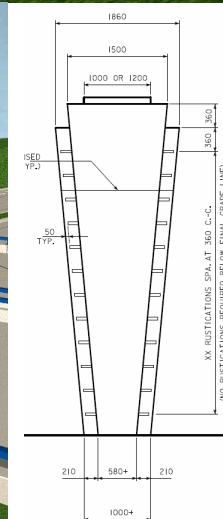
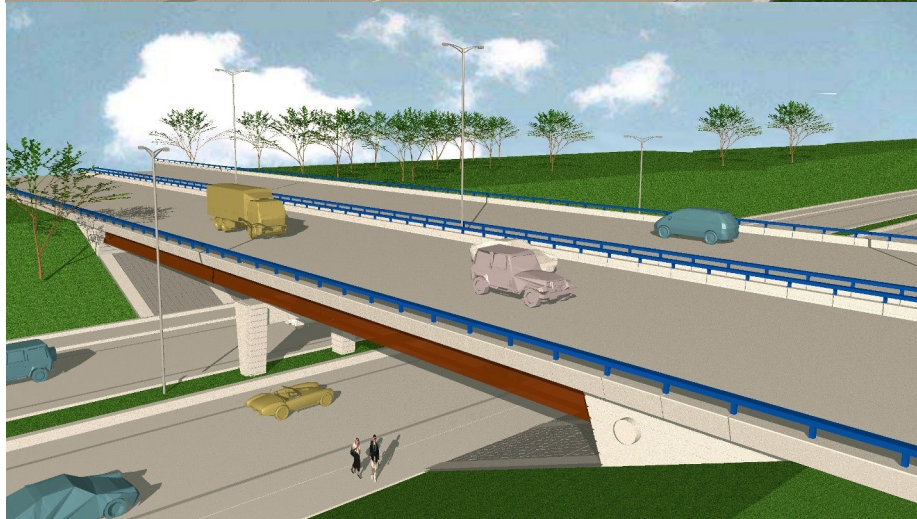


# Bridges: I-235 Mainline Bridges, Des Moines, IA



## Polk County Design Nos. 1904, 105, 1106 (examples only)

- Project Nos. BRFIM-235-2(392)10--05-77, BRFIM-235-2(323)9--05-77, IM-NHS-235-2(413)12--03-77 (examples only, not all-inclusive)
- FHWA Nos. 42891/601356, 42740/42761, 43001/43011 (examples only, not all-inclusive)
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-235 Corridor Des Moines
- Features:
  - Special pier and abutment shaping, rustication
  - Steel-on-concrete barrier (DM River bridge only)
  - Concrete coating (colored sealer; sep. projects)
  - Heavy broom finished concrete slope protection
- Costs:
  - Colored sealer (2005) \$15.84/SY (\$26.61/SY avg bid); (2008) \$15.05/SY (\$16.18/SY avg bid)
  - Steel-on-concrete barrier (2004) \$129.51/LF (avg bid unknown)
  - Slope protection (2003) \$66.89/SY (avg unknown)



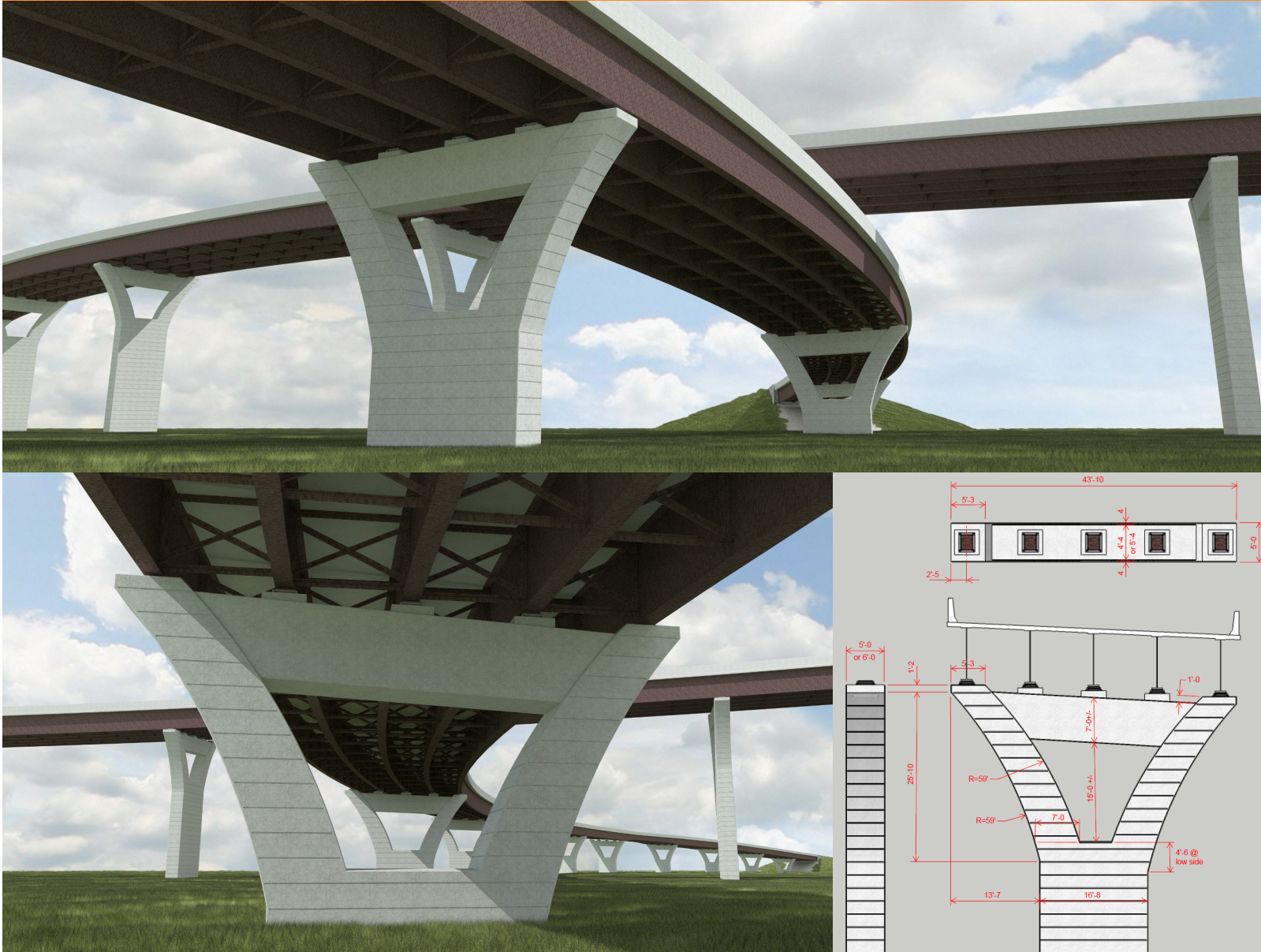
# Bridges: I-235 Mainline Bridges, Des Moines, IA





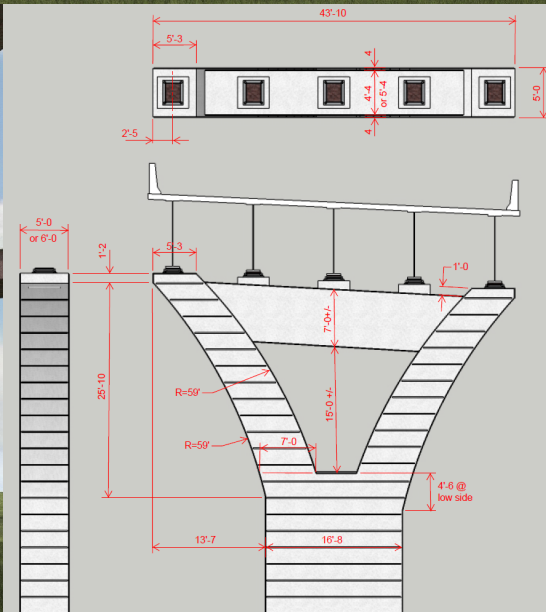
# Bridges: I-235 Northeast Mixmaster, Des Moines, IA

KMO



## Polk County Design No. 1918

- Project No. IM-035-3(195)87-13-77
- FHWA No. 700885
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-235 Mixmasters NE & SW
- Note: Flyover bridge type covered here; additional flyover bridges planned for the interchange; other bridges within the NEMM interchange conform to I-235 overpass and I-235 mainline bridge design details, except mainline abutment details used for all bridge types
- 3D model (.skp) available (mockups)
- Features:
  - Special pier and abutment shaping
  - Rustication (including barriers)
  - Special concrete form material requirements for exposed substructure concrete





# Bridges: I-235 Northeast Mixmaster, Des Moines, IA

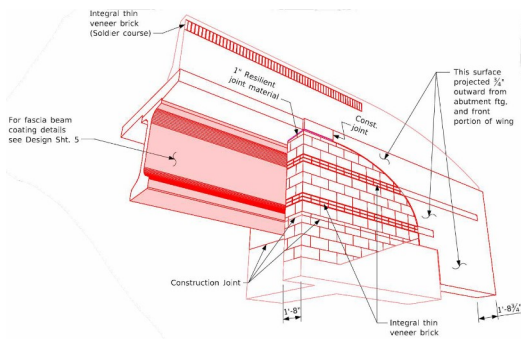
KMO





# Bridges: Wright Bros Blvd DDI over I-380, Cedar Rapids, IA

KMO



## Linn County Design Nos. 425, 525

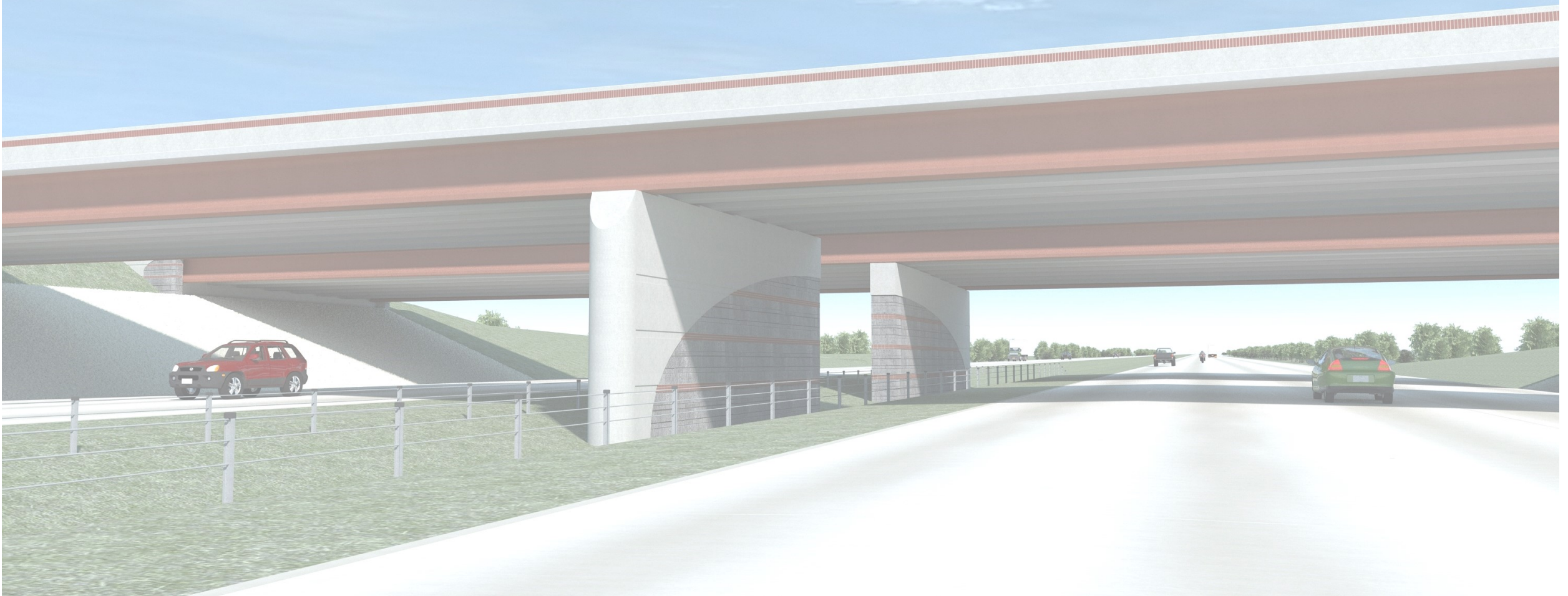
- Project Nos. IM-380-6(453)14-13-57
- FHWA Nos. 600531, 701175
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-380 Cedar Rapids (various)
- 3D model (.skp) available
- Features:
  - Special pier and abutment shaping
  - Form liner concrete texture and rustication
  - Custom welded tube railing with chain link mesh
  - Railing parapet
  - Integral thin veneer brick accents
  - Concrete coating (mineral silicate paint)
- Costs (2024):
  - Welded tube railing \$475/LF (\$534.20/LF avg bid)
  - Railing parapet \$170/LF (\$107.50/LF avg bid)
  - Thin veneer brick \$76/SF (\$86.83/SF avg bid)
  - Concrete coating \$63.70/SY (\$63.98/SY avg bid)



# Bridges: Wright Bros Blvd DDI over I-380, Cedar Rapids, IA

KMO

(need finished project photos)





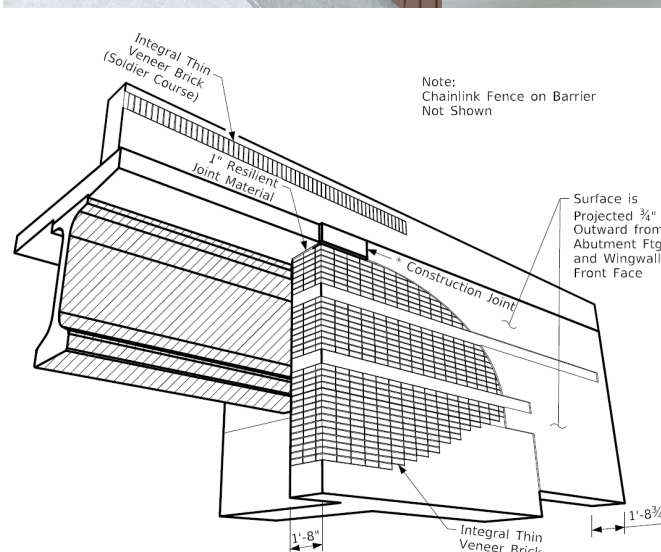
# Bridges: Tower Terrace Road DDI over I-380, Hiawatha, IA

KMO



## Linn County Design Nos. 321, 421

- Project Nos. IM-380-6(311)25-13-57
- FHWA Nos. 701060, 605041
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-380 Hiawatha DDIs
- Note: Nearly identical aesthetic design features at Boyson Road DDI over I-380, Linn Co. Design Nos. 122/222, Project No. IM-380-6(359)25-13-57, FHWA Nos. 701065, 604741
- 3D model (.skp) available
- Features:
  - Special pier and abutment shaping
  - Form liner concrete texture and rustication
  - Custom welded tube railing with chain link mesh
  - Railing parapet
  - Integral thin veneer brick
  - Concrete coating (mineral silicate paint)
- Costs (2021):
  - Welded tube railing \$315/LF (\$286.33/LF avg bid)
  - Thin veneer brick \$76/SF (\$67.67/SF avg bid)
  - Concrete coating \$66/SY (\$62.53/SY avg bid)





# Bridges: Tower Terrace Road DDI over I-380, Hiawatha, IA

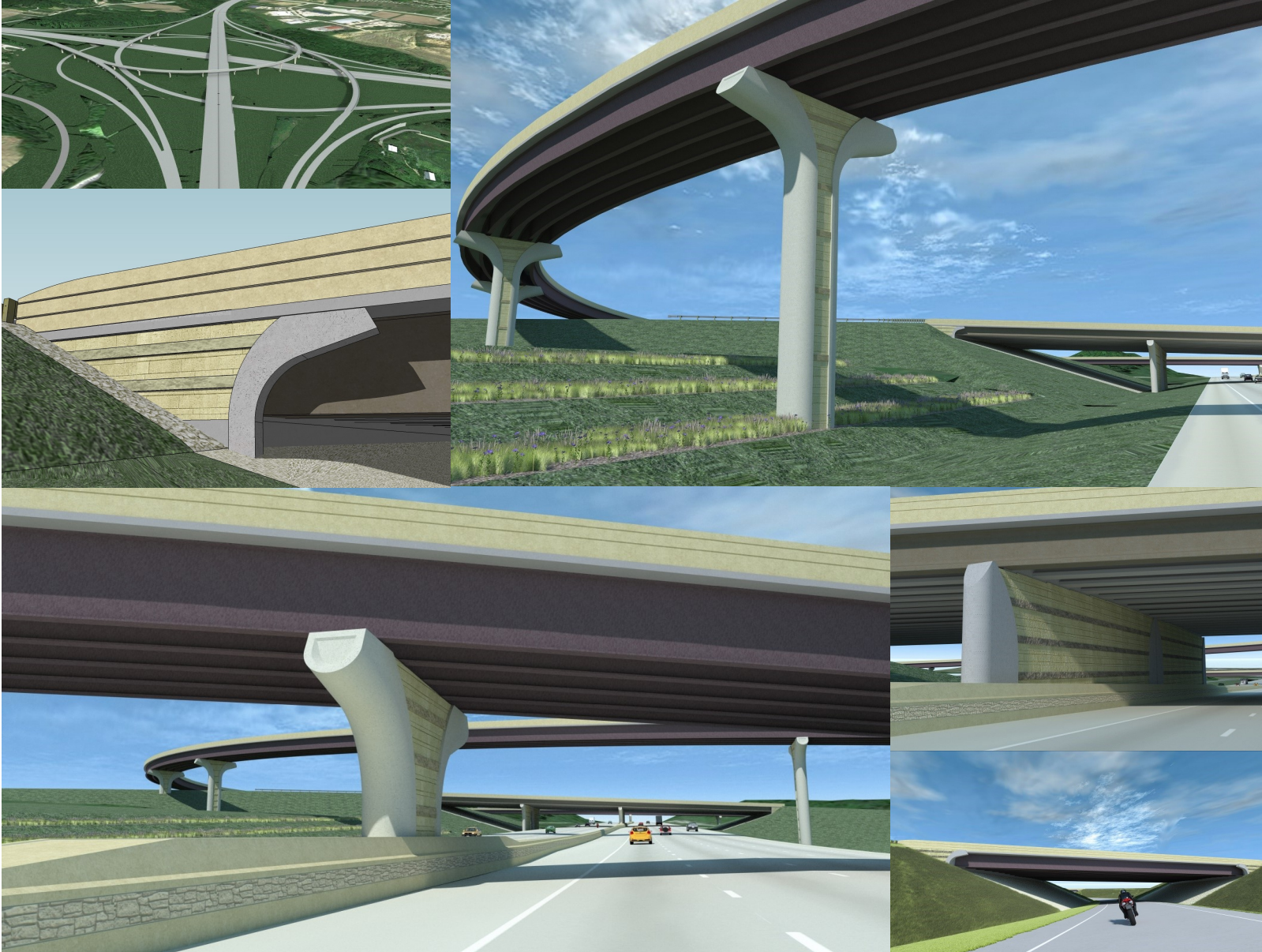
KMO





# Bridges: I-380 & I-80 Interchange, Coralville, IA

KMO



## Johnson County Design Nos. 317, 118, 120, 122, 223 (examples only)

- Project Nos. IM-080-6(332)239-13-52, NHS-080-6(330)239-13-52, IM-080-6(355)239-13-52, NHS-080-6(360)239-13-52 (not all-inclusive)
- FHWA Nos. 600351/600361, 700690/700695, 700720, 700735, 700745 (not all-inclusive)
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-380&I-80 Interchange Area
- 3D model (.skp) available
- Features:
  - Special pier and abutment shaping
  - Form liner concrete texture and rustication
  - Integrally colored concrete barriers
  - Concrete coating (mineral silicate paint)
  - Special pole support shape
- Costs:
  - Colored barriers (2018) \$110/LF (\$111/LF avg bid)
  - Concrete coating (2018) \$83/SY (\$80/SY avg bid)
  - Colored barriers (2020) \$150/LF (single bidder)
  - Concrete coating (2020) \$81/SY (single bidder)



# Bridges: I-380 & I-80 Interchange, Coralville, IA

KMO





# Bridges: Forevergreen Road over I-380, North Liberty, IA

KMO



## Johnson County Design No. 2417

- Project No. IM-380-6(304)2-13-52
- FHWA No. 600431
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\I-380&I-80 Interchange Area
- Note: Similar bridge constructed at S. Park Road over I-80 in Tiffin, Johnson Co. Design No. 220, FHWA No. 31981; similar bridge designed for W. Penn Street over I-380 in North Liberty, Johnson Co. Design No. 127, FHWA No. 205006
- 3D model (.skp) available
- Features:
  - Special pier and abutment shaping
  - Form liner concrete texture and rustication
  - Custom welded picket fence with chain link mesh
  - Special light pole support shape
  - Concrete coating (mineral silicate paint)
- Costs (2017):
  - Welded picket fence \$154.50/LF (\$199/LF avg bid)
  - Concrete coating \$63/SY (\$63/SY avg bid)



# Bridges: Forevergreen Road over I-380, North Liberty, IA

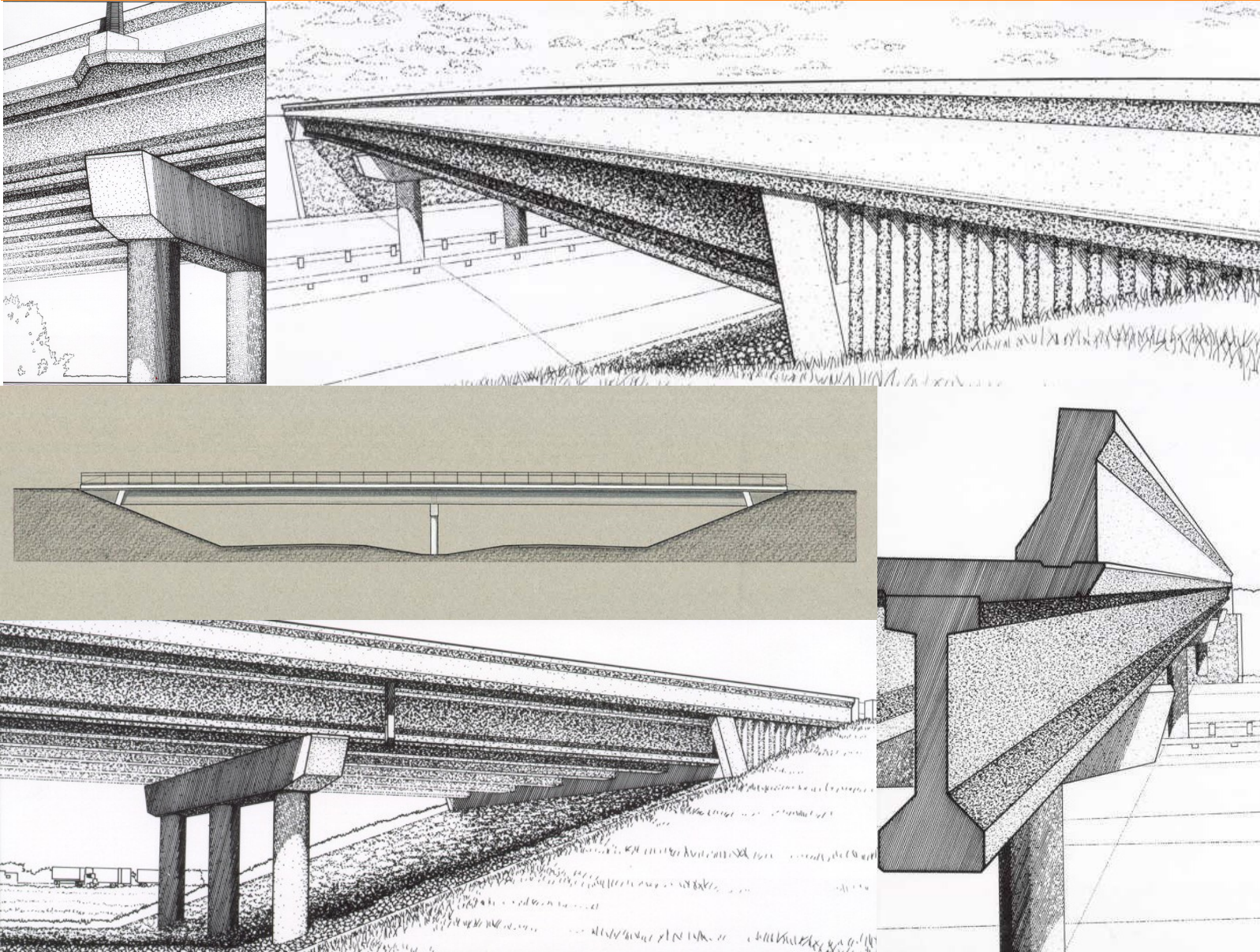
KMO





# Bridges: Iowa 5 Corridor Bridges, Des Moines, IA

KMO



Polk County Design Nos. 1997, 2097, 4297, 100, 300, Warren Co. Design Nos. 399, 699 (examples)

- Project Nos. NHSN-5-5(47)–2R-77, NHSN-5-5(49)–3H-77, NHSN-5-5(50)–3H-77, NHSX-5-5(63)–3H-91 (not all-inclusive)
- FHWA Nos. 608575, 608345, 607220, 601770/601935 (not all-inclusive)
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Iowa 5 Corridor
- Note: These bridges represent a late 1990s standard aesthetic bridge concept that was used elsewhere around the state, including on the US 20 corridor in Hardin and Grundy Cos., and the US 34 and US 218 corridors in Henry and Des Moines Cos.
- Features:
  - Minor pier, abutment, and deck edge re-shaping
  - Form liner textured concrete abutment wing walls
  - Special barrier shape (back side projected cap)
  - Class 3 Special Surface Finish (cementitious acrylic paint) on barriers, piers, and abutment accents; this technique was abandoned after surface adhesion failures on multiple projects

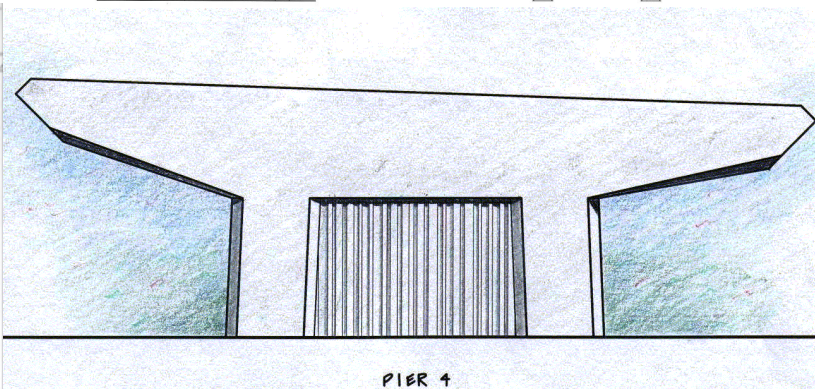
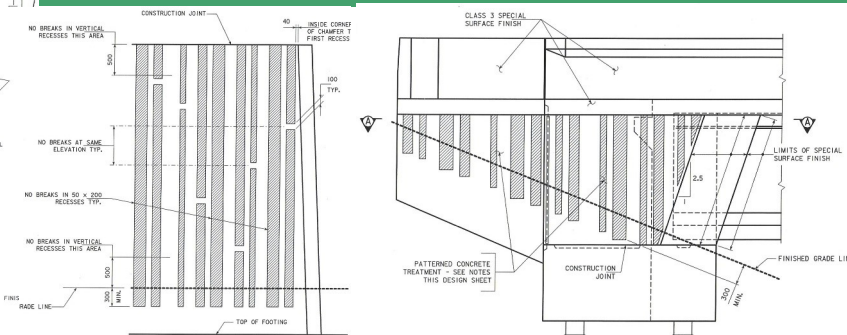
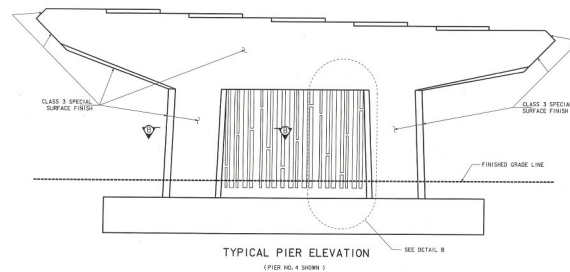
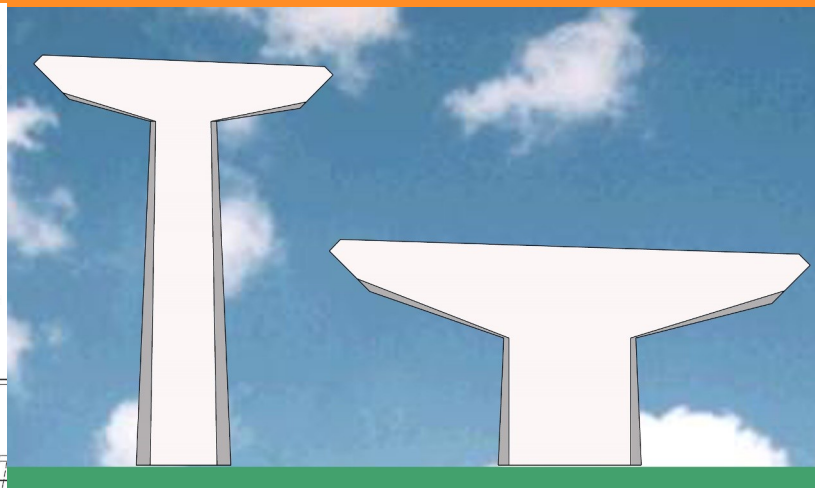


# Bridges: Iowa 5 Corridor Bridges, Des Moines, IA

KMO







- Project Nos. NHSX-5-5(49)-3H-77, NHSX-5-5(56)-3H-77
- FHWA Nos. 608230, 608240
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Iowa 5 Corridor
- Features:
  - Special pier and abutment shaping
  - Concrete rustication (piers and abutments)
  - Steel-on-concrete traffic barriers (MnDOT Type 3)
  - Concrete coating (colored sealer, by separate project)
- Costs (2000):
  - Steel-on-concrete barrier \$106/LF (\$106/LF avg)
- Costs (2001):
  - Steel-on-concrete barrier \$76/LF (\$101/LF avg)



# Bridges: I-35 & IA 5 Interchange, West Des Moines, IA

KMO





# Bridges: US 65 over Iowa River, Iowa Falls, IA

KMO



## Hardin County Design No. 110

- Project No. BRFN -065-6(42)-39-42
- FHWA No. 27141
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Iowa Falls US 65
- 3D model (.skp) available
- Features:
  - True, through-arch superstructure
  - Custom welded picket railing with integrated light pole support pedestals
  - Special separation barriers (vertical face)
  - Integral thin veneer brick, including barrier faces
  - Special railing on abutment retaining walls
  - Special lighting (by City)
  - Parapet under railing
  - Integrated columbarium at church retaining wall
- Costs (2010):
  - Aesthetic barrier \$145/LF (\$95/LF avg bid)
  - Custom railing \$170/LF (\$148./LF avg bid)
  - Thin veneer brick \$40/SF (\$27/SF avg bid)
  - Railing at abut. walls \$200/LF (\$165/LF avg bid)



# Bridges: US 65 over Iowa River, Iowa Falls, IA

KMO





# Bridges: County Roads C-50 and C-57 over US 218, Janesville, IA

KMO



## Bremer County Design Nos. XXXX

- Project No. HSIPX-218-8(103)-3L-09
- FHWA Nos. 700020, 700380
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Janesville US 218
- Note: Design features are similar to Polk Co. Design Nos. 2201, 1702, 6805, 1215, 1317 and Dallas Co. Design No. 100; concrete coatings were not included in construction
- 3D model (.skp) available
- Features:
  - Special pier and abutment shaping
  - Concrete rustication
  - Special light pole base shape



# Bridges: County Roads C-50 and C-57 over US 218, Janesville, IA

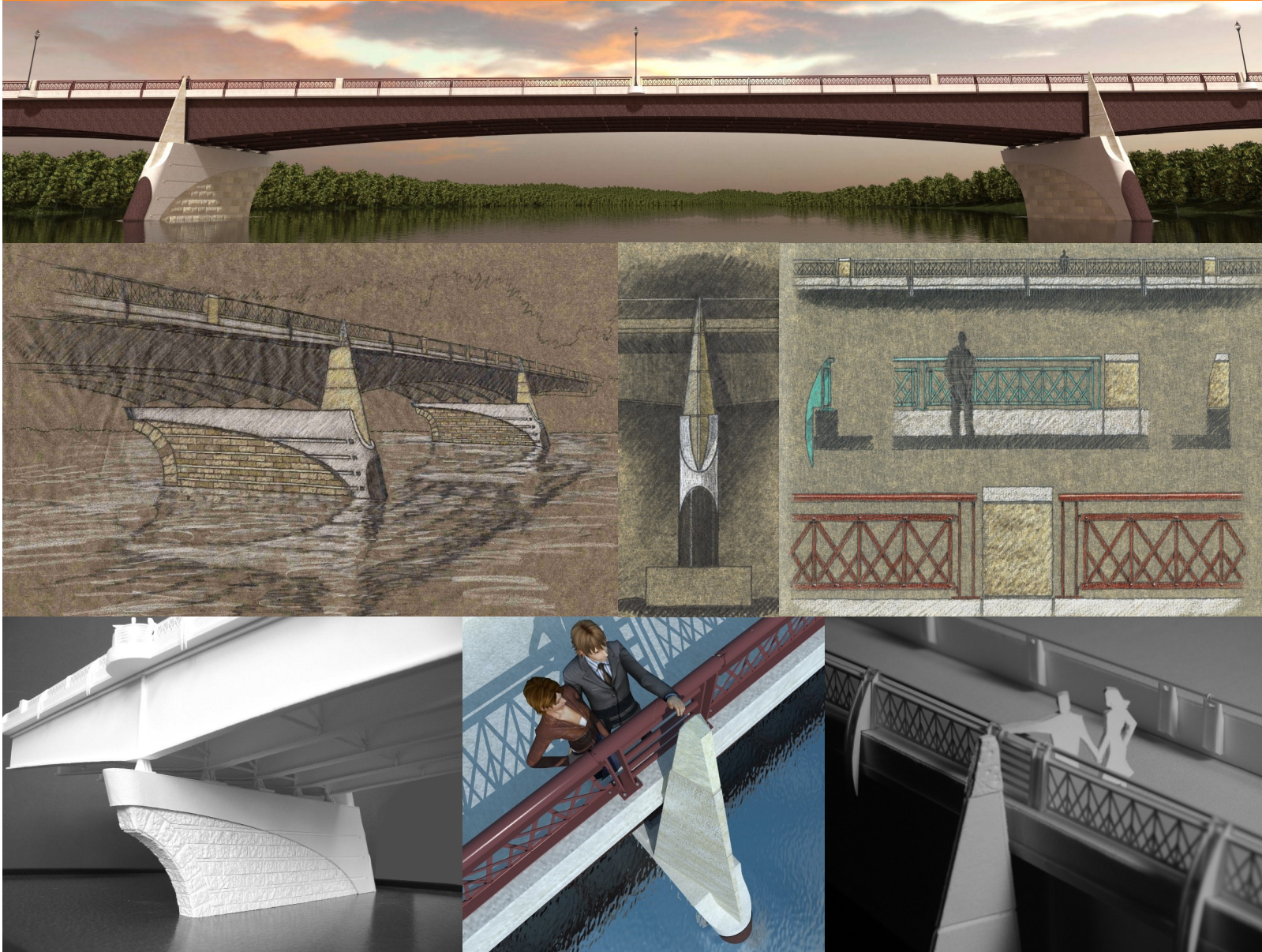
KMO





# Bridges: IA 1 over Des Moines River, Keosauqua, IA

KMO



## Van Buren County Design No. 105

- Project No. BRF-001-1(24)—38-89
- FHWA No. 50181
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Keosauqua IA 1
- 3D model (.skp) available
- Features:
  - Special pier and abutment shaping
  - Form liner concrete texture and rustication
  - Custom built-up steel bar, angle, and tube railing mounted on concrete parapet
  - Railing pedestals with custom light pole supports
  - Overlooks on deck cantilevers
  - Commemorative bronze plaque
  - Salvaged dolomitic limestone touchstones at pier towers, bronze plaque pedestal, and riprap
  - Concrete coatings (colored sealer)
- Costs (2005):
  - Custom railing \$128/LF (\$138/LF avg bid)
  - Colored sealer \$75/SY (\$51/SY avg bid)
  - Touchstones \$1,050 (\$9,873 avg bid)



# Bridges: IA 1 over Des Moines River, Keosauqua, IA

KMO





# Bridges: US 218 over Wolf Creek, La Porte City, IA

KMO



## Black Hawk County Design No. 111

- Project No. BRF-218-7(164)—38-07
- FHWA No. 14781
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\La Porte City US 218
- Note: Bridge with similar features built at IA 141 over Middle Raccoon River near Coon Rapids, Guthrie Co. Design No. 314
- 3D model (.skp) available
- Features:
  - Special pier and abutment shaping
  - Form liner concrete texture and rustication, including traffic barriers (both faces)
  - Special light pole support shape
  - Special lighting (by City)
- Costs (2013):
  - Aesthetic barrier \$80.50/LF (\$99/LF avg bid)



# Bridges: US 218 over Wolf Creek, La Porte City, IA

KMO





# Bridges: IA 9/WI 82 over Mississippi River, Lansing, IA

KMO



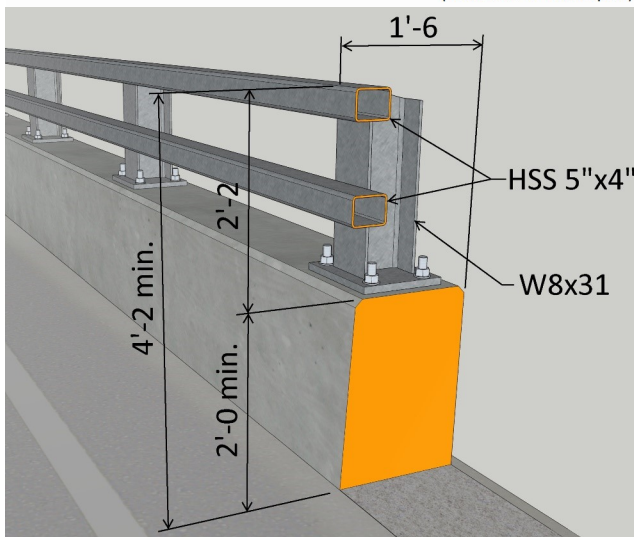
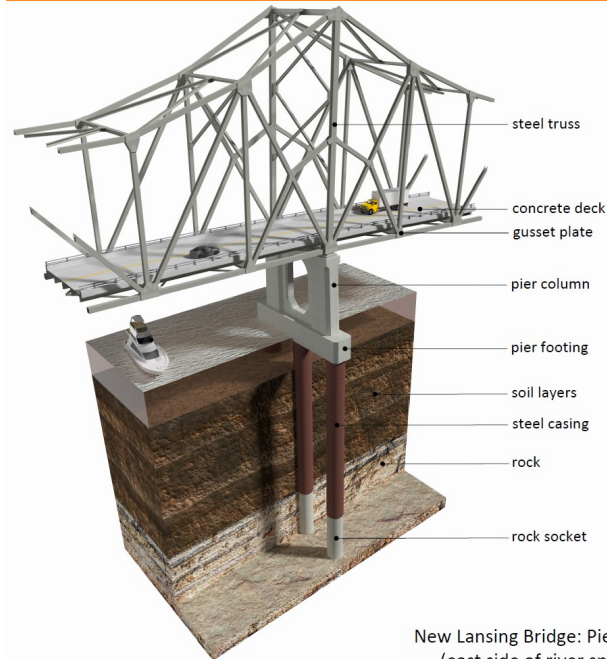
## Allamakee County Design No. 124

- Project No. STP-009-9(84)—2C-03
- FHWA No. 13521
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Lansing IA 9
- 3D model (.skp, dgn) available
- Features:
  - Continuous peaked steel through-truss super structure to mimic the previous bridge
  - Special pier shaping
  - Special steel-on-concrete barrier (PennDOT PA) for truss shielding and with added bicycle rods for fall protection
  - Custom MSE retaining wall panels with exposed Mississippi River aggregate finish and custom welded tube railings (see Retaining Walls section elsewhere in this guide)
- Costs (2023):
  - Steel-on-concrete barrier \$370/LF (\$579/LF avg bid)



# Bridges: IA 9/WI 82 over Mississippi River, Lansing, IA

KMO

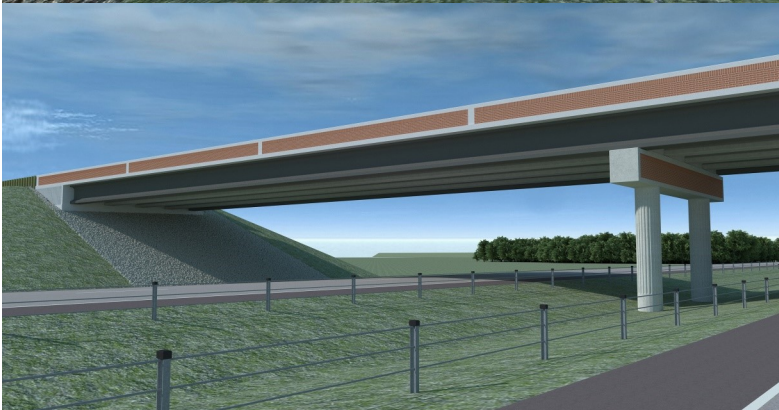
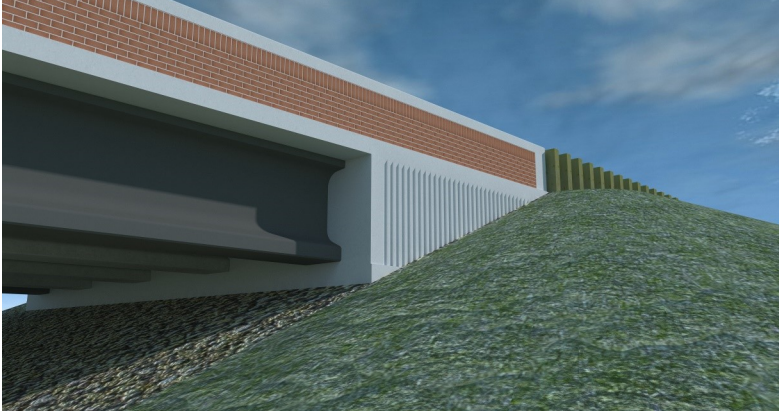


(need finished project photos)



# Bridges: US 30 Bypass Bridges, Mount Vernon/Lisbon, IA

KMO



Linn County Design Nos. 316/1216, 416, 516, 616, 916, Cedar County Design No. 216

- Project Nos. NHSX-030-7(171)–3H-57, NHSX-030-7(172)–3H-57, NHSX-030-7(173)–3H-57, NHSX-030-7(174)–3H-57, NHSX-030-7(176)–3H-57, NHSX-030-8(34)–3H-16
- FHWA Nos. 700515/700520, 700525, 700530, 700535, 700550, 700675
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Mt Vernon Lisbon Bypass US 30
- 3D model (.skp) available
- Features:
  - Round column vertical rustication
  - Abutment wingwall rustication
  - Integral thin veneer brick at pier cap and barriers
  - Concrete coating (mineral silicate paint) at beams
- Costs (2017):
  - Aesthetic barrier \$102/LF (\$111/LF avg bid)
  - Thin veneer brick \$32/SF (\$30/SF avg bid)
  - Concrete coating \$54.50/SY (\$69/SY avg bid)



# Bridges: US 30 Bypass Bridges, Mount Vernon/Lisbon, IA

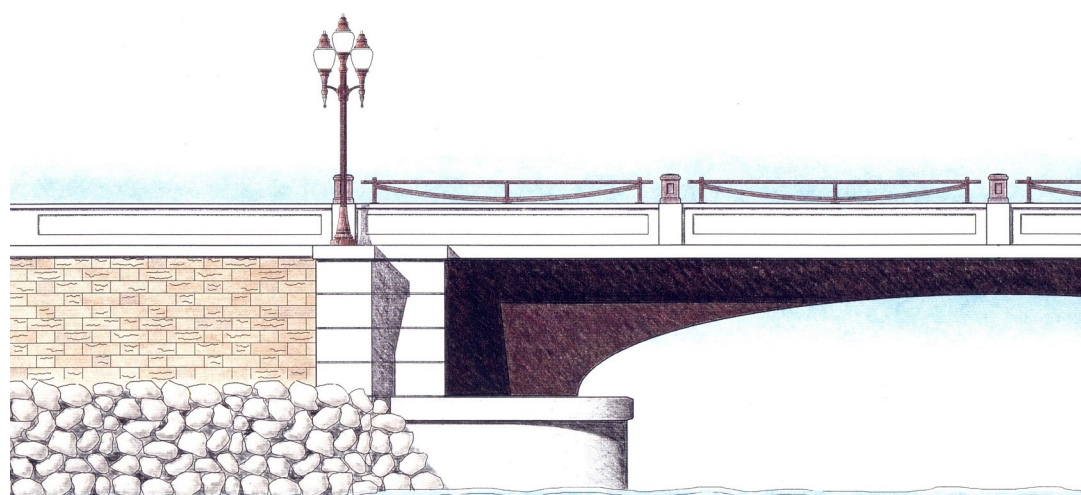
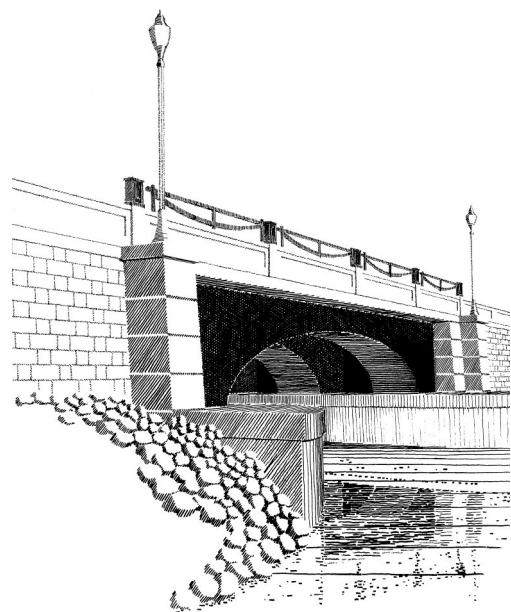
KMO





# Bridges: US 71 Okoboji Lakes Causeway, Okoboji, IA

KMO



\* EAST ELEVATION \*

## Dickinson County Design No. 196

- Project No. NHSX-71-9(38)-3H-30
- FHWA No. 23671
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Okoboji US 71
- Features:
  - Arched single span steel box girder superstructure to match profile of precedent historic concrete deck arch; metallized and painted
  - Custom welded tube and picket pedestrian railing
  - Custom welded tube separation barrier railing
  - Custom cast stone bollards at pedestrian railing and separation barrier
  - Special white cement concrete traffic barriers
  - Integrated abutment light pole supports
  - Concrete rustication
  - Special lighting (by City)
- Costs (1999):
  - Custom outer railing \$172/LF (\$148/LF avg bid)
  - White concrete barrier \$206/LF (\$207/LF avg bid)
  - Cast stone bollard (tall) \$1200 ea (\$1244 ea avg)



# Bridges: US 71 Okoboji Lakes Causeway, Okoboji, IA

KMO





# Bridges: W. Park Blvd over IA 149, Ottumwa, IA

KMO



## Wapello County Design No. 519

- Project No. BRF-149-1(72)—38-90
- FHWA No. 50661
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Ottumwa IA 149
- 3D model (.skp) available
- Features:
  - Special pier and abutment shaping
  - Custom welded picket pedestrian railing with vinyl coated chain link mesh
  - Texas Classic-type traffic barrier (TxDOT T411)
  - Integral thin brick accents
  - Concrete coating (mineral silicate paint) on beams
- Costs (2019):
  - Welded picket railing \$350/LF (\$325/LF avg bid)
  - Aesthetic barrier \$210/LF (\$192.50/LF avg bid)
  - Concrete coating \$69/SY (\$72/SY avg bid)
  - Thin veneer brick \$140/SF (\$92.50 avg bid; should have been bid Lump Sum due to unusually small quantity of just 164 SF; the only other bid was \$45/SF, which is SF unit-price appropriate)



# Bridges: W. Park Blvd over IA 149, Ottumwa, IA

KMO





# Bridges: I-29 over Pierce Street/SB Frontage Rd, Sioux City, IA

KMO



## Woodbury County Design Nos. 1217, 1317, 417

- Project Nos. IM-NHS-029-6(205)148--03-97, IM-NHS-029-6(204)148--03-97 (staged)
- FHWA Nos. 700330, 700335
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Sioux City I-29 Corridor
- 3D model (.skp) available
- Features:
  - Special pier shaping incl. diaphragm mask wall
  - Abutment towers on separate foundations
  - Special traffic barrier
  - Form liner texture with mineral silicate paint
  - Integral thin veneer brick
  - Full modular brick colonnade at towers
- Costs:
  - Aesthetic barrier (2015) \$159/LF (\$147/LF avg bid)
  - Thin veneer brick (2015) \$34/LF (\$33/LF avg bid)
  - Aesthetic barrier (2017) \$185/LF (\$162/LF avg bid)
  - Thin veneer brick (2017) \$42/LF (\$56/LF avg bid)
  - Full brick columns (2017) \$2500 ea (\$2312 ea avg)



# Bridges: I-29 over Pierce Street/SB Frontage Rd, Sioux City, IA

KMO





# Bridges: Wesley Pkwy over I-29 and Tri-View Ave, Sioux City, IA

KMO



## Woodbury County Design Nos. 1711, 1811

- Project Nos. IM-NHS-029-7(37)149-03-97, IM-NHS-029-7(38)149-13-97
- FHWA Nos. 700200, 700205
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Sioux City I-29 Corridor
- 3D model (.skp) available
- Features:
  - Special pier (Des. 1811) and abutment shaping
  - Abutment towers on separate foundations (Design 1711 only) with full brick colonnade
  - Custom chain link fence
  - Form liner texture with mineral silicate paint
  - Integral thin veneer brick
  - Special traffic barrier, parapet under fence
  - Special lighting (by City)
- Costs (2011):
  - Custom chain link fence \$72/LF (\$69/LF avg bid)
  - Aesthetic barrier \$70/LF (\$171/LF avg bid)
  - Thin veneer brick \$25/LF (\$34/LF avg bid)



# Bridges: Wesley Pkwy over I-29 and Tri-View Ave, Sioux City, IA

KMO





# Bridges: I-29 Mainline Bridges over Local Roads, Sioux City, IA

KMO



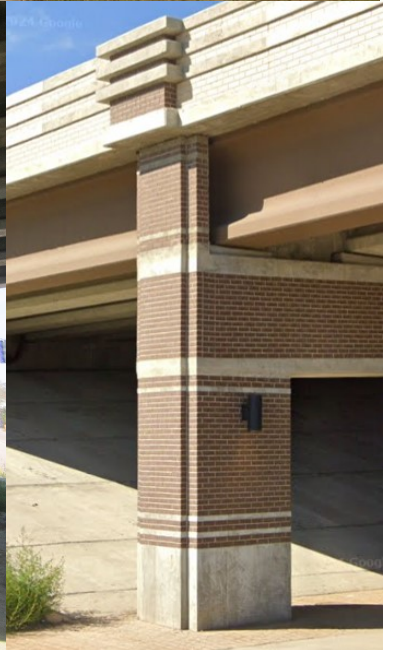
Woodbury County Design Nos. 217/  
817/917, 317/1017/1117, 1817,  
418

- Project Nos. IM-NHS-029-6(200)147--03-97, IM-NHS-029-6(201)147--03-97, IM-NHS-029-6(202)147--03-97, IM-NHS-029-6(203)147--03-97, IM-NHS-029-7(40)149--03-97, IM-NHS-029-7(39)149--03-97
- FHWA Nos. 53891/700350, 700315/700320, 53781/700310
- Note: See also I-29 over Pierce Street/SB Frontage Rd, Woodbury Co. Design Nos. 1217/1317/417
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Sioux City I-29 Corridor
- 3D model (.skp) available
- Features:
  - Special pier shaping incl. diaphragm mask wall
  - Integral thin veneer brick
  - Special barrier incl. form liner texture and paint
- Costs (2017):
  - Aesthetic barrier \$165/LF (\$157/LF avg bid)
  - Thin veneer brick \$36/SF (\$47/SF avg bid)



# Bridges: I-29 Mainline Bridges over Local Roads, Sioux City, IA

KMO





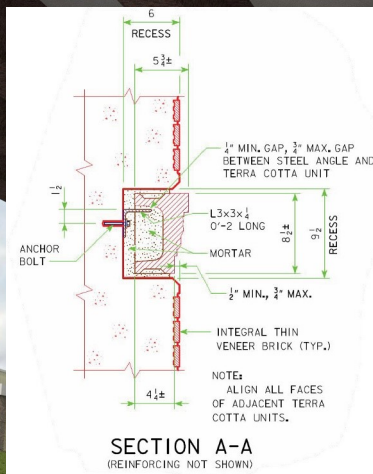
# Bridges: I-29 Nebraska Street Ramp, Sioux City, IA

KMO



## Woodbury County Design No. 1617

- Project No. IM-NHS-029-6(206)147--03-97,
- FHWA No. 700325
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Sioux City I-29 Corridor
- 3D model (.skp) available
- Features:
  - Special pier shaping incl. diaphragm mask wall
  - Special traffic barrier incl. form liner texture
  - Salvaged Terra Cotta panels on piers
  - Concrete coating (mineral silicate paint; also applied to other new I-29 corridor bridges by separate project)
  - Special lighting (by City)
- Costs (2015):
  - Aesthetic barrier \$117/LF (\$114/LF avg bid)
  - Thin veneer brick \$34/SF (\$33/SF avg bid)
  - Terra Cotta panels (6) \$12,087 (\$14,044 avg bid)
- Costs (2020):
  - Concrete coating (6 locations) \$57/SF (\$87/SF avg bid)





# Bridges: I-29 Nebraska Street Ramp, Sioux City, IA

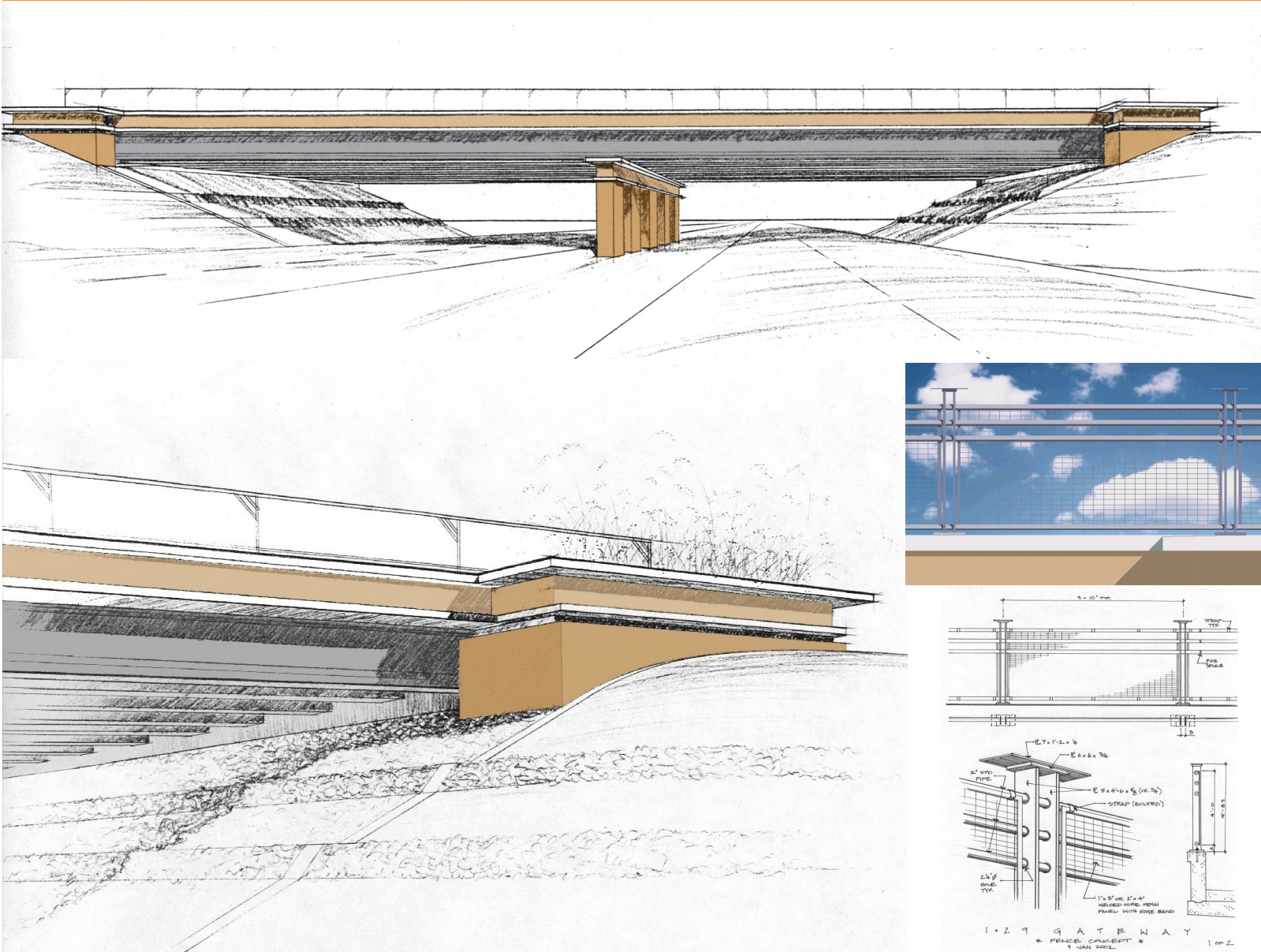
KMO





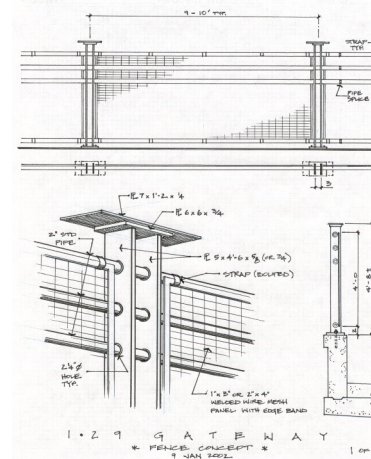
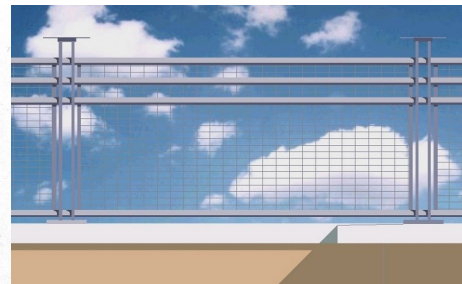
# Bridges: Ogden Ave/1st St over I-29, Sergeant Bluff, IA

KMO



## Woodbury County Design Nos. 402 and 502

- Project No. IM-29-6(134)141-13-97
- FHWA Nos. 609080
- Note: Bridges with similar design features (but without abutment planters) built at Riverside Blvd over I-29, Woodbury Co. Design No. 208, and at I-29 over Singing Hills Blvd, Woodbury Co. Design Nos. 509 and 609; design features also used at US 34 Fairfield Bypass and US 61 Ft. Madison Bypass
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Sioux City I-29 Corridor
- Features:
  - Special pier, abutment and barrier shaping
  - Integrated planter at abutments
  - Custom welded wire mesh fence on parapet
  - Concrete coating (colored sealer)
  - Multiple stone sizes/colors on slope protection
- Costs (2002):
  - Aesthetic barrier \$35/LF (\$46/LF avg bid)
  - Wire mesh fence \$200/LF (\$193/LF avg bid)
  - Colored sealer coating \$25/SY (\$23/SY avg bid)





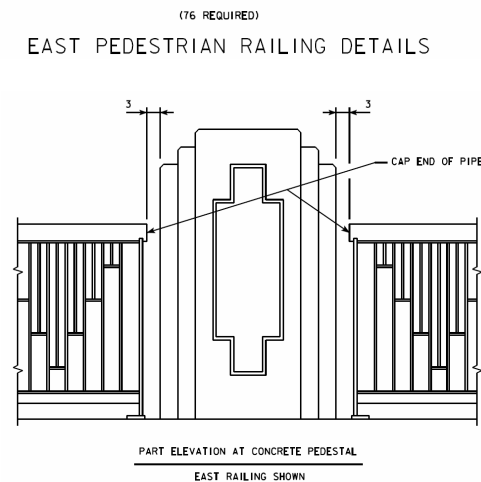
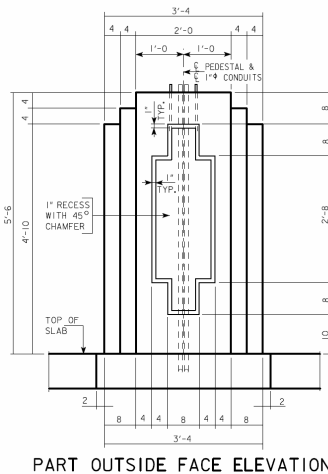
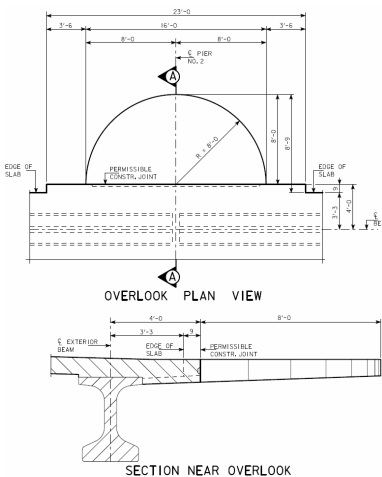
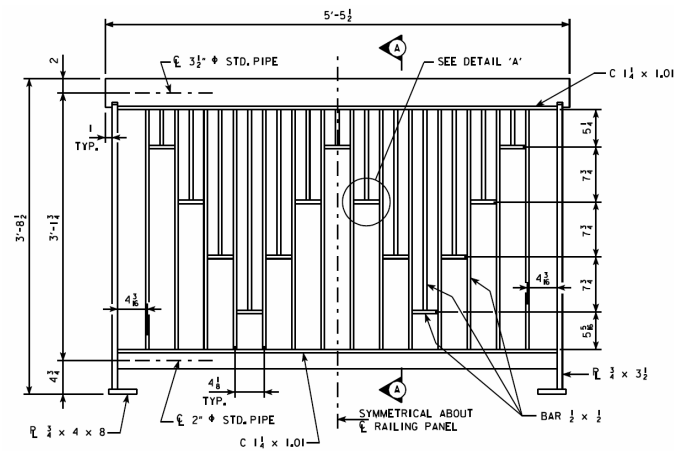
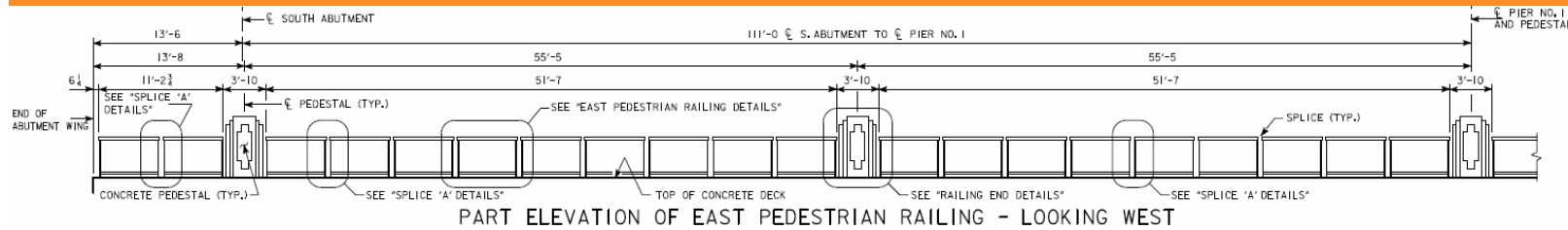
# Bridges: Ogden Ave/1st St over I-29, Sergeant Bluff, IA

KMO





# Bridges: US 18/71 over Little Sioux River, Spencer, IA



## Clay County Design No. 106

- Project No. BRF-018-2(72)—38-21
- FHWA No. 20331
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Spencer US 18+71
- 3D model (.skp) available (railing only)
- Features:
  - Custom welded picket railing
  - Concrete railing pedestals for lights
  - Overlooks at piers
  - Concrete coating (colored sealer)
  - Special lighting (by City)
  - Bridge end monuments and pedestrian plazas (by City in separate project)
- Costs (2006):
  - Welded picket railing \$159/LF (\$148/LF avg bid)
  - Colored sealer \$19/SY (\$25/SY avg bid)



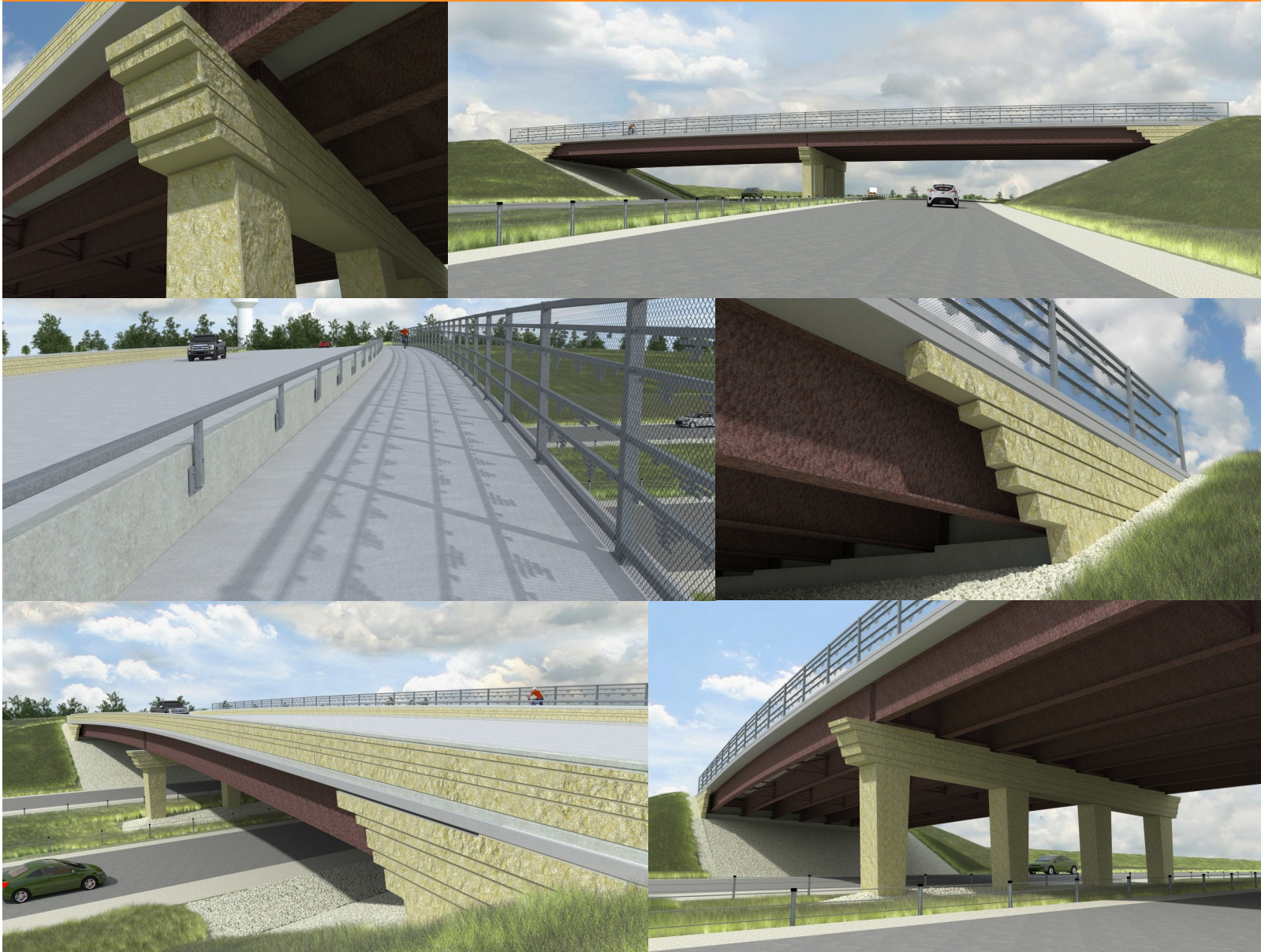
# Bridges: US 18/71 over Little Sioux River, Spencer, IA





# Bridges: County Road X20 over US 151, Springville, IA

KMO



## Linn County Design No. 227

- Project No. NHSX-151-3(143)-3H-57
- FHWA No. 701215
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Springville US 151
- 3D model (.skp) available
- Features:
  - Special pier and abutment shaping
  - Form liner texture and rustication
  - Custom welded tube and angle pedestrian fence
  - Special traffic barrier with texture on both faces
  - Concrete coating (mineral silicate paint)
- Costs (2026):
  - Custom welded fence \$~~XXX~~/LF (\$~~XXX~~/LF avg bid)
  - Aesthetic barrier \$~~XXX~~/LF (\$~~XXX~~/LF avg bid)
  - Concrete coating \$~~XX~~/SY (\$~~XX~~/SY avg bid)



# Bridges: County Road X20 over US 151, Springville, IA

KMO





# Bridges: US 30 and US 218 Interchange, “Youngville”, IA

KMO



## Benton County Design No. 117

- Project No. NHSX-030-6(230)—3H-06
- FHWA No. 700855
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\US 30 & US 218 Youngville
- Note: Similar design features used at IA 21 over US 30, Benton Co. Design No. 416, FHWA No. 700500; similar design features also used at US 30 Mount Vernon/Lisbon Bypass
- 3D model (.skp) available
- Features:
  - Round column vertical rustication
  - Abutment wingwall rustication
  - Integral thin veneer brick at pier cap and barriers
  - Lincoln Highway logo at pier cap ends
  - Concrete coating (mineral silicate paint) at beams and Lincoln Highway logo
- Costs (2018):
  - Aesthetic barrier \$93.94/LF (\$94.07/LF avg bid)
  - Thin veneer brick \$30.14/SF (\$30.45/SF avg bid)
  - Concrete coating \$76.36/SY (\$73.87/SY avg bid)



# Bridges: US 30 and US 218 Interchange, "Youngville", IA

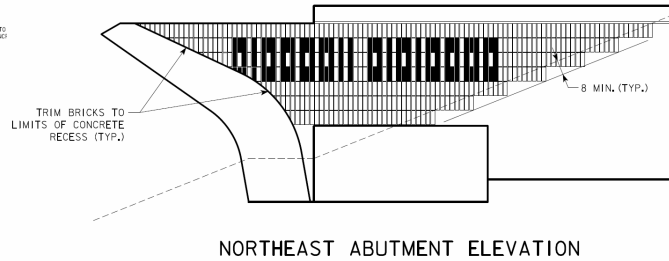
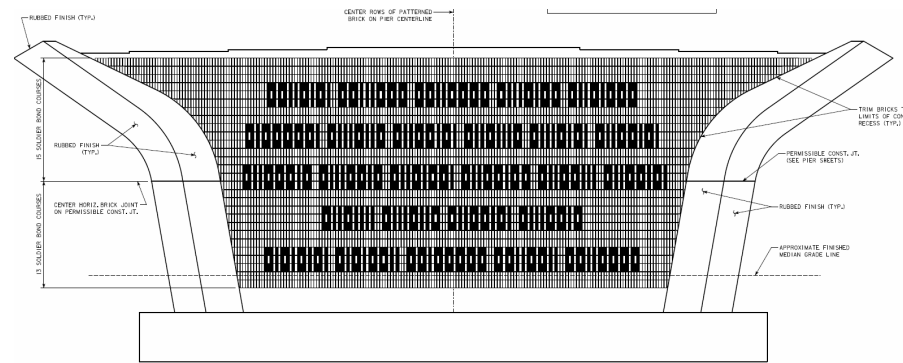
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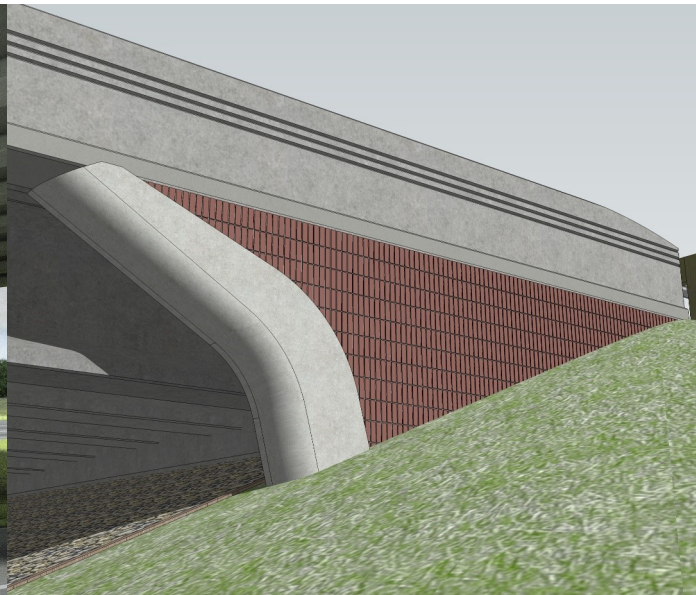


# Bridges: 580th Avenue over US 30 near Ames, IA

KMO



NORTHEAST ABUTMENT ELEVATION



## Story County Design No. 122

- Project No. NHSX-030-5(259)—3H-85
- FHWA No. 701070
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\US 30 at 580th Ave
- 3D model (.skp) available
- Features:
  - Special pier and abutment shaping
  - Integral thin veneer brick
  - Binary coded messages in brick faces
  - Rustications on traffic barrier
  - Rubbed concrete finish on plain pier and abutment surfaces
- Costs (2022):
  - Thin veneer brick \$40/SF (\$41.20/SF avg bid)



# Bridges: 580th Avenue over US 30 near Ames, IA

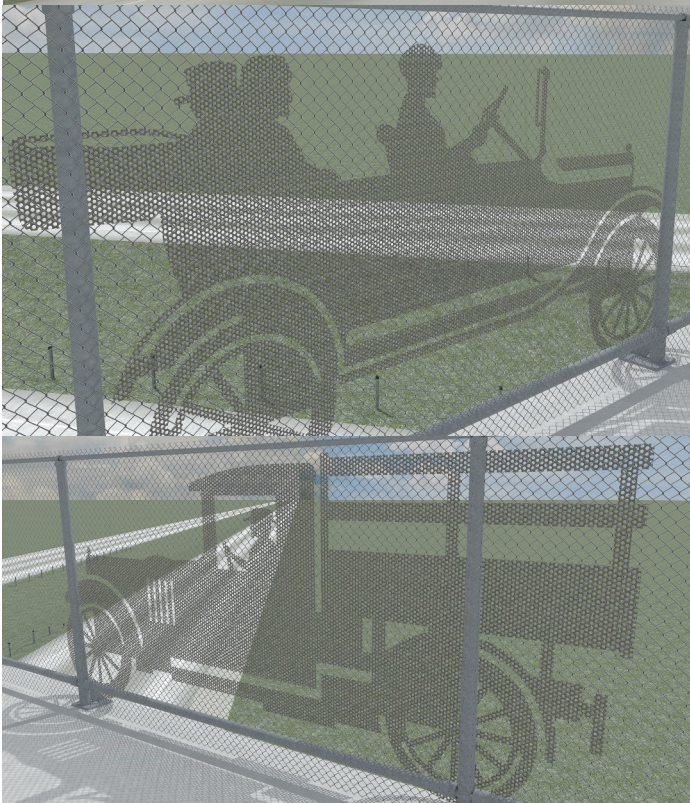
KMO





# Bridges: County Road S14 over US 30, Nevada, IA

KMO



## Story County Design No. 123

- Project No. NHSX-030-5(277)—3H-85
- FHWA No. 701155
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\US 30 at S14 Nevada
- 3D model (.skp) available
- Features:
  - Special pier and abutment shaping
  - Jefferson Highway logos on SW and NE wings
  - Concrete rustication incl. at traffic barriers
  - Integral thin veneer brick lettering in barrier
  - Perforated metal vintage vehicle panels at fence
  - Concrete coating (mineral silicate paint) at beams and Jefferson Highway abutment logos
- Costs (2023):
  - Aesthetic barrier \$65/LF (\$84.90/LF avg bid)
  - Thin veneer brick \$150/SF (\$152.10/SF avg bid; should have been bid as Lump Sum due to small total quantity of 80 SF)
  - Perforated panels (2) \$15,000 (\$15,200 avg bid)



# Bridges: County Road S14 over US 30, Nevada, IA

KMO





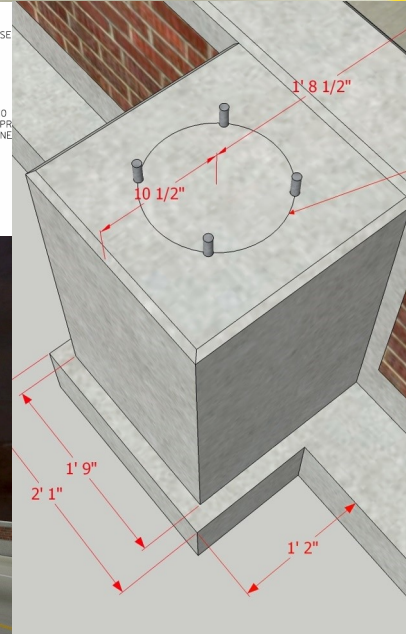
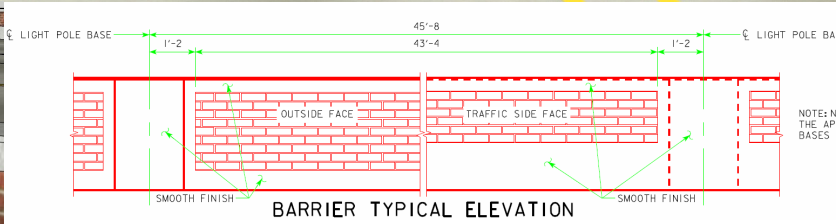
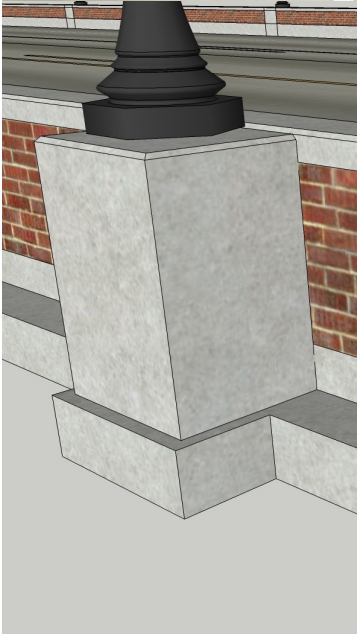
# Bridges: US 30 over Boyer River, Woodbine, IA

KMO



## Harrison County Design No. 116

- Project No. BRF-030-1(147)–38-43
- FHWA No. 27491
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\US 30 at Woodbine
- 3D model (.skp) available (deck/barriers only)
- Features:
  - Special traffic barrier with integrated light pole support pedestals on deck extensions
  - Integral thin veneer brick both barrier faces
  - Special lighting (by City)
- Costs (2015):
  - Aesthetic barrier \$85/LF (\$128.75/LF avg bid)
  - Thin veneer brick \$18/SF (\$28/SF avg bid)





# Bridges: US 30 over Boyer River, Woodbine, IA

KMO





# Bridges: US 34 over I-29 near Glenwood, IA

KMO



## Mills County Design Nos. 1111, 1211

- Project Nos. NHSX-534-1(84)—3H-65, NHSX-534-1(91)—3H-65
- FHWA Nos. 36331, 700115
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\US 34 & I-29 Mills County
- 3D model (.skp) available
- Features:
  - Special pier and abutment shaping
  - Form liner concrete texture and rustication
  - Integrated landscape planters at piers
  - Pier oculus (Design 1211 only)
  - Integrated retaining terrace wall at abutment supporting landscaped berm slope over EPS foam fill; cable railing on wall
- Costs (2013):
  - Structural concrete (bridge) \$325/CY (\$482/CY avg bid); estimated cost of pier planter wall at roughly 63.7 CY = \$20,700
  - Cable railing \$100/LF (\$96/LF avg bid)
  - EPS fill \$84/CY (\$128.52/CY avg bid)



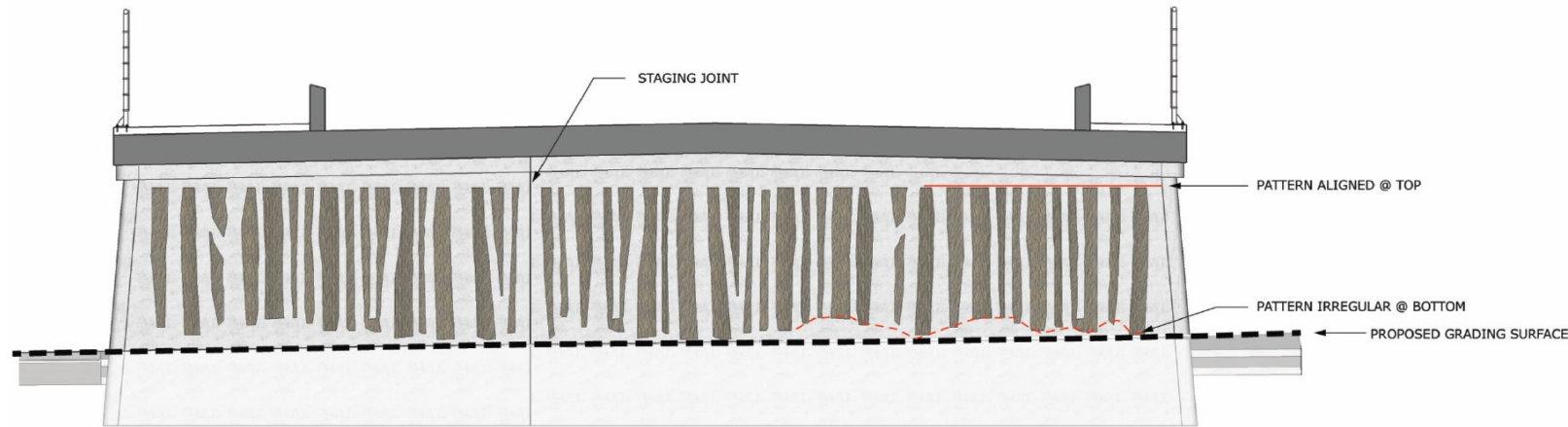
# Bridges: US 34 over I-29 near Glenwood, IA

KMO

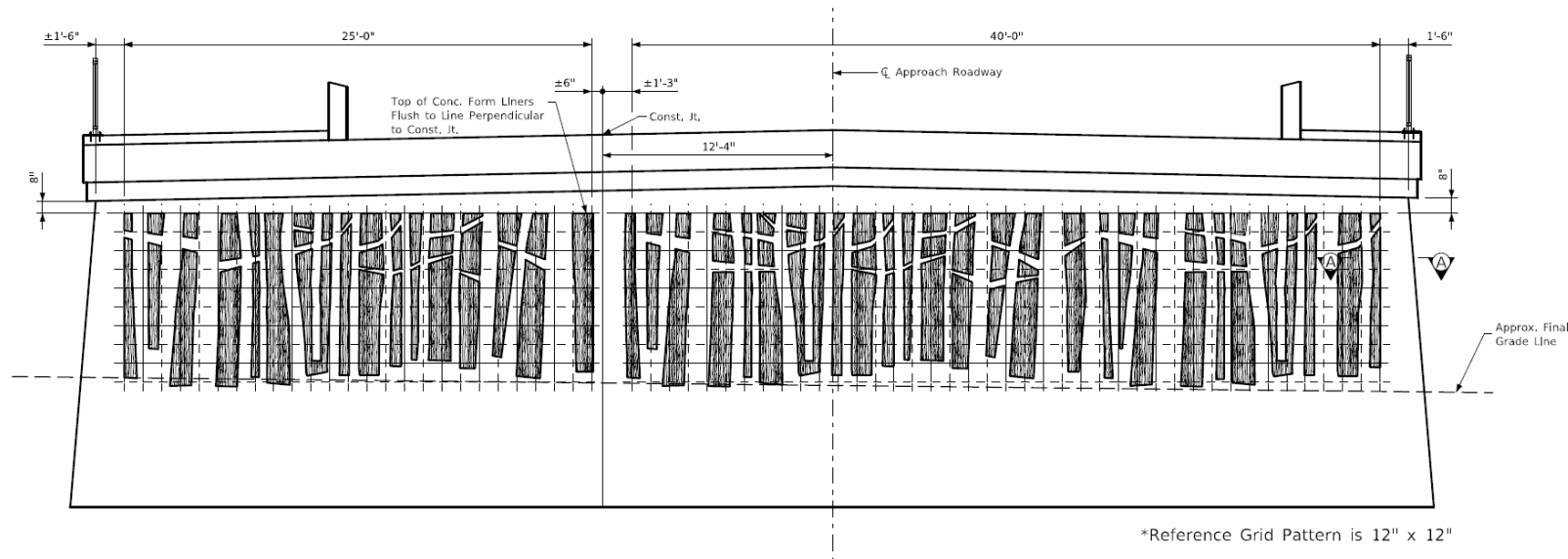




# Bridges: US 461 over Duck Creek, Davenport, IA



PIER ELEVATION - CONCRETE FORMLINER CONCEPT, Typ.  
(SOUTH FACE PIER 2 SHOWN)



PIER ENCASEMENT ELEVATION  
(South Face of Pier #2 Shown)

\*Reference Grid Pattern is 12" x 12"

## Scott County Design Nos. 222, 225

- Project Nos. BRF-461-1(9)—38-82, BRF-461-1(13)—38-82
- FHWA Nos. 46941, 47211
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\US 461 over Duck Cr Davenport
- 3D model (.skp) available
- Features:
  - Form liner concrete texture at pier along trail
  - Special welded picket pedestrian railing
- Costs (2023):
  - Welded railing \$276 (\$313/LF avg bid)



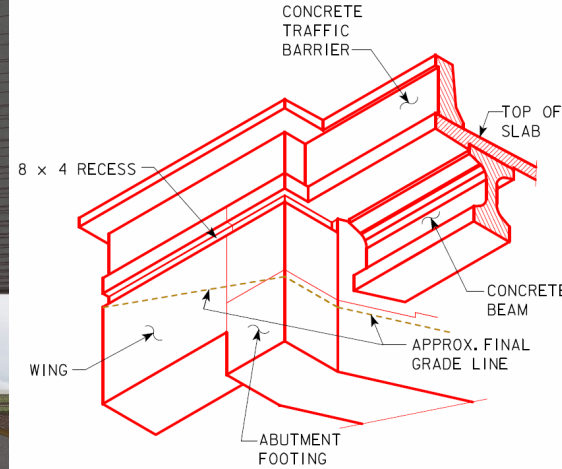
# Bridges: US 461 over Duck Creek, Davenport, IA





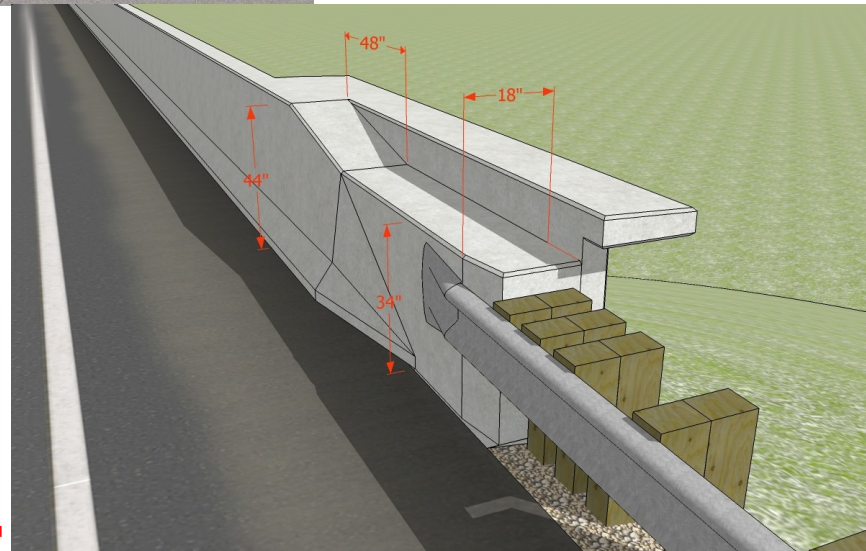
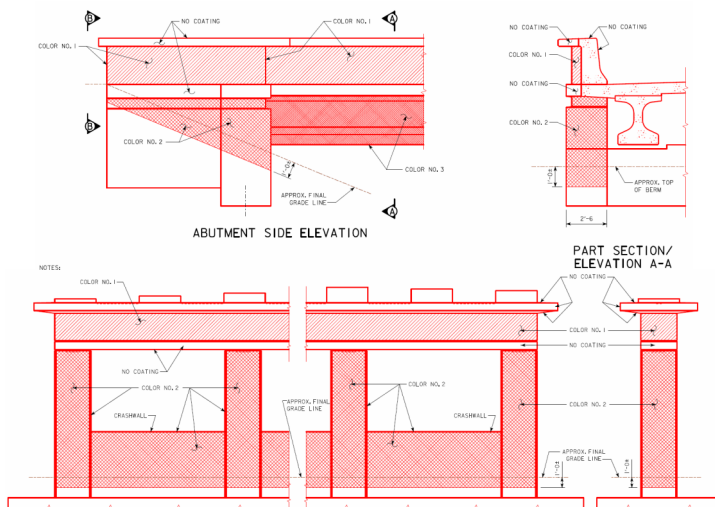
# Bridges: US 461 over IA 22, Davenport, IA

KMO



## Scott County Design No. 318

- Project No. BRF-461-1(6)—38-82
- FHWA No. 46871
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\US 461 over IA 22 Davenport
- Note: Bridge with similar design features constructed at I-29 over Singing Hills Blvd (Industrial Rd) in Sioux City
- 3D model (.skp) available (pier and barrier only)
- Features:
  - Special pier and abutment shaping
  - Integrated crash wall at non-standard pier
  - Special traffic barrier and end section
  - Concrete coatings (100% acrylic emulsion paint)
- Costs (2018):
  - Aesthetic barrier \$170/LF (\$184/LF avg bid)
  - Concrete coating \$40/SY (\$53.20/SY avg bid)





# Bridges: US 461 over IA 22, Davenport, IA

KMO





# Bridges: IA 3/Bremer Ave over Cedar River, Waverly, IA

KMO



## Bremer County Design No. 323

- Project No. BRF-003-6(69)—38-09
- FHWA No. 15571
- Folder: W:\Highway\Bridge\MethodsSection\Aesthetics\Waverly IA 3
- 3D model (.skp) available
- Features:
  - Special pier and abutment shaping
  - Overlooks at piers
  - Custom welded picket railing incl. hinged access panels for City dam floodlights
  - Integral thin veneer brick incl. both barrier faces
  - First IBBR separation barrier application
  - Concrete coating (mineral silicate paint) at beams
  - Special lighting (by City)
- Costs (2024):
  - Welded railing \$309/LF (\$323.80/LF avg bid)
  - Thin veneer brick \$56.50/SF (\$61.10/SF avg bid)
  - Aesthetic barrier \$89/LF (\$154.80/LF avg bid)
  - Concrete coating \$65.80/SY (\$81.32/SY avg bid)



# Bridges: IA 3/Bremer Ave over Cedar River, Waverly, IA

KMO

