

Mr. Mike Conger, P.E.  
Knoxville – Knox County Planning  
400 Main Street, Suite 403  
Knoxville, TN 37902

## Driveway Evaluation Proposed Taco Bell – 5613 Kingston Pike City of Knoxville, Knox County, Tennessee

Dear Mr. Conger,

The purpose of this letter is to provide a Driveway Evaluation for the proposed Taco Bell Fast Food restaurant to be located along the north side of Kingston Pike (State Route 1), west of Westwood Road in the City of Knoxville, Tennessee, as shown in Figure 1. This evaluation will analyze the sight distance at the proposed driveway location along Kingston Pike to determine if vehicles attempting to enter and exit the site have adequate site distance to safely make the turning movements. Additionally, this analysis will discuss an assessment of the on-site circulation, bike/ped accommodations and driveway throat depth.



Figure 1: Aerial Photograph

The proposed Taco Bell will consist of a 2,287 square foot restaurant with one proposed access drive onto Kingston Pike on the east side of the building. See Attachment A for a preliminary site plan.

### Sight Distance Evaluation

Intersections generally have a higher potential for vehicular crashes than a continuous section of roadway due to a higher frequency of conflicting traffic movements. By providing adequate vertical and horizontal sight distance at an intersection, the likelihood of these crashes is greatly reduced. GPD Group Professional Corporation personnel performed a site visit on Monday, November 28<sup>th</sup>, 2022 to take

pictures of the existing property and roadway conditions and these pictures, combined with a site distance evaluation figure, to verify that adequate sight distance will be provided at the proposed site drive location along Kingston Pike in accordance with TDOT's Standard Drawing Series RD11-SD, specifically drawing RD11-SD4 'Intersection Sight Distance 4-Lane and 5-Lane Undivided Roadways'.

Intersection sight distance (ISD) is the distance in which a motorist must have an unobstructed view of the entire intersection for the purpose of anticipating and avoiding potential collisions. Moreover, drivers in a stopped position should be able to observe traffic at a distance that will allow them to safely make the desired movement. Sight distance evaluations are based on the design speed of the roadway, which is typically 5 mph above the posted speed limit. Based on a design speed of 50 mph for Kingston Pike, vehicles exiting the site drive will require an unobstructed view of 625 feet to safely make a right turn and 625 feet to safely make a left turn.

An ISD analysis was performed at the proposed location of the site driveway along Kingston Pike to determine if any horizontal or vertical sight deficiencies exist. The sight distance evaluation determined that there are no horizontal or vertical intersection sight distance deficiencies for the proposed site drive approach when a driver is looking either to the west (right) or to the east (left). See Pictures 1 and 2 combined with the sight distance evaluation exhibit in Attachment B.



Picture 1: Looking west (right) from the proposed site driveway approach towards the eastbound approach of Kingston Pike



Picture 2: Looking east (left) from the proposed site driveway approach towards the westbound approach of Kingston Pike

As can be seen in Pictures 1 and Picture 2, an approaching vehicle driving eastbound or westbound on Kingston Pike can be seen by a vehicle exiting the site at the proposed location of the site driveway as there are no horizontal or vertical roadway curves **interfering with the driver's line of sight** to an approaching vehicle from either direction.

### On-Site Circulation

As shown on the preliminary site plan in Attachment A, the proposed site will be served by a single access point with a two-way main driveway with parking on both sides of the main drive. The drive-thru will operate in a counter-clockwise circulation pattern with a bypass lane for traffic to circulate the building or exit the drive-thru, if desired. The current site plan shows enough storage for eleven (11) vehicles before any parking spaces would be blocked and approximately eighteen (18) vehicles before the queue would spill onto Kingston Pike. The circulation for this site appears to provide acceptable circulation for all vehicles (including trash and delivery trucks) and adequate drive-thru storage which should not interfere with the operations along Kingston Pike.

### Bicycle / Pedestrian Accommodations

The preliminary site plan shows that no changes are proposed from a pedestrian accommodation perspective. The sidewalk is proposed to be reconstructed along Kingston Pike and the roadway does not include any dedicated bicycle facilities. Bicycle parking is being provided at the proposed Taco Bell, as required, as shown in Callout 29 on the preliminary site plan. The construction of the proposed Taco Bell should not have any adverse impacts on bicycle / pedestrian accommodations as all existing facilities are going to remain the same and bicycle parking is being added at the proposed restaurant.

### Throat Depth

The existing site does not provide any throat depth between Kingston Pike and the parking lot. The **proposed Taco Bell will provide approximately 20' of throat depth between the parking lot and Kingston Pike**, which is a significant improvement over the existing conditions. No issues related to throat depth are anticipated with this proposed driveway.

## Summary and Conclusions

The sight distance evaluation determined that there are no horizontal or vertical intersection sight distance deficiencies for the proposed site drive approach when a driver is looking either to the west (right) or to the east (left). Additionally, the on-site circulation, bicycle/pedestrian accommodations and throat depth were evaluated with no issues noted or anticipated.

If you have any questions regarding this Driveway Evaluation, please feel free to contact me at (330) 572-2214 or via email at [mhobbs@gpdgroup.com](mailto:mhobbs@gpdgroup.com).

Respectfully Submitted,  
GPD Group Professional Corporation

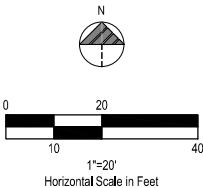


Michael A. Hobbs, P.E., PTOE  
Senior Director  
TN P.E. #125709

CC: Curtis J. Deibel, P.E., RSP2 (GPD Group Professional Corporation)  
Sarah McGowan (GPD Group Professional Corporation)  
File

ATTACHMENT A



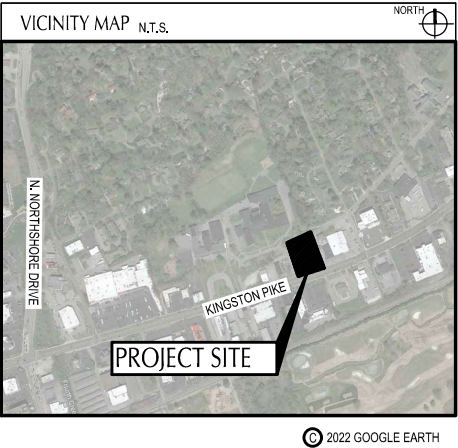


PROPOSED LEGEND

- PROPOSED STANDARD DUTY ASPHALT PER ASPHALT PAVEMENT TABLE THIS SHEET.
- PROPOSED HEAVY DUTY ASPHALT PER ASPHALT PAVEMENT TABLE THIS SHEET.
- PROPOSED CONCRETE
- CONSTRUCTION KEYNOTE
- PROPOSED PARKING SPACE NUMBER
- PROPOSED DRIVE THRU STACK CAR AND NUMBER
- PROPOSED ADA ACCESSIBLE RAMP PER ADA SPECIFICATIONS
- PROPOSED UTILITY STRUCTURES, REFER TO UTILITY PLAN FOR MORE INFORMATION.

EXISTING LEGEND

- POWER POLE
- GUY WIRE
- POWER LINE
- LIGHT POLE
- ELECTRIC TRANSFORMER
- WATER VAULT
- GAS VALVE
- GAS METER
- WATER VALVE
- WATER METER
- FIRE HYDRANT
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND GAS LINE
- UNDERGROUND COMMUNICATION LINE
- UNDERGROUND WATER LINE
- PHOTO POSITION INDICATOR
- REGULAR PARKING SPACE COUNT
- HANDICAP PARKING SPACE
- TREE POSITION INDICATOR
- SIGN



ASPHALT PAVEMENT

| MATERIAL               | LIGHT DUTY | HEAVY DUTY |
|------------------------|------------|------------|
| ESAL VALUES            | 9,500      | 87,000     |
| ASPHALT SURFACE COURSE | 2"         | 1-1/2"     |
| BINDER COURSE          | 2"         | 2-1/2"     |
| SOIL CEMENT BASE       | 6"         | 8"         |
| CRUSHED STONE BASE     | 8"         | 10"        |

SOILS REPORT GOVERNS IF ANY DISCREPANCIES OCCUR.

BUILDING SETBACKS

|                      | REQUIRED | PROVIDED |
|----------------------|----------|----------|
| FRONT: KINGSTON PIKE | 0        | 48       |
| REAR: NORTH          | 0        | 118      |
| SIDE: EAST           | 0        | 110      |
| SIDE: WEST           | 0        | 42       |

PARKING SETBACKS

|                      | REQUIRED | PROVIDED |
|----------------------|----------|----------|
| FRONT: KINGSTON PIKE | 10       | 15       |
| REAR: NORTH          | 10       | 14       |
| SIDE: EAST           | 10       | 38       |
| SIDE: WEST           | 10       | 14       |

LANDSCAPE SETBACKS

|                             | REQUIRED | PROVIDED |
|-----------------------------|----------|----------|
| FRONT: OLD PENDERGRASS ROAD | 10       | 15       |
| REAR: NORTH                 | 10       | 14       |
| SIDE: EAST                  | 10       | 38       |
| SIDE: WEST                  | 10       | 14       |

PARKING SPACES

|                  | REQUIRED | PROVIDED |
|------------------|----------|----------|
| NUMBER OF SPACES | 14       | 30       |

PARKING REQUIREMENTS  
MINIMUM: SIX (6) SPACES PER 1000 SQUARE FEET  
THEREFORE: 2,287 SF / (1000 / 6) = 13.72 ~ 14 SPACES REQUIRED.

LAND USE DATA

|                                 | % OF SITE AREA | AREA PROVIDED |
|---------------------------------|----------------|---------------|
| PROPOSED BUILDING               | 5.77%          | 0.06 AC.      |
| EXISTING BUILDING               | 1.92%          | 0.02 AC.      |
| PAVEMENT/IMPERVIOUS LANDSCAPING | 54.81%         | 0.57 AC.      |
| TOTAL                           | 100%           | 1.04 AC.      |

CURRENT ZONING: C-G-1 COMMERCIAL GENERAL

PLAN KEYNOTES

- PROPOSED P.C.C. CURB AND GUTTER.
- PROPOSED P.C.C. CURB AT DRIVE THRU.
- PROPOSED P.C.C. CURB.
- PROPOSED P.C.C. REVERSE CURB AND GUTTER.
- PROPOSED P.C.C. CURBED WALK.
- PROPOSED P.C.C. WALK.
- PROPOSED P.C.C. FLUSH CURB WALK.
- PROPOSED CROSSWALK.
- PROPOSED 6" P.C.C. PAVEMENT W/ W.W.F. 6" x 6"-W2.9 x W2.9 (CONTROL JTS. 12'-0" O.C.) OVER 6" CRUSHED AGGREGATE BASE, APPLY LIQUID ASPHALT AT ALL JOINTS BETWEEN CONCRETE AND ASPHALT.
- PROPOSED DETERRENT BOLLARD IN CURB.
- PROPOSED ADA PARKING SIGN IN CRASH RATED BOLLARD.
- PROPOSED LANDSCAPING AREA.
- PROPOSED PAINTED TRANSVERSE STRIPING.
- PROPOSED PAINTED 4" WIDE SOLID STRIPE - WHITE ON ASPHALT, YELLOW ON CONCRETE, BLUE FOR ADA.
- PROPOSED DIRECTIONAL PAVEMENT MARKINGS - WHITE ON ASPHALT, YELLOW ON CONCRETE.
- PROPOSED PAINTED INTERNATIONAL ADA SYMBOL PER ADA SPECIFICATIONS.
- PROPOSED CONCRETE COLLAR.
- PROPOSED FROST SLAB AT DOOR.
- PROPOSED 5" P.C.C. PAVEMENT W/ W.W.F. 6" x 6"-W2.9 x W2.9 (CONTROL JTS. 12'-0" O.C.) OVER 6" CRUSHED AGGREGATE BASE, APPLY LIQUID ASPHALT AT ALL JOINTS BETWEEN CONCRETE AND ASPHALT.
- PROPOSED MENU BOARD, CANOPY, SPEAKER POST, AND ORDER CONFIRMATION BOARD PER SIGN SUPPLIER SPECIFICATIONS. SIGN SUPPLIER TO PROVIDE A TEMPLATE FOR G.C. G.C. TO COORDINATE A MEETING WITH THE CONSTRUCTION/PROJECT MANAGER AND OPERATIONS TO VERIFY LOCATION AND PLACEMENT OF MENU BOARD, CANOPY, SPEAKER POST, AND ORDER CONFIRMATION BOARD PRIOR TO ANY CONSTRUCTION. SIGN SUPPLIER SHALL PROVIDE G.C. WITH FOUNDATION DETAILS. G.C. RESPONSIBLE FOR SIGN FOUNDATIONS/ELECTRICAL.
- PROPOSED EVOLUTION PORTAL CLEARANCE BAR.
- PROPOSED BRICK DUMPSTER ENCLOSURE.
- PROPOSED 12'-0" O.A.H. 100 S.F. MONUMENT SIGN PER SIGN SUPPLIER SPECIFICATIONS. SIGN SUPPLIER SHALL DESIGN AND INSTALL FOUNDATION.
- PROPOSED PATIO.
- PROPOSED DECORATIVE PATIO FENCE.
- PROPOSED MOBILE ORDER PICK-UP SIGN. IN BOLLARD, CONTRACTOR TO INSTALL SIGN POST AND BOLLARD PER THE HANDICAP SIGN DETAIL. SIGN TO BE PROVIDED BY SIGN VENDOR.
- PROPOSED 'DO NOT ENTER' AND 'STOP' SIGN PER MDOT STANDARDS.
- PROPOSED PAINTED STOP BAR PER MDOT STANDARDS.
- PROPOSED BIKE RACK SPACES.
- PROPOSED YIELD SIGN.
- PROPOSED ROLLED CURB.
- EXISTING RETAINING WALL (LANDLORD RESPONSIBILITY).

| DATE | REMARKS |
|------|---------|
|      |         |
|      |         |
|      |         |
|      |         |
|      |         |

CONTRACT DATE: 04.13.22  
BUILDING TYPE: END, 80FT  
PLAN VERSION: MARCH 2021  
BRAND DESIGNER: DICKSON  
SITE NUMBER: 0  
STORE NUMBER: 0  
PA/PM: SM  
DRAWN BY.: NA  
JOB NO.: 2022088,36

TACO BELL

5613 KINGSTON PIKE  
KNOXVILLE, TN 37919



ENDEAVOR 20

SITE PLAN

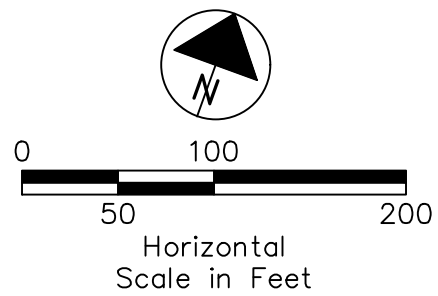
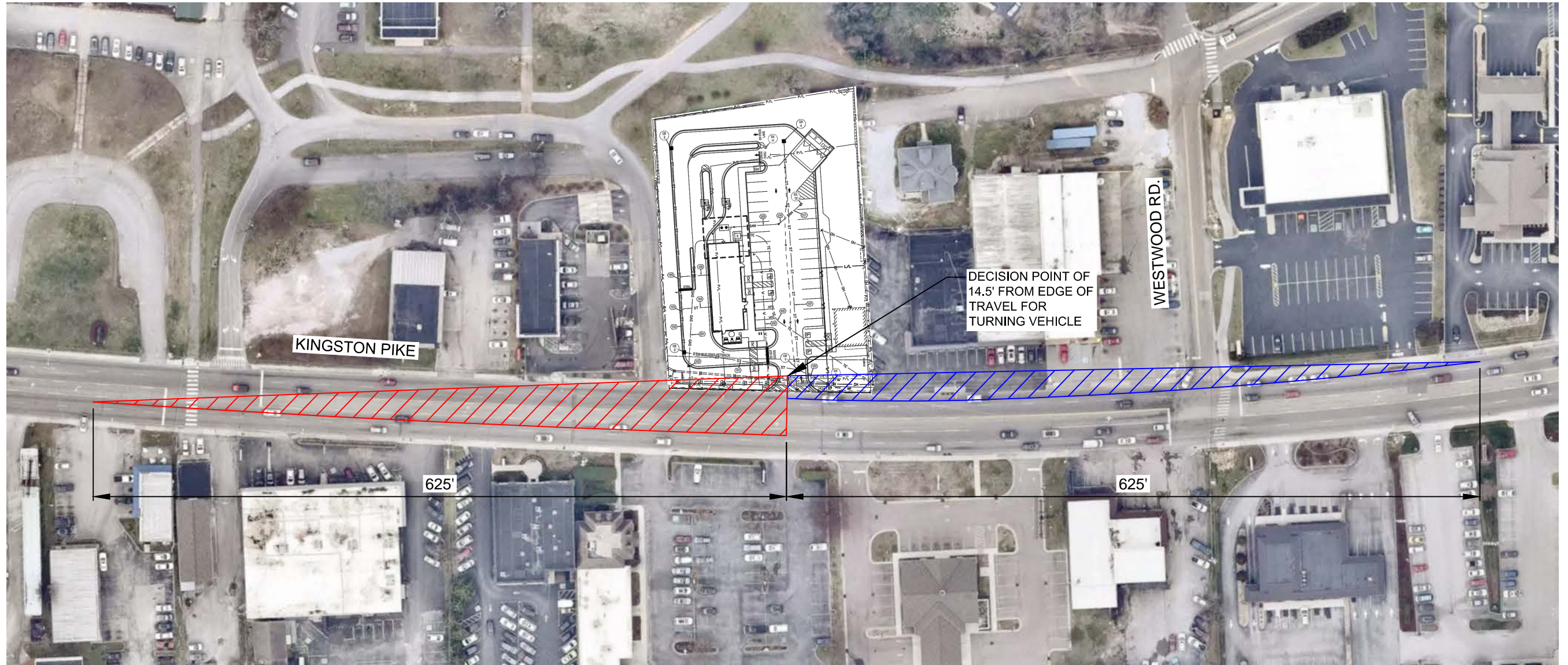
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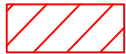

ATTACHMENT B



Drawing File: C:\2022\20220801\38 - Knoxville, TN (Kingston Pike)\3\_Field Services\04\_Traffic\Sight Distance\Attachment B.dwg Layout: Layout1  
Date: 1/25/21, 2021 Time: 10:36 am User: 0

Technician: ddombrosky



| LEGEND  |                                    |
|---|------------------------------------|
|  | LEFT TURN SIGHT DISTANCE TRIANGLE  |
|  | RIGHT TURN SIGHT DISTANCE TRIANGLE |



ATTACHMENT B

SIGHT DISTANCE EVALUATION

FEBRUARY 2023