Lake Wheeler Road to Par Drive



The following questions were raised during the question and answer session following a brief presentation at the December 7, 2017 public meeting held at the Carolina Pines Community Center. Questions are in **bold** face type followed by the response in *italics*.

1. Will there be lighting on the project?

We are coordinating with Duke Energy who will install street lighting within the project limits.

2. What is the construction cost?

The Estimated construction cost is approximately \$7 million.

3. Is the project funded?

The project is funded through the City's transportation bond program.

4. Can you speak to any of the traffic studies regarding subdivision signals?

As part of the design, the Engineering firm conducted a traffic analysis of the entire corridor. Part of that study included evaluation of existing signalized intersects and signal warrant analysis of non-signalized intersections. Modifications will be made at existing Lake Wheeler Road traffic signal. The Fairway Drive intersection which is not signalized was reviewed to see if signalization was warranted. A signal warrant analysis was conducted in accordance with NCDOT and FHWA standards and the location was found not to warrant a traffic signal based on current volumes and conditions. The golf cart crossing (western one) was studied for signalization too. It failed to meet warrants for a signal however it did meet warrants for a pedestrian hybrid beacon known as a "HAWK." The crossing is proposed to be shifted slightly eastward to allow for better sight distance at the crossing for both pedestrians and drivers. Traffic signal locations may be re-evaluated after construction is complete and traffic has had a chance to normalize.

5. How many times per day to do you think pedestrians will use the HAWK signal? Based on the current traffic volumes, crossings can occur up to 5-6 times per hour. It is difficult to predict usage as the pedestrians/golfers may not elect to us the HAWK if traffic is not heavy.

6. Are you aware of all the confusion this HAWK signal will produce, folks don't understand it, will be there any kind of education?

All traffic control devices be it a stop sign or traffic signal are specified in the FHWA's Manual on Uniform Traffic Control Devices. This manual does not adopt any device without through research and testing to ensure the device delineates the correct message to users. The FHWA thoroughly tested the HAWK pedestrian beacon prior to adoption in 2009. There are currently 7 HAWKs in the City limit and none of the locations have had any pedestrian related crashes. With that said, the last thing City staff desire is to create a confusing situations for drivers or pedestrians. Although City staff does not anticipate this, the City will plan on partnering with the NCDOT to have some targeted education components related to the operations of a HAWK beacon.

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7. The traffic signal at the Fairway Drive intersection off Tryon Road is not on the drawings? The Fairway Drive intersection does not currently warrant a traffic signal to be installed with the current project based on an engineering study performed in the Spring 2017.

8. Why not have a traffic signal at Par Drive?

A traffic signal at Par Drive is not warranted based on nationally adopted criteria. NCDOT will only approve a new traffic signal if conditions dictate (warrant analysis). Of all the side streets intersecting Tryon Road along this section of the corridor Fairway Drive is the heaviest. If that location did not meet warrants, then it stands to reason that the warrants would not be satisfied at Par Drive.

9. Assessments:

a. Inside City Limits vs Outside City Limits?

Properties adjacent to Tryon Road and within the City limits are assessed at \$32 per foot of abutting property for residential or \$64 per foot of abutting property for non-residentially zoned property. Assessments are based on the current zoning. The assessment can be set up to be paid back over a period of 10 years. For properties that abut Tryon Road but fall outside of the City corporate limits, assessments are delayed until such time that the property is annexed into the City.

b. How many property owners are in the assessments?

It was estimated that between 10-15 properties are within the City limits.

c. Would everyone be assessed?

Please refer to response to question #9a above.

d. What is the full return of the assessments?

Typically, anywhere from 3-5% of the total project costs are assessed to the property owners.

e. What about existing curb and gutter?

Properties that have existing curb and gutter will receive a credit of 150 FT in the assessment calculation.

f. Commercial/Non-residential vs Residential?

\$64 per foot of abutting property for commercial and \$32 per foot of abutting property for residential are the current rates used in the assessment calculation.

g. What about residents along Tryon Road that don't have city utilities – water and sewer?

Please refer to response to question #9a above.

h. Is the assessment only along the north side of Tryon Road?

No, the assessment is calculated on properties along both the north and south sides of Tryon Road.

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i. How many linear feet are we talking about? Approximately 6,650 linear feet.

j. Does the \$32 cover the linear feet on the south side as well as the north side?

Individual assessments are based on the rates noted in response to question #9a above.

Rates apply to each side of the roadway.

10. Why do we need bike lanes on the east side?

Bike lanes provide equal access as an alternate means of transportation.

11. Are there accommodations for bike lanes on the already widened Tryon Road?

Accommodations for bicycles are provided by "wide" outside lanes on adjacent sections of Tryon Road. On the recently completed State Project U-4432, the inside lane is 12 FT and the outside lane is 14 FT wide to accommodate bicycles. On Tryon Road, west of Lake Wheeler Road, the inside travel lane is 11 FT wide while the outside lane is 13 FT wide to accommodate bicycles.

12. Have they actually measured the volume of pedestrian traffic on Tryon Road?

Pedestrian counts were included in the recently completed (Spring 2017) peak hour traffic counts at intersections.

13. Has there been a pedestrian study at intersections?

Please refer to response to question #12 above.

14. Is there a need for sidewalks on both sides of the road in undeveloped areas?

Yes, it is City policy to provide sidewalks on both sides of the road not only in subdivisions but on these types of facilities as well.

15. Is it state policy for sidewalks on both sides of the road?

No, it is not the State's policy but the City's policy to construct sidewalks along both sides of the road.

16. Why is the median needed at Tryon Pines?

The proposed typical section is a 4-lane, median divided facility to match the roadway cross-section west of Lake Wheeler Road and east of Par Drive. Full movements are provided at Cherry Field Dr. and Fairway Dr. with access at Tryon Pines Dr. and Crestline Ave. restricted to right-in/right-out (RIRO) only. Access was decided based on traffic, intersection spacing, and connectivity.

17. Will there be a much longer turning lane at the Lake Wheeler intersection?

Yes, queuing will be lessened due to additional lane capacity and turn lanes will be of sufficient length.

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18. Will there be method to fast track the project (referring to traffic calming projects in neighborhoods) or will we have to still do what we do now with going through the neighborhoods and having petitions signed? Especially at subdivisions entrances to help with pedestrian safety regarding school buses?

This question relates to traffic calming on neighborhood streets and the City's petition process would remain the same since community consensus is required. The Tryon Road, Part C Widening Project is a Capital Improvement Project and follows a different process than a petition project.

- **19.** What is the time frame in city terms for fast tracking if a subdivision criteria is met? *Please refer to response to question #18 above.*
- 20. How long does getting a regular stop light at an intersection like Lake Dam Rd and Tryon Rd take?

The Tryon Road/Lake Dam intersection was requested to be studied for signalization after the road was closed due to the bridge. Since Tryon Road falls on the State Highway System, the City recommended signalization (to the State) based on the warrant analysis. NCDOT reviewed the City's study and concurred. NCDOT had to seek funding (via spot safety) which required approval from the State Board or Transportation. Once funding was secured the last steps are design and then construction. It is the City's understanding that the contractor working for NCDOT fell behind schedule, therefore prolonging the process at this location.

21. How long does fast tracking really take for City and NCDOT?

No specific timeline can be given since Tryon Road is a State owned/maintained facility and the City does not control NCDOT's review/approval process.

22. Why can't we get all the intersection lights in now to avoid fast tracking process?

There are over 8000 non-signalized intersecting streets in Raleigh. Every year, City staff receives approximately 100 requests to look at signalization. Signalization is not always the perfect solution and often creates rear end type crashes and causes delay to the major street. To ensure equity, every location is looked at using the same warrants or criteria. The warrants were established by FHWA and include criteria such as volume, side street delay, reported crashes considered correctable, pedestrian traffic, etc. Fairway Drive does not meet the required warrants for opening year. Since it is the intersection with the heaviest traffic, it stands to reason that the adjacent project intersections would also not meet the traffic signal warrants.

- 23. Why can't we do traffic counts on the intersections?
 - Traffic counts were performed earlier this year (2017).
- **24.** How is the signal queuing going to change at the Lake Wheeler Intersection?

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Queuing westbound, eastbound, and northbound should be reduced with the additional lane capacity being provided.

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- 25. Has there been a study on the school bus routes and how this project is going to affect them? Tryon Road is no different than any of the other roads the City improves. There should be no impact to WCPSS's bus service aside from temporary construction impacts. The City will coordinate with Wake County Public School System if any concerns or situations arise.
- 26. Why is there not access at Tryon Pines and Crestline instead of having the neighborhoods cut through each other?

Please refer to response to question #16.

27. Why was Cherry Field chosen over Tryon Pines for the access since Tryon Pines already has the turn lane?

Please refer to response to question #16.

28. What is the reason for the distance for the median breaks?

Adequately spacing the intersections enhances traffic flow. Restricting turning movements at intersections also reduces conflict points by as much as half thereby improving safety.

29. Is there a reason why you can't use the median breaks space for turn lanes? Eliminate the median?

Continuous left-turn lanes or two-way left-turn lanes are not considered the best alternative due to high frequency of conflicting movements. It is considered safer to control the flow of traffic with the use of medians.

- **30.** Is there going to be a way to have two lanes exiting Cherry Field (left & right)?

 It is possible to provide a separate left and right turn lane exiting Cherry Field but it would require removing the landscaped island.
- 31. Can we still keep the left turning lane into Tryon Pines without a left out but still have access to turn into the subdivision?

No, doing so would compromise the deceleration and storage bay length for the U-turn approaching Cherry Field Drive.

32. What about the tunnel for the golf carts? Why don't we have one at both ends of the course instead of having them cross four-lanes of traffic?

A tunnel for golf carts was investigated. The estimated additional cost to taxpayers would be over \$1 million for a private access tunnel. The additional cost for a tunnel is not in the project budget. The City presented the option to RGA to participate in the tunnel's funding and they declined. There is an existing grade-separated golf cart crossing under the new bridge over the railroad.

33. On spacing requirements in the median isn't there some kind of requirement to have a median break between Cherry Field and Lake Wheeler?

The recommended minimum spacing of full movement median openings is 1200 -1500 feet.

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34. Was there any consideration about the Dix Park development in the bond?

A master plan for Dix Park is being developed and the project will have its own traffic analysis. It would be built in phases and access has not yet been decided upon. Any offsite roadway improvements necessary resulting from site generated traffic will be completed as part of that project which will likely be finalized after completion of design on the Tryon Road widening project.

35. Who assumes liability for the golf crossing if someone is hurt?

Please refer to response to question #33.

36. Would the City have to buy the golf cart crossing access from RGA?

No, the crossing encroaches on public right-of-way.

37. During the construction phase will the project be built in sections or all at once?

The project will be constructed in sections maintaining at least two lanes of traffic at all times. It is anticipated that traffic would be maintained along the north side of the alignment first as construction begins on the south side of the project.

38. Which end of the project will be started first?

Construction would likely begin at the west end of the project. However, the contractor will have the full length of the project available to pursue construction work. If deemed necessary in our efforts to complete the project as soon as possible, the contractor may be working in several different locations along the entire project during the same time throughout the life of the project.

39. Can a dedicated left turn lane be added on Fairway Drive?

A turn lane can be added on the approach to Tryon Road by widening Fairway Drive. There is insufficient width of existing pavement on the approach to "re-stripe" Fairway Drive. This would be an additional cost to the project that the City would have to approve.

40. Would it be cheaper to have a stop light at Fairway Drive?

It would likely be less expensive to install a traffic signal at Fairway Drive than to construct a turn lane (requiring additional Right-of-way) on the Fairway Drive approach to Tryon Road.

41. How is the bottleneck at Lake Wheeler going to be handled?

The eastbound approach to the intersection would likely be one of the last steps in the sequence of construction. The existing outside lane of the eastbound approach would be converted to the second through lane. The existing concrete island would have to be modified to accomplish this. The final traffic pattern will be two through lanes on the eastbound approach compared to the one through lane that exists today.

42. Tryon Pines entrance sign is going to be affected by the project how does that work? Who in the neighborhood do you work with for the entrance sign?

The sign would be part of the right-of-way negotiations with the owner of record since there is no home owner's association.

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Additional comments were received during the comment period that followed the meeting and closed December 22, 2017. Again, comments are in **bold** face type followed by the response in *italics*.

- 43. I'd very much like to see pedestrian-friendly sidewalks and crosswalks, at least up to the Food Lion shopping center. It's a shame that it's so close, but we feel unsafe walking there due to the lack of space on the side of the road.
 - The project includes construction of sidewalks and bicycle lanes along both sides of the proposed roadway to accommodate pedestrians and bicyclists. (Refer to the Typical Section in the public meeting handout.) The proposed sidewalks will be separated from the travel lanes by a 5-ft bike lane, 2'-6" concrete curb and getter, and a 6-ft planting strip.
- **44. Turning from Tryon Road onto Lake Wheeler Road should have a protected left-turn light.**The existing traffic signal at Lake Wheeler Road and Tryon Road will be modified as part of the project. A protected phase for left-turns will be evaluated during the design.
- 45. Commuters who are evading I-40 are the primary beneficiaries. Residents derive absolutely no benefit. Actually having to pull out into higher speed traffic and negotiate several U-turns during routine travel only increase the adverse impact.
 - When construction is complete on the Fortify project, we expect less commuters to use Tryon Road as I-40 will allow for faster travel times. We've received comments from many local residents in favor of the project, particularly the sidewalk and bicycle accommodations that are included. We believe the there are benefits to the local communities.
- 46. Still a mystery why City of Raleigh has lobbied use of City Bonds to build a road with a vast majority of the frontage in the County. When it is built, city funds should not be used. The transportation bonds were approved by City Council and subsequently voted for by the citizens of the City of Raleigh. The project completes a 4-lane roadway along the Tryon Road corridor that would not otherwise be completed until the NCDOT made it a priority which could take several years.
- 47. Highly concerned about the loss of 15 beautiful cedar trees on our property. Most of the trees could be relocated using equipment made for that purpose. Doing so would vastly improve the impact on us.
 - An arborist would need to be consulted regarding health of the cedar trees and the likelihood that they would survive if relocated. This would likely be discussed with the City Right-of-Way Agent during the right-of-way acquisition/negotiation phase.
- 48. Drainage for this project "dumps" a large portion of the total runoff onto our property that historically has only a small (maybe 2-foot wide) ditch running through it for drainage. We have one location where an existing CMP of maybe 18" will be expected to cope with the project drainage. Actually, this project appears to rely on dumping runoff on our property without regard for what happens as a result.
 - Currently there are three pipes discharging onto the property in question and the proposed design maintains these outfall locations to the maximum extent possible. The existing and proposed outfalls are presented below:

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Existing outfalls:

Station	Discharge*	Pipe Size	Flow Depth**	Velocity**
42+19	7.3 cfs	18" RCP	0.65'	3.4 ft/s
45+80	7.9 cfs	15" RCP	0.35'	2.3 ft/s
50+40	6.5 cfs	15" Metal	0.29'	1.7ft/s

Proposed outfalls:

Station	Discharge*	Pipe Size	Flow Depth**	Velocity**
43+50	9.9 cfs	18" RCP	0.75'	3.7 ft/s
45+98	10.5 cfs	18" RCP	0.39'	2.5 ft/s
51+00	7.2 cfs	18" RCP	0.30'	1.8 ft/s

^{*} Discharge calculations are based on a 10-year design storm.

Based on our analysis, there will be slightly more water discharging onto the property in question. However, the impact to the receiving channel is negligible in regard to flow depth and velocity. The channels are stable and well suited to handle the minimal increase in flow.

49. Is there a way to create turn lanes using the median?

The sketch you provided depicts a continuous left-turn lane. While this type of median treatment has been used in the past, it is no longer the preferred treatment for safety reasons.

Additionally, this section of Tryon Road is the last section to be widened from US 64 in Cary to US 401 in Raleigh and we want to provide a consistent cross-section throughout the corridor.

50. Is it feasible to move the crepe myrtles along the road so they can be saved?

We certainly understand your desire to save the crepe myrtles along the road. An arborist would need to be consulted to determine if the trees could be relocated without losing them. This would likely be discussed with the City's Right-of-Way Agent at the time of right-of-way acquisition/negotiations.

51. Commuters use the gore area between the eastbound (EB) through lane and the EB right-turn lane onto Lake Wheeler Road to merge left into the EB through lane just before the concrete island. Can you make it more obvious with signage or barriers that this is not an area allowed for merging traffic?

When construction is complete, the gore area now being used as you describe will become a second EB through lane. The right-turn lane will remain and the gore area will no longer be present. This will eliminate the problem that you describe.

52. Will the bike lane proposed extend all along Tryon Road?

The dedicated bike lane will only be included within the project limits (Lake Wheeler Road to Par Drive). This is consistent with the City's Unified Development Ordinance. Tryon Road beyond the project limits does include wide outside lanes, i.e. 2-foot wider than the adjacent lane, that in

^{**} Depth and velocity calculations based on existing channel just outside proposed Right of Way.

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combination with the 2-foot concrete gutter pan, provides 4-foot of paved surface for bicycle travel.

53. Concern regarding access for emergency vehicles on Cherry Field Drive with the median across Tryon Pines Dr. Will residents be required to park on only one side of the street so emergency vehicles can get by parked cars?

There will be no change in access to Cherry Field Drive so no change to on-street parking is anticipated as a result of the Tryon Road project.

54. Will we be able to take a left-turn out of Cherry Field Drive or Tryon Pines Drive onto Tryon Road once the project is complete?

Left-turns out of Cherry Field Drive onto Tryon Road will be permitted once the project is complete. Median construction will prevent making a left-turn out of Tryon Pines Drive onto Tryon Road. Vehicles wanting to travel east out of Tryon Pines Drive will first have to turn right onto Tryon Road and then make a U-turn at Cherry Field Drive.

55. Can the golf course build tunnels for their golf carts instead of impeding traffic at the crosswalk?

Numerous discussions with RGA have already occurred with regard to the crossing. Early estimates indicate that such a tunnel could cost upwards of \$1 million. Such an amenity for a private land owner is not in the City's budget for the project nor does RGA want to fund such an improvement. At this time, the proposed high intensity activated crosswalk (HAWK) signal is the proposed solution. As noted at the public meeting, we anticipate that the HAWK signal would be activated 5-6 times per hour.

56. Complete this last remaining section with all due haste.

We strive to keep our project commitments on schedule. Construction of the Tryon Road, Part C improvements are scheduled to be awarded in the Spring of 2019 and construction completed in late 2020.

57. The stone wall will need to go and humps can slow folks down to 35 mph so golfers can cross. The existing stone wall will be relocated. The posted speed along this section of Tryon Road will be 45 mph. The golf cart crossing will be relocated to the east and will be controlled by a High Intensity Activated Crosswalk (HAWK) signal.

58. Shift the alignment to the south after parcel 5 that would affect parcels 6, 7, 8, and 9 and help save the yards on parcels 13 and 15.

The project team initially evaluated a similar alignment as you suggest and ultimately selected a new revised alignment from the one you viewed at the public meeting due to the following:

- The revised alignment allows the existing pavement to be used for traffic control during construction while the south side of the alignment is being constructed. This will minimize the amount of temporary pavement required to maintain traffic and at the same time, be less disruptive to existing traffic.
- The right of way impacts will be reduced for properties located on the north side, while minimally impacting property on the south side.

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- The revised design meets the current design standards and can maintain normal crown for the revised alignment.
- The alignment shift mutually satisfies multiple locations since the property owner owns property on both sides of Tryon Rd. in this segment.
- There could be a segment of 12" water line that may have to be relocated due to the water line being located under the proposed Curb and Gutter, and this may be in conflict with the proposed storm drainage design.
- This alignment shift was mentioned in the public meeting held on December 7 and later in the comments received from the public meeting.

The benefit of this alignment is the cost savings in less temporary pavement and improved traffic control during construction.

A shift of the alignment to the south has been investigated keeping the above factors in consideration.

- 59. On previous "in progress" drawings, a stoplight at Fairway/Tryon intersection was removed.

 This change does not materially affect RGA, but may affect others.
 - Yes, on earlier mapping a traffic signal was shown at Fairway Drive and Tryon Road. As the project progressed and an engineering study was performed by reviewing the traffic signal warrants as defined by the Manual of Uniform Traffic Control Devices (MUTCD), a traffic signal is not warranted at this location upon project completion based on current traffic counts.
- 60. There is currently space for 30 cars at the Director's House. After the land taking for a "right in, right-out" connection to Tryon Road, the current parking arrangement will no longer provide adequate parking. A plan for rearranging parking for 30 cars and connection to Tryon Road needs to be prepared for the approval of RGA.
 - Access to Tryon Road will be provided. There is no discernible parking arrangement on the property, just the horseshoe driveway. On-site parking will be discussed with the City's Right-of-Way Agent during the right-of-way acquisition phase.
- 61. The intersection of Par/Tryon/RGA parking does not currently show a stoplight or connection to the RGA parking lot. It is imperative that the parking lot be connected to Tryon and that a four-way stoplight be provided. In order to minimize disruption of traffic flow, the traffic lights facing Par Drive and RGA parking lot should be demand actuation. Failure to provide signaling for this four-way intersection will create a dangerous situation, and will reduce access to RGA. During tournaments, which are frequently scheduled during the warm half of the year, 160-175 cars will fill the RGA parking lot during a half hour period of time and will exit en mass approximately 5-6 hours later. The stoplight issue at the intersection of Par Drive and Tryon Road is of the highest importance to RGA and I assume to the condominiums on Par Drive and is worth taking to court if necessary.

The current drive entrances to the RGA parking lot are shown on the map and will remain as is. A traffic signal is likely not warranted for the same reasons that a traffic signal at Fairway Drive is not warranted at opening year. The proposed cross-section will enhance access to RGA over

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the current situation. By adding capacity there will be more gaps in the traffic flow than with the current two-lane facility allowing for easier ingress/egress.

62. People need (must) be able to enter and exit their communities (easily). Signals will be needed.

We agree that people must be able to access their communities. We will add that they must be able to do this "safely." As roadway and traffic engineers, we have standard practices to follow. It is not an easy choice to decide if intersections will be designed with limited access. Many factors go into that decision such as intersection spacing, traffic counts, inter-connectivity between subdivisions, and distance to the next available location to make a U-turn. While it may seem like an inconvenience to make a right-turn and then have to make a U-turn, it has proven safer and residents will actually find it easier than trying to make a left-turn across 4-lanes of traffic.

Traffic signals are less subjective and require an engineering study to evaluate traffic signal warrants as outlined in the Manual on Uniform Traffic Control Devices (MUTCD). Typically, several applicable warrants would need to be satisfied for a location to be considered for traffic signal control. The intersections along Tryon Road do not meet the warrants for opening year but may satisfy warrants as traffic continues to grow in the corridor.

- 63. The sooner the better! I would like to take the bus to work, but it is unsafe to use any stretch of Tryon Road, either by foot or bike, between Renaissance Park and Lake Wheeler Road.

 We strive to keep our project commitments on schedule. Construction of the Tryon Road, Part C improvements are scheduled to be awarded in the Spring of 2019 and construction completed in late 2020. The project includes construction of sidewalks and bicycle lanes along both sides of the proposed roadway to accommodate pedestrians and bicyclists.
- 64. I would like to express my disappointment with the City of Raleigh for giving the land-owners such a short amount of time to provide feedback, thoughts and concerns after having seen the initial plans. The plans were not presented to us until 07-Dec, and we were then given only until 22-Dec to provide feedback. Additionally, it is my understanding from some of the other land-owners in the area that the plans were not published on the website until the following Monday, 11-Dec. That afforded us only 10 business days to absorb the information and provide feedback. Most of us work at least 40 hours a week. I do closer to 80 most weeks. It's winter the days are shorter, giving us less time to survey our land and truly take in the total impact of the change. Considering that this road widening project in its entirety has been ongoing for several years now, it strikes me as unreasonable that affected parties would be given so little time to assess the impacts of the changes. Additionally, while it may not have been the intent, having this deadline so close to the holidays when people are busy, distracted, working extra hours, traveling and hoping to wind down and enjoy time with their families gives the impression that this deadline was not chosen arbitrarily, but rather to

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minimize the amount of feedback the affected parties were able to provide given other obligations. If true, that is also disappointing.

The 14-day comment period is standard for City of Raleigh Transportation projects. We're cognizant of the fact that there is a small window of opportunity around the holidays in which to conduct a public meeting and receive input. It is busy time of year for everyone and consideration was given to the time of year while maintaining the project schedule.

- 65. There are a lot of add-ons to this project, outside of the road itself, that seem unnecessary, and in some cases, downright unsafe. Almost all of the neighbors on my side of the street have had break-ins or attempted break-ins, most multiple times, myself included. We are not thrilled about the idea of having a sidewalk on both sides of the road, which not only increases the amount of land lost, but increases the chances of break-ins by passers-by. I hear that there is some amount of conformance that the city expects when developing new or widening existing roads, but I wonder which is more important conformance or safety of the citizenry of Raleigh? Is it really necessary to have this kind of global conformity across the city, or can we apply a bit of reasoning and tailor such projects to the areas affected?

 The project will result in a safer facility for motor vehicle traffic as well as pedestrians and cyclists. Sidewalks are consistent with recently improved, adjacent sections of Tryon Road. The proposed cross-section of the Tryon Road Widening project is in compliance with the City of Raleigh Street Design Manual that was approved by City Council. The project will include the installation of street lights by Duke Energy which should improve safety in the area.
- 66. The bike lanes are similarly problematic. The city is full of bike trails (one just down the street at Lake Johnson). Is it really necessary to strip land from the hands of home-owners who have lived here for many years and worked hard to maintain their property, only to lose more of it for bike lanes that at least, per the general mood of the parties attending the meeting on 07-Dec no one seems interested in having?

 Please refer to response #68 to your previous concern.
- 67. Then there are the medians, curbs and gutters, etc. I could go on, but I won't inundate you with too much information in this initial email. I want this to be the start of a civil discussion, and as I said, I will continue to communicate my thoughts and concerns on the matter regardless of timelines.
 - Please refer to response to your previous concern. Right-of-way and/or easements would likely be discussed with the City Right-of-Way Agent during the right-of-way acquisition/negotiation phase.
- 68. The bottom line is none of us want to lose our land, our scenery and our history, especially due to some of these trivial add-ons. I'm currently slated to lose 50 feet. That simply isn't acceptable to me.

We attempt to minimize impacts to adjacent properties by designing alignments that adhere to established standards and good engineering practice. On a widening project such as Tryon Road, impacts are inevitable but please understand that the team works diligently to minimize impacts within our capabilities.

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69. And I see that the plan calls for the loss of several trees, many of which are hundreds of years old.

An attempt will be made to save trees, where possible, within the project footprint.

- 70. I wonder, can the City of Raleigh really continue billing itself as "The City of Oaks" when the trees are coming down at such an alarming rate? This seems disingenuous at best.

 Additional trees will be planted as part of the Landscape Plan to be incorporated with this project.
- 71. One last concern I would like to express in this email though I clearly marked on the forms that I was to be notified in the event surveyors or other workers would be on my property, never once have I been, even when I was home. I have had workers so far onto my property that I was awoken one morning by the sound of them talking outside of my bedroom window. Again, this is unacceptable. Without some form of notification, I have no way of knowing if said people are city workers or someone attempting to break into my house. Am I expected to have to call the police because workers can't be bothered with a simple knock on the door to let me know what they are doing on my property?

Survey notification letters were sent out on 10/14/17, and the City apologizes for any inconvenience it may have caused.

- 72. Immediately east of 2607, shift proposed construction 1-15 feet south along the eastbound lane, as far east as Cherry Field Drive. This will utilize vacant fields (mine) for construction and save front yards and values of residences (half mine). This will avoid disturbance of existing power, water, gas, and sewer lines and straighten out an accident prone curve.

 Please refer to response #60 above.
- 73. Utilizing existing construction is ludicrous. The short segment of lane can still be used as a turning lane to Cherry Field and the 6-foot segment of sidewalk can only be extended another 6 feet because it must be interrupted by a driveway (mine).

We have evaluated an alignment shift to the south as suggested. It requires the introduction of an additional curve and has a significant impact on the 12" water line that runs along the north side of Tryon Road between Lake Wheeler Road and Cherry Field Drive. We do anticipate utilizing the existing pavement "gores" near Cherry Field as a turn lane. The "Accident prone curve" that you mention would have to be made more severe than the current alignment shows so as not to impact adjacent property to accommodate your request. There has been more design modifications since the public meeting and the best fit alignment is the one selected to move forward. This alignment will be used in moving forward to the 65% design phase.

74. I live in Tryon Pines, and my main concern is that there is no left turn planned from eastbound Tryon Rd. onto Tryon Pines Dr. The plan current allows for a left onto Cherry Field Dr., but that is a smaller subdivision (Villages of Tryon). The houses are closer together, and there are townhouses in the back. My concern is that there are always cars parked on the road, and

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then it becomes difficult for cars to go in both directions without having to wait on each other. The increased traffic because of everyone that lives in Tryon Pines needing to use that road when coming eastbound on Tryon Rd. will likely cause traffic issues in the neighborhood. I would like to suggest that you should consider putting a left turn only lane from eastbound Tryon Rd. to Tryon Pines Dr. I realize that Cherry Field and Tryon Pines are too close together to have 2 full pass throughs, but I am thinking just a left turn lane would help reduce the congestion on Cherry Field. The type of turn lane I was thinking of is like the one currently at Tryon Rd. and Trailwood Hills Dr., but of course I leave it to your expertise if there is a better option.

I just think having the single left into these 2 subdivisions is a mistake. These are active, working families that frequently come in and out of the neighborhood for work, school, shopping, etc., and I think especially rush hour traffic is of concern.

It is not an easy choice to decide if intersections will be designed with limited access. Many factors go into that decision such as intersection spacing, traffic counts, inter-connectivity between subdivisions, and distance to the next available location to make a U-turn. While it may seem like an inconvenience to make a right-turn and then have to make a U-turn, it has proven safer and residents will actually find it easier than trying to make a left-turn across 4-lanes of traffic. To provide a "left-over" at the Tryon Pines Drive location, the deceleration length and storage length of the turn lane bay approaching Cherry Field Drive would have to be compromised.

75. I attended the public meeting on December 7, 2017 and appreciate the transparency and discussion. I know that the widening of Tryon Road is necessary and will be glad to see it completed.

The 25% design shows no left turn into Tryon Pines from Tryon Road. This means 1) all traffic turning left into the Tryon Pines subdivision would have to instead route through Cherry Field; and 2) all traffic turning left onto Tryon Road from Tryon Pines would also have to instead route through Cherry Field.

Please see the response #77 to the comment above.

76. Approximately 115 single family homes are in the Tryon Pines subdivision. Most of these homes have two cars each. The small subdivision off of Cherry Field has about 170 homes, with about two cars each. There is only one road connecting the two neighborhoods and that is Betry PI. To route both neighborhoods' traffic through Cherry Field will result in unnecessary traffic congestion for residents entering and exiting Cherry Field and through Betry PI, the only connecting road between the neighborhoods.

We encourage the use of the U-turn opportunities provided in the median opening as the preferred traffic movement rather than utilizing neighborhood streets.

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- 77. Fortunately, this is easily addressed. I strongly recommend that a left turn lane be added to the design enabling traffic to turn left into Tryon Pines from Tryon Road. A secondary suggestion is to also enable a left turn from Tryon Pines onto Try on Road.
 - To provide a "left-over" at the Tryon Pines Drive location, the deceleration length and storage length of the turn lane bay approaching Cherry Field Drive would have to be compromised.
- 78. While it was deemed that no stop light needs to be added at Tryon Pines or Villages of Tryon, I think that the decision will make turning out of the neighborhoods unsafe, especially since we will no doubt have more traffic by 2020/2021.

Traffic operations post-construction may be periodically re-evaluated. If at that time, an engineering study assessing the traffic signal warrants proves that a location is a candidate for a traffic signal, the City and/or the NCDOT may program the installation of a traffic signal.

- 79. Having to enter Tryon from Fairway is not easy, especially at rush hour. With the expansion, having to cross three lanes to turn left will be especially difficult and perhaps dangerous. I think the intersection requires a stop light, or perhaps a traffic circle.
 - The additional capacity of the roadway, i.e. two through lanes in each direction, should provide better traffic flow and more gaps for vehicles entering from the minor streets. A traffic signal is not warranted when the completed project opens for construction.
- 80. To reduce stormwater runoff, please use swales rather than curb and gutter. Also please use some other material than quarry rip-rap as stormwater dissipates and infiltration.
 - Swales will require a much greater project "footprint" requiring more right-of-way than the proposed curb and gutter cross-section. The curb and gutter section is in compliance with the current City standards used for this type of facility, namely, 4-lane median divided section.

Quarried Rip Rap is required at pipe outlets to prevent erosion at the outlet of a pipe by reducing the velocity of flow and dissipating energy per the "NC Erosion and Sediment Control Planning and Design Manual". To eliminate the quarried rip rap would require the installation of significant stormwater control devices such as bio retention areas or detention ponds. Rip rap dissipaters were chosen for the following reasons:

- 1. Stone material is required to meet energy and velocity dissipation requirements per NC law
- 2. Reduce the overall impact (acreage of Right of Way required) to adjacent land owners by eliminating large stormwater control devices
- 3. Keep long term maintenance to a minimum both in cost and impact to adjacent landowners