MSE Panels



Fig 3.11- Ben White Blvd.,
Fractured Fin, MSE Panels



Fig 3.12- Ben White Blvd.,
Fractured Fin, CIP with
Concrete Banding



Fig 3.13- US 290,
Exposed Aggregate, CIP
with Concrete Banding

SAFETY BARRIERS

Safety barriers in the City of Austin shall not have opaque sealer and shall be one of the following TxDOT standards listed in Figures 3.14-3.17.

| SAFETY BARRIER TYPES | SITE CONDITIONS |
|---|--|
| Concrete Coping (Figure 3.14) | Retaining Wall, No Vehicular Traffic Present |
| Concrete Traffic Barrier with Coping (Figure 3.15) | Bridge, No Bicycle/ Pedestrian Traffic Present |
| Concrete Traffic Barrier (Figure 3.16) | Retaining Wall, Vehicular Traffic Present |
| Traffic Barrier with Bridge Railing (Figure 3.17) | Bridge, No Bicycle/ Pedestrian Traffic Present |

Table 3.2- Safety Barrier Matrix



Fig 3.14- Concrete Coping



Fig 3.15- Concrete Traffic Barrier with Coping



Fig 3.16- Concrete Traffic Barrier



Fig 3.17- Traffic Barrier with Bridge Railing

HARDSCAPE

At split-grade roadway intersections, concrete pavers shall be used between sidewalks and curbs and in medians. Pavers shall be terra cotta rectangular concrete units set in a herringbone pattern, as seen in Figure 3.18. A soldier course shall be set behind the back of curb as seen in Figure 3.19.

At ramp gores and roundabout truck aprons, use Class B concrete rip rap to a depth of 5 inches. The rip rap shall be stamped concrete, terra cotta in color with a herringbone brick pattern as seen in Figure 3.20.



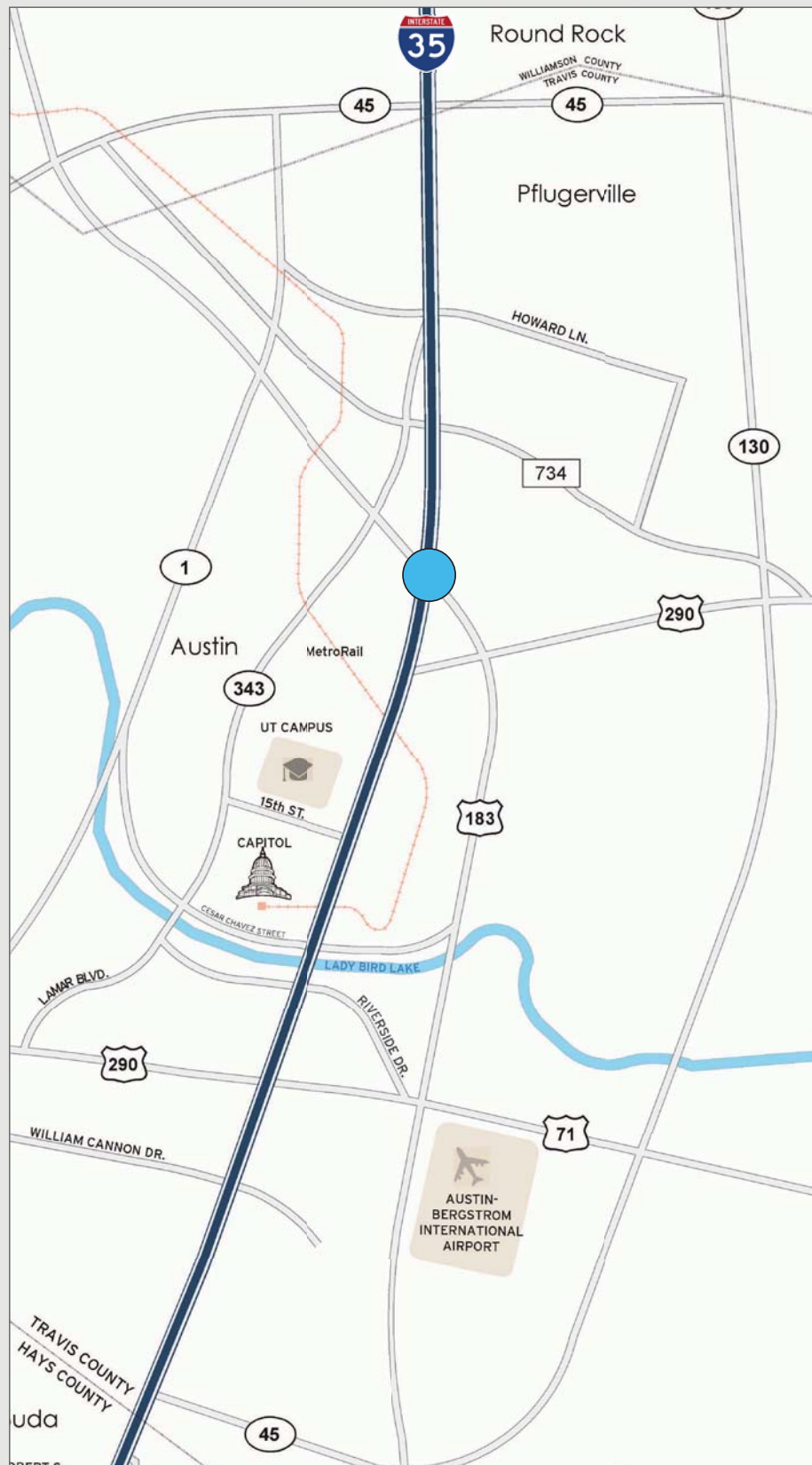
Fig 3.18- Herringbone Pattern



Fig 3.19- Concrete Pavers at Traffic Island



Fig 3.20- Terra Cotta Stamped Concrete, Herringbone Brick Pattern



US 183

The flyover ramps at US 183 were installed as segmental construction. Future construction methods do not require segmental construction, but all new construction at US 183 shall complement existing aesthetics.

| COMPONENT | MATCH |
|--|-------------|
| Single Column Bent | Figure 3.21 |
| Straddle Bent | Figure 3.22 |
| Segmental Concrete Reliefs | Figure 3.23 |
| Retaining/Abutment Wall | Figure 3.24 |
| Concrete Traffic Barrier with Coping | Figure 3.25 |
| Hardscape | Figure 3.26 |
| Concrete Traffic Barrier with Bridge Railing | Figure 3.27 |

Table 3.3- US 183 Component Matrix



Fig 3.21- Single Column Bent



Fig 3.22 - Straddle Bent



Fig 3.23- Segmental Concrete Reliefs



Fig 3.24- Retaining/Abutment Wall



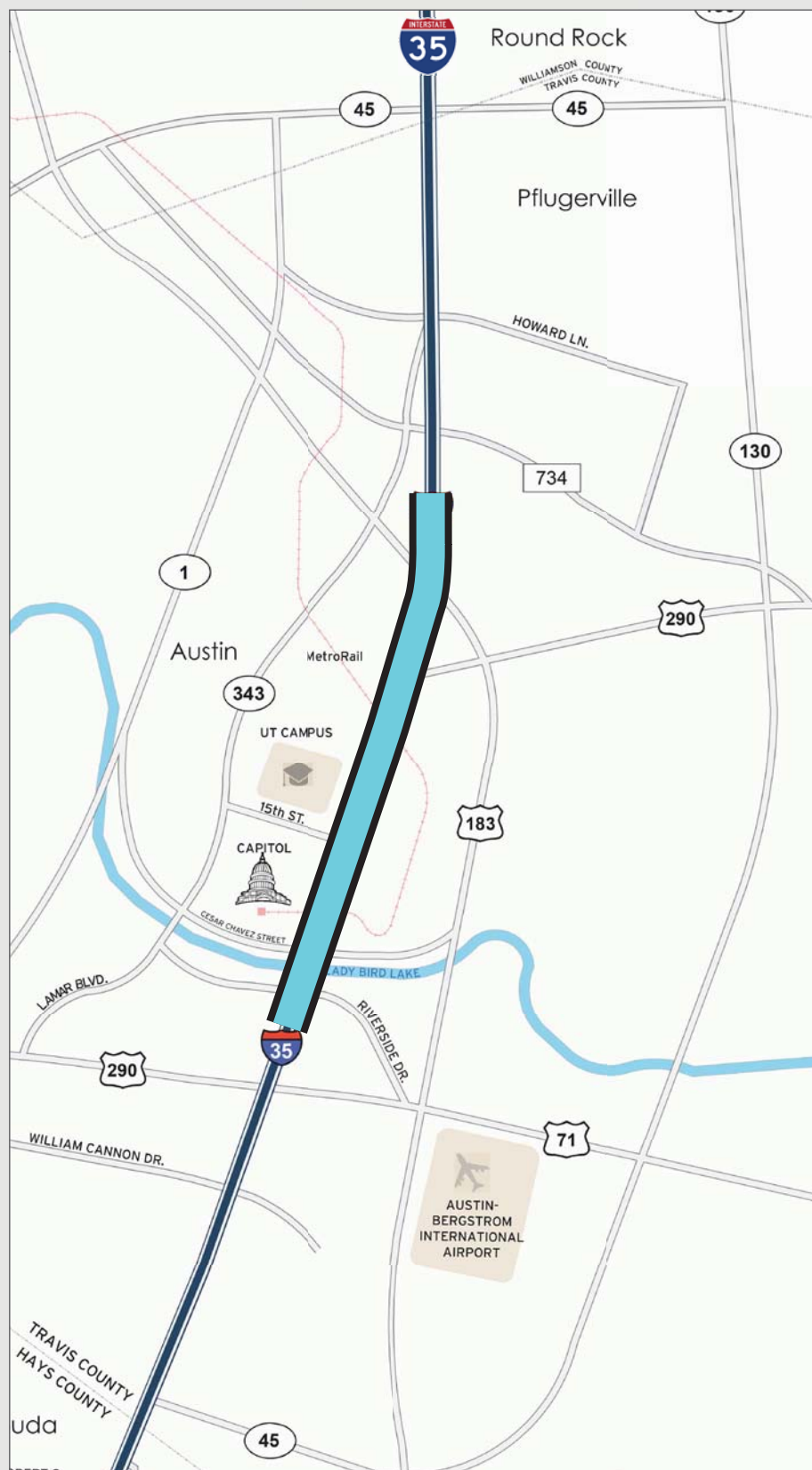
Fig 3.25- Concrete Traffic Barrier with Coping



Fig 3.26- Hardscape Pavers with Coping



Fig 3.27- Traffic Barrier and Bridge Rail



CENTRAL AUSTIN

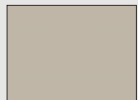
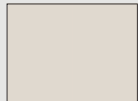




The limits of the Central Austin corridor are from Rundberg Ln. to Woodland Ave.

Aesthetic treatments shall remain consistent throughout the City of Austin project limits. The following structural component aesthetics are defined in this chapter:

- BRIDGE BENTS
- BRIDGE BEAMS
- SIGN STRUCTURES
- RETAINING AND ABUTMENT WALLS
- SAFETY BARRIERS
- ORNAMENTAL TRELLIS
- HARDSCAPE
- ILLUMINATION
- LANDSCAPE & IRRIGATION

Color Palette:

- | | |
|--|--|
|  | Analytical Gray Opaque Sealer, SW 7051 |
|  | Egret White Opaque Sealer, SW 7570 |
|  | Reddened Earth Opaque Sealer, SW 6053 |
|  | Fiery Brown Opaque Sealer, SW 6055 |

Note: Contractor to provide 4'x4' mockups for approval prior to installation or fabrication of any precast concrete panels. Opaque sealers should be applied to a separate 4'x4' panel for approval so as not to interfere with the inspection and approval of the precast panel formwork and construction methods.

Note: A more detailed document, Central Austin - Aesthetic Details, is available from TxDOT which provides additional information on all proposed aesthetic elements listed in this document.

CONCEPT FOR AESTHETICS

The aesthetic recommendations for the 'Central Austin' section of the corridor were developed in coordination with an Aesthetics Working Group (AWG) consisting of community leaders and representatives. Input was also received through public outreach, digital and online surveys, and other media outlets.

Native landscaping, safety and accent lighting, and aesthetic treatment of retaining wall panels were all placed high on the list of elements that were important to address. The AWG's preference was to implement these improvements on east/west cross streets primarily with less focus on the north/south corridor.

The 'preferred' concept's hardscape aesthetic was inspired by the architectural design surrounding the Capitol building with arched openings, implied columns, radially symmetrical paving patterns, and ornamental steel fencing.

Depending on funding for implementation and maintenance by local partners, native landscaping will be implemented in every feasible location available along the constrained corridor. Planting inspiration will come from in and around Central Austin's natural corridors while always being mindful of maintenance concerns that exist in such a well traveled thoroughfare. Green infrastructure and sustainable design, as part of TxDOT's standard practices, will also be implemented alongside all aesthetic treatments along the corridor wherever possible.



Fig 3.28 - Capitol Building



Fig 3.29 - Architectural Detailing at Capitol Building



Fig 3.30 - Native Landscaping in Constrained Areas



Fig 3.31 - Fencing on the Capitol Grounds



Fig 3.32 - Capitol Rotunda

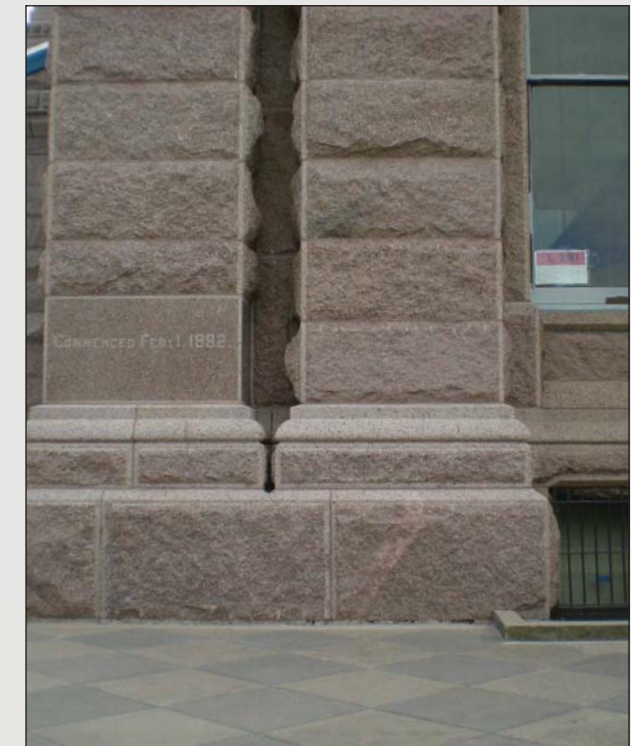


Fig 3.33 - Stone Texture and Paving



BRIDGE BENTS

Bridge bents in Austin shall complement the texture, form, shape and architectural details of the Capitol building in downtown Austin. Refer to Table 3.4 for bent aesthetic types.

| BENT TYPES | FIGURE |
|---------------------------------|--------|
| Multi-Column | 3.34 |
| Single Column- Rectangular Cap | 3.35 |
| Single Column -Inverted Tee Cap | 3.36 |

Table 3.4 - Bridge Bent Matrix

1

Analytical Gray Opaque Sealer, SW 7051

Fitzgerald Formliners (or approved equal)

Texas Sand Blast, 17992

2

Egret White Opaque Sealer, SW 7570

Fitzgerald Formliners (or approved equal)

Texas Sand Blast, 17992

3

Reddened Earth Opaque Sealer, SW 6053

Rough Stone Finish Formliner - Mimic Base of Capitol Building

4

Fiery Brown Opaque Sealer, SW 6055

Fitzgerald Formliners (or approved equal)

Texas Sand Blast, 17992

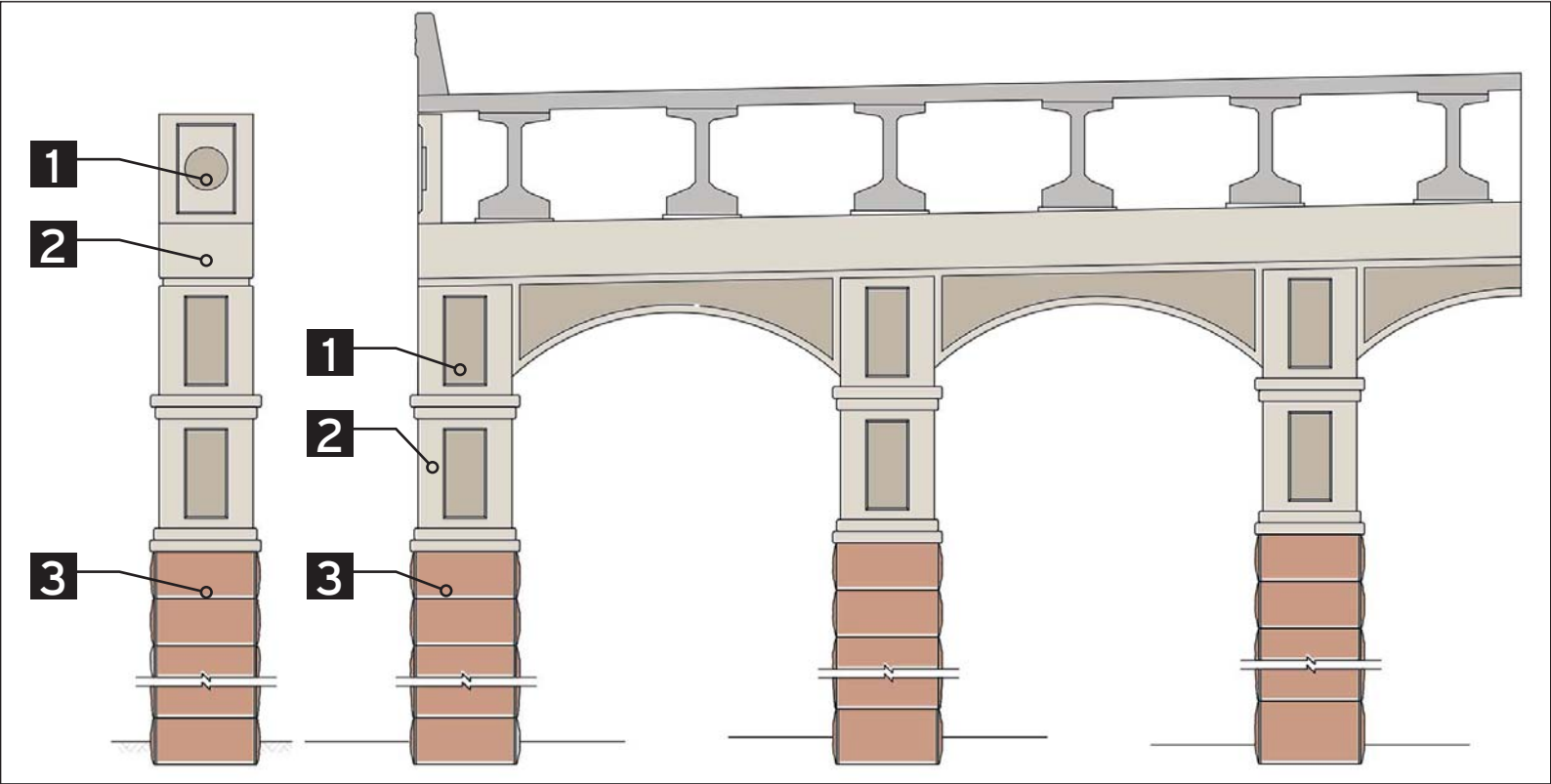


Fig 3.34 - Multi-Column

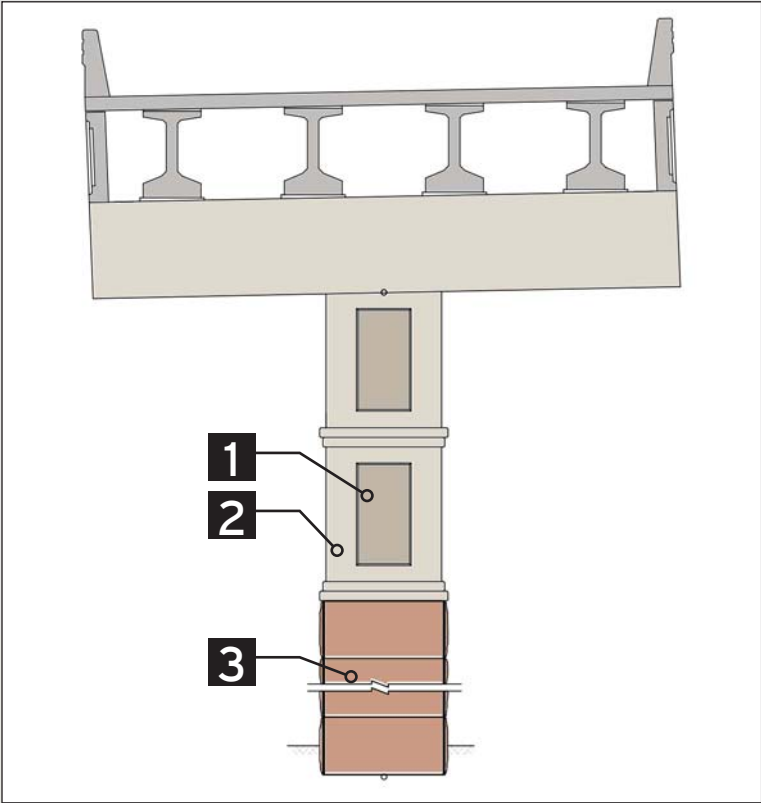


Fig. 3.35 - Single Column- Rectangular Cap

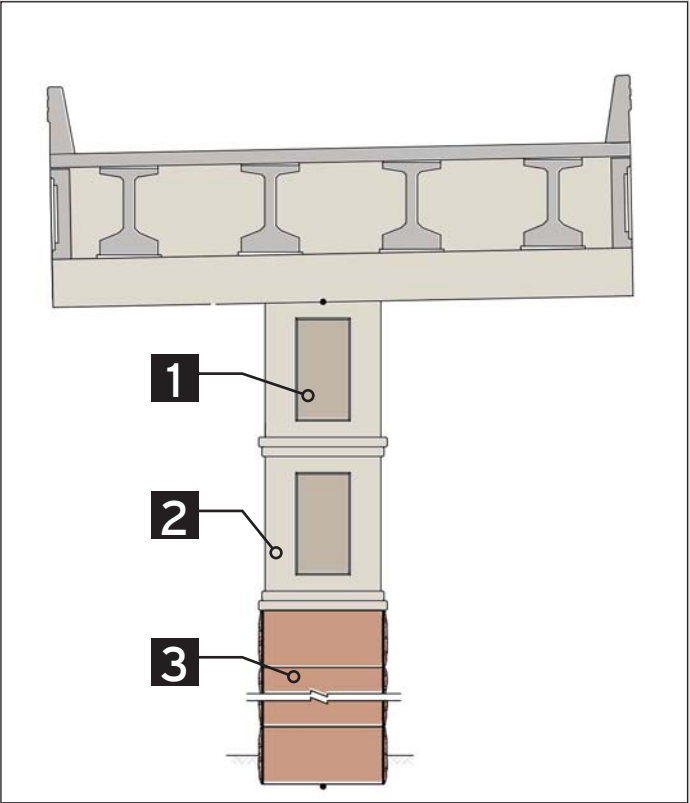


Fig. 3.36 - Single Column- Inverted Tee Cap

BRIDGE BENTS AND ABUTMENTS WITH STREET NAME IDENTIFIERS AND ART PANELS

Where I-35 passes over east/west surface streets, street name identifiers shall be placed on interior bents closest to shared use paths and where they will also be most visible from cross streets and service roads. See Figure 3.37 and 3.38 below for a conceptual diagram of how these should be located and Figure 3.42 for aesthetic treatments of these columns. Fonts for these shall be Highway Gothic Bold and letters are to be precision formed, recessed 3/4" and painted black. Note: Electrical conduit to be provided to allow for accent lighting for potential future art installation at removable art panels.

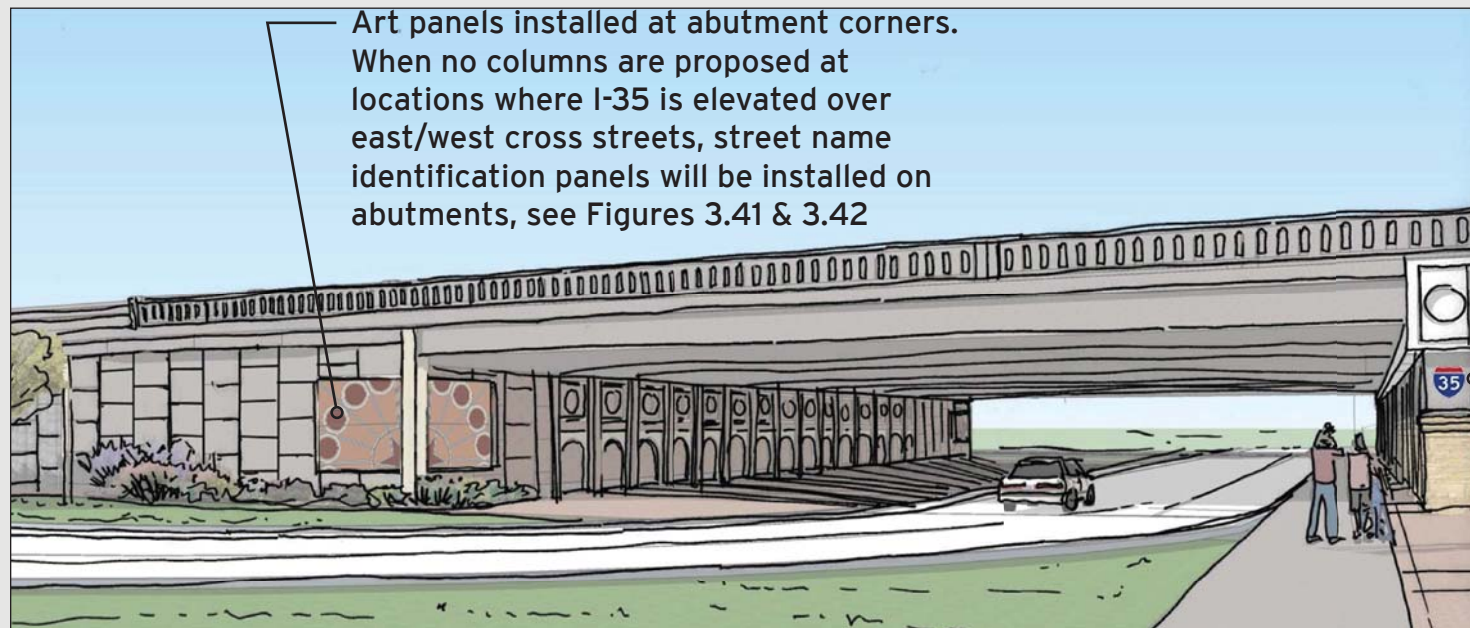


Fig 3.37 - Column and Abutment Signage Location

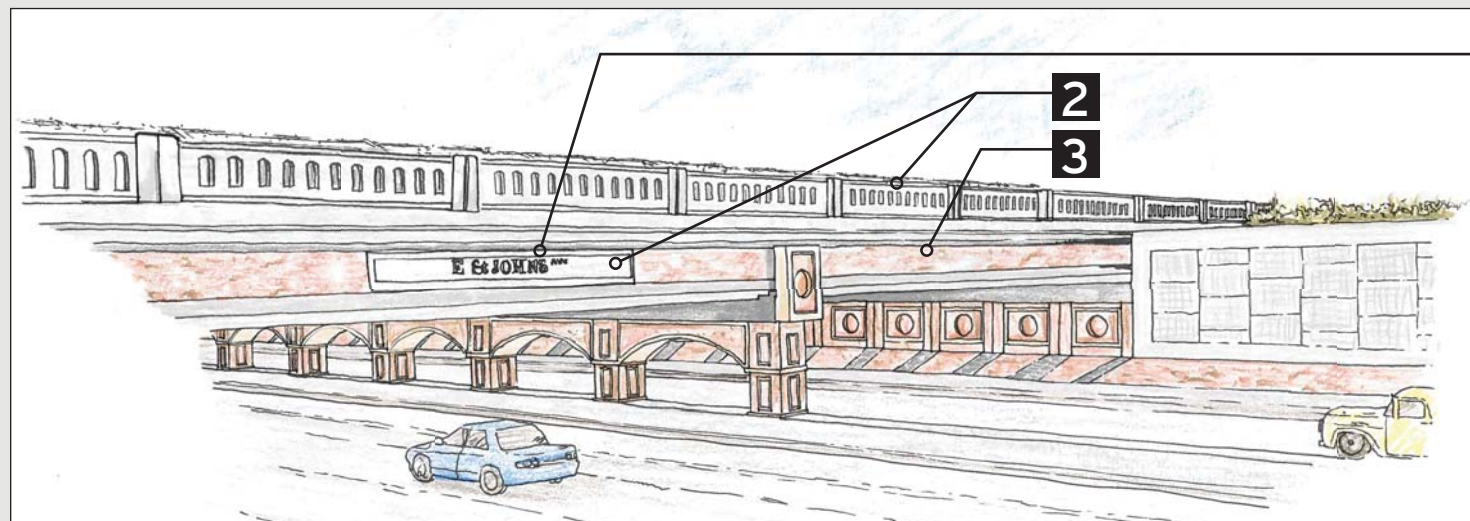


Fig 3.38 - Elevated East/West Crossing Street Name Identifiers

Exterior columns incorporate street identification where I-35 is elevated over east/west crossings, see Figure 1.13

Street name identifiers centered above mainlanes on the bridge beam where I-35 traverses below east/west crossings.

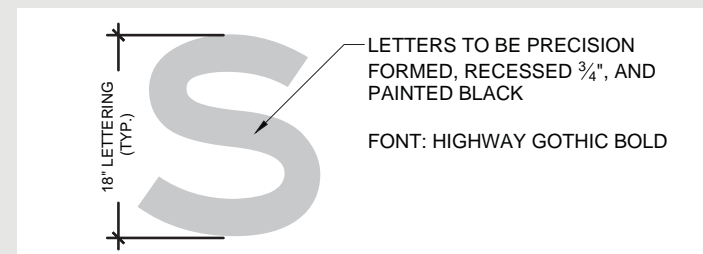


Fig 3.39 - Lettering Dimensions on Bridge Beam

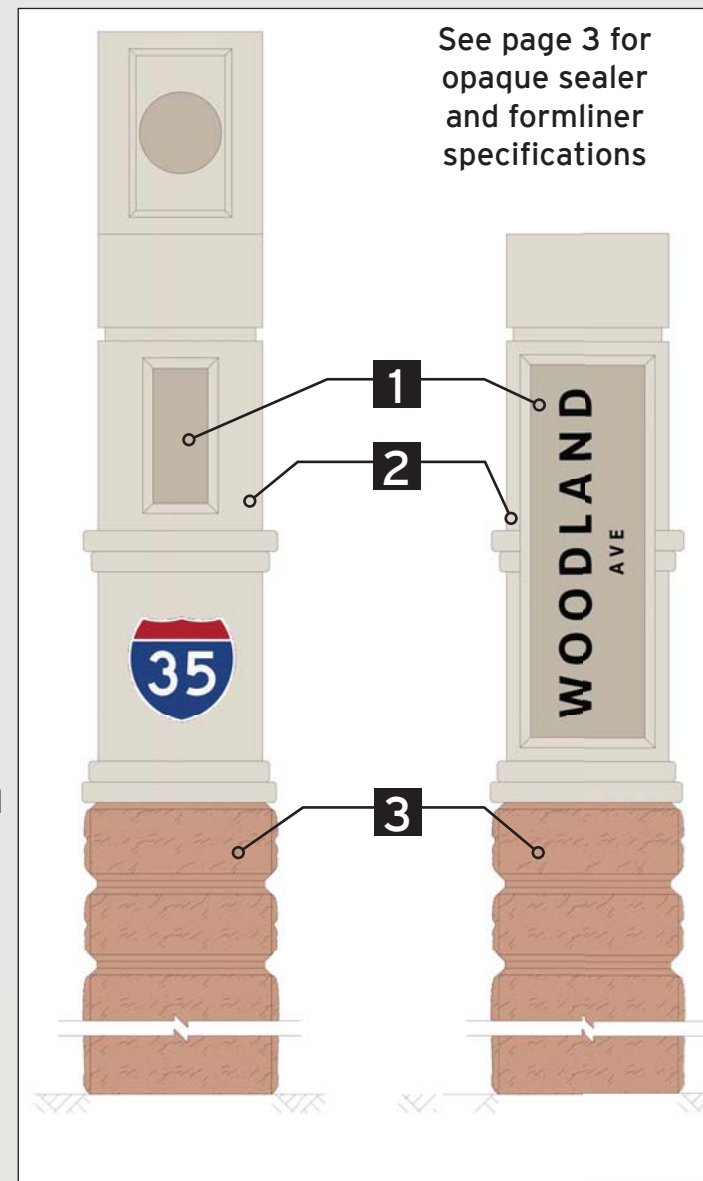


Fig 3.40 - Exterior Bent Street Identification Location

Note: Refer to sheet 33 for opaque sealer and formliner specifications.

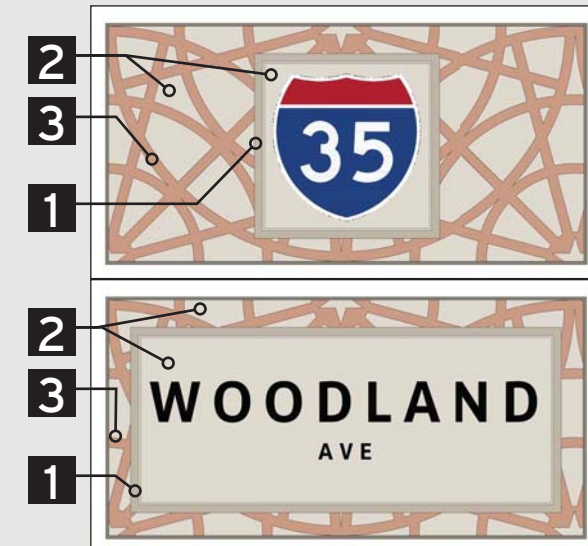


Fig 3.41 - Street Identification Panels Where No Interior Bents Exist

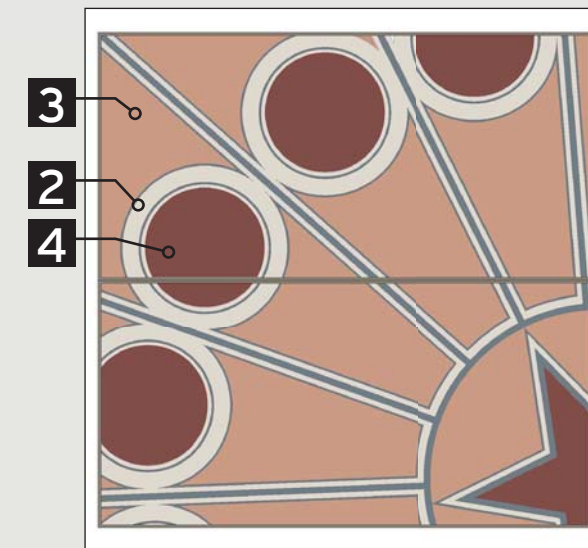




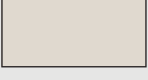



Fig 3.42 - Default Art Panels



SIGN STRUCTURES

Overhead signage structures within the corridor shall mimic the design used for the columns and complement the texture, form, shape and architectural details of the Capitol building in downtown Austin.

Note: In conditions where space does not allow installation of overhead sign structures as shown, a monotube design is preferred. Concrete base of monotube shall have opaque sealer applied, color to be "Reddened Earth" SW 6053 or approved equal.

| | | |
|---|---|--|
| 1 |  | Analytical Gray Opaque Sealer, SW 7051 |
| |  | Fitzgerald Formliners (or approved equal) Texas Sand Blast, 17992 |
| 2 |  | Egret White Opaque Sealer, SW 7570 |
| |  | Fitzgerald Formliners (or approved equal) Texas Sand Blast, 17992 |
| 3 |  | Reddened Earth Opaque Sealer, SW 6053 |
| |  | Rough Stone Finish Formliner - Mimic Base of Capitol Building |

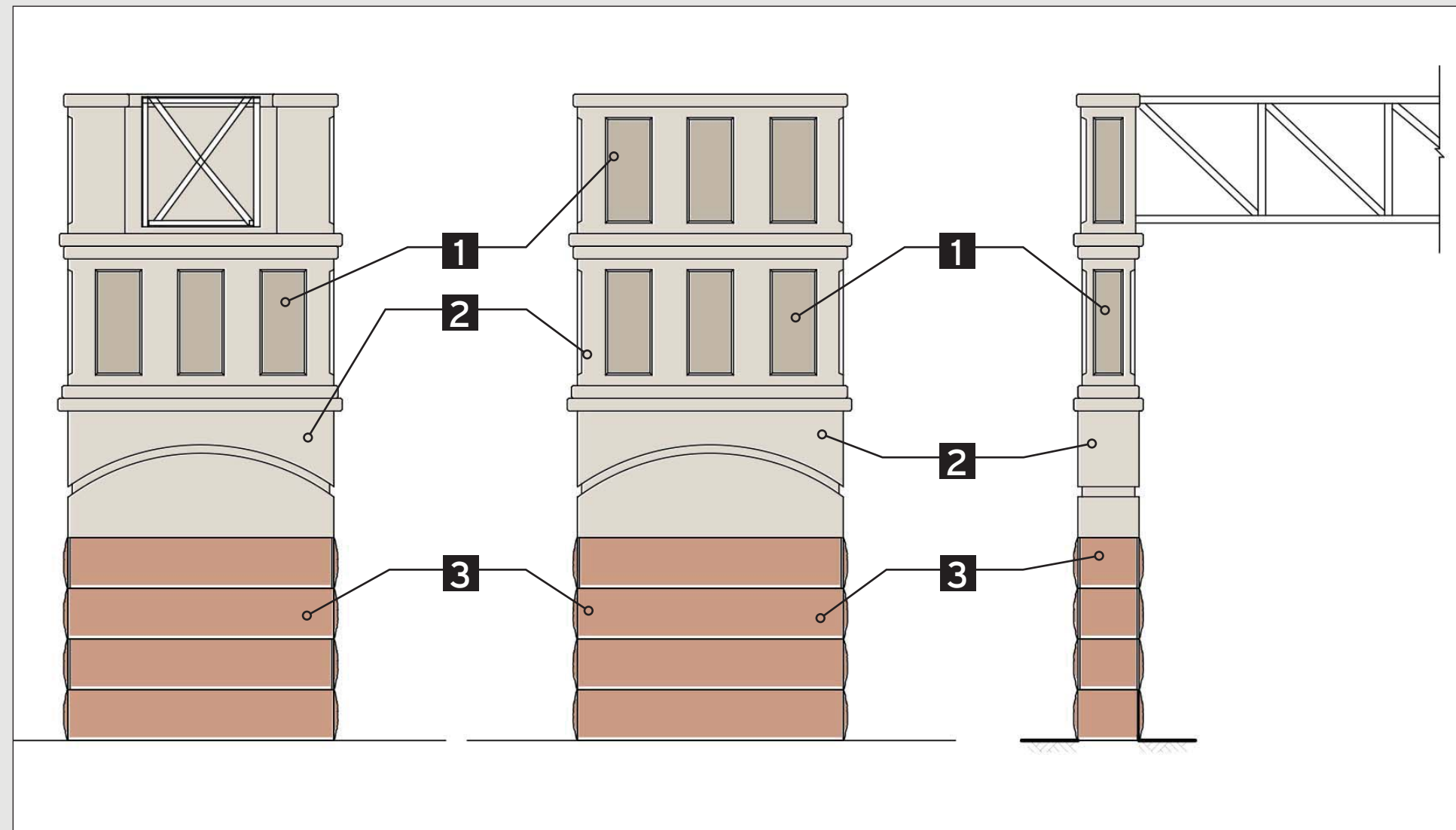


Fig 3.43 - Sign Structures



RETAINING AND WALLS

Retaining and abutment walls in Austin shall complement the texture, form, shape and architectural details of the Capitol building in downtown Austin.

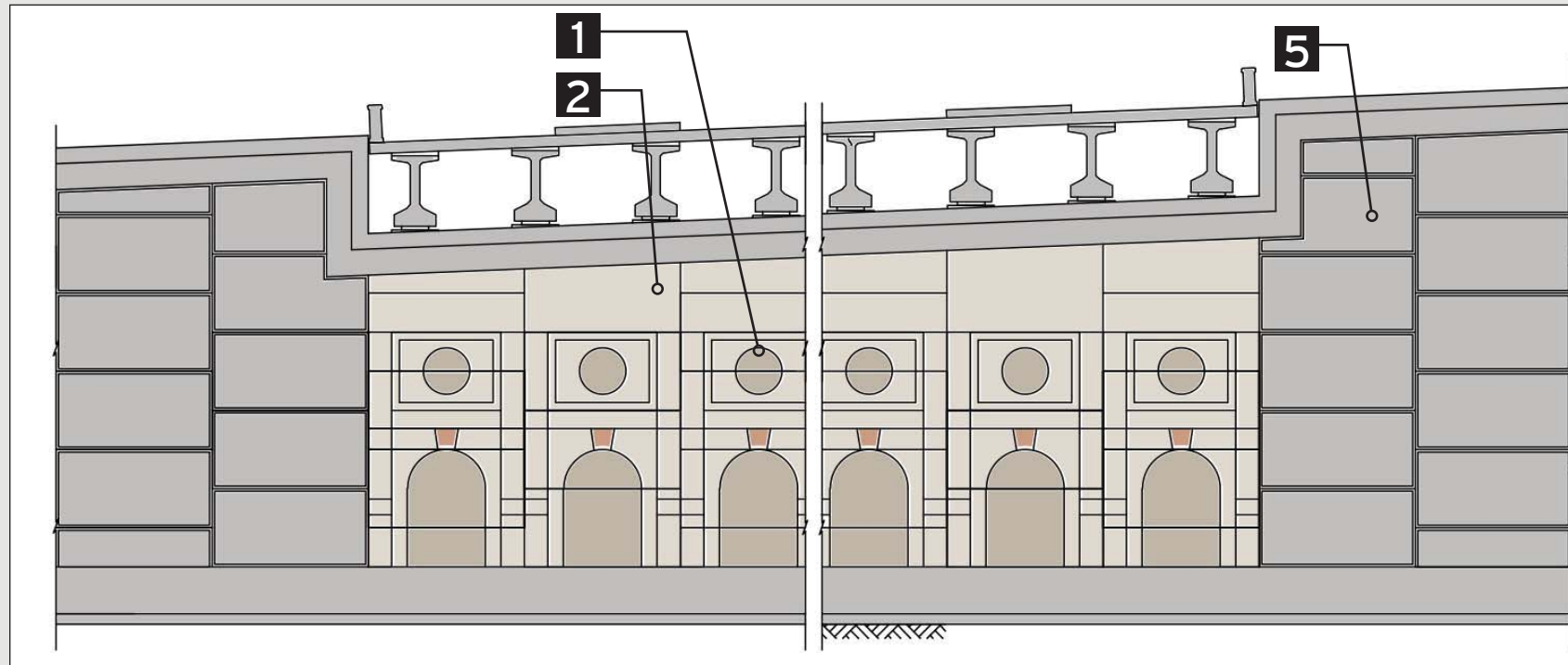


Fig 3.44 - Retaining Wall at Abutment - Freeway Underpass

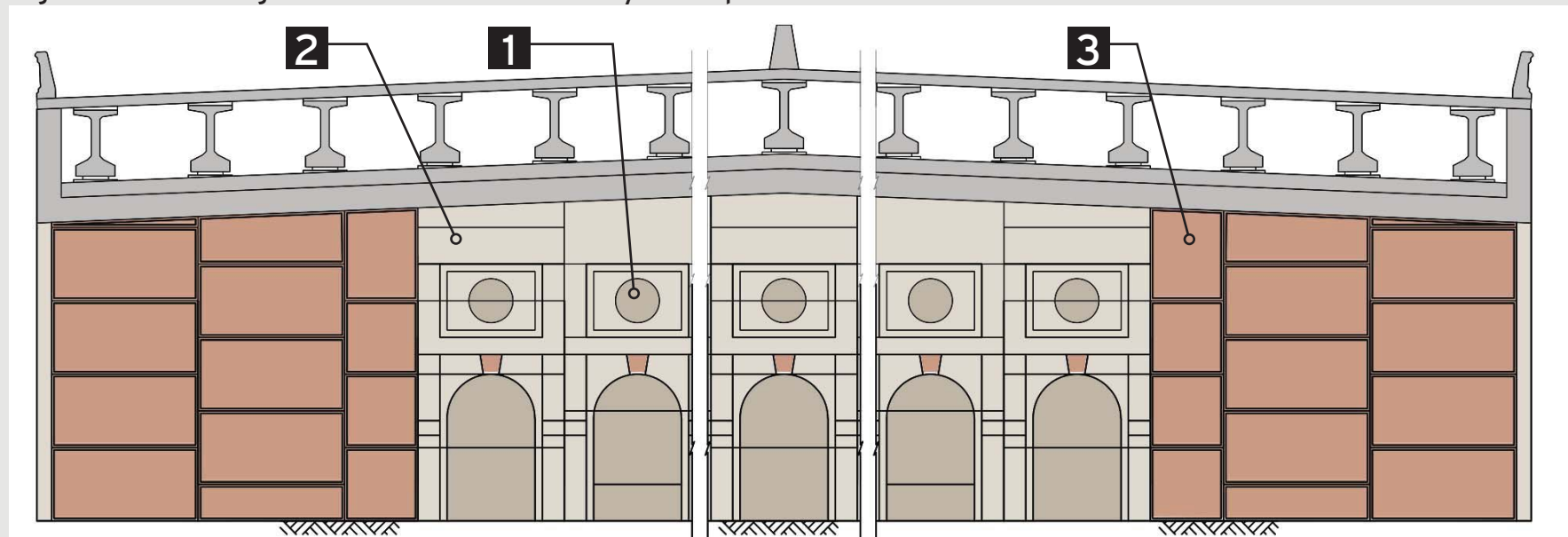


Fig 3.45 - Retaining Wall at Abutment - Freeway Overpass

| | | |
|---|--|--|
| 1 | | Analytical Gray Opaque Sealer, SW 7051 |
| | | Fitzgerald Formliners (or approved equal) Texas Sand Blast, 17992 |
| 2 | | Egret White Opaque Sealer, SW 7570 |
| | | Fitzgerald Formliners (or approved equal) Texas Sand Blast, 17992 |
| 3 | | Reddened Earth Opaque Sealer, SW 6053 |
| | | Rough Stone Finish Formliner - Mimic Base of Capitol Building |
| 5 | | Natural Concrete |
| | | Rough Stone Finish Formliner - Mimic Base of Capitol Building |

SAFETY BARRIERS

Multiple safety barriers will be utilized within the Central Austin corridor. Texas Classic traffic barrier will be the baseline used for areas where enhanced aesthetic treatments are applied and primarily focused on east/west crossings. Where east/west cross streets traverse over I-35, a traditional Texas Classic traffic barrier will be used.

Where I-35 traverses over east/west crossings, the traditional Texas Classic traffic barrier cannot be used due to speed limitation and impact requirements. In keeping with the overall aesthetic goal of the project, a modified SSTR traffic barrier designed to emulate the Texas Classic traffic barrier with imprinted arch patterns on the outside face will be used. At these locations, the modified SSTR traffic barrier should extended past the abutment front face of backwall by approximately 40 linear feet and transition back to an SSTR traffic barrier at a concrete pilaster. Traffic barrier finish to be Texas Sand Blast Formliner with Egret White Opaque Sealer.

| SAFETY BARRIER TYPES | SITE CONDITIONS |
|--|--|
| Texas Classic Traffic Barrier (Figure 3.46) | Elevated east/west crossings over I-35 mainlanes |
| Modified SSTR Traffic Barrier(Figure 3.47) | I-35 mainlane overpasses |
| SSTR Traffic Barrier (Figure 3.49) | Length of the corridor in areas not noted above |

Table 3.5 - Safety Barrier Matrix

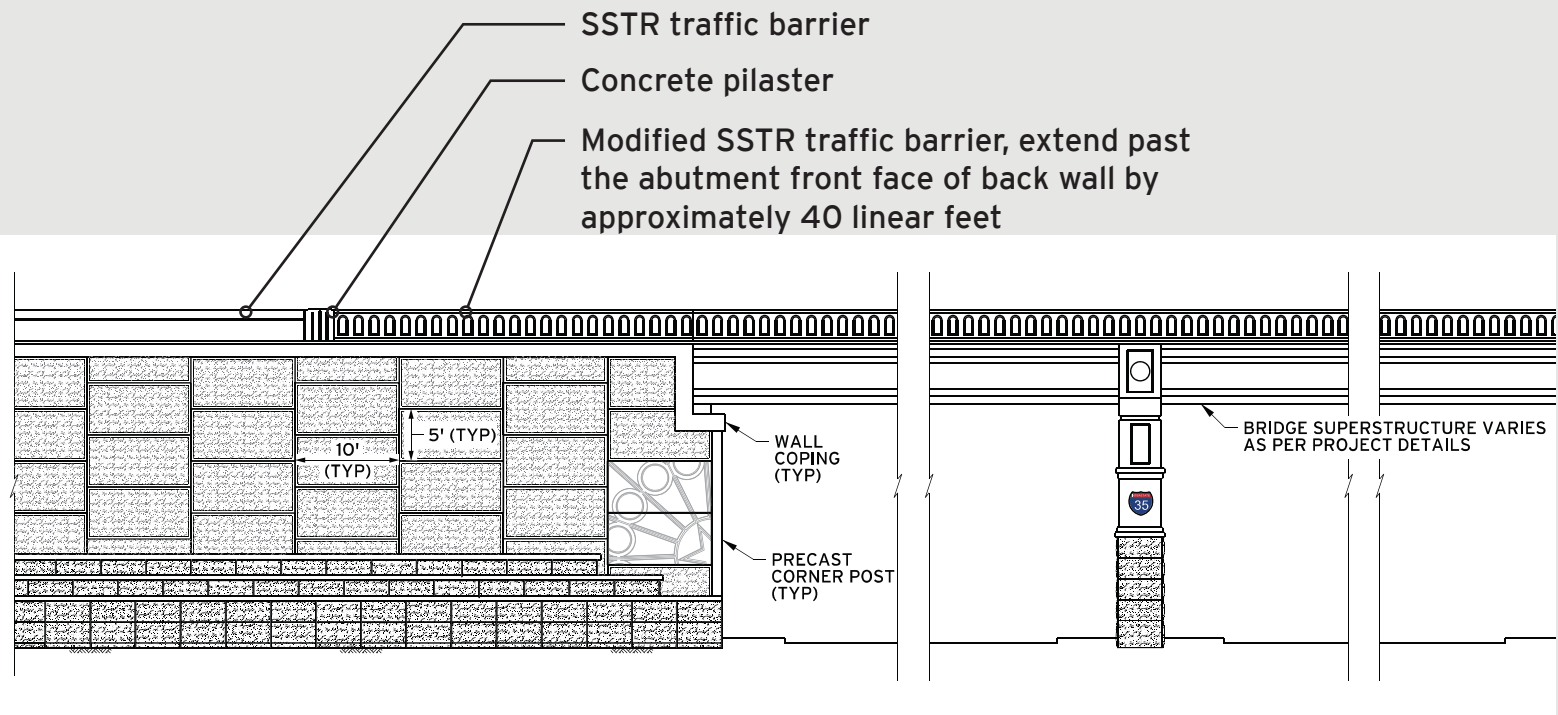


Figure 3.46 - Bridge Elevation (I-35 Overpass, Desirable Condition)



Figure 3.47 - Texas Classic Traffic Barrier



Figure 3.48 - Modified SSTR Traffic Barrier



Figure 3.49 - SSTR Traffic Barrier

ORNAMENTAL TRELLIS

Additional enhancements to the traditional safety barrier on elevated east/west crossings may, pending local funding and maintenance agreements, include the implementation of an ornamental trellis that evokes the character of the fencing used on the capitol grounds, architecture, and pavement patterns within the rotunda. Provisions for the addition of vegetation and vines along the length of the trellis may also be incorporated and should be implemented only when an adequate maintenance and watering program can be established. Trellis to be galvanized steel with black powder coat finish.

Note: Does not apply to east/west crossings within the upper decks segment of the corridor.

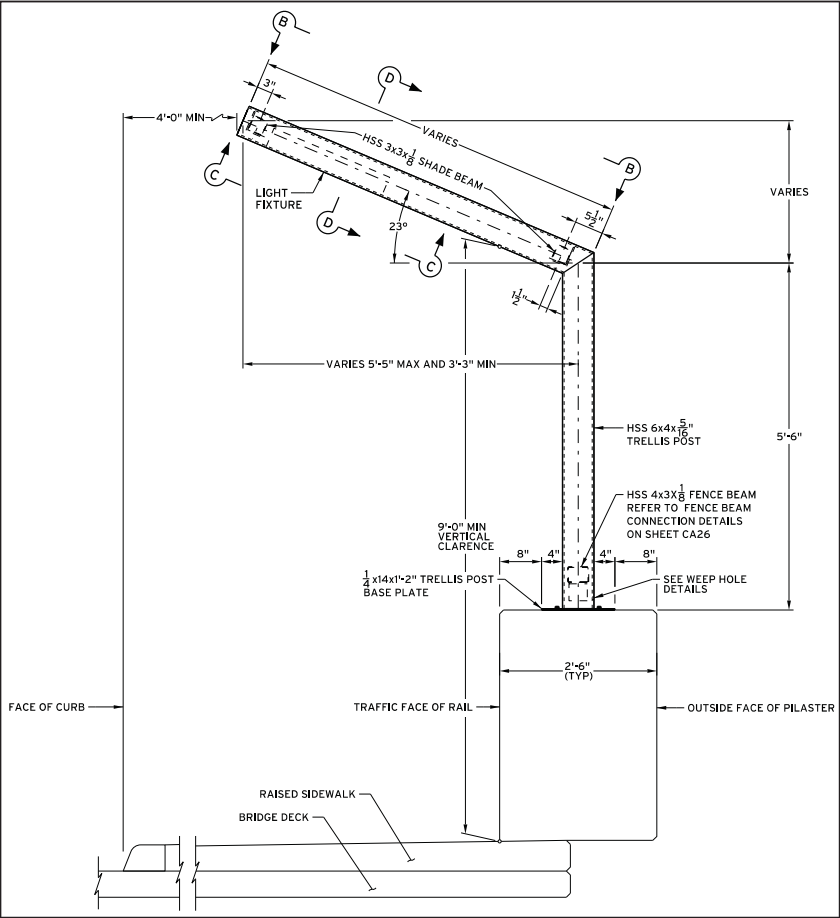


Figure 3.51 - Section Through Ornamental Trellis

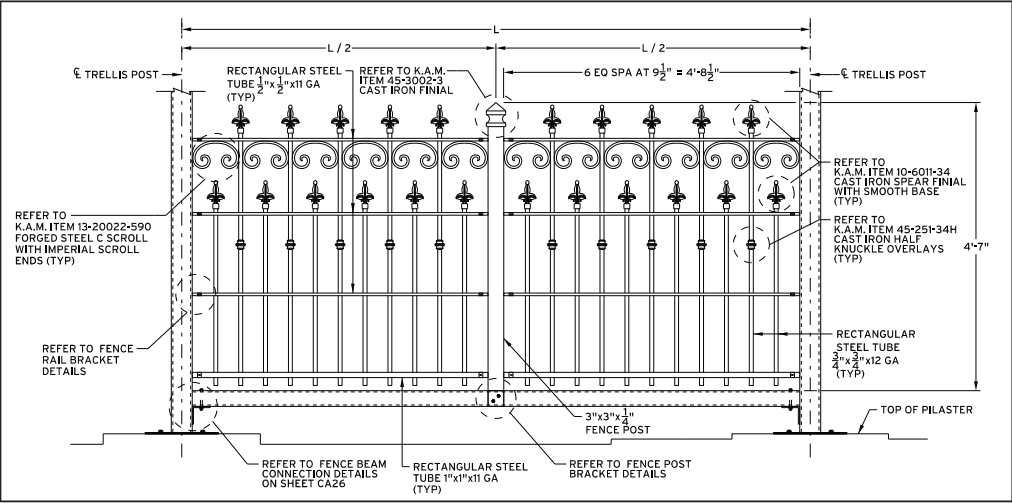


Figure 3.52 - Ornamental Fence Detail

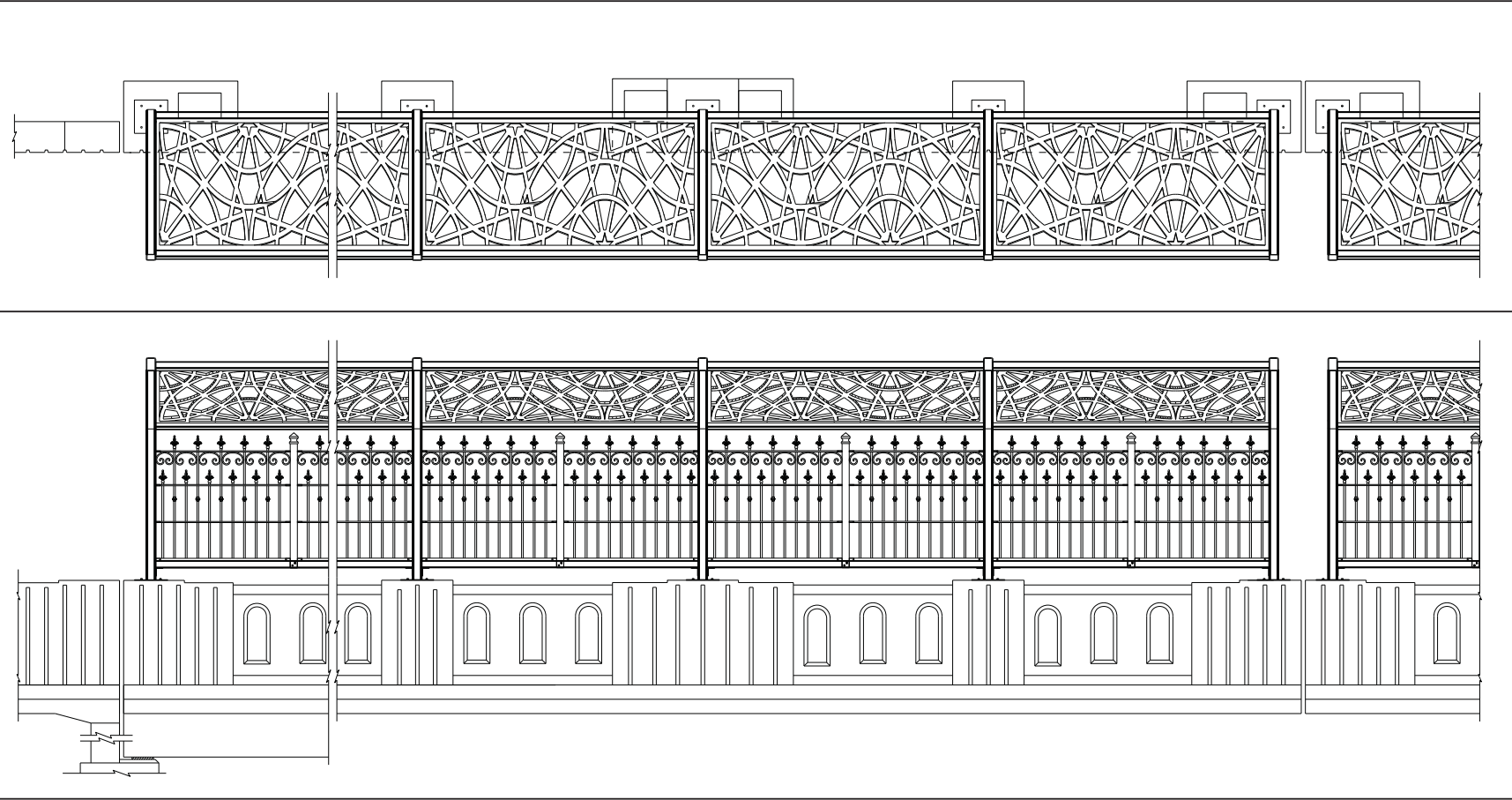


Figure 3.50 - Texas Classic Traffic Barrier with Ornamental Trellis on Elevated East/West Crossings

HARDSCAPE

Throughout the corridor a system of shared use paths and sidewalks is being expanded and these elements shall be plain concrete for user ease. Pavers will be used between the walks and the back of curb where the space is 5 feet or greater and areas underneath all overpasses where excessive shade prohibits the use of vegetation. To emulate the banding used at the Capitol rotunda, Pavestone charcoal Holland stone pavers (or approved equal) banding with Pavestone Quartex (or approved equal) paver fields will be implemented throughout the corridor.

Note: Contractor to coordinate with the City of Austin and the Area Office for placement of trash receptacles underneath overpasses if applicable.

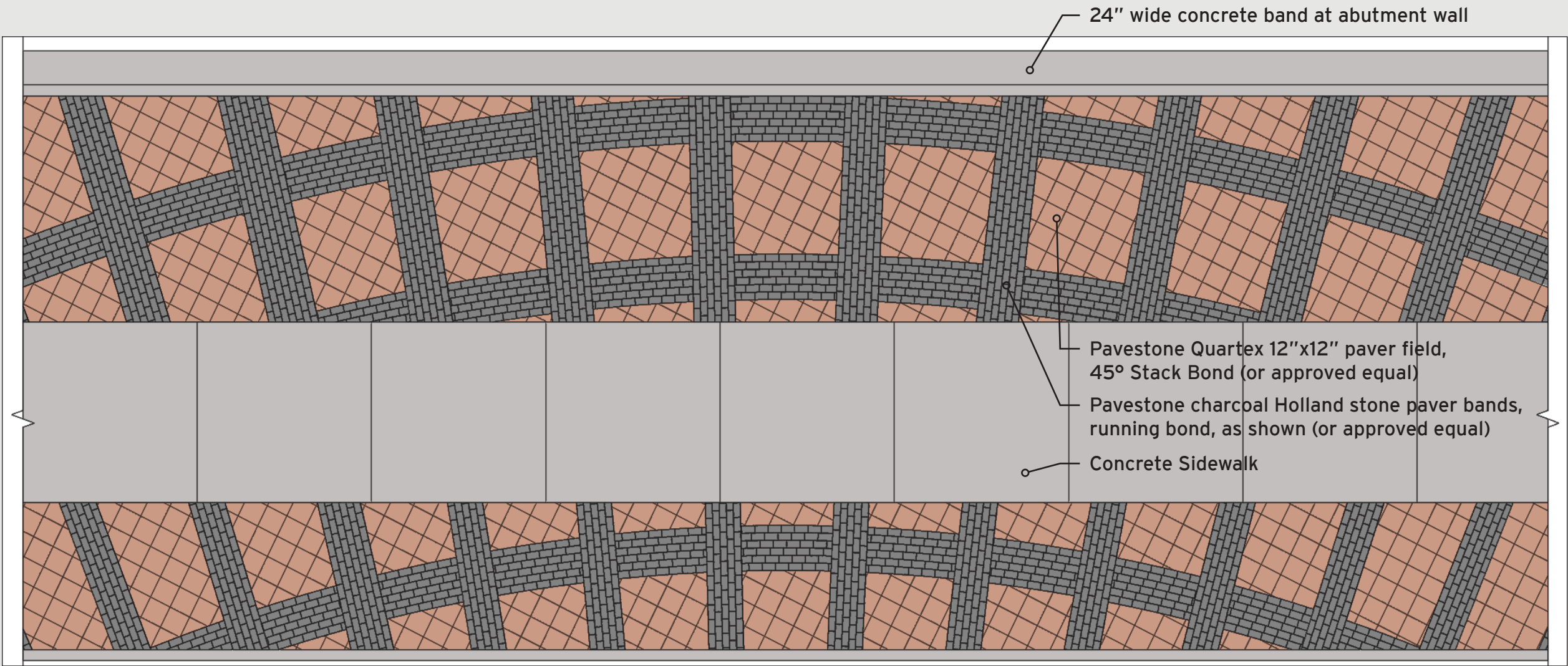


Figure 3.53 - Paving Pattern and Sidewalk at Abutments



Figure 3.54 - Pink Granite Quartex Paving



Figure 3.55 - Charcoal Pavers

TRANSITION AREAS

Several areas along the corridor will need to transition from existing aesthetics or already have aesthetic elements in place that will be matched for all future construction to create cohesiveness along corridors that intersect I-35. Below is a general list of elements that are anticipated to remain. Note: If an existing element changes, match the Central Austin Aesthetics where feasible.

Lady Bird Lake:

- Bridge Structures
- Northbound retaining walls
- Boardwalk

51st Street

- Turnaround and overpass
- All northbound retaining walls
- Southbound retaining walls
- Roundabout

*Upper Decks between MLK Blvd and Airport Blvd

- Bridge structure including columns
- Some exposed aggregate walls particularly between mainlanes

US 290

- Retaining walls
- Column aesthetic

US 183

- Some textured walls
- Segmental construction of US 183
- Southbound US 183 to southbound I-35 flyover
- Column aesthetic

*Aesthetic treatments that correspond to the Central Austin guidelines will be implemented to at grade and depressed areas of the decks section. Improvements will include retaining wall textures, lighting, and traffic barrier upgrades to match the Central Austin theme. Elevated east/west crossings will also have the aesthetic applied.



Figure 3.56 - Retaining Walls at Lady Bird Lake



Figure 3.57 - Bridge Structure at Lady Bird Lake



Figure 3.58 - Columns and structure at US 183 Interchange



Figure 3.59 - Existing Turnaround and Overpass at 51st Street



Figure 3.60 - Columns at Upper Decks

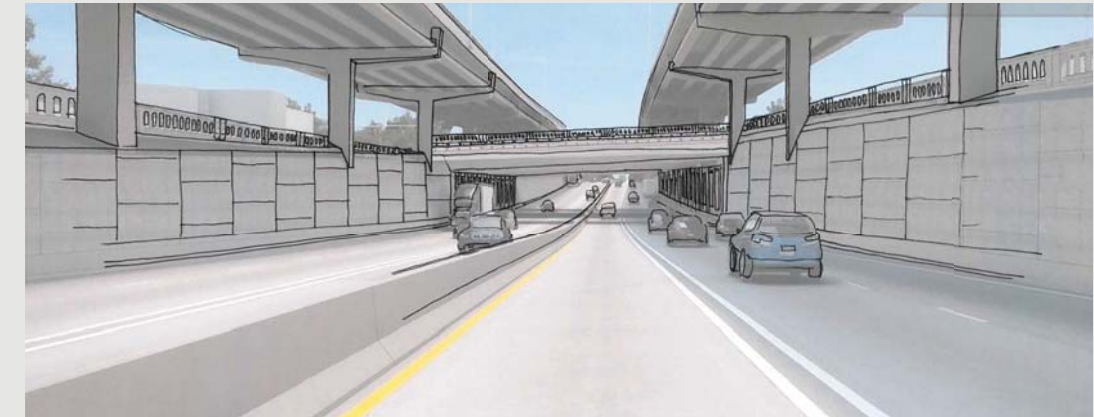


Figure 3.61 - East/West Crossing, Retaining Wall, and Barrier Improvements, Decks Section



Figure 3.62 - Bridge Structure and columns at US 290

ILLUMINATION

In general, the guidelines for Illumination design that are noted in the Corridor Wide Aesthetics section of this document will be followed with the exception of abutment accents and elevated east/west crossings over I-35 mainlanes at locations where ornamental trellises are implemented.

Standard LED safety lighting at abutments and freeway over/under passes will utilize an upgraded fixture that is to be supplemented with focused accent lighting used to highlight architectural designs on the columns and abutment precast panels. The focus of illumination for aesthetics and safety should be about light levels and not the fixtures themselves which will be concealed wherever possible.

Focused accent lighting is to be placed on columns and abutments. The fixture should be placed on the bent cap and centered between arched elements on abutment walls and centered on columns at freeway over/under passes. Light levels will need to be considered when placing fixtures and if too much illumination is provided, every other column may be lit so long as the outer columns are illuminated.

Conduit serving these fixtures is to be embedded in the bent cap to preserve the aesthetic design. J-boxes are to be located between turnaround bridges and overpass bridges and shall be concealed as best as possible on the end of the bent caps.

Elevated east/west crossings over I-35 Mainlanes that implement ornamental trellises will also incorporate additional safety lighting integral to the trellis posts. It is anticipated that the dense canopy that could potentially include vegetation which provides shade during the day would also create a dark space that shades street lighting. To avoid this, the additional lights will be necessary to maintain the level of safety while at the same time adding an additional aesthetic element to the corridor.

Concrete bases of high mast lighting, where visible from mainlanes shall have an opaque sealer applied, color to be "Reddened Earth" SW 6053 or approved equal.

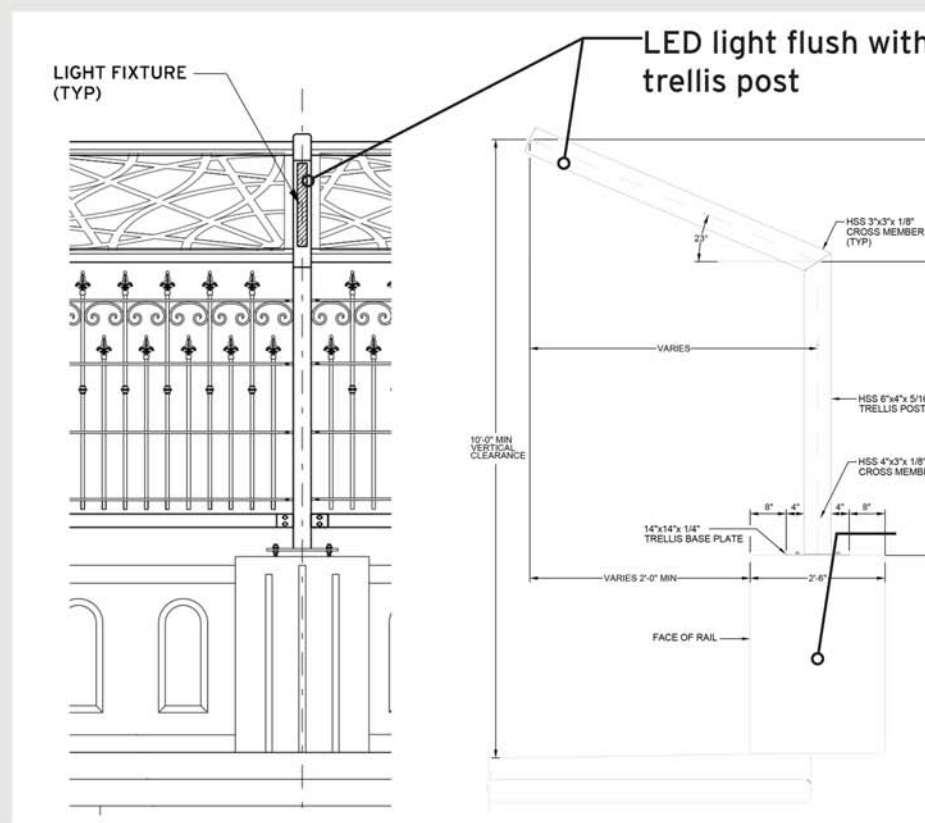


Figure 3.63 - Trellis Post, Typical



Figure 3.64 - Accent and Safety Lighting at Freeway Over/Underpasses, Columns, and Abutments



Figure 3.65 - Flush Mounted LED at Trellis Post



Figure 3.66 - Focused Accent Lighting at Columns and Abutments

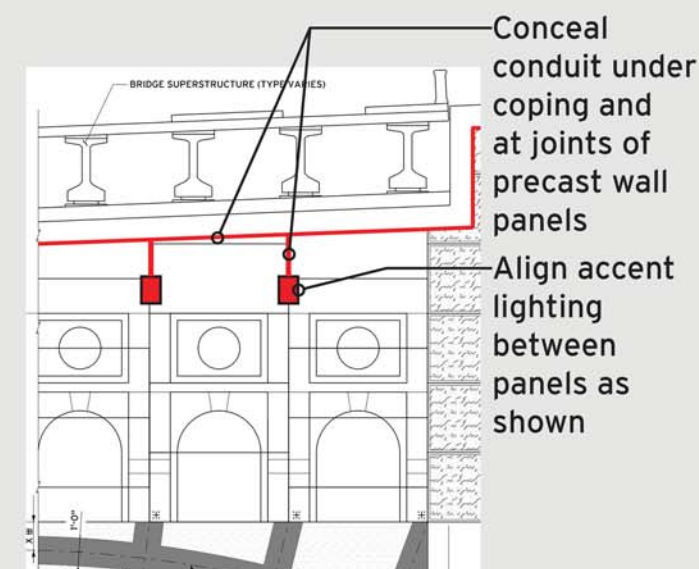


Figure 3.67 - Focused Accent Lighting and Conduit Layout at Abutments

LANDSCAPE & IRRIGATION

In general the guidelines for Tree Protection, Landscape, and Irrigation design that are noted in the Corridor Wide Aesthetics section of this document will be followed with one addition: depending on funding for implementation and maintenance by local partners, native landscaping will be implemented in every feasible location available along the constrained corridor. A strong preference for low maintenance, native trees, shrubs, and groundcovers that require minimal water use should be used. Where desirable conditions exist at abutments, raised planter walls should also be used to provide additional verticality and to supplement ornamental and shade tree plantings. Planter walls are to be high enough to discourage pedestrian access and the lowest planter wall should have a minimum of 5'-0" of exposed height. Planter walls are to have a Rough Stone Finish Formliner texture to mimic the base of the Capitol Building and will also have a Reddened Earth Opaque Sealer.

Note: Planter walls and plant material shall not obstruct full view of art panels.

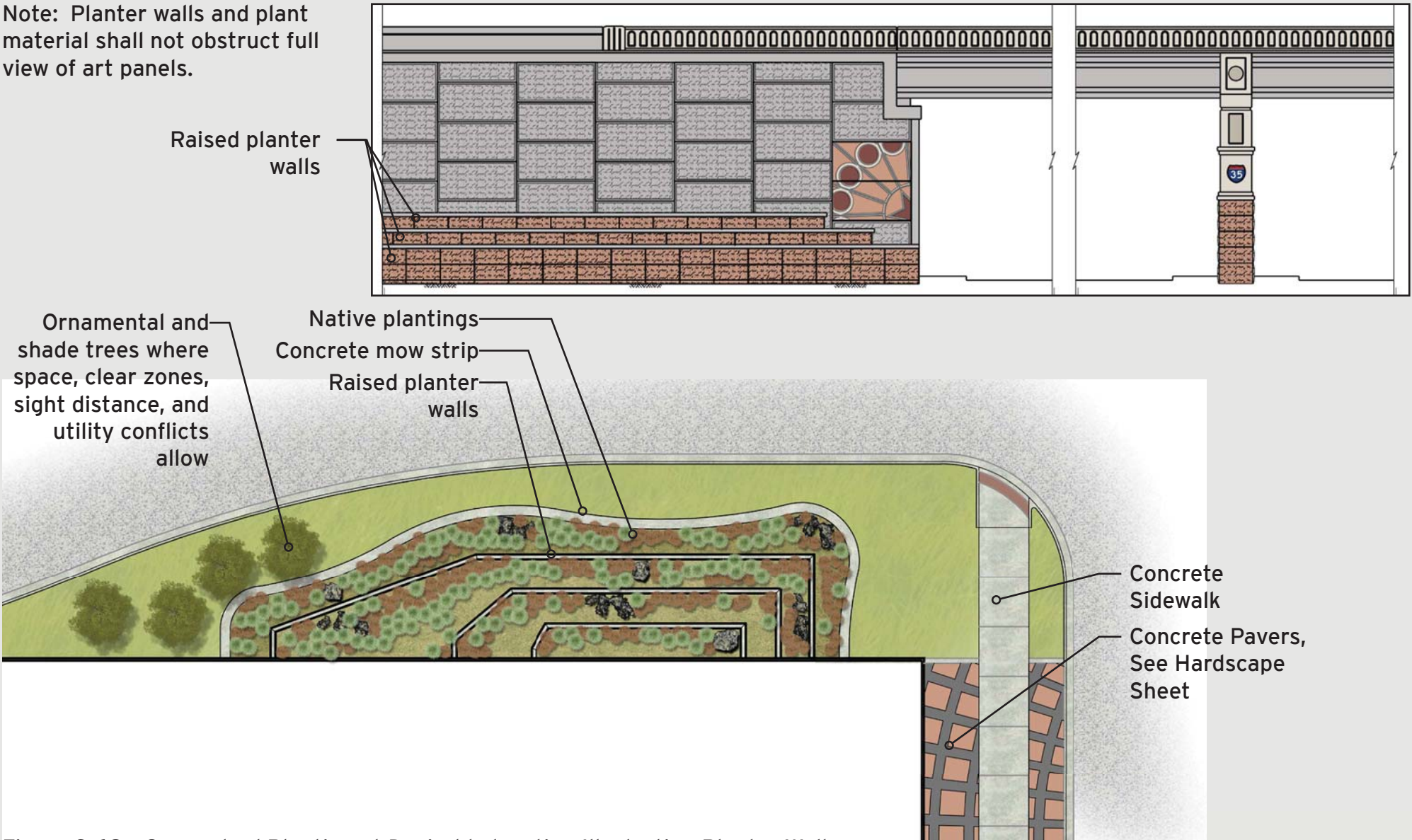


Figure 3.68 - Conceptual Planting at Desirable location Illustrating Planter Walls



Spineless Prickly Pear



Skeleton-leaf Goldeneye



Gulf Muhly



Twist Leaf Yucca



Red Yucca



Blackfoot Daisy



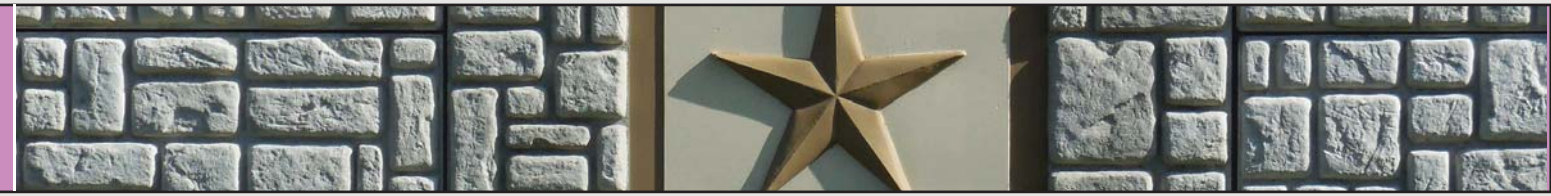
Palo Verde



Texas Red Bud



BUDA



The limits of the Buda corridor are from SH 45SE to Robert S. Light Road.

The following structural component aesthetics are defined in this chapter:

- BRIDGE BENTS
- BRIDGE BEAMS
- RETAINING AND ABUTMENT WALLS
- SAFETY BARRIERS
- HARDSCAPE

Color Palette



French Roast Opaque Sealer, SW 6069

BRIDGE BENT

Complement the texture, shape, and architectural details of the bents at SH 45SE and I-35. Unlike SH 45SE, an opaque sealer shall not be applied to the bridge bents. See Table 4.1 for bent aesthetic types. If existing bridges are widened, all structural components shall complement the proposed aesthetics.

| BENT TYPES | FIGURE |
|----------------------------|--------|
| Hammerhead | 4.1 |
| Multi-Column | 4.2 |
| Inverted "T" | 4.3 |
| Inverted "T", Multi-Column | 4.4 |
| Straddle | 4.5 |
| Cantilever | 4.6 |

Table 4.1- Bridge Bent Matrix



Fig. 4.1- Hammerhead Bent



Fig. 4.2- Multi-Column Bent



Fig. 4.3- Inverted "T" Bent



Fig. 4.4- Inverted "T", Multi-Column Bent



Fig. 4.5- Straddle Bent



Fig. 4.6- Cantilever Bent

BRIDGE BEAM

Bridge beams in Buda shall complement the aesthetics at I-35 and FM 2001. Where concrete “I” beams are used, opaque sealer shall not be applied, as seen in Figures 4.7 and 4.8.

Existing weathered steel beams in Buda are not coated with opaque sealer and as a result, have been a maintenance concern. All future weathered steel beams at cross bridges shall be painted with opaque sealer “French Roast” (Sherwin Williams 6069) to complement the weathered steel color, as seen in Figures 4.9 and 4.10.

Opaque sealer shall not be applied to mainline beams.



Fig. 4.7- Concrete “I” Beam



Fig. 4.8- Concrete “I” Beam, Brown Opaque Sealer Along Underside of Beam



Fig. 4.9- Weathered Steel Beam, No Opaque Sealer



Fig. 4.10- Weathered Steel Beam, No Opaque Sealer

RETAINING AND ABUTMENT WALLS

Retaining and abutment walls shall complement the aesthetic of those on SH 45SE and I-35. MSE retaining walls shall have an ashlar texture and no opaque sealer as seen in Figures 4.11 and 4.12. Signature MSE panels shall have an ashlar texture with a three dimensional star set on a smooth concrete inset panel as seen in Figure 4.13. If existing bridges are widened, all structural components shall complement the existing aesthetics.

Aesthetic treatments on retaining walls shall be as stated above regardless of wall type.

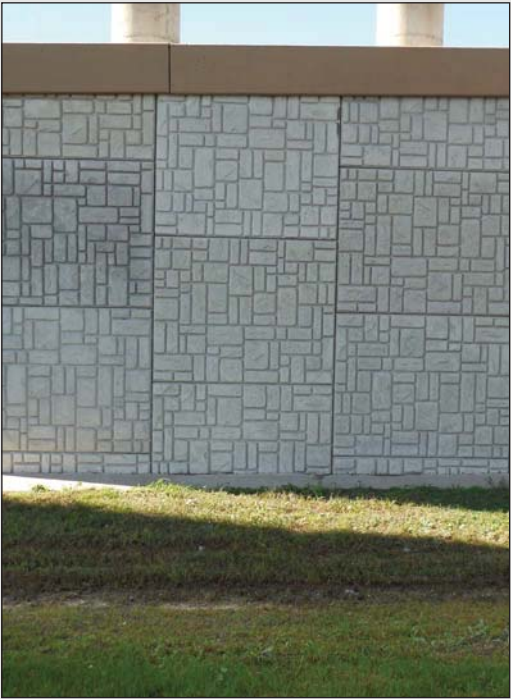


Fig 4.11- MSE Retaining Wall

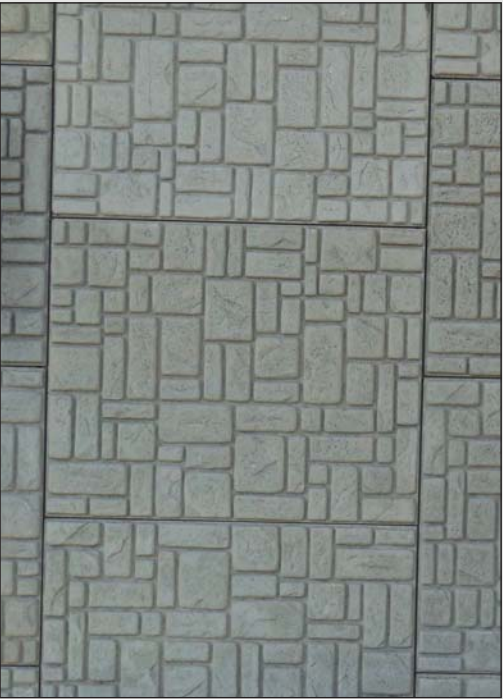


Fig 4.12- MSE Panel Detail



Fig 4.13- Signature MSE Panel Detail



Fig 4.14- MSE Panels with Signature MSE Panel

SAFETY BARRIERS

Safety barriers in Buda shall not have opaque sealer and shall be one of the following listed in Figures 4.15-4.17.

| SAFETY BARRIER TYPES | SITE CONDITIONS |
|--|--|
| Concrete Coping (Figure 4.15) | Retaining Wall, No Vehicular Traffic Present |
| Concrete Traffic Barrier with Coping (Figure 4.16) | Retaining Wall, Vehicular Traffic Present |
| Concrete Traffic Barrier (Figure 4.17) | Bridge |
| Concrete Traffic Barrier Bridge End Detail (Figure 4.18) | Bridge End |

Table 4.2- Safety Barrier Matrix

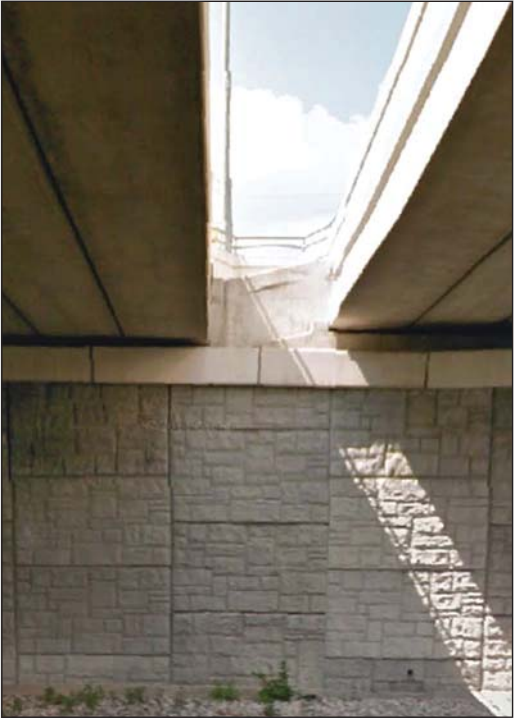


Fig 4.15- Concrete Coping



Fig. 4.16- Concrete Traffic Barrier



Fig 4.17- Concrete Traffic Barrier with Coping



Fig 4.18- Concrete Traffic Barrier Bridge End Detail

HARDSCAPE

At split-grade roadway intersections, concrete pavers shall be used between sidewalks and curbs and in medians. Pavers shall be an array of natural colors set in a herringbone pattern to complement those seen in Figure 4.19. A soldier course shall be set behind the back of curb as seen in Figure 4.20.

At ramp gores, use Class B concrete rip rap to a depth of 5 inches, as seen in Figure 4.21.



Fig 4.19- Concrete Pavers at Traffic Islands



Fig 4.20- Herringbone Pattern



Fig 4.21- Concrete Rip Rap at Ramp Gore



KYLE



The limits of the Kyle corridor are from Robert S. Light Road to Yarrington Road.

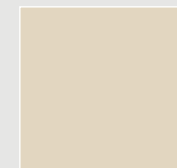
The following structural component aesthetics are defined in this chapter:

- BRIDGE BENTS
- BRIDGE END DETAILS
- BRIDGE BEAMS
- RETAINING AND ABUTMENT WALLS
- SAFETY BARRIERS

Color Palette



Red Brick Sealer, FS 20152



Tan Opaque Sealer, FS 37769

BRIDGE BENTS

Bridge bents in Kyle shall have brick texture on all faces of each column with red brick and tan opaque sealer to complement those of existing Kyle bridges on I-35 see in Figure 5.2. Each bent cap shall have a mask wall to conceal beam joints. Mask walls shall complement the architectural details and ranch symbols as seen in Figure 5.1. If existing bridges are widened, all structural components shall complement the existing aesthetics.



Fig. 5.1- Bent Cap with Mask Wall



Fig. 5.2- Multi-Column Bent with Mask Wall

BRIDGE END DETAILS

Bridge end obelisks in Kyle shall be smooth textured concrete with tan opaque sealer and ranch symbols to complement those at the existing Kyle bridges on I-35 as seen in Figures 5.3-5.4.



Fig 5.3- Bridge Bent End Detail with Ranch Symbol



Fig 5.4- Bridge Bent End Detail with Ranch Symbol

BRIDGE BEAMS

Bridge beams in Kyle shall have brick texture on the outer faces with red brick and tan opaque sealer and include street lettering centered over the oncoming main lanes to complement the existing Kyle bridges on I-35 as seen in Figures 5.5-5.6.



Fig. 5.5- Concrete "I" Beams



Fig. 5.6- Concrete "I" Beams

RETAINING AND ABUTMENT WALLS

Retaining and abutment walls shall complement those of existing Kyle bridges on I-35. MSE retaining walls shall have a brick texture with a red brick opaque sealer and smooth concrete bands with tan opaque sealer as seen in Figures 5.7-5.9.

Aesthetic treatments on retaining walls shall be stated as above regardless of wall type.



Fig 5.7- MSE Panels



Fig 5.8- Concrete Bands



Fig 5.9- MSE Panels

SAFETY BARRIERS

Safety barriers shall complement those of existing Kyle bridges on I-35. Concrete traffic barriers shall be painted with a tan opaque sealer as seen in Figure 5.10 and 5.12.

| SAFETY BARRIER TYPES | SITE CONDITIONS |
|---|--|
| Concrete Coping (Figure 5.10) | Retaining Wall, No Vehicular Traffic Present |
| Concrete Traffic Barrier with Coping (Figure 5.11) | Retaining Wall, Vehicular Traffic Present |
| Concrete Traffic Barrier with Arch Openings (Figure 5.12) | Bridge |

Table 5.2- Safety Barrier Matrix



Fig 5.10- Concrete Coping

Concrete Traffic Barrier with Concrete Coping (Mod.)



Fig 5.11- Concrete Traffic Barrier with Concrete Coping



Fig 5.12- Concrete Traffic Barrier with Arch Openings

HARDSCAPE

At split-grade roadway intersections, use Class B concrete rip rap to a depth of 5 inches, as seen in Figure 5.13.

At ramp gores, use Class B concrete rip rap to a depth of 5 inches, as seen in Figure 5.14.

At crosswalks, use terra cotta stamped concrete in a running bond brick pattern as seen in Figure 5.15.



Fig 5.14- Concrete Rip Rap at Ramp Gore



Fig 5.13- Concrete Rip Rap at Median



Fig 5.15- Terra Cotta Stamped Concrete, Running Bond Brick Pattern at Crosswalks



SAN MARCOS

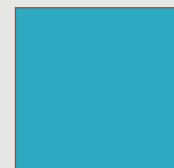


The limits of the San Marcos corridor are from Yarrington Road to Posey Road.

The following structural component aesthetics defined in this chapter:

- BRIDGE BENTS
- BRIDGE BEAMS
- RETAINING AND ABUTMENT WALLS
- SAFETY BARRIERS
- HARDSCAPE

Color Palette



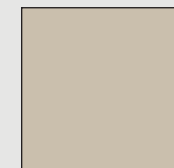
Calypso Opaque Sealer, SW 6950



Blue Chip Opaque Sealer, SW 6959



Honorable Blue Opaque Sealer, SW 6811



"Sandbar" Sealer, SW 7547



"Sands of Time" Sealer, SW 6101



"Rookwood Brown" Sealer, SW 2806
(used for sponge painting)

Note: Update to be provided
based on Yarrington Bridge
improvements.



BRIDGE BENTS

Bridge bents in San Marcos shall complement the opaque sealer color, texture, shape and architectural details of the newly constructed abutment wall at Aquarena Springs Drive and I-35.

If a new bridge is being constructed, the bents shall complement the multi-column bent with mask wall as seen in Figures 6.1. and 6.2.

If existing bridges are widened, all structural components shall complement the existing aesthetics. A concrete column detail shall be constructed at both ends of the bents as seen in Figure 6.2.

| BENT TYPES | FIGURE |
|---------------------------|--------|
| Multi-Column Bent | 6.1 |
| Column at Bridge Widening | 6.3 |

Table 1.1- Bridge Bent Matrix

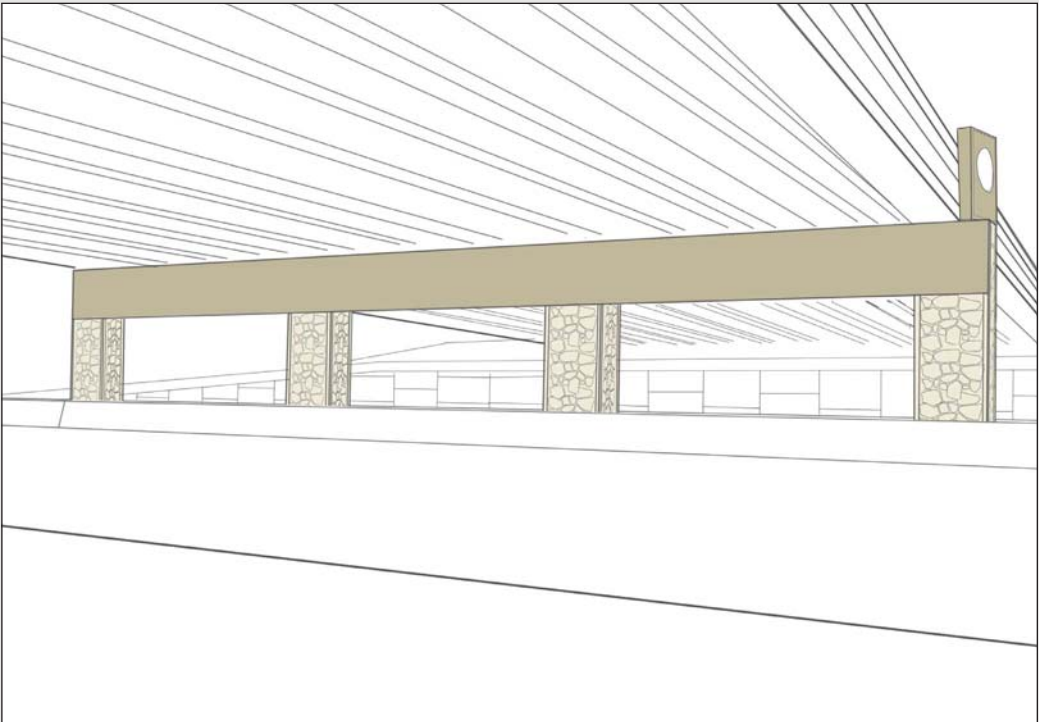


Fig. 6.1- Multi-Column Bent

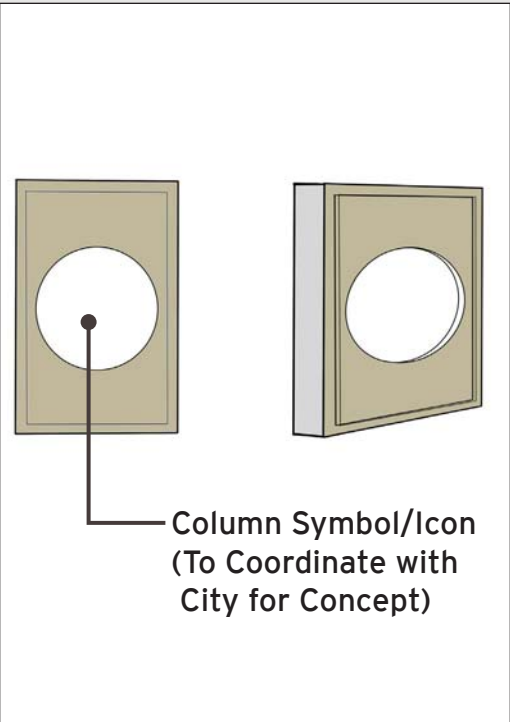


Fig. 6.2- Wall Mask

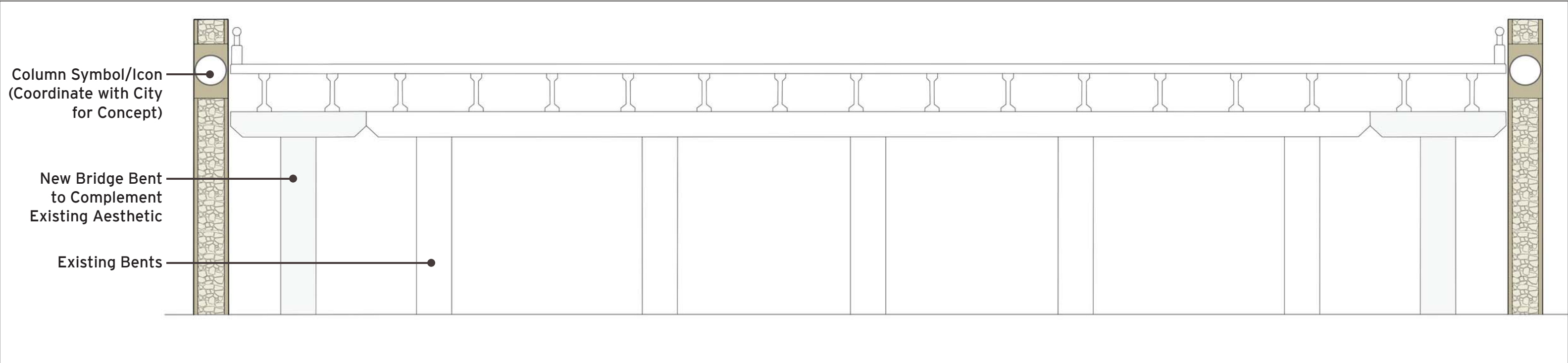


Fig. 6.3- Concrete Column Treatment at Bridge Widening



BRIDGE BEAMS

Bridge beams in San Marcos shall complement the aesthetics of the existing I-35 corridor. Where concrete "I" beams are used, opaque sealer shall not be applied, as seen in Figure 6.3.



Fig. 6.3- Concrete "I" Beam

RETAINING AND ABUTMENT WALLS

Retaining and abutment walls shall complement the aesthetic of those on Aquarena Springs Dr. and I-35 in San Marcos.

The wall panel types in San Marcos are as follows:

- Smooth concrete panel with a full stone veneer
- Smooth concrete panel with partial stone veneer
- Smooth concrete panel with partial stone veneer and “blue wave”
- Smooth concrete panel with “blue wave”
- Smooth concrete panel

Note: Update to be provided based on Yarrington Bridge improvements.

Aesthetic treatments on retaining walls shall be as stated above regardless of wall type.



Fig 6.4- MSE Panels

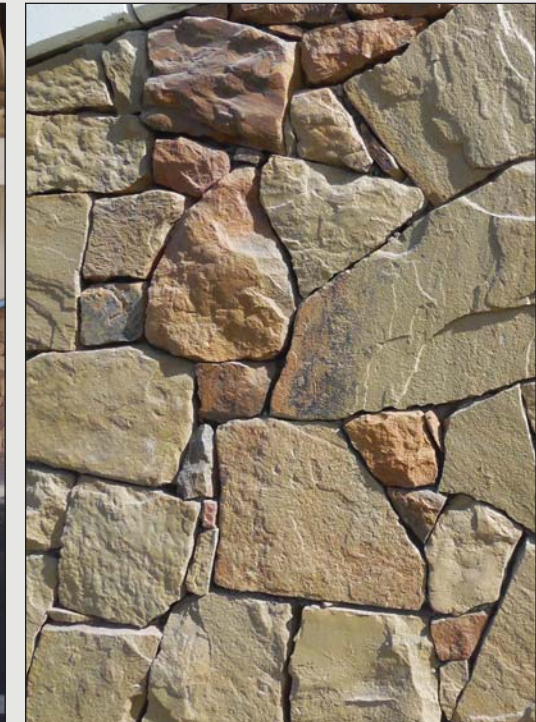


Fig 6.5- Stone Veneer



Fig 6.6- MSE Panels

SAFETY BARRIERS

Safety barriers in San Marcos shall not have opaque sealer and shall be one of the following TxDOT standards listed in Figures 6.7-6.9.

| SAFETY BARRIER TYPES | SITE CONDITIONS |
|--|--|
| Concrete Coping (Figure 6.7) | Retaining Wall, No Vehicular Traffic Present |
| Concrete Traffic Barrier with Coping (Figure 6.8) | Retaining Wall, Vehicular Traffic Present |
| Concrete Traffic Barrier with Coping (Figure 6.9) | Bridge |

Table 6.2- Safety Barrier Matrix



Fig 6.7- Concrete Coping



Fig 6.8- Concrete Traffic Barrier and Coping



Fig 6.9- Concrete Traffic Barrier

HARDSCAPE

At split-grade roadway intersections, concrete pavers shall be used between sidewalks and curbs and in medians. Pavers shall be terra cotta rectangular concrete units set in a herringbone pattern, as seen in Figure 6.10. A soldier course shall be set behind the back of curb as seen in Figure 6.10.

At ramp gores, use Class B concrete rip rap to a depth of 5 inches, as seen in Figure 6.11.



Fig 6.10- Concrete Pavers, Herringbon Pattern with a Solider Course



Fig 6.11- Concrete Rip Rap at Ramp Gore