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# MEETING MINUTES

Project: Clays Ferry Bridge Closure Detour Study
Item No. 7-264

Purpose: Project Team Meeting No. 1

Place: Hybrid Meeting: KYTC District 7 and MSTeams

Meeting Date: February 28, 2023 at 9:00 AM

Prepared By: Qk4

Participants:

| | |
|---|---|
| Adam Ulrich | KYTC CO Design |
| Andre Johannes | KYTC CO Design |
| Andrea Harth | TEC |
| Brent Sweger | KYTC CO Planning |
| Casey Smith | KYTC District 7 |
| Chris Van Brackel | Lexington Police Department |
| Curtis Tinker | KYTC Incident Management |
| Dave Heil | KYTC CO Planning |
| Ed Williams | TEC |
| Jared Jeffers | KYTC CO Planning |
| Jay Balaji | KYTC CO Planning |
| Jay Postlewaite | KYTC Incident Management |
| Jeff Dick | KYTC District 8 |
| Jeremy Lukat | Qk4 |
| Karl Sawyer | KYTC CO Design |
| Larry Chaney | KYTC District 5 |
| Natalia McMillan | KYTC District 7 |
| Randy Turner | KYTC CO Design |
| Rebecca Thompson | Qk4 |
| Rob Sprague | KYTC District 7 |
| Steve DeWitte | KYTC CO Planning |
| Telma Lightfoot | KYTC CO Traffic |
| Tom Hall | KYTC District 5 |
| Zeke Goodwin | KYTC CO Traffic |

Stephen opened the meeting and attendees introduced themselves. The purpose of the meeting is to discuss the existing conditions for the corridors, examining potential detours should the I-75 Kentucky River crossing have

to be closed for an extended period of time. This first meeting considers existing geometry/systems and anticipated traffic patterns before the consultant team begins field work to identify small-scale and operational improvements to boost capacity. Three study corridors have been defined:

- Red, along KY 627 to Winchester, with a potential branch along KY 418 at Athens
- Orange, from Berea to Lexington, primarily along US 150 and US 127, plus a western branch to Frankfort
- Blue, from Mount Vernon to Frankfort, primarily along US 27, plus a western branch along KY 151 north of Lawrenceburg

Qk4 provided overview maps with HIS data for functional classifications, truck routes, speed limits, lane and shoulder widths, horizontal curves, vertical grades, and bridge information. Traffic projections/operations at 47 key bottleneck intersections were analyzed for two scenarios: 2022 Existing (Bridge open) and 2022 Bridge Closed. Traffic information on origin-destinations and turning movements is primarily taken from StreetLight data.

Peak hour traffic along Clays Ferry Bridge is about 3,500 vph AM and 4,000 vph PM. To be conservative, the Bridge Closed scenario assumes 10% peak hour truck traffic (except where trucks are prohibited) and does not account for peak period spreading. As the shortest detour option, Red is expected to carry most (50%+) of the detour traffic. The travel demand model is a daily model, so some post-processing was applied to reflect capacity constraints.

Key discussion items are noted below.

- KY 418 is not viable for trucks; residents would likely strongly oppose detour traffic. Qk4 should run an extra model scenario, closing KY 418 to all but local traffic. Lexington Police relied on this strategy for previous short-term closures, with variable roadside message boards and a parked officer downstream to u-turn KY 418 non-local trips back to I-75.
- The team discussed whether KY 169 or KY 29 represent a better option for cut-through traffic between US 27 and US 68 near Nicholasville. KY 29 provides access to several schools but has fewer signals and an interchange with US 27. An HSIP project is being developed along KY 169. The City may have a preference; the team will consider both during field work.
- The emergency truck ban along KY 151 remains in place but is anticipated to be lifted in a couple years once the curve revisions are constructed.
- The Blue corridor at Mount Vernon should switch to the other Mount Vernon interchange, routing detour traffic along KY 461 instead of US 150.
- Poor condition bridges at KY 151/I-64 are being addressed as part of the ongoing construction project.
- Winchester has established a local truck ban to force trucks to use the KY 1958 bypass instead of cutting through town. There are signs posted at the turn but some commercial drivers rely on free GPS services instead of truck-specific routing. Qk4 will look at StreetLight origin-destination data to see if these are more local or long-distance cut-through trips.
- The Statewide Corridor Plan included DNA-style studies for key corridors; Qk4 will update mapping to reflect recommendations alongside other planned projects.
- US 27 is essential to routing emergency responders to/from counties south to Lexington-area hospitals.

- Is Man o' War Boulevard a more realistic routing choice than US 68-KY 4-US 60 along Orange? It is a city street but part of the Enhanced National Highway System. Jeff Neal from Lexington should be added to the project team to provide input.
- It may be worthwhile to reach out to District 6 and/or TRIMARC about their experiences with the Brent Spence closure.
- District 7 is retiming signals along KY 1958 Winchester and KY 169 Nicholasville. Natalia will share updated count information within the next month or so.
- Chris Lambert should be added to the study discussions to understand coordination required to influence GPS routing apps.

End of Minutes

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# MEETING MINUTES

Project: Clays Ferry Bridge Closure Detour Study
Item No. 7-264

Purpose: Project Team Meeting No. 2

Place: Hybrid Meeting: KYTC District 7 and MSTeams

Meeting Date: August 29, 2023 at 10:00 AM
September 1, 2023 at 10:00 AM

Participants:

| | |
|---|---|
| Adam Ulrich | KYTC CO Design |
| Andre Johannes | KYTC CO Design |
| Andrea Harth | TEC |
| Brent Sweger | KYTC CO Planning |
| Casey Smith | KYTC District 7 |
| Chris Van Brackel | Lexington Police Department |
| Courtney Evans | Qk4 |
| Dave Heil | KYTC CO Planning |
| Dewey Burchfield | KY State Police |
| Ed Williams | TEC |
| Ethan Strader | KYTC District 7 |
| Jared Jeffers | KYTC CO Planning |
| Jay Balaji | KYTC CO Planning |
| Jay Postlewaite | KYTC Incident Management |
| Jeff Dick | KYTC District 8 |
| Jeff Wolfe | KYTC Traffic Operations |
| Jeremy Lukat | Qk4 |
| Joshua Samples | KYTC District 7 |
| Karl Sawyer | KYTC CO Design |
| Larry Chaney | KYTC District 5 |
| Mallory Frye | KYTC District 8 |
| Natalia McMillan | KYTC District 7 |
| Randy Turner | KYTC CO Design |
| Rebecca Thompson | Qk4 |
| Shane Wall | KY State Police |
| Steve DeWitte | KYTC CO Planning |
| Telma Lightfoot | KYTC CO Traffic |
| Tom Hall | KYTC District 5 |

Tuesday, August 29

Casey opened the meeting and attendees introduced themselves. The purpose of the meeting is to discuss the proposed improvements to address detour routing in the event of a long-term closure of the I-75 Clays Ferry Bridge. Three study corridors have been defined:

- Red, along KY 627 to Winchester—assuming KY 418 through Athens is restricted to local trips only
- Orange, from Berea to Lexington, primarily along US 150 and US 127, plus a western branch to Frankfort
- Blue, from Mount Vernon to Frankfort, primarily along US 27, plus a western branch along KY 151 north of Lawrenceburg

Qk4 provided handouts with overview maps and traffic summary tables at key bottleneck intersections for two scenarios: 2022 Existing (Bridge Open) and 2022 Bridge Closed. Traffic information on origin-destinations and turning movements is primarily taken from StreetLight data.

Peak hour traffic along Clays Ferry Bridge is about 3,500 vehicles per hour (vph) AM and 4,000 vph PM. To be conservative, the Bridge Closed scenario assumes 10% peak hour truck traffic (except where trucks are prohibited) and does not account for peak period spreading. As the shortest detour option, Red is expected to carry most (50%) of the detour traffic, with 20% shifting to Blue, and 15% shifting to Orange.

Key discussion items related to **ITS deployments** include:

- The team will set up a sidebar conversation with Zack Neihof to discuss specifics.
- The playbook should define specific messaging for DMS. Some are controlled by TRIMARC, others by the State Traffic Management Center.
- Additional DMS will be installed as part of the northern KY INFRA grant with others recommended in the ongoing active traffic demand management (ATDM) study.
- The upcoming wrong-way driving study is likely to include additional recommendations on CCTV deployments.

The team discussed the **Blue Corridor**, including future highway projects, traffic operations, and proposed improvements at four specific bottlenecks. The Blue Corridor is 80-85 miles long and is expected to increase by up to 1,400 vph with the bridge closed. Beyond optimizing signal timing/phasing, build options looked at US 25/KY 461 near Mount Vernon, R-cuts along the US 127 Danville Bypass, the US 127/KY 151 intersection, and the US 127/I-64 interchange at Frankfort. Team discussion items are noted below.

- Casey will provide current plans for a few other proposed projects in the Danville vicinity.
- The northbound off-ramp at I-75 Exit 62 is over capacity in the AM peak hour with its existing geometry, even optimizing the signal. Short-term, striping the ramp for dual left turn lanes with the outer lane running on the US 25 outside shoulder increases capacity for a relatively low cost. This changes the free-flow southbound off-ramp right turn lane to a stop-control but with fewer queue concerns than at the northbound off-ramp. Item 8-80106 widening will reconstruct the interchange, providing adequate capacity with a set of roundabouts at the ramp termini. KYTC District 8 expects Item 8-80106 and the adjacent 8-8925 projects will be let within the next 3-6 months.
- Qk4 will look at lead/lag phasing at the US 150/KY 461 intersection. A high-speed roundabout could be considered but is constrained by the abandoned rail bridge immediately north.

- An R-cut intersection is under development at the US 150/Kroger intersection at Danville. Qk4 will apply the Cap-X tool to explore other variations at the US 127B/US 150/KY 52 intersection.
- In the handouts, R-cuts at Bottlenecks B6-B7 provide a lower v/c than in the signalized baseline. The metric reports the worst of all possible turn movements at an intersection; the increase is for one of the lesser movements that adds adverse travel time—not the thru detour moves.
- Qk4 will evaluate lead/lag phasing or a roundabout at the US 127/KY 151 intersection.
- Overall, Items 8-80106, 8-8952, and 5-80212 address capacity concerns at either end of the Blue corridor and are scheduled to advance for construction in the near future.

Friday, September 1

The team discussed the **Orange Corridor**, including future highway projects, traffic operations, and proposed improvements at specific bottlenecks. The Orange Corridor is 60-80 miles long and expected to carry up to 1,600 vph more with the bridge closed. Traffic is likely to disperse into the larger highway network around Lexington although forecasts conservatively assign detour traffic along the preferred route. Team discussion items are noted below.

- Item 7-117 was reduced from "major widening" to a pair of R-cuts along US 60.
- Item 7-8905 improves US 60 access management east of Versailles but does not realign the US 60/ Bypass intersection.
- Items 7-113 (KY 4 widening) and 7-252 (KY 922 widening) are expected to be let in October.
- Should the Orange Corridor follow improved KY 52 instead of KY 954/KY 21? GPS will still route drivers along KY 954 since it is shorter. District 7 will provide DGNs; Qk4 will investigate the KY 52 branch.
- Adding a new signal at the northbound ramps, spacing between signals will be tight.
- Narrow lanes and restrictive geometry on KY 954 and its intersection with KY 52 are less concerning if KY 52 provides an improved detour option.
- Downtown Lancaster is a major pinch point. Optimizing signal timing with existing geometry remains at LOS F in both peaks with lengthy queues. A two-lane roundabout impacts adjacent buildings. A one-way loop around the adjacent block could improve operations but warrants a closer look at traffic and turning radii; it is likely to face opposition by the local community. Qk4 will also consider a mini-roundabout or informal solution utilizing the existing parking areas around the square. Long-term, Item 7-196 pushes the US 27/KY 52 west of downtown, improving performance. District 7 has requested final design funding; this study could help illustrate its importance.
- An HSIP project at US 27/KY 169 will extend left turn lanes on the bypass and add a westbound right turn lane. Construction is expected by next year.
- The East Nicholasville Bypass ties to US 27 north of KY 169; KYTC will provide the forecast report to illustrate the expected impact on West Bypass traffic.

The team discussed the **Red Corridor**, including future highway projects, traffic operations, and proposed improvements. The Red Corridor is 15 miles long and is expected to carry the bulk of detour traffic. Beyond optimizing signal timing/phasing, build options looked at the I-75 interchange area, a turn lane to the quarry, the KY 627/bypass intersection, and the US 60/bypass intersection. Team discussion items are noted below.

- Steve provided documentation about trucks using KY 627 through Winchester.

- With the bridge closed, minimal traffic is expected to use ramps north of KY 627. Similarly, queue spillback for the northbound off-ramps is less concerning as there is virtually no northbound thru traffic.
- Between the interchange and high school, there's a 10.7-mile stretch of two-lane highway with 12-foot lanes and mostly 10- to 11-foot shoulders and no signals. Plans from the 1970s suggest shoulders do not provide full-depth pavement. The KY river crossing has 44 feet of horizontal clearance. The team discussed the merit of increasing thru lanes: traditional major widening, hard shoulder running, conversion to a 2+1, providing three thru lanes (two northbound) within existing pavement, etc. Bottlenecks on either end of the 10.7-mile stretch constrain throughput. Widening KY 627 is not a current priority for District 7; however, it carries heavy volumes when an incident closes sections of I-64.
- A Green-T at KY 627/KY 1958 provides the best operations of the concepts studied and could be considered as part of Item 7-8401. The East Winchester Bypass ties in as a T-intersection farther south.
- US 60/KY 1958 also constrains capacity; improvement concepts are limited by the proximity of the interchange. A bow-tie setup was considered but may not be intuitive for motorists. Qk4 will also continue examining feasibility of a displaced left option. District 7 has a project to restrict left turns at Carol Road.
- Adjusting the signal phasing at the I-64 interchange provides adequate capacity within existing pavement.

End of Minutes

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# MEETING MINUTES

Project: Clays Ferry Bridge Closure Detour Study
Item No. 7-264

Purpose: Project Team Meeting No. 3

Place: Hybrid Meeting: KYTC District 7 and MSTeams

Meeting Date: February 1, 2024

Participants:

| | |
|---|---|
| Andre Johannes | KYTC CO Design |
| Andrea Harth | TEC |
| Brent Sweger | KYTC CO Planning |
| Casey Smith | KYTC District 7 |
| Chris Van Brackel | Lexington Police Department |
| Courtney Evans | Qk4 |
| Dave Heil | KYTC CO Planning |
| Ed Williams | TEC |
| Jeremy Lukat | Qk4 |
| Karl Sawyer | KYTC CO Design |
| Larry Chaney | KYTC District 5 |
| Libbie Lowe | KYTC CO Planning |
| Randi Feltner | KYTC CO Maintenance |
| Randy Turner | KYTC CO Design |
| Rebecca Thompson | Qk4 |
| Roger Gabbard | KSP |
| Steve DeWitte | KYTC CO Planning |
| Telma Lightfoot | KYTC CO Traffic |
| Tom Hall | KYTC District 5 |

Casey opened the meeting and welcomed attendees. The purpose of the meeting is to review build concepts and concur on priorities. The overall study is intended to address detour routing in the event of a long-term closure of the I-75 Clays Ferry Bridge. Three detour routes have been studied. A second phase of the study will look at new alignment river-crossing options as a long-term solution.

Qk4 provided handouts with overview maps and traffic summary tables at key bottleneck intersections for two scenarios: 2022 Existing (Bridge Open) and 2022 Bridge Closed. Traffic information on origin-destinations and turning movements is primarily taken from StreetLight data. The Playbook will have recommendations for detour signing, signal timing/phasing adjustments, and coordination with public GPS routing apps. Project sheets will detail recommended infrastructure improvements at key bottlenecks.

The **Red Corridor** is 15 miles long and is expected to carry the bulk of detour traffic. Beyond optimizing signal timing/phasing, build options looked at the I-75 interchange area, a turn lane to the quarry, the KY 627/bypass intersection, and the US 60/bypass intersection. **Table 1** summarizes priorities, with team discussion items noted below.

- Widening to four lanes was initially discussed but dismissed as it is not a District priority at this time.
- The proposed signal at the southbound I-75 ramps (Exit 95) does not meet warrants without detour traffic; a temporary signal may be more appropriate.
- Another Build concept should add a northbound left turn lane at the KY 627/Old Boonesboro Road intersection. Existing pavement should be wide enough if shoulders are full depth; trucks use the shoulder currently to cheat around queued cars today. A similar project was evaluated for HSIP funding but lacked a crash history to advance with safety funding. Additional development south of the existing neighborhoods is proposed, exacerbating the issue.

Table 1: Priority Build Concepts, Red Corridor

| Project | Priority |
|---|---|
| 2070 Signal Controllers/Detour Timing Plan | High |
| Temp Signal/Striping at I-75 Exit 95 | High |
| Add northbound left to quarry | Low |
| Add northbound left to Old Boonesboro Rd | Medium |
| Construct Item No. 7-8401 | High |
| US 60/Bypass Reconstruction | Further Study |
| KY 627 Major Widening | Dismissed |

The **Orange Corridor** is 60-80 miles long and expected to carry up to 1,600 vph more with the bridge closed. Traffic is likely to disperse into the larger highway network around Lexington. Build concepts and recommended priorities are summarized in **Table 2** with team discussion items below.

- Item 7-235 (KY 52 reconstruction to I-75 exit 83) should be open to traffic by Summer 2024, minimizing the importance of the initial routing along KY 21/KY 954.
- A signal at Duncannon Lane/NB Ramps intersection has been requested and meets signal warrants based on current traffic.
- Casey shared plans for an ongoing CRRSAA project at the US 27/KY 169 intersection. Current designs create dual northbound left turn lanes, add a dedicated westbound right turn lane, and extend storage space for southbound lefts.
- At KY 52/US 27 in downtown Lancaster, previous Build options either did not provide adequate capacity or resulted in multiple business relocations. A stop-gap striping solution was discussed, which loses on-street parking. It is likely to face opposition from local leaders and business owners. Long-term, construction of Item 7-196.5 shifts the bottleneck beyond downtown; this could be a higher priority in the next Highway Plan.
- A signal at the US 27/south end of East Nicholasville Bypass intersection was requested; Natalia will confirm if it has been evaluated yet.

Table 2: Priority Build Concepts, Orange Corridor

| Project | Priority |
|---|---|
| Initial KY 21/KY 954 routing improvements | Dismissed |
| Add signal at northbound ramps (I-75 Exit 83) | High |
| Stop-gap striping at Lancaster | Temporary |
| 7-196.5 reroutes detour past downtown | High |
| Add signal at US 27/South Nicholasville Bypass | Medium |
| Add signal at KY 29/US 27 northbound ramps | High |
| US 27/KY 169 Reconstruction | Further Study |
| Extend turn lanes at US 68 at Man o War Blvd | Medium |

The **Blue Corridor** is 80-85 miles long and is expected to increase by up to 1,400 vph with the bridge closed. Beyond optimizing signal timing/phasing, build options looked at US 25/KY 461 near Mount Vernon, R-cuts along the US 127 Danville Bypass, the US 127/KY 151 intersection, and the US 127/I-64 interchange at Frankfort. Team discussion items are noted below with Build concepts and recommended priorities summarized in **Table 3**.

- Item No. 5-806 addresses geometric issues along KY 151, which should be constructed within the next year or two. Double serving the northbound left from US 127 (lead/lag phasing) instead of adding dual lefts may serve a similar volume with fewer impacts plus wouldn't create a short merge situation.
- District 8 is conducting a planning study along US 150 between Stanford and Danville; Jeff provided additional information to confirm if there are any overlaps to mention in the 7-264 report.
- District 8 plans to let 8-80106 in Summer 2024, coupled with 8-8952 that is further advanced.

Table 3: Priority Build Concepts, Blue Corridor

| Project | Priority |
|---|---|
| Restripe Exit 62 for dual lanes from northbound off-ramp | Temporary |
| Major widening US 25/KY 461 (Item 8-8952 & 8-80106) | High |
| Danville Bypass intersections | Further Study |
| Dual northbound lefts at US 127/KY 151 | Dismiss |

Qk4 will circulate the draft Playbook for review, with the draft report (including Phase 2) ready in early summer.

End of Minutes

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# MEETING MINUTES

Project: Clays Ferry Bridge Closure Detour Study
Item No. 7-264

Purpose: Project Team Meeting No. 4

Place: Hybrid Meeting: KYTC District 7 and MSTeams

Meeting Date: May 10, 2024

Participants:

| | |
|---|---|
| Adam Ross | KYTC Geotech |
| Adam Ulrich | KYTC Design |
| Andre Johannes | KYTC Design |
| Brent Sweger | KYTC Planning |
| Casey Smith | KYTC District 7 |
| Catherine Davis | KYTC Planning |
| Christian Wallover | KYTC Geotech |
| Courtney Evans | Qk4 |
| Dave Heil | KYTC Planning |
| Jay Balaji | KYTC Planning |
| Jeremy Lukat | Qk4 |
| Natalia McMillan | KYTC District 7 |
| Peter Loy | JMT |
| Rebecca Thompson | Qk4 |
| Rob Sprague | KYTC District 7 |
| Stephen Dillard | KYTC District 7 |
| Taylor Kelly | Qk4 |

Casey opened the meeting and welcomed attendees. The purpose of the meeting is to review Phase 2 Build concepts. The first phase of the study addressed detour routing in the event of a long-term closure of the I-75 Clays Ferry Bridge. The second phase looks at new alignment river-crossing corridors as a long-term solution.

Past planning studies focused on corridors south of Fayette County but encountered a "small but vocal opposition" to a new connection between I-75 and Nicholasville.

Six Build options were discussed, with traffic data, environmental red flags, and construction costs for each. Two typical sections were compared for cost estimates: 11-foot lanes with 4-foot paved shoulders versus 44 feet of full depth pavement.

- The Adjacent Bridge options roughly parallel the existing Clays Ferry Bridge between I-75 Exits 97 and 99, offset to the east or west. Each has minimal day-to-day benefits but would carry its maximum

capacity of traffic in a 2045 Bridge closed detour scenario. Each impacts Section 4(f) resources and nearby homes/businesses, with costs estimated at $70-120 million, depending on the alignment and corridor.

- The MOT Half Bridge option would add three new thru lanes immediately parallel but on a separate structure, with removable median sections to shift three lanes of directional traffic between two route options to accommodate the same capacity should half the existing bridge be closed. Construction costs are estimated at $90 million.
- The 11-mile Jacks Creek North option connects KY 3055 (White Hall Shrine Road) to KY 1976 (Jacks Creek Pike) to KY 1974 (Tates Creek Road). In 2045, it would carry 14,500 vehicles per day (vpd) with I-75 open and diverts roughly 8,000 vpd from Clays Ferry Bridge and 6,000 vpd from Man O' War Boulevard. With I-75 closed, it would carry 25,000-40,000 vpd, limited by its available capacity. Environmental red flags include Raven Run Nature Preserve, protected farmlands, historic resources, 10-11 relocations, a gas pipeline crossing, and transmission line. Construction costs are estimated at $130-160 million.
- The 12-mile Valley View option connects KY 3055 (White Hall Shrine Road) to KY 1156 (Jacks Creek Road) to KY 169/KY 1974 (Tates Creek Road). Traffic mimics Jacks Creek North. Environmental red flags include protected farmlands, historic resources, 16-19 relocations, and a gas pipeline. Construction costs are estimated at $180-220 million.
- The 20-mile Far South option connects KY 595 to KY 39, linking the new Duncannon Lane extension to the East Nicholasville Bypass. It carries the least traffic (6,100-11,400 vpd) with the highest costs and impacts.

Group discussion followed.

- How often is one direction of the existing bridge closed for maintenance or incidents?
- Could additional lanes be added to the outside of each direction of the existing bridge?
- The MOT Half Bridge option is intended to provide the same capacity as today for either direction of I-75 traffic, though the speed limit should probably drop to 55 mph to accommodate transitions. An on-call maintenance team would be needed to shift removable barrier sections.
- The team agreed to dismiss the Far South concept from further consideration.
- Casey will provide right-of-way and utility phase costs estimates.
- Brent will follow-up regarding the timing and content of a KYTC leadership briefing.
- Qk4 will deliver the draft report in June, addressing both phases of the study.

End of Minutes