

Project Location



LOCATION MAP
CSBRG-0007-00 (178) Johnson
SR 171 at Holton Creek
0.6 Mile South of Kite

PLANNING & BACKGROUND DATA

Project Justification Statement: This bridge (Structure ID 167-0025-0; SR 171 over Holton Creek) was built in 1963. The bridge consists of three spans of reinforced concrete deck girders on concrete caps and concrete columns. This bridge was designed using a truck configuration that weighs less than the current state legal truck weights. This bridge is currently posted. The overall condition of this bridge would be classified as good; with the deck, superstructure and substructure members exhibiting some minor problems. The superstructure has some minor cracking. No rehabilitation work performed on the structural components would improve this bridge in so far as the posting of the structure is concerned. Due to the structural integrity based on the design and that the bridge is currently posted, replacement of this bridge is recommended.

Description of the proposed project: This project consists of the replacement of the structurally deficient bridge over Holton Creek on State Route 171 located 0.6 miles South of Kite in Johnson County. The length of the project will be 0.32 miles. The replacement bridge is not proposed to be raised to increase boat clearance. A hydraulic study will be completed to determine if the bridge will need to be raised. Traffic will be detoured with an off-site detour during construction.

Federal Oversight: Full Oversight Exempt State Funded Other

MPO: N/A MPO - Choose
MPO Project TIP #

Regional Commission: N/A RC – Heart of Georgia RC
RC Project ID # N/A

Congressional District(s): 12

Projected Traffic: ADT

Current Year (2009): 550 Open Year (2017): 650 Design Year (2037): 975

Traffic Projections Performed by: GDOT Transportation Planning

Functional Classification (Mainline): Rural Major Collector

Is this a 3R (Resurfacing, Restoration, & Rehabilitation) Project? No Yes

Is this project on a designated Bike Route, Pedestrian Plan, or Transit Network?

None Bike Route Pedestrian Plan Transit Network

CONTEXT SENSITIVE SOLUTIONS

Issues of Concern: N/A

Context Sensitive Solutions: N/A

DESIGN AND STRUCTURAL DATA

Mainline Design Features:

Roadway Name/Identification: State Route 171

| Feature | Existing | Standard* | Proposed |
|---------------------------------|-------------------|--------------------|--------------------|
| Typical Section | | | |
| - Number of Lanes | 2 | 2 | 2 |
| - Lane Width(s) | 12 | 11-12 | 12 |
| - Median Width & Type | N/A | N/A | N/A |
| - Outside Shoulder Width & Type | 6-ft. | 6-ft. | 6-ft. |
| - Outside Shoulder Slope | 6% | 6% | 6% |
| - Inside Shoulder Width & Type | N/A | N/A | N/A |
| - Sidewalks | N/A | N/A | N/A |
| - Auxiliary Lanes | N/A | N/A | N/A |
| - Bike Lanes | N/A | N/A | N/A |
| Posted Speed | 55 MPH | | 55 MPH |
| Design Speed | 55 MPH | 55 MPH | 55 MPH |
| Min Horizontal Curve Radius | 960-ft. | 1060-ft. | 1060-ft. |
| Superelevation Rate | 8% | 6% | 6% |
| Grade | 4% | 6% | 4% |
| Access Control | Permit | Permit | Permit |
| Right-of-Way Width | 80-ft. to 150-ft. | 100-ft. to 150-ft. | 100-ft. to 150-ft. |
| Maximum Grade – Crossroad | N/A | N/A | N/A |
| Design Vehicle | SU | SU | SU |

*According to current GDOT design policy if applicable

Major Structures:

| Structure | Existing | Proposed |
|--|--|--|
| 167-0025-0 Bridge on SR 171 over Little Ogeechee River | This bridge was built in 1963 and consist of 3 spans of reinforced concrete deck girders on concrete caps and steel piles with a total length of 96-ft. The width is 26-ft. consisting of one 12-ft lane in each direction. The current sufficiency rating of this bridge is 68.89 | The proposed bridge is estimated to be 96-ft. long x 36-ft wide. The proposed bridge will have one 12-ft lane in each direction with 6-ft shoulders. The proposed bridge is expected to be at approximately the same elevation it currently is pending the outcome of the hydraulic study. |

Major Interchanges/Intersections: N/A

Project Concept Report page 5
Project Number: CSBRG-0007-00(178)
P.I. Number: 0007178
County: Johnson

Utility Involvements:

- Telephone: Pineland Telephone
- Power: Washington EMC

Public Interest Determination Policy and Procedure recommended (Utilities)? YES NO

SUE Required: Yes No

Railroad Involvement: N/A

Complete Streets - Bicycle, Pedestrian, and/or Transit Warrants:

Warrants met: None Bicycle Pedestrian Transit

Right-of-Way:

Required Right-of-Way anticipated: YES NO Undetermined
Easements anticipated: Temporary Permanent Utility Other

| | |
|--|---|
| Anticipated number of impacted parcels: | 6 |
| Anticipated number of displacements (Total): | 0 |
| Businesses: | 0 |
| Residences: | 0 |
| Other: | 0 |

Location and Design approval: Not Required Required

Off-site Detours Anticipated: No Yes Undetermined

A roadway user cost study was completed for this project and determined that the use of a off-site detour would reduce project cost, lower environmental impacts, reduce right of way cost while not adversely affecting commuter traffic.

Transportation Management Plan Anticipated: YES NO

Design Exceptions to FHWA/AASHTO controlling criteria anticipated:

| FHWA/AASHTO Controlling Criteria | YES | Appvl Date (if applicable) | NO | Undetermined |
|-----------------------------------|--------------------------|-------------------------------|-------------------------------------|--------------------------|
| 1. Design Speed | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Lane Width | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Shoulder Width | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4. Bridge Width | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5. Horizontal Alignment | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Superelevation | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7. Vertical Alignment | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 8. Grade | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 9. Stopping Sight Distance | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 10. Cross Slope | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 11. Vertical Clearance | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 12. Lateral Offset to Obstruction | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 13. Bridge Structural Capacity | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Design Variances to GDOT standard criteria anticipated:

| GDOT Standard Criteria | Reviewing Office | YES | Appvl Date (if applicable) | NO | Undetermined |
|---|------------------|--------------------------|-------------------------------|-------------------------------------|--------------------------|
| 1. Access Control - Median Opening Spacing | DP&S | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Median Usage & Width | DP&S | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Intersection Skew Angle | DP&S | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4. Lateral Offset to Obstruction | DP&S | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5. Intersection Sight Distance | DP&S | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Bike & Pedestrian Accommodations | DP&S | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7. GDOT Drainage Manual | DP&S | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 8. Georgia Standard Drawings | DP&S | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 9. GDOT Bridge & Structural Manual | Bridge Design | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 10. Roundabout Illumination | DP&S | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 11. Rumble Strips | DP&S | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 12. Safety Edge | DP&S | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

VE Study anticipated: No Yes Completed – Date:

ENVIRONMENTAL DATA

Anticipated Environmental Document:

GEPA: NEPA: Categorical Exclusion EA/FONSI EIS

Air Quality:

Is the project located in a PM 2.5 Non-attainment area? No Yes
 Is the project located in an Ozone Non-attainment area? No Yes
 Is a Carbon Monoxide hotspot analysis required? No Yes

MS4 Compliance – Is the project located in an MS4 area? No Yes

Environmental Permits/Variations/Commitments/Coordination anticipated:

| Permit/ Variance/ Commitment/ Coordination Anticipated | YES | NO | Remarks |
|--|-------------------------------------|-------------------------------------|---------|
| 1. U.S. Coast Guard Permit | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 2. Forest Service/Corps Land | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. CWA Section 404 Permit | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Tennessee Valley Authority Permit | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 5. Buffer Variance | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 6. Coastal Zone Management Coordination | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 7. NPDES | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 8. FEMA | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 9. Cemetery Permit | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 10. Other Permits | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 11. Other Commitments | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 12. Other Coordination | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |

Is a PAR required? No Yes Completed – Date:

NEPA/GEPA: This project will require an individual 404 Permit.

Ecology: A summary of the federal and state threatened and endangered species listed within a three mile radius of the project, their federal status, and suitable habitat requirements is included in the table below.

| Scientific Name | Common Name | State Status | Federal Status | Type | Habitat Requirements |
|----------------------------|--------------------------|--------------|----------------|---------|---|
| <i>Clemmys guttata</i> | Spotted Turtle | U | None | Reptile | Heavily vegetated, shallow wetlands with standing or slowly flowing water are the typical habitat for the spotted turtle. |
| <i>Heterodon simus</i> | Southern Hognose Snake | T | None | Reptile | Fire-maintained, well drained, zeric, sandy soils; longleaf pine and/or scrub oaks and wiregrass forests; ruderal habitats, fallow fields |
| <i>Moxostoma robustum</i> | Robust Redhorse | E | None | Fish | The robust redhorse is primarily known from habitats in main-stem rivers and has been collected in riffles, runs, and pools. Adults in the Oconee River have usually been found in association with (tree) snags, in moderate to swift current, often in deeper water near shore. |
| <i>Macranthera flammea</i> | Hummingbird Flower | T | None | Plant | Bogs and wet boggy thickets, edges of shrub-tree bogs or bays, occasionally in shallow water of cypress-gum ponds or depressions |
| <i>Marshallia ramosa</i> | Pineland Barbara Buttons | R | None | Plant | In Georgia, found in open, mixed oak-longleaf pine forests in thin soils on and near rock outcrops, particularly of the Altamaha Formation found on the Inner Coastal Plain. |

| | | | | | |
|---|---------------------|---|------|-------|--|
| <i>Penstemon dissectus</i> | Cutleaf Beardtongue | R | None | Plant | Outcrops of siliceous rock and the sandy-gravelly soils nearby. Occasionally locally abundant on outcrops of the Altamaha Grit, an iron-rich gravelly sand that is known to support several other endemics. Also (occasionally) on sand ridges with longleaf pine (<i>Pinus palustris</i>) and turkey oak (<i>Quercus laevis</i>). The sites where <i>Penstemon dissectus</i> occurs are dry savannahs; the open aspect is maintained by rock outcrops and by periodic fire. |
| <i>Sarracenia flava</i> | Yellow Flytrap | U | None | Plant | Wet pinelands and bogs. |
| <i>Sarracenia minor</i> var. <i>minor</i> | Hooded Pitcherplant | U | None | Plant | Wet savannas and pine flatwoods, seepage slopes, and bogs. |

History: The Bridge is not historic.

Archeology: A Cemetery is located on County Road 122(Swain Creek Road) just past the Gumlog Church. No impacts to the church or cemetery are anticipated.

Air & Noise:

Air: This project will be evaluated for its consistency with state and federal air quality goals, including CO, Ozone, PM 2.5 and MSATS as part of the assessment.

Noise: This project will be evaluated for the type of Noise Study required. When evaluated this project will be found to meet the criteria for a Type III project established in 23 CFR 722. Therefore, the project requires no analysis for highway traffic noise impacts.

Public Involvement: A Detour Public Open House will be required.

Major stakeholders: Traveling public

CONSTRUCTION

Issues potentially affecting constructability/construction schedule: Migratory birds could affect construction schedule of project if awarded during the nesting season and they are found to be under the existing bridge.

Early Completion Incentives recommended for consideration: No Yes

PROJECT RESPONSIBILITIES

Project Activities:

| Project Activity | Party Responsible for Performing Task(s) |
|---|--|
| Concept Development | GDOT – District 2 |
| Design | GDOT – District 2 |
| Right-of-Way Acquisition | GDOT – District 2 |
| Utility Relocation | Utility Owners |
| Letting to Contract | GDOT |
| Construction Supervision | GDOT – District 2 |
| Providing Material Pits | Contractor |
| Providing Detours | Contractor |
| Environmental Studies, Documents, & Permits | GDOT |
| Environmental Mitigation | GDOT |
| Construction Inspection & Materials Testing | GDOT |

Lighting required: No Yes

Initial Concept Meeting: N/A

Concept Meeting: A concept team meeting was held on 6-26-2012. The meeting minutes are attached.

Other projects in the area: CSBRG-0007-00(180) P.I. No. 0007180 consists of a Bridge Replacement on State Route 171 located 2.7 miles North of Kite.

Other coordination to date: N/A

Project Cost Estimate and Funding Responsibilities:

| | Breakdown of PE | ROW | Utility | CST* | Environmental Mitigation | Total Cost |
|------------------|-----------------|--------------|-----------|----------------|--------------------------|----------------|
| By Whom | GDOT | GDOT | GDOT | GDOT | GDOT | |
| \$ Amount | \$284,311.80 | \$143,000.00 | \$0.00 | \$1,106,105.81 | \$120,000.00 | \$1,653,417.61 |
| Date of Estimate | 5/6/2009 | 5/15/2012 | 5/17/2012 | 11/27/2012 | 4/18/2012 | |

*CST Cost includes: Construction, Engineering and Inspection, and Liquid AC Cost Adjustment.

ALTERNATIVES DISCUSSION

Alternative selection:

| | | | |
|---|---------------------|------------------------------|-----------------------|
| Preferred Alternative: Off-Site Detour – This Alternative would close State Route 171 and detour traffic along an off-site detour during construction. The only suitable routes that can accommodate truck traffic are State Route 26, State Route 4 and State Route 78. This route would cause motorist to travel east along State Route 26 to State Route 4, then take State Route 4 north to State Route 78, then take State Route 78 west back to State Route 171 for a total length of 33.0 miles. The normal distance traveled along this route is 25.35 miles. This off-site detour would add 7.65 miles to the commuter. The length of the project will be 0.32 miles. | | | |
| Estimated Property Impacts: | 6 | Estimated Total Cost: | \$1,653,417.61 |
| Estimated ROW Cost: | \$143,000.00 | Estimated CST Time: | 12 MONTHS |
| Rationale: This Alternate was selected as the preferred alternate as it satisfies the need and purpose of this project while minimizing traffic delays to commuters. This alternate reduces project cost and also environmental impact as compared to Alternate 1. | | | |

| | | | |
|--|------------|------------------------------|------------|
| No-Build Alternative: | | | |
| Estimated Property Impacts: | N/A | Estimated Total Cost: | N/A |
| Estimated ROW Cost: | N/A | Estimated CST Time: | N/A |
| Rationale: This alternate would not address the need and purpose of this project. | | | |

| | | | |
|---|---------------------|------------------------------|---------------------|
| Alternative 1 On-Site Detour – This Alternative would construct an on-site detour approximately 50-ft. South of the existing roadway of State Route 171. Once the detour construction is complete traffic would be shifted to the detour while the existing bridge and approaches are replaced. After the new bridge and approaches are complete traffic would then be shifted back to the original location and the detour would be removed. The length of the project will be 0.32 miles. | | | |
| Estimated Property Impacts: | 7 | Estimated Total Cost: | 1,791,930.89 |
| Estimated ROW Cost: | \$196,000.00 | Estimated CST Time: | 18 MONTHS |
| Rationale: This alternative would cost more to build since an on-site detour would have to be constructed including an additional bridge. Right of way cost would be increased to include additional easements for the on-site detour. The construction time would be extended an additional 6 months to build the detour, shift traffic, demolish the old bridge, construct the new bridge, shift traffic and remove detour and detour bridge. The detour would also increase environmental impacts. This office does not recommend this alternate due to the higher cost, the longer construction time, and the additional impacts to the environment. | | | |

Project Concept Report page 11
Project Number: CSBRG-0007-00(178)
P.I. Number: 0007178
County: Johnson

Comments: This office recommends that the Preferred Alternate of this concept be approved for implementation.

Attachments:

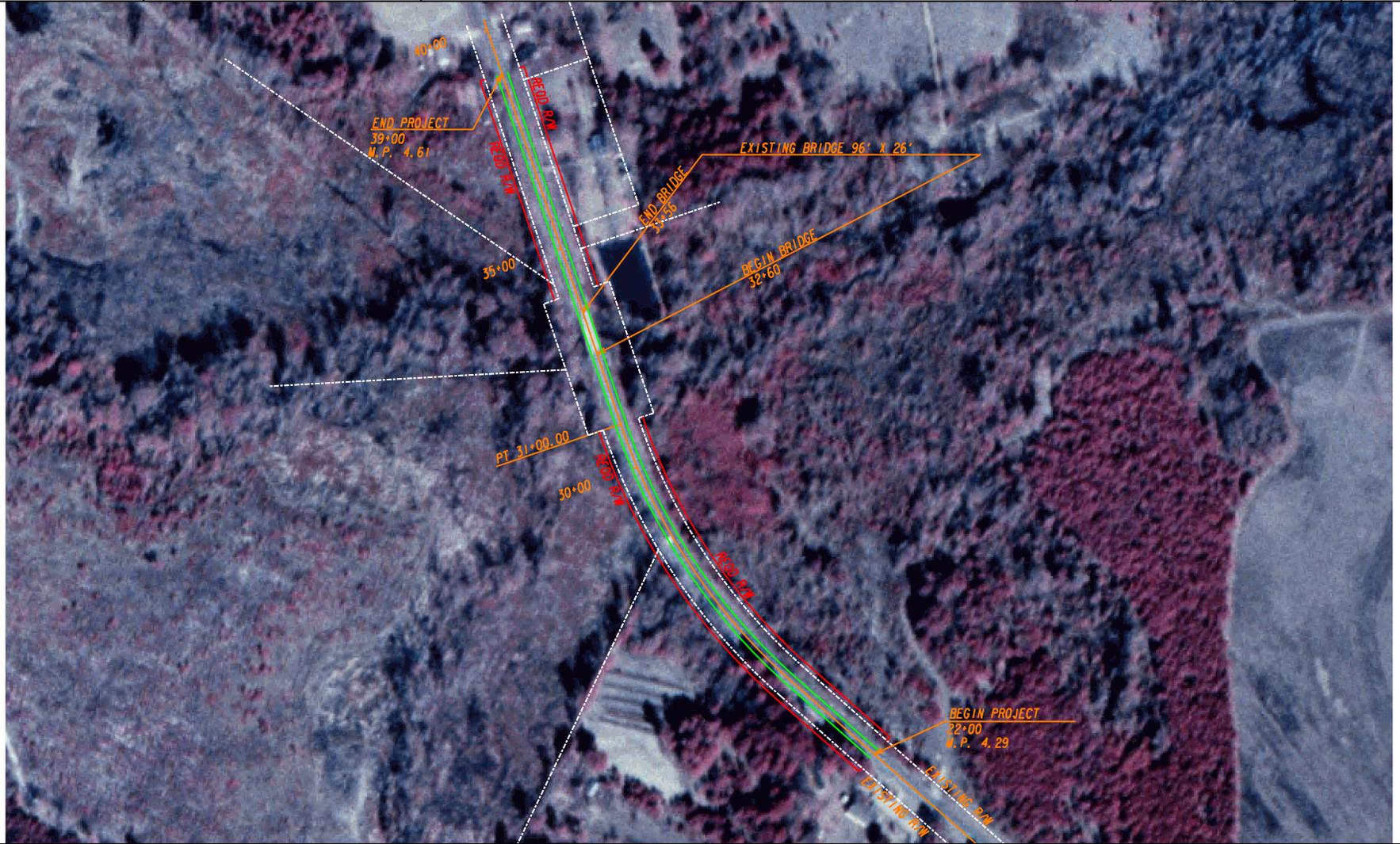
1. Concept Layout
2. Typical sections
3. Detailed Cost Estimates:
 - a. Construction including Engineering and Inspection, Fuel & Asphalt Price Adjustment forms
 - b. Right-of-Way
 - c. Utilities
 - d. Environmental Mitigation (EPD, etc)
4. Crash summaries
5. Corridor Traffic Data
6. Bridge inventory
7. Historic Bridge Inventory Report
8. Justification Statement from Bridge Maintenance
9. Minutes of Concept meetings
10. Roadway User Cost

APPROVALS

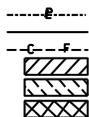
Concur: All R M: M
Director of Engineering

Approve: Gerald M Lass
Chief Engineer

 12/17/12
Date



PROPERTY AND EXISTING R/W LINE
 REQUIRED R/W LINE
 CONSTRUCTION LIMITS
 EASEMENT FOR CONSTR
 & MAINTENANCE OF SLOPES
 EASEMENT FOR CONSTR OF SLOPES
 EASEMENT FOR CONSTR OF DRIVES



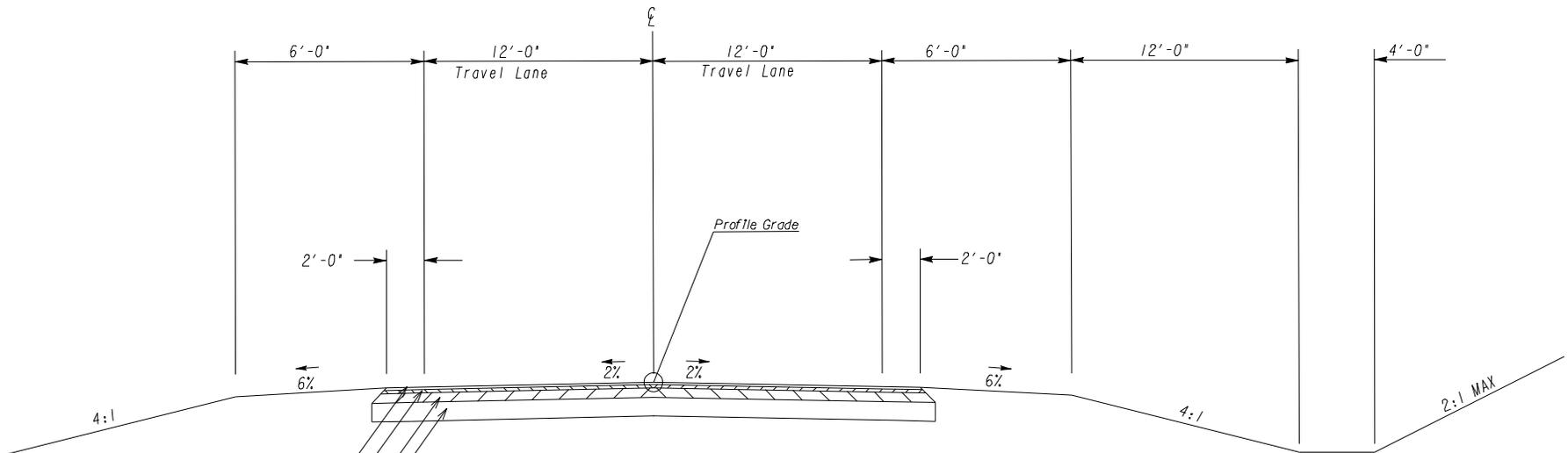
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 REQ'D R/W & LIMIT OF ACCESS

GEORGIA
 DEPARTMENT
 OF
 TRANSPORTATION



| REVISION DATES | | |
|----------------|--|--|
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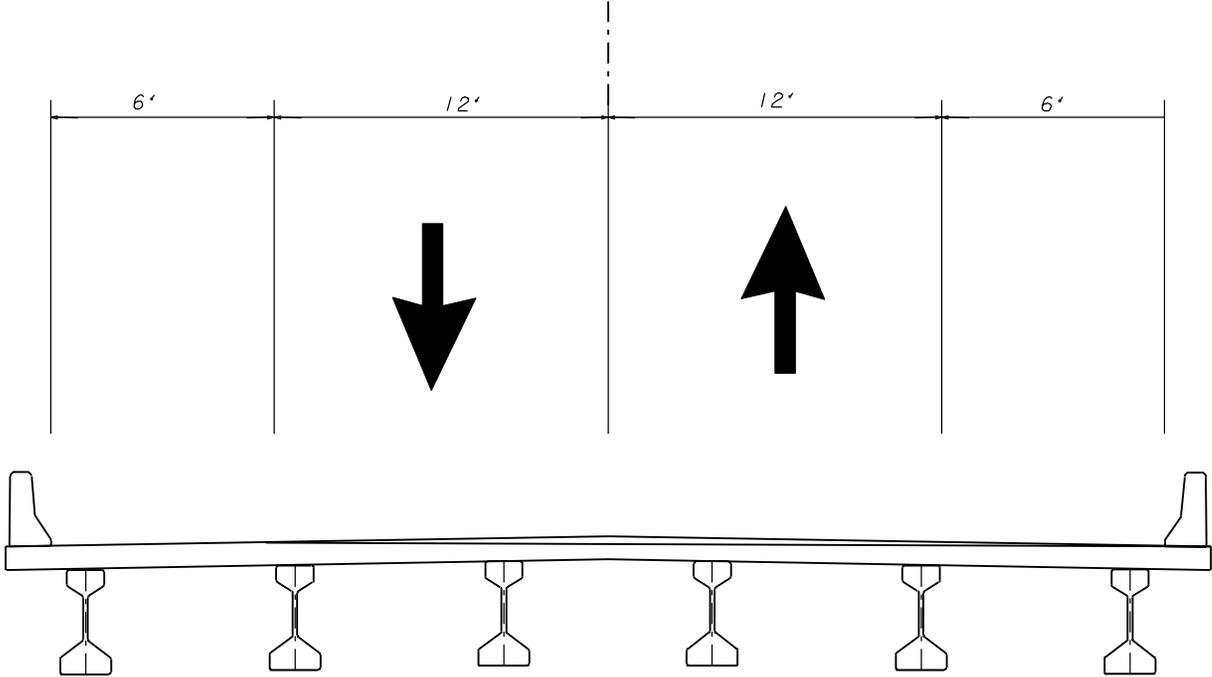
STATE OF GEORGIA
 DEPARTMENT OF TRANSPORTATION
 OFFICE: DISTRICT 2 DESIGN
 MAINLINE PLAN



TANGENT SECTION

- 8" GRADED AGGREGATE BASE CRS.
- 4" 25mm SUPERPAVE
- 2" 19mm SUPERPAVE
- 1 1/4" 9.5mm SUPERPAVE

BRIDGE
TYPICAL SECTION
CSBRG-0007-00(178)
JOHNSON COUNTY
PI # 0007178



PROPOSED BRIDGE TYPICAL

PROJ. NO.: CSBRG-0007-00(178)

P.I. NO. 0007178

DATE: 11/27/2012

| | | | |
|-----------------------------------|----|----|--------------|
| Base Construction Cost | | \$ | 1,023,752.29 |
| E & I | 5% | \$ | 51,187.61 |
| Construction Contingency | | \$ | - |
| Subtotal Construction Cost | | \$ | 1,074,939.90 |
| Liquid AC Adjustment (50 % cap) | | \$ | 31,165.90 |
| Total Construction Cost | | \$ | 1,106,105.81 |

| | | |
|-----------|--------------------|----------|
| PROJ. NO. | CSBRG-0007-00(178) | CALL NO. |
| P.I. NO. | 0007178 | |
| DATE | 11/27/2012 | |

| INDEX (TYPE) | DATE | INDEX |
|---------------|--------|-----------|
| REG. UNLEADED | Nov-12 | \$ 3.337 |
| DIESEL | | \$ 3.961 |
| LIQUID AC | | \$ 569.00 |

Link to Fuel and AC Index:
<http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx>

LIQUID AC ADJUSTMENTS

PA=[((APM-APL)/APL)]xTMTxAPL

| | | | | |
|--|----------|-----|--------------|---------------------|
| Asphalt | | | | |
| Price Adjustment (PA) | | | 30726 | \$ 30,726.00 |
| Monthly Asphalt Cement Price month placed (APM) | Max. Cap | 60% | \$ 910.40 | |
| Monthly Asphalt Cement Price month project let (APL) | | | \$ 569.00 | |
| Total Monthly Tonnage of asphalt cement (TMT) | | | 90 | |

| ASPHALT | Tons | %AC | AC ton |
|-------------|------|------|-----------|
| Leveling | 250 | 5.0% | 12.5 |
| 12.5 OGFC | | 5.0% | 0 |
| 12.5 mm | | 5.0% | 0 |
| 9.5 mm SP | 400 | 5.0% | 20 |
| 25 mm SP | 325 | 5.0% | 16.25 |
| 19 mm SP | 825 | 5.0% | 41.25 |
| 1800 | | | 90 |

| | | | | |
|--|----------|-----|--------------------|------------------|
| BITUMINOUS TACK COAT | | | | |
| Price Adjustment (PA) | | | \$ 439.90 | \$ 439.90 |
| Monthly Asphalt Cement Price month placed (APM) | Max. Cap | 60% | \$ 910.40 | |
| Monthly Asphalt Cement Price month project let (APL) | | | \$ 569.00 | |
| Total Monthly Tonnage of asphalt cement (TMT) | | | 1.288530277 | |

| | | |
|------------|----------|------------|
| Bitum Tack | | |
| Gals | gals/ton | tons |
| 300 | 232.8234 | 1.28853028 |

| | | | | |
|--|----------|-----|-----------|-------------|
| BITUMINOUS TACK COAT (surface treatment) | | | | |
| Price Adjustment (PA) | | | 0 | \$ - |
| Monthly Asphalt Cement Price month placed (APM) | Max. Cap | 60% | \$ 910.40 | |
| Monthly Asphalt Cement Price month project let (APL) | | | \$ 569.00 | |
| Total Monthly Tonnage of asphalt cement (TMT) | | | 0 | |

| Bitum Tack | SY | Gals/SY | Gals | gals/ton | tons |
|--------------------|----|---------|------|----------|------|
| Single Surf. Trmt. | | 0.20 | 0 | 232.8234 | 0 |
| Double Surf.Trmt. | | 0.44 | 0 | 232.8234 | 0 |
| Triple Surf. Trmt | | 0.71 | 0 | 232.8234 | 0 |
| | | | | | 0 |

TOTAL LIQUID AC ADJUSTMENT **\$ 31,165.90**

DETAILED COST ESTIMATE



Job: 0007178 MS

JOB NUMBER 0007178_MS,

FED/STATE PROJECT NUMBER CSBRG-0007-00(178)

SPEC YEAR: 01

DESCRIPTION: SR 171 BRIDGE REPLACEMENT OVER HOLTON CREEK
(PREFERRED ALTERNATE)

ITEMS FOR JOB 0007178_MS

10 - ROADWAY

| Line Number | ITEM | QUANTITY | UNITS | PRICE | DESCRIPTION | AMOUNT |
|------------------------------|----------|----------|-------|----------------|--|---------------------|
| 0005 | 150-1000 | 1.000 | LS | \$40,000.00000 | TRAFFIC CONTROL - CSBRG-0007-00(178) | \$40,000.00 |
| 0010 | 153-1300 | 1.000 | EA | \$59,911.09000 | FIELD ENGINEERS OFFICE TP 3 | \$59,911.09 |
| 0015 | 207-0203 | 50.000 | CY | \$50.59020 | FOUND BK FILL MATL, TP II | \$2,529.51 |
| 0020 | 210-0100 | 1.000 | LS | \$75,000.00000 | GRADING COMPLETE - CSBRG-0007-00(178) | \$75,000.00 |
| 0025 | 310-1101 | 1264.000 | TN | \$23.36080 | GR AGGR BASE CRS, INCL MATL | \$29,528.05 |
| 0030 | 318-3000 | 25.000 | TN | \$22.44681 | AGGR SURF CRS | \$561.17 |
| 0035 | 402-1812 | 250.000 | TN | \$84.67342 | RECYL AC LEVELING, INC BM&HL | \$21,168.36 |
| 0040 | 402-3103 | 400.000 | TN | \$78.84436 | REC AC 9.5 MM SP, TPII, GP2, INCL BM & H L | \$31,537.74 |
| 0045 | 402-3121 | 325.000 | TN | \$78.62987 | RECYL AC 25MM SP, GP1/2, BM&HL | \$25,554.71 |
| 0050 | 402-3190 | 825.000 | TN | \$77.16086 | RECYL AC 19 MM SP, GP 1 OR 2, INC BM&HL | \$63,657.71 |
| 0055 | 413-1000 | 300.000 | GL | \$3.01415 | BITUM TACK COAT | \$904.25 |
| 0060 | 433-1200 | 284.000 | SY | \$141.89666 | REF CONC APPR SL/I SLOPED EDGE | \$40,298.65 |
| 0065 | 436-1000 | 500.000 | LF | \$7.48442 | ASPH CONC CURB - 6 IN | \$3,742.21 |
| 0070 | 441-0303 | 4.000 | EA | \$1,606.67038 | CONC SPILLWAY, TP 3 | \$6,426.68 |
| 0075 | 446-1100 | 3070.000 | LF | \$3.13398 | PVMT REF FAB STRIPS, TP2, 18 INCH WIDTH | \$9,621.32 |
| 0080 | 456-2015 | 1.000 | GLM | \$4,650.88200 | INDENT. RUMB. STRIPS - GRND-IN-PL (SKIP) | \$4,650.88 |
| 0095 | 550-1180 | 100.000 | LF | \$37.92023 | STM DR PIPE 18", H 1-10 | \$3,792.02 |
| 0100 | 550-2180 | 40.000 | LF | \$29.19021 | SIDE DR PIPE 18", H 1-10 | \$1,167.61 |
| 0105 | 550-3618 | 2.000 | EA | \$540.44673 | SAFETY END SECTION 18", SD, 6:1 | \$1,080.89 |
| 0110 | 550-4218 | 4.000 | EA | \$520.70442 | FLARED END SECT 18 IN, ST DR | \$2,082.82 |
| 0115 | 634-1200 | 17.000 | EA | \$100.14692 | RIGHT OF WAY MARKERS | \$1,702.50 |
| 0120 | 641-1100 | 84.000 | LF | \$65.64684 | GUARDRAIL, TP T | \$5,514.33 |
| 0125 | 641-1200 | 400.000 | LF | \$15.05585 | GUARDRAIL, TP W | \$6,022.34 |
| 0130 | 641-5001 | 2.000 | EA | \$604.27744 | GUARDRAIL ANCHORAGE, TP 1 | \$1,208.55 |
| 0135 | 641-5012 | 2.000 | EA | \$1,800.97830 | GUARDRAIL ANCHORAGE, TP 12 | \$3,601.96 |
| 0140 | 643-8200 | 1000.000 | LF | \$2.13511 | BARRIER FENCE (ORANGE), 4 FT | \$2,135.11 |
| SUBTOTAL FOR ROADWAY: | | | | | | \$443,400.46 |

20 - PERMANENT EROSION CONTROL

| Line Number | ITEM | QUANTITY | UNITS | PRICE | DESCRIPTION | AMOUNT |
|--|----------|----------|-------|-------------|-------------------------------|--------------------|
| 0145 | 603-2181 | 100.000 | SY | \$36.91906 | STN DUMPED RIP RAP, TP 3, 18" | \$3,691.91 |
| 0310 | 603-7000 | 100.000 | SY | \$2.97671 | PLASTIC FILTER FABRIC | \$297.67 |
| 0150 | 700-6910 | 7.000 | AC | \$902.63636 | PERMANENT GRASSING | \$6,318.45 |
| 0155 | 700-7000 | 21.000 | TN | \$81.34865 | AGRICULTURAL LIME | \$1,708.32 |
| 0160 | 700-8000 | 22.000 | TN | \$475.16790 | FERTILIZER MIXED GRADE | \$10,453.69 |
| 0165 | 700-8100 | 700.000 | LB | \$2.09436 | FERTILIZER NITROGEN CONTENT | \$1,466.05 |
| 0170 | 710-9000 | 2500.000 | SY | \$3.49612 | PERM SOIL REINFORCING MAT | \$8,740.30 |
| 0175 | 716-2000 | 2500.000 | SY | \$1.28633 | EROSION CONTROL MATS, SLOPES | \$3,215.83 |
| SUBTOTAL FOR PERMANENT EROSION CONTROL: | | | | | | \$35,892.22 |

DETAILED COST ESTIMATE



Job: 0007178 MS

30 - TEMPORARY EROSION CONTROL

| Line Number | ITEM | QUANTITY | UNITS | PRICE | DESCRIPTION | AMOUNT |
|--|----------|----------|-------|---------------|---|--------------------|
| 0180 | 163-0232 | 21.000 | AC | \$242.50745 | TEMPORARY GRASSING | \$5,092.66 |
| 0185 | 163-0240 | 150.000 | TN | \$185.10568 | MULCH | \$27,765.85 |
| 0190 | 163-0300 | 2.000 | EA | \$1,204.25100 | CONSTRUCTION EXIT | \$2,408.50 |
| 0195 | 163-0520 | 1000.000 | LF | \$13.41078 | CONSTR AND REMOVE TEMP PIPE SLOPE DRAIN | \$13,410.78 |
| 0200 | 163-0528 | 1500.000 | LF | \$4.23362 | CONSTR AND REM FAB CK DAM -TP C SLT FN | \$6,350.43 |
| 0205 | 163-0529 | 500.000 | LF | \$3.68949 | CNST/REM TEMP SED BAR OR BLD STRW CK DM | \$1,844.75 |
| 0210 | 165-0030 | 2500.000 | LF | \$0.73927 | MAINT OF TEMP SILT FENCE, TP C | \$1,848.18 |
| 0215 | 165-0041 | 1500.000 | LF | \$1.27360 | MAINT OF CHECK DAMS - ALL TYPES | \$1,910.40 |
| 0220 | 165-0071 | 250.000 | LF | \$1.35647 | MAINT OF SEDIMENT BARRIER - BALED STRAW | \$339.12 |
| 0225 | 165-0101 | 2.000 | EA | \$493.21640 | MAINT OF CONST EXIT | \$986.43 |
| 0230 | 167-1000 | 2.000 | EA | \$418.46250 | WATER QUALITY MONITORING AND SAMPLING | \$836.93 |
| 0235 | 167-1500 | 12.000 | MO | \$690.95987 | WATER QUALITY INSPECTIONS | \$8,291.52 |
| 0240 | 171-0030 | 5000.000 | LF | \$2.77792 | TEMPORARY SILT FENCE, TYPE C | \$13,889.60 |
| SUBTOTAL FOR TEMPORARY EROSION CONTROL: | | | | | | \$84,975.15 |

40 - SIGNING AND MARKING

| Line Number | ITEM | QUANTITY | UNITS | PRICE | DESCRIPTION | AMOUNT |
|--|----------|----------|-------|------------|--------------------------------|-------------------|
| 0245 | 636-1020 | 22.000 | SF | \$13.88873 | HWY SGN,TP1MAT,REFL SH TP3 | \$305.55 |
| 0250 | 636-1033 | 18.000 | SF | \$17.40560 | HWY SIGNS, TP1MAT,REFL SH TP 9 | \$313.30 |
| 0255 | 636-2070 | 48.000 | LF | \$7.40919 | GALV STEEL POSTS, TP 7 | \$355.64 |
| 0260 | 636-2090 | 30.000 | LF | \$7.17953 | GALV STEEL POSTS, TP 9 | \$215.39 |
| 0265 | 652-5301 | 2034.000 | LF | \$0.14930 | SOLID TRAF STRIPE, 6 IN, WHITE | \$303.68 |
| 0270 | 652-5451 | 2034.000 | LF | \$0.38764 | SOLID TRAF STRIPE, 5 IN, WHITE | \$788.46 |
| 0285 | 654-1001 | 60.000 | EA | \$4.54358 | RAISED PVMT MARKERS TP 1 | \$272.61 |
| 0280 | 657-1085 | 532.000 | LF | \$6.04697 | PRF PL SD PVT MKG,8",B/W,TP PB | \$3,216.99 |
| 0275 | 657-6085 | 532.000 | LF | \$5.57342 | PRF PL SD PVMT MKG,8",B/Y,TPPB | \$2,965.06 |
| SUBTOTAL FOR SIGNING AND MARKING: | | | | | | \$8,736.68 |

50 - BRIDGE

| Line Number | ITEM | QUANTITY | UNITS | PRICE | DESCRIPTION | AMOUNT |
|-----------------------------|----------|----------|-------|-----------------|--|---------------------|
| 0290 | 540-1102 | 1.000 | LS | \$64,896.00000 | REM OF EX BR, BR NO - 1 (96-FT X 26-FT X \$26) | \$64,896.00 |
| 0295 | 543-9000 | 1.000 | LS | \$328,320.00000 | CONSTR OF BRIDGE COMPLETE - 1 (96-FT X 36-FT X \$95) | \$328,320.00 |
| 0300 | 603-2024 | 1200.000 | SY | \$44.96644 | STN DUMPED RIP RAP, TP 1, 24" | \$53,959.73 |
| 0305 | 603-7000 | 1200.000 | SY | \$2.97671 | PLASTIC FILTER FABRIC | \$3,572.05 |
| SUBTOTAL FOR BRIDGE: | | | | | | \$450,747.78 |

TOTALS FOR JOB 0007178_MSALT1

| | |
|---|-----------------------|
| ITEMS COST: | \$1,023,752.29 |
| COST GROUP COST: | \$0.00 |
| ESTIMATED COST: | \$1,023,752.29 |
| CONTINGENCY PERCENT: | 0.00 |
| ENGINEERING AND INSPECTION: | 0.00 |
| ESTIMATED COST WITH CONTINGENCY AND E&I: | \$1,023,752.29 |

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA**

INTERDEPARTMENT CORRESPONDENCE

FILE CSBRG-0007-00(178) Johnson County
P.I. No. 0007178 - SR 171 @ Holton Creek

OFFICE Tennille

DATE May 17, 2012



FROM Lynn Bean, District Utilities Engineer

TO Bobby Hilliard, P.E., State Program Delivery Engineer
ATTN Chad White, Project Manager

SUBJECT CONCEPT UTILITY COST ESTIMATE

As requested by your office, we are furnishing you with a Concept Utility Cost Estimate for each known utility facility within the project limits.

| FACILITY OWNER | NON-REIMBURSABLE | REIMBURSABLE |
|------------------------------|------------------|--------------|
| PINELAND TELEPHONE | \$51,000.00 | \$0.00 |
| THE CITY OF KITE | \$10,100.00 | \$0.00 |
| <hr/> | | |
| Total Non-Reimbursable Cost: | \$61,100.00 | |
| Total Reimbursable Cost: | \$0.00 | |

Total Potential Relocation Cost:

This estimate is based on Concept plans dated May 3, 2012.

Please be advised this is an estimate and may be revised when project plans are developed and prior rights research is completed.

If you have any questions, please contact Jimmy Hobby at 478-552-4637.

LB/JFH

cc: Jeff Baker, State Utilities Engineer
Allen Patrick, Utilities Preconstruction Engineer
Vahid Munshi, Utilities Preconstruction Engineer
Angela Robinson, Office of Financial Management
Chris Holmes, Area Engineer, Area One

Grimes, Foster

From: Westberry, Lisa
Sent: Wednesday, April 18, 2012 10:18 AM
To: Grimes, Foster
Cc: Lindsey, Jamie; Cox, Jonathan
Subject: FW: CSBRG-0007-00(178) P.I. No. 0007178 - Mitigation Cost Concept Estimate (Email 1 of 2)
Attachments: 0007178 Soil Survey.pdf

Good morning Foster,

The project is located on SR 171 over Holton Creek in Johnson County. I reviewed the NRCS Soil Survey Maps and based on the project description, wetlands would be impacted by either alternative of the proposed project and mitigation would be required. My calculations were based on using 200 feet of ROW, the project would require approximately 22 wetland credits. The estimated cost for these credits is \$120,000.

DISCLAIMER: This information is solely based on a desk top review of the information available. Only after a field reconnaissance can project impacts be determined and the exact number of credits required for mitigation calculated.

If you have any questions, please don't hesitate to ask.

Thank you,
Lisa Westberry
Georgia Department of Transportation
600 West Peachtree Street, NW, Atlanta, GA 30308
404-631-1772

From: Grimes, Foster
Sent: Tuesday, April 17, 2012 8:29 AM
To: Westberry, Lisa
Cc: Lindsey, Jamie
Subject: CSBRG-0007-00(178) P.I. No. 0007178 - Mitigation Cost Concept Estimate (Email 1 of 2)

Lisa,

Please provide this office the mitigation concept cost estimates for this project. I have attached two alternates for this project.

Thank you,

Foster C. Grimes

*Design Engineer 3
Georgia Department of Transportation
District 2 Preconstruction Division
Office of Design
801 Highway 15 South/P.O. Box 8
Tennille, Georgia 31089
Phone (478)552-4643
Fax (478)552-4677
email at fgrimes@dot.ga.gov*

ACCIDENT RATE CALCULATION for year(s) 2004,2005,2006,2007,2008

| Year | County | Rt Type | Route Num | Low Milelog | High Milelog | ADT | Distance | Vehicle Miles |
|------|---------|---------|-----------|-------------|--------------|-----|----------|---------------|
| 2004 | Johnson | 1 | 017100 | 4.29 | 4.61 | 710 | 0.32 | 227 |

| | | |
|--------------------------|---------------------|---------------------|
| Total Vehicle Miles: 227 | Total Accidents: 0 | Accident Rate: 0 |
| Average ADT: 710 | Total Injuries: 0 | Injury Rate: 0 |
| Length in Miles: 0.32 | Total Fatalities: 0 | Fatality Rate: 0.00 |

NOTE: Rates are per 100 Million Vehicle Miles

| Year | County | Rt Type | Route Num | Low Milelog | High Milelog | ADT | Distance | Vehicle Miles |
|------|---------|---------|-----------|-------------|--------------|-----|----------|---------------|
| 2005 | Johnson | 1 | 017100 | 4.29 | 5.03 | 620 | 0.74 | 459 |
| 2005 | Johnson | 1 | 017100 | 4.22 | 4.61 | 620 | 0.39 | 242 |

| | | |
|--------------------------|---------------------|---------------------|
| Total Vehicle Miles: 701 | Total Accidents: 0 | Accident Rate: 0 |
| Average ADT: 620 | Total Injuries: 0 | Injury Rate: 0 |
| Length in Miles: 1.13 | Total Fatalities: 0 | Fatality Rate: 0.00 |

NOTE: Rates are per 100 Million Vehicle Miles

| Year | County | Rt Type | Route Num | Low Milelog | High Milelog | ADT | Distance | Vehicle Miles |
|------|---------|---------|-----------|-------------|--------------|-----|----------|---------------|
| 2006 | Johnson | 1 | 017100 | 4.29 | 5.03 | 640 | 0.74 | 474 |
| 2006 | Johnson | 1 | 017100 | 4.22 | 4.61 | 640 | 0.39 | 250 |

| | | |
|--------------------------|---------------------|---------------------|
| Total Vehicle Miles: 723 | Total Accidents: 0 | Accident Rate: 0 |
| Average ADT: 640 | Total Injuries: 0 | Injury Rate: 0 |
| Length in Miles: 1.13 | Total Fatalities: 0 | Fatality Rate: 0.00 |

NOTE: Rates are per 100 Million Vehicle Miles

| Year | County | Rt Type | Route Num | Low Milelog | High Milelog | ADT | Distance | Vehicle Miles |
|------|---------|---------|-----------|-------------|--------------|-----|----------|---------------|
| 2007 | Johnson | 1 | 017100 | 4.29 | 5.03 | 640 | 0.74 | 474 |
| 2007 | Johnson | 1 | 017100 | 4.22 | 4.61 | 640 | 0.39 | 250 |

|| ||

| | | |
|--------------------------|---------------------|---------------------|
| Total Vehicle Miles: 723 | Total Accidents: 0 | Accident Rate: 0 |
| Average ADT: 640 | Total Injuries: 0 | Injury Rate: 0 |
| Length in Miles: 1.13 | Total Fatalities: 0 | Fatality Rate: 0.00 |

NOTE: Rates are per 100 Million Vehicle Miles

| Year | County | Rt Type | Route Num | Low Milelog | High Milelog | ADT | Distance | Vehicle Miles |
|------|---------|---------|-----------|-------------|--------------|-----|----------|---------------|
| 2008 | Johnson | 1 | 017100 | 4.29 | 5.03 | 640 | 0.74 | 474 |
| 2008 | Johnson | 1 | 017100 | 4.22 | 4.61 | 640 | 0.39 | 250 |

| | | |
|--------------------------|---------------------|---------------------|
| Total Vehicle Miles: 723 | Total Accidents: 0 | Accident Rate: 0 |
| Average ADT: 640 | Total Injuries: 0 | Injury Rate: 0 |
| Length in Miles: 1.13 | Total Fatalities: 0 | Fatality Rate: 0.00 |

NOTE: Rates are per 100 Million Vehicle Miles

NO BUILD = BUILD
Department of Transportation
State of Georgia

INTERDEPARTMENT CORRESPONDENCE

FILE CSBRG- 0007-00(178), Johnson County **OFFICE** Planning
P.I. # 0007178
DATE January 20, 2012

FROM Cindy VanDyke, State Transportation Planning Administrator

TO Bobby Hilliard, P.E., State Program Delivery Engineer
Attention: Chad White

SUBJECT Traffic Assignment for **SR 171 @ HOLTON CREEK 0.6 MI S. OF KITE.**

We are furnishing estimated Traffic Assignment for the above project as follows:

TC # 0178
2009 ADT = 550
2017 ADT = 650
2037 ADT = 975
2009 DHV = 50
2017 DHV = 60
2037 DHV = 90
K = 9%
D = 60%
T. = 25%
S.U. T = 18%
COMB. T = 7%
24-HOUR T. = 29%
S.U. = 19%
COMB. = 10%

If you have any questions concerning this information please contact Leslie Woods at (404) 631-1773.

Bridge Inventory Data Listing



Parameters: Bridge Serial Num

Structure ID:167-0025-0

Johnson

SUFF. RATING: 68.89

Location & Geography

Structure ID: 167-0025-0
 200 Bridge Information: 06
 *6A Feature Int: HOLTON CREEK
 *6B Critical Bridge: 0
 *7A Route No Carried: SR00171
 *7B Facility Carried: US 221
 9 Location: .6 MI S OF KITE
 2 Dot District: 2
 207 Year Photo: 2010
 *91 Inspection Frequency: 24 Date: 11/09/2010
 92A Fract Crit Insp Freq: 0 Date: 02/01/1901
 92B Underwater Insp Freq: 0 Date: 02/01/1901
 92C Other Spc. Insp Freq: 0 Date: 02/01/1901
 * 4 Place Code: 00000
 *5 Inventory Route(O/U): 1
 Type: 2
 Designation: 1
 Number: 00221
 Direction: 0
 *16 Latitude: 32 41.0937 HMMS Prefix:SR
 *17 Longitude: 82 -30.6805 HMMS Suffix:00 MP:3.64
 98 Border Bridge: 000%Shared:00
 99 ID Number: 0000000000000000
 *100 STRAHNET: 0
 12 Base Highway Network: 1
 13A LRS Inventory Route: 1671017100
 13B Sub Inventory Route: 0
 101 parallel Structure: N
 *102 Direction of Traffic: 2
 *264 Road Inventory Mile Post: 004.39
 *208 Inspection Area: 2 Initials: EFP
 Engineer's Initials: kww
 * Location ID No: 167-00171D-004.39N

*104 Highway System: 0
 *26 Functional Classification: 07
 *204 Federal Route Type: S No: 00578
 105 Federal Lands Highway: 0
 *110 Truck Route: 0
 2006 School Bus Route: 1
 217 Benchmark Elevation: 0000.00
 218 Datum: 0
 *19 Bypass Length: 09
 *20 Toll: 3
 *21 Maintanance: 01
 *22 Owner: 01
 *31 Design Load: 2
 37 Historical Significance: 5
 205 Congressional District: 12
 27 Year Constructed: 1963
 106 Year Reconstructed: 0000
 33 Bridge Medium: 0
 34 Skew: 00
 35 Structure Flared: 0
 38 Navigation Control: 0
 213 Special Steel Design: 0
 267 Type of Paint: 0
 *42 Type of Service On: 1
 Type of Service Under: 5
 214 Movable Bridge: 0
 203 Type Bridge: 0
 259 Pile Encasement 3.
 *43 Structure Type Main: 1 04
 45 No. Spans Main: 003
 44 Structure Type Appr: 0 00
 46 No Spans Appr: 0000
 226 Bridge Curve Horz 0 Vert: 0
 111 pier Protection 0
 107 Deck Structure Type: 1
 108 Wearing Structure Type: 1
 Membrane Type: 0
 Deck Protection: 8

Signs & Attachments

225 Expansion Joint Type: 02
 242 Deck Drains: 1
 243 Parapet Location: 0
 Height: 0
 Width: 0
 238 Curb Height: 1
 Curb Material: 1
 239 Handrail 1 1
 *240 Medium Barrier Rail: 0
 241 Bridge Median Height: 0
 * Bridge Median Width: 0
 230 Guardrail Loc. Dir. Rear: 3
 Fwr: 3
 Oppo. Dir. Rear: 0
 Oppo. Fwr: 0
 244 Approach Slab 3
 224 Retaining Wall: 0
 233 Posted Speed Limit: 55
 236 Warning Sign: 0.00
 234 Delineator: 1.00
 235 Hazzard Boards: 1
 237 Utilities Gas: 00
 Water: 00
 Electric: 00
 Telephone: 00
 Sewer: 00
 247 Lighting Street: 0
 Navigation: 0
 Aerial: 0
 *248 County Continuity No.: 00

Bridge Inventory Data Listing



Parameters: Bridge Serial Num

Structure ID:167-0025-0

| Programming Data | | Measurements: | | | | |
|-----------------------|----------------------|-----------------------------|------------------|----------------|------------------------------|---------------------|
| 201 Project No: | RAB (4) SP 1242 (14) | *29ADT | 000640 | Year:2007 | 65 Inventory Rating Method: | 1 |
| 202 Plans Available: | 4 | 109%Trucks: | 0 | | 63 Operating Rating Method: | 1 |
| 249 Prop Proj No: | BRG-0007-00(178) | * 28 Lanes On: | 02 | Under:00 | 66 Inventory Type: | 2 Rating: 19 |
| 250 Approval Status: | 0000 | 210 No. Tracks On: | 00 | Under:00 | 64 Operating Type: | 2 Rating: 19 |
| 251 PI Number: | 0007178 | * 48 Max. Span Length | 0032 | | 231Calculated Loads: | |
| 252 Contract Date: | 02/01/1901 | * 49 Structure Length: | 96 | | H-Modified: | 21 1 |
| 260 Seismic No: | 00000 | 51 Br. Rwdy. Width | 26.00 | | HS-Modified: | 21 0 |
| 75 Type Work: | 34 1 | 52 Deck Width: | 32.30 | | Type 3: | 28 1 |
| 94 Bridge Imp. Cost: | \$73 | * 47 Tot. Horiz. Cl: | 26 | | Type 3s2: | 27 0 |
| 95 Roadway Imp. Cost: | 41 | 50 Curb / Sidewalk Width | 2.00 / 2.00 | | Timber: | 37 1 |
| 96 Total Imp Cost: | 157 | 32 Approach Rdwy. Width | 28 | | Piggyback: | 37 0 |
| 76 Imp Length: | 000307 | *229 Shoulder Width: | | | 261 H Inventory Rating: | 14 |
| 97 Imp Year: | 1990 | Rear Lt: | 3.00 | Type:2 Rt:3.00 | 262 H Operating Rating | 24 |
| 114Furure ADT: | 000960 | Fwd. Lt: | 3.00 | Type:2 Rt:3.00 | 67 Structural Evaluation: | 4 |
| | | Permanent Width: | | | 58 Deck Condition: | 7 |
| | | Rear: | 22.00 | Type:2 | 59 Superstructure Condition: | 7 |
| | | | 22.00 | Type:2 | * 227 Collision Damage: | 0 |
| | | Intersaction Rear: | 0 | Fwd: 0 | 60A Substructure Condition: | 7 |
| | | 36Safety Features Br. Rail: | 2 | | 60B Scour Condition: | 7 |
| | | Transition: | 2 | | 60C Underwater Condition | N |
| | | App. G. Rail: | 2 | | 71 Waterway Adequacy: | 6 |
| | | App. Rail End: | 2 | | 61 Channel Protection Cond.: | 7 |
| | | 53 Minimum Cl. Over: | 99' 99 " | | 68 Deck Geometry: | 5 |
| | | Under: | | | 69 UnderClr. Horz/Vert: | N |
| | | *228 Minimum Vertical Cl | | | 72 Appr. Alignment: | 7 |
| | | Act. Odm Dir.: | 99' 99" | | 62 Culvert: | N |
| | | Oppo. Dir: | 99' 99" | | Posting Data | |
| | | Posted Odm. Dir: | 00' 00" | | 70 Bridge Posting Required | 3 |
| | | Oppo. Dir: | 00' 00" | | 41 Struct Open, Posted, CL: | P |
| | | 55 Lateral Undercl. Rt: | N 0 0 | | * 103 Temporary Structure: | 0 |
| | | 56 Lateral Undercl. Lt: | 0.00 | | 232 Posted Loads | |
| | | *10 Max Min Vert Cl: | 99' 99" Dir:0 | | H-Modified: | 21 |
| | | 39 Nav Vert Cl: | 000 Horiz:0000 | | HS-Modified: | 00 |
| | | 116 Nav Vert Cl Closed: | 000 | | Type 3: | 28 |
| | | 245 Deck Thickness Main | 6.00 | | Type 3s2: | 00 |
| | | Deck Thick Approach: | 0.00 | | Timber: | 37 |
| | | 246 Overlay Thickness: | 0.00 | | Piggyback | 00 |
| | | 212 Year Last Painted: | Sup:0000Sub:0000 | | 253 Notification Date: | 02/01/1901 |
| | | | | | 258 Fed Notify Date: | 2/1/1901 12:00:00AM |

DRAFT
APR 5 0 2010

GEORGIA DEPARTMENT OF TRANSPORTATION
HISTORIC BRIDGE INVENTORY REPORT

Serial #: 167-0025-0

ATTACHMENT
NOT FOUND

ATTACHMENT
NOT FOUND

DRAFT
APR 5 0 2010

County: JOHNSON **Municipality:** **GDOT District:** 2 **Owner:** STATE

Location: .6 MI S OF KITE

Bridge Name: **UTM:** 17 377289 3587200

Facility Carried: US 221

Feature Intersected: HOLTON CREEK

Type: T BEAM **Design:**

Material: REINFORCED CONCRETE **# Spans:** 3 **Length:** 96 **Width:** 32.3 **# Lanes:** 2

Railing Type: STANDARD CONCRETE 2 RAIL HIGH

Date of Construction: 1963 **Alteration:** **Source:** GDOT BRIDGE INSPECTION FILE

Designer/Builder: STATE HWY DEPT BRIDGE DEPT

Current National Register Status of Bridge: Not Previously Evaluated

Local, Determined Eligible, or NR Historic District/Status:

Inventory NR Recommendation: Not Eligible

Setting/Context:

The bridge carries a 2 lane road over a stream in a sparsely developed, rural setting.

Physical Description:

The 3 span, 96'-long T beam bridge with standard-design concrete 2-rail high on high curb railings is supported on concrete pile and cap beam bents and abutments at the ends.

Summary of Significance:

The T beam bridge constructed in 1963 continues the state's use of the economical bridge type first built in the state in the 1910s and adopted as a standard design in 1917. It is a very common bridge type with over 1,000 pre-1966 examples remaining. This late example has no innovative or distinctive details and is not historically or technologically significant.

Bibliography:

GADOT. Bridge Inspection File & Plans.

Reviewed By/ Date: MEM

PI 0007178

Kevin Schwartz

November 4, 2011

This bridge (Structure ID 167-0025-0; SR 171 over Holton Creek) was built in 1963. The bridge consists of three spans of reinforced concrete deck girders on concrete caps and concrete columns. This bridge was designed using a truck configuration that weighs less than the current state legal truck weights. This bridge is currently posted. The overall condition of this bridge would be classified as good; with the deck, superstructure and substructure members exhibiting some minor problems. The superstructure has some minor cracking. No rehabilitation work performed on the structural components would improve this bridge in so far as the posting of the structure is concerned. Due to the structural integrity based on the design and that the bridge is currently posted, replacement of this bridge is recommended.

Meeting Minutes

6-26-2012

0007178, Johnson County
Concept Meeting

Attendees

Chad E. White Sr.-Program Delivery (Project Manager)
Jamie Lindsey- District 2 Roadway Design Group Leader
Renee Decker- District 2 Roadway Design
Foster Grimes- District 2 Roadway Design
Lashone Alexander–Right of Way
Jimmy Hobby – District 2 GDOT Consultant
Lynn Bean- District 2 GDOT
Todd Price –District 2 Traffic Operations
Matthew Sammons – District 2 Utilities
Sidney Rhoney- Pineland Telephone Company
Corbett Reynolds District 2 Construction
Vonda Everett- District 2 Planning & Environmental

*Ben Rabun- Bridge Design- State Bridge Engineer
**Attendance by conference call*

- The Project Manager (PM) Chad E. White introduced the Project P.I. 0007178 bridge replacement SR171 @ Holton Creek .6 MI S of Kite
- The PM indicated that the schedule is as follows.
 - Right of Way (R/W) Approval by 4/25/2014
 - Management LET date 07/15/2015
- Jamie Lindsey-Roadway Design Group Leader reviews the functional Classification of the project to include the project justification. The concept report was review in great detail to include the primary means of constructing the bridge replace using an onsite detour.
- Rabun- Bridge Design- State Bridge Engineer questioned the onsite detail and requested the team to look into an offsite detour as a potential preferred alternative for both the stated above project as well 0007180 using an off-site detour. (Due to both project being posted by send truck traffic to another determined state route).
- Chad White explained that the project team would look into a potential detour and to update the traffic data for an analysis by the concept approving authority.

- Alternatives were discussed and rationale for preferred alternative along with constraints was mentioned (the need for survey to have a conclusive decision on how project will be staged).
- Vonda Everett stated that project wetland mitigation and a 404 permit are expected on this project. The project is not in an Ozone non-attainment area and the possibility of the bridge being historic (built in 1963, No Environmental Justice issues are expected and UST should not be an issue either.

- Lashone Alexander had ROW concerns for sediment basins, erosion control, utilities, etc.
 - Mr. Chad White advised that we did not expect to have a sediment basin and BMP's would be placed as required, expected to be within existing ROW.
- Mr. Chad White closed the meeting.

Action Items:

- Off-Site Detour for Local traffic as an alternative means for PI#0007178 and PI#0007180.
- Traffic analysis data for trucks in the local area

**DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
OFFICE OF DESIGN – DISTRICT TWO**

Roadway User Cost for

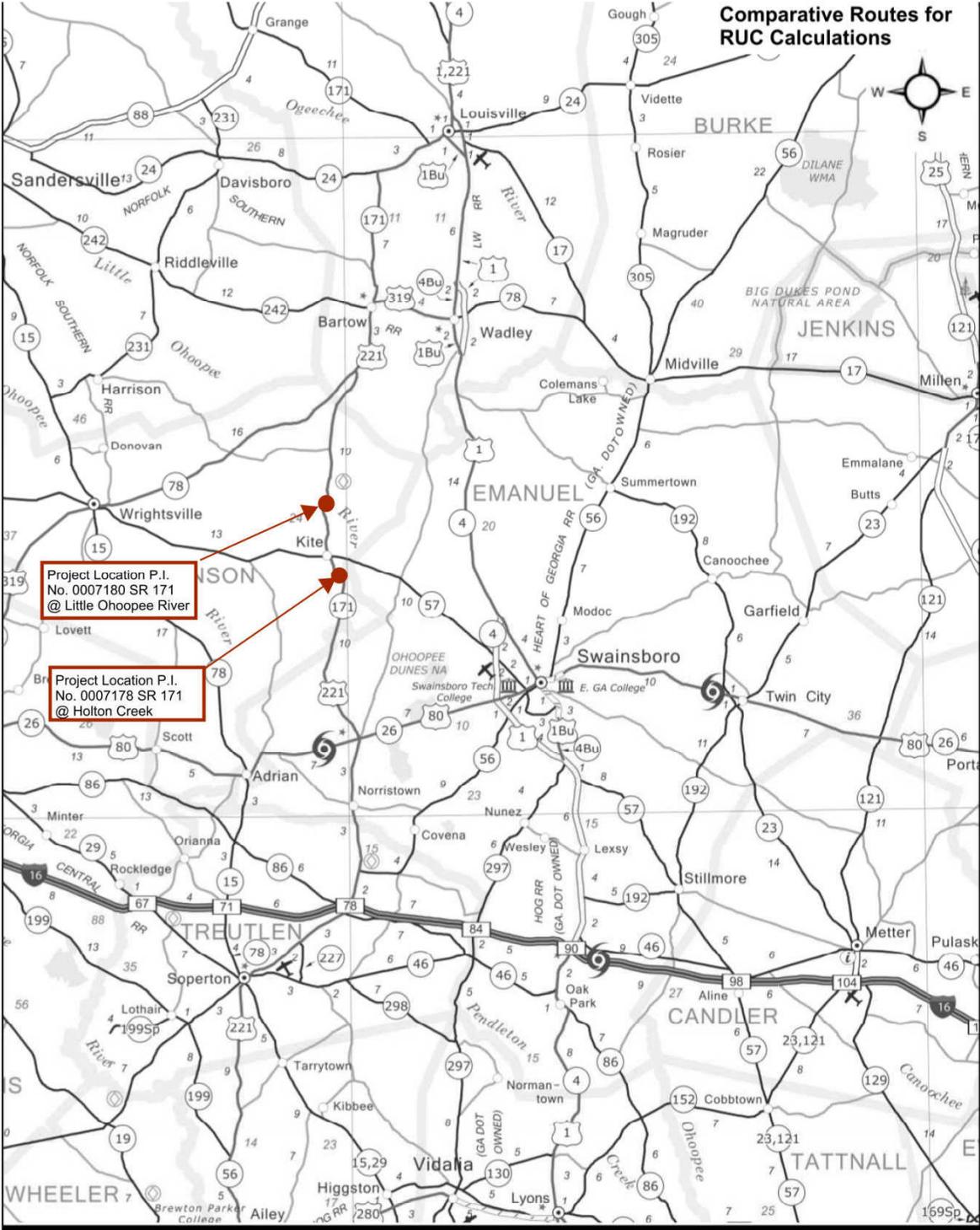
**Bridge Replacement on SR 171 over Holton Creek &
Little Ochoopee River**

Johnson County

PI #0007178 & 0007180

October 24, 2012

Bridge Replacement on State Route 171 over Holton Creek & Little Ohoopsee River Figure 1



P.I. No. 0007178

General Project Description:

This project consists of the replacement of the structurally deficient bridge over Holton Creek on State Route 171 located 0.6 miles South of Kite in Johnson County. The length of the project will be 0.32 miles. Traffic will be maintained with an on-site detour during construction.

Justification Statement:

This bridge (Structure ID 167-0025-0; SR 171 over Holton Creek) was built in 1963. The bridge consists of three spans of reinforced concrete deck girders on concrete caps and concrete columns. This bridge was designed using a truck configuration that weighs less than the current state legal truck weights. This bridge is currently posted. The overall condition of this bridge would be classified as good; with the deck, superstructure and substructure members exhibiting some minor problems. The superstructure has some minor cracking. No rehabilitation work performed on the structural components would improve this bridge in so far as the posting of the structure is concerned. Due to the structural integrity based on the design and that the bridge is currently posted, replacement of this bridge is recommended.

P.I. No. 0007180

General Project Description:

This project consists of the replacement of the structurally deficient bridge over Little Ohoopsee River on State Route 171 located 2.7 miles North of Kite in Johnson County. The length of the project will be 0.44 miles. Traffic will be maintained with an on-site detour during construction.

Justification Statement:

This bridge (Structure ID 167-0027-0; State Route 171 over Little Ohoopsee River) was built in 1963. The bridge consists of seven spans of reinforced concrete deck girders on concrete caps and steel piles. This bridge was designed using a truck configuration that weighs less than the current state legal truck weights. This bridge is currently posted. The overall condition of this bridge would be classified as good to satisfactory; with the substructure showing some minor deterioration considered to be classified as satisfactory. The deck and superstructure members are exhibiting some minor problems. No rehabilitation work performed on the structure components would improve this bridge in so far as the posting of the structure is concerned. Due to the structural integrity, based on the design and that the bridge is currently posted, replacement of this bridge is recommended.

**PI 0007178 & 0007180 Johnson County
 Bridge Replacement on SR 171 over Holton Creek & Little Ohoopsee River**

Summary of calculated Road User Costs (RUC)

| Roadway Closure | Duration | % Traffic that detours | Vehicles affected | Added Time | Adjusted RUC (50% of calculated) | Notes |
|------------------------|-----------------|-------------------------------|--------------------------|-------------------|---|--------------|
| | hr | % | ea | hr | \$ | |
| Bridge | 12 Months | 75% | 360 | 0.14 | 365K | |

RUC

Bridge Replacement on SR 171 over Holton Creek & Little Ochoopee River

Table 1: Summary of laneage and relative traffic volumes by roadway segment.

| Segment | Segment Description | | | | Laneage | Traffic Volumes - RCDATA Oct 2010 | | | |
|-------------------------|--|---|----------------|--|--------------------------------|-----------------------------------|--------------|------------------|-------------|
| | County | Mile Post at Beginning of Segment | Segment length | Location at Beginning of Segment | No. of Lanes | Traffic ADT (two way) date? | Posted Speed | Traffic ADT/lane | Travel Time |
| | | mi. | mi | | ea | vpd | MPH | vpd/lane | Hr |
| NORMAL ROUTE | Emanuel | 4.29 | 6.2 | SR 26 @ SR 171 to County Line | 2 | 474 | 55 | 237 | 0.11 |
| | Johnson | 10.4 | 4.63 | County Line to Kite City Limits | 2 | 620 | 55 | 310 | 0.08 |
| | Johnson | 4.63 | 0.78 | Kite City Limits | 2 | 650 | 35 | 325 | 0.02 |
| | Johnson | 5.41 | 8 | Kite City Limits to County Line | 2 | 620 | 55 | 310 | 0.15 |
| | Jefferson | 0 | 4.94 | County Line to Bartow City Limits | 2 | 1844 | 55 | 922 | 0.09 |
| | Jefferson | 4.94 | 0.29 | Speed Change | 2 | 3660 | 45 | 1830 | 0.01 |
| | Jefferson | 5.23 | 0.43 | Speed Change | 2 | 3660 | 35 | 1830 | 0.01 |
| | Jefferson | 5.31 | 0.08 | From 35MPH to SR171@SR78 | 2 | 3660 | 55 | 1830 | 0.00 |
| | Travel Length without Detour (mile) | | 25.35 | Travel Time without Detour | | | | 0.47 | |
| EQUIVALENT DETOUR ROUTE | Emanuel | 7.22 | | Begin Detour SR 26 @ SR 171 | | | | | |
| | | 7.22 | 7.3 | SR 26@SR 171 Speed Reduction | 2 | 2,445 | 55 | 611 | 0.13 |
| | | 14.52 | 0.2 | Speed Change | 2 | 3,230 | 45 | 808 | 0.00 |
| | | 22.75 | 17.3 | SR 4 | 2 | 2,888 | 55 | 1,444 | 0.31 |
| | Jefferson | | | County Line | | | | | |
| | | 3.84 | 3.8 | SR 4 | 2 | 3,865 | 55 | 1,933 | 0.07 |
| | | 10.07 | 1.2 | SR 78 to Speed Change | 2 | 2,595 | 35 | 1,298 | 0.03 |
| | | 8.82 | 0.3 | Speed Change | 2 | 2,110 | 45 | 1,055 | 0.01 |
| | | 8.54 | 2.2 | Wadley City Limits to Bartow City Limits | 2 | 1,835 | 55 | 918 | 0.04 |
| | | 6.08 | 0.8 | Bartow City Limits to SR 171 | 2 | 1,660 | 45 | 830 | 0.02 |
| | Jefferson | 5.31 | | End of Detour SR78/SR171 | | | | | |
| | | Travel Length with Detour (mile) | | 33.00 | Travel Time with Detour | | | | 0.62 |
| | Added Travel Length (mile) | | 7.65 | Added Travel Time | | | | 0.14 | |

Note:

Assume that Detour route segments will not exceed capacity when added traffic volume is in place during time of construction.

RUC

Bridge Replacement on SR 171 over Holton Creek & Little Ohoopsee River

Reference from another cell or sheet Black Input Red
 Calculated Blue

Table 3a: Circuity (Detour) Delay

| Travel Length without Detour (mile) | Travel Length with Detour (mile) | Added Travel Length (mile) | Travel Time without Detour (hr/veh) | Travel Time with Detour (hr/veh) | Added Time to Travel Detour (hr/veh) |
|-------------------------------------|----------------------------------|----------------------------|-------------------------------------|----------------------------------|--------------------------------------|
| 25.35 | 33.00 | 7.65 | 0.47 | 0.62 | 0.14 |

Table 4: Escalation factors

| Cost Factors | 1970 CPI-U ² | Current CPI-U ¹ | Escalation Factor |
|-------------------------------|-------------------------|----------------------------|-------------------|
| Idling & VOC (transportation) | 37.5 | 215 | 5.73 |
| Time Value (all components) | 38.8 | 229 | 5.90 |

¹From Bureau of Labor Statistics for July 2012 "transportation" and "all components" categories.

²As reported in NJ DOT Road User Cost Manual for 1970.

Table 5: Cost Rates

| Vehicle Class | 1970 | | | Current | | |
|---------------|-----------------------------------|-------------------------------|----------------------------|----------------------|------------------|---------------|
| | Time Value Cost Rate ¹ | Idling Cost Rate ² | VOC Cost Rate ² | Time Value Cost Rate | Idling Cost Rate | VOC Cost Rate |
| | \$/Veh-hr | \$/Veh-hr | \$/mile | \$/Veh-hr | \$/Veh-hr | \$/mile |
| Car | 3.00 | 0.1819 | 0.06 | 17.71 | 1.04 | 0.34 |
| Truck | 5.00 | 0.2092 | 0.12 | 29.51 | 1.20 | 0.69 |

¹From NCHRP Report 133 as indicated in NJ manual

²Average of SU and combination truck values from NCHRP as stated in the NJ manual.

Bridge Replacement on SR 171 over Holton Creek & Little Ohoopsee River RUC

Analysis Case - Off-Site Detour

Foster Grimes, 12 October 2012

| Cost Component | Vehicle Class | Percent Class | Total Vehicles | Added Travel Length | Added Travel Time | Cost Rate | Road User Cost | Total Road User Cost |
|--------------------------------------|---------------|---------------|----------------|--|-------------------|------------------|----------------|----------------------|
| | mph | % | # | mi/veh | hr/veh | \$/Veh-hr, \$/mi | \$/user | \$/day |
| Queue Delay (Added time) | Car | 84 | 0 | | 0.00 | 17.71 | 0 | 0 |
| | Truck | 16.0 | 0 | | 0.00 | 29.51 | 0 | 0 |
| Queue Idling VOC (Added cost) | Car | 84 | 0 | | 0.00 | 1.04 | 0 | 0 |
| | Truck | 16.0 | 0 | | 0.00 | 1.20 | 0 | 0 |
| Work Zone Delay (Added Time) | Car | 84 | 0 | | 0.00 | 17.71 | 0 | 0 |
| | Truck | 16.0 | 0 | | 0.00 | 29.51 | 0 | 0 |
| Circuity Delay (Added Time) | Car | 84 | 262 | | 0.14 | 17.71 | 2.5 | 554 |
| | Truck | 16.0 | 262 | | 0.14 | 29.51 | 4.2 | 176 |
| Circuity VOC (Added cost) | Car | 84 | 262 | 7.65 | | 0.34 | 2.6 | 579 |
| | Truck | 16.0 | 262 | 7.65 | | 0.69 | 5.3 | 221 |
| Total vehicles that travel queue | | | 0 | Road User Cost | | | | \$2,000 |
| Total vehicles that travel work zone | | | | Adjusted Road User Cost³ | | | | \$1,000 |
| Total vehicles that travel detour | | | 262 | Number of Work Zone Days | | | | 365 |
| Percent passenger cars | | | 84 | Total Road User Cost | | | | \$365,000 |
| Percent Trucks | | | 16 | ³ Adjusted down 50% from Road User Cost | | | | |

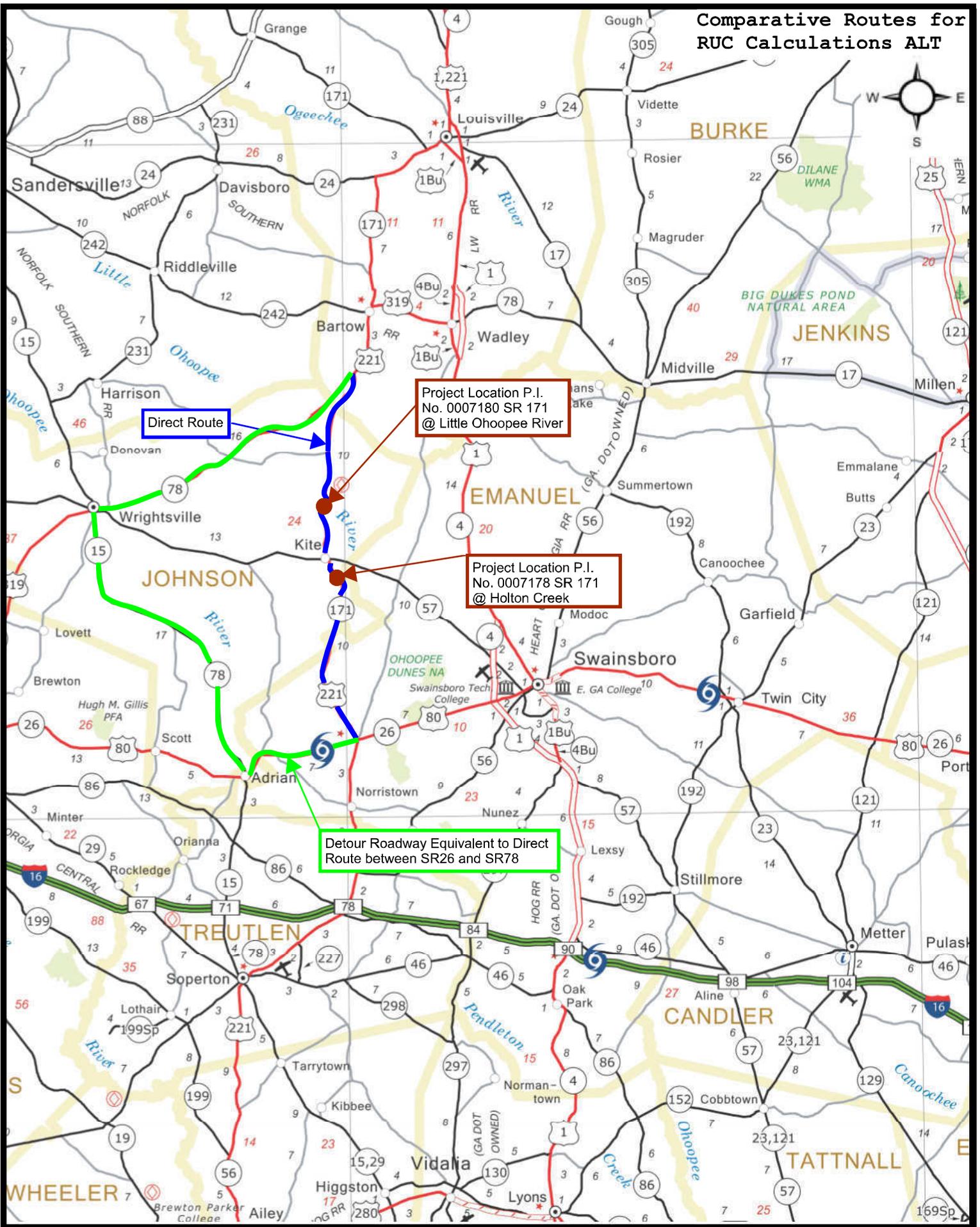
| | |
|--|-----|
| Trucks, % ¹ | 16 |
| Cars, % | 84 |
| 75% Traveling Detour ADT, vpd ² | 262 |

Notes:

¹ Corresponds to 24 hour truck percentage in project Traffic Assignments.

² Traffic ADT from report provided by State Planning and Programing Engineer, Traffic Assignments Dated 1-17-2012. Assumed that 50% of Traffic would use alternate route other than detour.

Comparative Routes for RUC Calculations ALT



**PI 0007178 &0007180 80 Johnson County
 Bridge Replacement on SR 171 over Holton Creek & Little Ohoopsee River**

Summary of calculated Road User Costs (RUC) ALT

| Roadway Closure | Duration | % Traffic that detours | Vehicles affected | Added Time | Adjusted RUC (50% of calculated) | Notes |
|------------------------|-----------------|-------------------------------|--------------------------|-------------------|---|--------------|
| | hr | % | ea | hr | \$ | |
| Bridge | 12 Months | 75% | 360 | 0.39 | 730K | |

RUC ALT

Bridge Replacement on SR 171 over Holton Creek & Little Ochoopee River

Table 1: Summary of laneage and relative traffic volumes by roadway segment.

| Segment | Segment Description | | | | Laneage | Traffic Volumes - RCDATA Oct 2010 | | | |
|--|---------------------|-----------------------------------|-------------------------------|--|--------------|-----------------------------------|--------------|------------------|-------------|
| | County | Mile Post at Beginning of Segment | Segment length | Location at Beginning of Segment | No. of Lanes | Traffic ADT (two way) date? | Posted Speed | Traffic ADT/lane | Travel Time |
| | | mi. | mi | | ea | vpd | MPH | vpd/lane | Hr |
| NORMAL ROUTE | Emanuel | 4.29 | 6.2 | SR 26 @ SR 171 to County Line | 2 | 474 | 55 | 237 | 0.11 |
| | Johnson | 10.4 | 4.63 | County Line to Kite City Limits | 2 | 620 | 55 | 310 | 0.08 |
| | Johnson | 4.63 | 0.78 | Kite City Limits | 2 | 650 | 35 | 325 | 0.02 |
| | Johnson | 5.41 | 8 | Kite City Limits to County Line | 2 | 620 | 55 | 310 | 0.15 |
| | Jefferson | 0 | 4.94 | County Line to Bartow City Limits | 2 | 1844 | 55 | 922 | 0.09 |
| | Jefferson | 4.94 | 0.29 | Speed Change | 2 | 3660 | 45 | 1830 | 0.01 |
| | Jefferson | 5.23 | 0.43 | Speed Change | 2 | 3660 | 35 | 1830 | 0.01 |
| | Jefferson | 5.31 | 0.08 | From 35MPH to SR171@SR78 | 2 | 3660 | 55 | 1830 | 0.00 |
| Travel Length without Detour (mile) | | | 25.35 | Travel Time without Detour | | | | 0.47 | |
| EQUIVALENT DETOUR ROUTE | Emanuel | 7.22 | | Begin Detour SR 26 @ SR 171 | | | | | |
| | | 7.22 | 7.2 | SR 26 to Johnson County | 2 | 3,320 | 55 | 830 | 0.13 |
| | Johnson | | | County Line | | | | | |
| | | 6.52 | 0.7 | SR 26 | 2 | 3,480 | 55 | 1,740 | 0.01 |
| | | 5.80 | 0.2 | Speed Change | 2 | 3,480 | 45 | 1,740 | 0.01 |
| | | 5.16 | 0.4 | SR 26 to SR 15 | 2 | 3,480 | 35 | 1,740 | 0.01 |
| | | 0.00 | 0.2 | Speed Change | 2 | 1,940 | 25 | 970 | 0.01 |
| | | 0.23 | 0.1 | Speed Change | 2 | 1,940 | 35 | 970 | 0.00 |
| | | 0.32 | 0.3 | State Route 15 to Wrightsville City Limits | 2 | 3,236 | 55 | 1,618 | 0.01 |
| | | 16.20 | 15.9 | Speed Change | 2 | 5,380 | 45 | 2,690 | 0.35 |
| | | 16.89 | 0.7 | Speed Change | 2 | 8,920 | 35 | 4,460 | 0.02 |
| | | 17.31 | 0.4 | Speed Change | 2 | 8,920 | 25 | 4,460 | 0.02 |
| | | 17.45 | 0.1 | to SR 78 | 2 | 8,920 | 25 | 4,460 | 0.01 |
| | | 17.21 | 0.3 | SR 78 to Speed Change | 2 | 5,040 | 25 | 2,520 | 0.01 |
| | | 17.46 | 0.3 | Speed Change | 2 | 5,040 | 35 | 2,520 | 0.01 |
| | | 17.98 | 0.2 | Speed Change | 2 | 5,140 | 45 | 2,570 | 0.00 |
| | | 30.91 | 12.9 | SR 78 to Jefferson County | 2 | 4,060 | 55 | 2,030 | 0.24 |
| | Jefferson | | | County Line | | | | | |
| | 1.65 | 1.7 | Johnson County Line to SR 171 | 2 | 3,060 | 55 | 1,530 | 0.03 | |
| | | | | End of Detour SR78/SR171 | | | | | |
| Travel Length with Detour | | | 41.73 | Travel Time with Detour | | | | 0.86 | |
| Added Travel Length (mile) | | | 16.38 | Added Travel Time | | | | 0.39 | |

Note:

Assume that Detour route segments will not exceed capacity when added traffic volume is in place during time of construction.

RUC ALT

Bridge Replacement on SR 171 over Holton Creek & Little Ohoopsee River

Reference from another cell or sheet Black Input Red
 Calculated Blue

Table 3a: Circuity (Detour) Delay

| Travel Length without Detour (mile) | Travel Length with Detour (mile) | Added Travel Length (mile) | Travel Time without Detour (hr/veh) | Travel Time with Detour (hr/veh) | Added Time to Travel Detour (hr/veh) |
|-------------------------------------|----------------------------------|----------------------------|-------------------------------------|----------------------------------|--------------------------------------|
| 25.35 | 41.73 | 16.38 | 0.47 | 0.86 | 0.39 |

Table 4: Escalation factors

| Cost Factors | 1970 CPI-U ² | Current CPI-U ¹ | Escalation Factor |
|-------------------------------|-------------------------|----------------------------|-------------------|
| Idling & VOC (transportation) | 37.5 | 215 | 5.73 |
| Time Value (all components) | 38.8 | 229 | 5.90 |

¹From Bureau of Labor Statistics for July 2012 "transportation" and "all components" categories.

²As reported in NJ DOT Road User Cost Manual for 1970.

Table 5: Cost Rates

| Vehicle Class | 1970 | | | Current | | |
|---------------|-----------------------------------|-------------------------------|----------------------------|----------------------|------------------|---------------|
| | Time Value Cost Rate ¹ | Idling Cost Rate ² | VOC Cost Rate ² | Time Value Cost Rate | Idling Cost Rate | VOC Cost Rate |
| | \$/Veh-hr | \$/Veh-hr | \$/mile | \$/Veh-hr | \$/Veh-hr | \$/mile |
| Car | 3.00 | 0.1819 | 0.06 | 17.71 | 1.04 | 0.34 |
| Truck | 5.00 | 0.2092 | 0.12 | 29.51 | 1.20 | 0.69 |

¹From NCHRP Report 133 as indicated in NJ manual

²Average of SU and combination truck values from NCHRP as stated in the NJ manual.

Bridge Replacement on SR 171 over Holton Creek & Little Ohoopsee River RUC ALT

Analysis Case - Off-Site Detour

Foster Grimes, 12 October 2012

| Cost Component | Vehicle Class | Percent Class | Total Vehicles | Added Travel Length | Added Travel Time | Cost Rate | Road User Cost | Total Road User Cost |
|--------------------------------------|---------------|---------------|----------------|--|-------------------|------------------|----------------|----------------------|
| | mph | % | # | mi/veh | hr/veh | \$/Veh-hr, \$/mi | \$/user | \$/day |
| Queue Delay (Added time) | Car | 84 | 0 | | 0.00 | 17.71 | 0 | 0 |
| | Truck | 16.0 | 0 | | 0.00 | 29.51 | 0 | 0 |
| Queue Idling VOC (Added cost) | Car | 84 | 0 | | 0.00 | 1.04 | 0 | 0 |
| | Truck | 16.0 | 0 | | 0.00 | 1.20 | 0 | 0 |
| Work Zone Delay (Added Time) | Car | 84 | 0 | | 0.00 | 17.71 | 0 | 0 |
| | Truck | 16.0 | 0 | | 0.00 | 29.51 | 0 | 0 |
| Circuity Delay (Added Time) | Car | 84 | 262 | | 0.39 | 17.71 | 6.9 | 1,517 |
| | Truck | 16.0 | 262 | | 0.39 | 29.51 | 11.5 | 482 |
| Circuity VOC (Added cost) | Car | 84 | 262 | 16.38 | | 0.34 | 5.6 | 1,240 |
| | Truck | 16.0 | 262 | 16.38 | | 0.69 | 11.3 | 472 |
| Total vehicles that travel queue | | | 0 | Road User Cost | | | | \$4,000 |
| Total vehicles that travel work zone | | | | Adjusted Road User Cost³ | | | | \$2,000 |
| Total vehicles that travel detour | | | 262 | Number of Work Zone Days | | | | 365 |
| Percent passenger cars | | | 84 | Total Road User Cost | | | | \$730,000 |
| Percent Trucks | | | 16 | ³ Adjusted down 50% from Road User Cost | | | | |

| | |
|--|-----|
| Trucks, % ¹ | 16 |
| Cars, % | 84 |
| 75% Traveling Detour ADT, vpd ² | 262 |

Notes:

¹ Corresponds to 24 hour truck percentage in project Traffic Assignments.

² Traffic ADT from report provided by State Planning and Programing Engineer, Traffic Assignments Dated 1-17-2012. Assumed that 50% of Traffic would use alternate route other than detour.

Table 3. Consumer Price Index for all Urban Consumers (CPI-U): U.S. city average, detailed expenditure categories

(1982-84=100, unless otherwise noted)

| Item and Group | Relative importance, December 2011 | Unadjusted indexes | | Unadjusted percent change to July 2012 from— | | Seasonally adjusted percent change from— | | |
|--|------------------------------------|--------------------|-----------|--|-----------|--|-------------|--------------|
| | | June 2012 | July 2012 | July 2011 | June 2012 | Apr. to May | May to June | June to July |
| Expenditure category | | | | | | | | |
| All items | 100.000 | 229.478 | 229.104 | 1.4 | -0.2 | -0.3 | 0.0 | 0.0 |
| All items (1967=100) | - | 687.415 | 686.294 | - | - | - | - | - |
| Food and beverages | 15.256 | 233.509 | 233.557 | 2.3 | .0 | .0 | .2 | .1 |
| Food | 14.308 | 233.563 | 233.630 | 2.3 | .0 | .0 | .2 | .1 |
| Food at home | 8.638 | 231.515 | 231.306 | 1.9 | -1 | -1 | .1 | .0 |
| Cereals and bakery products | 1.242 | 267.321 | 268.449 | 2.9 | .4 | -1 | -4 | .3 |
| Cereals and cereal products | .482 | 234.121 | 234.369 | 3.2 | .1 | .0 | -1 | -5 |
| Flour and prepared flour mixes | .051 | 258.194 | 258.081 | 5.0 | .0 | -8 | 1.5 | -9 |
| Breakfast cereal ¹ | .297 | 229.232 | 228.805 | 2.7 | -2 | .6 | -5 | -2 |
| Rice, pasta, cornmeal ¹ | .134 | 239.215 | 241.183 | 3.4 | .8 | .4 | -1.0 | .8 |
| Rice ^{1 2 3} | - | 166.946 | 166.615 | 2.6 | -2 | -4 | -1 | -2 |
| Bakery products | .760 | 285.029 | 286.801 | 2.8 | .6 | -3 | -5 | .8 |
| Bread ² | .225 | 172.319 | 174.960 | 3.2 | 1.5 | -2 | -7 | 1.3 |
| White bread ^{1 3} | - | 311.548 | 318.602 | 2.0 | 2.3 | .1 | -9 | 2.3 |
| Bread other than white ^{1 3} | - | 333.671 | 337.607 | 4.2 | 1.2 | .3 | .0 | 1.2 |
| Fresh biscuits, rolls, muffins ² | .114 | 166.105 | 166.955 | 1.8 | .5 | .5 | .4 | -1 |
| Cakes, cupcakes, and cookies | .186 | 263.686 | 265.764 | 5.3 | .8 | -9 | -6 | 1.0 |
| Cookies ³ | - | 255.173 | 257.938 | 5.7 | 1.1 | -2 | -7 | .6 |
| Fresh cakes and cupcakes ^{1 3} | - | 273.185 | 274.704 | 5.3 | .6 | -2.2 | .2 | .6 |
| Other bakery products | .235 | 260.547 | 259.777 | .8 | -3 | -6 | .0 | -4 |
| Fresh sweetrolls, coffeecakes, doughnuts ^{1 3} | - | 274.984 | 272.111 | 2.9 | -1.0 | 1.3 | 1.0 | -1.0 |
| Crackers, bread, and cracker products ³ | - | 302.651 | 305.250 | 1.4 | .9 | -7 | -1.7 | .8 |
| Frozen and refrigerated bakery products, pies, tarts, turnovers ³ | - | 267.563 | 265.627 | -6 | -7 | -1.3 | -3 | -8 |
| Meats, poultry, fish, and eggs | 1.960 | 230.464 | 231.309 | 3.1 | .4 | -5 | .2 | .3 |
| Meats, poultry, and fish | 1.846 | 232.004 | 232.936 | 3.2 | .4 | -6 | .2 | .3 |
| Meats | 1.201 | 231.938 | 232.462 | 2.8 | 2 | -3 | .0 | .0 |
| Beef and veal ¹ | .548 | 264.346 | 265.908 | 6.6 | .6 | .6 | .6 | .6 |
| Uncooked ground beef ¹ | .212 | 245.851 | 245.052 | 5.8 | -3 | 1.4 | 1.1 | -3 |
| Uncooked beef roasts ^{1 2} | .081 | 189.602 | 192.476 | 4.7 | 1.5 | .1 | .5 | 1.5 |
| Uncooked beef steaks ^{1 2} | .204 | 177.613 | 179.706 | 8.9 | 1.2 | .1 | .3 | 1.2 |
| Uncooked other beef and veal ^{1 2} | .052 | 183.759 | 185.083 | 5.4 | .7 | .6 | .0 | .7 |
| Pork | .379 | 205.617 | 206.446 | -1.0 | .4 | -2.4 | -8 | -1 |
| Bacon, breakfast sausage, and related products ² | .143 | 146.134 | 146.532 | -1.9 | .3 | -1.6 | -1.4 | .1 |
| Bacon and related products ³ | - | 258.077 | 262.421 | -2.6 | 1.7 | -3.4 | -1.5 | 1.6 |
| Breakfast sausage and related products ^{1 2 3} | - | 141.573 | 139.167 | 1.9 | -1.7 | 2.8 | -4 | -1.7 |
| Ham | .080 | 205.767 | 204.247 | 1.1 | -7 | -1.3 | .6 | -1.8 |
| Ham, excluding canned ³ | - | 231.450 | 229.941 | .6 | -7 | -1.3 | .6 | -2.1 |
| Pork chops | .063 | 189.153 | 190.722 | 1.4 | .8 | -1.9 | -4 | .1 |
| Other pork including roasts and picnics ² | .094 | 127.041 | 128.762 | -3.5 | 1.4 | -4.2 | -5 | .3 |
| Other meats | .273 | 209.989 | 208.312 | .4 | -8 | .6 | -3 | -9 |
| Frankfurters ³ | - | 202.821 | 201.958 | .6 | -4 | 1.8 | -2.7 | .5 |
| Lunchmeats ^{1 2 3} | - | 135.678 | 135.117 | .4 | -4 | -3 | .0 | -4 |
| Lamb and organ meats ^{1 3} | - | 318.771 | 315.917 | -2.4 | -9 | -2.1 | .3 | -9 |
| Lamb and mutton ^{1 2 3} | - | 202.239 | 187.926 | -9.8 | -7.1 | -6.0 | .5 | -7.1 |
| Poultry | .336 | 220.921 | 223.575 | 6.1 | 1.2 | -1.3 | 1.0 | 1.3 |
| Chicken ² | .263 | 140.037 | 141.872 | 5.5 | 1.3 | -1.9 | 1.3 | 1.4 |
| Fresh whole chicken ^{1 3} | - | 224.056 | 231.535 | 3.5 | 3.3 | -4.8 | .7 | 3.3 |
| Fresh and frozen chicken parts ^{1 3} | - | 213.613 | 214.360 | 6.5 | .3 | -8 | 2.6 | .3 |
| Other poultry including turkey ² | .073 | 151.906 | 153.156 | 8.2 | .8 | .8 | .1 | .5 |
| Fish and seafood | .308 | 268.247 | 268.780 | 1.6 | .2 | -1.2 | .1 | .4 |
| Fresh fish and seafood ^{1 2} | .199 | 158.389 | 158.373 | -3 | .0 | -2 | -2 | .0 |
| Processed fish and seafood ² | .149 | 141.590 | 142.182 | 3.7 | .4 | -1.4 | 1.0 | .0 |
| Shelf stable fish and seafood ^{1 3} | - | 193.431 | 196.634 | 6.3 | 1.7 | -1.3 | .8 | 1.7 |
| Frozen fish and seafood ^{1 3} | - | 301.892 | 299.051 | 1.8 | -9 | .1 | 1.2 | -9 |
| Eggs | .114 | 205.608 | 205.063 | 2.4 | -3 | 1.2 | .9 | .0 |
| Dairy and related products ¹ | .916 | 215.485 | 214.434 | -2 | -5 | -4 | -3 | -5 |
| Milk ^{1 2} | .299 | 145.158 | 145.621 | -1.9 | .3 | .0 | -6 | .3 |
| Fresh whole milk ^{1 3} | - | 207.176 | 206.884 | -3.1 | -1 | .1 | -1.2 | -1 |
| Fresh milk other than whole ^{1 2 3} | - | 149.171 | 149.957 | -1.1 | .5 | .0 | -3 | .5 |
| Cheese and related products | .291 | 220.402 | 218.037 | -1.3 | -1.1 | -7 | 1.0 | -1.6 |
| Ice cream and related products | .139 | 212.416 | 211.375 | 2.5 | -5 | .6 | -1.9 | .3 |
| Other dairy and related products ² | .187 | 145.913 | 144.684 | 2.6 | -8 | -6 | .9 | -8 |

See footnotes at end of table.

Table 3. Consumer Price Index for all Urban Consumers (CPI-U): U.S. city average, detailed expenditure categories -Continued

(1982-84=100, unless otherwise noted)

| Item and Group | Relative importance, December 2011 | Unadjusted indexes | | Unadjusted percent change to July 2012 from— | | Seasonally adjusted percent change from— | | |
|---|------------------------------------|--------------------|-----------|--|-----------|--|-------------|--------------|
| | | June 2012 | July 2012 | July 2011 | June 2012 | Apr. to May | May to June | June to July |
| Expenditure category | | | | | | | | |
| Moving, storage, freight expense ^{1 2} | .089 | 129.768 | 129.525 | 4.6 | -0.2 | 0.4 | 0.6 | -0.2 |
| Repair of household items ^{1 2} | .077 | 199.862 | 200.628 | - | .4 | .5 | .9 | .4 |
| Apparel | 3.562 | 125.241 | 122.300 | 3.0 | -2.3 | .4 | .5 | .2 |
| Men's and boys' apparel | .855 | 118.829 | 118.691 | 4.2 | -1 | .1 | .6 | 2.1 |
| Men's apparel | .679 | 123.622 | 123.644 | 3.6 | .0 | .5 | .5 | 1.9 |
| Men's suits, sport coats, and outerwear | .124 | 116.302 | 115.205 | -1 | -9 | .5 | 1.0 | -3 |
| Men's furnishings | .179 | 152.035 | 151.446 | 5.3 | -4 | 3.5 | -1.0 | .9 |
| Men's shirts and sweaters ² | .219 | 80.716 | 81.149 | 5.1 | .5 | -2.7 | 2.2 | 3.9 |
| Men's pants and shorts | .150 | 119.895 | 120.547 | 3.7 | .5 | 1.7 | -1.9 | 2.5 |
| Boys' apparel | .176 | 100.826 | 100.192 | 6.4 | -6 | -2.6 | -1.3 | 1.8 |
| Women's and girls' apparel | 1.507 | 111.471 | 106.499 | 3.0 | -4.5 | .5 | -1 | -4 |
| Women's apparel | 1.246 | 114.026 | 108.870 | 2.7 | -4.5 | .7 | -5 | -3 |
| Women's outerwear | .096 | 78.753 | 77.577 | -3.8 | -1.5 | -4.5 | -3.5 | .8 |
| Women's dresses | .157 | 122.143 | 110.664 | .6 | -9.4 | -2.0 | -2.1 | -3.1 |
| Women's suits and separates ² | .676 | 87.034 | 82.245 | 3.6 | 6.5 | 2.3 | .7 | .2 |
| Women's underwear, nightwear, sportswear and accessories ² | .402 | 101.926 | 100.434 | 1.9 | -1.5 | -.7 | .8 | -.2 |
| Girls' apparel | .261 | 99.195 | 95.088 | 4.9 | -4.1 | -.3 | 1.9 | -.8 |
| Footwear | .678 | 131.954 | 129.847 | 3.0 | -1.6 | .8 | 1.1 | -.1 |
| Men's footwear ¹ | .209 | 133.486 | 132.103 | 2.0 | -1.0 | .6 | -.2 | -1.0 |
| Boys' and girls' footwear | .152 | 136.448 | 135.789 | 2.6 | -.5 | .5 | .9 | 1.1 |
| Women's footwear | .316 | 127.876 | 124.719 | 3.9 | -2.5 | .8 | 1.9 | -.3 |
| Infants' and toddlers' apparel | .201 | 118.260 | 117.920 | 5.7 | -.3 | 1.6 | .7 | .9 |
| Jewelry and watches ⁸ | .323 | 166.335 | 163.995 | -2.1 | -1.4 | -1.3 | 1.8 | -2.2 |
| Watches ^{1 8} | .088 | 117.890 | 117.025 | -.9 | -.7 | -1.4 | 1.3 | -.7 |
| Jewelry ⁸ | .235 | 176.983 | 174.036 | -2.9 | -1.7 | -1.5 | 1.9 | -2.5 |
| Transportation | 16.875 | 216.369 | 214.294 | -.9 | -1.0 | -2.1 | -.7 | -.1 |
| Private transportation | 15.694 | 211.423 | 209.458 | -.9 | -9 | -2.3 | -.6 | .1 |
| New and used motor vehicles ² | 5.651 | 101.832 | 101.811 | .4 | .0 | .3 | .1 | -.3 |
| New vehicles | 3.195 | 144.367 | 143.953 | .8 | -.3 | .2 | .2 | -.1 |
| New cars and trucks ^{2 3} | - | 100.058 | 99.764 | .8 | -.3 | .2 | .2 | -.1 |
| New cars ³ | - | 144.365 | 143.924 | .2 | -.3 | .1 | .0 | -.1 |
| New trucks ^{3 9} | - | 149.406 | 149.014 | 1.5 | -.3 | .2 | .4 | .1 |
| Used cars and trucks | 1.913 | 155.306 | 155.815 | 1.1 | .3 | 1.0 | .0 | -.5 |
| Leased cars and trucks ¹¹ | .403 | 89.953 | 89.069 | -6.6 | -1.0 | -1.2 | .0 | -1.3 |
| Car and truck rental ² | .071 | 123.598 | 133.174 | 1.5 | 7.7 | -2.4 | .9 | .2 |
| Motor fuel | 5.463 | 304.697 | 296.502 | -5.4 | -2.7 | -6.6 | -2.0 | .2 |
| Gasoline (all types) | 5.273 | 303.747 | 295.498 | -5.5 | -2.7 | -6.8 | -2.0 | .3 |
| Gasoline, unleaded regular ³ | - | 303.316 | 295.007 | -5.7 | -2.7 | -6.9 | -2.1 | .3 |
| Gasoline, unleaded midgrade ^{3 12} | - | 311.230 | 303.357 | -4.9 | -2.5 | -6.6 | -1.7 | .4 |
| Gasoline, unleaded premium ³ | - | 292.970 | 284.990 | -4.8 | -2.7 | -5.8 | -1.9 | .0 |
| Other motor fuels ² | .189 | 275.104 | 269.923 | -5.2 | -1.9 | -5.4 | -7.0 | -1.1 |
| Motor vehicle parts and equipment ¹ | .438 | 148.542 | 149.048 | 2.8 | .3 | .1 | .0 | .3 |
| Tires ¹ | .298 | 135.200 | 135.447 | 2.8 | .2 | .0 | .0 | .2 |
| Vehicle accessories other than tires ^{1 2} | .140 | 158.869 | 159.945 | 2.9 | .7 | .5 | .0 | .7 |
| Vehicle parts and equipment other than tires ^{1 3} | - | 148.794 | 150.072 | 2.3 | .9 | .7 | .0 | .9 |
| Motor oil, coolant, and fluids ^{1 3} | - | 362.507 | 360.690 | 5.4 | -.5 | .1 | .3 | -.5 |
| Motor vehicle maintenance and repair ¹ | 1.155 | 257.629 | 257.423 | 1.8 | -.1 | .3 | .1 | -.1 |
| Motor vehicle body work ¹ | .057 | 265.018 | 265.271 | 2.2 | .1 | .2 | .3 | .1 |
| Motor vehicle maintenance and servicing ¹ | .461 | 233.052 | 232.863 | 2.3 | -.1 | .2 | .0 | -.1 |
| Motor vehicle repair ^{1 2} | .601 | 159.254 | 159.101 | 1.5 | -.1 | .4 | .1 | -.1 |
| Motor vehicle insurance | 2.426 | 399.729 | 400.709 | 3.4 | .2 | .4 | .4 | .4 |
| Motor vehicle fees ^{1 2} | .561 | 171.666 | 172.213 | 3.4 | .3 | .1 | .1 | .3 |
| State motor vehicle registration and license fees ^{1 2 6} | .333 | 166.500 | 166.528 | 1.1 | .0 | .0 | .0 | .0 |
| Parking and other fees ^{1 2} | .206 | 180.520 | 181.875 | 7.1 | .8 | .2 | .2 | .8 |
| Parking fees and tolls ^{1 2 3} | - | 196.837 | 198.767 | 8.7 | 1.0 | .2 | .1 | 1.0 |
| Automobile service clubs ^{1 2 3} | - | 125.301 | 125.381 | 3.3 | .1 | .6 | .4 | .1 |
| Public transportation | 1.181 | 276.784 | 273.033 | .1 | -1.4 | .8 | -1.8 | -1.5 |
| Airline fare | .768 | 313.920 | 305.689 | -.7 | -2.6 | 1.0 | -2.5 | -2.7 |
| Other intercity transportation | .152 | 154.945 | 156.221 | -1.3 | .8 | .3 | .4 | -1.5 |

See footnotes at end of table.