NIXON ROAD – HURON PARKWAY:
FREQUENTLY ASKED QUESTIONS

GENERAL:

1. Why and how was this project initiated?

The City recognized vehicle and pedestrian circulation operating at a low efficiency, which results in long vehicle delays especially during peak traffic demand periods. In addition, the skew of the intersection and multiple-lane approaches to a 4-way STOP raises significant safety concerns. The City's pavement management system also identified Nixon Road between Huron Parkway and Plymouth Road as needing to be rehabilitated. In addition, several complaints were received by the City from residents and commuters in the area about delays at the Nixon Road-Huron Parkway intersection.

The City hired a consultant to study the intersection, evaluate alternatives and make a recommendation for its improvement. The recommendation was to construct a roundabout. The City then hired the design team of Orchard, Hiltz and McCliment, Inc., and Beckett and Raeder, Inc. to move forward with the design of improvements to the intersection and the Nixon Road/Huron Parkway corridors to Plymouth Road.

2. Who is a roundabout designed for? Pedestrians? Vehicles?

A roundabout is designed for both the pedestrians and vehicles.

3. Has it already been decided to use a roundabout?

We have evaluated three alternatives for the intersection: to do nothing, install a signal, or construct a roundabout. The evaluation concluded that the roundabout is the best solution for the Nixon Road – Huron Parkway intersection. The project has been approved by City Council for construction.

4. How will the public, including disabled and senior citizens, be educated about who has the right-of-way at a roundabout?

A Public Open House was held on March 5, 2008. It included presenting the final design to the public and providing information on the use and operation of roundabouts. In addition, educational material is available from the City to assist in the education process. For further information on roundabouts and their use see the website, www.wcroads.org/news/articles/roundabouts/index.htm.

5. How long does it take to build? And how is traffic handled during construction?

The construction of a roundabout at this location should be completed in one construction season (April to November). The planned construction will not occur until the spring of 2009. Access to all properties will be will be maintained during construction.

6. How will the landscape be impacted?

There will be more opportunity for landscaping, as a roundabout intersection will use less pavement than the existing intersection. The location of the roundabout may have impacts to existing landscaping on adjoining properties. Impacts to existing trees and tree preservation/relocation will be evaluated during the design process.

7. What are the past 1, 5, and 10-year crash reports/statistics for the Nixon Road/ Huron Parkway Intersection?

We have evaluated the crash reports for the intersection for the years 2003, 2004, and 2005. The crash reports indicate 17 crashes over the three-year period, 2 of which involved pedestrians. Both incidents involving pedestrians resulted in injury.

8. What about a trial traffic signal at the intersection?

There is no need to construct a "trial" traffic signal as the implementation of a traffic signal can be easily modeled on a computer. This has been done, and it shows that a traffic signal will not work well at this location or in conjunction with the two signals at Plymouth Road.

9. Do we have counts that define pedestrian/vehicular data in the computer model?

We have vehicle counts for Nixon Road and Huron Parkway traffic (10,160 veh/day) and pedestrian (60 ped/hr) counts. More conservative pedestrian counts were used in the computer model (100 ped/hr).

10. How will the roundabout improve exiting from Aurora St?

Due to its distance from Aurora Street to the Nixon / Huron Parkway intersection, the construction of a roundabout should result in no significant change in the length of delay for exiting during peak traffic periods. Thus, the construction will neither make the current situation better nor worse.

11. How is slowing traffic in a roundabout going to affect existing intersection back-ups?

A roundabout slows traffic more than a traditional intersection, and during peak hours it may stop traffic. A traffic signal allows traffic to proceed faster through an intersection during a green light and completely stops traffic during a red light. Overall, traffic is stopped for a shorter time when entering a roundabout than when waiting at a red light. Therefore, a roundabout allows more traffic to proceed through an intersection, thus helping alleviate the existing back-ups.

12. Have you considered the impact of all weather conditions for a roundabout?

We have considered weather conditions for a roundabout. Roundabouts have been constructed in similar and harsher climates (Rochester Hills, Finland, Colorado) than Ann Arbor with no significant problems.

13. Will signalization be used for the roundabout and will it be audible and pedestrian activated?

It is anticipated that pedestrian signals will not be needed and are not currently planned for the roundabout intersection. Current Federal design standards do not recommend signalizing single-lane roundabouts. However, since this recommendation may change in the future, the design provides for the installation of underground conduits and surface hand holes to facilitate the installation of signals if they become required in the future.

14. What is the difference in cost between a traffic signal and a roundabout?

A roundabout has a larger construction cost than a traffic signal. Roundabouts have little maintenance costs while traffic signals have high maintenance costs as well as operating costs. Over the lifetime of an intersection, both options generally cost the same.

15. How will traffic be directed during construction? How does the construction phasing work?

Both vehicular and non-motorized traffic (pedestrians) will be maintained by constructing the project in multiple stages. During each stage of construction, access will be maintained to all properties and auxiliary sidewalks will be constructed to accommodate pedestrians. The construction may require some of the routes to be lengthened and may not represent the most direct route.

16. Is this the final design?

Yes.

PEDESTRIAN:

17. How does a roundabout provide pedestrians with safer crossings?

Roundabouts provide pedestrians with safer crossings because of:

- Lower vehicle speeds – vehicles entering/exiting the roundabout will be traveling at 15mph to 24mph, which is slower than a signal controlled intersection where a vehicle could proceed through the intersection at the posted speed limit of 35mph.
- Shorter crossing distances – due to the existing skewed intersection, pedestrians are exposed to traffic for 82 feet to 95 feet depending on the crossing. With a roundabout, the pedestrians will have to cross only a 16-foot segment to reach a 9-foot wide mid-point "safe haven" and then cross another 16-foot segment to reach the other side.
- A greater separation between the pedestrian crossing and the intersection – the pedestrian crossings are moved approximately two car lengths away from the roundabout, thus allowing approaching drivers to first acknowledge the pedestrian crossing, then acknowledge the vehicles in the roundabout. In addition, it allows pedestrians to cross one lane of one-way traffic at a time, as opposed to four to five lanes of two-way and turning traffic.

18. Will a roundabout be safer for pedestrians? Is there any data substantiating these claims? How was pedestrian safety affected in the UK and Australian roundabout studies?

Studies in the UK and Australia have both shown that there is a marked improvement in pedestrian safety with roundabouts. In addition, the Insurance Institute of Highway Safety has concluded that converting stop-controlled and signal-controlled intersections into roundabouts results in 80% reduction in injury crashes and a 40% reduction in all crashes. In addition, the types of crashes are less severe with lower speeds.

19. Will it take a pedestrian longer to cross? What about a disabled person (mobility, vision)?

A pedestrian has to cross 82 to 95 feet at the current intersection and two 16 foot sections for the longest crossing of the roundabout. Therefore, it should not take a pedestrian longer to cross with a roundabout.

20. How does a person with visual impairment cross a roundabout?

A person with visual impairment utilizes the sounds of traffic to know when one direction has stopped or started. In a roundabout, the circulating traffic could make it difficult to tell whether or not traffic

has cleared. With this in mind, the pedestrian crossings are moved back from the intersection to alleviate this concern. In addition, the crosswalks will be colored and textured to aid the visually impaired when crossing the street. It should be noted that studies have concluded that a person with visual impairment should have no trouble crossing a single lane roundabout.

21. Will there be pedestrian signage to let vehicles know the crossings are a pedestrian zone?

    There will be an internal illuminated sign over the roadway at the crossings.

22. Will the pedestrian crossings be difficult to maintain in winter?

    No. There are designed to handle runoff and snow melt.

23. Are the splitter islands accessible to disabled persons?

    The 9-foot wide splitter islands or "safe havens" which split a pedestrian crossing in half, will comply with all Americans with Disabilities Act (ADA) requirements.

24. Will pedestrians be able to cross the roundabout during peak hours?

    Yes.

25. When does a pedestrian step into the crosswalk?

    A pedestrian should step into the crosswalk when they perceive a gap in traffic.

26. Does research show a reduction in pedestrian crossings when a conventional intersection is converted to a roundabout?

    We are not aware of any research that shows a reduction in the number of pedestrian crossing at a roundabout that can be attributed to a change in behavior due to the conversion from a conventional intersection. The data that is available shows the numbers to be comparable and a marked improvement on safety.

27. What if a person is not able to cross the road in four seconds (based on an average walking speed of 4 feet per second)?

    The comparison of 4 seconds to cross one lane of traffic to get to the "safe haven" with a roundabout versus 23 seconds to cross the existing pavement was intended to show the reduction in time that an average person would be exposed to traffic when using the pedestrian crossings. It is reasonable to assume that some persons would take longer to cross, which would increase the number of seconds for crossing both types of intersections. Despite the crossing speed of the individual, a pedestrian crossing a roundabout will be exposed to traffic for less time than the existing intersection because the roundabout crossing is shorter.

28. Have pedestrian counts been taken?

    Yes, actual pedestrian counts have been recently recorded at 60 persons per hour. The pedestrian counts that were used in modeling the roundabout were purposely increased to a number that should far exceed any current and future projections of pedestrian traffic. The City assumed a pedestrian count of 100 persons per hour for the model.

29. How close will the pedestrian crossing of Nixon Road north of the intersection be from Aurora Street?

    The distance between the proposed crosswalk location and Aurora Street is anticipated to be approximately 200 feet.

30. How will this project be funded?

    It is anticipated that funding will be obtained through CMAQ which will cover 100% of the intersection construction improvements. The remainder of the project is being federally funded through the Surface Transportation Program (STP) Urban Fund with a 20% match of local funding.

31. Where will the pedestrian crossings be located?

    The pedestrian crossings will be located more than two car lengths away from the circulating traffic which is the Federal standard. This is approximately 30 feet.

32. Please explain the route a pedestrian from Parkway Meadows would take to get to the grocery store.

    The pedestrian would walk south along the existing sidewalk until they get to the roundabout. They continue south to cross Huron Parkway. The sidewalk then directs the pedestrian to the east and then south again to the grocery store. The preliminary design indicates that the overall walking distance will be lengthened by only ten feet.

33. Has the City considered pedestrian bridges in this area instead of or in addition to a roundabout?

    The City has considered a pedestrian bridge; however it is not a cost effective solution.

34. Would it be possible to have a sidewalk connection from the bus stops at Nixon Road to the Traver Village shopping center?

    The City is unable to construct a sidewalk connection to the Traver Village shopping center because it is private property.

35. Will there be pedestrian signals at the crosswalks?

    No. Based on the information obtained in roundabout studies, pedestrian signals are not warranted for single lane roundabouts. In addition, typical standards for signalizing a roundabout have not been officially adopted. Although signalization is not anticipated, it should be noted that through this project, the City will be installing the necessary infrastructure for signalization as a precautionary measure.

36. How will people (both vehicles and pedestrians) coming into or out of the businesses enter/exit onto the roundabout?

    Both vehicles and pedestrians should expect to access the businesses the same way prior to the proposed improvements.

37. Is the project team considering an ordinance that requires vehicles to stop for pedestrians? Specifically, what type of ordinance language is being considered?

The City is considering an ordinance. Whether or not this will be pursued, has not been decided.

38. Why is the pedestrian crossing at the bus stops on Nixon in that specific location?

The location of the mid-block crossing was specifically chosen to provide the best and safest location for people to cross. Other locations were considered, but they would adversely affect turning traffic at the drives and within the left turn lane. The location proposed is a centralized location that offers a safe pedestrian crossing opportunity. The shopping centers on opposite sides of Nixon Road were not designed together to delineate clear pedestrian destinations or connections. The proposed crossing is a good central compromise.

39. There needs to be another crosswalk to the south of the proposed one where the driveways cross from one shopping center to another. Why isn't there?

This location was deemed to be unsafe and would conflict with traffic turning from the left turn lane.

VEHICLES:

40. How do drivers exiting the roundabout know to yield to pedestrians?

The geometry of the roundabout will keep vehicle speeds low while exiting the roundabout. With the pedestrian crossings being separated from the roundabout, it allows drivers clear vision of the crosswalk and sufficient space to stop for pedestrians who may be crossing. In addition, signs and pavement markings will be present to designate the pedestrian crossing.

41. What speed will the vehicles be traveling at in the roundabout?

We are considering the installation of a compact urban roundabout, which would provide a vehicular design speed of 13mph to 18mph.

42. How will the speed limit within the roundabout (13 mph to 18 mph) be enforced?

The geometrics and shape of the roundabout will curtail the speed of the drivers entering, circulating, and exiting the roundabout.

43. Who has the right-of-way at a roundabout intersection?

The vehicles/bicyclists circulating in the roundabout have the right-of-way. Vehicles/bicyclists looking to enter the roundabout must yield to the circulating traffic.

44. If drivers do not have patience to yield or stop during peak hours, how will a roundabout work?

By law, vehicles are required to yield to circulating traffic at a roundabout. If they do not yield, this is a moving violation similar to running a red light or failing to stop at a stop sign.

45. Will drivers be less courteous in a roundabout?

Generally, the same drivers who use the current intersection will also use the new roundabout intersection. Therefore, it is anticipated that the courtesy of the drivers will not change.

46. Will motorcycles be able to travel faster than cars in a roundabout?

    The geometric shape of the roundabout should keep motorcycle speeds to levels that are comparable to other traffic (13mph to 18mph).

47. Will motorcycles follow the "rules of the road" / law? Do motorcyclists have different rules/laws?

    The laws for motorcyclists are the same as the laws for vehicular traffic.

48. What is the radius on the roundabout? Will it be able to accommodate semi-trucks, fire trucks, and safety vehicles?

    The radius of the outer edge of pavement is 50 feet. The radius of the inner landscaped circle is 32 feet. We have been in contact with the fire department regarding their specific requirements. The roundabout will be able to accommodate fire and safety vehicles as the inner circle will be equipped with a "truck apron," which will allow for over-sized vehicles (such as fire trucks and semi-trucks) to negotiate the roundabout.

49. What considerations have been given to the bus traffic?

    AATA has given input and their suggestions. Provisions have been made based on their input. The roundabout will be designed to accommodate bus traffic. It should be noted that there is significant bus traffic through the Nixon Road – Huron Parkway corridor, including several bus stops. Bus pull-outs and an additional bus stop have been requested by AATA. The bus pull-outs will be located along Nixon Road and an additional stop along Huron Parkway.

50. Is there any research available comparing the rate of acceleration on departure from a four-way stop versus a roundabout?

    Yes, and it shows that there is no difference in the rate of vehicle acceleration.

51. Has a by-pass lane be considered in this design?

    By-pass lanes have been considered as part of the design for right-turn traffic movements. Based on the traffic volume, turning movements, and pedestrian volumes, by-pass lanes are not needed.

52. Is there an opportunity to add a Park and Ride lot or on-street spaces in lieu of additional green areas along Huron Parkway between Nixon Road and Plymouth Road?

    We have looked into the option(s) of adding Park and Ride spaces and/or on-street parking as part of the project. There is not sufficient space for a separate Park and Ride lot. There is sufficient space to add parallel parking along Huron Parkway between Nixon Road and Plymouth Road. This has been included as part of the final design.

53. Why does there need to be extra parking on Huron Parkway? With the parking along Huron Parkway, how are you going to go from your car to the parking lot? There doesn't seem to be a purpose for the parking on Huron Parkway.

The parking is being proposed with the installation of a bus stop. It is hoped that it will provide commuters a location where they can park their vehicle and then ride an AATA to their destinations around town.

54. What impact will the pedestrian crossings have on motorized traffic flow?

It is anticipated that there will be a minimal impact during peak hour traffic flow and virtually no impact during non-peak hours.

55. How will drivers know to slow down at the pedestrian crossings?

Advanced signage for the roundabout is included with this project. Signs specific to the pedestrian crossings combined with streetscape features will emphasize to drivers that they are approaching a pedestrian crossing.

56. What is the proposed speed limit for Nixon Road and Huron Parkway?

The proposed speed limit for Nixon Road will remain unchanged at 30mph. The proposed speed limit for Huron Parkway will also remain unchanged at 35mph.

57. How do drivers know to slow down when approaching a roundabout?

Advisory signs indicating a roundabout with a 15mph advisory speed will be posted as drivers approach the roundabout.

58. How do we keep traffic moving slowly through the roundabout?

The geometrics and shape of the roundabout will curtail the speed of the drivers entering, circulating, and exiting the roundabout.

59. How much time will it take a motorist to travel through the intersection during peak hours?

It is anticipated that the average delay for motorists entering the roundabout during peak hours will be less than 8 seconds.

60. What about signage? Are they using regulatory signs?

Traffic using the roundabout will be maintained with regulatory signs.

61. Will the roundabout be large enough that people won't blow through it? I hoped the roundabout would be bigger rather than smaller. Why isn't it?

Traffic circles (as opposed to roundabouts) "failed" because they are too large and do not effectively control the circulating traffic. With larger sizes come higher speeds. Smaller roundabouts are inherently safer because they promote slower vehicle speeds. The circulating lane will be at a low speed (13-18mph).

BICYCLISTS:

62. How does a bicyclist navigate a roundabout?

A cyclist will have two options for navigating a roundabout: They can either take a lane and proceed through the roundabout as a vehicle, traveling at approximately 13mph to 18mph, or they can exit from the bike lane to the sidewalk/pathway and proceed through the intersection as a pedestrian, using the crosswalks.

63. Will the design consider bicycles and the Ann Arbor Non-Motorized Plan?

Yes, the design process will include considering the specific needs of bicyclists and the recommendations of the City's non-motorized plan.

64. The City of Ann Arbor Non-Motorized Plan calls for narrowing the lanes and adding bike lanes on Nixon Road south to Plymouth Road. Will this be included?

This has been evaluated and it has been determined that Nixon Road will be slightly widened to accommodate bike lanes in this section of roadway.

65. There is concern about bikes lanes next to parallel parking on Huron Parkway.

The option of having parallel parking along with a bike lane is included along Huron Parkway (east bound only). The bike lanes that are next to the parallel parking will be wider than the typical bike lane. A meeting regarding the City's Non-Motorized Plan calls out a typical bike lane as 5-feet wide which is consistent with AASHTO standards. It should be noted that 8-foot wide off street non-motorized paths are available for this section of Huron Parkway.

MISCELLANEOUS:

66. Will additional lighting be provided at the intersection?

Yes. The design process included evaluating the existing lighting conditions and the need for additional lighting. LED lights will be added to the roundabout area at all four approaches. The LED lights specified are one of most energy efficient lights available on the market.

67. Will the Dhu Varren Road, Green Road and Nixon Road intersection be a priority after this? Is the intersection planned as a roundabout? What are the crash statistics?

This intersection is a priority for realignment and possibly a roundabout. However, due to right-of-way constraints, no improvements are currently scheduled.

68. Please post the location of other roundabouts in the State. In particular we would like to know the location of the two roundabouts in Okemos that representatives from the Ann Arbor Commission on Disability Issues visited.

A list of roundabouts in southeast Michigan has been posted on the website. The two roundabouts in Okemos that representatives from the Ann Arbor Commission on Disability Issues visited were located at Hamilton @ Marsh and Bennett @ Hulet.

69. Will there be a way that the center roundabout island will deter vehicles from viewing too much of the traffic flow and give them incentive to speed through the roundabout? What will be planted in the center of the roundabout?

The roundabout will be somewhat mounded and planted with low growing native grasses and plants. The center of the roundabout will have three small trees that will offer some visual direction to the

drivers. These plantings will not interfere with a driver's vision. The roundabouts themselves are designed to require enough turning movement to deter speeding through them.

70. How similar is this roundabout to the roundabout at Van Dyke and 18 ½ Mile Road in Sterling Heights and the one at Drake and Maple Roads in West Bloomfield?

The proposed roundabout will be different that the ones mentioned above. The proposed roundabout at Nixon-Huron is designed for low speeds and low traffic volumes. It is designed to have one lane approaches and one lane of circulating traffic. The largest design vehicle is a fire truck. The roundabouts in Sterling Heights and West Bloomfield were designed for higher speeds and high traffic volumes. It has two and three lanes of approaches and three lanes of circulating traffic. The largest design vehicle is an interstate semi-truck.

71. Does this have any effect on property values?

The construction of a roundabout should not have an effect on property values. However, the streetscape improvements that are planned for the project should make for improved aesthetics along the Nixon Road corridor.

72. Will the fence / mural along Huron Parkway be taken out?

No. One small section of the fence at the west end will be rotated and saved.

73. Is pervious pavement being considered or used?

Pervious paving is not recommended for use on roads carrying large numbers of trucks and busses. It's not designed for applications where sand is applied during winter months (as done by the City, which would clog the openings in the porous paving and make it ineffective.

74. What happens if someone gets killed?

The City will review and fix the reason for the accident as it does in all incidents.

75. What has the City done with the City vehicle code?

We are not aware of any recent changes to the Vehicle Code by the City.

76. The hill on Nixon is dangerous where you come out at the condominiums.

We are not aware of a sight-distance problem at this location.

77. Is there any possibility of Nixon Road becoming a major route out of town?

The chances that Nixon Road became a major route are relatively small. The City does not have any plans to upgrade this road. The City is not aware of any plans of Ann Arbor Township to promote any significant development in this area.

Other Roundabouts in Southeast Michigan

Additional information regarding modern roundabouts provided by the Washtenaw County Road Commission:

http://www.wcroads.org/news/articles/roundabouts/index.htm