Appendix A - Problem Statement/Straight Line Diagrams/Management System Data

Problem Statement

NEW JERSEY DEPARTMENT OF TRANSPORTATION

MEMORANDUM

TO: Tom Saylor

FROM: Mark L. Stout MLS
Director
Capital Investment Planning & Development

DATE: 2-18-05

TELEPHONE: 5-8069

SUBJECT: Tier 2 Screening – Route 206/CR 533/CR 524, Whitehorse Circle (DB 95040; UPC 950526)

Attached is a problem statement that was received from the Safety Management System regarding the potential reconstruction of Route 206 at the Whitehorse Circle.

Please initiate a Tier 2 Screening on this problem statement.

Attachment

C: Millie Cox
Gary Toth
Pat Ott
Bill Beans
Theresa Hatchett

TP-1 4-03

New Jersey Department of Transportation

Transportation Problem Statement

PLEASE SEND THIS COMPLETED FORM TO MARK STOUT, CAPITAL INVESTMENT PLANNING & DEVELOPMENT

The following information is to be completed by the Division of Capital Investment Planning & Development:

DB Number:

Legislative District:

Congressional District:

Program Category:

Information contained on this form has been verified by _____

LOCATION

Route: US 206 and CR 524 (South Broad Street) - CR 533 (Whitehorse Avenue) (Whitehorse Circle) (IIP ID#00-019r)

Mileposts (if applicable): 38.9+/-

Structure number (if applicable): Route 206 Over Route I-295 (Bridge #1134151) is just south of project area.

Limits: Approx. MP 38.81-39.95

County(s): Mercer

Municipality(s): Hamilton Township

Rec'd 2/2/05

TP-1 4-03

DESCRIPTION OF PROBLEM

Check those items that best describe the problem:

Existing Highway

_____ Capacity problem

___X___ Operational problem

___X___ Physical condition problem

___X___ Safety problem

_____ Other (specify)

Existing Bridge

_____ Capacity problem

_____ Physical condition problem

_____ Safety problem

Corridor/area Capacity Problem

_____ Need for corridor study

_____ Possible highway on new alignment

_____ Possible new transit line

_____ Need for park and ride development

DESCRIBE THE PROBLEM:

This location was initially brought to the Department's attention by Hamilton Township officials as their own traffic safety officers were reporting to them that based on total crash frequency, this intersection should be considered the municipality's greatest concern in terms of being a "priority high accident location." As a result of this information, our Safety Programs office studied this location jointly with the Traffic Engineering and Investigations unit and in terms of the crash history, was able to determine from our crash database that the circle was producing roughly nine right-angle crashes per year- roughly half of the total annual frequency for the three year period 1998-2000. The Township actually claimed a much higher frequency of both angle and total crashes, but it was reasoned that the discrepancy between our numbers and the Township's might lie with their inclusion of non-reportable accidents which do not get entered into our database. In any case, the fact that the right-angle crash frequency was clearly in excess of five per year made this intersection eligible for treatment under the Right-Angle Crash Reduction Program, a sub-program of the IIP. A detailed crash analysis of this location revealed that these right angle collisions were occurring at several of the traffic circle's intersecting approaches, including both the internal and external conflict points, but most frequently at the two, consecutive internal stopping points at the circle's westerly quadrant where vehicle's enter Route 206 southbound after coming from any of the other three approaches.

After studying the crash patterns and observing field operations on several occasions, it was reasoned that some safety benefits might be obtained by establishing more obvious right-of-way controls at the merge or conflict points that were not previously under stop or yield control and also adding yield bar markings for those points and even where the signs already existed. We had hoped to obtain some degree of improvement in circle operation and safety as was realized at several other locations throughout the State after undergoing similar treatment.

After making the above-noted assignments of right-of-way for the all yield-controlled intersection points using signing and striping and also carrying out a complete overhaul of the intersection's guide, regulatory and warning signing back in the Summer of 2002, our office evaluated this location as part of our 2004 Annual Safety Report to determine the level of success of these quick-fix treatment attempts. Unfortunately, as a result of that exercise completed a full year after the implementation of the signing and striping modifications to the circle, we were unable to realize the reductions in angle crashes, overall frequency, or injury crash percentage that we were looking for. Although it seemed from observations of the location after installation of the traffic control upgrades that there was a slightly more orderly operation of vehicles through the facility, the facts bore out a different picture. Of course, even with the more obvious assignment of movement priorities in the circle and the continued maintenance of gap metering circles on three of the circle's approach legs, there still exists an inadequate set of storage areas for stopped motorists, especially at the majority of the internal crossing points, and so negotiating one's way through this intersection remains a difficult task for even the most skilled and experienced driver. Therefore, it is the opinion of this office that the location needs to be evaluated for significant reconstruction as would likely be necessitated by either a full circle elimination project or perhaps conversion to a modern roundabout utilizing proper design parameters and geometries. As this work will likely involve widening and/or ROW/access impacts, we are issuing this problem statement for further study and final pipeline assignment.

If an outside group actively supports this problem, please identify:

This location was investigated jointly with our Traffic Engineering and Investigations and having advised them of the apparent inability of our low-cost treatments to significantly affect the safety performance of this location, they concur with the need for a major study effort by the Department to either revise the circle to a more modern roundabout design or replace it with an at-grade, signalized intersection. As you will note within the attachments, the re-elected Mayor Glen Gilmore went on record anticipating that both short and long term measures to address safety at this location would likely be warranted.

NOTE: Please refer to related correspondence, straight-line diagram page, and other related attachments.

TP-1 4-03

Initiator: Kevin M. Conover, Project Engineer

Division: Bureau of Safety Programs, Division of Traffic Engineering and Safety

Date of Initiation: 1/28/05

Signature _____

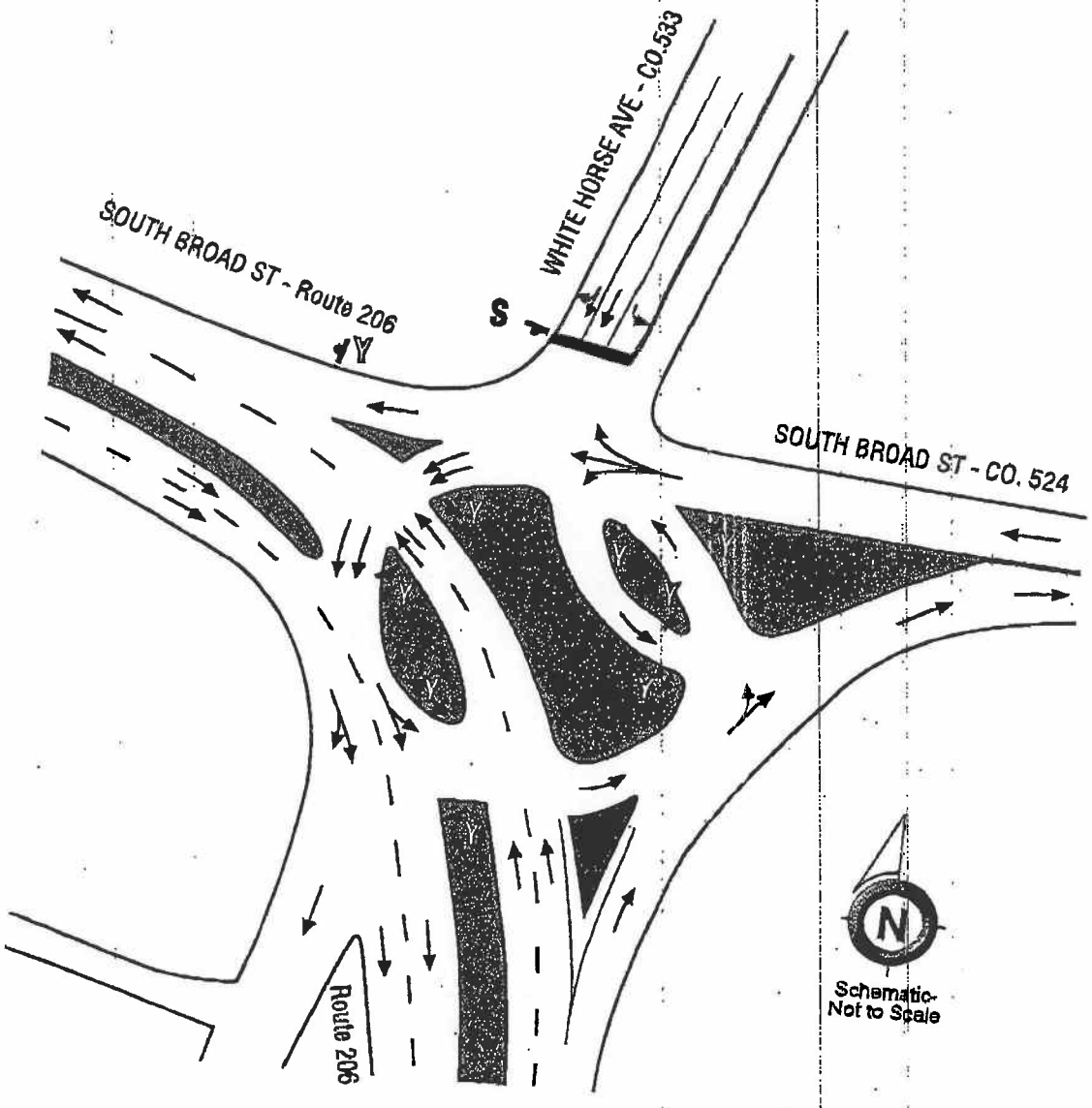
Concurrence by Division Director (Signature) _____

Date of Concurrence 2/1/05

Sign In

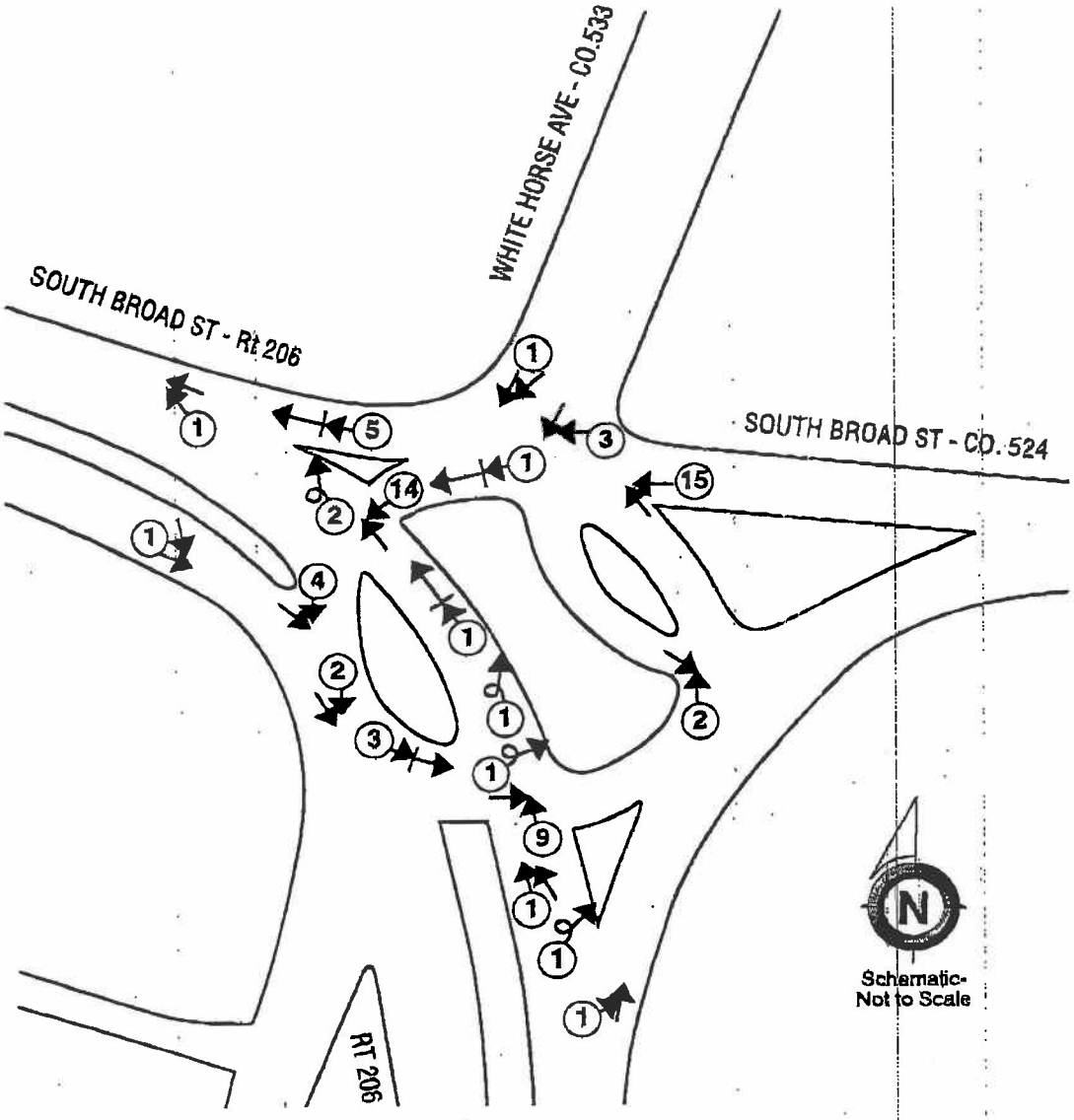
Whitehorse Circle 3/7/02

Jaime Saladino	NJDOT - Traffic Eng.	530-468
RICHARD SPRINGER	" "	530-261
Lt. Robert Mehl	H.T.P.D. - Traffic	581-402
Acting Chief James W. Collins	H.T.P.D.	581-4120
FRANK ZABAWSKI	FAZ ASSOC. (HAM.)	215-702-8870
RICHARD WILLIAMS	TWP. OF HAM. ENG.	890-3636
VIRENDRA GANDHI	TOWNSHIP OF HAMILTON ENG-DN.	890-363
Kevin Conover	NJDOT - Safety Programs	530-3482
PATRICIA OTT	NJDOT - TETI	530-3717



Y - YIELD SIGN
S - STOP SIGN

Figure 1
EXISTING CONDITION
Whitehorse Circle



LEGEND

← Vehicle Movement

ACCIDENTS

- Angle
- Backing-up
- Hit Fixed Object
- Left Turn
- Right Turn
- Rear End
- Side-swiped

69 **Total Intersection Accidents**

Figure 2

COLLISON DIAGRAM

JAN '00 - JUNE '01 (18 months)

Whitehorse Circle

Whitehorse Circle
US Route 206, South Broad Street and Whitehorse Avenue

Accident Summary
January 2000 - June 2001

Type	Number	Percent
Angle	47	68%
Rear End	10	14%
Side-Swipe	6	9%
Fixed Object	5	7%
Right Turn	1	2%
Total	69	100%

- 57 (83%) of the accidents were reportable accidents
- 11 (16%) of the accidents were injury accidents
- 13 injuries were reported

Potential Mitigation Measures

1. Add yield line pavement markings
2. Restrict movements (except US 206 through traffic) to single lane flow through edge line and gore area markings.
3. Convert the southbound Whithorse Avenue approach to a single through lane, resulting in separate left, through and right turn lanes.
4. Add reflective delineators to median/island areas
5. Reconstruct to a signalized, four way intersection with separate turning lanes (long term improvement)

Township of Hamilton
Department of Engineering, Planning, and Inspections
2090 Greenwood Avenue, PO Box 00150, Hamilton, NJ 08650-0150
Telephone (609) 890-3636
Fax (609) 890-3537
Lloyd J. Jacobs, *Director of Engineering, Planning, and Inspections*
E-mail: LJacobs@hamiltonnj.com

GLEN D. GILMORE
Mayor

Kevin
FYA

February 26, 2002

Mr. Kevin Conover
Bureau of Safety Programs
930 Lower Ferry Road
Thiokol Building #8
Trenton, New Jersey 08625

RE: Whitehorse Circle

Dear Mr. Conover:

In response to our telephone conversation today, enclosed please find accident reports for the above site from January 1, 2000, through June 20, 2001. If you need any further information, please do not hesitate to contact me at 890-3635.

Very truly yours,

Joyce E. Vaughn
Secretarial Assistant

JEV/
enclosures
c: Lloyd J. Jacobs
Richard S. Williams
File (Traffic - Whitehorse Circle)

MAR 5 2002

James E. McGreevey
Governor

John F. Lettiere
Acting Commissioner

January 18, 2002

Honorable Glen D. Gilmore
Mayor, Hamilton Township
2090 Greenwood Avenue
P.O. Box 00150
Hamilton, New Jersey 08650-0150

Dear Mayor Gilmore:

Thank you for your letter dated December7, 2001, regarding the Whitehorse Circle. The Department of Transportation shares your objective to improve public safety and reduce traffic congestion and delay.

I have assigned staff to assist in addressing your safety concerns, and would be happy to meet with you. You may contact Jim Paral, Director of Traffic Engineering and Safety at (609) 530-2488 to schedule a meeting.

In the meantime, staff is reaching out to your Police Department to verify all accident information. A detailed accident analysis will be performed to determine what short and long term safety measures would be beneficial.

I look forward to working with you and your staff on this important issue,

Sincerely,

ORIGINAL SIGNED
F. RODNEY ROBERSON

F. Rodney Roberson
Assistant Commissioner
Operations

Source: James Paral
bc. Correspondence Unit #86889
J. Paral-#16
S. Warren
K. Conover
FRR File 02-004

2/26/02 Spoke to Joya Vaughn (890-3635) She'll send in "69" accident reports for 2000 and up to 6/2001. KM C.

From: Steve Warren
To: Paral, James
Date: 1/16/02 11:25AM
Subject: Fwd: Rt US 206 @ South Broad Street (CR 524)-White Horse Road (CR 533) (White Horse Circle)

Jim,
As you are aware I gave this referral to Kevin for his action on this matter. The attached is his response to referral #86889. I have reviewed his findings and concur with them. Any questions please contact me.
Thanks
Steve

CC: Plumeri, Mary; Sanderson, Lucy

From: Kevin Conover
To: Warren, Steve
Date: 1/16/02 11:07AM
Subject: Rt US 206 @ South Broad Street (CR 524)-White Horse Road (CR 533) (White Horse Circle)

Steve:
Lt. Mehl, Traffic Safety Officer with the Hamilton Township Police Department, is out sick today, so I left a message for his Sgt. Pizzullo to call me when he comes in from the road.
In the meantime, I spoke with Rich Springer up in TE & I who is not aware of any ongoing or recent investigation there, and as I told you yesterday, Lisa was only able to produce a list of 36 DLN's from the database when I asked her to do a three year (1998-2000) query. This translates into a rate of one accident per month, differing significantly from the Mayor Gilmore's letter which quoted the Police statistic of 69 accidents in an 18 month period (46 per year or just under four per month).
I just received a callback from Sgt. Pizzullo who will now have the Township's Acting Chief contact me and will also get the crash reports together to submit for our review. I will instruct the Chief to send in the reports to us for the 1998 through June 2001 period. If I can confirm that their numbers are correct and in fact they are experiencing weekly crashes there, then our office should volunteer to become involved with the investigation alongside TE & I because it could be reasoned that the location should have made it onto one of our TOP 100 lists- perhaps even breaking the TOP 10.
In the interim, I will be going back up to the 7th floor today to talk to Jack Rofrano about the Rt. 1&9 signals in Elizabeth and make copies of some plans, one of which will be the sign plan for The Circle. Being somewhat familiar with the location, as are you, I think we could immediately recommend the installation of Yield bars to accompany the signs (which frequently get knocked down or are ignored) at some of those internal conflict points. A detailed accident analysis would be needed to see what other measures would be beneficial.
Looking down the road, I've always felt that the circle should be eliminated, signalized, and "de-signalized" (gap meter) because the driving task required to navigate it in its current form is way too complicated for the average driver. And I'd maintain that position regardless of the expected drop in entering volume that will likely result from next month's opening of the Route 29 tunnel project. I expect, however, that the Department would want to wait a few months after the project completion and traffic patterns achieve equilibrium before it would commence planning studies.
If you concur with my opinion and course of action on this matter, please forward to Jim for his review so that he may prepare a response for Rod.
Thanx.

New Jersey Department of Transportation
Commissioners Correspondence Unit

To: F. Rodney Roberson
Operations

Request ID: 000000000086889
Referral Name: Glen D. Gilmore
Date: 1/2/02

For Action As Noted Below

Due by 1/16/02

Prepare a response for your signature

Comments: Whitehorse Circle (Route 206) identified as the highest accident intersection with 69 accidents in an 18 month period.

RECEIVED
JAN 0 4 2002

INF.	ACT.		
		RR	
		AJE	
		PLB	
		DAW	
		CSS	
		DAW	
		WTE	
		SMB	
		PW	

1/4/02
Jim Paral
Please prepare a response for Rod's signature by 1/16/02

#02-004

2002
JAN 07 RECD

#16-JP

Lt. Mehl
581-4025
S.H. Rizzuto

1/7/02 Steve Werner
Pls. prepare a response for Rod's signature by 1/16/02
TJP

#14-02

HAMILTON TOWNSHIP
OFFICE OF THE MAYOR
2090 Greenwood Avenue
P O Box 00150
Hamilton, New Jersey 08650-0150
(609) 890-3502 TDD (609) 890-3523
FAX (609) 890-3632
e-mail - Comments@hamiltonnj.com

Hamilton
Safe • Clean • Beautiful

GLEN D. GILMORE
Mayor

December 7, 2001

James W. Weinstein, Jr., Commissioner
New Jersey Department of Transportation
P.O. Box 600
Trenton, New Jersey 08625-0600

Re: Whitehorse Circle
US Route 206, South Broad Street and Whitehorse Avenue
Hamilton Township, Mercer County

Dear Commissioner Weinstein:

I have initiated a review of traffic safety conditions within Hamilton Township and am in the process of evaluating various intersections that have been identified as priority 'high accident' locations. My objective is to improve public safety and reduce traffic congestion and delay. To accomplish this objective, I intend to vigorously pursue the development and implementation of corrective actions measures in both the short and long terms. It is anticipated that these measure will include a combination of low cost, short-term actions (new pavement markings, supplemental directional or traffic control signing) and longer-term actions (such as, an intersection realignment, turning lanes, and/or signalization).

The Hamilton Township Police Department has identified State Route 206 (the Whitehorse Circle) as the highest accident intersection in the Township. With 69 accidents in the 18-month period January 2000 through June 2001, this intersection has nearly double the number of accidents as any other location in the Township over the same period. Observations of the intersection during any peak hour period show not only the hazardous conditions but also the driver confusion that occurs at the intersection. The intersection is composed of closely spaced merging, weaving and crossing movements that are poorly regulated by a mix of yield and stop sign controls.

Rate: 46/yr. (≈ 4/month)

86889

The purpose of this letter is to request your assistance in addressing our safety concerns and prioritizing this intersection's improvement. We would like an opportunity to meet with your staff and the County Engineer to discuss our findings and gain the Department's support and participation in improving our No. 1, high accident location.

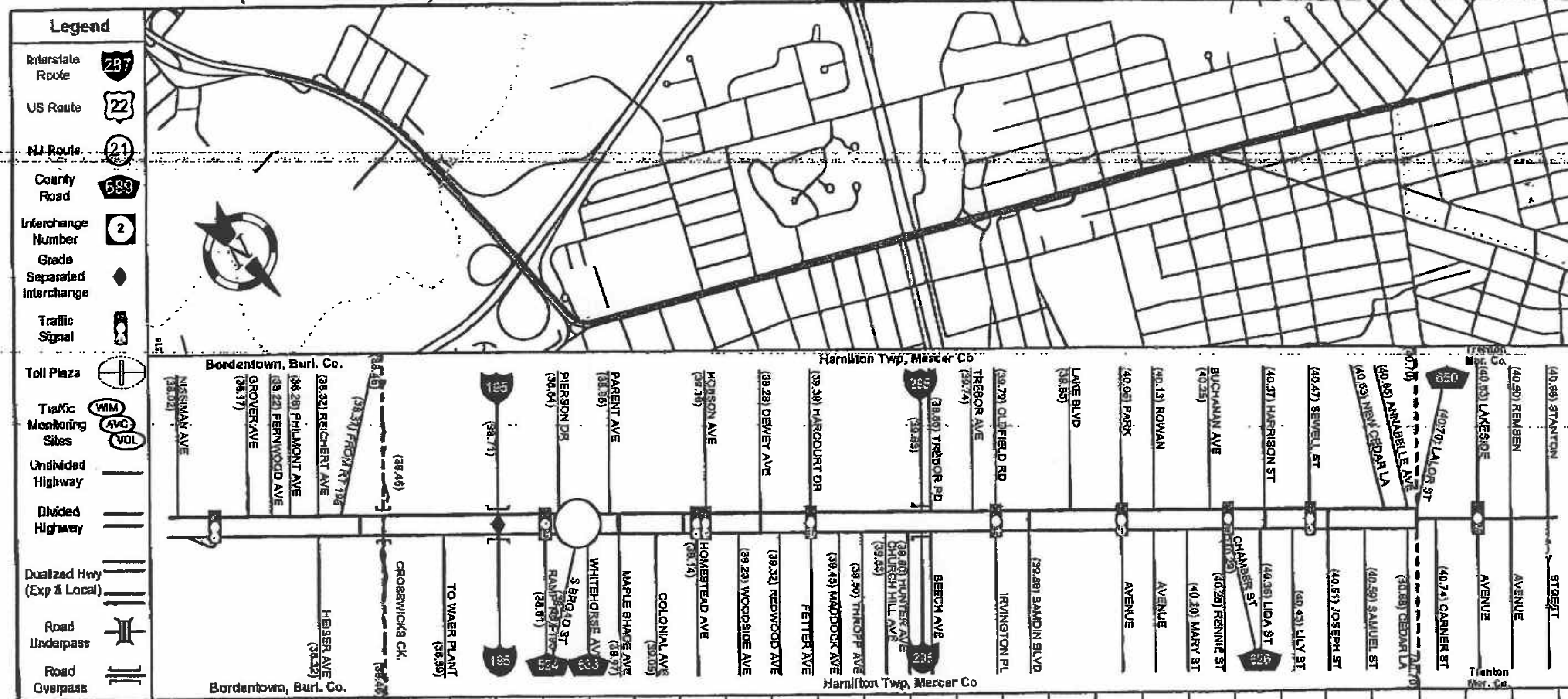
Your attention to this matter will be greatly appreciated.

Yours truly,

Glen D. Gilmore,
Mayor

US 206 (South to North)

Mile Posts: 38.000 - 41.000



MILES	38.0		39.0		40.0		41.0
KILOMETERS	62.0	63.0	64.0	65.0			

Field	Values (south to north)
Street Name	Disabled American Veterans Hwy
Jurisdiction	N.J.D.O.T. / Municipal
Functional Class	Urban Principal Arterial
Federal Aid Sys	NHS
Control Section	0326 / 1120
Speed Limit	50 / 45 / 35 / 25
Number of Lanes	4
Divided – SB/WB Shou.	12 / 8 / 0
Divided – SB/WB Pave.	24
Divided – Med. Type	Unprotected / Curbed / None
Divided – Med. Width	18 / VAR / 0
Undiv. – NB/EB Pave.	24 / 72
Undiv. – NB/EB Shou.	12 / 8 / 0
Traffic Volume	53,240 (94); 47,300 (91); 21,432 (02); 33,460 (94); 25,480 (00); 37,830 (94)
Traffic Sta. ID	5T5C155; 5D5-275; 6-4-204; 5T5C471; 5-3-013; 5T5C456
Structure No.	0326153 0326152; 1134154; 1137158
Contract No. & Date	N.J. 2 (9/1/19) TAKEOVER, SEC. 6 (1924) N.J. 39 SEC. 1B, 10A (1942) W.R., / I-195 SEC. 1A 100 (1986) G.P.S. / N.J. 2 (9/1/19) TAKEOVER, SEC. 5, 3A (1924) G.P.S., N.J. 37 (1928) SEC. 10 (1939) D, U.S. 206 (1953) SEC. 27B (1979) R.
Enlarged Views	

SRI = 00000206__

Date last inventoried: January 1999

Striaght Line Diagram

US 206 (South to North)

Mile Posts: 38.000 - 41.000

Secondary Direction

Primary Direction

Pavement	24			24	
Shoulder	12	0		0	0
Number of Lanes	2			2	
Speed Limit	50	45	35	35	25
Street Name	Disabled American Veterans Highway		South Broad Street	South Broad Street	

Interstate Route 287 · US Route 22 · NJ Route 21 · County Road 689 · Interchange Number 2 · Grade Separated Interchange · Traffic Signal · Traffic Monitoring Sites WIM AVC VOL · Road Underpass · Road Overpass

91.77 · 91.0 · 90.57 · 90.16 · 90.0 · 89.06

Bordentown, Burl. Co. — Hamilton Twp, Mercer Co — Trenton, Mer. Co.

Secondary Direction: NISSIMAN AVE (91.75); CARMEN AVE *(91.66); GROVER AVE *(91.60); AVE *(91.55)FERNWOOD; *(91.51)PHILMONT AVE; *(91.44)REICHERT AVE; *(91.39) FROM RT 195 (38.46); 195 *(91.04); PIERSON DR *(90.91); PARENT AVE *(90.80); HOBSON AVE *(90.58); (39.28) DEWEY AVE; (39.39) HARCOURT DR; 295 *(90.09)ENT. TO MALL; TREBOR AVE *(90.01); *(89.96)OLDFIELD RD; LAKE BLVD *(89.80); *(89.70)PARK; *(89.63)ROWAN; BUCHANAN AVE *(89.52); *(89.40)HARRISON ST; *(89.31)SEWELL ST; *(89.15)NEW CEDAR LA AVE; *(89.11)ANNABELLE; 650 *(89.09)LALOR ST; (40.83) LAKESIDE; (40.90) REMSEN; (40.98) STANTON; * Secondary direction milepost

Primary Direction: HEISER AVE (38.32); CROSSWICKS CK. (38.46); TO WATER PLANT (38.59); 195 (38.71); RAMP (38.81); 524 533 S BROAD ST (38.88); WHITEHORSE AV (38.89); MAPLE SHADE AVE (38.97); COLONIAL AVE (39.05); HOMESTEAD AVE (39.14); (39.23) WOODSIDE AVE; (39.32) REDWOOD AVE; FETTER AVE; (39.45) MADDOCK AVE; (39.50) THROPP AVE; (39.55) CHURCH HILL AVE; HUNTER AVE (39.60); (39.63); 295 BEECH AVE (39.65); IRVINGTON PL (39.79); SAMDIN BLVD (39.86); AVENUE (40.06); AVENUE (40.13); MARY ST (40.20); RENNIE ST (40.28); CHAMBER ST (40.29); 626 LIDA ST (40.36); LILY ST (40.43); JOSEPH ST (40.51); SAMUEL ST (40.59); CEDAR LA (40.68); (40.74) CAPNER ST; AVENUE; AVENUE; STREET; Units in miles

38.0 · 39.0 · 40.0 · 41.0

Street Name	Disabled American Veterans Highway		South Broad Street		
Jurisdiction	N.J.D.O.T.		Municipal		
Functional Class	Urban Principal Arterial				
Federal Aid - NHS Sy	STRAHNET Conn.		NHS		
Control Section	0326	1128			
Speed Limit	50	45	35		25
Number of Lanes	2		5	2	
Med. Type	Curbed		None	Curbed	Painted/Unprotected
Med. Width	18	VAR	0	VAR	12
Pavement	24		60	24	
Shoulder	12		0		
Traffic Volume	25,794 (2005)				
Traffic Sta. ID	5-4-204				
Structure No.	0326153 0326152	1134151		1137158	
Enlarged Views					

SRI = 00000206__

Date last inventoried: March 2008

Page Created: May 2008

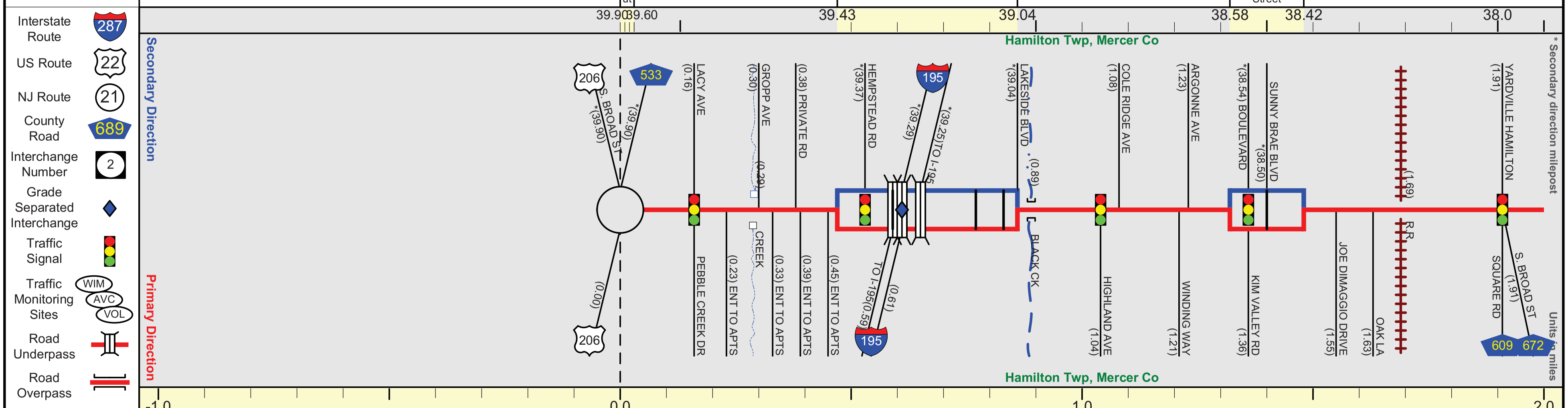
ROUTE 524 (West to East)

Mile Posts: 0.000 - 2.000

Secondary Direction
Primary Direction

Pavement: 48 | 26 | 24 | 20
Shoulder: 0 | 0 | 10 | 0
Number of Lanes: 1 | 1 | 2 | 2
Speed Limit: 40 | 40 | 40 | 35
Street Name: So ut | South Broad Street | South Broad Street

Interstate Route
US Route
NJ Route
County Road
Interchange Number
Grade Separated Interchange
Traffic Signal
Traffic Monitoring Sites
Road Underpass
Road Overpass



Street Name: South Broad Street | Yardville-All
Jurisdiction: County | N.J.D.O.T. | County
Functional Class: Urban Principal Arterial | Urban Minor Arter
Federal Aid - NHS Sy: STP
Control Section:
Speed Limit: 40 | 35
Number of Lanes: 1 | 2 | 3 | 2
Med. Type: Cu | None | Curbed | None | Curbed | None
Med. Width: V A R | 0 | VAR | 0 | VAR | 0
Pavement: 46 | 14 | 24 | 36 | 40 | 42 | 24 | 40 | 36
Shoulder: 0 | 10 | 0
Traffic Volume: 11,143 (2006)
Traffic Sta. ID: 5-4-407
Structure No.: N/A | 1134171,172 | 1134153-155, | 1134174 | 1116150
Enlarged Views:

Begin Rt. 524 MP=0.00

SRI = 00000524__

Date last inventoried: June 2004

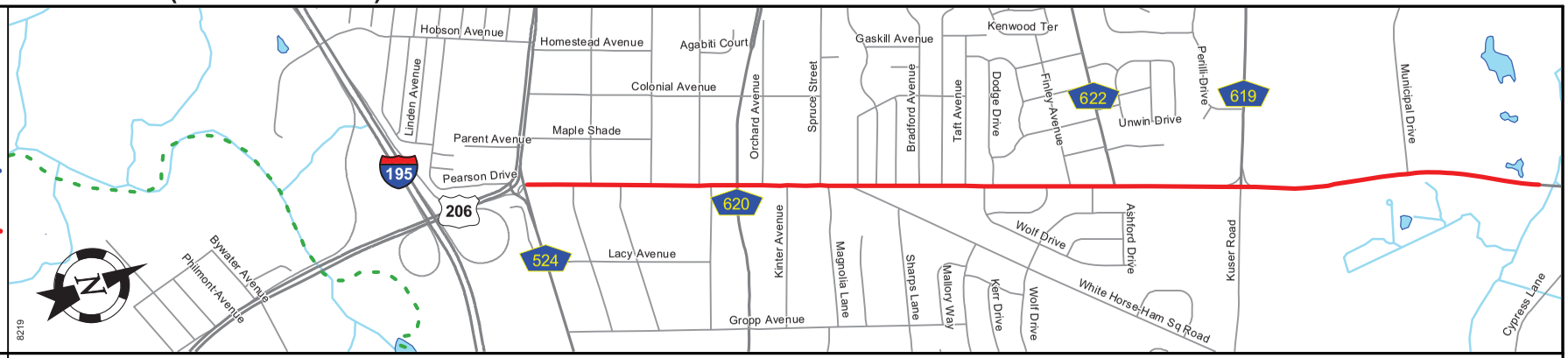
Page Created: May 2008

ROUTE 533 (South to North)

Mile Posts: 0.000 - 2.000

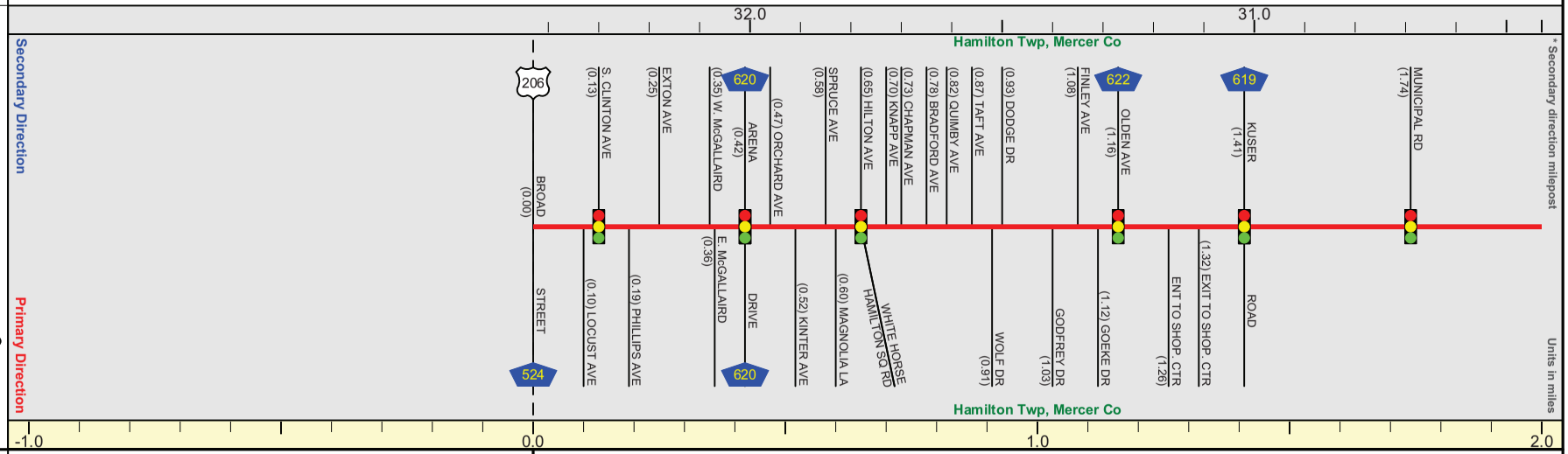
Secondary Direction

Primary Direction



Pavement	
Shoulder	
Number of Lanes	
Speed Limit	
Street Name	

Interstate Route 287
US Route 22
NJ Route 21
County Road 689
Interchange Number 2
Grade Separated Interchange
Traffic Signal
Traffic Monitoring Sites WIM AVC VOL
Road Underpass
Road Overpass



Street Name	Whitehorse Road
Jurisdiction	County
Functional Class	Urban Minor Arterial
Federal Aid - NHS Sy	STP
Control Section	
Speed Limit	35 45
Number of Lanes	4 2 4
Med. Type	None
Med. Width	0
Pavement	48 38 54 60 48
Shoulder	0
Traffic Volume	
Traffic Sta. ID	
Structure No.	
Enlarged Views	

Begin Rt. 533 MP=0.00

SRI = 00000533__

Date last inventoried: May 1997

Page Created: May 2008

Fact Sheet

NEW JERSEY DEPARTMENT OF TRANSPORTATION

MEMORANDUM

TO: Tom Wospil, Director
Capital Investment Planning and Development

FROM: Tom Saylor
Manager, Region South
Division of Project Development

DATE: 3/25/2011

PHONE: 530-2739

SUBJECT: Rt. 206, Whitehorse Circle (CR 533, 524), UPC number 950526

Discussion of project status

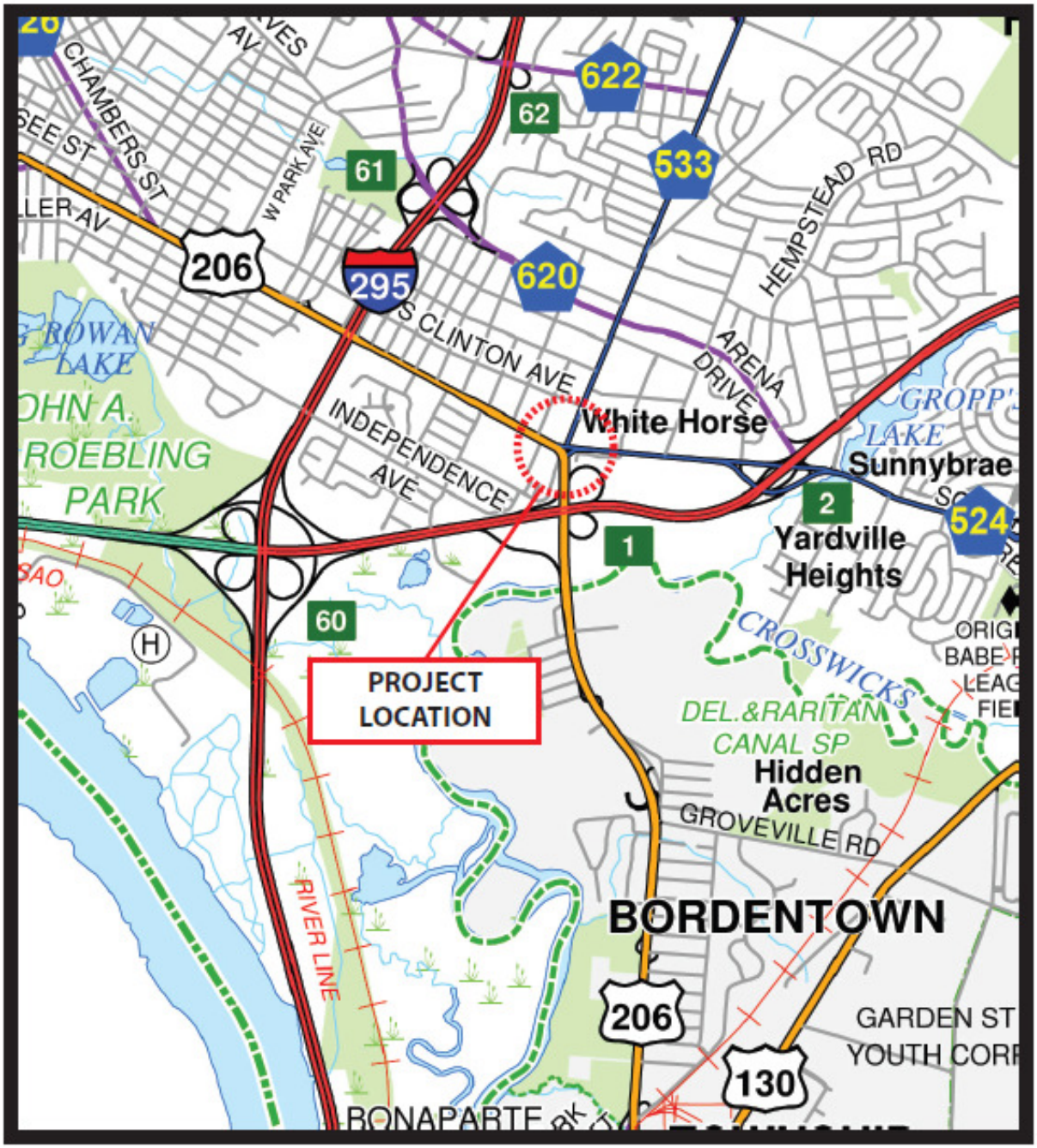
The Division of Project Development (DPD) requests that this project be placed on the next CPC agenda. The intent is to request concurrence on the project status and receive an approval to continue the Concept Development study.

Due to the recent changes to the NJDOT Project Delivery Process, it was determined by DPD that the project obtain concurrence from CPC prior to continuing the study and advancement of project alternatives, including presenting alternatives to local officials and the general public.

PROBLEM BACKGROUND

The Concept Development study for Whitehorse Circle (Circle) was initiated by DPD in 2010 as a result of a Bureau of Safety Programs (BSP) recommendation based on the results of previously implemented solutions. The Whitehorse Circle (Circle) is located in the Township of Hamilton and serves both local and regional traffic (See Project Location Map – **Figure 1**).

The project has a long history that started with a problem statement prepared in 2005 by the Safety Management System South Jersey Transportation Planning Organization (SJTPO). The statement indicated that Hamilton Township identified the facility as being a high priority accident location. At the time, the number of crashes far exceeded the criteria of five right-angle crashes per year to be eligible for treatment as part of the Right-Angle Crash Reduction Program. Because attempted quick fix solutions did not realize material safety improvements, BSP recommended the project be re-evaluated for concept development study.



PROJECT LOCATION MAP
Route 206/CR 533/CR 524 Whitehorse Circle
Hamilton Township, Mercer County

Project Limits
The project study limits are along Route 206 from M.P. 38.59 to M.P. 39.23, C.R. 533 from M.P. 0.00 to M.P. 0.47, and C.R. 524 from M.P. 0.00 to 0.45.

Location Characteristics
The circle has an unconventional design where vehicles traveling on Route 206 have the right-of-way and all other vehicles must yield. **Figure 2** shows the Whitehorse Circle with the internal stopping points.

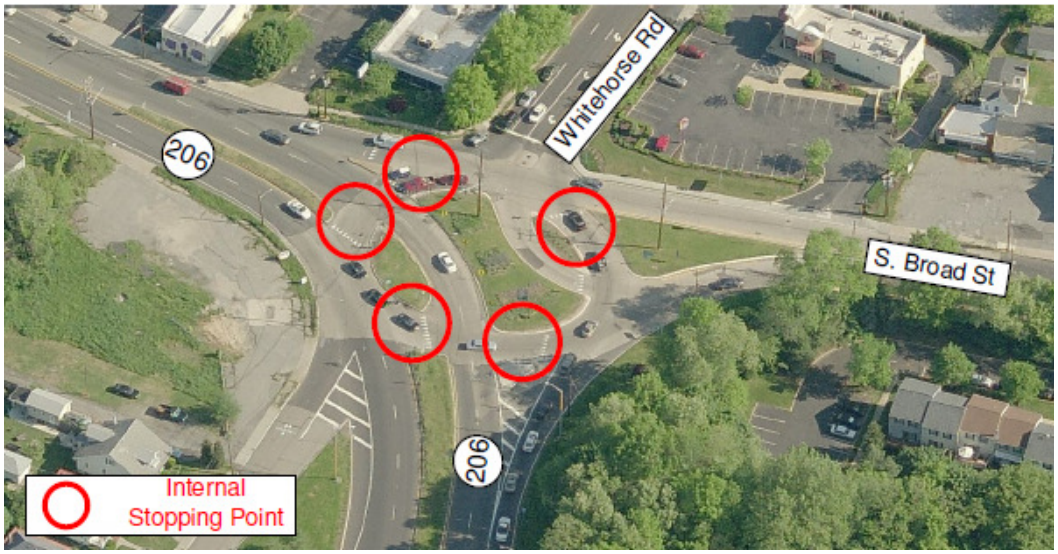


Figure 2: Site Location Map with Internal Stopping Points

The Circle's design forces vehicles within the Circle to yield to the Route 206 through traffic resulting in queueing onto Route 206. The Circle is located on Route 206 and processes traffic volumes of approximately 21,000 ADT.

The northbound Route 206 approach operates with a traffic signal that meters the volume entering the Circle. This signal is approximately 375 feet south of the intersection and operates on a 90 second cycle with approximately 60 seconds of green time and 30 seconds of red time. When the signal is red it helps the other three approaches clear, and when the signal returns to green the northbound through vehicles queue back frequently to the beginning of the auxiliary turn pocket on US 206.

Summary of Issues and Concerns

The primary purpose of the Whitehorse Circle project is to improve safety. Crash analyses were completed for the Whitehorse Circle using crash data collected from January 2006 to December 2008. There were 62, 56 and 43 crashes in 2006, 2007 and 2008, respectively. The results of the analysis including comparison to state averages are outlined in ***Table 2***. The results in ***Table 2*** indicate that the percentage of angle crashes and rear-end crashes exceeds statewide averages.

Table 2: Crash Summary for January 2006 to December 2008

Type	Number	Percent	2008 State Avg Percent*
Angle	62	38.51 %	25.32 %
Rear End	68	42.24 %	34.90 %
Side-Swipe	23	14.29 %	14.67 %
Fixed Object	8	4.97 %	6.93 %
Total	161	100.00 %	N/A
	42 (26%) were injury crashes 56 injuries were reported (19 annual)		

*2008 NJDOT Bureau of Safety Programs Crash Summary – Total Crashes at Intersections for State System Road (Excluding Toll Roads and Interstates)

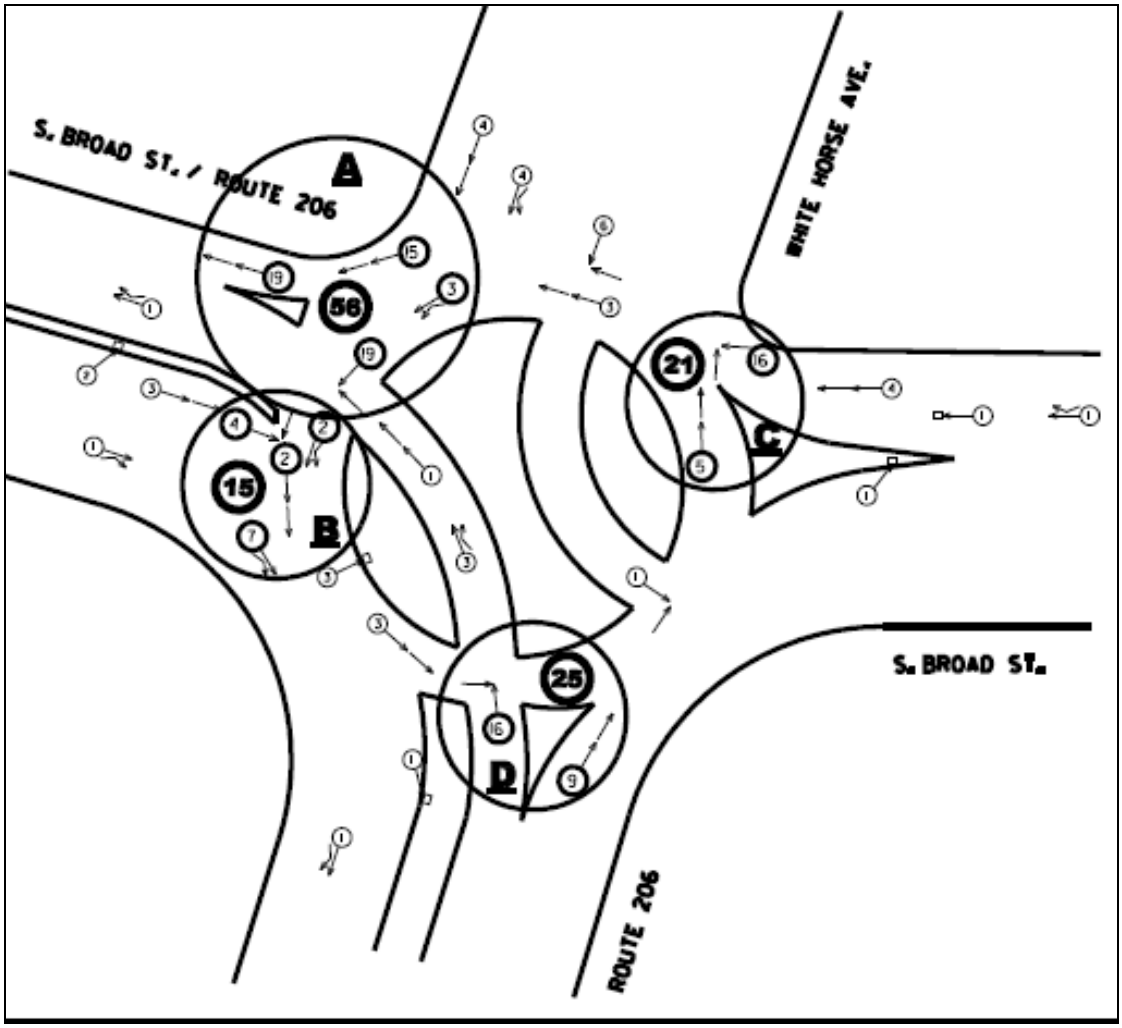


Figure 2: Crashes By Location for 2006-2008

Figure 2 shows the individual crashes between 2006 and 2008 by location and highlights the four key crash areas within the Whitehorse Circle. Location A on the northwest corner of the circle had a total of 56 crashes with 19 angle crashes

where vehicles cross Route 206. Location B on the west side of the intersection had 15 crashes with a mix of all crash types. Location C on the east side of the intersection had 21 crashes with 16 angle crashes where vehicles cross over South Broad Street moving towards Whitehorse Road. Location D on the south side had 16 angle crashes where vehicles attempted to cross northbound Route 206.

MANAGEMENT SYSTEM INFORMATION

Safety Management System (SMS)

A review of the SMS database revealed that Route 206 (MP 38.9) at County Route 533 showed up on the Top Intersection Crash Locations List by Total Severity for 2003 to 2005 at rank number 364 based on a severity score of 33 with a crash frequency of 27. As a comparison, the crash analysis completed by DPD for crashes occurring between 2006 and 2008 revealed 161 crashes occurred at or near the circle.

Based on discussions with the Bureau of Safety Programs (BSP) it was determined that the physical nature of the location (i.e., the size and shape of the circle and resulting conflict locations) results in the location being significantly underestimated as far as the number of crashes and the severity score in the safety management system and that the actual score would be much higher.

PROJECT PURPOSE AND NEED

A summary of the project Purpose and Need is provided below.

Project Purpose

The purpose of the project is to develop concepts that will improve safety and operational problems at the White Horse Circle.

Project Need

Following an evaluation of existing conditions, the main project need is to improve safety as the Whitehorse Circle has a high number of crashes, and more specifically angle crash type.

CONCEPTUAL IMPROVEMENT ALTERNATIVES

A number of concepts were developed based on two main themes: signalized intersection and roundabout. Based on coordination with Subject Matter Experts and the local professional staff, one concept of each improvement option was identified as preferred (Alternatives 3 and 5). The alternatives are depicted in the attached plans and associated impacts of each alternative are presented in the attached alternatives impacts matrix.

Both alternatives will help mitigate the safety issues at the Whitehorse Circle by reducing the number of conflict points for drivers and also by eliminating the existing atypical design. Both alternatives provide acceptable traffic operations in the 2035 design year.

COST ESTIMATE

The preliminary construction cost estimate (not including ROW) for Alternatives 3 (signalized intersection) and 5 (roundabout) is approximately $2.1M and 1.65M, respectively.

RECOMMENDATIONS

The proposed project is recommended for completion of CD with the intent to advance to PE pending the outcome of CD and the availability of funds. The two identified preferred alternatives address the established purpose and need, and were viewed favorably by professional staff from the County and Hamilton Township. Since the Department's study's program focus has changed since the start of the project, DPD seeks concurrence from CPC on DPD's continued study and advancement of project alternatives prior to presenting alternatives to local officials and the general public.

As indicated above, there are anticipated limited ROW impacts and the project has limited other anticipated impacts including utilities. The following additional information is attached for your use: A Straight Line Diagram and a 11x17 plans of two primary alternatives (roundabout and intersection).

If you have any questions please contact John Zim at 609-530-2314 or myself.

cc: John Zim, DPD

Management System Information

NEW JERSEY DEPARTMENT OF TRANSPORTATION
MANAGEMENT SYSTEMS INFORMATION

DATE: 04/24/2013

TO: William Birch
Division of Project Development

FROM: Urban Engineers – Cherry Hill, New Jersey

SUBJECT: **Management System Information Summary (Updated)**
Route 206 Whitehorse Circle (CR 533,524)
Township of Hamilton, Mercer County
Concept Development (CD)

The following information provides a brief compilation of record data as provided by the NJDOT Management Systems. A request was sent out from the Division of Project Management to each management system within NJDOT requesting information pertaining to the project limits. Responses are presented below.

Congestion Management System (CMS)

CMS provided a response. Part of this section of US 206 (Score 4.03/Med-Low) and this section of CR 524 (Score 5.14/Medium) are "Moderately Congested". It was noted that CMS does not provide analysis of traffic circles.

Bridge Management System (BMS)

There are no bridges within the project limits

Drainage Management Systems (DMS)

DMS provided a response. Route 206, Whitehorse Circle does not rank in Drainage Management Unit's DMS Ranking List. No records available for Flooding, Icing and Maintenance Crew expenditure for the project limit.

Rockfall Hazard Management Systems (RHMS)

There are no rock cuts within the project limits.

Geotechnical Data Management System (GDMS)

GDMS indicates some limited subsurface information (specifically, soil borings) within the project limits. The information may be accessed through the Departments home page.

Pavement Management System (PMS)

Pavement Management provided a response. The PMS only has data up to milepost 39.0 because Rt 206 changes from NJDOT to Municipal jurisdiction at this point. This area was last resurfaced in 2009 and is not currently identified as a need by the PMS.

Safety Management System (SMS)

SMS provided a response. As the project was generated from their unit, they have considered this location a priority. Information initially provided was updated for the Concept Development Study effort.

Maintenance Management Systems (MMS)

No records available for Maintenance Crew expenditure within the project limit.

Traffic Engineering and Safety Program (TESP)

TESP has no input to provide in association with this location

Transportation Data Development (TDD)

Currently available information is provided on the NJDOT Website

Commuter Mobility/Bicycle and Pedestrian Programs

Bicycle and Pedestrian Programs has no documentation related to this location.

ITS

There are no ITS facilities within the project limits. A request for new facilities has been provided and will be incorporated in the PE Scope Statement.

New Jersey Department of Transportation

Bureau of Commuter Mobility and Strategies

CMS Priority Ranking

US 206 (MP 38.89) and CR 533, CR 524 (MP 0.00), White Horse Circle, Concept Development

Hamilton Twp., Mercer County

CMS Link Number	Route	Begin Milepost	End Milepost	One-Way ADT (2009) (Veh./Day)	No. of Lanes (NB/EB)	No. of Lanes (SB/WB)	Max V/C	Overall Score	Priority Rating	System Top Percentile	County	County Top Percentile	MPO	MPO Top Percentile
5290	US 206	38.69	38.86	9840	2	2	0.75	4.03	Med-Low	65	Mercer	65	DVRPC	60
5288	US 206	38.86	38.90	10080	2	2	0.27	2.49	Low	88	Mercer	91	DVRPC	85
911	US 206	38.90	39.00	10440	2	2	0.28	2.56	Low	87	Mercer	91	DVRPC	84
4259	CR 524	0.00	0.47	6904	1	1	0.90	5.14	Medium	46	Mercer	39	DVRPC	38

Part of this section of US 206 and this section of CR 524 are "Moderately Congested".

- Highest Score in this section

The Overall Score shown above considers V/C ratio and ADT per lane. Each factor is weighted 50%.
Priority Ratings are based on the Overall Score of 0 to 10, as follows:

High= 7.00+ **Med-High = 6 - 6.99** **Medium = 5.00 - 5.99** **Medium-Low = 4.00 - 4.99** **Low < 4.00**

CMS does not provide analysis of traffic circles.

Pavement Management & Technology Unit
Skid/Roughness/Surface Distress/Rut Data
Route 206 Whitehorse Circle Mileposts 38.4 to 39.0

Notes: 1) The PMS only has data up to milepost 39.0 because Rt 206 changes from NJDOT to Municipal jurisdiction at this point.

2) This area was last resurfaced in 2009 and is not currently identified as a need by the PMS

3) IRI = International Roughness Index (in/mile); SDI = Surface Distress Index (0-5 scale)

Route	Dir	MP Start	MP End	Speed Limit	Skid Test Date	Skid Value (SN40R)	Profiler Test Date	IRI	SDI	Avg Rut Depth (In)
206	N	38.4	38.5	50	6/10/2010	51	3/21/2012	46	5.00	0.2
206	N	38.5	38.6	45	6/10/2010	51	3/21/2012	253	4.90	0.2
206	N	38.6	38.7	45	6/10/2010	51	3/21/2012	98	5.00	0.2
206	N	38.7	38.8	45	6/10/2010	50	3/21/2012	165	5.00	0.2
206	N	38.8	38.9	45	6/10/2010	50	3/21/2012	179	4.47	0.2
206	N	38.9	39.0	35	6/10/2010	50	3/21/2012	160	3.88	0.2
206	S	38.4	38.5	50	5/20/2010	53	3/21/2012	129	5.00	0.2
206	S	38.5	38.6	45	5/20/2010	49	3/21/2012	148	5.00	0.2
206	S	38.6	38.7	45	5/20/2010	49	3/21/2012	98	4.74	0.2
206	S	38.7	38.8	45	5/20/2010	47	3/21/2012	270	3.88	0.1
206	S	38.8	38.9	45	5/20/2010	47	3/21/2012	82	3.88	0.1
206	S	38.9	39.0	35	5/20/2010	47	3/21/2012	222	4.57	0.1

Mileposts 38.4 to 39.0				
Dir	Avg IRI	Rating	Avg SDI	Rating
N	150	Fair	4.71	Good
S	158	Fair	4.51	Good

Color Code	
	Substandard Skid Value (speed dependent)
	Deficient Roughness (IRI) > 170 in/mi
	Deficient Surface Distress (SDI) ≤ 2.4
	Excessive Rut ≥ 0.5 in

Bill McGarrigel - Rt 206 Whitehorse Circle

From: "Louis JoliBois" <louis.jolibois@dot.state.nj.us>
To: "Bill McGarrigel" <wpmcgarrigel@urbanengineers.com>
Date: 4/22/2013 1:58 PM
Subject: Rt 206 Whitehorse Circle
CC: "William Birch" <William.Birch@dot.state.nj.us>

Hello Bill McGarrigel,

Please find enclosed the following comments bellow from our SME's

Thanks

Louis Jolibois

From Surveying, John Ciamnecki/Bhavsar Rajesh to Louis

There are currently no CADD plans / projects or mapping in the vicinity of the Whitehorse Circle project.

If we can be of any additional assistance please contact us.

John Ciemnecki
CADD Development
530-5341

From Bureau of Safety Program (BSP), Kevin Conover to Louis:

I am fairly certain that our office has given you plenty of crash data and SMS back up to support your project here, not to mention the fact that we did the initial problem statement in support of doing a CPM feasibility study for a project here, so please review everything you have from us and let me know if it becomes imperative to get any updated crash data.

Thanks.

From Commuter Mobility/Bike &Ped Programs, Debbie Kingsland to Louis,

Bike/Ped has no documentation for this area.

From Division of Regional Operations, Alkesh Desai/Barbara Flesch to Louis

I checked with Denny Diehl. No drainage work has been done in near past and no drainage work has been planned for the subject location.

From Bureau of Traffic Signal and safety Engineering, Chris Barretts to Louis

No input to offer.

Bill McGarrigel - Fwd: Re: Rt 202 Whitehorse Circle - MS request

From: "Louis JoliBois" <louis.jolibois@dot.state.nj.us>
To: "Bill McGarrigel" <wpmcgarrigel@urbanengineers.com>
Date: 4/22/2013 2:26 PM
Subject: Fwd: Re: Rt 202 Whitehorse Circle - MS request
CC: "William Birch" <William.Birch@dot.state.nj.us>
Attachments: Re: Rt 202 Whitehorse Circle - MS request

From Geotechnical,John Jamerson to Louis

Hi Louis-
In response to your attached request, Geotechnical Engineering has checked our 2 management systems for relevant data for the referenced CD study. Our Rockfall Hazard Management System (RHMS) shows no rock cuts within the project limits; and our Geotechnical Data Management System (GDMS) also indicates no subsurface information within those same limits.
Please contact our office at 5-3733 if you have any questions.

John

Please see the attached SI&A Sheets from Bureau of Structural Evaluation and Bridge Management, GuarangKumar Patel to Louis

Thanks

NEW JERSEY DEPARTMENT OF TRANSPORTATION

MEMORANDUM

TO: LIST (see table)

FROM: William Birch
Division of Project Management

DATE: March 21, 2013

PHONE: (609) 530-3003

SUBJECT: Project Area Data Request

Route 206 Whitehorse Circle, (CR 533, 524)
Township of Hamilton, Mercer County
Concept Development (CD)

The Division of Project Management (DPM) is nearing completion of the Concept Development Study for the above-mentioned project. Following the review of the draft CD Report, it was determined that an updated Management System request be submitted.

Attached, please find the Preliminary Preferred Alternative (PPA) Concept Plan and the supporting Straight Line Diagrams for your information and review. The anticipated construction cost estimate is $2.7 million.

DPM is looking for a fast-track review of the available information and is requesting any input that may be relevant to this project. Items such as the following as they pertain to your office would be helpful in our investigation:

- Relative ranking on the management systems
- Final rating
- Available traffic data
- Crash data, rates, summaries and details
- Recently completed work-orders/projects
- Recently completed survey/base mapping
- Other relevant information…….

In addition, we are specifically looking to obtain the following information from each of your areas of expertise.

NJDOT Contact List	**Unit and Management System**	**Data requested**
Ira Levinton	Systems Development and Analysis *Congestion Management System (CMS)*	Ranking on CMS (0-10; 10 is highest priority)
Susan Gresavage	Pavement Management Unit *Pavement Management System (PMS)*	ARAN and skid test results
Gaurang Patel	Structural Engineering *Bridge Management System (BMS)*	BMS ranking, recent repairs etc.
Kevin Conover	Safety Programs *Safety Management System (SMS)*	Crash data, rates, summaries and details
Kiong Chan	PMS- DMS *Drainage Management System (DMS)*	Are there any drainage projects in area; Ranking on DMS
Andrew Tunnard Operations Director	Operations Support *Maintenance Management System (MMS)*	Ranking on MMS; recent, pending or active work, etc.
John Jamerson	Geotechnical Engineering *Rockfall Hazard Rating System* *Underground Strata*	Rockfall Hazard Rating Underground Strata information
Chris Barretts	Traffic Engineering and Safety Program	Recent, pending or active work orders in project area, etc.
Antoun Abraham	Transportation Data Development	Functional classification; Existing traffic counts, truck %, etc.
John Knapp	Reg Design, CADD & Survey Services	Recent survey/base mapping
Rajesh Bhavsar	Reg Design, CADD & Survey Services	CADD files
Debra Kingsland	Commuter Mobility	

The expectation is to advance the Concept Development Process in an efficient manner with respect to cost as well as time. A response by **April 3, 2013** would be appreciated. Thank you in advance for your attention in this matter, if you have any questions please contact me at 5-3003.

US 206 (South to North)

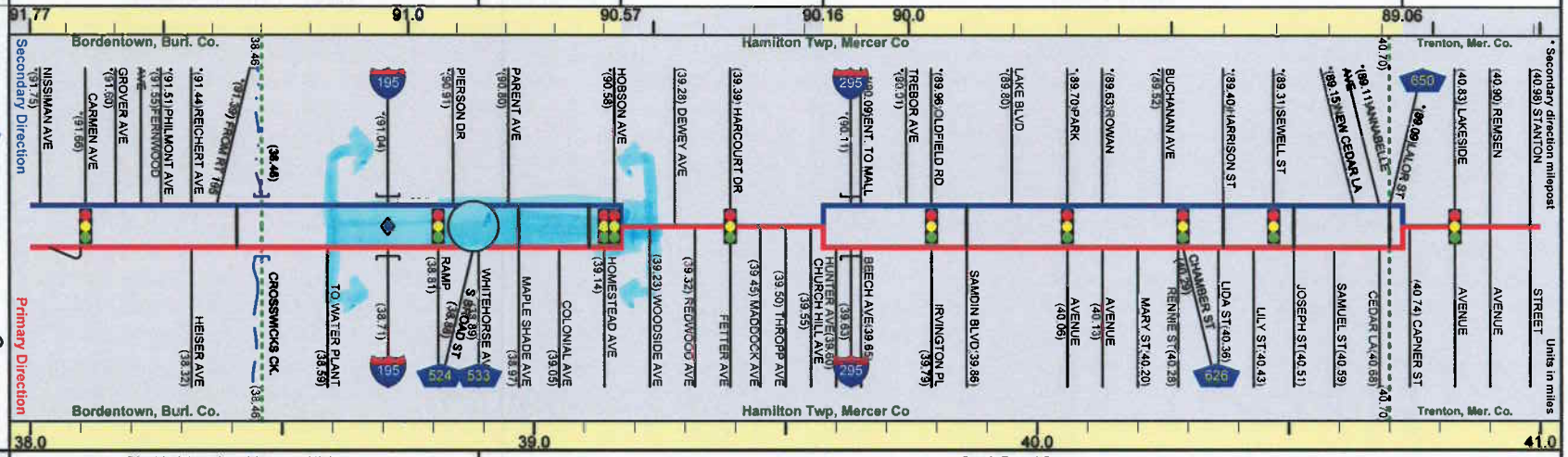
Mile Posts: 38.000 - 41.000

Secondary Direction

Primary Direction

Pavement	24 / 24
Shoulder	12 / 0 / 0 / 0
Number of Lanes	2 / 2
Speed Limit	50 / 45 / 35 / 35
Street Name	Disabled American Veterans Highway / South Broad Street / South Broad Street

Interstate Route 287 · US Route 22 · NJ Route 21 · County Road 689 · Interchange Number 2 · Grade Separated Interchange · Traffic Signal · Traffic Monitoring Sites WIM AVC VOL · Road Underpass · Road Overpass



Street Name	Disabled American Veterans Highway / South Broad Street
Jurisdiction	N.J.D.O.T. / Municipal
Functional Class	Urban Principal Arterial
Federal Aid - NHS Sy	STRAHNET Conn. / NHS
Control Section	0326 / 1128
Speed Limit	50 / 45 / 35 / 25
Number of Lanes	2 / 5 / 2
Med. Type	Curbed / None / Curbed / Painted/Unprotected
Med. Width	18 / VAR / 0 / VAR / 12
Pavement	24 / 60 / 24
Shoulder	12 / 0
Traffic Volume	25,794 (2005)
Traffic Sta. ID	5-4-204
Structure No.	0326153 / 0326152 / 1134151 / 1137158
Enlarged Views	

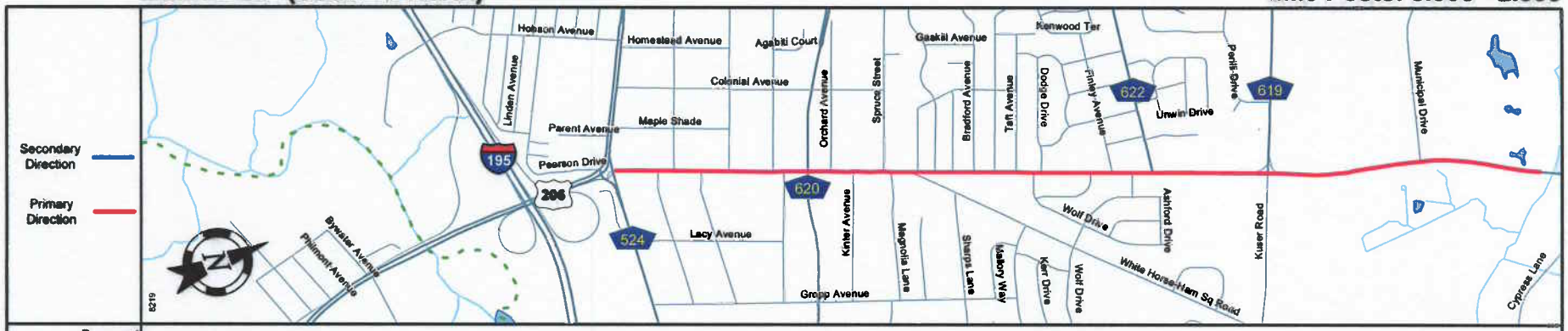
SRI = 00000206__

Date last inventoried: March 2008

Page Created: May 2008

ROUTE 533 (South to North)

Mile Posts: 0.000 - 2.000



Pavement
Shoulder
Number of Lanes
Speed Limit
Street Name

Interstate Route 287
US Route 22
NJ Route 21
County Road 689
Interchange Number 2
Grade Separated Interchange
Traffic Signal
Traffic Monitoring Sites WIM AVC VOL
Road Underpass
Road Overpass

Secondary Direction
Primary Direction

32.0 31.0

Hamilton Twp, Mercer Co

206 BROAD (0.00) STREET 524
S. CLINTON AVE (0.13) (0.10) LOCUST AVE
EXTON AVE (0.25) (0.19) PHILLIPS AVE
620 (0.35) W. McGALLAIRD (0.36) E. McGALLAIRD
ARENA (0.42) DRIVE 620
(0.47) ORCHARD AVE
SPRUCE AVE (0.58) (0.52) KINTER AVE
(0.65) HILTON AVE (0.60) MAGNOLIA LA
(0.70) KNAPP AVE WHITE HORSE HAMILTON SQ RD
(0.73) CHAPMAN AVE
(0.78) BRADFORD AVE
(0.82) QUIMBY AVE
(0.87) TAFT AVE
(0.93) DODGE DR (0.91) WOLF DR
FINLEY AVE (1.08) GODFREY DR (1.03)
622 OLDEN AVE (1.16) (1.12) GOEKE DR
ENT TO SHOP. CTR (1.28)
(1.32) EXIT TO SHOP. CTR
619 KUSER (1.41) ROAD
MUNICIPAL RD (1.74)

Hamilton Twp, Mercer Co

* Secondary direction milepost
Units in miles

-1.0 0.0 1.0 2.0

Street Name		Whitehorse Road
Jurisdiction		County
Functional Class		Urban Minor Arterial
Federal Aid - NHS Sy		STP
Control Section	Begin Rt. 533 MP=0.00	
Speed Limit		35 / 45
Number of Lanes	4	2 / 4
Med. Type		None
Med. Width		0
Pavement	48	38 / 54 / 60 / 48
Shoulder		0
Traffic Volume		
Traffic Sta. ID		
Structure No.		
Enlarged Views		

Page Created: May 2008

SRI = 00000533__

Date last inventoried: May 1997

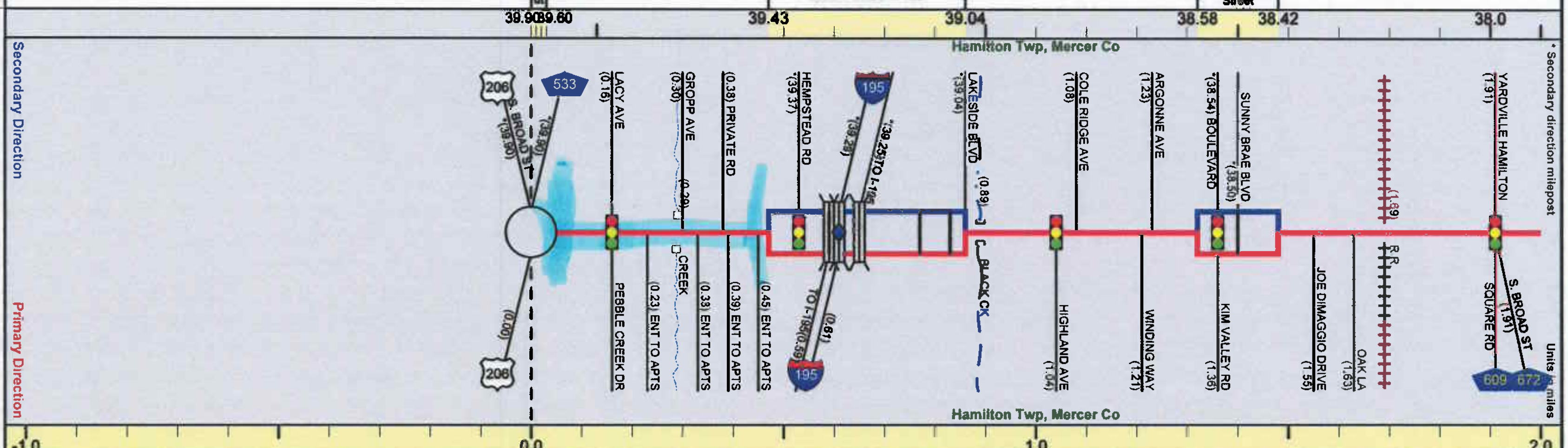
ROUTE 524 (West to East)

Mile Posts: 0.000 - 2.000

Secondary Direction
Primary Direction

Pavement: 46 | 26 | 24 | 20
Shoulder: 0 | 0 | 10 | 0
Number of Lanes: 1 | 1 | 2 | 2
Speed Limit: 40 | 40 | 40 35
Street Name: So | South Broad Street | South Broad Street

Interstate Route
US Route
NJ Route
County Road
Interchange Number
Grade Separated Interchange
Traffic Signal
Traffic Monitoring Sites
Road Underpass
Road Overpass



Street Name: South Broad Street | Yardville-Al
Jurisdiction: County | N.J.D.O.T. | County
Functional Class: Urban Principal Arterial | Urban Minor Arter
Federal Aid - NHS Sy: STP
Control Section:
Speed Limit: 40 | 35
Number of Lanes: 2 | 3 | 2
Med. Type: None | Curbed | None | Curbed | None
Med. Width: 0 | VAR | 0 | VAR | 0
Pavement: 46 | 14 | 24 | 36 | 40 | 42 | 24 | 40 | 36
Shoulder: 0 | 10 | 0
Traffic Volume: 11,143 (2006)
Traffic Sta. ID: 5-4-407
Structure No.: N/A | 1134171,172 1134153-155, 1134174 | 1116150
Enlarged Views:

Begin Rt. 524 MP=0.00

SRI = 00000524__

Date last inventoried: June 2004

Page Created: May 2008

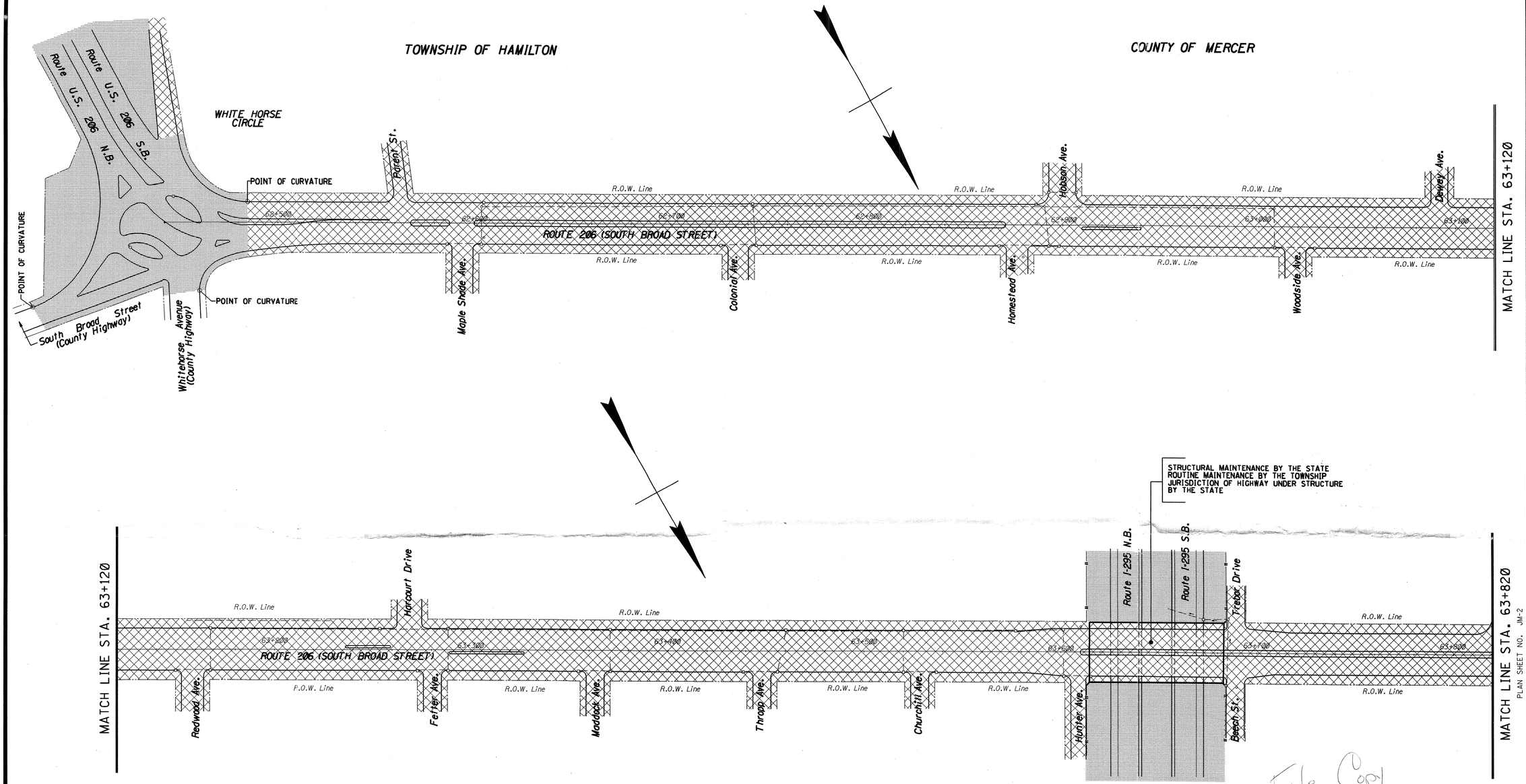
Appendix B – Record Drawings

APPENDIX B – RECORD DRAWINGS

Record Drawings were provided in hard copy format from the NJDOT Engineering Documents Unit at a sheet size greater than 11x17 Tabloid. Electronic copies were not provided and are unable to be incorporated into the CD Report. The following is a list of the projects available.

NJDOT Record Plans

- Plans – Route 39 Section 10B
- Plans – Route 195 Sections 1A, 1E & 10D
- Plans – Route U.S. 206 Section 27B
- ROW Plans – Route 2 Section 7 & 3A (South Broad Street Widening)
- ROW Plans – Route 39 Section 1A & 10
- ROW Plans – Route 29 Freeway, Section 10
- NJDOT Jurisdictional Limit Maps



STRUCTURAL MAINTENANCE BY THE STATE
ROUTINE MAINTENANCE BY THE TOWNSHIP
JURISDICTION OF HIGHWAY UNDER STRUCTURE BY THE STATE

File Copy

0 50 100
SCALE IN METERS

JM-1 / JM-2

LEGEND

- JURISDICTION FOR HIGHWAY MAINTENANCE AND CONTROL BY NEW JERSEY DEPARTMENT OF TRANSPORTATION
- JURISDICTION FOR HIGHWAY MAINTENANCE AND CONTROL BY THE TOWNSHIP OF HAMILTON
- RIGHT OF WAY LINE (ACCESS PERMITTED)
- RIGHT OF WAY LINE (ACCESS DENIED)
- CORPORATE BOUNDARY LINE

NOTE : DRIVEWAYS ARE NOT AFFECTED BY THIS AGREEMENT

NEW JERSEY DEPARTMENT OF TRANSPORTATION

JURISDICTIONAL LIMIT MAP

ROUTE 206 (SOUTH BROAD STREET)

JURISDICTIONAL TRANSFER OF SOUTH BROAD STREET
FROM THE WHITE HORSE CIRCLE TO LALOR STREET

TOWNSHIP OF HAMILTON — COUNTY OF MERCER

SCALE : AS INDICATED

Drafted on CADD by NJDOT Design Services

Appendix C - Access/Right of Way/Jurisdiction/Property Data

Access Information

Route 206/CR 533/CR 524 Whitehorse Circle Improvements

ACCESS IMPACT SUMMARY

US ROUTE 206 (SOUTH BROAD STREET)

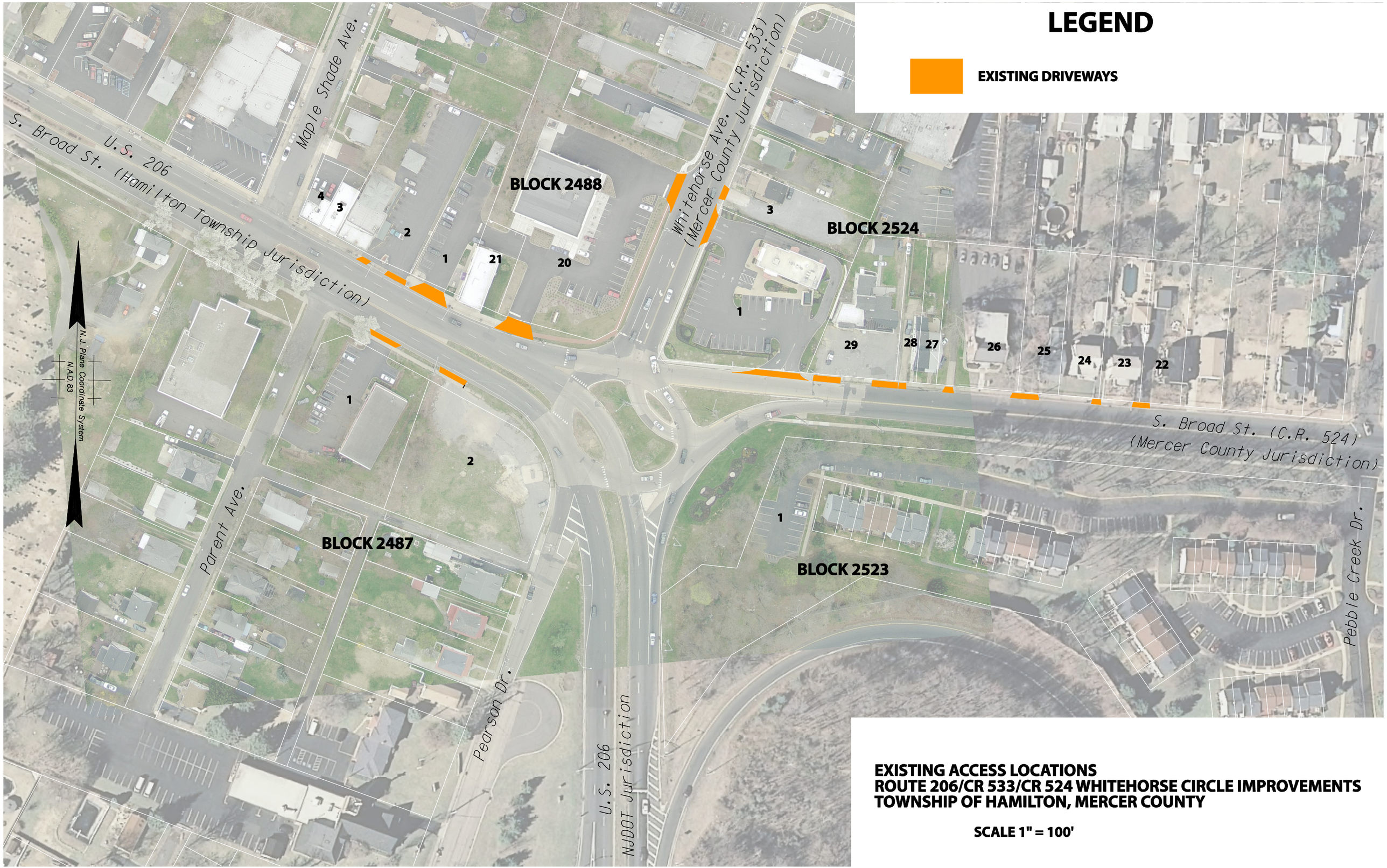
NO	BLOCK	LOT	NAME OF THE OWNER OF RECORD AND ADDRESS	LOT ADDRESS	TENANT NAME AND ADDRESS	LOT TYPE / USE	NO. OF ALLOWABLE ACCESS POINTS	TYPE OF ACCESS ALTERATION	Access Level	NO OF EXISTING DRIVEWAYS	LOCATION OF EXISTING DRIVEWAYS	BASELINE STA. OF EXISTING DRIVEWAYS	EXISTING ACCESS VIOLATIONS	CORRESPONDING ACCESS CODE	NUMBERS OF PROPOSED DRIVEWAY	LOCATION OF PROP. DRIVEWAY	BASELINE STA. OF PROP. DRIVEWAY	PROP. DRIVEWAY WORK BEYOND THE STATE ROW LINE	AUTO TURN CHECK VEHICLE	REQUIRED WAIVERS FOR THE PROPOSED RECOMMENDED DRIVEWAYS	DISCUSSION ON 1) OVERALL ACCESS IMPACT TO THE PROPERTY, 2) JUSTIFICATION FOR THE REQUIRED WAIVERS FOR PROPOSED RECOMMENDADE DRIVEWAYS (ATTACHE SEPARATE WORD DOCUMENT IF NEEDED)
1	2488	20	The Merlou, LLC 713 KIMBERLY DR MOORESTOWN NJ 08057	3150 Broad Street	N/A	COMMERCIAL	2 -TWO WAY	ADJUSTMENT	N/A	2	RT 206/WHITE HORSE AVENUE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NO CHANGE IS RECOMMENDED FOR THIS PROPERTY.
2	2488	1, 21	Michael & Diane McGrath 3144 S BROAD ST HAMILTON NJ 08610-3610	3144 Broad Street	N/A	COMMERCIAL	1-TWO WAY	ADJUSTMENT	N/A	1	RT 206	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NO CHANGE IS RECOMMENDED FOR THIS PROPERTY.
3	2488	2	Russo & Russo, c/o Peter J. Russo 3108 S BROAD ST HAMILTON NJ 08610-3610	3108 Broad St	N/A	COMMERCIAL	1-TWO WAY	MODIFICATION	N/A	2	RT 206	N/A	EDGE CLEARANCE LESS THAN 12' DISTACE BETWEEN DRIVEWAYS LESS THAN 24' TOTAL NUMBER OF EXISTING DRIVEWAYS ARE MORE THAN ALLOWABLE	16:47-3.8(c) 16:47-3.8(i) 16:47-3.5(c)	1	RT 206	N/A	NO	SU	NONE	MODIFIES 2 DRIVEWAYS (INGRESS AND EGRESS DOWN TO ONE 2-WAY USE DRIVEWAY THAT MEETS THE CODE.
4	2487	1	2487 1 Realty Income Corp., Portfolio Mgt PO BOX 460069 ESCONDIDO CA 92046-0069	3109 Broad Street	N/A	COMMERCIAL	1-TWO WAY	ADJUSTMENT	N/A	1	RT 206	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NO CHANGE IS RECOMMENDED FOR THIS PROPERTY.
5	2487	2	Samson Marion; Sundance Enterprises, Yassmine Esther Mehdyzadeh, Marjorie Ann Gropp, trustee; Harry Stephen Gropp Revocable Trust Agreement 7885 NELSON RD PANORAMA CITY CA 91402-6045	Broad St	N/A	COMMERCIAL	1-TWO WAY	MODIFICATION	N/A	1	RT 206	N/A	EDGE CLEARANCE LESS THAN 12'	16:47-3.8(c)	1	RT 206	N/A	NO	SU	NONE	MODIFIES EXISTING DRIVEWAY THAT FRONTS ON RT 206 AWAY FROM THE PROPERTY LINE TO AN ALLOWABLE OFFSET WITHOUT ENCROACHING ON THE 50 FOOT CORNER CLEARANCE REQUIREMENT

WHITE HORSE AVENUE (CR 533)

NO	BLOCK	LOT	NAME OF THE OWNER OF RECORD AND ADDRESS	LOT ADDRESS	TENANT NAME AND ADDRESS	LOT TYPE / USE	NO. OF ALLOWABLE ACCESS POINTS	TYPE OF ACCESS ALTERATION	Access Level	NO OF EXISTING DRIVEWAYS	LOCATION OF EXISTING DRIVEWAYS	BASELINE STA. OF EXISTING DRIVEWAYS	EXISTING ACCESS VIOLATIONS	CORRESPONDING ACCESS CODE	NUMBERS OF PROPOSED DRIVEWAY	LOCATION OF PROP. DRIVEWAY	BASELINE STA. OF PROP. DRIVEWAY	PROP. DRIVEWAY WORK BEYOND THE STATE ROW LINE	AUTO TURN CHECK VEHICLE	REQUIRED WAIVERS FOR THE PROPOSED RECOMMENDED DRIVEWAYS	DISCUSSION ON 1) OVERALL ACCESS IMPACT TO THE PROPERTY, 2) JUSTIFICATION FOR THE REQUIRED WAIVERS FOR PROPOSED RECOMMENDADE DRIVEWAYS (ATTACHE SEPARATE WORD DOCUMENT IF NEEDED)
6	2524	1	JAT Properties, LLC PO BOX 8635 HAMILTON NJ 08610-8635	3200 Broad Street	N/A	COMMERCIAL	2-TWO WAY	ADJUSTMENT	N/A	2	S. BROAD ST (CR 524)/WHITE HORSE AVE (CR 533)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NO CHANGE IS RECOMMENDED FOR THIS PROPERTY.
7	2524	3	John J. Flacco, Jr. 1251 LOWER FERRY RD EWING NJ 08618-1406	33 White Horse Avenue	N/A	RESIDENTIAL	1-TWO WAY	ADJUSTMENT	N/A	1	WHITE HORSE AVE (CR 533)	N/A	EDGE CLEARANCE LESS THAN 12'	16:47-3.8(c)	N/A	N/A	N/A	N/A	P	EDGE CLEARANCE	EXISTING DRIVEWAY IS FOR A RESIDENTIAL PROPERTY WITH A NARROW LOT. MODIFICATION WOULD ADVERSELY IMPACT THE PROPERTY.

SOUTH BROAD STREET (CR 524)

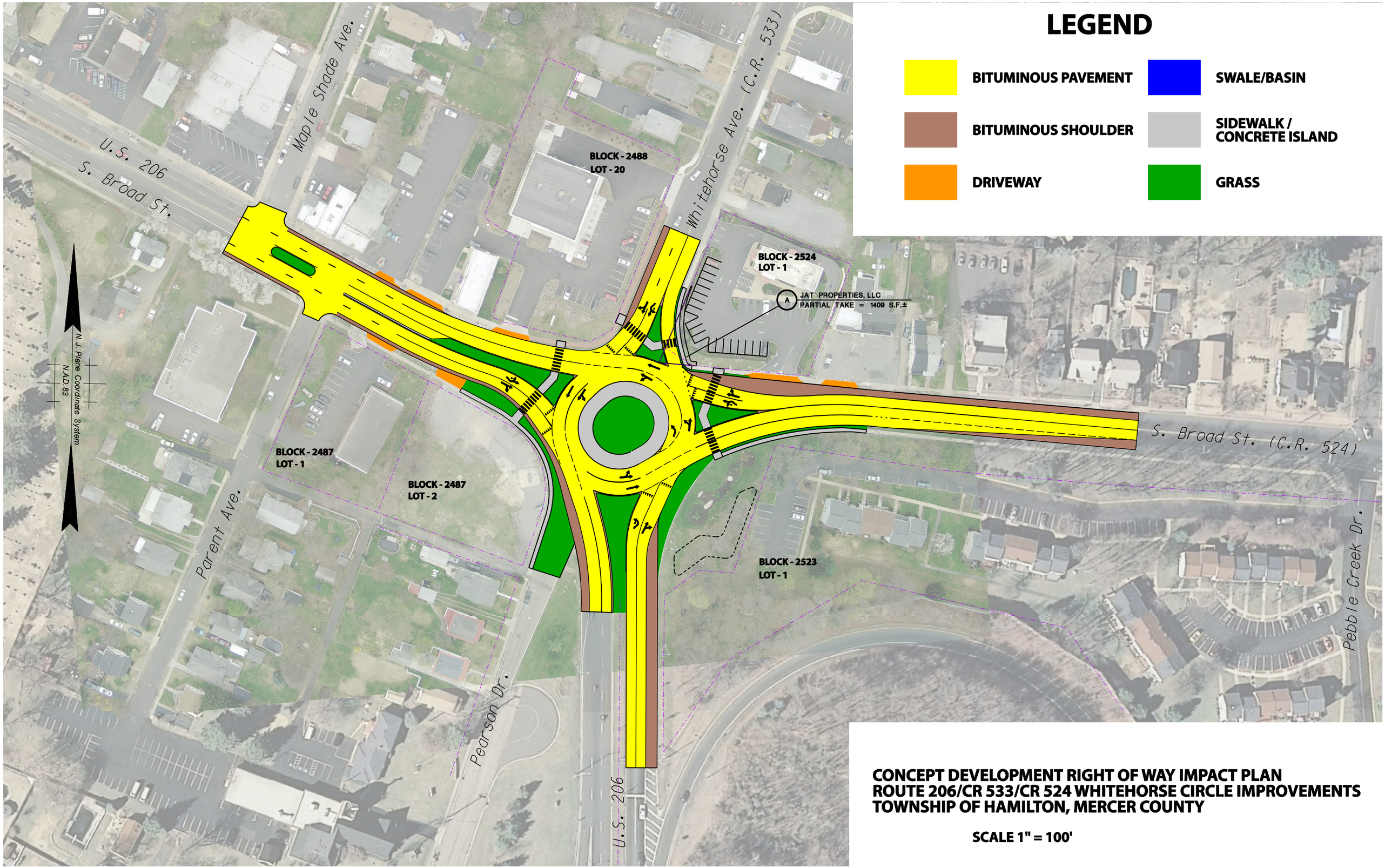
NO	BLOCK	LOT	NAME OF THE OWNER OF RECORD AND ADDRESS	LOT ADDRESS	TENANT NAME AND ADDRESS	LOT TYPE / USE	NO. OF ALLOWABLE ACCESS POINTS	TYPE OF ACCESS ALTERATION	Access Level	NO OF EXISTING DRIVEWAYS	LOCATION OF EXISTING DRIVEWAYS	BASELINE STA. OF EXISTING DRIVEWAYS	EXISTING ACCESS VIOLATIONS	CORRESPONDING ACCESS CODE	NUMBERS OF PROPOSED DRIVEWAY	LOCATION OF PROP. DRIVEWAY	BASELINE STA. OF PROP. DRIVEWAY	PROP. DRIVEWAY WORK BEYOND THE STATE ROW LINE	AUTO TURN CHECK VEHICLE	REQUIRED WAIVERS FOR THE PROPOSED RECOMMENDED DRIVEWAYS	DISCUSSION ON 1) OVERALL ACCESS IMPACT TO THE PROPERTY, 2) JUSTIFICATION FOR THE REQUIRED WAIVERS FOR PROPOSED RECOMMENDADE DRIVEWAYS (ATTACHE SEPARATE WORD DOCUMENT IF NEEDED)
8	2524	29	Chan H. & Chung H. Pak 141 MILLERICK AVE LAWRENCEVILLE NJ 08648-3601	3212 Broad St	N/A	COMMERCIAL	2 -TWO WAY	MODIFICATION	N/A	2	S BROAD ST	N/A	EDGE CLEARANCE LESS THAN 12' TOTAL NUMBER OF EXISTING DRIVEWAYS ARE MORE THAN ALLOWABLE	16:47-3.8(c) 16:47-3.5(c)	1	S BROAD ST	N/A	NO	SU	NONE	MODIFIES 2 DRIVEWAYS (INGRESS AND EGRESS DOWN TO ONE 2-WAY USE DRIVEWAY THAT MEETS THE CODE.
9	2524	28	Joseph & Eugenia Calderone 3222 S BROAD ST HAMILTON NJ 08610-2602	3222 Broad St	N/A	RESIDENTIAL	1-TWO WAY	ADJUSTMENT	N/A	1	S BROAD ST	N/A	EDGE CLEARANCE LESS THAN 12'	16:47-3.8(c)	N/A	N/A	N/A	N/A	P	EDGE CLEARANCE	EXISTING DRIVEWAY IS FOR A RESIDENTIAL PROPERTY WITH A NARROW LOT. MODIFICATION WOULD ADVERSELY IMPACT THE PROPERTY.
10	2524	26	Hamilton Properties 4 Rent, Inc PO B0X 511 ALLENTOWN NJ 08501-0511	3228-32 Broad St	N/A	RESIDENTIAL	1-TWO WAY	ADJUSTMENT	N/A	1	S BROAD ST	N/A	EDGE CLEARANCE LESS THAN 12'	16:47-3.8(c)	N/A	N/A	N/A	N/A	P	EDGE CLEARANCE	SHARED DRIVEWAY WITH LOT 25. EXISTING DRIVEWAY IS FOR A RESIDENTIAL PROPERTY WITH A NARROW LOT. MODIFICATION WOULD ADVERSELY IMPACT THE PROPERTY.
11	2524	25	Paul Coupe & Karen Onderdonk 3242 S BROAD ST HAMILTON NJ 08610-2602	3242 Broad St	N/A	RESIDENTIAL	1-TWO WAY	ADJUSTMENT	N/A	1	S BROAD ST	N/A	EDGE CLEARANCE LESS THAN 12'	16:47-3.8(c)	N/A	N/A	N/A	N/A	P	EDGE CLEARANCE	SHARED DRIVEWAY WITH LOT 26. EXISTING DRIVEWAY IS FOR A RESIDENTIAL PROPERTY WITH A NARROW LOT. MODIFICATION WOULD ADVERSELY IMPACT THE PROPERTY.
12	2524	24	Pasquale V. Papero Jr. 3250 S BROAD ST HAMILTON NJ 08610-2602	3250 Broad St	N/A	RESIDENTIAL	1-TWO WAY	ADJUSTMENT	N/A	1	S BROAD ST	N/A	EDGE CLEARANCE LESS THAN 12'	16:47-3.8(c)	N/A	N/A	N/A	N/A	P	EDGE CLEARANCE	EXISTING DRIVEWAY IS FOR A RESIDENTIAL PROPERTY WITH A NARROW LOT. MODIFICATION WOULD ADVERSELY IMPACT THE PROPERTY.
13	2524	23	Alessandro M. & Patricia Bartole 3256 S BROAD ST HAMILTON NJ 08610-2602	3256 Broad St	N/A	RESIDENTIAL	1-TWO WAY	ADJUSTMENT	N/A	1	S BROAD ST	N/A	EDGE CLEARANCE LESS THAN 12'	16:47-3.8(c)	N/A	N/A	N/A	N/A	P	EDGE CLEARANCE	SHARED DRIVEWAY WITH LOT 22. EXISTING DRIVEWAY IS FOR A RESIDENTIAL PROPERTY WITH A NARROW LOT. MODIFICATION WOULD ADVERSELY IMPACT THE PROPERTY.
14	2524	22	Beth B. Seube 3264 S BROAD ST HAMILTON NJ 08610-2602	3264 Broad St	N/A	RESIDENTIAL	1-TWO WAY	ADJUSTMENT	N/A	1	S BROAD ST	N/A	EDGE CLEARANCE LESS THAN 12'	16:47-3.8(c)	N/A	N/A	N/A	N/A	P	EDGE CLEARANCE	SHARED DRIVEWAY WITH LOT 23. EXISTING DRIVEWAY IS FOR A RESIDENTIAL PROPERTY WITH A NARROW LOT. MODIFICATION WOULD ADVERSELY IMPACT THE PROPERTY.



EXISTING ACCESS LOCATIONS
ROUTE 206/CR 533/CR 524 WHITEHORSE CIRCLE IMPROVEMENTS
TOWNSHIP OF HAMILTON, MERCER COUNTY

SCALE 1" = 100'

ROW Information



CONCEPT DEVELOPMENT RIGHT OF WAY IMPACT PLAN
ROUTE 206/CR 533/CR 524 WHITEHORSE CIRCLE IMPROVEMENTS
TOWNSHIP OF HAMILTON, MERCER COUNTY

SCALE 1" = 100'

BLOCK 2484
BLOCK 2488
BLOCK 2524
BLOCK 2487
BLOCK 2523
BLOCK 2481

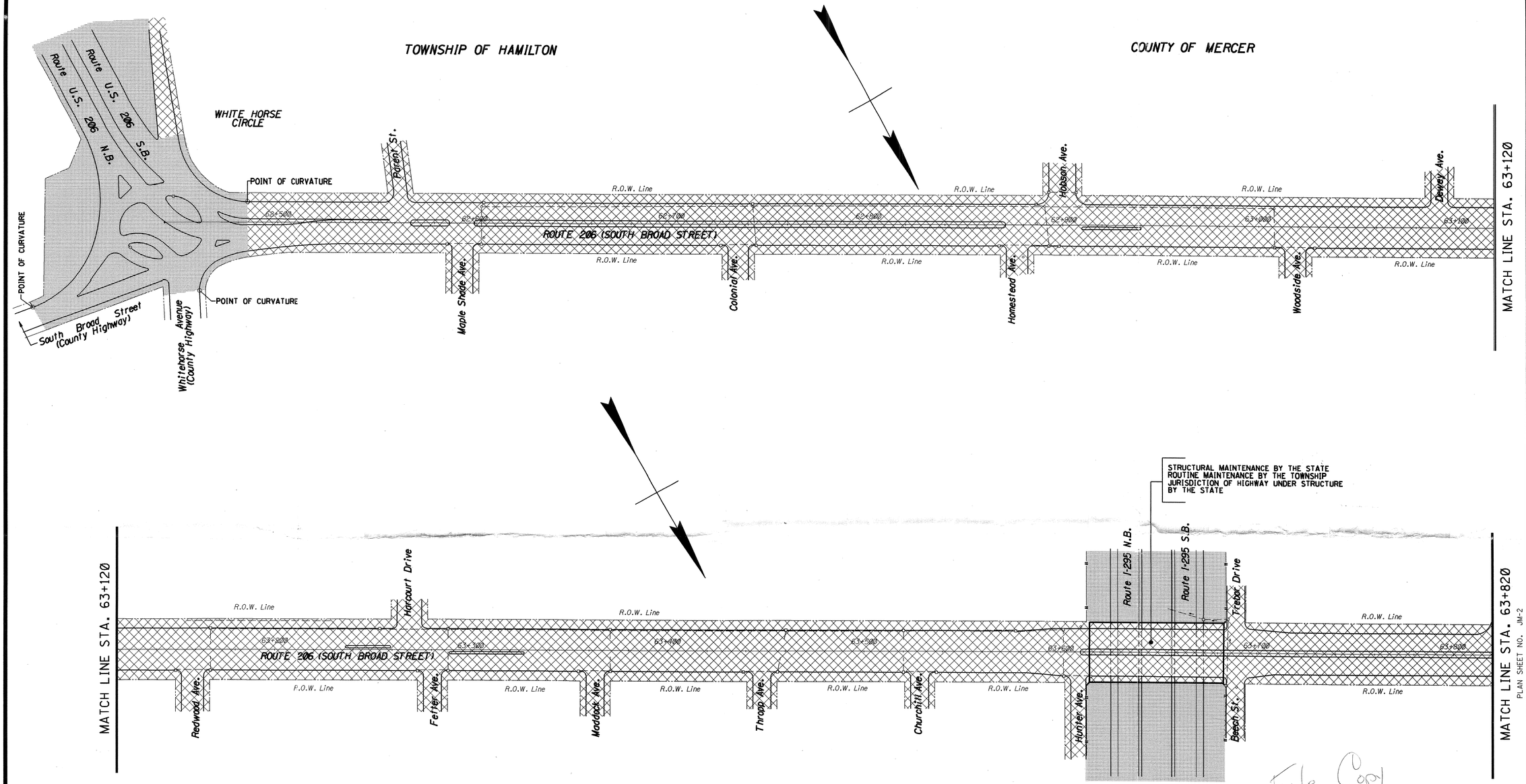
BOROUGH OF HAMILTON
MERCER COUNTY
UPDATED TO 1/31/2012

BLOCK	LOT	DEED	OWNER	ADDRESS	CITY	LOCATION
2481	1		Colonial Memorial Park Inc.	3039 S BROAD ST	HAMILTON NJ 08610-3607	3039 Broad Street
2481	2		Bell Atlantic	PO BOX 152206	IRVING TX 75015-2206	3059 Broad Street
2481	3		Mary L. Small	33 PARENT AVE	TRENTON NJ 08610-3720	33 Parent Avenue
2481	4		Katherine C. Dell	39 PARENT AVE	TRENTON NJ 08610-3720	39 Parent Avenue
2481	5		George M. & Rebecca G. Dowdell	1263 N FIELDLARK LN	HOMESTEAD FL 33035-1035	47 Parent Avenue
2481	6		Noreen Devlin & Bruce G. Hvasta	53 PARENT AVE	TRENTON NJ 08610-3720	53 Parent Avenue
2481	7		Frank M. & Lori E. Slimak	67 PARENT AVE	TRENTON NJ 08610-3720	67 Parent Avenue
2481	8		Pearson Memorial United Methodist Church	71 PEARSON DR	TRENTON NJ 08610-4301	71 Pearson Drive
2481	32		Vito Ciampa III	66 PARENT AVE	TRENTON NJ 08610-3721	66 Parent Avenue
2481	33		Cheryl G. Staub	19 FOXTON DR	ATCO NJ 08004-2486	60 Parent Avenue
2481	34		Michael D. Srahola & Melissa Reside	54 PARENT AVE	TRENTON NJ 08610-3721	54 Parent Avenue
2481	35		Lidia Bilak	46 PARENT AVE	TRENTON NJ 08610-3721	46 Parent Avenue
2481	36		Shamus & Lorraine M. Dunn	38 PARENT AVE	TRENTON NJ 08610-3721	38 Parent Avenue
2481	37		Lisa M. Albertson	32 PARENT AVE	TRENTON NJ 08610-3721	32 Parent Avenue
2481	38		Salvatore & Janice A. Damiano	35 PEARSON DR	TRENTON NJ 08610-4301	35 Pearson Drive
2481	39		Mary G. Alu	43 PEARSON DR	TRENTON NJ 08610-4301	43 Pearson Drive
2481	40		Erick Torrez	49 PEARSON DR	HAMILTON NJ 08610-4301	49 Pearson Drive
2481	41		Charles A. Bole	55 PEARSON DR	HAMILTON NJ 08610-4301	55 Pearson Drive
2481	42		Pearson Memorial United Methodist Church	71 PEARSON DR	TRENTON NJ 08610-4301	71 Pearson Drive
2484	1		3048 Broad Street LLC c/o H. Zeltt	2107 HARPERS CROSSING	LANGHORNE PA 19047-4503	3048 Broad Street
2484	2		John & Rebecca Pagano	PO BOX 283	FLORENCE NJ 08518-0283	3030 Broad Street
2484	3		Meridian Holdings, Inc.	3024 S BROAD ST	HAMILTON NJ 08610-3624	3024 Broad Street
2484	5		Meridian Holdings, Inc.	3024 S BROAD ST	HAMILTON NJ 08610-3624	3010 Broad Street
2484	6		Arthur, Joyce F. & Bruce Harrison	3002 S BROAD ST	HAMILTON NJ 08610-3608	3002 Broad Street
2484	7		David J. Thomas & Jacqueline Kraemer	24 COLONIAL AVE	HAMILTON NJ 08610-3612	24 Colonial Avenue
2484	8		Mark A. Prekop	32 COLONIAL AVE	HAMILTON NJ 08610-3612	32 Colonial Avenue
2484	9		Nicholas R. & Susan B. Lukasewycz	38 COLONIAL AVE	HAMILTON NJ 08610-3612	38 Colonial Avenue
2484	10		Freya E. Poliziana	44 COLONIAL AVE	HAMILTON NJ 08610-3612	44 Colonial Avenue
2484	11		Linda Wiedemann	50 COLONIAL AVE	TRENTON NJ 08610-3612	50 Colonial Avenue
2484	12		Chad E. Gonzales	58 COLONIAL AVE	HAMILTON NJ 08610-3612	58 Colonial Avenue
2484	19		Olga B. Puchalski c/o W. Puchalski	565 WAYNE DR	SOUTHAMPTON PA 18966-3545	63 Maple Shade Avenue
2484	20		Richard T. Woolf	57 MAPLE SHADE AVE	HAMILTON NJ 08610-3619	57 Maple Shade Avenue
2484	21		Pedro D. & Lillian A. Palacios	49 MAPLE SHADE AVE	HAMILTON NJ 08610-3619	49 Maple Shade Avenue
2484	22		Robert J. & Elizabeth A. Fields	43 MAPLE SHADE AVE	HAMILTON NJ 08610-3619	43 Maple Shade Avenue
2484	23,24		Calle Petronio & Segundo Sanchez	37 MAPLE SHADE AVE	HAMILTON NJ 08610-3619	37 Maple Shade Avenue
2487	1		Realty Income Corp., Portfolio Mgt.	PO BOX 460069	ESCONDIDO CA 92046-0069	3109 Broad Street
2487	2		Samson Marion; Sundance Enterprises, Yassmine Esther Mehdyzadeh, Marjorie Ann Gropp, trustee; Harry Stephen Gropp Revocable Trust Agreement	7885 NELSON RD	PANORAMA CITY CA 91402-6045	Broad Street
2488	1,21		Michael & Diane McGrath	3144 S BROAD ST	HAMILTON NJ 08610-3610	3144 Broad Street

2488	2	Russo & Russo, c/o Peter J. Russo	3108 S BROAD ST	HAMILTON NJ 08610-3610	3108 Broad Street
2488	3	Stephen J. Russo Jr. & Charles Russo	2300 S CLINTON AVE	HAMILTON NJ 08610-5414	3106 Broad Street
2488	4	Ralph A. Raspatello et ux	3102 S BROAD ST	HAMILTON NJ 08610-3610	3102 Broad Street
2488	5	Stephen J. Russo Jr. & Charles Russo	2300 S CLINTON AVE	HAMILTON NJ 08610-5414	18 Maple Shade Avenue
2488	6	Mariya Dodo Adigun & Alfred Adigun	24 MAPLE SHADE AVE	HAMILTON NJ 08610-3620	24 Maple Shade Avenue
2488	7	John Charles Rossetti	32 MAPLE SHADE AVE	HAMILTON NJ 08610-3620	32 Maple Shade Avenue
2488	8	Beejay Cooper & Judy Martinez	36 MAPLE SHADE AVE	HAMILTON NJ 08610-3620	36 Maple Shade Avenue
2488	9	Joseph & Annette M. Collura	44 MAPLE SHADE AVE	HAMILTON NJ 08610-3620	44 Maple Shade Avenue
2488	10	Joyce Brooks	50 MAPLE SHADE AVE	HAMILTON NJ 08610-3620	50 Maple Shade Avenue
2488	11	Joseph & Patricia L. Totaro	58 MAPLE SHADE AVE	TRENTON NJ 08610-3620	58 Maple Shade Avenue
2488	12	Nancy Pollack	64 MAPLE SHADE AVE	HAMILTON NJ 08610-3620	64 Maple Shade Avenue
2488	19	Gabriele Tattoni et ux	900 KUSER RD	HAMILTON NJ 08619-4019	40 White Horse Avenue
2488	20	The Merlou, LLC	713 KIMBERLY DR	MOORESTOWN NJ 08057	3150 Broad Street
2523	1	Pebble Creek Home Association Inc.	14000 HORIZON WAY, STE 200	MOUNT LAUREL NJ 08054-4342	Broad Street
2523	2	Pushparatnam & Pathmasani Indradas	12 SOUTH HILL DR	TRENTON NJ 08610-2720	12 South Hill Drive
2523	3	Veronica Fulton	11 SOUTH HILL DR	HAMILTON NJ 08610-2720	11 South Hill Drive
2523	4	Matthew Guagliardo & Heather Baldwin	10 SOUTH HILL DR	HAMILTON NJ 08610-2720	10 South Hill Drive
2523	5	Allison White & Sydney Breidenbach	9 SOUTH HILL DR	HAMILTON NJ 08610-2720	9 South Hill Drive
2523	6	S & T Vijayasundaram	8 SOUTH HILL DR	TRENTON NJ 08610-2720	8 South Hill Drive
2523	7	Edward F. & Dolores A. Dragan	49 CORYELL ST	LAMBERTVILLE NJ 08530-1705	7 South Hill Drive
2523	8	Subhasu & Neeru Suri	6 SOUTH HILL DR	HAMILTON NJ 08610-2720	6 South Hill Drive
2523	9	Indranie Milton-Davis	5 SOUTH HILL DR	HAMILTON NJ 08610-2720	5 South Hill Drive
2523	10	Susanna A. Burket	4 SOUTH HILL DR	HAMILTON NJ 08610-2720	4 South Hill Drive
2523	11	John J. Spera	3 SOUTH HILL DR	HAMILTON NJ 08610-2720	3 South Hill Drive
2523	12	Robert R. & Miriam Arnold	2 SOUTH HILL DR	HAMILTON NJ 08610-2720	2 South Hill Drive
2523	13	Warren E. & Dessie P. Smith	1 SOUTH HILL DR	TRENTON NJ 08610-2720	1 South Hill Drive
2523	14	Florence I. Leonard	9 JAMES CUBBERLY CT	HAMILTON NJ 08610-2722	9 James Cubberly Court
2523	15	Blair & Linda Astbury	10 JAMES CUBBERLY CT	HAMILTON NJ 08610-2722	10 James Cubberly Court
2523	16	Michael & Anne Szczepanski	11 JAMES CUBBERLY CT	HAMILTON NJ 08610-2722	11 James Cubberly Court
2523	17	Denise King & Delores King	12 JAMES CUBBERLY CT	HAMILTON NJ 08610-2722	12 James Cubberly Court
2523	18	June R. Balint	14 JAMES CUBBERLY CT	HAMILTON NJ 08610-2722	14 James Cubberly Court
2523	19	Robert M. Warboys & Susanne Meshofski	15 JAMES CUBBERLY CT	HAMILTON NJ 08610-2722	15 James Cubberly Court
2523	92	Wesley Apartments Inc. c/o J. Kersey	20 FANNING WAY	PENNINGTON NJ 08534-5132	1 James Cubberly Court
2523	93	Karl & Jayvee Ferrer	2 JAMES CUBBERLY CT	HAMILTON NJ 08610-2722	2 James Cubberly Court
2523	94	Karen Damiano	3 JAMES CUBBERLY CT	HAMILTON NJ 08610-2722	3 James Cubberly Court
2523	95	Brian M. Dolobacs	4 JAMES CUBBERLY CT	HAMILTON NJ 08610-2722	4 James Cubberly Court
2523	96	Janice Marie Flynn	5 JAMES CUBBERLY CT	HAMILTON NJ 08610-2722	5 James Cubberly Court
2523	97	David M. Lanigan	271 GROPP AVE	HAMILTON NJ 08610-2422	6 James Cubberly Court
2523	98	Brian Strandskov	7 JAMES CUBBERLY CT	HAMILTON NJ 08610-2722	7 James Cubberly Court
2524	1	JAT Properties, LLC	PO BOX 8635	HAMILTON NJ 08610-8635	3200 Broad Street
2524	3	John J. Flacco, Jr.	1251 LOWER FERRY RD	EWING NJ 08618-1406	33 White Horse Avenue
2524	4	John J. Flacco, Jr.	1251 LOWER FERRY RD	EWING NJ 08618-1406	39 White Horse Avenue
2524	5	45 Whitehorese, LLC	45 WHITE HORSE AVE	HAMILTON NJ 08610-2621	45 White Horse Avenue
2524	6	55 Whitehorse Rd, LLC c/o D.K. Winslow	2704 FOX RUN DR	PLAINSBORO NJ 08536-2756	55 White Horse Avenue
2524	7	White Horse Volunteer Fire Company	19 LOCUST AVE	HAMILTON NJ 08610-2613	19 Locust Avenue

2524	8	David Howarth	35 LOCUST AVE	HAMILTON NJ 08610-2613	35 Locust Avenue
2524	9	Donna M. & Danny Adams	41 LOCUST AVE	HAMILTON NJ 08610-2613	41 Locust Avenue
2524	10	Ralph J. Lubosco	134 ARNOLD BLVD	LONG BEACH TOWNSHIP NJ 08008-7008	45 Locust Avenue
2524	11	Indulis E. Liepins	53 LOCUST AVE	HAMILTON NJ 08610-2613	53 Locust Avenue
2524	12	Barbara C. Schreirer	59 LOCUST AVE	HAMILTON NJ 08610-2613	59 Locust Avenue
2524	13	Nancy A. Rathburn	67 LOCUST AVE	HAMILTON NJ 08610-2613	67 Locust Avenue
2524	14	Joan G. Cassidy	73 LOCUST AVE	HAMILTON NJ 08610-2613	73 Locust Avenue
2524	15	Hope L. Goldenbaum	81 LOCUST AVE	HAMILTON NJ 08610-2613	81 Locust Avenue
2524	16	Daniel James & Jennifer L. Novajosky	87 LOCUST AVE	HAMILTON NJ 08610-2613	87 Locust Avenue
2524	17	Julianne McGinley et vir	93 LOCUST AVE	HAMILTON NJ 08610-2613	93 Locust Avenue
2524	18	George T. & Nancy K. Kohlmayer	3286 S BROAD ST	TRENTON NJ 08610-2602	3286 Broad Street
2524	19	Margaret Caravetta	3284 S BROAD ST	TRENTON NJ 08610-2602	3284 Broad Street
2524	20	Margaret Caravetta	3284 S BROAD ST	TRENTON NJ 08610-2602	Broad Street
2524	21	Hansel Gonzalez	3270 S BROAD ST	HAMILTON NJ 08610-2602	3270 Broad Street
2524	22	Beth B. Seube	3264 S BROAD ST	HAMILTON NJ 08610-2602	3264 Broad Street
2524	23	Alessandro M. & Patricia Bartole	3256 S BROAD ST	HAMILTON NJ 08610-2602	3256 Broad Street
2524	24	Pasquale V. Papero Jr.	3250 S BROAD ST	HAMILTON NJ 08610-2602	3250 Broad Street
2524	25	Paul Coupe & Karen Onderdonk	3242 S BROAD ST	HAMILTON NJ 08610-2602	3242 Broad Street
2524	26	Hamilton Properties 4 Rent, Inc.	PO B0X 511	ALLENTOWN NJ 08501-0511	3228-32 Broad Street
2524	27	Joan M. Irvin	3224 S BROAD ST	TRENTON NJ 08610-2602	3224 Broad Street
2524	28	Joseph & Eugenia Calderone	3222 S BROAD ST	HAMILTON NJ 08610-2602	3222 Broad Street
2524	29	Chan H. & Chung H. Pak	141 MILLERICK AVE	LAWRENCEVILLE NJ 08648-3601	3212 Broad Street

Jurisdiction



STRUCTURAL MAINTENANCE BY THE STATE
ROUTINE MAINTENANCE BY THE TOWNSHIP
JURISDICTION OF HIGHWAY UNDER STRUCTURE BY THE STATE

File Copy

0 50 100
SCALE IN METERS

JM-1 / JM-2

LEGEND

- JURISDICTION FOR HIGHWAY MAINTENANCE AND CONTROL BY NEW JERSEY DEPARTMENT OF TRANSPORTATION
- JURISDICTION FOR HIGHWAY MAINTENANCE AND CONTROL BY THE TOWNSHIP OF HAMILTON
- RIGHT OF WAY LINE (ACCESS PERMITTED)
- RIGHT OF WAY LINE (ACCESS DENIED)
- CORPORATE BOUNDARY LINE

NOTE : DRIVEWAYS ARE NOT AFFECTED BY THIS AGREEMENT

NEW JERSEY DEPARTMENT OF TRANSPORTATION

JURISDICTIONAL LIMIT MAP

ROUTE 206 (SOUTH BROAD STREET)

JURISDICTIONAL TRANSFER OF SOUTH BROAD STREET
FROM THE WHITE HORSE CIRCLE TO LALOR STREET

TOWNSHIP OF HAMILTON — COUNTY OF MERCER

SCALE : AS INDICATED

Drafted on CADD by NJDOT Design Services

Property Data

UNITED GENERAL TITLE INSURANCE COMPANY

File No. MTA-023288

check

TITLE INSURANCE COMMITMENT
SCHEDULE A
LEGAL DESCRIPTION

All that certain lot, piece or parcel of land, with the buildings and improvements thereon erected, situate, lying and being in the **Township of Hamilton, County of Mercer State of New Jersey:**

BEGINNING at a point in the southwesterly line of the new right of way of the State Highway leading from Trenton to White Horse and being in the southeasterly line of land now of Walter L. Gropp and formerly of Thomas Parent, and running; thence

1. **Southeasterly, along the southwesterly line of the new right of way of said State Highway, 155.37 feet to a point of curve; thence**

2. **Southeasterly, still along the right of way of said Highway on a curve bearing to the right with a radius of 34.35 feet, a distance of 48.17 feet to a point in the new westerly right of way line of the State Highway leading from White Horse to Crosswicks Creek; thence**

3. **Southwesterly, along the new westerly right of way line of State Highway leading from White Horse to Crosswicks Creak, 127.00 feet, more or less, to a point in the northerly line of land now or formerly of Thomas Parent; thence**

4. **North 65 degrees West, along the said line of land of said Thomas Parent, 187.00 feet, more or less, to a point in the line of property formerly of Thomas Parent and now owned by Walter L. Gropp; thence**

5. **North 25 degrees East, along the southeasterly line of land owned by Thomas Parent 178.00 feet, more or less, to the place of BEGINNING.**

NOTE: Being Lot(s) **2**, Block **2487**, Tax Map of the **Township of Hamilton**, County of **Mercer.**

NOTE: Tax Lot and Block references are shown for informational purposes only.

MADISON TITLE AGENCY, LLC
1125 OCEAN AVENUE, LAKEWOOD, NJ 08701
Telephone: 732-905-9400 Fax: 732-905-9420

EXHIBIT "A"

LEGAL DESCRIPTION

File No: 10500ST-01

ALL THAT CERTAIN tract or parcel of land and premises lying, being and situate in Hamilton Township, Mercer County, and State of New Jersey being more particularly described as follows:

BEGINNING at a point in the northerly side line of South Broad Street said pint being distant westerly 153.79 feet from the intersection of same with the westerly line of Whitehorse Avenue and from said point and place of BEGINNING running; thence

1. North 24 degrees 43 minutes 00 seconds East, 100.00 feet to a point; thence

2. North 53 degrees 10 minutes 00 seconds West, 51.14 feet to a point; thence

3. North 24 degrees 43 minutes 00 seconds East, 110.20 feet to a point; thence

4. North 28 degrees 26 minutes 16 seconds East, 100.04 feet to a point; thence

5. South 62 degrees 24 minutes 12 seconds East, 43.31 feet to a point; thence

6. South 28 degrees 34 minutes 58 seconds West, 48.99 feet to a point; thence

7. South 60 degrees 46 minutes 18 seconds East, 155.52 feet to a point in the westerly side line of Whitehorse Avenue; thence

8. Along the westerly sideline of Whitehorse Avenue South 26 degrees 49 minutes 30 seconds East, 223.78 feet to a point; thence

9. South 67 degrees 22 minutes 30 seconds East, 30.39 feet to a point in the northerly line of South Broad Street; thence

10. Along the northerly line of South Broad Street North 72 degrees 04 minutes 30 seconds West, 114.12 feet to a point in same; thence

11. Still along the northerly line of South Broad Street North 53 degrees 09 minutes 35 seconds West, 9.55 feet to a point in same being the point and place of BEGINNING.

BEING premises No. 3150 Broad Street.

BEING Block: 2488, Lot: 20

Block 2523

103—DEED - BARGAIN AND SALE (Covenant as to Grantor's Acts)
IND. TO IND. OR CORP. — Plain Language GRVST—1

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One Commerce Drive, Cranford, N.J. 07016

I.

DEED

Prepared by:
DANIEL J. GAZIANO, JR.

This Deed is made on June 16, 1983.

BETWEEN Estate of Armando Conti, deceased, by Angela Conti, Executrix, residing at Scenic Drive, Ewing Township, Mercer County, N.J.; and

Angelo Blasi, single, residing at 446 Columbus Avenue, City of Trenton, County of Mercer and State of New Jersey; and

White Horse Circle Company, a New Jersey Corporation

referred to as the Grantors

AND Pebble Creek Corporation, a New Jersey Corporation

COUNTY OF MERCER
CONSIDERATION 490,000.00
REALTY TRANSFER FEE 1715=
DATE 6-17-83 BY DB

whose post office address is Suite 201, One Greentree Centre; Marlton, Township of Evesham, Burlington County, New Jersey referred to as the Grantee.
The words "Grantor" and "Grantee" shall mean all Grantors and all Grantees listed above.

Transfer of Ownership. The Grantor grants and conveys (transfers ownership of) the property described below to the Grantee. This transfer is made for the sum of Four Hundred Ninety Thousand Dollars ($490,000.00).

The Grantor acknowledges receipt of this money.

Tax Map Reference. (N.J.S.A. 46:15-2.1) Municipality of Township of Hamilton
Block No. 571 Lot No. 68 Account No.
☐ No property tax identification number is available on the date of this deed. (Check box if applicable.)

Property. The property consists of the land and all the buildings and structures on the land in the Township of Hamilton
County of Mercer and State of New Jersey. The legal description is:

All that certain lot, tract or parcel of land situate; lying and being in the Township of Hamilton, County of Mercer and State of New Jersey, and being known as Lot 68 in Section 571 as shown on page 88 and 89 of the Township of Hamilton Tax Maps, and being more particularly described as follows, to wit:

BEGINNING at a point in the new Southerly line of South Broad Street, said point being at the intersection of the Easterly line of United States Highway Route 206 with the aforesaid new Southerly line of South Broad Street and running, thence-

(1) Along the new Southerly line of South Broad Street, S 82°31'16" E, a distance of 211 ft. to an angle point, thence-

(2) Still along the same, S 85°14'00" E, a distance of 205.53 ft. to an angle point, thence-

(3) Still along the same, S 86°31'47" E, a distance of 442 ft. to an angle point, thence-

(4) Still along the same, S 85°05'02" E, a distance of 138 ft. to an angle point, thence-

(5) Still along the same, N 0°53'38" W, a distance of 24.47 ft. to a point in the old Southerly line of South Broad Street, thence-

(6) Along the aforesaid old Southerly line of South Broad Street, S 85°14'00" E, a distance of 50.29 ft. to a point on a concrete monument being the Northeasterly corner of the herein described Lot 68 and also being the Northwesterly corner of Lot 2, lands now or formerly of the Barclay Village Apartments, thence-

(7) Along the Easterly line of Lot 68 and also being the Westerly line of the aforesaid Lot 2, S 0°53'38" E, a distance of 461.15 ft. to a stake at an angle point, thence-

(8) Still along the same, N 89°06'22" E, a distance of 206.41 ft. to a stake at an angle point, thence-

(9) Still along the same, S 13°36'49" E, a distance of 352.48 ft. to a point in the Northerly line of Proposed New Jersey State Highway Route I-195,

(9) said point being the Southeasterly corner of Lot 68 and the Southwesterly corner of Lot 2, thence-

(10) Along the aforesaid Northerly line of Proposed Route I-195, N 84°47'32" W, a distance of 235.62 ft. to an angle point, thence-

(11) Still along the same, N 77°46'53" W. a distance of 304.67 ft. to an angle point, thence-

(12) Still along the same, N 80°13'43" W. a distance of 291.94 ft. to an angle point, thence-

(13) Still along the same, N 6°44'38" W, a distance of 169.88 ft. to an angle point, thence-

(14) Still along the same, N 0°18'04" E, a distance of 126.95 ft. to an angle point, thence-

(15) Still along the same, N 34°20'29" W, a distance of 254.35 ft. to an angle point, thence-

(16) Still along the same, N 77°03'51" W, a distance of 256.09 ft. to an angle point, thence-

(17) Still along the same, S 59°08'47" W, a distance of 188.75 ft. to an angle point, thence-

(18) Still along the same, S 35°27'30" W, a distance of 139.76 ft. to a point in the Proposed Easterly line of the aforesaid Route 206, thence-

(19) Along the aforesaid Proposed Easterly line of Route 206, N 0°20'45" E, a distance of 191.37 ft. to a point in the Easterly line of the aforesaid Route 206, thence-

(20) Along the aforesaid Easterly line of Route 206, N 53°22'29" E, a distance of 52.80 ft. to an angle point, thence-

(21) Still along the same, S 85°14'00" E, a distance of 42.03 ft. to a point on a concrete monument to an angle point, thence-

(22) Still along the same, N 18°05'21" E, a distance of 164.88 ft. to an angle point in the aforesaid Southerly line of South Broad Street being the point and place of BEGINNING.

The above-described Lot 68 being as surveyed by Lanning Engineering Co., Inc. and shown on Plan of Survey dated June 15, 1983 and containing 13.586 acres of land.

Being the same lands and premises conveyed to Blas-Con Corporation, a New Jersey Corporation, by deed from the City of Bordentown, a municipal corporation of the State of New Jersey dated June 3, 1977 and recorded in the Office of the Clerk of Mercer County on June 13, 1977 in Book 2044 of Deeds at page 380.

Blas-Con Corporation conveyed a one-half (1/2) interest in a portion of these lands and premises to White Horse Circle Company, a New Jersey Corporation, by deed dated March 24, 1978 and recorded August 20, 1979 in Deed Book 2111, page 462 in the Mercer County Clerk's Office.

Blas-Con Corporation conveyed all of its remaining interest in the entire parcel containing these lands and premises to Armando Conti and Angelo Blasi as tenants in common and not as joint tenants with right of survivorship by Deed dated April 11, 1979 and recorded April 18, 1979 in Deed Book 2100 page 81 in the Mercer County Clerk's Office.

Armando Conti died testate and his will was probated on May 13, 1980 as Docket # 80-811-A, Mercer County Surrogate's Office, wherein Angela Conti was appointed executrix with power of sale.

The above-described Lot 68 being as surveyed by Lanning Sanitary Engineering Co., Inc. and shown on the Plan of Survey dated June 15, 1983 and containing 13.586 acres of land.

SCHEDULE 'A'

Broderick –to- JAT Properties, L.L.C.
Tax Lots 1 & 2, Block 2524
Hamilton Township
Mercer County, NJ

ALL that certain tract or parcel of land and premises, hereinafter particularly described, situate, lying and being in the Township of Hamilton, in the County of Mercer and State of New Jersey, bounded and described as follows, to wit:

BEGINNING at a point in the center line of the White Horse-Yardville Road, about 25 feet southeasterly from the center line of White Horse Avenue, said point being the southeasterly corner of land conveyed by Andrew Gropp, et ux, to the Township of Hamilton, by deed dated March 30, 1908, and running thence

(1) South 80 degrees 15 minutes East, along the center line of the White Horse-Yardville Road, 184 feet, more or less, to a point in the line of land formerly of Isaac Asay; thence

(2) North 25 degrees 45 minutes East, along the line of land of said Asay, 175.88 feet to a point in the southwesterly line of land now or formerly of James Chapman; thence

(3) North 62 degrees 30 minutes West, along the line of land of said Chapman, 175 feet, more or less, to a point in the southeasterly line of lands of the Township of Hamilton; thence

(4) South 25 degrees 45 minutes West, along the said line of lands of the Township of Hamilton, 225 feet, more or less, to the place of Beginning.

Being known as Tax Lots 1 & 2, Block 2524, as shown on the Township of Hamilton Tax Map.

PRINCETON JUNCTION ENGINEERING, P.C.
PROFESSIONAL ENGINEERS AND LAND SURVEYORS

BRYCE M. RITTENHOUSE, P.E., L.S. & P.P.*
D. GEOFFREY BROWN, P.E., L.S. & P.P.
WESLEY J. LANG, L.S. & P.P.*
FRANK J. FALCONE, L.S. & P.P.
PETER R. EDIFWSKY, L.S. & P.P.*
TED W. PIVOVARNICK, L.S.
MARTIN D. KATZ, L.S.

NORTH POST ROAD
P.O. BOX 610
PRINCETON JUNCTION, NJ 08550
609.790.1006
FAX 609.799.1524
EMAIL: PJLPC@PJCPC.COM
*NJ & PA LICENSED

December 28, 1999

Description of Tax Map Lots 1 & 2, Block 2524 located in Hamilton Township, Mercer County, New Jersey.

BEGINNING at the intersection of the northerly line of South Broad Street (Variable width R.O.W.) and the easterly line of Whitehorse Avenue (Variable width R.O.W.), and running; thence

1. along the easterly line of Whitehorse Avenue North 21° 53' 45" East 201.64 feet to a point; thence

2. along the southerly line of Lot 3, Block 2524 South 68° 06' 15" East 170.00 feet to an iron pipe; thence

3. along the easterly line of Lot 29, Block 2524 South 20° 13' 45" West 146.20 feet to a point; thence

4. along the northerly line of South Broad Street North 85° 46' 15" West 182.88 feet to the point and place of **BEGINNING**.

Containing 29,990 Square Feet of Land.

As shown on a plan entitled "Plan of Survey of Lots 1 & 2, Block 2524 for JAT Properties, L.L.C. Hamilton Township, Mercer County, New Jersey", Scale: 1"= 30', Dated 12/28/99 and prepared by Princeton Junction Engineering, P.C., Princeton Junction, New Jersey.

Description prepared by Martin D. Katz, NJPLS. # 36249.

Martin D. Katz, NJPLS. # 36249

legaldescription

SCHEDULE "A"

Appendix D – Crash Data and Analysis

Crash Data

State of New Jersey

DEPARTMENT OF TRANSPORTATION
P.O. BOX 600
TRENTON, NEW JERSEY 08625-0600

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

JAMES S. SIMPSON
Commissioner

July 6, 2012

Scott Diehl, P.E., PTOE, AICP
Project Engineer
Urban Engineers
55 Haddonfield Road, Suite 200
Cherry Hill, NJ 08002
Phone: 856-663-5550

RE: Crash Data for Route US 206 MP 38.59 – 39.23, CR 524 MP 0.00 – 0.30, and CR 533 MP 0.00 – 0.25
(White Horse Circle)
Hamilton Township, Mercer County

Dear Mr. Diehl:

This is in reference to your request dated May 16, 2012, asking this office to furnish the crash data for the above – referenced locations for the most recent three year period.

Enclosed are the automated/unverified Crash Summaries for the period 2009-2011 for comparison to the previously supplied data for 2006-2008 for each of these roadway sections. This information may help your office in any engineering decision that might be made to improve or upgrade the White Horse Circle.

If there are any further questions, please contact Marhaba Omer of this office at 530-8084.

Very truly yours,

Kevin Conover, PE, PTOE
Project Engineer
Bureau of Transportation Data and Safety

Enclosure

C: Bill Birch, DPM

KC:MO

New Jersey Department of Transportation
Bureau of Safety Programs
Accident Summary

For SRI: 00000206
From MP 038.590 **To** 039.230
Time Period: 01/01/2009 **To** 12/31/2011

Restrictions:

Severity: No Restrictions
Collision Type: No Restrictions
Travel Direction: No Restrictions
Intersection: No Restrictions
Light: No Restrictions
Surface Condition: No Restrictions

Road System: No Restrictions

County-Municipality: No Restrictions

Total Accidents: 188 < 201 ('06-'08)

Severity	Count	% of Total
Fatal	0	0.00%
Injury - Maj	0	0.00%
Injury - Mod	6	3.19%
Injury - Min	23	12.23%
Property Damage	159	84.57%

Intersection	Count	% of Total
At Signalized	6	3.19%
At Unsignalized	91	48.40%
Between Intersections	91	48.40%
Railroad Crossing	0	0.00%

Collision Type	Count	% of Total
Same Dir- Rear End	74	39.36%
Same Dir- Sideswipe	24	12.77%
Angle	42	22.34%
Head On	16	8.51%
Parked Vehicle	3	1.60%
Left Turn / U Turn	5	2.66%
Backing	4	2.13%
Encroachment	3	1.60%
Overturned	1	0.53%
Fixed Object	13	6.91%
Animal	3	1.60%
Pedestrian	0	0.00%
Pedalcycle	0	0.00%
Non-Fixed Object	0	0.00%
Railcar - Vehicle	0	0.00%
Unknown	0	0.00%
Other	0	0.00%

Surface Condition	Count	% of Total
Dry	153	81.38%
Wet Surface	24	12.77%
Snow	2	1.06%
Ice	8	4.26%
Unknown	0	0.00%
Other	1	0.53%

Light	Count	% of Total
Day	137	72.87%
Dusk	5	2.66%
Night	42	22.34%
Dawn	3	1.60%
Unknown	1	0.53%

ARDSUMRPTS

New Jersey Department of Transportation
Bureau of Safety Programs
Accident Summary

July 5, 2012

For SRI: 00000524
From MP 000.000 **To** 000.300
Time Period: 01/01/2009 **To** 12/31/2011

Restrictions:

Severity: No Restrictions
Collision Type: No Restrictions
Travel Direction: No Restrictions
Intersection: No Restrictions
Light: No Restrictions
Surface Condition: No Restrictions

Road System: No Restrictions

County-Municipality: No Restrictions

Total Accidents: 33 ≈34 ('06-'08)

Severity	Count	% of Total
Fatal	0	0.00%
Injury - Maj	0	0.00%
Injury - Mod	1	3.03%
Injury - Min	11	33.33%
Property Damage	21	63.64%

Intersection	Count	% of Total
At Signalized	2	6.06%
At Unsignalized	13	39.39%
Between Intersections	18	54.55%
Railroad Crossing	0	0.00%

Collision Type	Count	% of Total
Same Dir- Rear End	10	30.30%
Same Dir- Sideswipe	1	3.03%
Angle	10	30.30%
Head On	1	3.03%
Parked Vehicle	2	6.06%
Left Turn / U Turn	1	3.03%
Backing	0	0.00%
Encroachment	0	0.00%
Overturned	0	0.00%
Fixed Object	7	21.21%
Animal	0	0.00%
Pedestrian	1	3.03%
Pedalcycle	0	0.00%
Non-Fixed Object	0	0.00%
Railcar - Vehicle	0	0.00%
Unknown	0	0.00%
Other	0	0.00%

Surface Condition	Count	% of Total
Dry	23	69.70%
Wet Surface	9	27.27%
Snow	0	0.00%
Ice	1	3.03%
Unknown	0	0.00%
Other	0	0.00%

Light	Count	% of Total
Day	20	60.61%
Dusk	0	0.00%
Night	13	39.39%
Dawn	0	0.00%
Unknown	0	0.00%

New Jersey Department of Transportation
Bureau of Safety Programs
Accident Summary

For SRI: 00000533
From MP 000.000 **To** 000.250
Time Period: 01/01/2009 **To** 12/31/2011

Restrictions:

Severity: No Restrictions
Collision Type: No Restrictions
Travel Direction: No Restrictions
Intersection: No Restrictions
Light: No Restrictions
Surface Condition: No Restrictions
Road System: No Restrictions
County-Municipality: No Restrictions

Total Accidents: 32 <39 ('06-'08)

Severity	Count	% of Total
Fatal	0	0.00%
Injury - Maj	0	0.00%
Injury - Mod	0	0.00%
Injury - Min	6	18.75%
Property Damage	26	81.25%

Intersection	Count	% of Total
At Signalized	0	0.00%
At Unsignalized	9	28.13%
Between Intersections	23	71.88%
Railroad Crossing	0	0.00%

Collision Type	Count	% of Total
Same Dir- Rear End	17	53.13%
Same Dir- Sideswipe	7	21.88%
Angle	6	18.75%
Head On	0	0.00%
Parked Vehicle	2	6.25%
Left Turn / U Turn	0	0.00%
Backing	0	0.00%
Encroachment	0	0.00%
Overturned	0	0.00%
Fixed Object	0	0.00%
Animal	0	0.00%
Pedestrian	0	0.00%
Pedalcycle	0	0.00%
Non-Fixed Object	0	0.00%
Railcar - Vehicle	0	0.00%
Unknown	0	0.00%
Other	0	0.00%

Surface Condition	Count	% of Total
Dry	22	68.75%
Wet Surface	9	28.13%
Snow	1	3.13%
Ice	0	0.00%
Unknown	0	0.00%
Other	0	0.00%

Light	Count	% of Total
Day	25	78.13%
Dusk	0	0.00%
Night	7	21.88%
Dawn	0	0.00%
Unknown	0	0.00%

NEW JERSEY DEPARTMENT OF TRANSPORTATION
MEMORANDUM

TO: John Zim, Project Engineer
Division of Project Development

RECEIVED
SEP 15 2009
Division of Project Development

FROM: William J. Beans, Section Chief
Bureau of Safety Programs

DATE: September 9, 2009

PHONE: 530 – 2471

RE: Crash Data for Route 206 MP 38.59 – 39.23, County Route 533 MP 0.00 – 0.25, and County Route 524 MP 0.00 – 0.30
Hamilton Township, Mercer County

This is in reference to your memo dated July 23, 2009, requesting this office to furnish the crash data for the above referenced locations for the most recent three years.

Enclosed are the Crash Summaries and Details of Motor Vehicle Accidents for the years January 1, 2006, through December 31, 2008. The Details will show the frequency, severity, conditions and circumstances surrounding the section crashes. The crash summaries will show overrepresentations for these sections of Route 206, County Route 533 and County Route 524 and are herewith attached. The percentages on the summary are 2008 statewide average values corresponding to overrepresented crash categories. This information may help your office in any engineering decision that might be made to improve or upgrade these sections.

If there are any further questions, please contact Geoffrey Gayanilo of this office at 530-4288.

WB:KC:TZ:GG

Mail Log No. 207-09

RECEIVED
SEP 15 2009
Division of Project Development

CRASH SUMMARY

Route 206 MP 38.59 - 39.23
Hamilton Township, Mercer County
01/01/2006 THRU 12/31/2008

TOTAL CRASHES: 201

SEVERITY	COUNT	% OF TOTAL	2008 Average
Fatal	0	0.00%	
Injury	60	29.85%	28.39%
Property Damage	141	70.15%	
Total	**201**		

INTERSECTION	COUNT	% OF TOTAL	2008 Average	**
At Signalized Intersection	6	2.99%		
At Unsignalized Intersection	92	45.77%	15.48%	
Between Intersections	103	51.24%		
Railroad Crossing	0	0.00%		
Total	**201**			

COLLISION TYPE	COUNT	% OF TOTAL	2008 Average	**
Same Dir.-Rear End	69	34.33%		
Same Dir.-Sideswipe	28	13.93%		
Angle	70	34.83%	10.65%	
Head On	1	0.50%		
Parked Vehicle	3	1.49%	1.34%	
Left Turn / U Turn	5	2.49%		
Backing	0	0.00%		
Encroachment	2	1.00%	0.24%	
Overturned	0	0.00%		
Fixed Object	19	9.45%		
Animal	0	0.00%		
Pedestrian	2	1.00%	0.89%	
Pedalcycle	1	0.50%	0.50%	
Non-Fixed Object	0	0.00%		
Unknown	0	0.00%		
Other	1	0.50%		
Total	**201**			

SURFACE CONDITION	COUNT	% OF TOTAL	2008 Average	**
Dry	157	78.11%	74.44%	
Wet Surface	43	21.39%		
Snow	0	0.00%		
Ice	0	0.00%		
Unknown	0	0.00%		
Other	1	0.50%	0.39%	
Total	**201**			

LIGHT	COUNT	% OF TOTAL	2008 Average	**
Day	150	74.63%	68.96%	
Dusk	3	1.49%		
Night	44	21.89%		
Dawn	4	1.99%	1.53%	
Unknown	0	0.00%		
Total	**201**			

Note:
** These columns indicate the number of fatal crashes in each accident category.

Length of Segment _____
Number of Years _____
AADT _____

Crash Rate/MVM _____ 2008 Statewide Crash Rate/MVM _____

NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF SAFETY PROGRAMS
DETAIL OF MOTOR VEHICLE ACCIDENTS
ON ROUTE 206
MILEPOST 38.590 TO 39.230
01/01/2006 TO 12/31/2008

ROAD SYS D L N	COLLISION TYPE	VEHICLE 1 DIR TRAV VEH TYPE, VEH ACTN	VEHICLE 2 DIR TRAV VEH TYPE, VEH ACTN	WEA SUR	LITE	DATE	DOW	TIME	VEH 1 CONTRIB CIRCUMSTANCES	VEH 2 CONTRIB CIRCUMSTANCES	NO. KIL	NO. MAJ	INJURED MOD	INJURED MIN	NO. ACC
STATE HWY	*RT 206*	*MP 038.60*	*NEAR SOUTH BROAD STREET*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*1*	*1*
06055910	SAME DIR-REAR	N- PASS-STOP-TRAF	N- PASS-STOP-TRAF	CL/DR	DAY	03/28/06	TUE	08:18	NONE-DRIVER/CYC	NONE-DRIVER/CYC	0	0	0	1	
STATE HWY	*RT 206*	*MP 038.66*	*NEAR S. BROAD ST (524)*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*7*	*2*
07163588	SAME DIR-REAR	N- PASS-STOP-TRAF	N- PASS-STOP-TRAF	CL/DR	DAY	07/10/07	TUE	16:57	NONE-DRIVER/CYC	NONE-DRIVER/CYC	0	0	0	5	
07218400	SAME DIR-REAR	E- PASS-GOING STRT	E- PASS-STOP-TRAF	CL/DR	DAY	10/12/07	FRI	16:03	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	2	
STATE HWY	*RT 206*	*MP 038.70*	*AT IRVINGTON PL / OLDFIELD RD*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
08267364	RIGHT ANGLE	S- PASS-GOING STRT	W- PASS-START TRAF	CL/DR	DAY	12/05/08	FRI	14:58	NONE-DRIVER/CYC	FAIL TO YLD ROW	0	0	0	0	
STATE HWY	*RT 206*	*MP 038.71*	*NEAR SOUTH BROAD STREET*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*1*	*3*
06055575	SAME DIR-REAR	N-CV10K-STOP-TRAF	N- PASS-STOP-TRAF	CL/DR	DAY	03/28/06	TUE	07:33	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
07058304	FIXED OBJECT	N- PASS-GOING STRT	N- PASS-GOING STRT	RN/WT	DARK	02/20/07	TUE	22:43	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08068944	SAME DIR-REAR	N- SUV-SLOW-STOP	N- PASS-SLOW-STOP	RN/WT	DAY	03/31/08	MON	08:31	FOLLOW TO CLOSE	NONE-DRIVER/CYC	0	0	0	1	
STATE HWY	*RT 206*	*MP 038.74*	*NEAR ROUTE 195*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*1*	*0*	*1*
07303858	SAME DIR-SIDE	N- PASS-PASSING	N- PASS-GOING STRT	RN/WT	DARK	12/21/07	FRI	22:25	IMP LANE CHANGE	NONE-DRIVER/CYC	0	0	1	0	
STATE HWY	*RT 206*	*MP 038.77*	*NEAR CR 524*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*2*	*1*
07301100	SAME DIR-REAR	N- PASS-STOP-TRAF	N- PASS-STOP-TRAF	CL/DR	DAY	12/28/07	FRI	08:58	NONE-DRIVER/CYC	NONE-DRIVER/CYC	0	0	0	2	
STATE HWY	*RT 206*	*MP 038.79*	*NEAR SOUTH BROAD ST*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*3*
07079204	SAME DIR-REAR	N- PASS-STOP-TRAF	N- PASS-STOP-TRAF	CL/DR	DAY	01/30/07	TUE	08:39	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
07071153	FIXED OBJECT	N- PASS-GOING STRT	- -	CL/DR	DAY	04/23/07	MON	09:37	OTH DR/PED ACT		0	0	0	0	
08229175	SAME DIR-REAR	N- PASS-GOING STRT	N- SUV-STOP-TRAF	RN/WT	DAY	10/25/08	SAT	15:26	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
STATE HWY	*RT 206*	*MP 038.80*	*AT CR 533*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
06166787	SAME DIR-SIDE	S- SUV-GOING STRT	S- PKUP-LEFT TURN	RN/WT	DAY	06/26/06	MON	12:43	NONE-DRIVER/CYC	IMP LANE CHANGE	0	0	0	0	
STATE HWY	*RT 206*	*MP 038.82*	*NEAR CR 524*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*3*	*5*
07055865	SAME DIR-REAR	N- PASS-GOING STRT	N- PASS-SLOW-STOP	CL/DR	DAY	02/22/07	THR	07:55	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
07152641	SAME DIR-SIDE	S- PASS-GOING STRT	S- PASS-STOP-TRAF	CL/DR	DAY	07/24/07	TUE	15:10	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08034961	SAME DIR-REAR	N- PASS-STOP-TRAF	N- PKUP-GOING STRT	CL/DR	DAY	02/25/08	MON	16:46	NONE-DRIVER/CYC	SUNGLARE	0	0	0	1	
08101638	SAME DIR-REAR	N- PKUP-GOING STRT	N- PASS-SLOW-STOP	CL/DR	DAY	05/28/08	WED	08:35	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	1	
08228897	SAME DIR-REAR	N- PKUP-GOING STRT	N- PASS-GOING STRT	CL/DR	DUSK	10/21/08	TUE	17:32	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	1	
STATE HWY	*RT 206*	*MP 038.83*	*NEAR PEARSON DR*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*1*	*4*
06263112	SAME DIR-REAR	E- SUV-STOP-TRAF	E- PASS-GOING STRT	RN/WT	DAY	12/01/06	FRI	14:46	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
07121045	SAME DIR-SIDE	S-CV10K-CHNG LANES	S- PASS-GOING STRT	CL/DR	DAY	05/18/07	FRI	15:57	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	1	
07153048	RIGHT ANGLE	S- SUV-START TRAF	E- PASS-GOING STRT	CL/DR	DAY	07/14/07	SAT	17:08	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
07153093	RIGHT ANGLE	N- PASS-GOING STRT	E- SUV-START TRAF	CL/DR	DAY	08/07/07	TUE	17:37	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	

County-Municipality Restrictions: 1: 2:

NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF SAFETY PROGRAMS
DETAIL OF MOTOR VEHICLE ACCIDENTS
ON ROUTE 206
MILEPOST 38.590 TO 39.230
01/01/2006 TO 12/31/2008

ROAD SYS D L N	COLLISION TYPE	VEHICLE 1 DIR TRAV VEH TYPE, VEH ACTN	VEHICLE 2 DIR TRAV VEH TYPE, VEH ACTN	WEA SUR	LITE	DATE	DOW	TIME	VEH 1 CONTRIB CIRCUMSTANCES	VEH 2 CONTRIB CIRCUMSTANCES	NO. KIL	NO. MAJ	INJURED MOD	INJURED MIN	NO. ACC
STATE HWY	*RT 206*	*MP 038.84*	*NEAR SOUTH BROAD STREET*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*2*
08184003	SAME DIR-SIDE	N- PASS-GOING STRT	N- PKUP-CHNG LANES	CL/DR	DAY	08/06/08	WED	12:19	NONE-DRIVER/CYC	IMP LANE CHANGE	0	0	0	0	
08208403	STR PK VEH	N- PASS-GOING STRT	- PASS-PARKED	RN/WT	DARK	09/27/08	SAT	04:00	DRI INATTENTION		0	0	0	0	
STATE HWY	*RT 206*	*MP 038.86*	*NEAR CR 524*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*1*	*2*
06125090	SAME DIR-REAR	N- PASS-STOP-TRAF	N- PASS-SLOW-STOP	CL/DR	DAY	06/22/06	THR	19:39	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
08083474	SAME DIR-REAR	W- PASS-MERGING	W- SUV-MERGING	CL/DR	DAY	04/18/08	FRI	12:06	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	1	
STATE HWY	*RT 206*	*MP 038.87*	*NEAR WHITEHORSE AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*4*
06233240	SAME DIR-SIDE	S- SUV-START TRAF	S- PASS-SLOW-STOP	CL/DR	DAY	10/29/06	SUN	11:28	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
07090526	SAME DIR-REAR	W-CV10K-START TRAF	W- PASS-START TRAF	CL/DR	DAY	05/14/07	MON	09:58	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08018818	SAME DIR-REAR	S- SUV-SLOW-STOP	S- SUV-STOP-TRAF	RN/WT	DAY	02/05/08	TUE	16:13	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08139381	FIXED OBJECT	S- SUV-GOING STRT	- -	RN/WT	DAY	07/14/08	MON	08:22	DRI INATTENTION		0	0	0	0	
STATE HWY	*RT 206*	*MP 038.87*	*AT WHITEHORSE AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*1*	*1*
08115095	SAME DIR-REAR	N- PASS-SLOW-STOP	N- PASS-STOP-TRAF	CL/DR	DAY	06/17/08	TUE	18:46	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	1	
STATE HWY	*RT 206*	*MP 038.88*	*NEAR WHITEHORSE AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*1*	*4*	*13*
06216101	SAME DIR-SIDE	S- PASS-GOING STRT	S- PASS-GOING STRT	CL/DR	DARK	10/14/06	SAT	20:28	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
06231034	SAME DIR-REAR	N- PASS-GOING STRT	N- PKUP-GOING STRT	CL/DR	DAY	10/25/06	WED	15:16	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
06232931	SAME DIR-SIDE	W- PASS-GOING STRT	W- PASS-MERGING	CL/DR	DAY	10/31/06	TUE	08:06	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
06266031	SAME DIR-REAR	W- PASS-STOP-TRAF	W- PASS-START TRAF	CL/DR	DAY	12/04/06	MON	07:51	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
07026700	SAME DIR-REAR	W- PASS-SLOW-STOP	W- PASS-GOING STRT	CL/DR	DAY	03/01/07	THR	08:42	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	1	
07069426	SAME DIR-SIDE	N-S2AXL-CHNG LANES	N- PASS-GOING STRT	CL/DR	DAY	03/05/07	MON	09:02	IMP LANE CHANGE	NONE-DRIVER/CYC	0	0	0	0	
07124124	SAME DIR-REAR	W- SUV-STOP-TRAF	W- PASS-GOING STRT	CL/DR	DAY	07/02/07	MON	09:00	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
07127508	SAME DIR-REAR	W- PASS-START TRAF	W- PASS-STOP-TRAF	CL/DR	DARK	07/12/07	THR	20:43	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	2	
07191549	SAME DIR-REAR	N- SUV-STOP-TRAF	N- PASS-SLOW-STOP	CL/DR	DAY	08/01/07	WED	07:02	NONE-DRIVER/CYC	FOLLOW TO CLOSE	0	0	0	0	
07241313	SAME DIR-REAR	W- SUV-STOP-TRAF	W- -GOING STRT	OC/DR	DAY	11/03/07	SAT	12:25	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
08070275	SAME DIR-REAR	S- SUV-GOING STRT	S- PASS-STOP-TRAF	CL/DR	DAY	04/22/08	TUE	13:52	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08213785	SAME DIR-REAR	N- PASS-GOING STRT	N- PASS-GOING STRT	RN/WT	DARK	09/26/08	FRI	20:20	DRI INATTENTION	FOLLOW TO CLOSE	0	0	0	1	
08228901	FIXED OBJECT	N- SUV-GOING STRT	- -	CL/DR	DAY	10/18/08	SAT	07:46	DRI INATTENTION		0	0	1	0	
STATE HWY	*RT 206*	*MP 038.88*	*AT SO. BROAD ST.*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*9*	*21*
06000968	RIGHT ANGLE	N- SUV-GOING STRT	E- PASS-GOING STRT	CL/DR	DARK	01/16/06	MON	21:05	NONE-DRIVER/CYC	DISOBEYED TCD	0	0	0	0	
06000973	RIGHT ANGLE	W- PASS-GOING STRT	S-CV10K-GOING STRT	RN/WT	DAWN	01/18/06	WED	07:27	NONE-DRIVER/CYC	DISOBEYED TCD	0	0	0	0	
06126850	RIGHT ANGLE	E- PASS-GOING STRT	N- PKUP-GOING STRT	CL/DR	DARK	06/10/06	SAT	01:06	NONE-DRIVER/CYC	FAIL TO YLD ROW	0	0	0	2	
06125091	RIGHT ANGLE	W- PASS-GOING STRT	N- SUV-GOING STRT	CL/DR	DAY	06/23/06	FRI	11:06	NONE-DRIVER/CYC	FAIL TO YLD ROW	0	0	0	0	
06134021	FIXED OBJECT	S- PKUP-GOING STRT	- -	CL/WT	DARK	06/30/06	FRI	00:21	UNSAFE SPEED		0	0	0	0	
06242580	RIGHT ANGLE	W- PASS-GOING STRT	N- PASS-GOING STRT	CL/DR	DAY	10/26/06	THR	16:48	NONE-DRIVER/CYC	DISOBEYED TCD	0	0	0	2	
06265591	SAME DIR-SIDE	S- PKUP-GOING STRT	S- PASS-MERGING	CL/DR	DAY	11/11/06	SAT	14:55	NONE-DRIVER/CYC	IMP LANE CHANGE	0	0	0	0	
06273450	RIGHT ANGLE	W- PASS-GOING STRT	N- PASS-GOING STRT	CL/DR	DAY	12/18/06	MON	09:51	NONE-DRIVER/CYC	FAIL TO YLD ROW	0	0	0	0	

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MILEPOST 38.590 TO 39.230
01/01/2006 TO 12/31/2008

ROAD SYS D L N	COLLISION TYPE	VEHICLE 1 DIR TRAV VEH TYPE, VEH ACTN	VEHICLE 2 DIR TRAV VEH TYPE, VEH ACTN	WEA SUR	LITE	DATE	DOW	TIME	VEH 1 CONTRIB CIRCUMSTANCES	VEH 2 CONTRIB CIRCUMSTANCES	NO. KIL	NO. MAJ	INJURED MOD	INJURED MIN	NO. ACC
STATE HWY	*RT 206*	*MP 038.88*	*AT WHITEHORSE AVE.*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*9*	*21*
07076220	SAME DIR-REAR	S- PASS-START TRAF	S- SUV-START TRAF	CL/DR	DAY	04/30/07	MON	18:52	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
07110202	RIGHT ANGLE	W- SUV-GOING STRT	S- PASS-GOING STRT	RN/WT	DAY	06/03/07	SUN	15:45	UNKNOWN	NONE-DRIVER/CYC	0	0	0	0	
07132100	RIGHT ANGLE	E- PASS-MERGING	N- PASS-NEG CURVE	CL/WT	DAY	07/19/07	THR	19:03	DISOBEYED TCD	NONE-DRIVER/CYC	0	0	0	0	
07153073	RIGHT ANGLE	N- SUV-GOING STRT	W- PASS-MERGING	CL/DR	DAY	08/11/07	SAT	06:55	NONE-DRIVER/CYC	FAIL TO YLD ROW	0	0	0	2	
07223404	RIGHT ANGLE	N- PASS-MERGING	W- PASS-GOING STRT	CL/DR	DAY	09/27/07	THR	16:29	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	1	
07289441	RIGHT ANGLE	N- SUV-GOING STRT	E- PASS-STOP-TRAF	CL/DR	DAY	12/19/07	WED	12:46	NONE-DRIVER/CYC	FAIL TO YLD ROW	0	0	0	0	
08000669	RIGHT ANGLE	E- PASS-GOING STRT	N- SUV-GOING STRT	CL/WT	DARK	01/11/08	FRI	17:40	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
08000671	RIGHT ANGLE	E- SUV-GOING STRT	N- PASS-GOING STRT	OC/WT	DARK	01/11/08	FRI	18:32	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
08007254	SAME DIR-SIDE	E- PASS-GOING STRT	E- PASS-GOING STRT	CL/DR	DAY	01/15/08	TUE	08:14	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	1	
08116757	FIXED OBJECT	E- PASS-GOING STRT	- -	CL/DR	DARK	03/12/08	WED	01:28	UNSAFE SPEED		0	0	0	0	
08099746	SAME DIR-SIDE	S- PASS-GOING STRT	S- PASS-START TRAF	RN/WT	DAY	05/09/08	FRI	13:39	NONE-DRIVER/CYC	NONE-DRIVER/CYC	0	0	0	0	
08111008	RIGHT ANGLE	E- PKUP-SLOW-STOP	N- PASS-NEG CURVE	CL/DR	DARK	06/01/08	SUN	22:15	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
08149028	RIGHT ANGLE	N- PASS-GOING STRT	E- PASS-GOING STRT	CL/DR	DARK	07/14/08	MON	21:01	UNSAFE SPEED	NONE-DRIVER/CYC	0	0	0	1	
STATE HWY	*RT 206*	*MP 038.89*	*NEAR WHITEHORSE AVE*				*HAMILTON TWP*			*MERCER*	*0*	*1*	*0*	*6*	*17*
06139893	SAME DIR-REAR	W- PASS-GOING STRT	W-CV10K-SLOW-STOP	CL/DR	DAY	07/10/06	MON	14:32	UNSAFE SPEED	NONE-DRIVER/CYC	0	0	0	1	
06142357	SAME DIR-REAR	N-S2AXL-UNKNOWN	N- PASS-GOING STRT	CL/DR	DAY	07/17/06	MON	16:27	NONE-DRIVER/CYC		0	0	0	0	
06281440	SAME DIR-SIDE	W-CV10K-STOP-TRAF	W- PASS-GOING STRT	CL/DR	DAY	11/15/06	WED	08:17	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	1	
07057645	RIGHT ANGLE	S- PASS-START TRAF	W- PASS-GOING STRT	CL/DR	DAY	04/09/07	MON	10:36	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
07085745	SAME DIR-REAR	W- SUV-STOP-TRAF	W- PASS-GOING STRT	CL/DR	DAY	05/04/07	FRI	09:48	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
07122606	SAME DIR-SIDE	S- PASS-GOING STRT	S- PASS-SLOW-STOP	CL/DR	DAY	06/20/07	WED	17:48	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
07163585	SAME DIR-REAR	W- PASS-START TRAF	W- SUV-START TRAF	CL/DR	DAY	07/09/07	MON	07:43	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	1	
07181681	RIGHT ANGLE	S- PASS-MERGING	W- PKUP-GOING STRT	CL/DR	DAY	09/04/07	TUE	17:14	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	1	
07208123	SAME DIR-REAR	W- PASS-START TRAF	W- PASS-STOP-TRAF	CL/DR	DAY	09/25/07	TUE	08:05	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	1	
08007262	SAME DIR-REAR	N- PASS-STOP-TRAF	- PASS-SLOW-STOP	CL/DR	DAY	01/07/08	MON	15:45	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08012348	RIGHT ANGLE	W- PASS-MERGING	N- PASS-GOING STRT	CL/DR	DAY	01/21/08	MON	15:33	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08093922	FIXED OBJECT	S- PASS-NEG CURVE	- -	CL/DR	DARK	05/03/08	SAT	23:20	DRI INATTENTION		0	0	0	0	
08125177	SAME DIR-REAR	W- PASS-START TRAF	W- PASS-STOP-TRAF	CL/DR	DAY	06/19/08	THR	14:21	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08168671	SAME DIR-REAR	N- PASS-STOP-TRAF	N- PASS-STOP-TRAF	CL/DR	DAY	08/04/08	MON	12:45	NONE-DRIVER/CYC	NONE-DRIVER/CYC	0	0	0	0	
08240329	SAME DIR-REAR	E- PASS-SLOW-STOP	E- PASS-STOP-TRAF	RN/WT	DAY	11/06/08	THR	14:17	UNSAFE SPEED	NONE-DRIVER/CYC	0	0	0	0	
08240322	STR PK VEH	W-BV9PL-PARKED	W- PASS-RT TRN-NRD	OC/DR	DAY	11/08/08	SAT	15:48	NONE-DRIVER/CYC	OTH DR/PED ACT	0	1	0	0	
08257825	SAME DIR-REAR	W-BV9PL-SLOW-STOP	W- SUV-STOP-TRAF	CL/DR	DAY	11/24/08	MON	09:10	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	1	
STATE HWY	*RT 206*	*MP 038.89*	*AT CR 533*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*1*	*6*	*36*
06261005	RIGHT ANGLE	S- PASS-MERGING	E- PASS-GOING STRT	CL/DR	DARK	11/19/06	SUN	18:42	DISOBEYED TCD	UNKNOWN	0	0	0	0	
06262775	RIGHT ANGLE	S- PKUP-SLOW-STOP	E- SUV-GOING STRT	RN/WT	DARK	11/22/06	WED	19:12	DISOBEYED TCD	NONE-DRIVER/CYC	0	0	0	0	
06284942	RIGHT ANGLE	N- PASS-GOING STRT	W- PASS-GOING STRT	RN/WT	DARK	11/22/06	WED	17:47	NONE-DRIVER/CYC	FAIL TO YLD ROW	0	0	0	0	
06286409	SAME DIR-REAR	W- PASS-STOP-TRAF	W- PASS-STOP-TRAF	CL/DR	DAY	12/21/06	THR	14:08	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
06286414	SAME DIR-REAR	S- PKUP-SLOW-STOP	S- PASS-SLOW-STOP	OC/DR	DAY	12/22/06	FRI	10:30	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	

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ROAD SYS D L N	COLLISION TYPE	VEHICLE 1 DIR TRAV VEH TYPE, VEH ACTN	VEHICLE 2 DIR TRAV VEH TYPE, VEH ACTN	WEA SUR	LITE	DATE	DOW	TIME	VEH 1 CONTRIB CIRCUMSTANCES	VEH 2 CONTRIB CIRCUMSTANCES	NO. KIL	NO. MAJ	INJURED MOD	INJURED MIN	NO. ACC
STATE HWY	*RT 206*	*MP 038.89*	*AT WHITEHOUSE AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*1*	*6*	*36*
07042772	RIGHT ANGLE	S- PASS-GOING STRT	E- SUV-GOING STRT	CL/WT	DARK	03/23/07	FRI	21:16	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
07098741	SAME DIR-REAR	E- PASS-GOING STRT	E- PASS-GOING STRT	RN/WT	DARK	04/16/07	MON	23:00	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
07110225	SAME DIR-SIDE	N- PASS-NEG CURVE	N- PASS-NEG CURVE	OC/DR	DAY	05/28/07	MON	09:24	NONE-DRIVER/CYC	IMP LANE CHANGE	0	0	0	0	
07132964	SAME DIR-SIDE	E- SUV-MERGING	E- PASS-MERGING	CL/DR	DAY	06/01/07	FRI	16:50	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
07125662	RIGHT ANGLE	E- PASS-SLOW-STOP	N- PASS-GOING STRT	CL/DR	DAY	06/18/07	MON	14:38	FAIL TO YLD ROW	FAIL TO YLD ROW	0	0	0	0	
07127513	RIGHT ANGLE	S- PASS-MERGING	E- PASS-STOP-TRAF	CL/DR	DAY	06/29/07	FRI	17:49	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	1	
07191233	SAME DIR-SIDE	N-SEMIT-GOING STRT	N- PASS-GOING STRT	CL/DR	DAY	08/12/07	SUN	17:59	UNKNOWN	UNKNOWN	0	0	0	0	
07156678	RIGHT ANGLE	N- PASS-LEFT TURN	W- PASS-GOING STRT	OC/DR	DAY	08/16/07	THR	11:37	DISOBEYED TCD	NONE-DRIVER/CYC	0	0	0	0	
07156667	FIXED OBJECT	E- PASS-NEG CURVE	- -	CL/DR	DARK	08/19/07	SUN	02:27	DRI INATTENTION		0	0	0	0	
07172556	RIGHT ANGLE	E- PASS-GOING STRT	N- PKUP-GOING STRT	CL/DR	DAY	08/19/07	SUN	10:46	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
07205108	SAME DIR-SIDE	S- SUV-MERGING	S- PASS-GOING STRT	CL/DR	DAY	09/10/07	MON	08:05	OTH DR/PED ACT	NONE-DRIVER/CYC	0	0	0	0	
07189023	RIGHT ANGLE	N- PASS-GOING STRT	W- PASS-GOING STRT	CL/DR	DAY	09/13/07	THR	15:17	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
07224226	RIGHT ANGLE	S- PASS-MERGING	E- PKUP-MERGING	CL/DR	DAY	10/15/07	MON	16:19	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
07233146	RIGHT ANGLE	- PASS-GOING STRT	- SUV-GOING STRT	CL/DR	DAY	10/22/07	MON	09:03	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
07233155	RIGHT ANGLE	S- PASS-GOING STRT	W- PASS-GOING STRT	RN/WT	DUSK	10/24/07	WED	17:45	DISOBEYED TCD	NONE-DRIVER/CYC	0	0	0	1	
07274273	RIGHT ANGLE	N- PASS-START TRAF	W- PASS-GOING STRT	RN/WT	DAY	12/02/07	SUN	13:46	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
07278296	SAME DIR-REAR	N-S2AXL-GOING STRT	N- PASS-STOP-TRAF	CL/DR	DAY	12/14/07	FRI	13:35	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08047462	SAME DIR-REAR	N- SUV-START TRAF	N- SUV-START TRAF	CL/DR	DAY	03/17/08	MON	14:53	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	1	
08060019	SAME DIR-SIDE	W-BV9PL-GOING STRT	W- PASS-STOP-TRAF	CL/DR	DAY	04/03/08	THR	09:01	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
08062546	RIGHT ANGLE	S- PASS-GOING STRT	W- PASS-GOING STRT	OC/DR	DAY	04/07/08	MON	13:49	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
08109795	RIGHT ANGLE	S-MCYCL-NEG CURVE	E- SUV-GOING STRT	CL/DR	DAY	04/14/08	MON	16:52	NONE-DRIVER/CYC	FAIL TO YLD ROW	0	0	1	0	
08083475	RIGHT ANGLE	W- PASS-GOING STRT	E- PASS-GOING STRT	CL/DR	DAY	04/18/08	FRI	11:53	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
08093927	RIGHT ANGLE	E- SUV-GOING STRT	N- PASS-GOING STRT	CL/DR	DAY	05/02/08	FRI	16:58	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
08101616	SAME DIR-REAR	S- PASS-GOING STRT	S- PASS-SLOW-STOP	RN/WT	DAY	05/18/08	SUN	17:38	NONE-DRIVER/CYC	NONE-DRIVER/CYC	0	0	0	0	
08133170	OTHER	W-MCYCL-PASSING	- -	CL/DR	DAY	06/21/08	SAT	11:43	NONE-DRIVER/CYC		0	0	0	1	
08115104	RIGHT ANGLE	S- PASS-GOING STRT	W- PASS-GOING STRT	CL/DR	DAY	06/28/08	SAT	11:57	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
08134345	RIGHT ANGLE	S- SUV-START TRAF	W- PKUP-GOING STRT	CL/DR	DAY	07/08/08	TUE	18:16	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08190760	RIGHT ANGLE	W- PASS-GOING STRT	N- PASS-NEG CURVE	CL/DR	DAY	08/27/08	WED	16:13	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
08238538	RIGHT ANGLE	E- PASS-GOING STRT	N-PVLT9-START TRAF	CL/DR	DAY	10/29/08	WED	12:16	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	2	
08248340	RIGHT ANGLE	S- PASS-GOING STRT	W- PASS-GOING STRT	SN/DR	DARK	11/10/08	MON	21:06	DISOBEYED TCD	NONE-DRIVER/CYC	0	0	0	0	
08297812	SAME DIR-SIDE	N-SEMIT-GOING STRT	N- PASS-STOP-TRAF	RN/WT	DAY	12/19/08	FRI	16:15	IMP LANE CHANGE	NONE-DRIVER/CYC	0	0	0	0	
STATE HWY	*RT 206*	*MP 038.90*	*NEAR WHITEHORSE AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*1*	*4*	*12*
06199894	RIGHT ANGLE	E- PASS-GOING STRT	S- PASS-GOING STRT	CL/DR	DARK	04/06/06	THR	21:59	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	1	
06163052	SAME DIR-REAR	W- PASS-START TRAF	W- SUV-START TRAF	CL/DR	DAY	07/28/06	FRI	19:15	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	1	
07055866	SAME DIR-SIDE	W- PASS-GOING STRT	W- PASS-CHNG LANES	SN/WT	DARK	02/25/07	SUN	17:39	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
08154531	SAME DIR-REAR	E- SUV-GOING STRT	E- PASS-STOP-TRAF	CL/DR	DAY	06/13/08	FRI	10:41	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08163499	LEFT/U TURN	E- PASS-LEFT TURN	W- PASS-GOING STRT	CL/DR	DAY	07/25/08	FRI	08:29	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	1	0	
08189202	STR PK VEH	S- PASS-GOING STRT	-PVLT9-PARKED	RN/WT	DARK	08/30/08	SAT	02:40	UNSAFE SPEED		0	0	0	2	

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BUREAU OF SAFETY PROGRAMS
DETAIL OF MOTOR VEHICLE ACCIDENTS
ON ROUTE 206
MILEPOST 38.590 TO 39.230
01/01/2006 TO 12/31/2008

ROAD SYS D L N	COLLISION TYPE	VEHICLE 1 DIR TRAV VEH TYPE, VEH ACTN	VEHICLE 2 DIR TRAV VEH TYPE, VEH ACTN	WEA SUR	LITE	DATE	DOW	TIME	VEH 1 CONTRIB CIRCUMSTANCES	VEH 2 CONTRIB CIRCUMSTANCES	NO. KIL	NO. MAJ	INJURED MOD	INJURED MIN	NO. ACC
STATE HWY	*RT 206*	*MP 038.90*	*NEAR WOODSIDE AVENUE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*1*	*4*	*12*
08202449	RIGHT ANGLE	N- PASS-LEFT TURN	E- PASS-LEFT TURN	OC/DR	DAY	09/06/08	SAT	09:42	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08196498	SAME DIR-SIDE	N- PKUP-CHNG LANES	N- PASS-RT TRN-NRD	CL/DR	DAY	09/13/08	SAT	12:02	NONE-DRIVER/CYC	IMPROPER TURN	0	0	0	0	
08209924	SAME DIR-REAR	W- PASS-GOING STRT	W- PASS-SLOW-STOP	CL/DR	DARK	09/20/08	SAT	17:31	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08234730	FIXED OBJECT	W- -GOING STRT	- -	CL/DR	DARK	10/22/08	WED	01:34	DRI INATTENTION		0	0	0	0	
08240328	ENCROACHMENT	N- PASS-RT TRN-RED	N- PASS-GOING STRT	CL/DR	DARK	11/06/08	THR	17:25	IMPROPER TURN	NONE-DRIVER/CYC	0	0	0	0	
08279491	ENCROACHMENT	S- PASS-MERGING	S- PASS-GOING STRT	CL/DR	DAY	12/13/08	SAT	12:45	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
STATE HWY	*RT 206*	*MP 038.90*	*AT S. BROAD ST.*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*2*	*6*	*22*
06054377	RIGHT ANGLE	E- PASS-GOING STRT	N- PASS-GOING STRT	CL/DR	DAY	03/22/06	WED	07:58	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
06092046	RIGHT ANGLE	W- PASS-GOING STRT	N- SUV-GOING STRT	CL/DR	DAY	05/13/06	SAT	16:48	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	3	
06112936	RIGHT ANGLE	W- PASS-GOING STRT	N- PASS-GOING STRT	OC/DR	DAY	06/08/06	THR	18:15	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
06120323	RIGHT ANGLE	W- PASS-SLOW-STOP	N-S2AXL-GOING STRT	CL/DR	DAY	06/13/06	TUE	19:36	BRAKES	NONE-DRIVER/CYC	0	0	0	1	
06166395	RIGHT ANGLE	E- PASS-GOING STRT	S- PASS-GOING STRT	CL/DR	DAY	07/04/06	TUE	18:44	NONE-DRIVER/CYC	FAIL TO YLD ROW	0	0	0	0	
06224340	SAME DIR-SIDE	E- PASS-GOING STRT	E- PASS-LEFT TURN	OC/WT	DAY	10/07/06	SAT	09:13	NONE-DRIVER/CYC	IMP LANE CHANGE	0	0	0	0	
06216668	SAME DIR-REAR	N- PASS-GOING STRT	N- PASS-STOP-TRAF	CL/DR	DAY	10/12/06	THR	17:25	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	1	
06228160	RIGHT ANGLE	N- PKUP-GOING STRT	E- PASS-STOP-TRAF	CL/DR	DAY	10/21/06	SAT	15:15	NONE-DRIVER/CYC	FAIL TO YLD ROW	0	0	0	0	
07059610	RIGHT ANGLE	S- PASS-CHNG LANES	W-S2AXL-GOING STRT	OC/DR	DAY	04/13/07	FRI	16:07	IMP LANE CHANGE	NONE-DRIVER/CYC	0	0	0	0	
08118675	SAME DIR-REAR	E- PASS-GOING STRT	E- PASS-STOP-TRAF	CL/DR	DAY	06/09/08	MON	14:10	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08163511	RIGHT ANGLE	N- PKUP-MERGING	E- PASS-GOING STRT	CL/WT	DAY	07/09/08	WED	18:42	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08148050	RIGHT ANGLE	E- PASS-SLOW-STOP	N- PASS-GOING STRT	CL/DR	DAY	07/19/08	SAT	16:14	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
08192951	OPP HEAD-ON	W- PKUP-LEFT TURN	E-MCYCL-GOING STRT	CL/DR	DARK	08/04/08	MON	01:10	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	1	0	
08184005	SAME DIR-REAR	W- PASS-NEG CURVE	W- PASS-NEG CURVE	CL/DR	DARK	08/06/08	WED	22:10	NONE-DRIVER/CYC	OTH DR/PED ACT	0	0	0	0	
08202444	LEFT/U TURN	S- PASS-LEFT TURN	N-MCYCL-GOING STRT	CL/DR	DAY	08/31/08	SUN	17:20	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	1	0	
08208405	LEFT/U TURN	S- PASS-LEFT TURN	N- PASS-GOING STRT	RN/WT	DAY	09/26/08	FRI	16:23	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
08225684	SAME DIR-SIDE	S- SUV-GOING STRT	S- PASS-GOING STRT	CL/DR	DAY	10/18/08	SAT	07:52	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08241815	OPP ANGLE	S- SUV-GOING STRT	N- PASS-GOING STRT	OC/DR	DAY	10/27/08	MON	15:28	DISOBEYED TCD	NONE-DRIVER/CYC	0	0	0	0	
08241809	PEDESTRIAN	N- PASS-LEFT TURN	- -	RN/WT	DAY	10/28/08	TUE	15:03	NONE-DRIVER/CYC		0	0	0	1	
08238531	FIXED OBJECT	S- PASS-GOING STRT	- -	CL/DR	DAY	10/30/08	THR	10:22	DRI INATTENTION		0	0	0	0	
08257829	OPP ANGLE	S- PKUP-GOING STRT	N- PASS-GOING STRT	RN/WT	DAWN	11/25/08	TUE	06:47	DISOBEYED TCD	NONE-DRIVER/CYC	0	0	0	0	
08280084	FIXED OBJECT	E- SUV-GOING STRT	- -	RN/WT	DARK	12/12/08	FRI	01:49	DRI INATTENTION		0	0	0	0	
MUN STREET	*206*	*MP 038.90*	*NEAR WHITEHORSE AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*1*	*2*
06077929	SAME DIR-SIDE	W- PASS-START TRAF	W- PASS-GOING STRT	CL/DR	DARK	04/23/06	SUN	19:36	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
06142083	SAME DIR-REAR	W- PASS-SLOW-STOP	W-S2AXL-GOING STRT	CL/DR	DARK	07/11/06	TUE	20:20	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	1	
MUN STREET	*206*	*MP 038.90*	*AT WHITEHORSE MERCERVILLE ROAD*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*2*	*4*
06112907	RIGHT ANGLE	W- SUV-START TRAF	N- PASS-GOING STRT	CL/DR	DAY	06/09/06	FRI	12:35	DISOBEYED TCD	NONE-DRIVER/CYC	0	0	0	0	
06120333	RIGHT ANGLE	N- PASS-GOING STRT	W- PASS-GOING STRT	CL/DR	DAY	06/17/06	SAT	18:25	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
06188594	RIGHT ANGLE	- PASS-GOING STRT	S- PASS-START TRAF	RN/WT	DAY	09/05/06	TUE	17:26	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	

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MILEPOST 38.590 TO 39.230
01/01/2006 TO 12/31/2008

ROAD SYS D L N	COLLISION TYPE	VEHICLE 1 DIR TRAV VEH TYPE, VEH ACTN	VEHICLE 2 DIR TRAV VEH TYPE, VEH ACTN	WEA SUR	LITE	DATE	DOW	TIME	VEH 1 CONTRIB CIRCUMSTANCES	VEH 2 CONTRIB CIRCUMSTANCES	NO. KIL	NO. MAJ	INJURED MOD	INJURED MIN	NO. ACC
MUN STREET	*206*	*MP 038.90*	*AT WHITEHORSE AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*2*	*4*
06216699	RIGHT ANGLE	W- PASS-GOING STRT	N- SUV-GOING STRT	CL/DR	DARK	10/07/06	SAT	21:58	NONE-DRIVER/CYC	FAIL TO YLD ROW	0	0	0	2	
MUN STREET	*206*	*MP 038.91*	*NEAR WHITE HORSE AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*5*	*9*
06003448	SAME DIR-REAR	N- PASS-STOP-TRAF	N- SUV-GOING STRT	FG/DR	DAY	01/13/06	FRI	08:33	NONE-DRIVER/CYC	FOLLOW TO CLOSE	0	0	0	1	
06007121	RIGHT ANGLE	S- PASS-GOING STRT	N- PKUP-GOING STRT	RN/WT	DAY	01/29/06	SUN	15:15	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
06087610	SAME DIR-REAR	W- PKUP-GOING STRT	W- PASS-STOP-TRAF	CL/DR	DAY	05/09/06	TUE	18:35	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
06095638	SAME DIR-REAR	W- PASS-STOP-TRAF	W- SUV-GOING STRT	CL/DR	DAY	05/22/06	MON	09:01	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	1	
06102833	FIXED OBJECT	E- SUV-GOING STRT	- -	CL/DR	DAY	05/27/06	SAT	05:17	UNSAFE SPEED		0	0	0	0	
06102844	SAME DIR-REAR	N- PASS-STOP-TRAF	N- PASS-START TRAF	CL/DR	DARK	05/29/06	MON	20:46	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	2	
06119461	SAME DIR-REAR	N- PASS-MERGING	N- PASS-MERGING	CL/DR	DUSK	06/16/06	FRI	19:09	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
06196973	SAME DIR-REAR	W- PASS-START TRAF	W- PKUP-START TRAF	OC/DR	DAY	09/10/06	SUN	14:01	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
07181675	RIGHT ANGLE	S- PASS-MERGING	W- PASS-GOING STRT	CL/DR	DAY	09/05/07	WED	17:59	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	1	
MUN STREET	*206*	*MP 038.91*	*AT S. BROAD ST.*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*2*	*2*
06012886	RIGHT ANGLE	N- SUV-GOING STRT	E- PASS-GOING STRT	CL/DR	DAY	01/04/06	WED	07:54	NONE-DRIVER/CYC	FAIL TO YLD ROW	0	0	0	0	
06102832	RIGHT ANGLE	W- PASS-GOING STRT	S- PASS-LEFT TURN	CL/DR	DARK	05/26/06	FRI	21:09	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	2	
MUN STREET	*206*	*MP 038.96*	*NEAR CR 533*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*2*
06188599	FIXED OBJECT	W-S2AXL-GOING STRT	- -	OC/DR	DAWN	09/06/06	WED	05:50	OTH VEHICLE FAC		0	0	0	0	
07241318	SAME DIR-REAR	N- PASS-MERGING	N- PKUP-MERGING	CL/DR	DAY	11/02/07	FRI	16:50	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
MUN STREET	*206*	*MP 038.97*	*AT MAPLE SHADE AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
08066534	SAME DIR-SIDE	N- SUV-CHNG LANES	N- SUV-GOING STRT	CL/DR	DARK	04/06/08	SUN	21:38	IMP LANE CHANGE	NONE-DRIVER/CYC	0	0	0	0	
MUN STREET	*206*	*MP 038.98*	*NEAR MAPLE SHADE AVE.*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
08029886	FIXED OBJECT	W- PASS-RT TRN-NRD	- -	RN/SL	DARK	02/13/08	WED	01:12	UNSAFE SPEED		0	0	0	0	
MUN STREET	*206*	*MP 039.00*	*AT PARENT AVE.*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
06117197	RIGHT ANGLE	E- SUV-LEFT TURN	S- PASS-GOING STRT	OC/DR	DAY	06/14/06	WED	08:25	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
MUN STREET	*206*	*MP 039.01*	*NEAR PARENT AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
06081088	SAME DIR-REAR	S- PASS-GOING STRT	S- PASS-GOING STRT	CL/DR	DAY	05/03/06	WED	15:16	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
MUN STREET	*206*	*MP 039.03*	*NEAR PARENT AVENUE*				*HAMILTON TWP*			*MERCER*	*0*	*1*	*0*	*0*	*2*
07058113	SAME DIR-REAR	E- PKUP-STOP-TRAF	E- SUV-GOING STRT	RN/WT	DAY	04/12/07	THR	09:41	NONE-DRIVER/CYC	FOLLOW TO CLOSE	0	0	0	0	
08125170	FIXED OBJECT	N-MCYCL-MERGING	- -	CL/DR	DAY	06/20/08	FRI	17:52	OTH VEHICLE FAC		0	1	0	0	
MUN STREET	*206*	*MP 039.04*	*NEAR COLONIAL AVENUE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
07289439	SAME DIR-REAR	N- PASS-GOING STRT	N- PASS-SLOW-STOP	CL/DR	DAY	12/20/07	THR	08:23	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
MUN STREET	*206*	*MP 039.05*	*NEAR COLONIAL AVE.*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*

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ROAD SYS D L N	COLLISION TYPE	VEHICLE 1 DIR TRAV VEH TYPE, VEH ACTN	VEHICLE 2 DIR TRAV VEH TYPE, VEH ACTN	WEA SUR	LITE	DATE	DOW	TIME	VEH 1 CONTRIB CIRCUMSTANCES	VEH 2 CONTRIB CIRCUMSTANCES	NO. KIL	NO. MAJ	INJURED MOD	INJURED MIN	NO. ACC
MUN STREET	*206*	*MP 039.05*	*NEAR COLONIAL AVE.*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
07153087	SAME DIR-REAR	N- PASS-GOING STRT	N- SUV-GOING STRT	OC/DR	DAY	08/08/07	WED	08:24	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
MUN STREET	*206*	*MP 039.12*	*NEAR HAMESTEAD AVENUE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
06030621	FIXED OBJECT	N- PASS-SLOW-STOP	- -	CL/DR	DAY	01/26/06	THR	10:27	DRI INATTENTION		0	0	0	0	
MUN STREET	*206*	*MP 039.14*	*NEAR HOBSON AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*2*
07086156	SAME DIR-REAR	E- PASS-GOING STRT	E- PASS-GOING STRT	CL/DR	DAWN	05/14/07	MON	18:55	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
07278916	SAME DIR-REAR	S- PASS-GOING STRT	S- SUV-GOING STRT	OC/WT	DARK	11/20/07	TUE	17:02	OTH DR/PED ACT		0	0	0	0	
MUN STREET	*206*	*MP 039.14*	*AT HOMESTEAD AVENUE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*2*
06299854	PEDALCYCLIST	N- PASS-LEFT TURN	- -	CL/DR	DARK	12/28/06	THR	18:15	NONE-DRIVER/CYC		0	0	0	0	
07007200	FIXED OBJECT	N- PASS-GOING STRT	- -	CL/DR	DARK	01/27/07	SAT	05:34	DRI INATTENTION		0	0	0	0	
MUN STREET	*206*	*MP 039.15*	*NEAR HOMESTEAD AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*3*	*3*
06126841	SAME DIR-REAR	W- PASS-GOING STRT	W- PASS-GOING STRT	CL/DR	DAY	06/22/06	THR	19:04	UNSAFE SPEED	NONE-DRIVER/CYC	0	0	0	2	
07172568	SAME DIR-REAR	N- SUV-STOP-TRAF	N- PASS-GOING STRT	RN/WT	DAY	08/22/07	WED	08:08	NONE-DRIVER/CYC	FOLLOW TO CLOSE	0	0	0	1	
07207975	RIGHT ANGLE	E- PASS-START TRAF	N- PASS-GOING STRT	CL/DR	DAY	09/05/07	WED	11:05	NONE-DRIVER/CYC	DISOBEYED TCD	0	0	0	0	
MUN STREET	*206*	*MP 039.16*	*NEAR HOBSON AVENUE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*1*	*3*
06301224	SAME DIR-REAR	E- PASS-SLOW-STOP	E- SUV-SLOW-STOP	RN/WT	DARK	12/26/06	TUE	18:35	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	1	
07007202	FIXED OBJECT	W- PASS-GOING STRT	- -	CL/DR	DARK	01/27/07	SAT	02:17	DRI INATTENTION		0	0	0	0	
08133190	SAME DIR-REAR	E- PASS-STOP-TRAF	E- PASS-START TRAF	CL/DR	DAY	06/27/08	FRI	17:23	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
MUN STREET	*206*	*MP 039.16*	*AT HOBSON AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
08056286	RIGHT ANGLE	N- PASS-LEFT TURN	E- PASS-GOING STRT	CL/WT	DAY	03/28/08	FRI	10:15	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
MUN STREET	*206*	*MP 039.17*	*NEAR HOBSON AVE.*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
08095244	SAME DIR-REAR	S- PASS-START TRAF	S- PASS-STOP-TRAF	CL/DR	DAY	05/14/08	WED	16:12	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
MUN STREET	*206*	*MP 039.18*	*NEAR HOBSON AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
07289438	FIXED OBJECT	E- PASS-GOING STRT	- -	CL/DR	DAY	12/20/07	THR	08:50	OTH DR/PED ACT		0	0	0	0	
MUN STREET	*206*	*MP 039.20*	*NEAR HOMESTEAD AVE.*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
08093915	PEDESTRIAN	N- PKUP-GOING STRT	N- PASS-PARKED	OC/DR	DAY	05/01/08	THR	12:30		NONE-DRIVER/CYC	0	0	0	0	
MUN STREET	*206*	*MP 039.20*	*AT WOODSIDE AVE.*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
06262772	SAME DIR-SIDE	N- SUV-RT TRN-NRD	N- PASS-GOING STRT	OC/WT	DARK	11/22/06	WED	17:32	IMPROPER TURN	DEFECTVE LIGHTS	0	0	0	0	
MUN STREET	*206*	*MP 039.23*	*NEAR WOODSIDE AVE.*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*4*	*0*	*2*
06085425	SAME DIR-SIDE	N- PASS-CHNG LANES	N- PASS-GOING STRT	CL/DR	DAY	05/03/06	WED	13:38	IMP LANE CHANGE	NONE-DRIVER/CYC	0	0	0	0	
06266115	OPP HEAD-ON	W- PASS-STOP-TRAF	E- PASS-LEFT TURN	CL/DR	DAY	12/02/06	SAT	08:13	NONE-DRIVER/CYC	DRI INATTENTION	0	0	4	0	

County-Municipality Restrictions: 1: 2:

NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF SAFETY PROGRAMS
DETAIL OF MOTOR VEHICLE ACCIDENTS
ON ROUTE 206
MILEPOST 38.590 TO 39.230
01/01/2006 TO 12/31/2008

ROAD SYS D L N	COLLISION TYPE	VEHICLE 1 DIR TRAV VEH TYPE, VEH ACTN	VEHICLE 2 DIR TRAV VEH TYPE, VEH ACTN	WEA SUR	LITE	DATE	DOW	TIME	VEH 1 CONTRIB CIRCUMSTANCES	VEH 2 CONTRIB CIRCUMSTANCES	NO. KIL	NO. MAJ	INJURED MOD	INJURED MIN	NO. ACC
MUN STREET	*206*	*MP 039.23*	*AT WOODSIDE AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*3*	*4*
06051491	RIGHT ANGLE	N- PASS-GOING STRT	W- PKUP-GOING STRT	CL/DR	DAY	03/18/06	SAT	13:09	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	1	
06060086	OP/ HEAD ON	E- PKUP-LEFT TURN	W- PASS-GOING STRT	CL/DR	DAY	03/30/06	THR	15:16	IMPROPER TURN	NONE-DRIVER/CYC	0	0	0	1	
06104938	RIGHT ANGLE	W- PASS-GOING STRT	S- PASS-START TRAF	OC/WT	DAY	06/03/06	SAT	09:26	NONE-DRIVER/CYC	FAIL TO YLD ROW	0	0	0	0	
08018824	RIGHT ANGLE	N- SUV-LEFT TURN	W- PASS-GOING STRT	CL/DR	DAY	02/07/08	THR	09:25	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	1	

TOTAL 201

County-Municipality Restrictions: 1: 2:

NEW JERSEY DEPARTMENT OF TRANSPORTATION
MEMORANDUM

TO: John Zim, Project Engineer
Division of Project Development

RECEIVED
SEP 15 2009
Division of Project Development

FROM: William J. Beans, Section Chief
Bureau of Safety Programs

DATE: September 9, 2009

PHONE: 530 – 2471

RE: Crash Data for Route 206 MP 38.59 – 39.23, County Route 533 MP 0.00 – 0.25, and County Route 524 MP 0.00 – 0.30
Hamilton Township, Mercer County

This is in reference to your memo dated July 23, 2009, requesting this office to furnish the crash data for the above referenced locations for the most recent three years.

Enclosed are the Crash Summaries and Details of Motor Vehicle Accidents for the years January 1, 2006, through December 31, 2008. The Details will show the frequency, severity, conditions and circumstances surrounding the section crashes. The crash summaries will show overrepresentations for these sections of Route 206, County Route 533 and County Route 524 and are herewith attached. The percentages on the summary are 2008 statewide average values corresponding to overrepresented crash categories. This information may help your office in any engineering decision that might be made to improve or upgrade these sections.

If there are any further questions, please contact Geoffrey Gayanilo of this office at 530-4288.

WB:KC:TZ:GG

Mail Log No. 207-09

RECEIVED
SEP 15 2009
Division of Project Development

CRASH SUMMARY

County Route 524 MP 0.00 - 0.30
Hamilton Township, Mercer County
01/01/2006 THRU 12/31/2008

TOTAL CRASHES: 34

SEVERITY	COUNT	% OF TOTAL	2008 Average
Fatal	0	0.00%	
Injury	11	32.35%	28.15%
Property Damage	23	67.65%	
Total	**34**		

INTERSECTION	COUNT	% OF TOTAL	2008 Average	**
At Signalized Intersection	3	8.82%		
At Unsignalized Intersection	10	29.41%	23.64%	
Between Intersections	21	61.76%	61.67%	
Railroad Crossing	0	0.00%		
Total	**34**			

COLLISION TYPE	COUNT	% OF TOTAL	2008 Average	**
Same Dir.-Rear End	12	35.29%	31.31%	
Same Dir.-Sideswipe	4	11.76%	11.02%	
Angle	11	32.35%	18.61%	
Head On	0	0.00%		
Parked Vehicle	1	2.94%		
Left Turn / U Turn	1	2.94%		
Backing	0	0.00%		
Encroachment	0	0.00%		
Overturned	0	0.00%		
Fixed Object	4	11.76%		
Animal	0	0.00%		
Pedestrian	1	2.94%	1.93%	
Pedalcycle	0	0.00%		
Non-Fixed Object	0	0.00%		
Unknown	0	0.00%		
Other	0	0.00%		
Total	**34**			

SURFACE CONDITION	COUNT	% OF TOTAL	2008 Average	**
Dry	28	82.35%	74.82%	
Wet Surface	6	17.65%		
Snow	0	0.00%		
Ice	0	0.00%		
Unknown	0	0.00%		
Other	0	0.00%		
Total	**34**			

LIGHT	COUNT	% OF TOTAL	2008 Average	**
Day	24	70.59%	69.86%	
Dusk	1	2.94%	2.69%	
Night	9	26.47%	25.82%	
Dawn	0	0.00%		
Unknown	0	0.00%		
Total	**34**			

Note:
** These columns indicate the number of fatal crashes in each accident category.

Length of Segment _____
Number of Years _____
AADT _____

Crash Rate/MVM _____ 2008 Statewide Crash Rate/MVM _____

NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF SAFETY PROGRAMS
DETAIL OF MOTOR VEHICLE ACCIDENTS
ON ROUTE 524
MILEPOST 0.000 TO 0.300
01/01/2006 TO 12/31/2008

ROAD SYS D L N	COLLISION TYPE	VEHICLE 1 DIR TRAV VEH TYPE, VEH ACTN	VEHICLE 2 DIR TRAV VEH TYPE, VEH ACTN	WEA SUR	LITE	DATE	DOW	TIME	VEH 1 CONTRIB CIRCUMSTANCES	VEH 2 CONTRIB CIRCUMSTANCES	NO. KIL	NO. MAJ	INJURED MOD	INJURED MIN	NO. ACC
COUNTY ROAD	*CR 524*	*MP 000.00*	*NEAR WHITEHORSE AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*3*	*9*
06125113	SAME DIR-REAR	W- PASS-STOP-TRAF	W- PASS-START TRAF	OC/DR	DAY	06/26/06	MON	17:27	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
06152672	RIGHT ANGLE	E- PASS-MERGING	N- PASS-GOING STRT	CL/DR	DARK	07/30/06	SUN	00:18	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
06152677	RIGHT ANGLE	W- PASS-GOING STRT	N- PASS-START TRAF	CL/DR	DAY	07/31/06	MON	15:55	NONE-DRIVER/CYC	FAIL TO YLD ROW	0	0	0	0	
06242554	RIGHT ANGLE	N- PASS-RT TRN-NRD	W- PASS-GOING STRT	CL/DR	DAY	11/04/06	SAT	12:20	DISOBEYED TCD	NONE-DRIVER/CYC	0	0	0	0	
06273452	SAME DIR-REAR	W- SUV-STOP-TRAF	W- PASS-MERGING	CL/DR	DAY	12/18/06	MON	08:51	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
07172570	RIGHT ANGLE	N- PASS-GOING STRT	E- PASS-START TRAF	RN/WT	DAY	08/22/07	WED	13:45	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
07173173	SAME DIR-REAR	N- PASS-STOP-TRAF	N- PASS-GOING STRT	CL/DR	DAY	08/29/07	WED	12:22	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
07218406	SAME DIR-REAR	W- PASS-GOING STRT	W- PASS-START TRAF	CL/WT	DAY	10/11/07	THR	14:58	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	1	
08089127	SAME DIR-REAR	E- PASS-SLOW-STOP	E- PASS-STOP-TRAF	RN/WT	DUSK	05/09/08	FRI	18:23	RD SURF CNDTION	NONE-DRIVER/CYC	0	0	0	2	
COUNTY ROAD	*CR 524*	*MP 000.00*	*AT WHITE HORSE AVE.*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*2*	*6*
06103412	FIXED OBJECT	S- PASS-GOING STRT	- -	CL/DR	DARK	05/25/06	THR	02:01	DISOBEYED TCD		0	0	0	0	
06134012	FIXED OBJECT	S-SEMIT-LEFT TURN	- -	OC/DR	DAY	06/23/06	FRI	15:09	DRI INATTENTION		0	0	0	0	
06149098	SAME DIR-REAR	W- PASS-SLOW-STOP	W- PASS-SLOW-STOP	CL/DR	DAY	07/18/06	TUE	16:13	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	1	
07283232	RIGHT ANGLE	N- PASS-MERGING	W- PASS-GOING STRT	CL/DR	DAY	12/17/07	MON	14:52	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08060914	RIGHT ANGLE	N- PASS-GOING STRT	W- PASS-GOING STRT	CL/DR	DAY	04/15/08	TUE	15:17	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	1	
08095242	SAME DIR-SIDE	E- PASS-SLOW-STOP	E- PASS-SLOW-STOP	RN/WT	DAY	05/12/08	MON	16:17	UNSAFE SPEED	NONE-DRIVER/CYC	0	0	0	0	
COUNTY ROAD	*CR 524*	*MP 000.01*	*NEAR WHITEHORSE AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*2*
07208118	SAME DIR-SIDE	S- PASS-CHNG LANES	S- PASS-SLOW-STOP	CL/DR	DAY	09/12/07	WED	18:11	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08012382	RIGHT ANGLE	N- PASS-LEFT TURN	E- PASS-GOING STRT	CL/DR	DARK	01/26/08	SAT	22:14	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
COUNTY ROAD	*CR 524*	*MP 000.06*	*NEAR WHITEHORSE AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
06087972	STR PK VEH	W-S2AXL-GOING STRT	W- PASS-PARKED	CL/DR	DAY	05/11/06	THR	11:19	OTH DR/PED ACT	NONE-DRIVER/CYC	0	0	0	0	
COUNTY ROAD	*CR 524*	*MP 000.11*	*NEAR LACY AVE.*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*1*	*2*
06269101	SAME DIR-SIDE	E- PASS-PASSING	E- PASS-LEFT TURN	CL/DR	DARK	12/06/06	WED	17:56	IMP PASSING	NONE-DRIVER/CYC	0	0	0	0	
07058333	FIXED OBJECT	S- PASS-STOP-TRAF	S- PASS-STOP-TRAF	CL/DR	DARK	02/18/07	SUN	12:40	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	1	
COUNTY ROAD	*CR 524*	*MP 000.16*	*NEAR PEBBLE CREEK DRIVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*2*	*2*
07252252	SAME DIR-REAR	E- SUV-GOING STRT	E- SUV-STOP-TRAF	CL/WT	DARK	10/19/07	FRI	18:28	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	1	
08118249	SAME DIR-REAR	W- PASS-GOING STRT	W- PASS-SLOW-STOP	CL/DR	DARK	06/01/08	SUN	17:14	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	1	
COUNTY ROAD	*CR 524*	*MP 000.16*	*AT LACY AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*1*	*2*
06234333	RIGHT ANGLE	W- PASS-GOING STRT	S- PASS-LEFT TURN	CL/DR	DAY	10/09/06	MON	17:42	DISOBEYED TCD	NONE-DRIVER/CYC	0	0	0	1	
08242347	RIGHT ANGLE	E- PASS-LEFT TURN	W- PKUP-GOING STRT	CL/DR	DARK	11/12/08	WED	17:36	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
COUNTY ROAD	*CR 524*	*MP 000.18*	*NEAR PEBBLE CREEK DR*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*1*	*0*	*2*
07189159	PEDESTRIAN	E- PASS-GOING STRT	- -	CL/DR	DAY	09/12/07	WED	11:26	DRI INATTENTION		0	0	1	0	
08168686	SAME DIR-REAR	W- PASS-GOING STRT	W- SUV-GOING STRT	OC/DR	DAY	08/14/08	THR	18:07	UNSAFE SPEED	NONE-DRIVER/CYC	0	0	0	0	

County-Municipality Restrictions: 1: 2:

NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF SAFETY PROGRAMS
DETAIL OF MOTOR VEHICLE ACCIDENTS
ON ROUTE 524
MILEPOST 0.000 TO 0.300
01/01/2006 TO 12/31/2008

ROAD SYS D L N	COLLISION TYPE	VEHICLE 1 DIR TRAV VEH TYPE, VEH ACTN	VEHICLE 2 DIR TRAV VEH TYPE, VEH ACTN	WEA SUR	LITE	DATE	DOW	TIME	VEH 1 CONTRIB CIRCUMSTANCES	VEH 2 CONTRIB CIRCUMSTANCES	NO. KIL	NO. MAJ	INJURED MOD	INJURED MIN	NO. ACC
COUNTY ROAD	*CR 524*	*MP 000.20*	*NEAR PEBBLE CREEK*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*1*	*1*
06289092	FIXED OBJECT	W- PASS-GOING STRT	- -	CL/DR	DAY	12/27/06	WED	07:38	DRI INATTENTION		0	0	0	1	
COUNTY ROAD	*CR 524*	*MP 000.28*	*NEAR GROPP AV.*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*2*	*2*
06086714	SAME DIR-REAR	W- PASS-STOP-TRAF	W- PASS-SLOW-STOP	CL/DR	DAY	05/01/06	MON	17:20	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
08060016	SAME DIR-REAR	W- PASS-GOING STRT	W- SUV-SLOW-STOP	CL/DR	DARK	04/04/08	FRI	19:31	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	2	
COUNTY ROAD	*CR 524*	*MP 000.29*	*AT GROPP AVE.*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
08083460	RIGHT ANGLE	E- PASS-LEFT TURN	S- PASS-LEFT TURN	CL/DR	DAY	04/17/08	THR	17:05	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
COUNTY ROAD	*CR 524*	*MP 000.30*	*AT GROPP AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*4*
07223409	RIGHT ANGLE	S- PASS-LEFT TURN	E- PASS-LEFT TURN	CL/DR	DAY	09/29/07	SAT	13:05	FAIL TO YLD ROW	NONE-DRIVER/CYC	0	0	0	0	
08028131	SAME DIR-SIDE	E- PASS-SLOW-STOP	E- PASS-GOING STRT	CL/DR	DAY	02/10/08	SUN	13:00	IMP PASSING	NONE-DRIVER/CYC	0	0	0	0	
08029885	RIGHT ANGLE	E- PASS-GOING STRT	S- SUV-LEFT TURN	RN/WT	DAY	02/13/08	WED	07:52	IMP USE/NO LITE	DRI INATTENTION	0	0	0	0	
08193915	SAME DIR-REAR	E- PASS-GOING STRT	E- PASS-LEFT TURN	CL/DR	DAY	09/18/08	THR	07:54	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	

TOTAL 34

County-Municipality Restrictions: 1: 2:

NEW JERSEY DEPARTMENT OF TRANSPORTATION
MEMORANDUM

TO: John Zim, Project Engineer
Division of Project Development

RECEIVED
SEP 15 2009
Division of Project Development

FROM: William J. Beans, Section Chief
Bureau of Safety Programs

DATE: September 9, 2009

PHONE: 530 – 2471

RE: Crash Data for Route 206 MP 38.59 – 39.23, County Route 533 MP 0.00 – 0.25, and County Route 524 MP 0.00 – 0.30
Hamilton Township, Mercer County

This is in reference to your memo dated July 23, 2009, requesting this office to furnish the crash data for the above referenced locations for the most recent three years.

Enclosed are the Crash Summaries and Details of Motor Vehicle Accidents for the years January 1, 2006, through December 31, 2008. The Details will show the frequency, severity, conditions and circumstances surrounding the section crashes. The crash summaries will show overrepresentations for these sections of Route 206, County Route 533 and County Route 524 and are herewith attached. The percentages on the summary are 2008 statewide average values corresponding to overrepresented crash categories. This information may help your office in any engineering decision that might be made to improve or upgrade these sections.

If there are any further questions, please contact Geoffrey Gayanilo of this office at 530-4288.

WB:KC:TZ:GG

Mail Log No. 207-09

RECEIVED
SEP 15 2009
Division of Project Development

CRASH SUMMARY

County Route 533 MP 0.00 - 0.25
Hamilton Township, Mercer County
01/01/2006 THRU 12/31/2008

TOTAL CRASHES: **39**

SEVERITY	COUNT	% OF TOTAL	2008 Average
Fatal	0	0.00%	
Injury	10	25.64%	
Property Damage	29	74.36%	71.63%
Total	**39**		

INTERSECTION	COUNT	% OF TOTAL	2008 Average	**
At Signalized Intersection	5	12.82%		
At Unsignalized Intersection	6	15.38%		
Between Intersections	28	71.79%	61.67%	
Railroad Crossing	0	0.00%		
Total	**39**			

COLLISION TYPE	COUNT	% OF TOTAL	2008 Average	**
Same Dir.-Rear End	21	53.85%	31.31%	
Same Dir.-Sideswipe	10	25.64%	11.02%	
Angle	3	7.69%		
Head On	0	0.00%		
Parked Vehicle	1	2.56%		
Left Turn / U Turn	2	5.13%		
Backing	0	0.00%		
Encroachment	1	2.56%	0.40%	
Overturned	0	0.00%		
Fixed Object	0	0.00%		
Animal	0	0.00%		
Pedestrian	1	2.56%	1.93%	
Pedalcycle	0	0.00%		
Non-Fixed Object	0	0.00%		
Unknown	0	0.00%		
Other	0	0.00%		
Total	**39**			

SURFACE CONDITION	COUNT	% OF TOTAL	2008 Average	**
Dry	32	82.05%	74.82%	
Wet Surface	7	17.95%		
Snow	0	0.00%		
Ice	0	0.00%		
Unknown	0	0.00%		
Other	0	0.00%		
Total	**39**			

LIGHT	COUNT	% OF TOTAL	2008 Average	**
Day	30	76.92%	69.86%	
Dusk	1	2.56%		
Night	8	20.51%		
Dawn	0	0.00%		
Unknown	0	0.00%		
Total	**39**			

Note:
** These columns indicate the number of fatal crashes in each accident category.

Length of Segment _____
Number of Years _____
AADT _____

Crash Rate/MVM _____ 2008 Statewide Crash Rate/MVM _____

NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF SAFETY PROGRAMS
DETAIL OF MOTOR VEHICLE ACCIDENTS
ON ROUTE 533
MILEPOST 0.000 TO 0.250
01/01/2006 TO 12/31/2008

ROAD SYS D L N	COLLISION TYPE	VEHICLE 1 DIR TRAV VEH TYPE, VEH ACTN	VEHICLE 2 DIR TRAV VEH TYPE, VEH ACTN	WEA SUR	LITE	DATE	DOW	TIME	VEH 1 CONTRIB CIRCUMSTANCES	VEH 2 CONTRIB CIRCUMSTANCES	NO. KIL	NO. MAJ	INJURED MOD	INJURED MIN	NO. ACC
COUNTY ROAD	*CR 533*	*MP 000.00*	*NEAR S. BROAD ST*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*2*	*11*
06166776	SAME DIR-REAR	S- PASS-STOP-TRAF	S- SUV-GOING STRT	CL/DR	DAY	06/28/06	WED	14:26	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
06137529	SAME DIR-SIDE	S-SEMIT-GOING STRT	S- PASS-RT TRN-NRD	CL/DR	DAY	07/07/06	FRI	19:00	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
06200048	SAME DIR-REAR	S- PASS-STOP-TRAF	S- PASS-STOP-TRAF	CL/DR	DARK	09/17/06	SUN	22:11	NONE-DRIVER/CYC	FOLLOW TO CLOSE	0	0	0	1	
07085784	SAME DIR-SIDE	S- SUV-CHNG LANES	S- PASS-STOP-TRAF	CL/DR	DAY	05/09/07	WED	17:33	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
07163569	SAME DIR-SIDE	S-SEMIT-GOING STRT	S-S3AXL-SLOW-STOP	CL/DR	DAY	07/02/07	MON	08:52	DRI INATTENTION	DRI INATTENTION	0	0	0	0	
07153049	SAME DIR-SIDE	S- PASS-STOP-TRAF	S- PASS-UNKNOWN	CL/DR	DARK	07/09/07	MON	00:09	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
07152609	SAME DIR-REAR	S- PASS-START TRAF	S- PASS-STOP-TRAF	CL/DR	DAY	07/30/07	MON	14:35	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	1	
07252253	ENCROACHMENT	W- PASS-RT TRN-NRD	S- PASS-STOP-TRAF	RN/WT	DARK	10/19/07	FRI	18:29	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
07242013	SAME DIR-REAR	S- SUV-SLOW-STOP	S- PASS-STOP-TRAF	CL/DR	DAY	10/31/07	WED	12:32	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08155934	SAME DIR-REAR	S- PASS-RT TRN-NRD	S- PASS-RT TRN-NRD	CL/DR	DAY	05/06/08	TUE	17:12	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08267360	SAME DIR-REAR	W- PASS-STOP-TRAF	W- PASS-START TRAF	CL/DR	DAY	12/06/08	SAT	11:03	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
COUNTY ROAD	*CR 533*	*MP 000.00*	*AT SOUTH BROAD STREET*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*1*	*4*
06112909	SAME DIR-REAR	S- PASS-START TRAF	S- PASS-STOP-TRAF	CL/DR	DAY	06/09/06	FRI	13:37	FOLLOW TO CLOSE	NONE-DRIVER/CYC	0	0	0	1	
06166774	SAME DIR-REAR	S- PKUP-START TRAF	S- PASS-STOP-TRAF	CL/DR	DAY	06/28/06	WED	16:06	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
06228178	SAME DIR-SIDE	S- PASS-RT TRN-NRD	S-SEMIT-OTHER	CL/DR	DAY	10/18/06	WED	14:17	UNKNOWN	UNKNOWN	0	0	0	0	
07040568	SAME DIR-SIDE	S-SEMIT-RT TRN-NRD	S- SUV-RT TRN-NRD	CL/DR	DAY	03/21/07	WED	14:17	IMPROPER TURN	UNKNOWN	0	0	0	0	
COUNTY ROAD	*CR 533*	*MP 000.01*	*NEAR S. BROAD ST.*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
06265585	SAME DIR-REAR	S- PASS-GOING STRT	S- PASS-STOP-TRAF	CL/DR	DAY	11/25/06	SAT	13:51	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
COUNTY ROAD	*CR 533*	*MP 000.02*	*NEAR RT 206*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
07011317	RIGHT ANGLE	N- PASS-GOING STRT	E- PASS-RT TRN-NRD	CL/DR	DARK	02/06/07	TUE	18:39	DRI INATTENTION	IMPROPER TURN	0	0	0	0	
COUNTY ROAD	*CR 533*	*MP 000.04*	*NEAR S. BROAD ST*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*2*	*1*
07212222	SAME DIR-REAR	S- SUV-STOP-TRAF	S- PASS-STOP-TRAF	CL/DR	DUSK	09/21/07	FRI	18:33	NONE-DRIVER/CYC	NONE-DRIVER/CYC	0	0	0	2	
COUNTY ROAD	*CR 533*	*MP 000.09*	*NEAR LOCUST AVENUE*				*HAMILTON TWP*			*MERCER*	*0*	*1*	*0*	*0*	*1*
07042396	SAME DIR-REAR	N- PASS-GOING STRT	N- PASS-SLOW-STOP	CL/DR	DAY	03/15/07	THR	11:23	DRI INATTENTION	NONE-DRIVER/CYC	0	1	0	0	
COUNTY ROAD	*CR 533*	*MP 000.10*	*NEAR LOCUST AVE.*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*2*
07297036	SAME DIR-REAR	S- PASS-GOING STRT	S- SUV-GOING STRT	RN/WT	DARK	12/21/07	FRI	16:50	UNKNOWN	RD SURF CNDTION	0	0	0	0	
08189007	SAME DIR-REAR	S- PASS-STOP-TRAF	S- PKUP-GOING STRT	CL/DR	DAY	08/06/08	WED	15:48	NONE-DRIVER/CYC	FOLLOW TO CLOSE	0	0	0	0	
COUNTY ROAD	*CR 533*	*MP 000.10*	*AT LOCUST AVENUE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*2*
06265579	RIGHT ANGLE	W- PKUP-LEFT TURN	N- PASS-PASSING	CL/DR	DAY	11/28/06	TUE	07:51	NONE-DRIVER/CYC	IMP PASSING	0	0	0	0	
08251912	OPP HEADON	S-PVLT9-START PARK	N- PASS-GOING STRT	CL/DR	DAY	11/17/08	MON	15:52	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
COUNTY ROAD	*CR 533*	*MP 000.12*	*NEAR S. CLINTON AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
08272980	SAME DIR-SIDE	S- PASS-CHNG LANES	S- PASS-GOING STRT	CL/DR	DAY	12/15/08	MON	15:57	DISOBEYED TCD	NONE-DRIVER/CYC	0	0	0	0	

County-Municipality Restrictions: 1: 2:

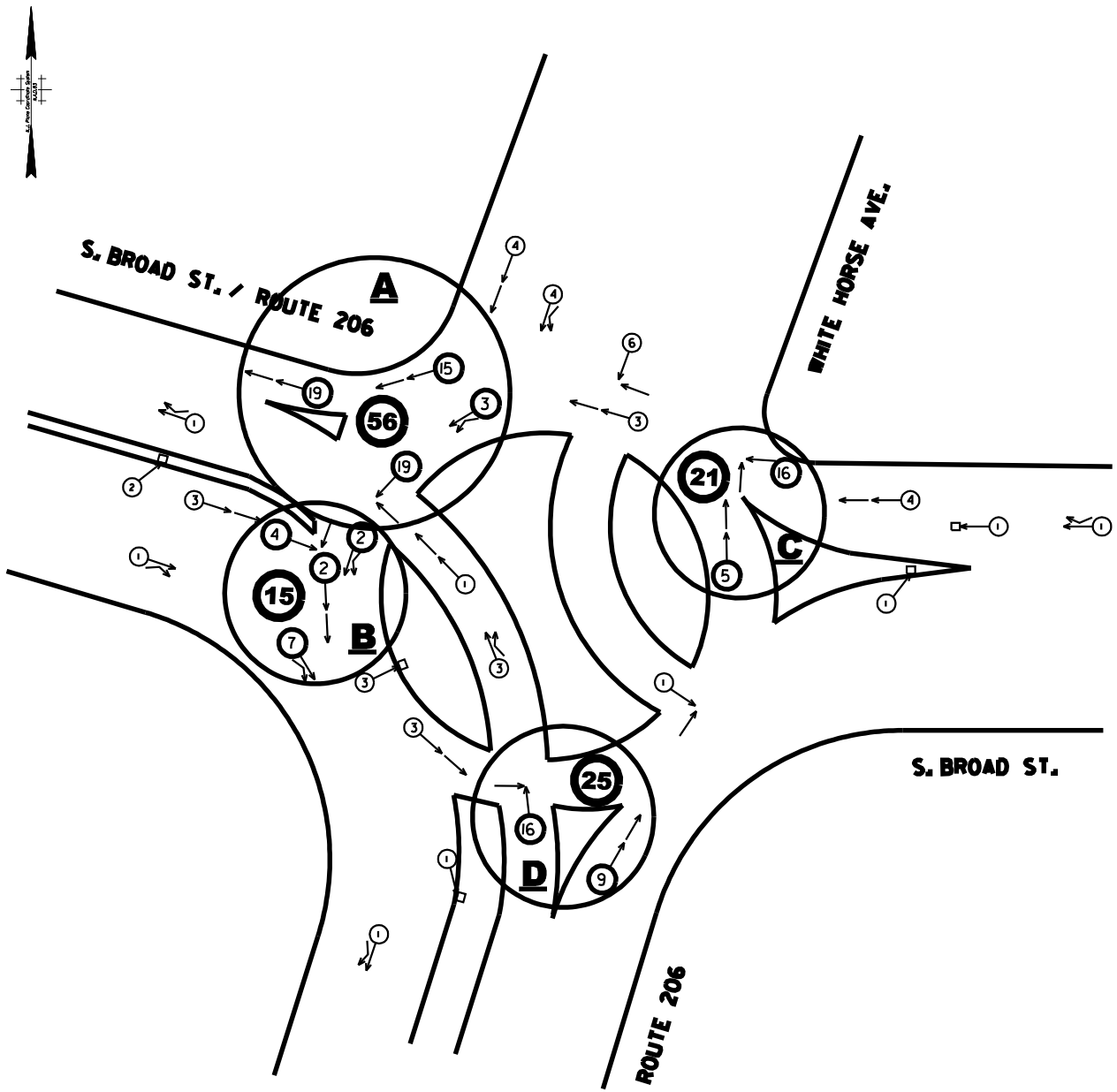
NEW JERSEY DEPARTMENT OF TRANSPORTATION
BUREAU OF SAFETY PROGRAMS
DETAIL OF MOTOR VEHICLE ACCIDENTS
ON ROUTE 533
MILEPOST 0.000 TO 0.250
01/01/2006 TO 12/31/2008

ROAD SYS D L N	COLLISION TYPE	VEHICLE 1 DIR TRAV VEH TYPE, VEH ACTN	VEHICLE 2 DIR TRAV VEH TYPE, VEH ACTN	WEA SUR	LITE	DATE	DOW	TIME	VEH 1 CONTRIB CIRCUMSTANCES	VEH 2 CONTRIB CIRCUMSTANCES	NO. KIL	NO. MAJ	INJURED MOD	INJURED MIN	NO. ACC
COUNTY ROAD	*CR 533*	*MP 000.13*	*NEAR S. CLINTON AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*2*
06026324	SAME DIR-REAR	S- PKUP-SLOW-STOP	S- PASS-START TRAF	CL/DR	DAY	02/14/06	TUE	13:05	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
07086171	SAME DIR-SIDE	N- PASS-LEFT TURN	N- PASS-CHNG LANES	RN/WT	DAY	04/30/07	MON	07:44	IMP LANE CHANGE	NONE-DRIVER/CYC	0	0	0	0	
COUNTY ROAD	*CR 533*	*MP 000.13*	*AT S. CLINTON AVE* SIGNALIZED				*HAMILTON TWP*			*MERCER*	*0*	*0*	*3*	*0*	*5*
06067177	PEDESTRIAN	W- PASS-UNKNOWN	- -	RN/WT	DARK	01/02/06	MON	21:16	UNKNOWN		0	0	1	0	
06037667	RIGHT ANGLE	5 E- PASS-LEFT TURN	S- PASS-GOING STRT	CL/WT	DAY	03/10/06	FRI	07:28	DRI INATTENTION	DRI INATTENTION	0	0	0	0	
06273455	SAME DIR-SIDE	S- PASS-GOING STRT	S- PASS-RT TRN-RED	CL/DR	DAY	12/16/06	SAT	10:29	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
08195662	LEFT/U TURN	N- PASS-LEFT TURN	S- PKUP-GOING STRT	CL/DR	DAY	09/11/08	THR	16:51	IMPROPER TURN	NONE-DRIVER/CYC	0	0	2	0	
08267362	RIGHT ANGLE	S- PASS-GOING STRT	E- PASS-LEFT TURN	CL/DR	DAY	12/06/08	SAT	09:37	DISOBEYED TCD	NONE-DRIVER/CYC	0	0	0	0	
COUNTY ROAD	*CR 533*	*MP 000.14*	*NEAR S. CLINTON AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*1*	*2*
06166781	SAME DIR-REAR	S- SUV-STOP-TRAF	S- PASS-STOP-TRAF	CL/DR	DAY	06/27/06	TUE	15:31	NONE-DRIVER/CYC	NONE-DRIVER/CYC	0	0	0	1	
07301103	STR PK VEH	N- PASS-LEFT TURN	U- PASS-PARKED	RN/WT	DARK	12/26/07	WED	20:14	DRI INATTENTION	UNKNOWN	0	0	0	0	
COUNTY ROAD	*CR 533*	*MP 000.15*	*NEAR S CLINTON AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
08318540	SAME DIR-REAR	S- PASS-GOING STRT	S- PASS-START TRAF	CL/DR	DAY	12/28/08	SUN	14:30	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	0	
COUNTY ROAD	*CR 533*	*MP 000.16*	*NEAR SOUTH CLINTON AVENUE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*1*	*2*
08222490	SAME DIR-REAR	S-S2AXL-SLOW-STOP	S- PASS-STOP-TRAF	CL/DR	DAY	10/09/08	THR	14:07	VEH HITCH ETC	NONE-DRIVER/CYC	0	0	0	0	
08297808	SAME DIR-REAR	S- PASS-GOING STRT	S- PASS-STOP-TRAF	CL/DR	DAY	12/26/08	FRI	11:55	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	1	
COUNTY ROAD	*CR 533*	*MP 000.19*	*NEAR PHILLIPS AVENUE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*1*	*2*
08000663	SAME DIR-REAR	S- PASS-GOING STRT	S- PASS-STOP-TRAF	CL/DR	DARK	01/10/08	THR	18:33	DRI INATTENTION	NONE-DRIVER/CYC	0	0	0	0	
08101628	SAME DIR-REAR	S- PKUP-STOP-TRAF	S- SUV-GOING STRT	CL/DR	DAY	05/29/08	THR	13:38	NONE-DRIVER/CYC	DRI INATTENTION	0	0	0	1	
COUNTY ROAD	*CR 533*	*MP 000.20*	*NEAR PHILLIPS AVE*				*HAMILTON TWP*			*MERCER*	*0*	*0*	*0*	*0*	*1*
07273156	SAME DIR-REAR	S- PASS-GOING STRT	S- PKUP-STOP-TRAF	OC/WT	DAY	10/25/07	THR	10:04	UNSAFE SPEED	NONE-DRIVER/CYC	0	0	0	0	

TOTAL 39

County-Municipality Restrictions: 1: 2:

Collision Diagram



LEGEND

ACCIDENT SYMBOLS

- SAME DIRECTION (REAR END)
- SAME DIRECTION (SIDESWIPE)
- ANGLE
- LEFT TURN
- FIXED OBJECT

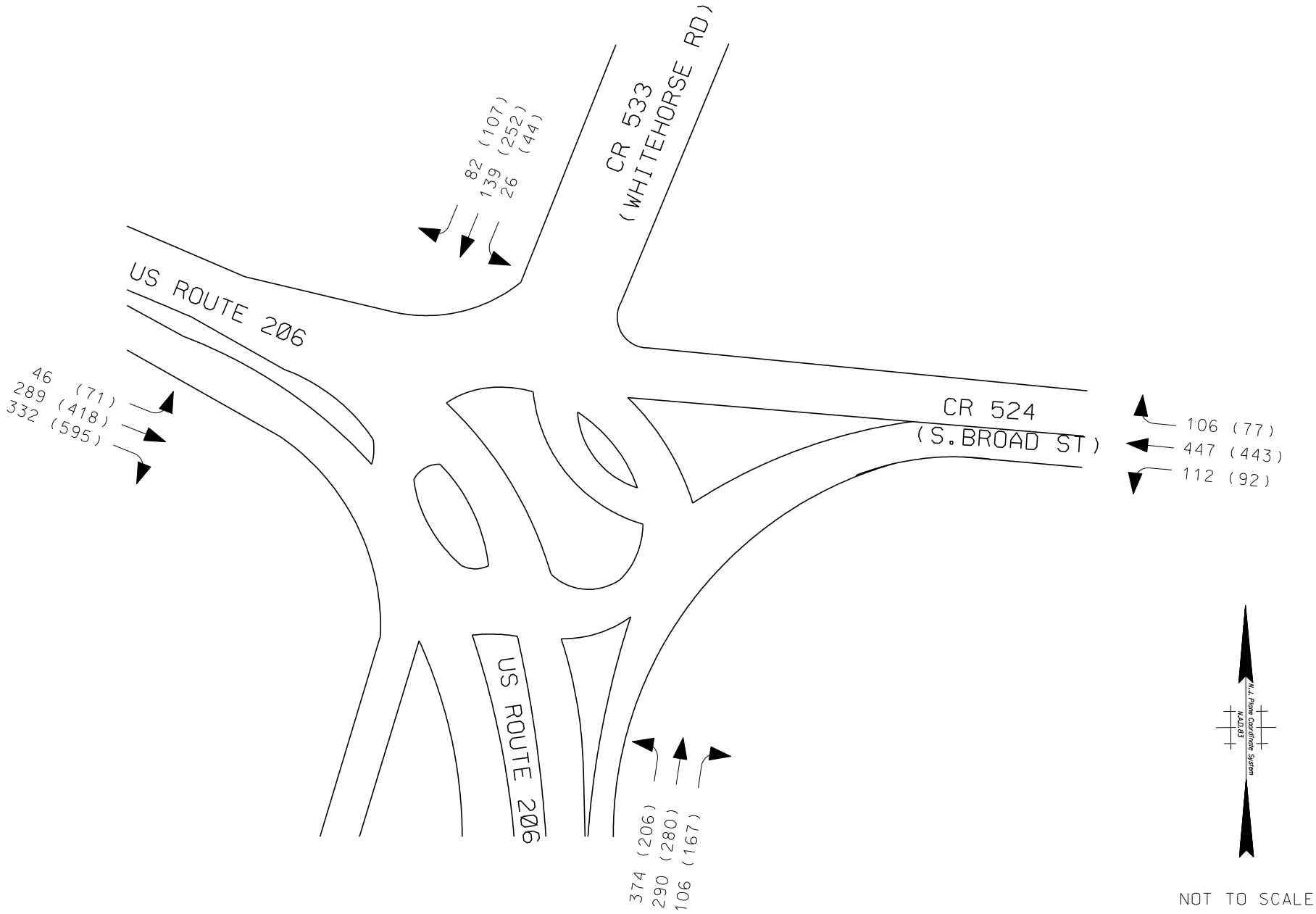
COLLISION DIAGRAM
2006-2008

WHITE HORSE CIRCLE
HAMILTON TOWNSHIP, MERCER COUNTY

DRAWN BY:	CHK'D BY:	DATE:	SCALE:
JSV	CAB	1/21/10	NTS

Appendix E – Traffic Data and Analysis

Traffic Volumes



LEGEND:

AM Volume (PM Volume) →
AM Peak : 7:30 to 8:30
PM Peak : 4:15 to 5:15

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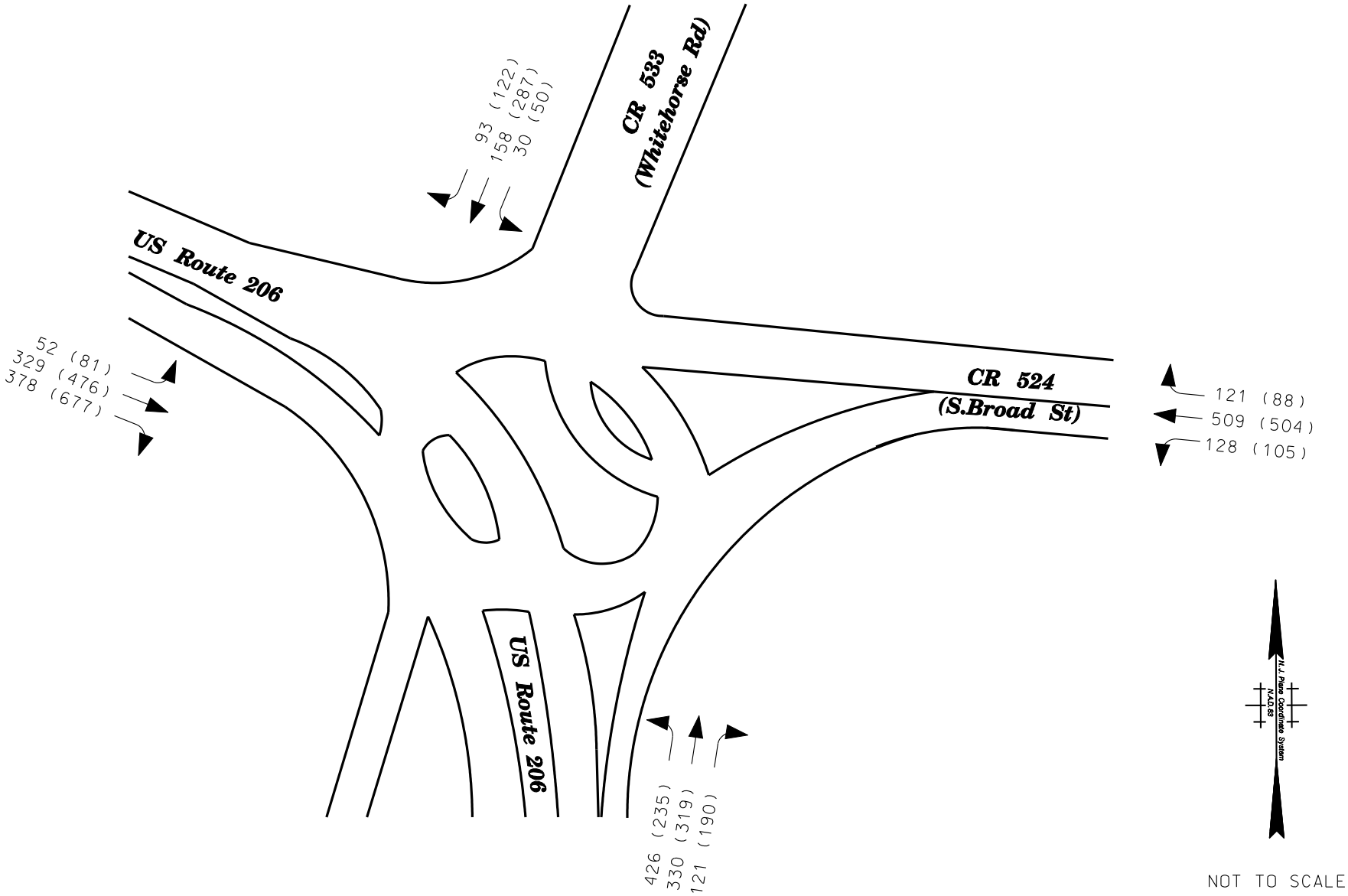
Whitehorse Circle

AM/PM Peak Hour Volumes
2009 Existing Conditions



LEGEND:

AM Volume (PM Volume) →
AM Peak : 7:30 to 8:30
PM Peak : 4:15 to 5:15

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Whitehorse Circle

AM/PM Peak Hour Volumes
2035 Projected Conditions

Urban Engineers, Inc.

55 Haddonfield Rd, Suite 200
Cherry Hill, NJ 08002
p(856) 663-5550 f(856) 663-4836

Counted By: ChrisErikJamesScottTK
Street (North-South): US Route 206
Street (East-West): Broad St
Notes:

File Name : Whitehorse Circle COMBINED
Site Code : 00000003
Start Date : 2/11/2009
Page No : 1

Groups Printed- Cars - Trucks - Buses

	Whitehorse Road SB					S.Broad Street WB					US Route 206 NB					US Route 206 EB						
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Whitehorse Rd	To Broad St	US 206 SB	Minor Street	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0		
06:30 AM	10	32	6	0	48	14	45	6	0	65	48	40	7	0	95	7	57	70	0	0	134	342
06:45 AM	11	37	6	0	54	16	55	6	0	77	57	46	12	0	115	8	49	58	0	0	115	361
Total	21	69	12	0	102	30	100	12	0	142	105	86	19	0	210	15	106	128	0	0	249	703
07:00 AM	7	37	10	0	54	18	52	11	0	81	70	46	15	0	131	2	61	82	0	0	145	411
07:15 AM	6	32	4	0	42	21	90	29	0	140	90	51	12	0	153	13	71	84	1	0	169	504
07:30 AM	5	35	19	0	59	26	111	42	0	179	79	60	30	0	169	8	76	97	0	0	181	588
07:45 AM	10	39	14	0	63	29	128	22	0	179	157	89	30	0	276	11	87	86	0	0	184	702
Total	28	143	47	0	218	94	381	104	0	579	396	246	87	0	729	34	295	349	1	0	679	2205
08:00 AM	5	26	25	0	56	26	111	22	0	159	94	67	21	0	182	17	74	66	1	0	158	555
08:15 AM	6	39	24	0	69	31	97	20	0	148	44	74	25	0	143	10	52	83	0	0	145	505
08:30 AM	9	38	13	0	60	21	71	13	0	105	48	108	13	0	169	10	74	90	3	0	177	511
08:45 AM	7	44	19	0	70	15	109	15	0	139	60	112	22	0	194	14	69	64	3	0	150	553
Total	27	147	81	0	255	93	388	70	0	551	246	361	81	0	688	51	269	303	7	0	630	2124
03:30 PM	10	60	28	0	98	21	101	13	0	135	79	77	33	0	189	16	92	116	1	0	225	647
03:45 PM	9	55	26	0	90	22	96	22	0	140	76	73	26	0	175	23	94	112	0	0	229	634
Total	19	115	54	0	188	43	197	35	0	275	155	150	59	0	364	39	186	228	1	0	454	1281
04:00 PM	13	61	19	0	93	16	106	20	0	142	80	71	34	0	185	21	88	122	5	0	236	656
04:15 PM	9	68	36	0	113	27	121	11	0	159	64	76	45	0	185	15	95	138	1	0	249	706
04:30 PM	7	70	28	0	105	12	100	22	0	134	67	73	37	0	177	18	117	128	1	0	264	680
04:45 PM	12	61	20	0	93	27	99	20	0	146	33	62	47	0	142	13	105	156	5	0	279	660
Total	41	260	103	0	404	82	426	73	0	581	244	282	163	0	689	67	405	544	12	0	1028	2702
05:00 PM	16	53	23	0	92	26	123	24	0	173	42	69	38	0	149	25	101	173	0	0	299	713
05:15 PM	13	74	22	0	109	20	143	19	0	182	30	72	42	0	144	16	81	155	1	0	253	688
05:30 PM	9	78	21	0	108	17	92	17	0	126	55	62	31	0	148	11	75	120	0	0	206	588
05:45 PM	6	63	24	0	93	21	124	21	0	166	45	68	31	0	144	18	66	103	0	0	187	590
Total	44	268	90	0	402	84	482	81	0	647	172	271	142	0	585	70	323	551	1	0	945	2579

Urban Engineers, Inc.

55 Haddonfield Rd, Suite 200
Cherry Hill, NJ 08002
p(856) 663-5550 f(856) 663-4836

Counted By: ChrisErikJamesScottTK
Street (North-South): US Route 206
Street (East-West): Broad St
Notes:

File Name : Whitehorse Circle COMBINED
Site Code : 00000003
Start Date : 2/11/2009
Page No : 2

Groups Printed- Cars - Trucks - Buses

	Whitehorse Road SB					S.Broad Street WB					US Route 206 NB					US Route 206 EB						
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Whitehorse Rd	To Broad St	US 206 SB	Minor Street	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0		
Grand Total	180	1002	387	0	1569	426	1974	375	0	2775	1318	1396	551	0	3265	276	1584	2103	22	0	3985	11594
Apprch %	11.5	63.9	24.7	0		15.4	71.1	13.5	0		40.4	42.8	16.9	0		6.9	39.7	52.8	0.6	0		
Total %	1.6	8.6	3.3	0	13.5	3.7	17	3.2	0	23.9	11.4	12	4.8	0	28.2	2.4	13.7	18.1	0.2	0	34.4	
Cars	178	998	380	0	1556	398	1903	363	0	2664	1288	1358	512	0	3158	261	1528	2049	20	0	3858	11236
% Cars	98.9	99.6	98.2	0	99.2	93.4	96.4	96.8	0	96	97.7	97.3	92.9	0	96.7	94.6	96.5	97.4	90.9	0	96.8	96.9
Trucks	2	2	0	0	4	26	42	6	0	74	20	32	37	0	89	6	27	37	1	0	71	238
% Trucks	1.1	0.2	0	0	0.3	6.1	2.1	1.6	0	2.7	1.5	2.3	6.7	0	2.7	2.2	1.7	1.8	4.5	0	1.8	2.1
Buses	0	2	7	0	9	2	29	6	0	37	10	6	2	0	18	9	29	17	1	0	56	120
% Buses	0	0.2	1.8	0	0.6	0.5	1.5	1.6	0	1.3	0.8	0.4	0.4	0	0.6	3.3	1.8	0.8	4.5	0	1.4	1

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File Name : Whitehorse Circle COMBINED
Site Code : 00000003
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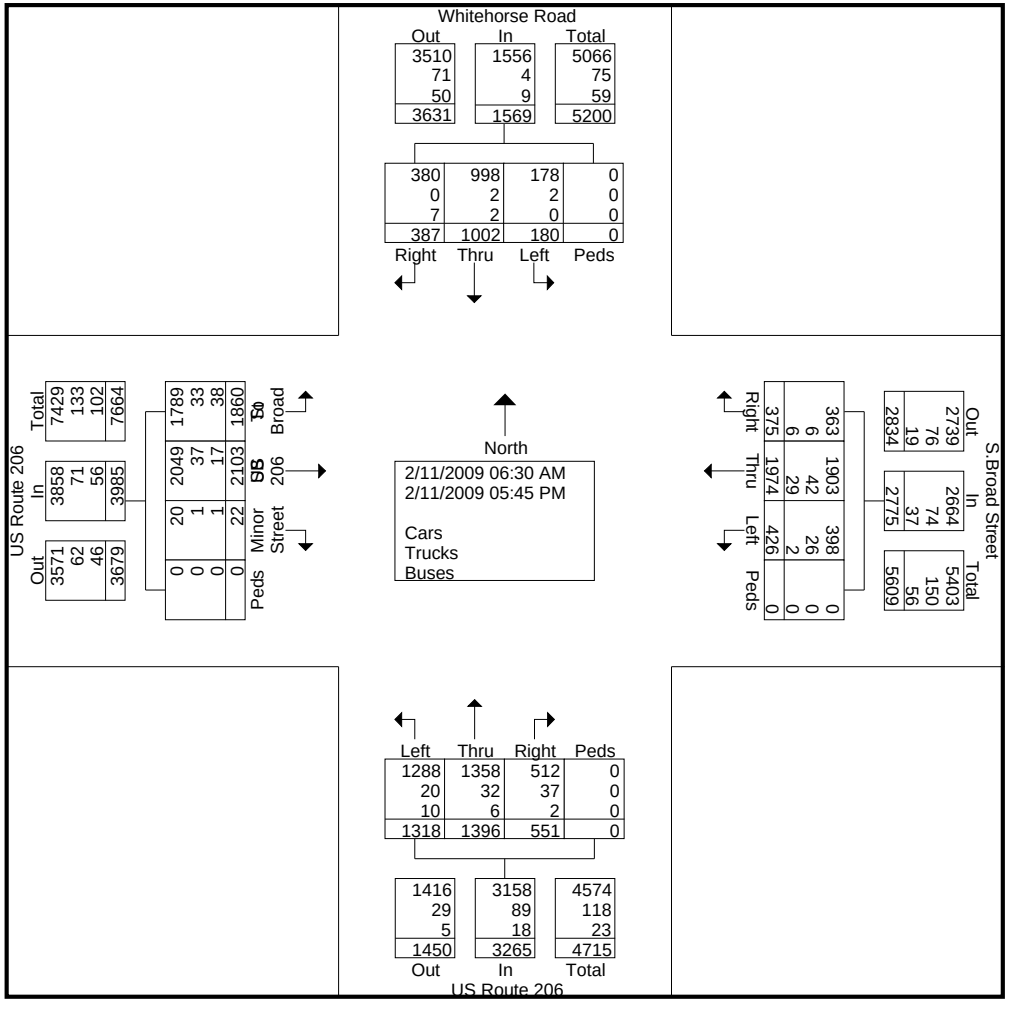

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File Name : Whitehorse Circle COMBINED
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Page No : 4

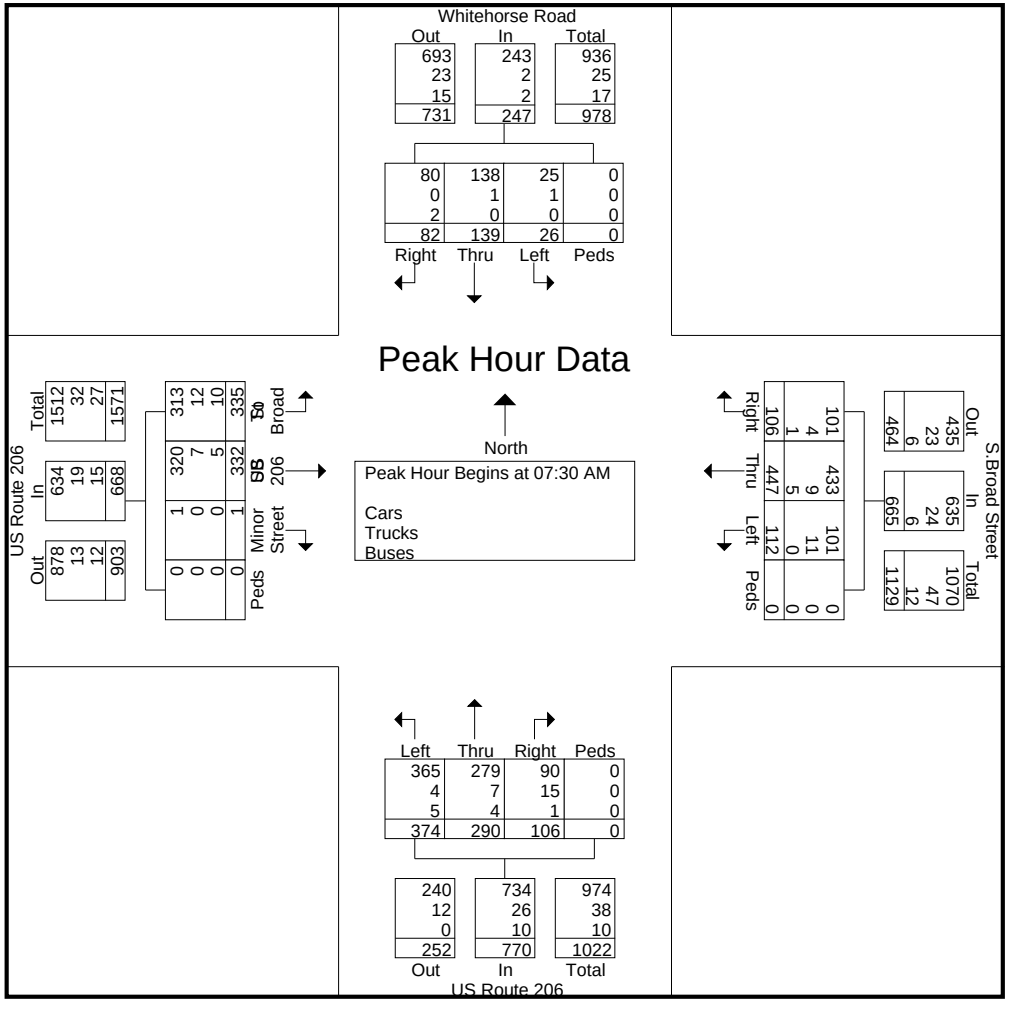
	Whitehorse Road SB					S.Broad Street WB					US Route 206 NB					US Route 206 EB						
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Whitehorse Rd	To Broad St	US 206 SB	Minor Street	Peds	App. Total	Int. Total
Peak Hour Analysis From 06:30 AM to 12:15 PM - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 07:30 AM																						
07:30 AM	5	35	19	0	59	26	111	**42**	0	**179**	79	60	**30**	0	169	8	76	**97**	0	0	181	588
07:45 AM	**10**	**39**	14	0	63	29	**128**	22	0	179	**157**	**89**	30	0	**276**	11	**87**	86	0	0	**184**	**702**
08:00 AM	5	26	**25**	0	56	26	111	22	0	159	94	67	21	0	182	**17**	74	66	**1**	0	158	555
08:15 AM	6	39	24	0	**69**	**31**	97	20	0	148	44	74	25	0	143	10	52	83	0	0	145	505
Total Volume	26	139	82	0	247	112	447	106	0	665	374	290	106	0	770	46	289	332	1	0	668	2350
% App. Total	10.5	56.3	33.2	0		16.8	67.2	15.9	0		48.6	37.7	13.8	0		6.9	43.3	49.7	0.1	0		
PHF	.650	.891	.820	.000	.895	.903	.873	.631	.000	.929	.596	.815	.883	.000	.697	.676	.830	.856	.250	.000	.908	.837
Cars	25	138	80	0	243	101	433	101	0	635	365	279	90	0	734	41	272	320	1	0	634	2246
% Cars	96.2	99.3	97.6	0	98.4	90.2	96.9	95.3	0	95.5	97.6	96.2	84.9	0	95.3	89.1	94.1	96.4	100	0	94.9	95.6
Trucks	1	1	0	0	2	11	9	4	0	24	4	7	15	0	26	3	9	7	0	0	19	71
% Trucks	3.8	0.7	0	0	0.8	9.8	2.0	3.8	0	3.6	1.1	2.4	14.2	0	3.4	6.5	3.1	2.1	0	0	2.8	3.0
Buses	0	0	2	0	2	0	5	1	0	6	5	4	1	0	10	2	8	5	0	0	15	33
% Buses	0	0	2.4	0	0.8	0	1.1	0.9	0	0.9	1.3	1.4	0.9	0	1.3	4.3	2.8	1.5	0	0	2.2	1.4

Urban Engineers, Inc.

55 Haddonfield Rd, Suite 200
Cherry Hill, NJ 08002
p(856) 663-5550 f(856) 663-4836

Counted By: ChrisErikJamesScottTK
Street (North-South): US Route 206
Street (East-West): Broad St
Notes:

File Name : Whitehorse Circle COMBINED
Site Code : 00000003
Start Date : 2/11/2009
Page No : 5



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Counted By: ChrisErikJamesScottTK
Street (North-South): US Route 206
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Notes:

File Name : Whitehorse Circle COMBINED
Site Code : 00000003
Start Date : 2/11/2009
Page No : 6

	Whitehorse Road SB					S.Broad Street WB					US Route 206 NB					US Route 206 EB						
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Whitehorse Rd	To Broad St	US 206 SB	Minor Street	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:30 PM to 05:45 PM - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 04:15 PM																						
04:15 PM	9	68	**36**	0	**113**	**27**	121	11	0	159	64	**76**	45	0	**185**	15	95	138	1	0	249	706
04:30 PM	7	**70**	28	0	105	12	100	22	0	134	**67**	73	37	0	177	18	**117**	128	1	0	264	680
04:45 PM	12	61	20	0	93	27	99	20	0	146	33	62	**47**	0	142	13	105	156	**5**	0	279	660
05:00 PM	**16**	53	23	0	92	26	**123**	**24**	0	**173**	42	69	38	0	149	**25**	101	**173**	0	0	**299**	**713**
Total Volume	44	252	107	0	403	92	443	77	0	612	206	280	167	0	653	71	418	595	7	0	1091	2759
% App. Total	10.9	62.5	26.6	0		15	72.4	12.6	0		31.5	42.9	25.6	0		6.5	38.3	54.5	0.6	0		
PHF	.688	.900	.743	.000	.892	.852	.900	.802	.000	.884	.769	.921	.888	.000	.882	.710	.893	.860	.350	.000	.912	.967
Cars	44	252	106	0	402	89	433	77	0	599	201	278	164	0	643	69	411	582	6	0	1068	2712
% Cars	100	100	99.1	0	99.8	96.7	97.7	100	0	97.9	97.6	99.3	98.2	0	98.5	97.2	98.3	97.8	85.7	0	97.9	98.3
Trucks	0	0	0	0	0	3	9	0	0	12	3	1	3	0	7	1	6	13	1	0	21	40
% Trucks	0	0	0	0	0	3.3	2.0	0	0	2.0	1.5	0.4	1.8	0	1.1	1.4	1.4	2.2	14.3	0	1.9	1.4
Buses	0	0	1	0	1	0	1	0	0	1	2	1	0	0	3	1	1	0	0	0	2	7
% Buses	0	0	0.9	0	0.2	0	0.2	0	0	0.2	1.0	0.4	0	0	0.5	1.4	0.2	0	0	0	0.2	0.3

Urban Engineers, Inc.

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Cherry Hill, NJ 08002
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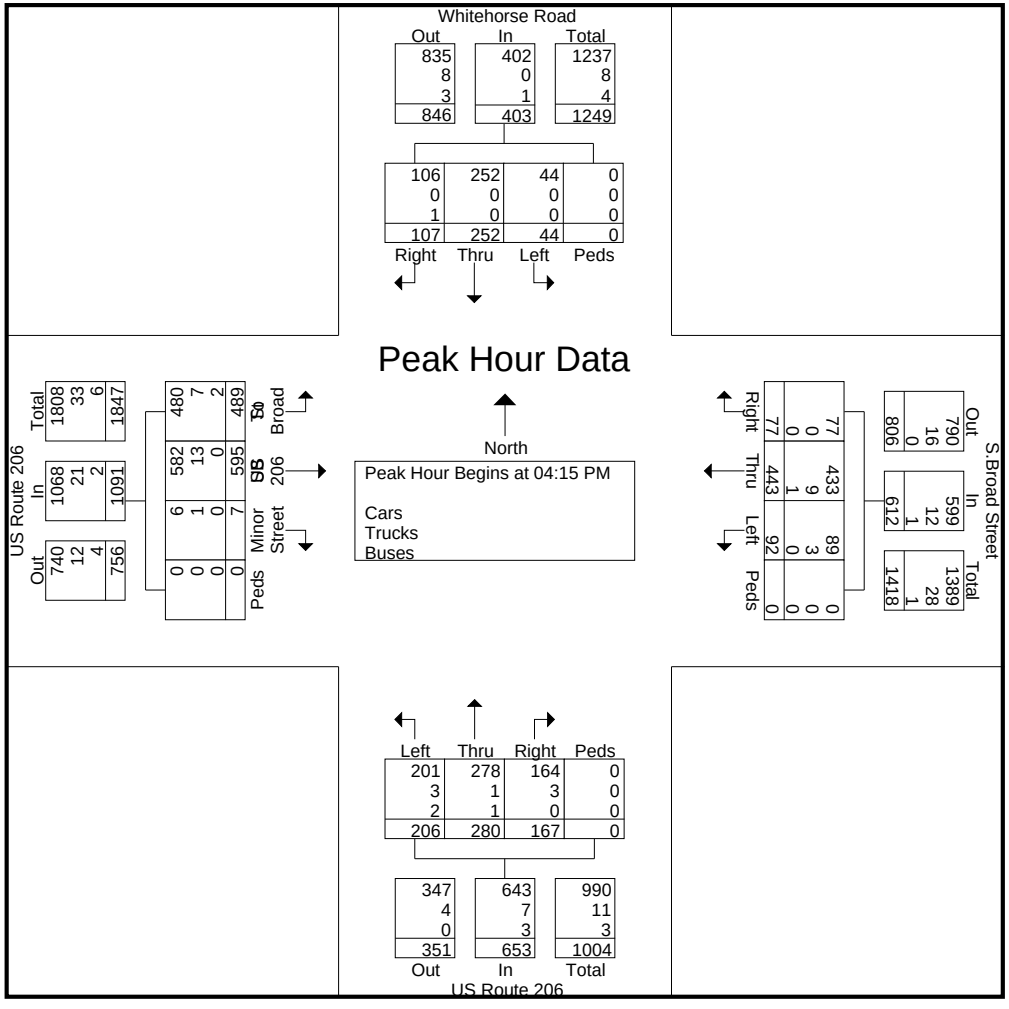
Counted By: ChrisErikJamesScottTK
Street (North-South): US Route 206
Street (East-West): Broad St
Notes:

File Name : Whitehorse Circle COMBINED
Site Code : 00000003
Start Date : 2/11/2009
Page No : 7



URBAN ENGINEERS,INC
Colwick Business Center, Suite 200
55 Haddonfield Road
Cherry Hill, NJ 08002

Site Code: 2
Station ID:
Westbound Parent Ave
Eastbound Parent Ave
Latitude: 40' 11.000 North

Start Time	07-Mar-11 Mon	Westbound	Eastbound	Total
12:00 AM		*	*	*
01:00		*	*	*
02:00		*	*	*
03:00		*	*	*
04:00		*	*	*
05:00		*	*	*
06:00		*	*	*
07:00		*	*	*
08:00		*	*	*
09:00		*	*	*
10:00		8	12	20
11:00		**16**	**13**	**29**
12:00 PM		9	7	16
01:00		18	15	33
02:00		**26**	**34**	**60**
03:00		12	25	37
04:00		18	14	32
05:00		17	10	27
06:00		10	8	18
07:00		5	5	10
08:00		2	0	2
09:00		2	0	2
10:00		2	2	4
11:00		0	0	0
Total		145	145	290
Percent		50.0%	50.0%	
AM Peak		11:00	11:00	11:00
Vol.		16	13	29
PM Peak		14:00	14:00	14:00
Vol.		26	34	60

URBAN ENGINEERS,INC
Colwick Business Center, Suite 200
55 Haddonfield Road
Cherry Hill, NJ 08002

Site Code: 2
Station ID:
Westbound Parent Ave
Eastbound Parent Ave
Latitude: 40' 11.000 North

Start Time	08-Mar-11 Tue	Westbound	Eastbound	Total
12:00 AM		1	0	1
01:00		0	0	0
02:00		2	1	3
03:00		0	0	0
04:00		1	1	2
05:00		3	0	3
06:00		4	5	9
07:00		**19**	9	28
08:00		16	**17**	**33**
09:00		10	9	19
10:00		9	7	16
11:00		14	16	30
12:00 PM		9	11	20
01:00		9	18	27
02:00		**24**	18	**42**
03:00		16	**20**	36
04:00		12	13	25
05:00		16	18	34
06:00		12	3	15
07:00		8	2	10
08:00		8	9	17
09:00		4	2	6
10:00		0	1	1
11:00		3	1	4
Total		200	181	381
Percent		52.5%	47.5%	
AM Peak		07:00	08:00	08:00
Vol.		19	17	33
PM Peak		14:00	15:00	14:00
Vol.		24	20	42

URBAN ENGINEERS,INC
Colwick Business Center, Suite 200
55 Haddonfield Road
Cherry Hill, NJ 08002

Site Code: 2
Station ID:
Westbound Parent Ave
Eastbound Parent Ave
Latitude: 40' 11.000 North

Start Time	09-Mar-11 Wed	Westbound	Eastbound	Total
12:00 AM		0	0	0
01:00		0	0	0
02:00		1	0	1
03:00		0	0	0
04:00		2	1	3
05:00		3	1	4
06:00		4	5	9
07:00		**24**	16	**40**
08:00		21	**19**	40
09:00		8	10	18
10:00		11	10	21
11:00		9	13	22
12:00 PM		16	15	31
01:00		4	9	13
02:00		12	7	19
03:00		17	**18**	**35**
04:00		**20**	12	32
05:00		10	7	17
06:00		17	9	26
07:00		6	5	11
08:00		3	5	8
09:00		1	2	3
10:00		0	1	1
11:00		3	1	4
Total		192	166	358
Percent		53.6%	46.4%	
AM Peak		07:00	08:00	07:00
Vol.		24	19	40
PM Peak		16:00	15:00	15:00
Vol.		20	18	35

URBAN ENGINEERS,INC
Colwick Business Center, Suite 200
55 Haddonfield Road
Cherry Hill, NJ 08002

Site Code: 2
Station ID:
Westbound Parent Ave
Eastbound Parent Ave
Latitude: 40' 11.000 North

Start Time	10-Mar-11 Thu	Westbound	Eastbound	Total
12:00 AM		0	0	0
01:00		0	0	0
02:00		0	0	0
03:00		0	0	0
04:00		2	2	4
05:00		5	0	5
06:00		2	6	8
07:00		15	10	25
08:00		**30**	**15**	**45**
09:00		13	5	18
10:00		8	10	18
11:00		9	6	15
12:00 PM		9	7	16
01:00		14	18	32
02:00		19	**24**	**43**
03:00		18	22	40
04:00		**21**	12	33
05:00		11	10	21
06:00		10	5	15
07:00		6	6	12
08:00		6	4	10
09:00		4	1	5
10:00		1	1	2
11:00		3	2	5
Total		206	166	372
Percent		55.4%	44.6%	
AM Peak		08:00	08:00	08:00
Vol.		30	15	45
PM Peak		16:00	14:00	14:00
Vol.		21	24	43

URBAN ENGINEERS,INC
Colwick Business Center, Suite 200
55 Haddonfield Road
Cherry Hill, NJ 08002

Site Code: 2
Station ID:
Westbound Parent Ave
Eastbound Parent Ave
Latitude: 40' 11.000 North

Start Time	11-Mar-11 Fri	Westbound	Eastbound	Total
12:00 AM		1	1	2
01:00		0	0	0
02:00		0	0	0
03:00		0	0	0
04:00		3	2	5
05:00		2	3	5
06:00		1	1	2
07:00		16	9	25
08:00		16	**17**	**33**
09:00		**19**	7	26
10:00		*	*	*
11:00		*	*	*
12:00 PM		*	*	*
01:00		*	*	*
02:00		*	*	*
03:00		*	*	*
04:00		*	*	*
05:00		*	*	*
06:00		*	*	*
07:00		*	*	*
08:00		*	*	*
09:00		*	*	*
10:00		*	*	*
11:00		*	*	*
Total		58	40	98
Percent		59.2%	40.8%	
AM Peak		09:00	08:00	08:00
Vol.		19	17	33
PM Peak				
Vol.				
Grand Total		801	698	1499
Percent		53.4%	46.6%	

ADT ADT 370 AADT 370

URBAN ENGINEERS,INC
Colwick Business Center, Suite 200
55 Haddonfield Road
Cherry Hill, NJ 08002

Site Code: 1
Station ID:
Pearson Dr

Latitude: 40' 11.000 North

Start Time	07-Mar-11 Mon	Southbound	Total	Combined
12:00 AM		*	*	*
01:00		*	*	*
02:00		*	*	*
03:00		*	*	*
04:00		*	*	*
05:00		*	*	*
06:00		*	*	*
07:00		*	*	*
08:00		*	*	*
09:00		*	*	*
10:00		16	0	16
11:00		11	0	11
12:00 PM		11	0	11
01:00		10	0	10
02:00		20	0	20
03:00		22	0	22
04:00		23	0	23
05:00		24	0	24
06:00		13	0	13
07:00		18	0	18
08:00		13	0	13
09:00		9	0	9
10:00		9	0	9
11:00		3	0	3
Total		202	0	202
Percent		100.0%	0.0%	

URBAN ENGINEERS,INC
Colwick Business Center, Suite 200
55 Haddonfield Road
Cherry Hill, NJ 08002

Site Code: 1
Station ID:
Pearson Dr

Latitude: 40' 11.000 North

Start Time	08-Mar-11 Tue	Southbound	Total	Combined
12:00 AM		1	0	1
01:00		1	0	1
02:00		0	0	0
03:00		1	0	1
04:00		5	0	5
05:00		2	0	2
06:00		9	0	9
07:00		15	0	15
08:00		15	0	15
09:00		11	0	11
10:00		10	0	10
11:00		15	0	15
12:00 PM		18	0	18
01:00		16	0	16
02:00		16	0	16
03:00		19	0	19
04:00		26	0	26
05:00		24	0	24
06:00		17	0	17
07:00		12	0	12
08:00		18	0	18
09:00		10	0	10
10:00		7	0	7
11:00		3	0	3
Total		271	0	271
Percent		100.0%	0.0%	

URBAN ENGINEERS,INC
Colwick Business Center, Suite 200
55 Haddonfield Road
Cherry Hill, NJ 08002

Site Code: 1
Station ID:
Pearson Dr

Latitude: 40' 11.000 North

Start Time	09-Mar-11 Wed	Southbound	Total	Combined
12:00 AM		4	0	4
01:00		0	0	0
02:00		0	0	0
03:00		2	0	2
04:00		5	0	5
05:00		4	0	4
06:00		13	0	13
07:00		13	0	13
08:00		10	0	10
09:00		11	0	11
10:00		8	0	8
11:00		17	0	17
12:00 PM		20	0	20
01:00		13	0	13
02:00		14	0	14
03:00		26	0	26
04:00		35	0	35
05:00		27	0	27
06:00		19	0	19
07:00		9	0	9
08:00		20	0	20
09:00		14	0	14
10:00		10	0	10
11:00		2	0	2
Total		296	0	296
Percent		100.0%	0.0%	

URBAN ENGINEERS,INC
Colwick Business Center, Suite 200
55 Haddonfield Road
Cherry Hill, NJ 08002

Site Code: 1
Station ID:
Pearson Dr

Latitude: 40' 11.000 North

Start Time	10-Mar-11 Thu	Southbound	Total	Combined
12:00 AM		3	0	3
01:00		0	0	0
02:00		1	0	1
03:00		0	0	0
04:00		4	0	4
05:00		4	0	4
06:00		10	0	10
07:00		19	0	19
08:00		20	0	20
09:00		18	0	18
10:00		10	0	10
11:00		8	0	8
12:00 PM		10	0	10
01:00		17	0	17
02:00		12	0	12
03:00		27	0	27
04:00		26	0	26
05:00		6	0	6
06:00		22	0	22
07:00		12	0	12
08:00		12	0	12
09:00		10	0	10
10:00		12	0	12
11:00		6	0	6
Total		269	0	269
Percent		100.0%	0.0%	

URBAN ENGINEERS,INC
Colwick Business Center, Suite 200
55 Haddonfield Road
Cherry Hill, NJ 08002

Site Code: 1
Station ID:
Pearson Dr

Latitude: 40' 11.000 North

Start Time	11-Mar-11 Fri	Southbound	Total	Combined
12:00 AM		3	0	3
01:00		1	0	1
02:00		1	0	1
03:00		1	0	1
04:00		2	0	2
05:00		6	0	6
06:00		9	0	9
07:00		20	0	20
08:00		15	0	15
09:00		7	0	7
10:00		*	*	*
11:00		*	*	*
12:00 PM		*	*	*
01:00		*	*	*
02:00		*	*	*
03:00		*	*	*
04:00		*	*	*
05:00		*	*	*
06:00		*	*	*
07:00		*	*	*
08:00		*	*	*
09:00		*	*	*
10:00		*	*	*
11:00		*	*	*
Total		65	0	65
Percent		100.0%	0.0%	
Grand Total		1103	0	
Percentage		100.0%	0.0%	

ADT

ADT 279

AADT 279

Traffic Analysis

2009 Existing Conditions and 2035 No-Build Traffic Analysis

2009 Exising Conditions AM Peak Hour

Node	Description	Queue Length (ft)		Delay (sec)	Estimated
		Max	Average	Average	LOS
	Northbound	594	105	37.7	D
	Eastbound	230	15	15.5	B
	Westbound	218	6	5.1	A
	Southbound	91	7	24.6	C
	Intersection Totals	594	33	20.8	C

2009 Exising Conditions PM Peak Hour

Node	Description	Queue Length (ft)		Delay (sec)	Estimated
		Max	Average	Average	LOS
	Northbound	464	43	29.1	C
	Eastbound	405	46	16.0	B
	Westbound	275	18	7.0	A
	Southbound	242	46	59.2	E
	Intersection Totals	464	38	23.4	C

2035 No Build Conditions AM Peak Hour

Node	Description	Queue Length (ft)		Delay (sec)	Estimated
		Max	Average	Average	LOS
	Northbound	1255	573	86.4	F
	Eastbound	301	21	14.6	B
	Westbound	220	13	4.9	A
	Southbound	102	11	26.9	C
	Intersection Totals	1255	155	36.4	D

2035 No Build Conditions PM Peak Hour

Node	Description	Queue Length (ft)		Delay (sec)	Estimated
		Max	Average	Average	LOS
	Northbound	872	213	57.7	E
	Eastbound	610	82	19.6	B
	Westbound	392	71	5.3	A
	Southbound	364	101	87.0	F
	Intersection Totals	872	117	35.3	D

Proposed Alternatives
Traffic Analysis

3: 206 SB & Whitehorse Rd Performance by approach

Approach	EB	WB	NB	SB	All
Total Delay (hr)	2.4	4.2	5.8	2.0	14.4
Delay / Veh (s)	11.8	20.0	24.1	26.1	19.7
Vehicles Entered	742	755	865	278	2640
Vehicles Exited	740	757	863	279	2639
Hourly Exit Rate	740	757	863	279	2639
Input Volume	759	758	877	281	2675
% of Volume	97	100	98	99	99

Total Network Performance

Total Delay (hr)	16.3
Delay / Veh (s)	22.2
Vehicles Entered	2639
Vehicles Exited	2641
Hourly Exit Rate	2641
Input Volume	10699
% of Volume	25

Intersection: 3: 206 SB & Whitehorse Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	L	T	L	T	R
Maximum Queue (ft)	94	156	163	131	241	265	262	260	258	68	178	76
Average Queue (ft)	25	58	66	65	112	141	107	121	124	22	90	31
95th Queue (ft)	65	114	128	119	202	239	212	222	208	59	158	58
Link Distance (ft)		760	760		685	685		781	781	438	438	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	220			200			260					180
Storage Blk Time (%)		0			1		0	1			1	
Queuing Penalty (veh)		0			1		1	2			1	

Network Summary

Network wide Queuing Penalty: 5

3: 206 SB & Whitehorse Rd Performance by approach

Approach	EB	WB	NB	SB	All
Total Delay (hr)	4.2	4.2	3.6	3.0	15.0
Delay / Veh (s)	12.3	21.5	17.7	23.5	17.3
Vehicles Entered	1235	699	723	456	3113
Vehicles Exited	1236	703	725	456	3120
Hourly Exit Rate	1236	703	725	456	3120
Input Volume	1234	697	744	459	3134
% of Volume	100	101	97	99	100

Total Network Performance

Total Delay (hr)	17.6
Delay / Veh (s)	20.4
Vehicles Entered	3116
Vehicles Exited	3119
Hourly Exit Rate	3119
Input Volume	12536
% of Volume	25

Intersection: 3: 206 SB & Whitehorse Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	TR	L	L	T	L	T	R
Maximum Queue (ft)	106	180	190	124	231	262	150	156	231	98	253	205
Average Queue (ft)	39	83	98	55	113	144	59	72	111	35	137	47
95th Queue (ft)	85	152	169	107	199	234	124	130	201	79	214	118
Link Distance (ft)		760	760		685	685		781	781	438	438	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	220			200			260					180
Storage Blk Time (%)					1						3	
Queuing Penalty (veh)					1						4	

Network Summary

Network wide Queuing Penalty: 4

3: 206 SB & Whitehorse Rd Performance by approach

Approach	EB	WB	NB	SB	All
Total Delay (hr)	2.6	3.6	4.2	1.9	12.3
Delay / Veh (s)	12.8	17.1	17.6	24.3	16.8
Vehicles Entered	742	755	865	278	2640
Vehicles Exited	742	755	866	279	2642
Hourly Exit Rate	742	755	866	279	2642
Input Volume	759	758	877	281	2675
% of Volume	98	100	99	99	99

Total Network Performance

Total Delay (hr)	14.4
Delay / Veh (s)	19.7
Vehicles Entered	2639
Vehicles Exited	2643
Hourly Exit Rate	2643
Input Volume	10699
% of Volume	25

Intersection: 3: 206 SB & Whitehorse Rd

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	T	T	L	T	T	R	L	L	T	L	T
Maximum Queue (ft)	102	151	149	162	190	205	29	234	238	244	70	95
Average Queue (ft)	33	66	78	69	96	107	1	87	104	107	24	46
95th Queue (ft)	76	118	131	127	154	172	21	174	189	193	61	87
Link Distance (ft)		761	761		690	690			781	781	443	443
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	220			200			200	260				
Storage Blk Time (%)		0		0	0	0		0	0			
Queuing Penalty (veh)		0		0	0	1		1	0			

Intersection: 3: 206 SB & Whitehorse Rd

Movement	SB
Directions Served	TR
Maximum Queue (ft)	147
Average Queue (ft)	78
95th Queue (ft)	122
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	180
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 2

3: 206 SB & Whitehorse Rd Performance by approach

Approach	EB	WB	NB	SB	All
Total Delay (hr)	0.7	0.6	0.5	0.4	2.1
Delay / Veh (s)	11.7	17.8	14.8	22.7	15.3
Vehicles Entered	205	117	117	72	511
Vehicles Exited	200	116	116	72	504
Hourly Exit Rate	1200	696	696	432	3024
Input Volume	1234	697	744	459	3134
% of Volume	97	100	94	94	96

Total Network Performance

Total Delay (hr)	2.6
Delay / Veh (s)	18.4
Vehicles Entered	510
Vehicles Exited	508
Hourly Exit Rate	3048
Input Volume	12536
% of Volume	24

Intersection: 3: 206 SB & Whitehorse Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	T	L	T	T	L	L	T	L	T	TR
Maximum Queue (ft)	77	117	126	97	120	148	91	94	135	68	109	122
Average Queue (ft)	45	80	90	63	94	105	53	71	91	35	69	94
95th Queue (ft)	98	142	139	114	144	160	97	107	149	78	112	136
Link Distance (ft)		761	761		690	690		781	781	443	443	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	220			200			260					180
Storage Blk Time (%)					0	0						
Queuing Penalty (veh)					0	0						

Network Summary

Network wide Queuing Penalty: 0

3: 206 SB & Whitehorse Rd Performance by approach

Approach	EB	WB	NB	SB	All
Total Delay (hr)	3.2	4.7	5.1	2.4	15.4
Delay / Veh (s)	15.4	22.5	21.2	30.7	20.9
Vehicles Entered	742	755	865	278	2640
Vehicles Exited	745	763	862	276	2646
Hourly Exit Rate	745	763	862	276	2646
Input Volume	759	758	877	281	2675
% of Volume	98	101	98	98	99

Total Network Performance

Total Delay (hr)	18.1
Delay / Veh (s)	24.8
Vehicles Entered	2639
Vehicles Exited	2637
Hourly Exit Rate	2637
Input Volume	10699
% of Volume	25

Intersection: 3: 206 SB & Whitehorse Rd

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	T	L	L	T	L	T	TR
Maximum Queue (ft)	124	177	173	200	198	222	242	252	244	70	108	160
Average Queue (ft)	40	70	84	95	108	122	99	112	121	25	55	83
95th Queue (ft)	89	125	144	170	178	190	193	201	221	63	101	137
Link Distance (ft)		761	761		690	690		781	781	443	443	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	220			200			260					180
Storage Blk Time (%)		0		1	0	1	0	0				0
Queuing Penalty (veh)		0		1	0	1	0	0				0

Network Summary

Network wide Queuing Penalty: 3

3: 206 SB & Whitehorse Rd Performance by approach

Approach	EB	WB	NB	SB	All
Total Delay (hr)	5.7	5.3	3.6	3.8	18.4
Delay / Veh (s)	16.5	27.2	18.1	30.2	21.3
Vehicles Entered	1235	699	723	456	3113
Vehicles Exited	1236	698	726	458	3118
Hourly Exit Rate	1236	698	726	458	3118
Input Volume	1234	697	744	459	3134
% of Volume	100	100	98	100	99

Total Network Performance

Total Delay (hr)	22.6
Delay / Veh (s)	26.2
Vehicles Entered	3115
Vehicles Exited	3113
Hourly Exit Rate	3113
Input Volume	12536
% of Volume	25

Intersection: 3: 206 SB & Whitehorse Rd

Movement	EB	EB	EB	EB	B8	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	TR	R	T	L	T	T	L	L	T	L
Maximum Queue (ft)	181	198	223	232	4	179	245	257	139	159	259	114
Average Queue (ft)	66	107	119	25	0	92	112	129	58	71	117	38
95th Queue (ft)	146	175	198	132	3	173	190	207	124	136	216	85
Link Distance (ft)		761	761		259		690	690		781	781	443
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	220			340		200			260			
Storage Blk Time (%)	1	0				1	0	1				
Queuing Penalty (veh)	1	0				2	1	1				

Intersection: 3: 206 SB & Whitehorse Rd

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	161	203
Average Queue (ft)	94	114
95th Queue (ft)	146	175
Link Distance (ft)	443	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		180
Storage Blk Time (%)	0	1
Queuing Penalty (veh)	0	1

Network Summary

Network wide Queuing Penalty: 6

Whitehorse Circle - 2009 Alternative 5 AM Peak Hour

Node	Approach	Queue Length (ft)		Delay (sec)	Estimated
		Max	Average	Average	LOS
	Eastbound	115	3	2.5	A
	Westbound	188	43	15.0	B
	Northbound	239	22	8.3	A
	Southbound	115	14	19.2	B
	Intersection Totals	239	20.6	9.7	A

Whitehorse Circle - 2009 Alternative 5 PM Peak Hour

Node	Approach	Queue Length (ft)		Delay (sec)	Estimated
		Max	Average	Average	LOS
	Eastbound	186	10	4.5	A
	Westbound	166	26	10.9	B
	Northbound	345	44	14.1	B
	Southbound	147	17	14.1	B
	Intersection Totals	345	24.1	9.6	A

Whitehorse Circle - 2035 Alternative 5 AM Peak Hour

Node	Approach	Queue Length (ft)		Delay (sec)	Estimated
		Max	Average	Average	LOS
	Eastbound	112	4	3.0	A
	Westbound	272	69	21.1	C
	Northbound	339	47	12.7	B
	Southbound	162	28	30.3	C
	Intersection Totals	339	37.3	14.2	B

Whitehorse Circle - 2035 Alternative 5 PM Peak Hour

Node	Approach	Queue Length (ft)		Delay (sec)	Estimated
		Max	Average	Average	LOS
	Eastbound	273	18	5.9	A
	Westbound	192	39	13.3	B
	Northbound	653	178	32.3	C
	Southbound	231	38	25.8	C
	Intersection Totals	653	68.0	16.7	B

Whitehorse Circle - 2009 Alternative 5a AM Peak Hour

Node	Approach	Queue Length (ft)		Delay (sec)	Estimated
		Max	Average	Average	LOS
	Eastbound	181	10	4.9	A
	Westbound	202	32	12.8	B
	Northbound	239	25	9.0	A
	Southbound	315	60	41.0	D
	Intersection Totals	315	31.4	12.3	B

Whitehorse Circle - 2009 Alternative 5a PM Peak Hour

Node	Approach	Queue Length (ft)		Delay (sec)	Estimated
		Max	Average	Average	LOS
	Eastbound	499	89	19.4	B
	Westbound	146	16	8.5	A
	Northbound	565	137	31.3	C
	Southbound	597	157	57.0	E
	Intersection Totals	597	99.6	25.3	C

Whitehorse Circle - 2009 Alternative 5b AM Peak Hour

Node	Approach	Queue Length (ft)		Delay (sec)	Estimated
		Max	Average	Average	LOS
	Eastbound	190	10	4.9	A
	Westbound	187	32	12.6	B
	Northbound	225	24	8.7	A
	Southbound	225	34	26.2	C
	Intersection Totals	225	23.0	10.5	B

Whitehorse Circle - 2009 Alternative 5b PM Peak Hour

Node	Approach	Queue Length (ft)		Delay (sec)	Estimated
		Max	Average	Average	LOS
	Eastbound	525	92	19.8	B
	Westbound	149	16	8.3	A
	Northbound	550	129	30.0	C
	Southbound	466	71	29.3	C
	Intersection Totals	550	73.6	21.1	C

Whitehorse Circle - 2035 Alternative 5b AM Peak Hour

Node	Approach	Queue Length (ft)		Delay (sec)	Estimated
		Max	Average	Average	LOS
	Eastbound	235	18	6.9	A
	Westbound	270	58	18.7	B
	Northbound	358	58	14.8	B
	Southbound	608	166	94.7	F
	Intersection Totals	608	70	22.0	C

Whitehorse Circle - 2035 Alternative 5b PM Peak Hour

Node	Approach	Queue Length (ft)		Delay (sec)	Estimated
		Max	Average	Average	LOS
	Eastbound	1190	592	66.1	E
	Westbound	166	24	10.0	A
	Northbound	1580	918	70.5	E
	Southbound	1003	659	164.0	F
	Intersection Totals	1580	541	68.4	E

Appendix F – Utility Information

Utility Coordination

Procedure \ Utility Owner	PSE&G Electric	PSE&G Gas	AT&T Comm.	Verizon	Cablevision of Hamilton	Hamilton Water Pol. Control	Trenton Water Works
Letter # 1 Sent	6/2/2011	6/3/2011	6/4/2011	6/6/2011	6/7/2011	6/8/2011	6/9/2011
Response due	6/16/2011	6/17/2011	6/18/2011	6/20/2011	6/21/2011	6/22/2011	6/23/2011
Response Received	6/13/2011	6/7/2011			6/8/2011	6/8/2011	6/24/2011
Letter # 1 Sent (2nd time)			7/22/2011	7/22/2011			
Response due			8/5/2011	8/5/2011			
Response Received			10/4/2011				
	YES	YES	NO	YES (Visual)	YES	YES	YES

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June 2, 2011

Mr. Ralph Sotomayor
Verizon
5100 Belmar Boulevard
Farmingdale, NJ 07727

Re:

Route 206/CR 533/CR 524 Whitehorse Circle
Condition Improvements
Hamilton Township,
Mercer County, New Jersey

Designer

Urban Engineers, Inc.
Colwick Business Center
55 Haddonfield Road, Suite 200
Cherry Hill, NJ 08002

Mr. Sotomayor:

The New Jersey Department of Transportation (NJDOT) has engaged Urban Engineers, Inc. to prepare feasibility assessment plans for the subject project, which is reflected on the enclosed project location map.

In accordance with the NJDOT New Utility Process, our preliminary investigation disclosed that Verizon is franchised to operate within the proposed project limits and may have facilities affected by the State's proposed construction.

Should you have existing or future plans within the project limits, it is necessary for us to verify your facilities and enter into an engineering dialog with Verizon.

Please complete the following questionnaire and return to us by June 16, 2011.

(____) The _____ Engineer to be contacted is:

Name _____
Company _____
Title _____
Address _____
_____
_____
_____
Telephone Number:_____
Fax Number: _____

(____) We **DO HAVE** existing facilities within the project limits.

(____) We **DO NOT HAVE** existing facilities within the project limits.

(____) Other (***Owner comment)*** _____
_____
_____

Questions concerning this matter should be directed to John Zim, Project Manager, NJDOT at (609) 530-2314.

Upon the completion of utility discovery within the project limits, the design of utility relocation will be performed by Urban Engineers, Inc. The contact person for the project is Bill McGarrigel and can be reached at (856) 663-5550.

If you prefer to respond by Fax, our number is (856) 663-4836.

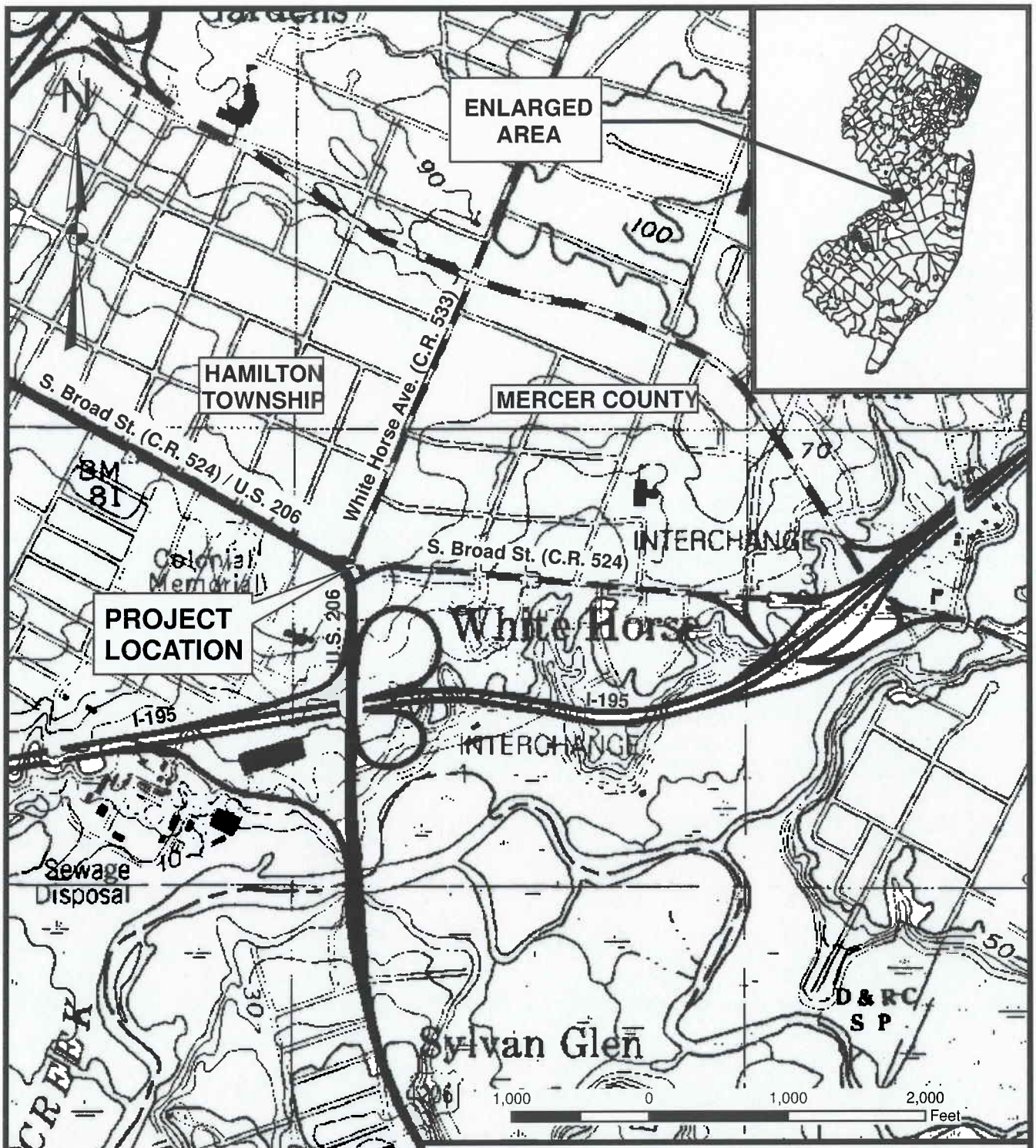
Thank you for your cooperation in this matter.

Very truly yours,

URBAN ENGINEERS, INC.

Dane Greene
Junior Highway Engineer

Attachment
Copy to: John Zim, Project Manager, NJDOT
File: 513438



ROUTE 206/CR 533/CR 524, WHITEHORSE CIRCLE

HAMILTON TOWNSHIP
MERCER COUNTY, NJ

FIGURE 1
PROJECT LOCATION MAP

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June 2, 2011

Mr. Victor Santoro
Public Service Electric & Gas Company
Electric Division
300 New Albany Road
Moorestown, NJ 08057

Re:

Route 206/CR 533/CR 524 Whitehorse Circle
Condition Improvements
Hamilton Township,
Mercer County, New Jersey

Designer

Urban Engineers, Inc.
Colwick Business Center
55 Haddonfield Road, Suite 200
Cherry Hill, NJ 08002

Mr. Santoro:

The New Jersey Department of Transportation (NJDOT) has engaged Urban Engineers, Inc. to prepare feasibility assessment plans for the subject project, which is reflected on the enclosed project location map.

In accordance with the NJDOT New Utility Process, our preliminary investigation disclosed that Public Service Electric and Gas Company is franchised to operate within the proposed project limits and may have facilities affected by the State's proposed construction.

Should you have existing or future plans within the project limits, it is necessary for us to verify your facilities and enter into an engineering dialog with Public Service Electric and Gas Company.

Please complete the following questionnaire and return to us by June 16, 2011.

(____) The _____ Engineer to be contacted is:

Name _____
Company _____
Title _____
Address _____
_____
_____
_____

Telephone Number:_____
Fax Number: _____

(____) We **DO HAVE** existing facilities within the project limits.

(____) We **DO NOT HAVE** existing facilities within the project limits.

(____) Other (***Owner comment)*** _____
_____
_____

Questions concerning this matter should be directed to John Zim, Project Manager, NJDOT at (609) 530-2314.

Upon the completion of utility discovery within the project limits, the design of utility relocation will be performed by Urban Engineers, Inc. The contact person for the project is Bill McGarrigel and can be reached at (856) 663-5550.

If you prefer to respond by Fax, our number is (856) 663-4836.

Thank you for your cooperation in this matter.

Very truly yours,

URBAN ENGINEERS, INC.

Dane Greene
Junior Highway Engineer

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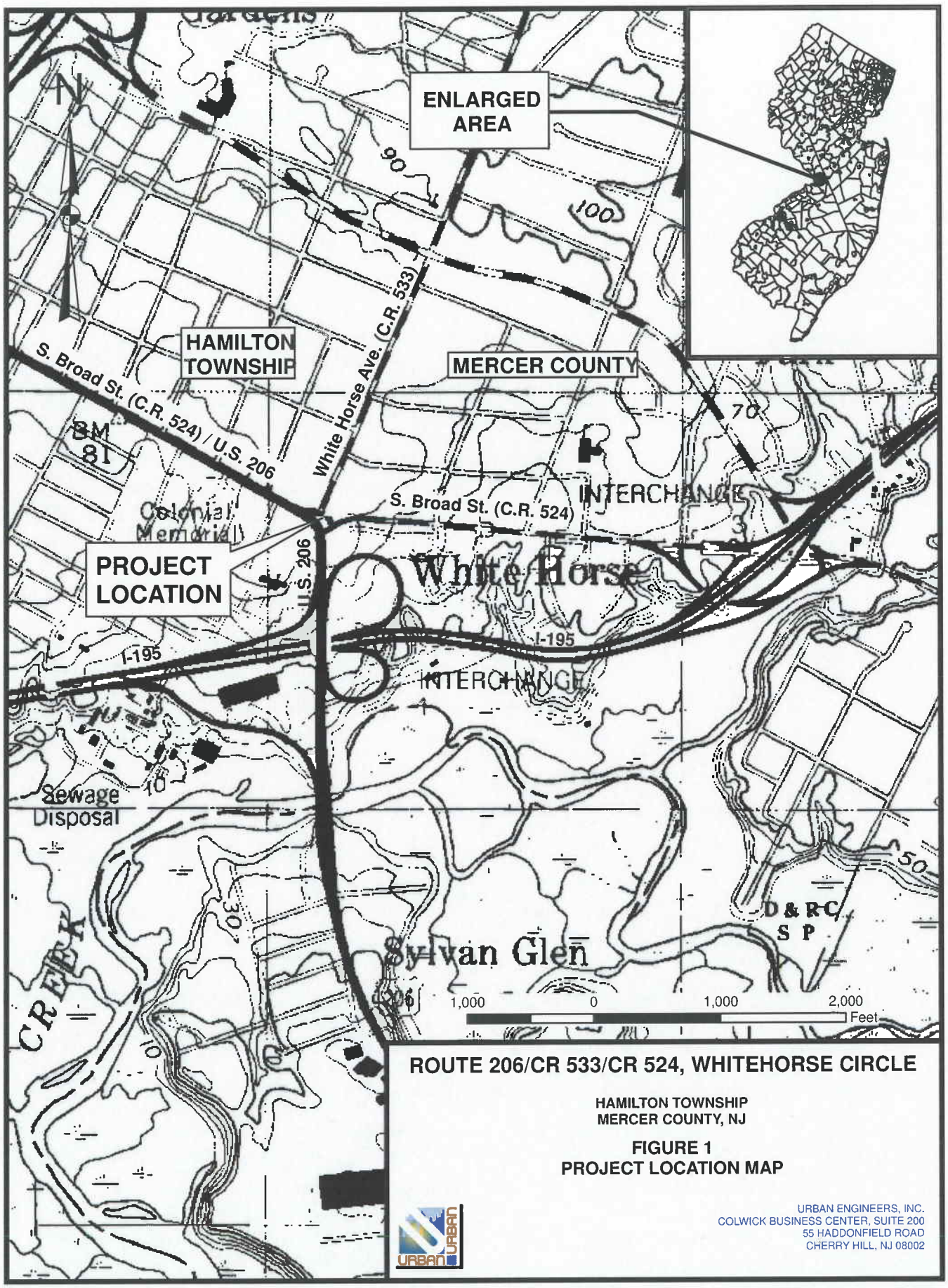

ROUTE 206/CR 533/CR 524, WHITEHORSE CIRCLE

HAMILTON TOWNSHIP
MERCER COUNTY, NJ

FIGURE 1
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June 2, 2011

Mr. Gregory T. Kyriacos
Public Service Electric & Gas Company
Gas Division
665 Whitehead Road
Lawrenceville, NJ 08648

Re:

Route 206/CR 533/CR 524 Whitehorse Circle
Condition Improvements
Hamilton Township,
Mercer County, New Jersey

Designer

Urban Engineers, Inc.
Colwick Business Center
55 Haddonfield Road, Suite 200
Cherry Hill, NJ 08002

Mr. Kyriacos:

The New Jersey Department of Transportation (NJDOT) has engaged Urban Engineers, Inc. to prepare feasibility assessment plans for the subject project, which is reflected on the enclosed project location map.

In accordance with the NJDOT New Utility Process, our preliminary investigation disclosed that Public Service Electric and Gas Company is franchised to operate within the proposed project limits and may have facilities affected by the State's proposed construction.

Should you have existing or future plans within the project limits, it is necessary for us to verify your facilities and enter into an engineering dialog with Public Service Electric and Gas Company.

Please complete the following questionnaire and return to us by June 16, 2011.

(____) The _____ Engineer to be contacted is:

Name _____
Company _____
Title _____
Address _____
_____
_____
_____
Telephone Number: _____
Fax Number: _____

(____) We **DO HAVE** existing facilities within the project limits.

(____) We **DO NOT HAVE** existing facilities within the project limits.

(____) Other (***Owner comment)*** _____
_____
_____

Questions concerning this matter should be directed to John Zim, Project Manager, NJDOT at (609) 530-2314.

Upon the completion of utility discovery within the project limits, the design of utility relocation will be performed by Urban Engineers, Inc. The contact person for the project is Bill McGarrigel and can be reached at (856) 663-5550.

If you prefer to respond by Fax, our number is (856) 663-4836.

Thank you for your cooperation in this matter.

Very truly yours,

URBAN ENGINEERS, INC.

Dane Greene
Junior Highway Engineer

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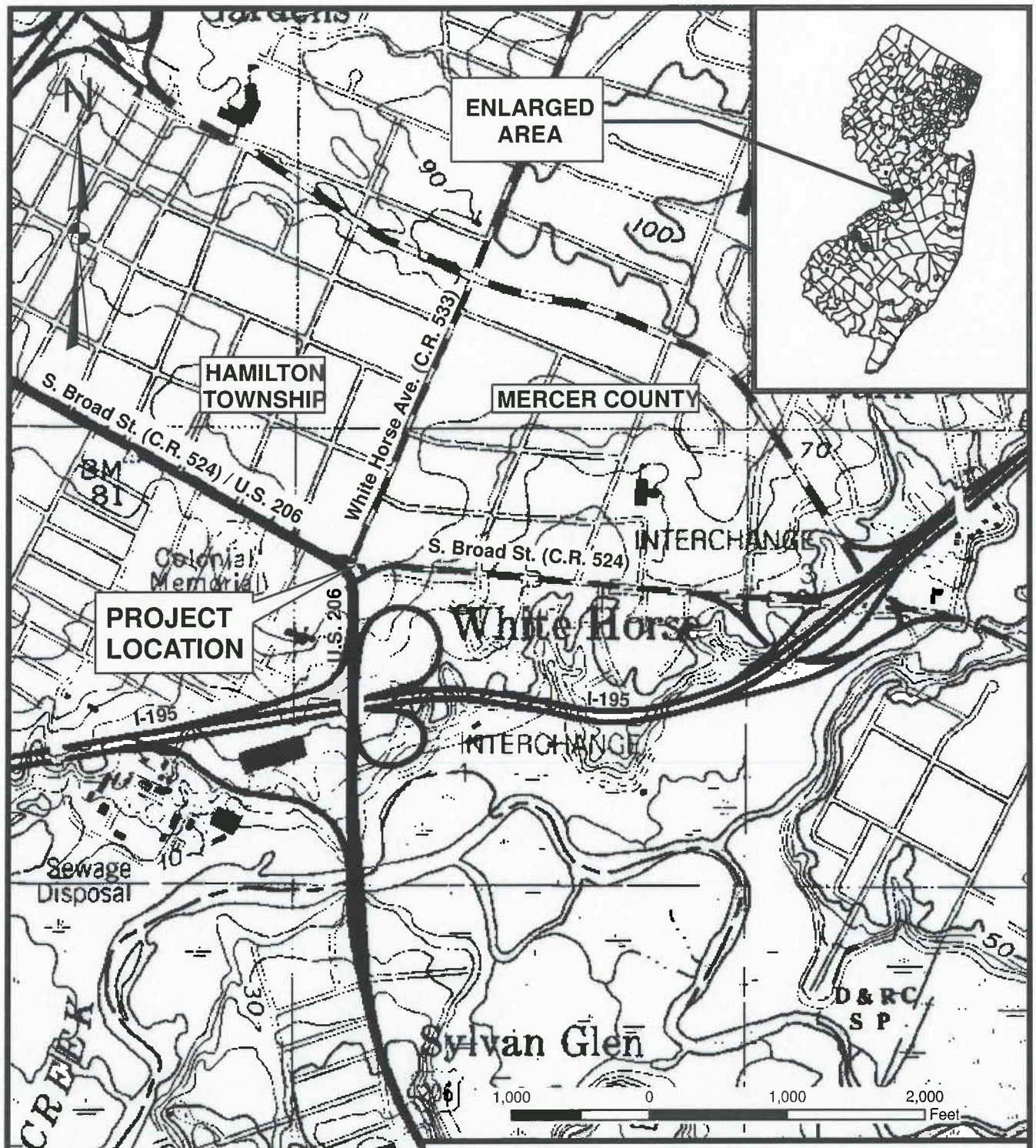

ROUTE 206/CR 533/CR 524, WHITEHORSE CIRCLE

HAMILTON TOWNSHIP
MERCER COUNTY, NJ

FIGURE 1
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June 2, 2011

Mr. Thomas Conroy
Cablevision of Hamilton
2137 Hamilton Avenue
Hamilton, NJ 08619

Re:

Route 206/CR 533/CR 524 Whitehorse Circle
Condition Improvements
Hamilton Township,
Mercer County, New Jersey

Designer

Urban Engineers, Inc.
Colwick Business Center
55 Haddonfield Road, Suite 200
Cherry Hill, NJ 08002

Mr. Conroy:

The New Jersey Department of Transportation (NJDOT) has engaged Urban Engineers, Inc. to prepare feasibility assessment plans for the subject project, which is reflected on the enclosed project location map.

In accordance with the NJDOT New Utility Process, our preliminary investigation disclosed that Cablevision of Hamilton is franchised to operate within the proposed project limits and may have facilities affected by the State's proposed construction.

Should you have existing or future plans within the project limits, it is necessary for us to verify your facilities and enter into an engineering dialog with Cablevision of Hamilton.

Please complete the following questionnaire and return to us by June 16, 2011.

(____) The _____ Engineer to be contacted is:

Name _____
Company _____
Title _____
Address _____
_____
_____
_____
Telephone Number:_____
Fax Number: _____

(____) We **DO HAVE** existing facilities within the project limits.

(____) We **DO NOT HAVE** existing facilities within the project limits.

(____) Other (***Owner comment***) _____
_____
_____

Questions concerning this matter should be directed to John Zim, Project Manager, NJDOT at (609) 530-2314.

Upon the completion of utility discovery within the project limits, the design of utility relocation will be performed by Urban Engineers, Inc. The contact person for the project is Bill McGarrigel and can be reached at (856) 663-5550.

If you prefer to respond by Fax, our number is (856) 663-4836.

Thank you for your cooperation in this matter.

Very truly yours,

URBAN ENGINEERS, INC.

Dane Greene
Junior Highway Engineer

Attachment
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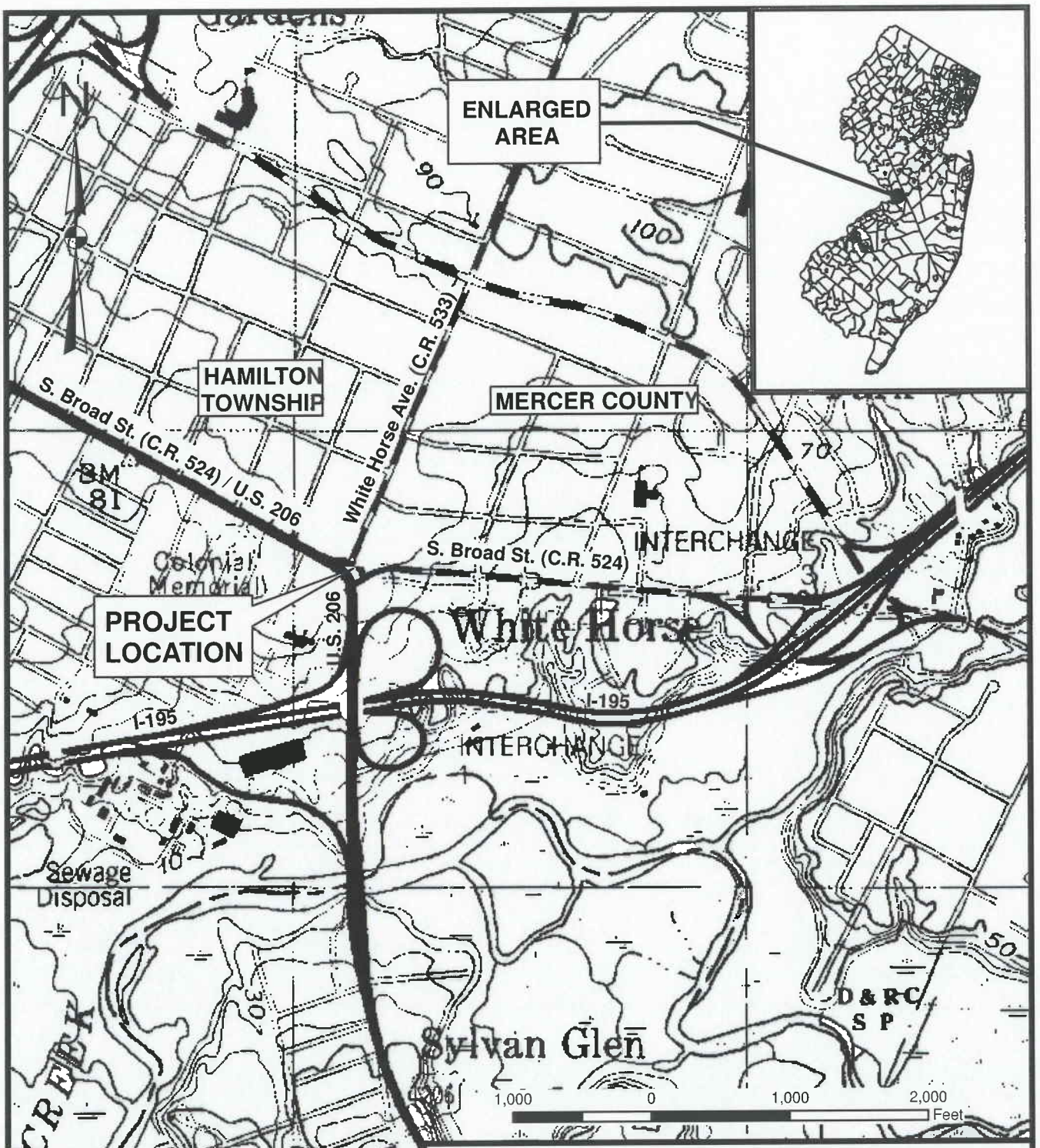
File: 513438



ROUTE 206/CR 533/CR 524, WHITEHORSE CIRCLE

HAMILTON TOWNSHIP
MERCER COUNTY, NJ

FIGURE 1
PROJECT LOCATION MAP

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June 2, 2011

Mr. Richard W. Watson
Department of Water Pollution Control
Township of Hamilton
300 Hobson Avenue
Hamilton, NJ 08610

Re:

Route 206/CR 533/CR 524 Whitehorse Circle
Condition Improvements
Hamilton Township,
Mercer County, New Jersey

Designer

Urban Engineers, Inc.
Colwick Business Center
55 Haddonfield Road, Suite 200
Cherry Hill, NJ 08002

Mr. Watson:

The New Jersey Department of Transportation (NJDOT) has engaged Urban Engineers, Inc. to prepare feasibility assessment plans for the subject project, which is reflected on the enclosed project location map.

In accordance with the NJDOT New Utility Process, our preliminary investigation disclosed that the Department of Water Pollution Control of the Township of Hamilton is franchised to operate within the proposed project limits and may have facilities affected by the State's proposed construction.

Should you have existing or future plans within the project limits, it is necessary for us to verify your facilities and enter into an engineering dialog with the Department of Water Pollution Control of the Township of Hamilton.

Please complete the following questionnaire and return to us by June 16, 2011.

(____) The _____ Engineer to be contacted is:

Name _____
Company _____
Title _____
Address _____
_____
_____
_____
Telephone Number: _____
Fax Number: _____

(____) We **DO HAVE** existing facilities within the project limits.

(____) We **DO NOT HAVE** existing facilities within the project limits.

(____) Other (***Owner comment***) _____
_____
_____

Questions concerning this matter should be directed to John Zim, Project Manager, NJDOT at (609) 530-2314.

Upon the completion of utility discovery within the project limits, the design of utility relocation will be performed by Urban Engineers, Inc. The contact person for the project is Bill McGarrigel and can be reached at (856) 663-5550.

If you prefer to respond by Fax, our number is (856) 663-4836.

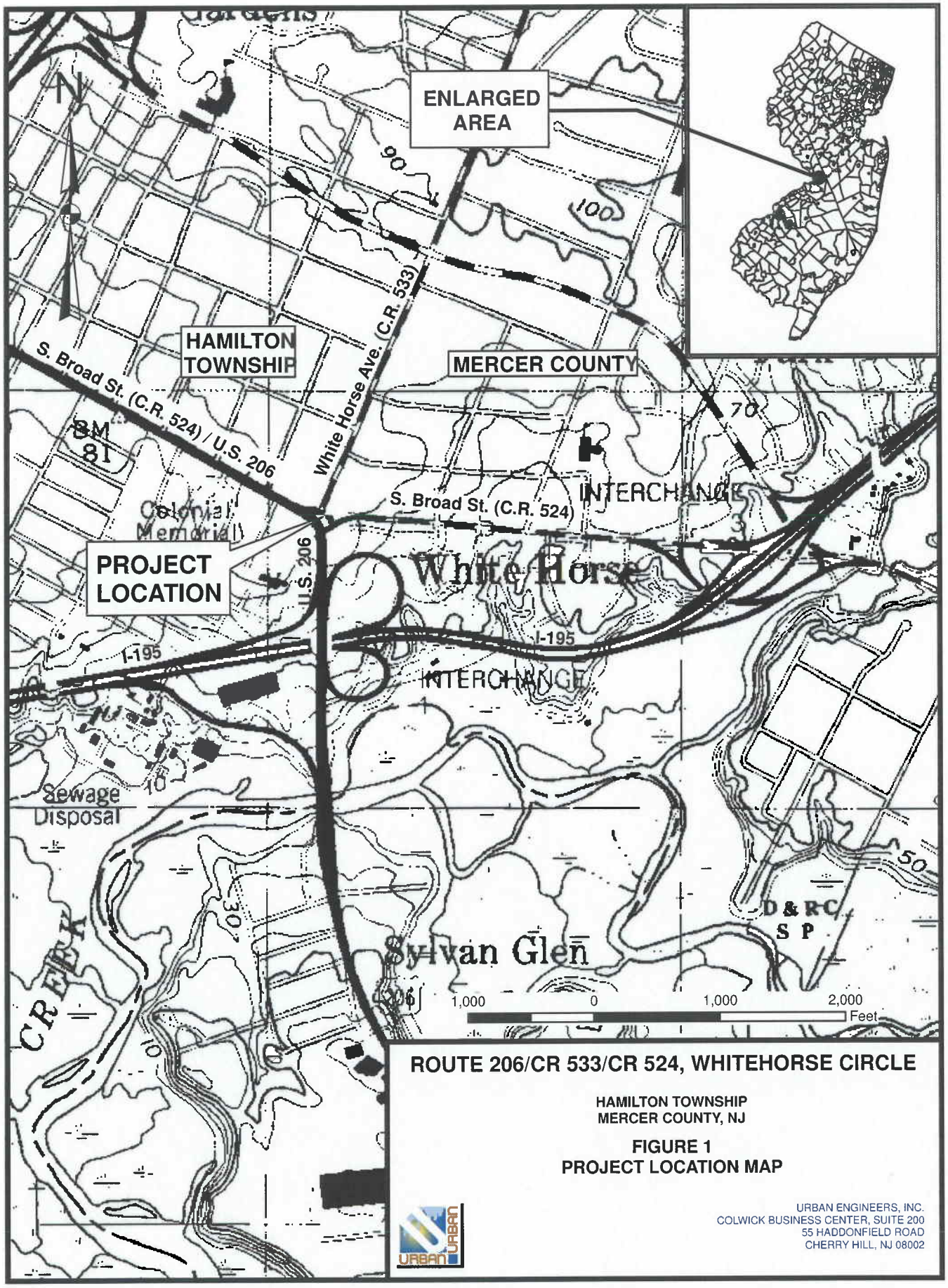
Thank you for your cooperation in this matter.

Very truly yours,

URBAN ENGINEERS, INC.

Dane Greene
Junior Highway Engineer

Attachment
Copy to: John Zim, Project Manager, NJDOT
File: 513438



ROUTE 206/CR 533/CR 524, WHITEHORSE CIRCLE

HAMILTON TOWNSHIP
MERCER COUNTY, NJ

FIGURE 1
PROJECT LOCATION MAP

URBAN ENGINEERS, INC.
COLWICK BUSINESS CENTER, SUITE 200
55 HADDONFIELD ROAD
CHERRY HILL, NJ 08002

URBAN ENGINEERS, INC.
Formulating Excellence®
ISO 9001:2008 Certified | Founded 1960 | Employee Owned
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55 Haddonfield Road
Cherry Hill, NJ 08002
(856) 663-5550 Fax (856) 663-4836
www.urbanengineers.com

June 2, 2011

Mr. Dilip Patel
Trenton Water Works
P.O. Box 528
Trenton, NJ 08604

Re:

Route 206/CR 533/CR 524 Whitehorse Circle
Condition Improvements
Hamilton Township,
Mercer County, New Jersey

Designer

Urban Engineers, Inc.
Colwick Business Center
55 Haddonfield Road, Suite 200
Cherry Hill, NJ 08002

Mr. Patel:

The New Jersey Department of Transportation (NJDOT) has engaged Urban Engineers, Inc. to prepare feasibility assessment plans for the subject project, which is reflected on the enclosed project location map.

In accordance with the NJDOT New Utility Process, our preliminary investigation disclosed that Trenton Water Works is franchised to operate within the proposed project limits and may have facilities affected by the State's proposed construction.

Should you have existing or future plans within the project limits, it is necessary for us to verify your facilities and enter into an engineering dialog with Trenton Water Works.

Please complete the following questionnaire and return to us by June 16, 2011.

(____) The _____ Engineer to be contacted is:

Name _____
Company _____
Title _____
Address _____
_____
_____
_____
Telephone Number: _____
Fax Number: _____

(____) We **DO HAVE** existing facilities within the project limits.

(____) We **DO NOT HAVE** existing facilities within the project limits.

(____) Other (***Owner comment***) _____
_____
_____

Questions concerning this matter should be directed to John Zim, Project Manager, NJDOT at (609) 530-2314.

Upon the completion of utility discovery within the project limits, the design of utility relocation will be performed by Urban Engineers, Inc. The contact person for the project is Bill McGarrigel and can be reached at (856) 663-5550.

If you prefer to respond by Fax, our number is (856) 663-4836.

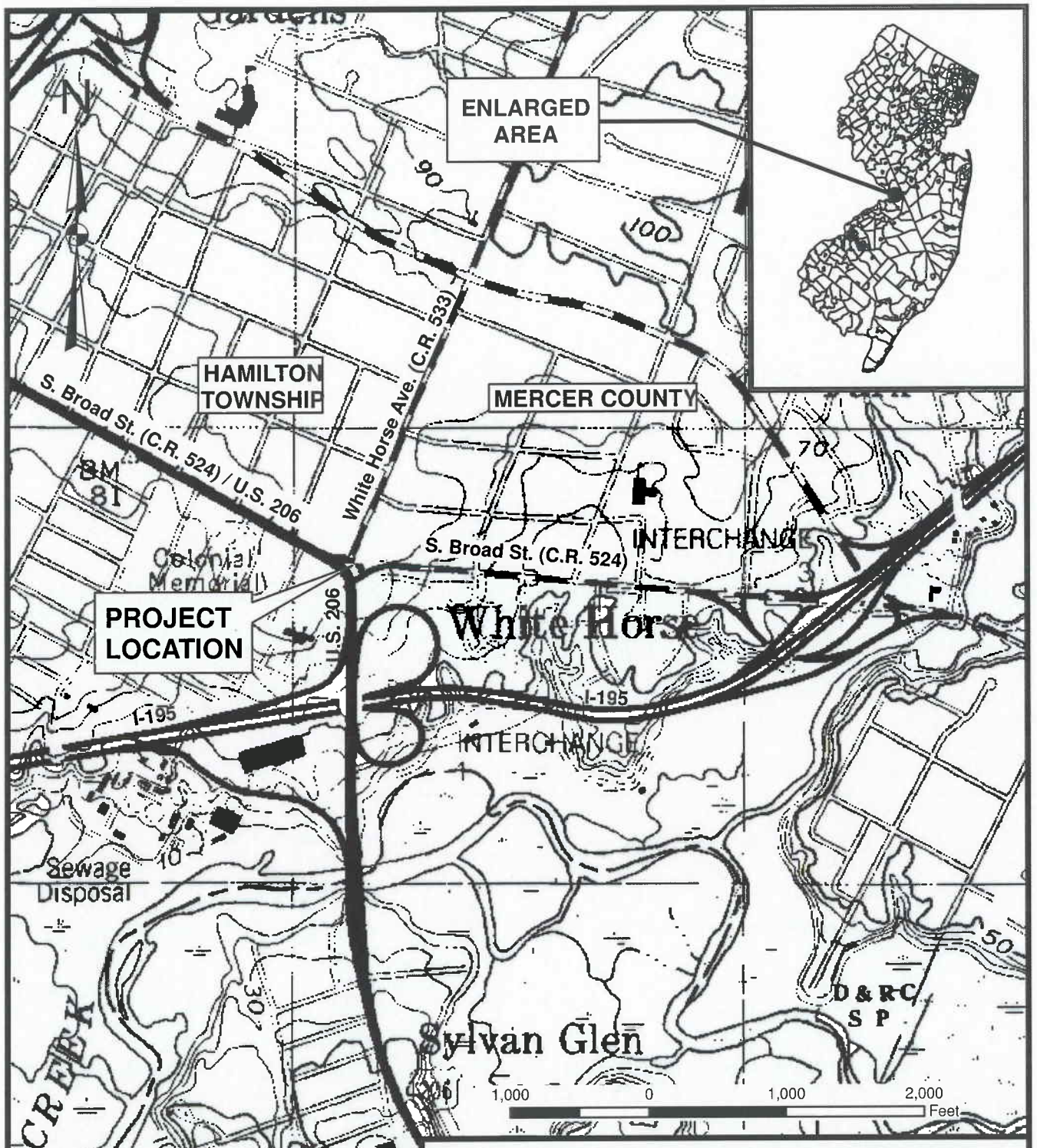
Thank you for your cooperation in this matter.

Very truly yours,

URBAN ENGINEERS, INC.

Dane Greene
Junior Highway Engineer

Attachment
Copy to: John Zim, Project Manager, NJDOT
File: 513438



ROUTE 206/CR 533/CR 524, WHITEHORSE CIRCLE

HAMILTON TOWNSHIP
MERCER COUNTY, NJ

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www.urbanengineers.com

June 2, 2011

Mr. Louis J. Marello, Sr. Tech. Project Mgr.
AT&T Communications
400 Hamilton Avenue
A&B, Room 1
White Plains, New York, 10601

Re:

Route 206/CR 533/CR 524 Whitehorse Circle
Condition Improvements
Hamilton Township,
Mercer County, New Jersey

Designer

Urban Engineers, Inc.
Colwick Business Center
55 Haddonfield Road, Suite 200
Cherry Hill, NJ 08002

Mr. Marello:

The New Jersey Department of Transportation (NJDOT) has engaged Urban Engineers, Inc. to prepare feasibility assessment plans for the subject project, which is reflected on the enclosed project location map.

In accordance with the NJDOT New Utility Process, our preliminary investigation disclosed that AT&T Communications is franchised to operate within the proposed project limits and may have facilities affected by the State's proposed construction.

Should you have existing or future plans within the project limits, it is necessary for us to verify your facilities and enter into an engineering dialog with AT&T Communications.

Please complete the following questionnaire and return to us by June 16, 2011.

(____) The _____ Engineer to be contacted is:

Name _____
Company _____
Title _____
Address _____
_____
_____
_____
Telephone Number: _____
Fax Number: _____

(____) We **DO HAVE** existing facilities within the project limits.

(____) We **DO NOT HAVE** existing facilities within the project limits.

(____) Other (***Owner comment***) _____
_____
_____

Questions concerning this matter should be directed to John Zim, Project Manager, NJDOT at (609) 530-2314.

Upon the completion of utility discovery within the project limits, the design of utility relocation will be performed by Urban Engineers, Inc. The contact person for the project is Bill McGarrigel and can be reached at (856) 663-5550.

If you prefer to respond by Fax, our number is (856) 663-4836.

Thank you for your cooperation in this matter.

Very truly yours,

URBAN ENGINEERS, INC.

Dane Greene
Junior Highway Engineer

Attachment
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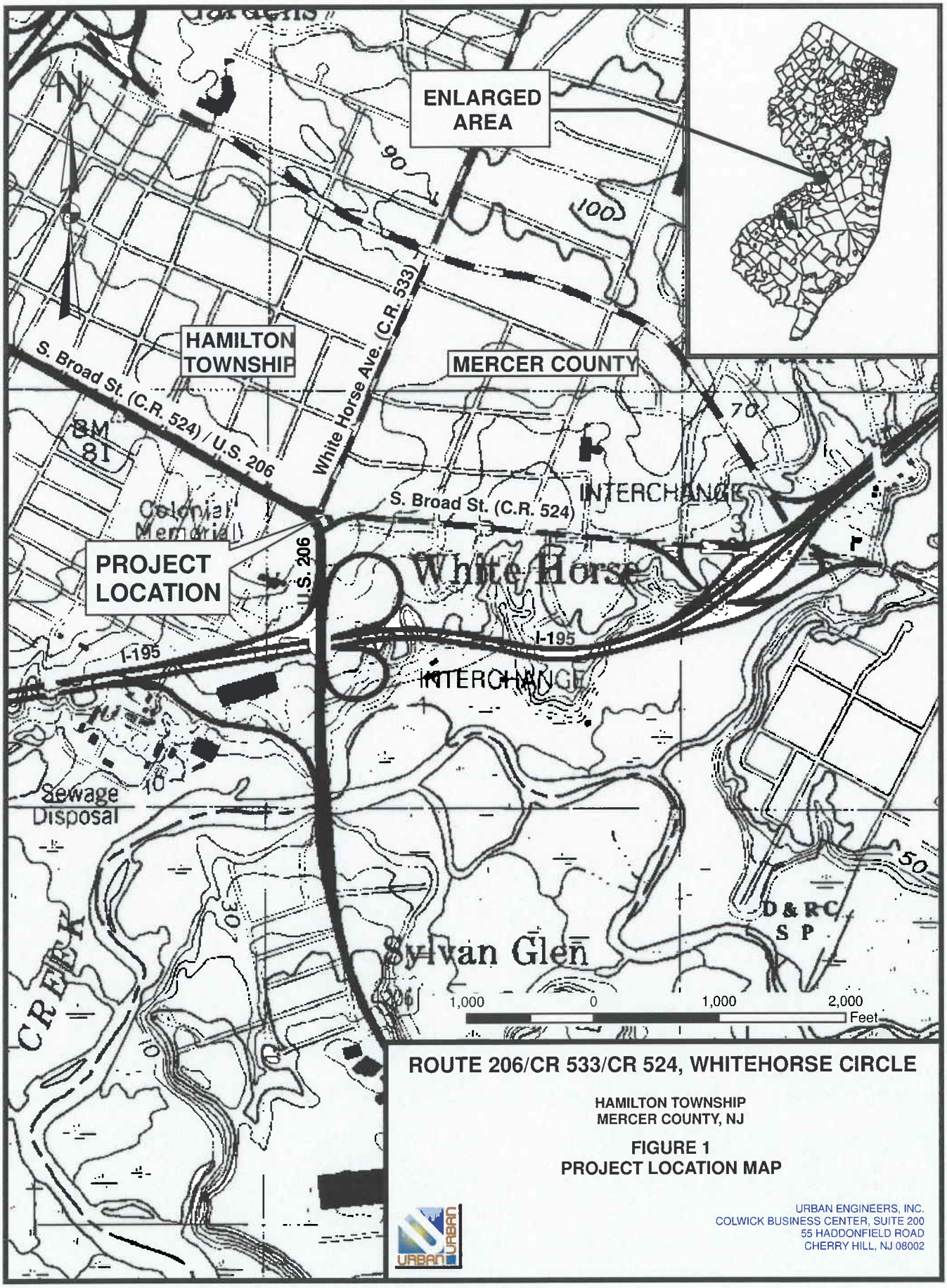
File: 513438



ROUTE 206/CR 533/CR 524, WHITEHORSE CIRCLE

HAMILTON TOWNSHIP
MERCER COUNTY, NJ

FIGURE 1
PROJECT LOCATION MAP

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www.urbanengineers.com

June 2, 2011

Mr. Fred Harrison
Residential Operations Manager
Waste Management of Central Jersey
208 Patterson Avenue
Hamilton, NJ 08610

Re:

Route 206/CR 533/CR 524 Whitehorse Circle
Condition Improvements
Hamilton Township,
Mercer County, New Jersey

Designer

Urban Engineers, Inc.
Colwick Business Center
55 Haddonfield Road, Suite 200
Cherry Hill, NJ 08002

Mr. Harrison:

The New Jersey Department of Transportation (NJDOT) has engaged Urban Engineers, Inc. to prepare feasibility assessment plans for the subject project, which is reflected on the enclosed project location map.

In accordance with the NJDOT New Utility Process, our preliminary investigation disclosed that Waste Management of Central Jersey is franchised to operate within the proposed project limits and may have facilities affected by the State's proposed construction.

Should you have existing or future plans within the project limits, it is necessary for us to verify your facilities and enter into an engineering dialog with Waste Management of Central Jersey.

Please complete the following questionnaire and return to us by June 16, 2011.

(____) The _____ Engineer to be contacted is:

Name _____
Company _____
Title _____
Address _____
_____
_____
_____
Telephone Number: _____
Fax Number: _____

(____) We **DO HAVE** existing facilities within the project limits.

(____) We **DO NOT HAVE** existing facilities within the project limits.

(____) Other (***Owner comment)*** _____
_____
_____

Questions concerning this matter should be directed to John Zim, Project Manager, NJDOT at (609) 530-2314.

Upon the completion of utility discovery within the project limits, the design of utility relocation will be performed by Urban Engineers, Inc. The contact person for the project is Bill McGarrigel and can be reached at (856) 663-5550.

If you prefer to respond by Fax, our number is (856) 663-4836.

Thank you for your cooperation in this matter.

Very truly yours,

URBAN ENGINEERS, INC.

Dane Greene
Junior Highway Engineer

Attachment
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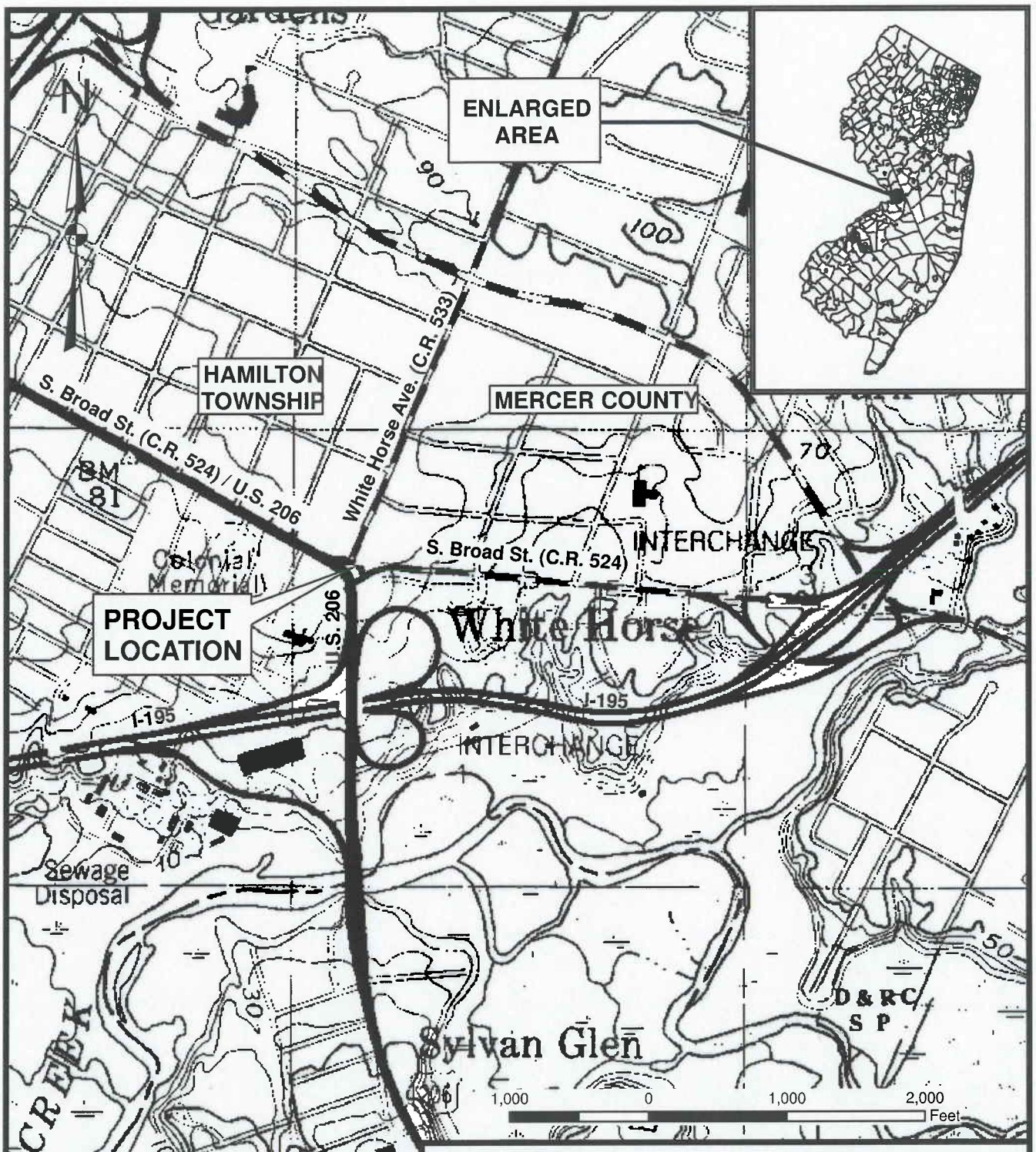

ROUTE 206/CR 533/CR 524, WHITEHORSE CIRCLE

HAMILTON TOWNSHIP
MERCER COUNTY, NJ

FIGURE 1
PROJECT LOCATION MAP

URBAN ENGINEERS, INC.
COLWICK BUSINESS CENTER, SUITE 200
55 HADDONFIELD ROAD
CHERRY HILL, NJ 08002

URBAN ENGINEERS, INC.
ISO 9001 Registered
FOUNDED 1960
530 Walnut Street, 14th Floor
Philadelphia, PA 19106-3685
(215) 922-8080 Fax (215) 922-8082
www.urbanengineers.com

June 2, 2011

Tracy Rowe, Supervisor of Transportation
Hamilton Township Board of Education
1700 Bell Avenue
Hamilton, NJ 08619

Re:

Route 206/CR 533/CR 524 Whitehorse Circle
Condition Improvements
Hamilton Township,
Mercer County, New Jersey

Designer

Urban Engineers, Inc.
Colwick Business Center
55 Haddonfield Road, Suite 200
Cherry Hill, NJ 08002

Ms. Rowe:

The New Jersey Department of Transportation (NJDOT) has engaged Urban Engineers, Inc. to prepare feasibility assessment plans for the subject project, which is reflected on the enclosed project location map.

In accordance with the NJDOT New Utility Process, our preliminary investigation disclosed that Hamilton Township Board of Education is franchised to operate within the proposed project limits and may have facilities affected by the State's proposed construction.

Should you have existing or future plans within the project limits, it is necessary for us to verify your facilities and enter into an engineering dialog with Hamilton Township Board of Education.

Please complete the following questionnaire and return to us by June 16, 2011.

(____) The _____ Engineer to be contacted is:

Name _____
Company _____
Title _____
Address _____
_____
_____
_____
Telephone Number: _____
Fax Number: _____

(____) We **DO HAVE** existing facilities within the project limits.

(____) We **DO NOT HAVE** existing facilities within the project limits.

(____) Other (***Owner comment)*** _____
_____
_____

Questions concerning this matter should be directed to John Zim, Project Manager, NJDOT at (609) 530-2314.

Upon the completion of utility discovery within the project limits, the design of utility relocation will be performed by Urban Engineers, Inc. The contact person for the project is Bill McGarrigel and can be reached at (856) 663-5550.

If you prefer to respond by Fax, our number is (856) 663-4836.

Thank you for your cooperation in this matter.

Very truly yours,

URBAN ENGINEERS, INC.

Dane Greene
Junior Highway Engineer

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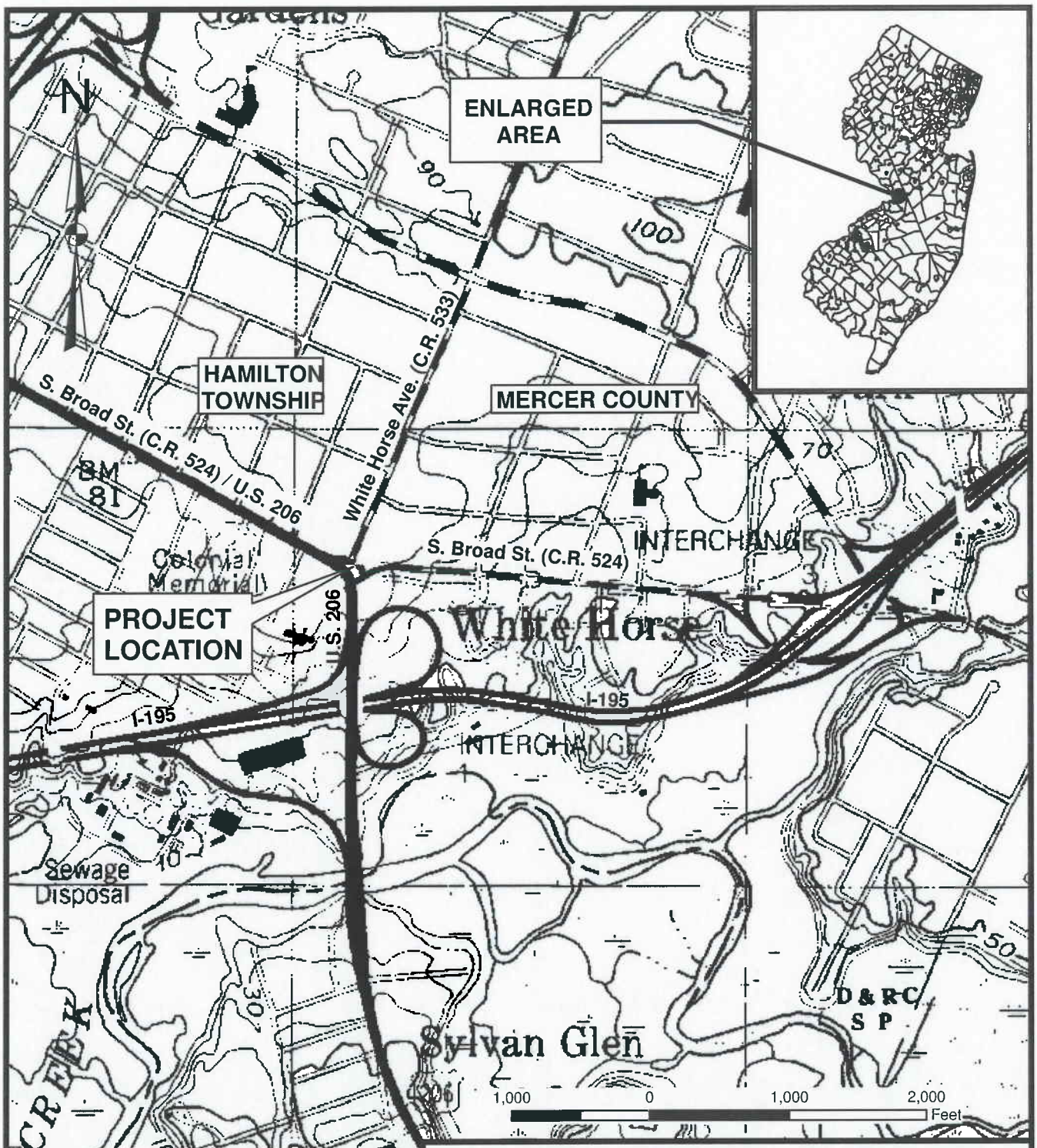


ROUTE 206/CR 533/CR 524, WHITEHORSE CIRCLE

HAMILTON TOWNSHIP
MERCER COUNTY, NJ

FIGURE 1
PROJECT LOCATION MAP

URBAN ENGINEERS, INC.
COLWICK BUSINESS CENTER, SUITE 200
55 HADDONFIELD ROAD
CHERRY HILL, NJ 08002

Appendix G - Environmental/Stormwater Management Assessment

Environmental Screening

NEW JERSEY DEPARTMENT OF TRANSPORTATION
-- M E M O R A N D U M –

TO: John Zim
Division of Project Development

FROM: Jim Sweet
Bureau of Environmental Resources

SUBJECT: Route 206 Whitehorse Circle
Intersection Improvement
M.P. 38.88
Hamilton Township
Mercer County
Environmental Screening Report

DATE: March 10, 2010

As requested, please find attached the Environmental Screening Report for the said project.

If there are any questions, please contact Kevin Bancroft at 530-2459.
KB

c: R. Cebrick

NEW JERSEY DEPARTMENT OF TRANSPORTATION

ENVIRONMENTAL SCREENING

Revised April 27, 2006

Date:	March 8, 2010
Request for this screening made by:	John Zim
Project Name:	Route 206 Whitehorse Circle
Project Description:	Intersection Improvement
County and Municipality:	Mercer County/Hamilton Township (See attached project location map)

ENVIRONMENTAL CONSTRAINTS/OPPORTUNITIES:

Cultural Resources	**Yes / No**
Are there any 50+ year old structures in the project study area?	Y
Are there known buildings or structures on or eligible for the State and/or National Register of Historic Places in the project study area?	Y
Is there involvement with an historic bridge or culvert?	N
Is the project located in a known or potential Historic District?	Y
Are there any undisturbed areas, old foundations or building rubble in the project study area?	Y
Are there any known archaeological sites or potential underground cultural resources within the project study area?	Y
Enhancement Opportunities:	
Comments: Based on a review of SHPO mapping and the Trenton Complex Report, the following cultural resources were found to be within the project area: (See next page)	

Abbott Farm Historic District (NHL, ID#1654)
NR: 12/8/1976 (NR Reference #: 76001158)
SR: 8/16/1979
SHPO Opinion: 11/6/1979 (Previous Opinion: 12/19/1975)

The Abbott Farm National Historic Landmark includes significant prehistoric occupations/sites, most notably a concentration of sites of the Middle Woodland period, as well as noteworthy historic homes, related archeological components, historic sites and the remains of transportation achievements – the Delaware and Raritan Canal and Camden and Amboy Railroad.

In addition to the landmark, multiple archeological sites have been identified in proximity to the Abbott Farm, which may actually be part of the historic district when viewed from a larger perspective.

Because Abbott Farm is a National Historic Landmark, the Advisory Council must be included in the Section 106 consultation process once initiated. It is also strongly recommended that the NJHPO be involved in the project scoping/screening process. Also, because of known archeological deposits, any proposal to construct roadway facilities beyond the existing pavement will require systematic archeological investigations by a qualified consultant.

Section 4(f) Properties	Yes / No
Are there any recreational facilities within the project study area?	N
Is there publicly owned open space in the project study area?	N
Is there a Wildlife Refuge or Wildlife Management Area in the project study area?	N
Is there a school or school athletic fields in the project study area?	Y
Is there a community park or parkland within the project study area?	Y
Enhancement Opportunities:	
Comments: Delaware Valley School is located approximately 500 feet from the Whitehorse Circle on Pearson Avenue (no athletic fields). See attached Section 4(f) Properties mapping. Once more detailed plans become available there may be a need to reevaluate the presence or absence of Section 4(f) Properties. Please refer to the attached Open Space Database, which lists all open space within Hamilton Twp.	

Air/Noise	Yes / No
Are there any sensitive receptors (i.e. residences, schools, hospitals, and churches) within 300 feet of the project?	Y
Will the project change the vertical or horizontal alignment of the roadway?	N/A
Does the project provide for a significant increase in vehicle operating speeds of roadway capacity?	N/A
Is the project in a non-attainment area for Carbon Monoxide?	N
Is an intersection Carbon monoxide analysis required?	N
Is the project in a non-attainment area for PM2.5?	Y
Is a PM2.5 hot-spot analysis required?	N
Is the project in a non-attainment area for PM10?	N
Is a PM10 hot-spot analysis required?	N
Mitigation Opportunities:	
Comments: Please refer to attached Section 4(f) and Sensitive Receptors mapping. Colonial Memorial Park (cemetery) is located approximately 500 feet west of the Whitehorse Circle. The Delaware Valley School and the Pearson Memorial United Methodist Church are located approximately 500 feet southwest of the Whitehorse Circle. Project plans are unavailable at this time; therefore there will be a need to reevaluate the project's possible air and noise impacts once more detailed plans are developed. Any construction noise impacts will be addressed as part of the standard commitments.	

Ecology	Yes / No
Are there any wetlands, floodplains, sole source aquifer, stream crossings or wildlife habitat in the project study area?	Y
Are there any Category 1 waters or Wild and Scenic rivers in the project study area?	N
Are there any potential or know vernal pool habitats with the project study area?	N
Are there any trout maintenance or trout production streams within the project study area?	N
Is there any potential for rare, threatened or endangered species or their habitats within the project study area?	Y
Are there any environmentally-sensitive areas that are possible project design constraints?	Y
Are there any potential stormwater management mitigation areas in project area or upstream of project area?	Unknown

Describe ecology in the project study area: (ie heavily forested, urban, residential, etcetera) The immediate area is highly trafficked due to the convergence of I-195 and Route 206. The areas surrounding the intersection include residential & commercial (urban) properties to the north and west, a forested patch of land to the east (on ramp for I-195), and I-195 to the south. Please refer to attached Ecology mapping.

The following environmental permits and interagency coordination may be necessary:

U.S. Coast Guard (Bridge)	N	NJDEP Freshwater Wetlands	N
USACOE Section 404	N	P.L. 2001 Chapter 10 Reforestation	Y
USACOE Section 10 (Navigable Waters)	N	NJDEP Waterfront Development	N
CAFRA	N	NJDEP Stream Encroachment	N
NJPDES Construction Stormwater	Y	NJDEP Riparian	N
NJDEP Coastal Wetlands	N	USEPA-Sole Source Aquifer	Y
NJDEP Water Quality Certificate	N	Essential Fish Habitat	N
Pinelands Commission	N	Category One waters	N
D & R Canal Commission	N	NJDEP Stormwater Management Rules	Y
Meadowlands Commission	N	Delaware River Bridge Commission	N

Comments: The need for specific permits/approvals will be determined after the proposed project is defined. However, the above checklist may be used as a guide for potential permits that may be required. Please refer to the attached ecology mapping.

Reforestation – According to the NJ No Net Loss Reforestation Act, if project plans include the deforestation of one-half acre or more of land owned or maintained by the State, a reforestation plan must first be approved by the NJDEP Division of Parks and Forestry. **Sole Source Aquifer** – The project is located with the USEPA-designated NJ Coastal Plains SSA. However, according to the 7/9/1984 FHWA-USEPA Memorandum of Understanding on SSAs, the proposed activities may not meet the criteria for early notification to the USEPA. If this is the case, impacts to the SSA would not be anticipated. **Wildlife Habitat & Threatened/Endangered Species** – The project is located along a major roadway which has a mostly urban setting, however an area to the east consists of mature forests. According to NJDEP Landscape Project data, Eastern Box Turtle and Great Blue Heron are documented as being present in the project area. According to USFWS, Bog Turtle may still be present in Hamilton Township. Due to the presence of these endangered/threatened species, and their habitats, further environmental studies and consultation with appropriate agencies are required. Please see attached Ecology mapping. **Stormwater** – If one acre or more of ground disturbance or ¼ acre or more of new impervious surface is anticipated, the project will need to be in compliance with the NJDEP Stormwater Management Rules. Compliance measures should be addressed. A Request For Authorization (RFA) under the NJPDES Construction Stormwater General Permit will be required if the proposed project disturbs one acre or more of land.

Socioeconomics	Yes / No
Will the project affect farmland or community facilities?	UNK
Based on the proposed improvements for this project, will there be possible displacement of businesses or residences?	UNK
Will the project affect access to community facilities, bus stop shelters, playgrounds or parks or gardens?	UNK
Are there any observable safety issues or concerns in the project study area?	UNK
Does project have potential for Environmental Justice involvement?	UNK

Hazardous Waste	Yes / No
Are there any known or suspected hazardous waste sites (UST, landfills, known NJDEP Case, ECRA Case), within the project study area?	Y
Are there active or abandoned industries, service stations or repair shops within the project study area?	Y
Is there evidence of potential contamination (monitoring wells, stained soils, etc.)?	Y
Are railroads or railyards located in the project study area?	N
Enhancement Opportunities:	
Comments: This project consists of an intersection improvement at the Whitehorse Circle, in Hamilton Township, Mercer County. At the present time there are no intersection improvement plans available. There is one (1) former service station and one (1) 3,000 gallon heating UST located within the project area. If DOT plans to acquire property within this area, further investigation and sampling will be required. See attached Hazardous Waste Screening.	

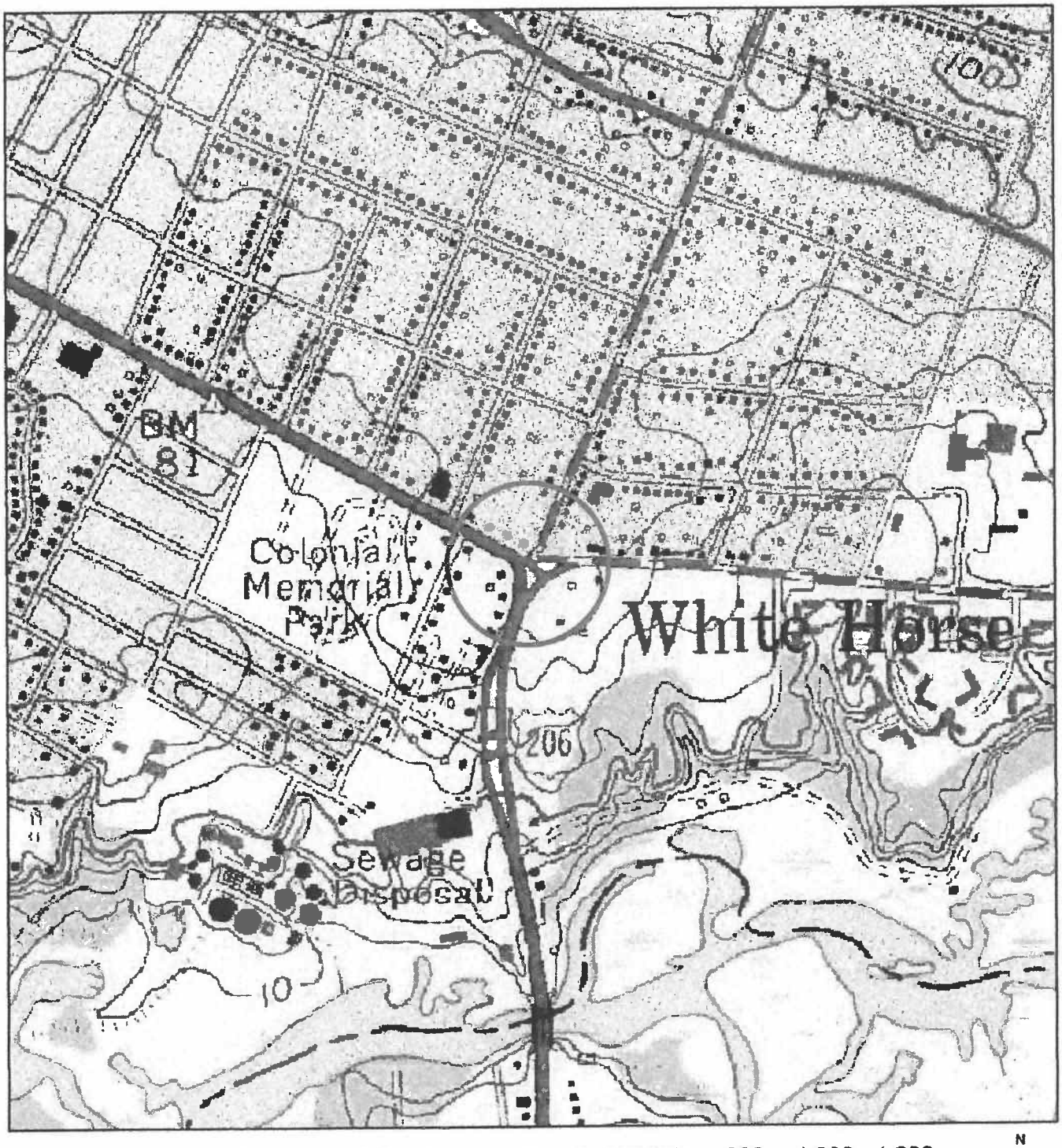
Environmental Screening Summary: In summary, the project has the potential to impact archaeological resources, historic places, sensitive receptors to air and noise, forests, a sole source aquifer, rare/threatened/endangered species and their habitats, stormwater and other environmentally sensitive areas. This project has the potential for involvement with hazardous waste or contaminated sites.

Prepared & Recommended By: Kevin Bancroft 3/8/10 609-530-2459

James R. Weed	3-8-10	609-530-5365
E-Team Screening Coordinator	Date	Phone
John Colmh	3/8/10	5-2838
Environmental Team Leader	Date	Phone

Project Location Map

Route 206 White Horse Circle
M.P. 38.88 & Immediate Area
Hamilton Twp, Mercer County



Source: USGS Topo Quarterquad Trenton East, NJ

0 200400 800 1,200 1,600 Feet

N
W E
S

Ecology Mapping

Route 206 White Horse Circle
Hamilton Township, Mercer County

Legend

Roads (Tele Atlas)

Landscape Project 2.1 - Forest

OGIS.FOREST_VIEW.RANK

- Suitable Habitat
- Priority Concern
- State Threatened
- State Endangered
- Federal T & E

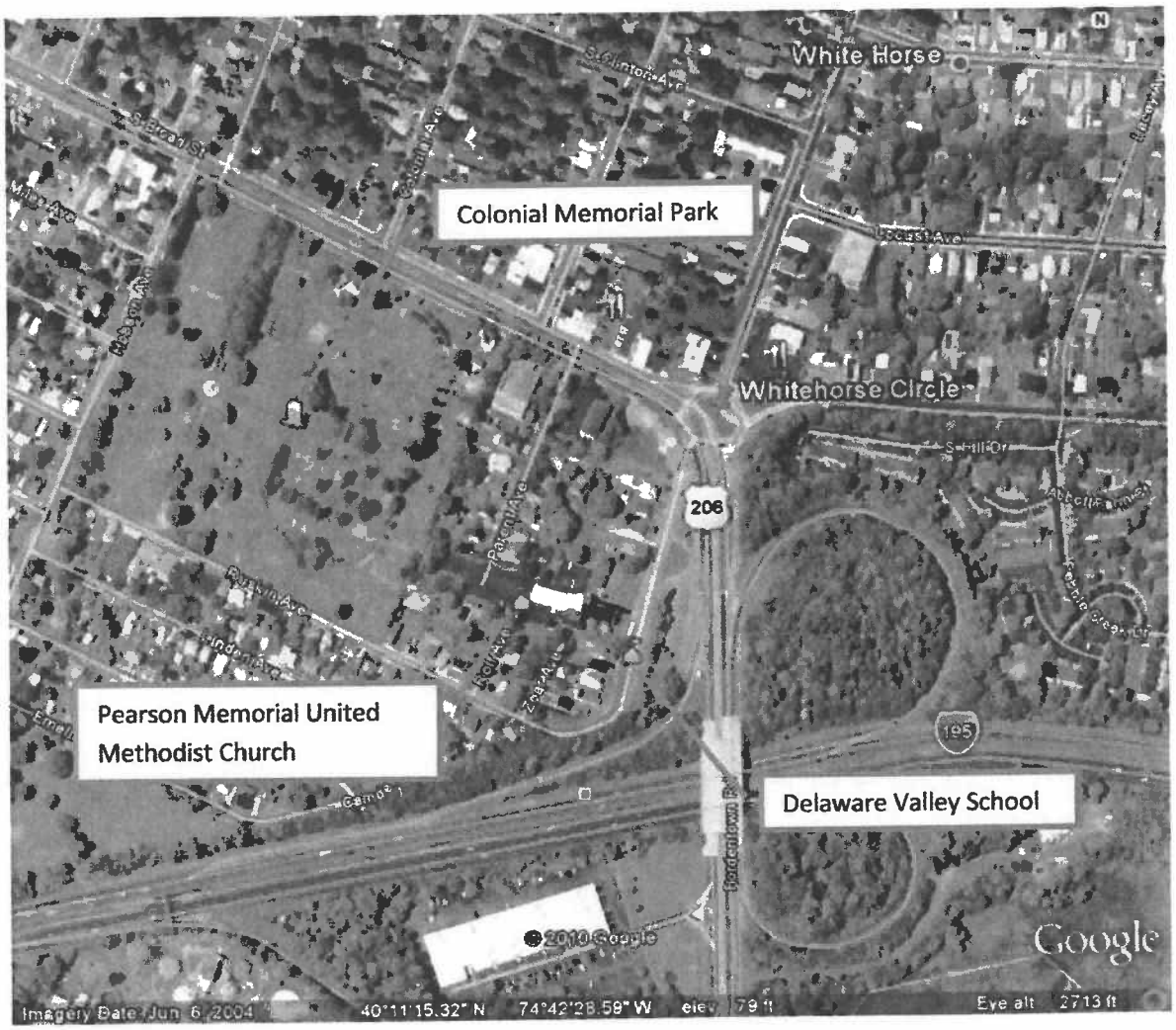
0 150 300 600 900 1,200 Feet

N
W E
S

Section 4(f) Properties and Sensitive Receptors

Route 206 Whitehorse Circle

Hamilton Township, Mercer County



Open Space Database

Facility Name: If followed by - DIV = parcel was entirely diverted; if followed by - P/DIV = parcel was partially diverted; and if followed by - COMP = parcel was a compensation piece for previous diversion.

Interest: ET/FE - Entire Taking/Fee Simple; PT/FE - Partial Taking/Fee Simple; LEASE - Leased Land; ET/CE - Entire Taking/Conservation Easement; PT/CE - Partial Taking/Conservation Easement

Type: M - Municipal; C - County; N - Non Profit

Funded?: Y - Park received Green Acres funding; N - Park did not receive Green Acres funding; L: funded under the Federal Land and Water Conservation Fund only

County: MERCER **Municipality:** HAMILTON TWP

Block	Lot	Facility Name	Interest	Type	Funded?	Last Updated
1108	33	DAM SITE #21	ET/CR	C	Y	28-Dec-05
1108	34	DAM SITE #21	ET/CR	C	Y	28-Dec-05
1374	11	DAM SITE #21	ET/FE	C	N	28-Dec-05
1501	128	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1501	3	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1501	4	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1501	81	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1501	82	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1501	83	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1501	84	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1505	1	VACANT LAND	ET/FE	M	N	28-Dec-05
1512	26	MERCER COUNTY PARK	ET/FE	C	Y	28-Dec-05
1512	27	MERCER COUNTY PARK	ET/FE	C	Y	28-Dec-05
1512	28	MERCER COUNTY PARK	ET/FE	C	Y	28-Dec-05
1518	1	VACANT LAND	ET/FE	M	N	28-Dec-05
1518	2	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1519	2	BEAR SWAMP	ET/FE	M	N	28-Dec-05
1519	3	BEAR SWAMP	ET/FE	M	N	28-Dec-05
1519	75	VAN HORN PARK	ET/FE	M	N	28-Dec-05
1519	79	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1519	84	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1535	19	CORNELL HEIGHTS	ET/FE	M	N	28-Dec-05
1578	1	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	10	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	11	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	12	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	13	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	2	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	25	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	26	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	27	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	28	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	29	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05

1578	3	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	30	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	31	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	32	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	33	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	34	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	4	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	5	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	6	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	7	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	8	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1578	9	WHITEHEAD PARK	ET/FE	M	N	28-Dec-05
1603	15	AMC DEDICATION	ET/FE	M	N	28-Dec-05
1603	22	MERCERVILLE PARK	ET/FE	M	N	28-Dec-05
1622	10.01	TYNDALE FARM PARK	ET/FE	M	Y	28-Dec-05
1629	37	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1631	38	DAM SITE #21	ET/FE	C	Y	28-Dec-05
1631	39	DAM SITE #21	ET/FE	C	Y	28-Dec-05
1631	40	DAM SITE #21	ET/FE	C	N	28-Dec-05
1631	41	DAM SITE #21	ET/FE	C	N	28-Dec-05
1631	42	DAM SITE #21	ET/FE	C	Y	28-Dec-05
1631	43	DAM SITE #21	ET/FE	C	Y	28-Dec-05
1631	44	DAM SITE #21	ET/FE	C	Y	28-Dec-05
1631	45	DAM SITE #21	ET/FE	C	Y	28-Dec-05
1631	64	DAM SITE #21	ET/FE	C	N	28-Dec-05
1631	74	DAM SITE #21		C	N	
1638	1	FARMINGDALE PARK	ET/FE	M	N	28-Dec-05
1638	2	FARMINGDALE PARK	ET/FE	M	N	28-Dec-05
1656	26	GEORGE DICK FIELD	ET/FE	M	N	28-Dec-05
1702	68	PINTINELLI TRACT	ET/FE	M	N	28-Dec-05
1722	105	FRED SAYEN PARK	ET/FE	M	N	28-Dec-05
1722	48	FRED SAYEN PARK	ET/FE	M	N	28-Dec-05
1722	7	FRED SAYEN PARK	ET/FE	M	Y	28-Dec-05
1722	95	FRED SAYEN PARK	ET/FE	M	N	28-Dec-05
1722	96	FRED SAYEN PARK	ET/FE	M	N	28-Dec-05
1733	7	BROMLEY PARK	ET/FE	M	N	28-Dec-05
1743	2	CONNECTICUT AVE PLAYGROUND	ET/FE	M	N	28-Dec-05
1757	24	MUNICIPAL BUILDING ATHLETIC FIELDS	PT/FE	M	N	28-Dec-05
1779	48	VACANT LAND	ET/FE	M	N	28-Dec-05
1813	5	MEGAN'S PLACE	ET/FE	N	Y	
1824.02	18	TOWNSHIP WETLANDS	ET/FE	M	N	28-Dec-05
1824.03	1	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1824	21	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1824	50	PERIWINKLE PARK	ET/FE	M	N	28-Dec-05
1824	51	PERIWINKLE PARK	ET/FE	M	N	28-Dec-05
1824	62	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1824	63	PERIWINKLE PARK	ET/FE	M	N	28-Dec-05
1824	80	PERIWINKLE PARK	ET/FE	M	N	28-Dec-05
1839	1	BERNARD FOLEY PARK	ET/FE	M	N	28-Dec-05
1841	104	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1841	104	DAM SITE #21	PT/CR	C	Y	28-Dec-05
1841	138	ST GREGORY THE GREAT	ET/FE	C	N	28-Dec-05
1841	166	ST GREGORY THE GREAT	ET/FE	C	N	28-Dec-05
1841	61	DAM SITE #21	PT/CR	C	N	28-Dec-05
1841	62	DAM SITE #21	PT/CR	C	Y	28-Dec-05
1841	62	VACANT LAND	ET/FE	M	N	28-Dec-05
1841	63	DAM SITE #21	PT/CR	C	Y	28-Dec-05

1841	96	DAM SITE #21	PT/CR	C	Y	28-Dec-05
1841	96	SUNSET MANOR PARK	ET/FE	M	N	28-Dec-05
1899	1	D'ARCY STREET PARK	ET/FE	M	N	28-Dec-05
1899	13	D'ARCY STREET PARK	ET/FE	M	N	28-Dec-05
1913	265	TOWNSHIP / VACANT	ET/FE	M	N	28-Dec-05
1913	389	BROOKLANE FIELD	ET/FE	M	N	28-Dec-05
1913	413	HOMESTEAD GARDENS	ET/FE	M	Y	28-Dec-05
1922	11	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1924	12	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1925	10	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1925	42	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1961	197	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1961	209	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1967	28	HAMILTON SQUARE PARK	PT/FE	M	N	28-Dec-05
1980	1	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1980	12	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1980	55	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1986	34	GEORGE DYE TRACT	ET/FE	M	N	28-Dec-05
1986	5	GEORGE DYE TRACT	ET/FE	M	N	28-Dec-05
1992	10	HAMILTON GREEN LIMEWOOD	ET/FE	M	N	28-Dec-05
1992	11	HAMILTON GREEN LIMEWOOD	ET/FE	M	N	28-Dec-05
1992	12	HAMILTON GREEN LIMEWOOD	ET/FE	M	N	28-Dec-05
1992	13	HAMILTON GREEN LIMEWOOD	ET/FE	M	N	28-Dec-05
1992	3	HAMILTON GREEN LIMEWOOD	ET/FE	M	N	28-Dec-05
1992	4	HAMILTON GREEN LIMEWOOD	ET/FE	M	N	28-Dec-05
1999	22	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1999	37	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
1999	52	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2011	24	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2011	58	FUTURE BIKE PATH	ET/FE	M	N	28-Dec-05
2026	5	FRANCIAMORE GARDEN	ET/FE	M	N	28-Dec-05
2077	1	HOMEDELL SCHOOL	ET/FE	M	N	28-Dec-05
2154	150	KUSER FARM PARK	ET/FE	M	Y	28-Dec-05
2163	5	SOMERTON SPRINGS	LEASE	M	N	28-Dec-05
2169	1.27	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2169	2	VETERANS PARK	ET/FE	M	Y	28-Dec-05
2169	265	BRAGHELLI	ET/FE	C	N	28-Dec-05
2169	546	VETERANS PARK	ET/FE	M	N	28-Dec-05
2169	546	VETERANS PARK EXPANSION	ET/FE	M	Y	28-Dec-05
2180	34	DUETZVILLE PARK	ET/FE	M	N	28-Dec-05
2187	4	DUETZVILLE PARK	ET/FE	M	N	28-Dec-05
2187	6	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2218	32	NEW CEDAR LANE PARK	ET/FE	M	N	28-Dec-05
2218	33	NEW CEDAR LANE PARK	ET/FE	M	N	28-Dec-05
2261	10	NEIGHBORHOOD CENTER	ET/FE	M	N	28-Dec-05
2261	8	CEDAR LAWN PARK	ET/FE	M	N	28-Dec-05
2327	15	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2335	13	McCLELLAN AVENUE PARK	ET/FE	M	N	28-Dec-05
2359	10	J A ROEBLING MEMORIAL PARK	ET/FE	C	N	28-Dec-05
2362	1	WILLEY SCHOOL	ET/FE	M	N	28-Dec-05
2370	1	MARSH ENVIRONMENTAL ED CENTER	ET/FE	C	N	28-Dec-05
2370	2	MARSH ENVIRONMENTAL ED CENTER	ET/FE	C	N	28-Dec-05
2370	3	MARSH ENVIRONMENTAL ED CENTER	ET/FE	C	N	28-Dec-05
2379	32	SHADY BROOK PARK	ET/FE	M	Y	28-Dec-05
2379	32	SNYDER MEMORIAL FIELD	ET/FE	M	N	28-Dec-05
2405	10	J A ROEBLING MEMORIAL PARK	ET/FE	C	N	28-Dec-05
2405	3	SWITLIK	ET/FE	C	N	28-Dec-05

2405	7	J A ROEBLING MEMORIAL PARK	ET/FE	C	N	28-Dec-05
2405	8	J A ROEBLING MEMORIAL PARK	ET/FE	C	N	28-Dec-05
2405	9	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2406	2	J A ROEBLING MEMORIAL PARK	ET/FE	C	N	28-Dec-05
2406	3	HAMILTON MARSH	ET/FE	C	N	28-Dec-05
2406	4	J A ROEBLING MEMORIAL PARK	ET/FE	C	N	28-Dec-05
2408	42	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2408	43	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2408	68	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2477	1	ISSAC PEARSON HOUSE	ET/FE	M	Y	28-Dec-05
2477	2	ISSAC PEARSON HOUSE	ET/FE	M	Y	28-Dec-05
2507	4	J A ROEBLING MEMORIAL PARK	ET/FE	C	N	28-Dec-05
2515	1	HAMILTON MARSHES	ET/FE	M	N	28-Dec-05
2516	1	HAMILTON MARSHES	ET/FE	M	N	28-Dec-05
2517	1	HAMILTON MARSHES	ET/FE	M	N	28-Dec-05
2518	1	HAMILTON MARSHES	ET/FE	M	N	28-Dec-05
2519	1	HAMILTON MARSHES	ET/FE	M	N	28-Dec-05
2520	1	HAMILTON MARSHES	ET/FE	M	N	28-Dec-05
2556	46	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2575	10	SHARPS LN CRESTWOOD PARK	ET/FE	M	N	28-Dec-05
2575	94	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2606	127	TOWNSHIP / VACANT LAND	ET/FE	M	N	28-Dec-05
2606	14	GROPPS LAKE	ET/FE	M	Y	28-Dec-05
2606	165	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2606	96	SUNNYBRAE PARK	ET/FE	M	Y	28-Dec-05
2606	97	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2607	13	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2613	1.10	GRAFTON HOUSE	ET/FE	M	N	28-Dec-05
2614	130	SWITLIK PARK	ET/FE	M	N	28-Dec-05
2614	127	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2614	86	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2656	6	APOLLO PARK	ET/FE	M	N	28-Dec-05
2663	13	GROVEVILLE SCHOOL	ET/FE	M	N	28-Dec-05
2683	45	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2683	7	MURRAY AVE PARK	ET/FE	M	N	28-Dec-05
2690	72	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2712	13	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2712	34	PAPPS VILLAGE PLAYGROUND	ET/FE	M	N	28-Dec-05
2712	35	PAPPS VILLAGE PLAYGROUND	ET/FE	M	N	28-Dec-05
2712	36	PAPPS VILLAGE PLAYGROUND	ET/FE	M	N	28-Dec-05
2715	7	HAMILTON PLAYGROUND	ET/FE	M	N	28-Dec-05
2715	9	HAMILTON PLAYGROUND	ET/FE	M	N	28-Dec-05
2716.02	8	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2716.05	1	HIGHLANDS TOT LOT	ET/FE	M	N	28-Dec-05
2716	1.02	GROVEVILLE	ET/FE	C	N	28-Dec-05
2716	127	CROSSWICKS CREEK	ET/FE	M	N	28-Dec-05
2716	14	TOWNSHIP / VACANT LAND	ET/FE	M	N	28-Dec-05
2716	15	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2716	170	HIGHLANDS PLAYGRND	ET/FE	M	N	28-Dec-05
2716	86	TOWNSHIP / VACANT LAND	ET/FE	M	N	28-Dec-05
2724	33	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2726	20	VILLAGE GREEN	ET/FE	C	N	28-Dec-05
2730	15	TALL CEDARS CONSERVATION EASEMENT	ET/CR	C	N	28-Dec-05
2730	15.01	TALL CEDARS CONSERVATION EASEMENT	ET/CR	C	N	28-Dec-05
2730	18	CROSSWICKS CREEK GREENWAY (BANNER)	ET/FE	C	N	28-Dec-05
2731	1	VILLAGE GREEN	ET/FE	C	N	28-Dec-05
2731	2	VILLAGE GREEN	ET/FE	C	N	28-Dec-05

2731	3	VILLAGE GREEN	ET/FE	C	N	28-Dec-05
2731	4	VILLAGE GREEN	ET/FE	C	N	28-Dec-05
2731	5	VILLAGE GREEN	ET/FE	C	N	28-Dec-05
2732	3	DOCTORS CREEK	ET/FE	C	N	28-Dec-05
2732	38	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2732	4	DOCTORS CREEK	ET/FE	C	N	28-Dec-05
2732	45	DOCTORS CREEK	ET/FE	C	N	28-Dec-05
2735	59	DRIALO PARK	ET/FE	M	N	28-Dec-05
2735	60	DRIALO PARK	ET/FE	M	N	28-Dec-05
2738	1.02	SAMU STREAM CORRIDOR	ET/FE	C	N	28-Dec-05
2738	7	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2739	39	WEST ACRES PLAYGRND	ET/FE	M	N	28-Dec-05
2743	14	TOWNSHIP LAND	ET/FE	M	N	28-Dec-05
2743	31.02	SAKOWSKY	ET/FE	C	N	28-Dec-05
2743	47	SAMUEL PERRO PARK	ET/FE	M	N	28-Dec-05
2743	6.02	RUNGE STREAM CORRIDOR	ET/FE	C	N	28-Dec-05

The above information is the Recreation and Open Space Inventory (ROSI) on file with Green Acres. Please note that Green Acres relies on the accuracy of the information provided to us by the Local Unit(s) in maintaining the accuracy of our database. Since it is the responsibility of the Local Unit(s) to ensure compliance with Green Acres rules, it is strongly recommended that you confirm this information with the Local Unit(s).

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Department of Environmental Protection
P. O. Box 402
Trenton, NJ 08625-0402

Last Updated: October 7, 2004

NEW JERSEY DEPARTMENT OF TRANSPORTATION

MEMORANDUM

TO: Kevin Bancroft

FROM: Rich Cloward
Bureau of Environmental Program Resources
Hazardous Waste Section

DATE: March 3, 2010

SUBJECT: Route 206 White Horse Circle
Hamilton Twp
Mercer County
Hazardous Waste Screening – Modified

As part of an Environmental Review process, this office has completed a modified hazardous waste screening for the above referenced project. The intent of the study was to identify locations of existing or potential hazardous waste and/or contamination within the proposed Right of Way (ROW) plus either side of the existing bridge structure.

The project involves the replacement of the Route 206 White Horse Circle. At the time of this investigation the limits of the proposed project have not been set. Once more detailed plans become available a reevaluation will be required to determine what if any impact the two (2) sites listed in Section A will have on the proposed project.

A site visit was conducted to determine if any adjacent properties had a potential for contamination. If a concern was noted, then the following additional environmental information was acquired:

- List and describe properties of questionable environmental integrity.
- Identify all sites with underground or aboveground storage tanks (USTs, ASTs).
- Review the NJDEP's Environmental Information Inventory to identify any landfills and State-funded hazardous waste cleanup sites in the study corridor.
- Check businesses/properties within the study corridor against the NJDEP's list of Known Contaminated Sites and the USEPA's National Priority List (Superfund).
- Gather historical land use information through examination of Sanborn Fire Insurance Maps and historic aerial photographs to determine whether any previous land uses may have contributed to contamination within the study corridor.

The findings for the above project are as followed:

SECTION A

Site Name	Address	Environmental Concerns	Recommendation
Former Exxon 3-2026	3151 South Broad St	Former Service Station Known Contaminated Site	If DOT plans to acquire property within this area, sampling will be required
Auto Parts (Former Sizzler Restaurant)	3150 South Broad Street	3,000 Gal Heating UST	If DOT plans to acquire property within this area further investigation required

Based on our field investigation and associated research we find this project has a potential for involvement with hazardous waste or contaminated sites. Once more detailed plans become available a reevaluation will be required. Should you have any questions, please call me at 530-2836.

cc: Haz-core file

Environmental Features Plan

ENVIRONMENTAL FEATURES PLAN

ROUTE 206/ C.R. 533/C.R. 524
WHITEHORSE CIRCLE

HAMILTON TOWNSHIP, MERCER COUNTY

URBAN ENGINEERS
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URBAN ENGINEERS, INC.
COLWICK BUSINESS CENTER, SUITE 200
55 HADDONFIELD ROAD
CHERRY HILL, NJ 08002

Stormwater Management Assessment

Stormwater Management Assessment

The proposed White Horse Circle project is anticipated to be classified as a Major Development and subject to the Stormwater Management Rules. The current amount of net impervious coverage is 0.34 acres, and may be reduced slightly if the opportunity to remove a small portion of existing impervious pavement from Pearson Drive is feasible. The following summarizes the added coverage elements.

Coverage Element	SF	Acres	TSS Removal
Existing Pavement	129520	2.973	
Proposed Pavement	115396	2.65	
Proposed Shoulder	20871	0.48	
Proposed Sidewalk	8124	0.19	
Net Change Pavement	6747	0.16	80%
Net Change Sidewalk	8124	0.19	NA
Total Added Impervious	14871	0.34	
Reconstructed Pavement Portion	TBD	TBD	50%

Pavement coring data will be collected in a future design phase, and thus it was not possible to determine the amount of roadway reconstruction, reclamation, and mill and overlay. The "reconstructed" portion that would trigger 50 percent TSS removal would only apply to areas that constitute "disturbance" involving the exposure or transport of soils. It appears possible to achieve a 20 year roadway surface life for much of the existing portion of the road by reclamation methods and/or full depth pavement constructed over partial excavation leaving in place minimal existing DGA so as not to cause regulated "disturbance." Sidewalks are not subject to the water quality restrictions, but apply to impervious coverage totals and pre and post runoff peak analyses.

However the project site's proximity to regulated NJDEP jurisdiction such as Freshwater Wetlands or the Flood Hazard Control Act appears to avoid NJDEP permit jurisdiction.

There are ample opportunities for stormwater management within the existing right of way areas adjacent to the project to provide in-line water quality and water quantity BMP facilities to address the Stormwater Management rule standards.

Appendix H – Alternatives Analysis/Matrix

Whitehorse Circle
PRELIMINARY ALTERNATIVES IMPACTS MATRIX

ALT. NO.	ALTERNATIVE DESCRIPTION	PROJECT LIMITS (M.P.)	DESIGN EXCEPTIONS REQUIRED	R.O.W. IMPACTS		ACCESS IMPACTS				TRAFFIC	ENVIRONMENTAL IMPACTS[2]	STORMWATER MANAGEMENT	UTILITY IMPACTS[3]	BICYCLE COMPATIBLE	EST. COST[4] (MILLIONS)
				NO. OF PARCELS	AREA	NO. OF DRIVE.	REV.	MOD.	ADJUST.						
1	NO BUILD	US 206 M.P. 38.79 - M.P. 37.99 ROUTE 524 M.P. 0.00 - M.P. 0.16 ROUTE 533 M.P. 0.00 - M.P. 0.05	NONE	0	0	0	0	0	0	SEE TRAFFIC MATRIX	NO	NO STORMWATER MANAGEMENT RULES TRIGGERED	NO	NOT SHARED LANES < 14FT NON COMPLIANT INLET GRATES	0.00
2	SIGNALIZED INTERSECTION	US 206 M.P. 38.79 - M.P. 37.99 ROUTE 524 M.P. 0.00 - M.P. 0.16 ROUTE 533 M.P. 0.00 - M.P. 0.05	NJDOT Jurisdiction – None Other Jurisdictions – Possible SHOULDER WIDTH < 6FT OUTSIDE LANE < 15TH	0[1]	0[1]	7	0	0	7	SEE TRAFFIC MATRIX	POSSIBLE	YES STORMWATER MANAGEMENT RULES TRIGGERED BY ADDED IMPERVIOUS & TOTAL DISTURBANCE	YES AERIAL & UNDERGROUND	NOT BICYCLE COMPATIBLE SHARED LANES < 14FT	2.10
3	SIGNALIZED INTERSECTION WITH WIDENING	US 206 M.P. 38.79 - M.P. 37.99 ROUTE 524 M.P. 0.00 - M.P. 0.16 ROUTE 533 M.P. 0.00 - M.P. 0.05	NJDOT Jurisdiction – None Other Jurisdictions – Possible SHOULDER WIDTH < 6FT OUTSIDE LANE < 15TH	4	0.194 AC.	7	0	2	5	SEE TRAFFIC MATRIX	POSSIBLE	YES STORMWATER MANAGEMENT RULES TRIGGERED BY ADDED IMPERVIOUS & TOTAL DISTURBANCE	YES AERIAL & UNDERGROUND	NOT BICYCLE COMPATIBLE SHARED LANES < 14FT	2.13
4	ALTERNATIVE 3 WITH I-195 ON-RAMP WIDENING	US 206 M.P. 38.79 - M.P. 37.99 ROUTE 524 M.P. 0.00 - M.P. 0.16 ROUTE 533 M.P. 0.00 - M.P. 0.05	NJDOT Jurisdiction – None Other Jurisdictions – Possible SHOULDER WIDTH < 6FT OUTSIDE LANE < 15TH	4	0.194 AC.	7	0	2	5	SEE TRAFFIC MATRIX	POSSIBLE	YES STORMWATER MANAGEMENT RULES TRIGGERED BY ADDED IMPERVIOUS & TOTAL DISTURBANCE	YES AERIAL & UNDERGROUND	NOT BICYCLE COMPATIBLE SHARED LANES < 14FT	2.36
5	TWO LANE ROUNDABOUT	US 206 M.P. 38.82 - M.P. 38.98 ROUTE 524 M.P. 0.00 - M.P. 0.16 ROUTE 533 M.P. 0.00 - M.P. 0.05	NJDOT Jurisdiction – None Other Jurisdictions – Possible SHOULDER WIDTH < 6FT OUTSIDE LANE < 15TH	4	0.04 AC.	3	0	3	0	SEE TRAFFIC MATRIX	POSSIBLE	YES STORMWATER MANAGEMENT RULES TRIGGERED BY TOTAL DISTURBANCE	YES AERIAL & UNDERGROUND	NOT BICYCLE COMPATIBLE SHARED LANES < 14FT	1.65
5a	2/1 ROUNDABOUT WITH 1 ENTERING SB	US 206 M.P. 38.82 - M.P. 38.98 ROUTE 524 M.P. 0.00 - M.P. 0.16 ROUTE 533 M.P. 0.00 - M.P. 0.05	NJDOT Jurisdiction – None Other Jurisdictions – Possible SHOULDER WIDTH < 6FT OUTSIDE LANE < 15TH	3	0.03 AC.	3	0	3	0	SEE TRAFFIC MATRIX	POSSIBLE	YES STORMWATER MANAGEMENT RULES TRIGGERED BY TOTAL DISTURBANCE	YES AERIAL & UNDERGROUND	NOT BICYCLE COMPATIBLE SHARED LANES < 14FT	1.53
5b	2/1 ROUNDABOUT WITH 2 ENTERING SB	US 206 M.P. 38.82 - M.P. 38.98 ROUTE 524 M.P. 0.00 - M.P. 0.16 ROUTE 533 M.P. 0.00 - M.P. 0.05	NJDOT Jurisdiction – None Other Jurisdictions – Possible SHOULDER WIDTH < 6FT OUTSIDE LANE < 15TH	2	0.02 AC.	3	0	3	0	SEE TRAFFIC MATRIX	POSSIBLE	YES STORMWATER MANAGEMENT RULES TRIGGERED BY TOTAL DISTURBANCE	YES AERIAL & UNDERGROUND	NOT BICYCLE COMPATIBLE SHARED LANES < 14FT	1.59

1. POTENTIAL 0.032 AC. IMPACT AT THE NORTH-WEST QUADRANT PARCEL TO BE INVESTIGATED
2. POSSIBLE IMPACTS PENDING ENVIRONMENTAL SCREENING REPORT
3. POSSIBLE IMPACTS PENDING UTILITY LOCATIONS
4. ROW COST NOT INCLUDED

Appendix I – Coordination

URBAN ENGINEERS, INC.
Colwick Business Center, Suite 200
55 Haddonfield Road
Cherry Hill, NJ 08002
Phone: (856) 663-5550
Fax: (856) 663-4836

MEMORANDUM

TO: John Zim, NJDOT

FROM: Scott Diehl, Urban

DATE: March 8, 2010

RE: US Route 206 White Horse Circle Follow-Up Items

CC: Tom Saylor, NJDOT
Tom Carbone, NJDOT
Bill McGarrigel, Urban

Based on the discussion at the Project Coordination Meeting on March 2, 2010 the following is a list of identified key points, follow-up tasks and next steps:

- Based on the results of the crash analysis, there was agreement that the previously identified safety problem remains and that we should develop alternatives to address the safety issues.

- Prepare a table identifying the crashes that were used from the original, larger area crash list provided by BSP.

- Check with BSP (Kevin Conover) to determine if BSP can provide a more detailed assessment of the crash data. Check with BSP to determine if they can calculate a cost savings based on a anticipated percent reduction in the different types of crashes as a result of changing the intersection configuration (existing vs. signalized intersection and existing vs. modern roundabout). If that type of analysis is not possible or practical, perhaps BSP can identify a location that was similar in nature to the White Horse Circle that has been subsequently improved. The results of the similar location could be used to estimate the % reduction and cost savings.

- Check the alternatives that contain a merge and/or weave to determine if we can calculate LOS for those sections. Provide merging/weaving analysis (quantitative if possible) in the Traffic Analysis matrix.

- Conduct traffic analysis to determine the impact (operations and queueing) of "yielding" SB 206 at the intersection. This would eliminate the merging and weaving concerns in some Alternatives as well as the need to modify the entrance ramp to I-195.

- Check to see what the pedestrian/bicycle volume and if there are any pedestrian/bicyclists crashes

- Modify alternatives to include a crosswalk on the north side of the intersection (i.e., the Whitehorse Road approach).

- Identify more clearly on the plans the access issues (modification, etc.). Provide a table identifying the block and lot.

- Evaluate drainage treatments and locations and determine anticipated stormwater impact (i.e., amount of new impervious and disturbance)

- Urban to develop a Project Schedule based on the new CD Process.

- Evaluate the SB 206 approach to determine if we can include both sidewalk and bicycle lanes on SB approach. Include a typical section as part of the core group meeting.

- NJDOT to schedule a core group meeting to discuss the alternatives and issues, and identify which alternatives to discuss with local officials.

Urban Engineers, Inc.

Colwick Business Center
55 Haddonfield Road, Suite 200
Cherry Hill, NJ 08002
Telephone: (856) 663-5550

New Jersey Department of Transportation

US Route 206 White Horse Circle
Concept Development Study

MINUTES OF MEETING

SUBJECT: Core Group Meeting

DATE: 11/30/10

TIME: 9:30 A.M. – 11:30 A.M.

LOCATION: NJDOT Conference Room 3C

PRESENT: See Attached Attendance List

The purpose of the meeting was to: (1) solicit comments and address questions from the Core Group regarding the proposed concepts and whether they meet the project's purpose and need, (2) discuss any additional concepts that should be evaluated, and (3) determine if any concepts should not move forward.

The meeting began with the Project Manager, John Zim-DPD, presenting a general overview of the project. The DPD's consultants (Urban Engineers) then provided a power point presentation providing greater project detail with respect to project background and history, existing conditions, areas of concerns (purpose and need), and concepts developed.

The following provides a summary of the presentation and the key discussion items:

Presentation

The first section covered was the project background, project location and project history. It was noted that the project is in the Concept Development Phase of the Project Delivery Process and that with the new process a key, new step in the CD phase includes selecting a Preliminary Preferred Alternative (PPA). It was explained that the project team has not met with the locals and that a main point of the meeting was to discuss which concepts should be presented to the local officials.

The project team reviewed the project location characteristics including the unique operating conditions and traffic controls at the circle as well as the project history.

The project team then presented the team's analysis of the existing conditions including safety, traffic operations, and geometrics. The first area covered was the safety. It was noted that MP 38.9 (within the Whitehorse Circle) is listed in the SMS Top Intersection Crash Locations (#364) for 2003 to 2005 data. The ranking is based on a reported total of 27 crashes resulting in a 33 severity score.

A review of recent crash data showed that 161 crashes occurred at or on the approaches to the circle between 2006 and 2008. It was discussed with attendees that the large difference in the number of crashes in the SMS and the project team's review (other than the timeframe) is a result of the SMS ranking locations being based on crashes occurring at a specific MP where as the project team used a larger section of roadway. It was noted that it is not uncommon for crashes at Traffic Circles to be identified over a number of MP locations due to the size of the circle and entry point and circulating conflict locations. Kevin Conover indicated that BSP would review the recent crash data and determine an appropriate number and ranking.

In addition to reviewing the total number of crashes, the project team explained that their review indicated that crashes appear to be clustered at four locations around/in the circle. The project team reviewed the locations and the team's assessment of the reasons for the high crash clusters. Attendees generally agreed with the assessment adding in their own experiences with the operations.

The project team then reviewed the traffic characteristics and operations at the circle. It was noted that the circle actually operates fairly well with an overall Level of Service C (LOS C) during both peak hours. It was explained that the main traffic operation issue at the circle is the occasional queueing which can traffic flow on US 206 (blocking thru lanes) and likely contributes to the high crash totals. The project team went thru the locations where the queueing mainly occurs and noted the reasons why. The meeting attendees agreed with the locations and reasons.

Following the review of safety and traffic operations, the project team provided a brief review of the project location's physical features and underlying deficiencies. These include less than desirable shoulder widths, varying approach speed limits, and unusual lane configurations for turning movements. There are several places where turning traffic queues into the travel path of through movements, at times blocking circulation.

The project team then reviewed with attendees the project's purpose and need:

Project Purpose:

- The purpose of the US 206 Whitehorse Circle Concept Development Study is to develop concepts that improve the identified safety and operational issues

Project Needs:

- Improve Safety:
  - There are a high overall number of crashes
  - The number of angle crashes exceeds statewide averages
  - Crashes are concentrated at four primary locations

- Improve Traffic Operations:
  - Queuing within the circle affects traffic flow

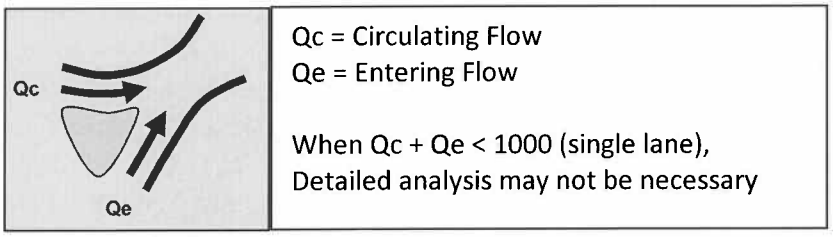
The project team then reviewed with attendees the developed concepts proposed to address the project purpose and need. It was noted that the build concepts could be categorized as one of two types: signalized intersection and roundabout. The first alternatives discussed were the signalized intersection alternatives (Alternatives 2-4). It was noted that the general idea was to start with the smallest footprint (Alt. 2) and then expand to provide more desired geometric design parameters. As an example, a key difference between Alt. 2 and Alt. 3 is the right-turn from westbound S. Broad St. to NB Whitehorse Avenue. In Alt. 2, the project team maintained the existing radius which is not designed for larger vehicles where as in Alt.3 the design was modified to accommodate larger vehicles (WB-62), but it was noted that there would be significant ROW impacts. In general the attendees noted that they liked the idea of starting with a minimization/practical alternative (Alt.2) and that if a signalized concept is pursued it would likely be a combination of Alternatives 2 and 3. Attendees asked to see more detail on the dimensions and design standards used to layout the alternatives.

A question was asked about whether there was a need for two lanes on S. Broad St considering the volumes were similar in magnitude to what is on Whitehorse Avenue and that approach is only showing one lane. It was noted that alternative was considered, but it was believe to be dismissed based on LOS (i.e., the 2nd lane was needed to achieve acceptable LOS). The project team indicated that they would check the results to confirm and include the results in the meeting summary action items (see below discussion items for more information).

The key design feature of Alternative 4 is the two-lane ramp from SB US 206 to SB US 206. The project team explained that while this may be a desirable feature, the traffic analysis did not indicate that a 2nd lane on the ramp was needed to provide acceptable level of service. Additionally, it was noted that this configuration could make the weaving area between the SB US 206 ramp and the ramp to I-195 worse. Attendees agreed that Alternative 4 could be removed from further consideration considering the potential negative impacts and the acceptable traffic operations from the other alternatives.

The next set of alternatives discussed were the roundabout alternatives (5, 5a, and 5b). The project team explained that the location is a good candidate for a modern roundabout from a number of perspectives including traffic volumes, size of available area, intersecting roadway angles, and roadway speeds. There were two main roundabout alternatives: a full two lane roundabout and a partial two lane roundabout. The project team explained that if the future

traffic volumes do occur, the roundabout would need to be a full two lane roundabout. However, using today's traffic volumes, the roundabout works quite well as a partial two lane roundabout. It was asked if there was a guide on when a one lane alternative needs to be two lanes. The project team noted that the general guidance was that if the circulating and entering traffic volumes on an approach were less than 1000 vehicles per hour a one lane roundabout should work fine (see figures below). Between 1000 and 1200 vehicles you would need to do more detailed analysis to determine if a single lane worked. After about 1200 vehicles the roundabout would need to be two lanes.



Basic Roundabout Assessment Principle

During and following the presentation, there were a number of questions about specific details of some of the concepts as well as an open discussion about issues, concerns, and ideas that core group members had with some of the concepts. The key questions and discussions points are provided below.

- It was noted that in Alternative 3 the 2nd EB thru lane on US 206 to S. Broad Street had a very short amount of room to queue cars before the queue would block access to the SB 206 ramp. All attendees agreed that the design needs to be investigated/modified to limit the possibility of the ramp being blocked by thru traffic. The project team noted that they would look at the queue results and the design to identify potential changes.

- It was requested that the matrix be expanded/clarified so that at attendees could better understand where the impacts would occur (ROW, utility). Urban indicated that they would revise the figures and table to better show the requested information.

- There was a question about whether a 2nd lane was needed in the east-west direction on S. Broad St/US 206. At the meeting, it was indicated that the alternative was evaluated but the information was not readily available, although the belief was that LOS was not acceptable. Urban indicated that they would check the results and document the findings in the meeting summary. *The LOS results indicate that one lane on S. Broad St could work although in the westbound direction the alternative was tested with two (2) WB lanes since there are two (2) WB receiving lanes for the NB US 206 double left. Based*

on these results the project team will re-evaluate this concept for inclusion in the concepts moving forward.

- There was a lengthy discussion on how best to accommodate traffic heading to Pearson Drive. Urban will evaluate options as part of next steps, but the general agreement from attendees is that the existing location is not desirable to maintain as part of either the signalized alternatives or the roundabout alternatives. Alternatives discussed included shifting the access point slight south on US 206 or providing access via Parent Avenue and the alley way that currently connects Parson Dr and Parent Avenue.

- There was discussion on the possibility of converting Whitehorse Avenue to one-way away from the circle. After some discussion it was agreed that a right-in/right-out option would be a more practical concept considering the impacts that one-way conversion would create. Urban will evaluate the option from a practical standpoint (benefits, drawbacks, etc.) and identify any additional information that would be needed to do a more comprehensive analysis.

Action Items/Next Steps:

1. Urban to modify the concepts based on the discussion regarding Pearson Drive and Parent Avenue

2. NJDOT - BSP (Kevin Conover) will do additional crash analysis to determine appropriate safety ranking

3. Urban to review the need for two (2) lanes EB/WB on S. Broad St. *Completed see discussion items*

4. Urban to evaluate from a practical standpoint the idea of RI/RO on White Horse Avenue and identify additional information that would be needed to do a more comprehensive analysis.

5. Urban to revise Alternatives Matrix/Concept Plans to include more information on utility and ROW impacts

6. Urban to check queueing to make sure SB 206 to EB S. Broad St will not block SB 206 channelized right-turn lane (signalized alternatives)

7. Urban to calculate what is needed for the deceleration lane from SB 206 to I-195

8. NJDOT – DPD (John Zim) to set-up meeting with County to discuss concepts

9. Urban/DPD need to check with Traffic about whether there is an issue with locating a roundabout at this location considering the posted speed on US 206.

We believe the foregoing record to be an accurate summary of the discussion and related decisions. We would appreciate notification of exceptions or corrections to these Minutes within five (5) working days. Without notification, we will consider these minutes to be a record of fact.

Respectfully Submitted,

Scott Diehl, PE, PTOE

URBAN ENGINEERS, INC

MEETING SIGN-IN SHEET
Rte 206/C.R. 533/C.R. 524, Whitehorse Circle, Concept Development Study
November 30, 2010

Name	Department/Division	E-mail
TOM CARBONE	NJDOT- DPD	thomas.carbone@dot.state.nj.us
John Zim	" "	john.zim@dot.state.nj.us
ROBERT RAACHINI	TSSE/WORKZONE	ROBERT.RAACHINI@DOT.STATE.NJ.US
MARK SMITH	NJ DOT TRAFFIC OPS SOUTH	MARK.SMITH@dot.state.nj.us
Tom SAYLOR	NJDOT - DPD	THOMAS.SAYLOR@DOT.STATE.NJ.US
SCOTT DIEHL	URBAN ENG	sjdiehl@URBANENGINEERS.com
BILL McGARRIGEL	URBAN	WPMCGARRIGEL@URBANENGINEERS.com
RYAN CAVENDER	URBAN	wrcavender@urbanengineers.com
Rikesh Patel	NJDOT - TEI	Rikesh.patel@dot.state.nj.us
Robert Abitz Jr	Value Solutions	Robert.Abitz@dot.state.nj.us

MEETING SIGN-IN SHEET
Rte 206/C.R. 533/C.R. 524, Whitehorse Circle, Concept Development Study
November 30, 2010

Name	Department/Division	E-mail
Kevin Conover	DOT-Safety Progs.	Kevin.Conover@dot.state.nj.us
Paul Thomas	ADA	Paul.Thomas@dot.state.nj.us
Chiman Antala	DOT- Value Solutions	chiman.antala@dot.state.nj.us

NEW JERSEY DEPARTMENT OF TRANSPORTATION

MEMORANDUM

TO: List

FROM: John Zim
Division of Project Planning and Development

DATE: November 12, 2010

PHONE: (609) 530-2314

SUBJECT: **Route 206/CR 533/CR 524 Whitehorse Circle Operational / Safety/Physical Condition Improvements (Route 206 Northbound M.P. 38.59 – M.P. 39.23) (Route 206 Southbound M.P. 90.57 – M.P. 91.16) (CR 533 M.P. 0.0 – M.P. 0.47) (CR 524 M.P. 0.0 – M.P. 0.45) Hamilton Township, Mercer County**

Core Group Meeting

The NJDOT Division of Project Development (DPD) has initiated Concept Development Route 206/CR 533/CR 524 Whitehorse Circle Operational / Safety/Physical Condition Improvements.

At this time we are scheduling a Core Group Meeting to solicit your valuable input and information to be utilized in our concept development process. This meeting will be held at 9:30am on November 30, 2010 at the NJDOT Headquarters, 1035 Parkway Avenue, Ewing Township, NJ, in conference room 3C, which is located on the 3rd floor of the E & O building.

Your office is to review and provide comments on the information provided and to be familiar with the project and project area. In addition to the Fact Sheet (with Crash Analysis included), the appropriate NJDOT Straight Line Diagram (SLD) sheets have been attached.

If you require any further information please contact me at (609) 530-2314

List

TO:	Bill Birch	Project Management
	Mark Rollo	Project Management
	Kevin Conover	Safety Management Systems
	William Dey	Safety Management Systems
	Dave Martin	Traffic Engineering and Safety
	Rob Raachini	Traffic Engineering and Safety
	Bill McGarrigel	Urban Engineeers
	Bob Abitz	Value Solutions
	Dhanesh Motiani	Traffic Operations
	Pete Amin	ITS Engineering
	Paul Thomas	ADA Coordinator

To: Core Group Participants

From: John Zim

Date: 11-4- 10

Subject: Route 206/CR 533/CR 524 Whitehorse Circle
Operational / Safety/Physical Condition Improvements
(Route 206 Northbound M.P. 38.59 – M.P. 39.23)
(Route 206 Southbound M.P. 90.57 – M.P. 91.16)
(CR 533 M.P. 0.0 – M.P. 0.47)
(CR 524 M.P. 0.0 – M.P. 0.45)

Hamilton Township, Mercer County

Core Group Meeting

PROJECT BACKGROUND

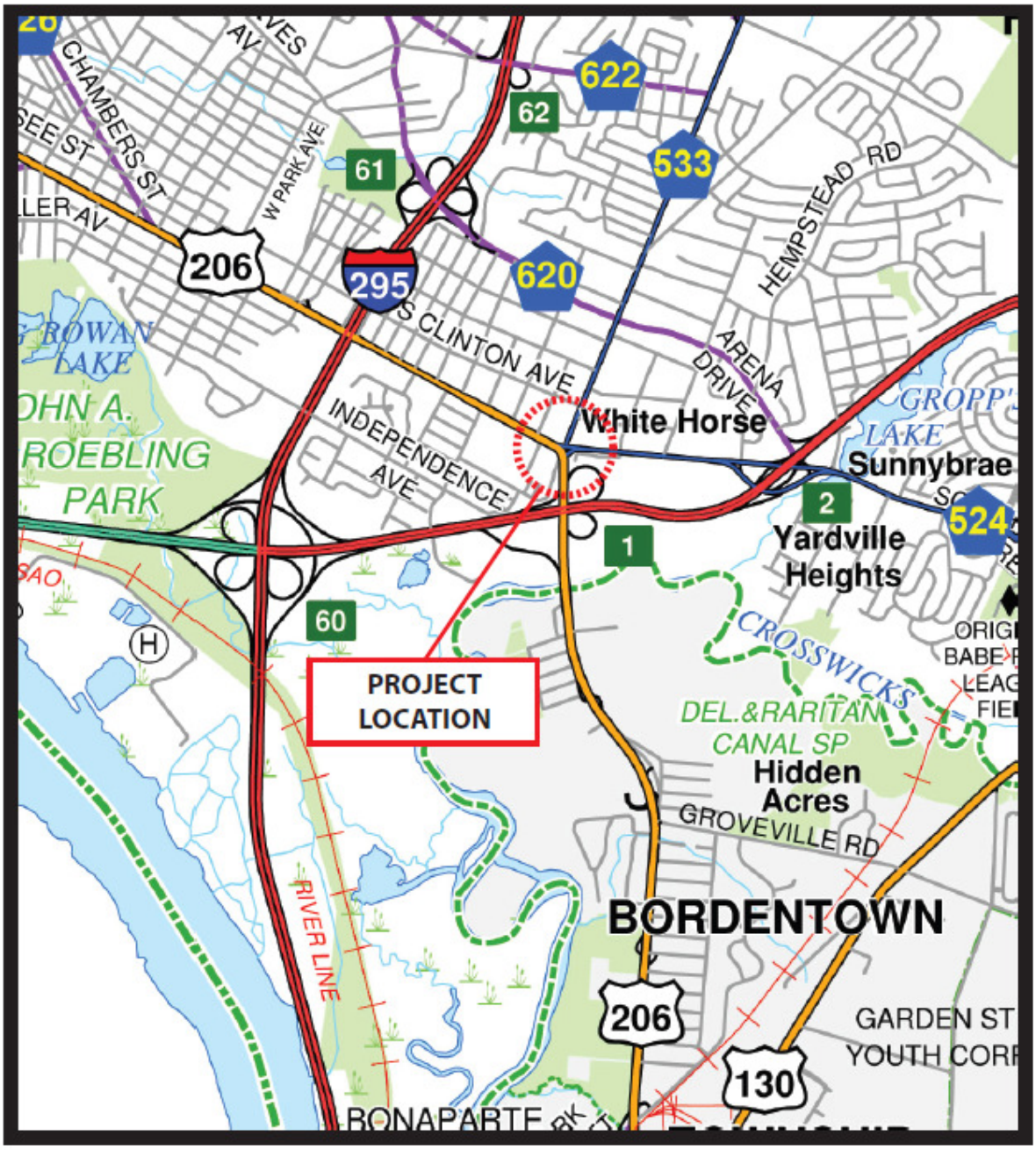
This project was initiated as a result of a problem statement generated by the Safety Management System and requests made by Hamilton Township. The problem statement involved reports from the Hamilton Township safety officers that the location was considered the municipality's greatest concern in terms of being a high priority accident location.

Following the request by Hamilton Township, The Bureau of Safety Programs in a joint effort with Traffic Engineering and Investigations studied the location. The Bureau of Safety Programs implemented several quick fix solutions in an attempt to resolve the safety issues associated with this location.

The implemented solutions were ineffective to a point that officials were unable to recognize any improvement at the location. It was determined that the storage capacity within the traffic circle is inadequate and unsafe for motorists. As such, the project was suggested for screening to be followed by a major study effort by the Department to address the problem.

Project Limits

The study area includes the following roadway sections: Route 206 Northbound, M.P. 38.59 – M.P. 39.23; Route 206 Southbound, M.P. 90.57 – M.P. 91.16; CR 533, M.P. 0.0 – M.P. 0.47; and CR 524 M.P., 0.0 – M.P. 0.45.



PROJECT LOCATION MAP
Route 206/CR 533/CR 524 Whitehorse Circle
Hamilton Township, Mercer County

PROJECT PURPOSE AND NEED

A summary of the project Purpose and Need is provided below.

Project Purpose
The purpose of the Route 206/CR 533/CR 524 Whitehorse Circle Concept Development Study is to develop concepts that improve safety conditions within the project limits.

Needs
Following an evaluation of existing conditions, the following needs have been identified:

1. *Improve Safety:* There are a high number of crashes within the project limits, specifically at the Whitehorse Circle. Refer to the Crash Analysis Document Attached.

ROADWAY DESCRIPTION

Classification

Route 206 is an Urban Principal Arterial within the limits of the project.

CR 524 is an Urban Principal Arterial within the limits of the project.

CR 533 is an Urban Minor Arterial within the limits of the project.

Speed Limit

The posted speed limits are 35, 35, and 40 mph along Route 206/C.R. 524 approaches, C.R. 533 approach, and C.R. 524 eastern approach, respectively.

Jurisdiction

Route 206 is maintained by NJDOT from the southern project limit through to the existing Whitehorse Circle. As it continues Westbound the jurisdiction becomes Municipal based on agreement previously completed by NJDOT with Hamilton Township.

Both CR 524 and CR 533 are Mercer County jurisdiction.

Desirable Typical Section

New Jersey State Highway Access Management Code assigns Route 206 in this section a DTS of 6A which is 6 lanes, divided with shoulders or parking.

Access Level

Route 206 is Access Level 3. Right-Turn Access to and from an Access Point with Left-Turn Access via Jughandles where Signalized Spacing Standards are met.

Major Roadway Cross Sectional Elements

Surface Type

The project area is comprised of concrete and asphalt pavements at the circle and approaches, respectively.

Cross Slope

The roadway appears to meet the minimum required 1.5% cross slope across all roads within the project area.

Lane Widths

The lane widths within the project area appear to meet the minimum lane width of 12 feet.

Shoulders

Northbound Route 206/ Westbound C.R. 524 have delineated shoulders within the project area. However, Northbound C.R. 533/ Eastbound C.R. 524 have no delineated shoulders.

Roadside or Border

No record drawings that show the existing R.O.W. lines were gathered, thus the roadside or border are to be determined.

Curbs

The project area is comprised of curbing that appears in varying condition from poor to good.

Sidewalks

There are sidewalks within the limits of the project area with the exception of Route 206 southern approach. They appear in good condition with the exception of isolated locations.

Medians

The project area grass medians are associated with Route 206/ C.R. 524 approach. There are no medians along C.R. 533 Northbound and C.R. 524 eastbound.

MANAGEMENT SYSTEM INFORMATION

The collection and compilation of this information is in process. Safety Information was prioritized due to the Project Need. A request was sent out from the Division of Project Development to each management system within NJDOT requesting information pertaining to the project limits. Once compiled, the Fact Sheet will be updated.

TRAFFIC AND SAFETY CONDITIONS

Crash Data

A supporting document has been provided capturing the crash analysis completed for the project.

See attached document, Crash Analysis (*Crash Analysis.PDF*)

Traffic Conditions

Field Observations

Based on field observations, the Whitehorse Circle operates fairly well, from an overall perspective, with regards to queuing and delay. The northbound US 206 approach operates with a traffic signal that meters the volume entering the Circle. When this signal is red it allows the other approaches at the Circle to clear, and when the signal returns to green the burst of the northbound vehicles tends to result in queueing in the northbound lanes back to the beginning of the auxiliary turn pocket on US 206. This queuing is due to the Circle's design where the northbound vehicles traveling to NB Whitehorse Road must yield to the westbound vehicles.

In addition to the operational issues, the Circle's design creates storage capacity within the Circle that is inadequate. This was evident during field observations with near-collisions due to vehicles spilling back onto US 206 northbound in the center of the Circle. Driver confusion was noticed and attributed to the congestion and unconventional design of the Circle.

During the PM peak period, the US 206 eastbound approach was observed to be much heavier than the AM peak period creating increased queuing on Whitehorse Road and within the Circle. The US 206 eastbound vehicles destined for Whitehorse Road or Broad Street would queue sporadically between 5 and 10 vehicles along US 206 waiting to enter the circle. The southbound left turning vehicles were noticed to have significant delays entering the circle and even more prolonged delays trying to exit the Circle onto Broad Street. The metering traffic signal allowed the Circle to clear out, but many near-collisions and atypical maneuvers were observed.

Traffic Volumes and Level of Service

The heaviest volumes at the Whitehorse Circle are on the northbound Route 206 approach during the AM peak period and the eastbound Route 206 approach during the PM peak period.

Traffic analysis was performed for existing conditions using VISSIM, Version 5.1. VISSIM is a microscopic simulation program capable of handling the complex design at the Whitehorse Circle.

The existing Level of Service (LOS) and delay results from the VISSIM analysis for the Whitehorse Circle are shown in ***Table 1,*** and are based on 2009 peak hour volumes.

Table 1: Existing Conditions LOS Results

Approach	LOS (DELAY	
	AM	**PM**
Eastbound Route 206	B (15.5)	B (16.0)
Westbound CR 524 (Broad Street)	A (5.1)	A (7.0)
Northbound Route 206	D (37.7)	C (29.1)
Southbound CR 533 (Whitehorse Road)	C (24.6)	E (59.2)
Intersection Total	**C (20.8)**	**C (23.4)**

As shown in ***Table 1***, the capacity analysis results indicate that the Whitehorse Circle operates at a LOS C during the AM peak period and LOS C during the PM peak period. During the PM peak period, the southbound CR 533 (Whitehorse Road) approach operates at LOS E due to the difficulty for vehicles to enter and exit the Circle from this approach. The simulated average and maximum queues at this approach are 46 and 242 feet, respectively. Overall during the AM and PM peak periods the Circle operates well (LOS C) with minimal queuing that is mostly attributable to driver confusion and the Circle's design.

CONCEPTUAL IMPROVEMENT ALTERNATIVES

A matrix has been provided capturing the pertinent information associated with the concepts under consideration for this project.

See attached document, Alternatives Matrix (*Alternatives Matrix.PDF*)

ENVIRONMENTAL SCREENING

An environmental screening has not yet been completed for this project. It is anticipated that it will be conducted following approval to advance from the CPC Screening Committee.

US 206 (South to North)

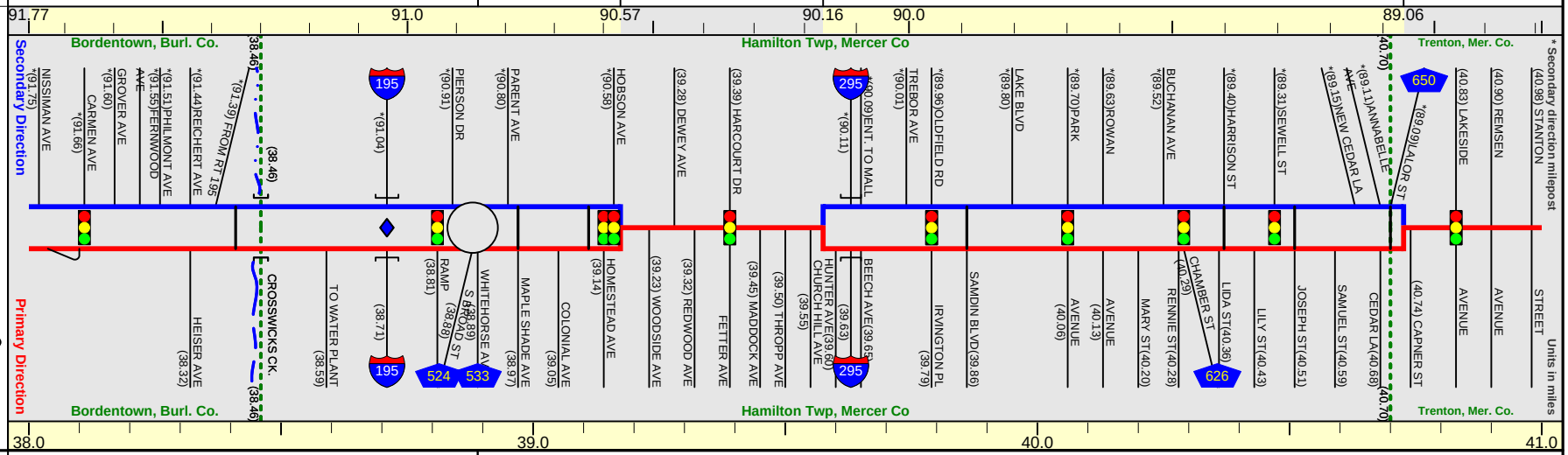
Mile Posts: 38.000 - 41.000

Secondary Direction

Primary Direction

Pavement	24			24		
Shoulder	12	0		0	0	
Number of Lanes	2			2		
Speed Limit	50	45	35	35	25	
Street Name	Disabled American Veterans Highway		South Broad Street	South Broad Street		

Interstate Route 287 · US Route 22 · NJ Route 21 · County Road 689 · Interchange Number 2 · Grade Separated Interchange · Traffic Signal · Traffic Monitoring Sites WIM AVC VOL · Road Underpass · Road Overpass



Street Name	Disabled American Veterans Highway		South Broad Street		
Jurisdiction	N.J.D.O.T.		Municipal		
Functional Class	Urban Principal Arterial				
Federal Aid - NHS Sy	STRAHNET Conn.		NHS		
Control Section	0326		1128		
Speed Limit	50	45	35		25
Number of Lanes	2	5	2		
Med. Type	Curbed	None	Curbed		Painted/Unprotected
Med. Width	18	VAR	0	VAR	12
Pavement	24	60	24		
Shoulder	12	0			
Traffic Volume	25,794 (2005)				
Traffic Sta. ID	5-4-204				
Structure No.	0326153 0326152	1134151	1137158		
Enlarged Views					

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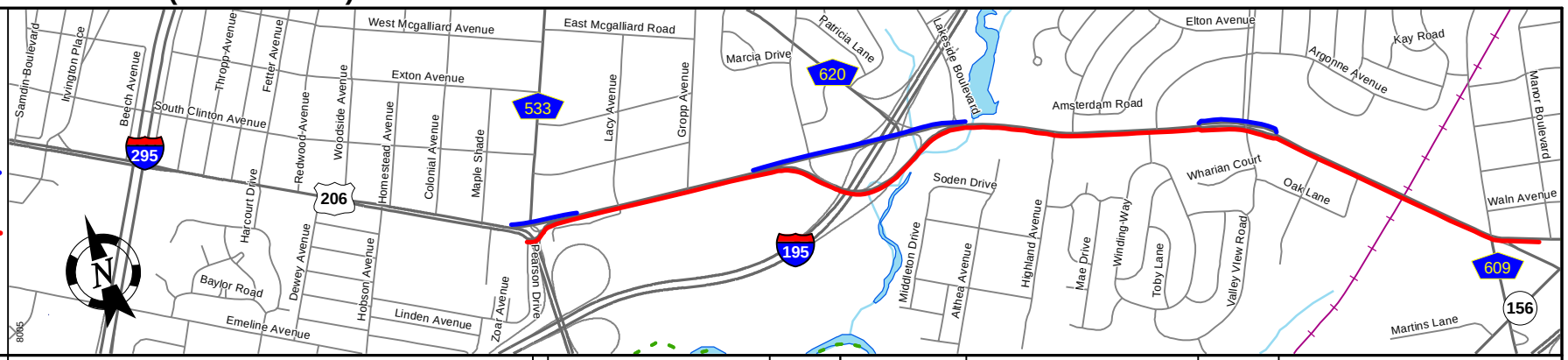
Date last inventoried: March 2008

ROUTE 524 (West to East)

Mile Posts: 0.000 - 2.000

Secondary Direction

Primary Direction



Pavement					48				26		24						20							
Shoulder					0				0		10						0							
Number of Lanes					1				1		2						2							
Speed Limit					40				40								40	35						
Street Name					So Ut				South Broad Street								South Broad Street							

Interstate Route 287

US Route 22

NJ Route 21

County Road 689

Interchange Number 2

Grade Separated Interchange

Traffic Signal

Traffic Monitoring Sites WIM AVC VOL

Road Underpass

Road Overpass

39.90 39.60 39.43 39.04 38.58 38.42 38.0

Hamilton Twp, Mercer Co

Secondary Direction

Primary Direction

206 S. BROAD ST *(39.90) *(39.0) 533 (0.16) LACY AVE (0.23) ENT TO APTS (0.30) GROPP AVE (0.29) CREEK (0.33) ENT TO APTS (0.39) PRIVATE RD (0.39) ENT TO APTS (0.45) ENT TO APTS *(39.37) HEMPSTEAD RD 195 *(39.29) *(39.25) TO I-195 (0.61) TO I-195 (0.59) 195 *(39.04) LAKESIDE BLVD (0.89) BLACK CK (1.08) COLE RIDGE AVE (1.04) HIGHLAND AVE (1.23) ARGONNE AVE (1.21) WINDING WAY *(38.54) BOULEVARD *(38.50) SUNNY BRAE BLVD (1.36) KIM VALLEY RD (1.55) JOE DIMAGGIO DRIVE (1.63) OAK LA (1.69) R.R. (1.91) YARDVILLE HAMILTON SQUARE RD (1.91) S. BROAD ST 609 672 206 (0.0) * Secondary direction milepost Units: Miles

Hamilton Twp, Mercer Co

-1.0 0.0 1.0 2.0

Street Name									South Broad Street														Yardville-All	
Jurisdiction									County				N.J.D.O.T.						County					
Functional Class									Urban Principal Arterial														Urban Minor Arter	
Federal Aid - NHS Sy									STP															
Control Section																								
Speed Limit									40										35					
Number of Lanes					1				2							3			2					
Med. Type					Cu				None				Curbed				None		Curbed				None	
Med. Width					VAR				0				VAR				0		VAR				0	
Pavement									46				14		24		36	40	42		24		40	36
Shoulder									0				10						0					
Traffic Volume																							11,143 (2006)	
Traffic Sta. ID																							5-4-407	
Structure No.											N/A		1134171,172 1134153-155, 1134174						1116150					
Enlarged Views																								

Begin Rt. 524 MP=0.00

Page Created: May 2008

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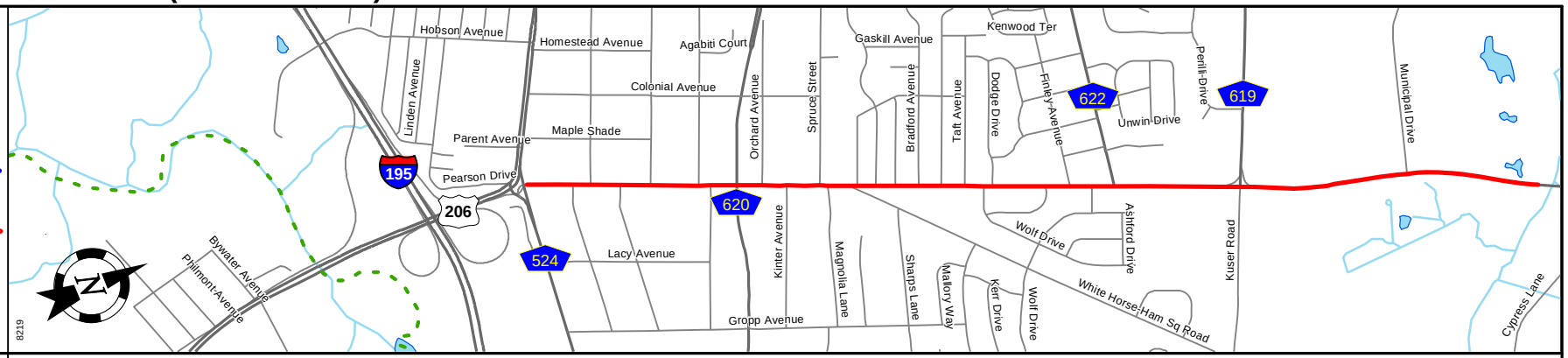
Date last inventoried: June 2004

ROUTE 533 (South to North)

Mile Posts: 0.000 - 2.000

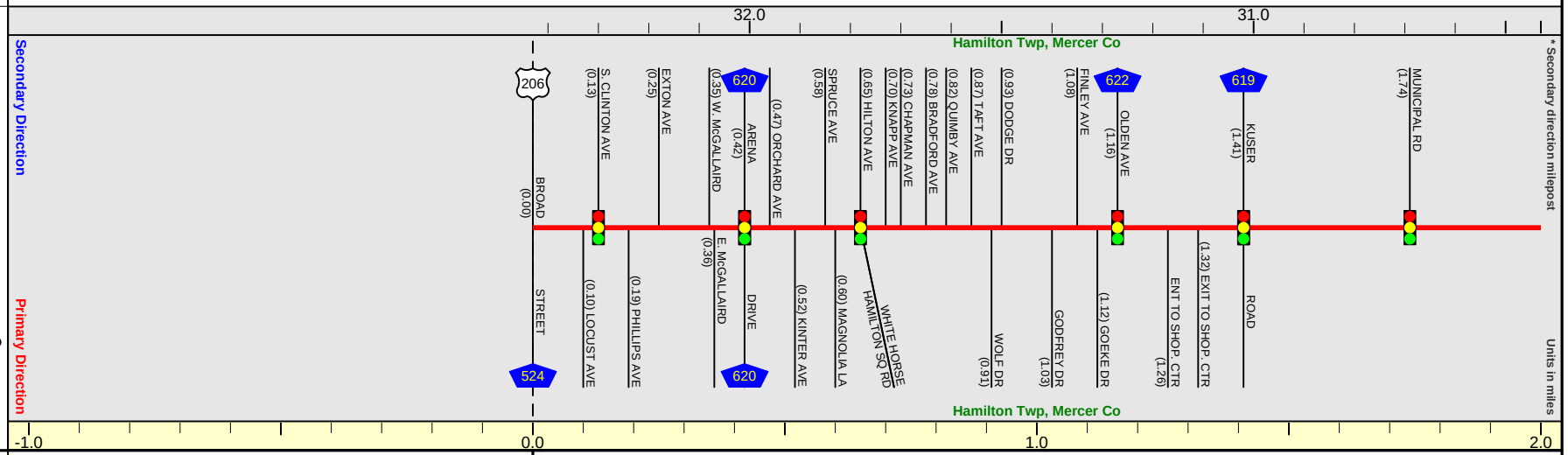
Secondary Direction

Primary Direction



Pavement	
Shoulder	
Number of Lanes	
Speed Limit	
Street Name	

Interstate Route 287
US Route 22
NJ Route 21
County Road 689
Interchange Number 2
Grade Separated Interchange
Traffic Signal
Traffic Monitoring Sites WIM AVC VOL
Road Underpass
Road Overpass



Street Name	Whitehorse Road
Jurisdiction	County
Functional Class	Urban Minor Arterial
Federal Aid - NHS Sy	STP
Control Section	
Speed Limit	35 / 45
Number of Lanes	4 / 2 / 4
Med. Type	None
Med. Width	0
Pavement	48 / 38 / 54 / 60 / 48
Shoulder	0
Traffic Volume	
Traffic Sta. ID	
Structure No.	
Enlarged Views	

Begin Rt. 533 MP=0.00

Page Created: May 2008

SRI = 00000533__

Date last inventoried: May 1997

Whitehorse Circle
ALTERNATIVES IMPACTS MATRIX

ALT. NO.	ALTERNATIVE DESCRIPTION	PROJECT LIMITS (M.P.)	DESIGN EXCEPTIONS REQUIRED	R.O.W. IMPACTS		ACCESS IMPACTS				TRAFFIC	ENVIRONMENTAL IMPACTS[2]	STORMWATER MANAGEMENT	UTILITY IMPACTS[3]	BICYCLE COMPATIBLE	EST. COST[4] (MILLIONS)
				NO. OF PARCELS	AREA	NO. OF DRIVE.	REV.	MOD.	ADJUST.						
1	NO BUILD	US 206 M.P. 38.79 - M.P. 37.99 ROUTE 524 M.P. 0.00 - M.P. 0.16 ROUTE 533 M.P. 0.00 - M.P. 0.05	NONE	0	0	0	0	0	0	SEE TRAFFIC MATRIX	NO	NO STORMWATER MANAGEMENT RULES TRIGGERED	NO	NOT SHARED LANES < 14FT NON COMPLIANT INLET GRATES	0.00
2	SIGNALIZED INTERSECTION	US 206 M.P. 38.79 - M.P. 37.99 ROUTE 524 M.P. 0.00 - M.P. 0.16 ROUTE 533 M.P. 0.00 - M.P. 0.05	YES SHOULDER WIDTH < 6FT OUTSIDE LANE < 15TH	0[1]	0[1]	7	0	0	7	SEE TRAFFIC MATRIX	POSSIBLE	YES STORMWATER MANAGEMENT RULES TRIGGERED BY ADDED IMPERVIOUS & TOTAL DISTURBANCE	YES AERIAL & UNDERGROUND	NOT BICYCLE COMPATIBLE SHARED LANES < 14FT	2.10
3	SIGNALIZED INTERSECTION WITH WIDENING	US 206 M.P. 38.79 - M.P. 37.99 ROUTE 524 M.P. 0.00 - M.P. 0.16 ROUTE 533 M.P. 0.00 - M.P. 0.05	YES SHOULDER WIDTH < 6FT OUTSIDE LANE < 15TH	4	0.194 AC.	7	0	2	5	SEE TRAFFIC MATRIX	POSSIBLE	YES STORMWATER MANAGEMENT RULES TRIGGERED BY ADDED IMPERVIOUS & TOTAL DISTURBANCE	YES AERIAL & UNDERGROUND	NOT BICYCLE COMPATIBLE SHARED LANES < 14FT	2.13
4	ALTERNATIVE 3 WITH I-195 ON-RAMP WIDENING	US 206 M.P. 38.79 - M.P. 37.99 ROUTE 524 M.P. 0.00 - M.P. 0.16 ROUTE 533 M.P. 0.00 - M.P. 0.05	YES SHOULDER WIDTH < 6FT OUTSIDE LANE < 15TH	4	0.194 AC.	7	0	2	5	SEE TRAFFIC MATRIX	POSSIBLE	YES STORMWATER MANAGEMENT RULES TRIGGERED BY ADDED IMPERVIOUS & TOTAL DISTURBANCE	YES AERIAL & UNDERGROUND	NOT BICYCLE COMPATIBLE SHARED LANES < 14FT	2.36
5	TWO LANE ROUNDABOUT	US 206 M.P. 38.82 - M.P. 38.98 ROUTE 524 M.P. 0.00 - M.P. 0.16 ROUTE 533 M.P. 0.00 - M.P. 0.05	YES SHOULDER WIDTH < 6FT OUTSIDE LANE < 15TH	4	0.04 AC.	3	0	3	0	SEE TRAFFIC MATRIX	POSSIBLE	YES STORMWATER MANAGEMENT RULES TRIGGERED BY TOTAL DISTURBANCE	YES AERIAL & UNDERGROUND	NOT BICYCLE COMPATIBLE SHARED LANES < 14FT	1.43
5a	2/1 ROUNDABOUT WITH 1 ENTERING SB	US 206 M.P. 38.82 - M.P. 38.98 ROUTE 524 M.P. 0.00 - M.P. 0.16 ROUTE 533 M.P. 0.00 - M.P. 0.05	YES SHOULDER WIDTH < 6FT OUTSIDE LANE < 15TH	3	0.03 AC.	3	0	3	0	SEE TRAFFIC MATRIX	POSSIBLE	YES STORMWATER MANAGEMENT RULES TRIGGERED BY TOTAL DISTURBANCE	YES AERIAL & UNDERGROUND	NOT BICYCLE COMPATIBLE SHARED LANES < 14FT	1.59
5b	2/1 ROUNDABOUT WITH 2 ENTERING SB	US 206 M.P. 38.82 - M.P. 38.98 ROUTE 524 M.P. 0.00 - M.P. 0.16 ROUTE 533 M.P. 0.00 - M.P. 0.05	YES SHOULDER WIDTH < 6FT OUTSIDE LANE < 15TH	2	0.02 AC.	3	0	3	0	SEE TRAFFIC MATRIX	POSSIBLE	YES STORMWATER MANAGEMENT RULES TRIGGERED BY TOTAL DISTURBANCE	YES AERIAL & UNDERGROUND	NOT BICYCLE COMPATIBLE SHARED LANES < 14FT	1.53

1. POTENTIAL 0.032 AC. IMPACT AT THE NORTH-WEST QUADRANT PARCEL TO BE INVESTIGATED
2. POSSIBLE IMPACTS PENDINDG ENVIRONMENTAL SCREENING REPORT
3. POSSIBLE IMPACTS PENDING UTILITY LOCATES
4. ROW COST NOT INCLUDED

Crash Analysis

The purpose of this crash analysis is to investigate the Whitehorse Circle's safety history to determine (1) if any improvement or deterioration in the overall safety of the intersection has occurred in recent years, and (2) if initial investigations indicate conditions have not improved or have worsen, investigate the crashes to identify problem areas, any underlying deficiencies and potential short-term and long-term solutions.

Background and History

As shown in ***Figure 1***, the Whitehorse Circle has a significant number of conflict points due to internal crossing locations and Route 206 northbound having the right-of-way through the circle. In late 1999/early 2000, the NJDOT was notified by Hamilton Township officials about safety concerns. The Township indicated that this location was the municipality's greatest concern in terms of being a "priority high accident location." As a result, the Bureau of Safety Programs (BSP) and Traffic Engineering and Investigations (TE&I) unit were assigned to investigate the location. ***Table 1*** provides a summary of the crashes that occurred between January 2000 and June 2001 and a collision diagram is shown in ***Figure 2***. The most common accident type identified was angle crashes with 47 in the 18 month time period equating to 31 angle crashes annually. At the time, the number of crashes far exceeded the criteria of five right-angle crashes per year to be eligible for treatment as part of the Right-Angle Crash Reduction Program.

The BSP/TE&I investigation noted that the right angle collisions were occurring mostly at the two, consecutive internal stopping points at the circle's westerly quadrant where vehicles enter Route 206 southbound after coming from any of the other three approaches (shown on ***Figure 1***).

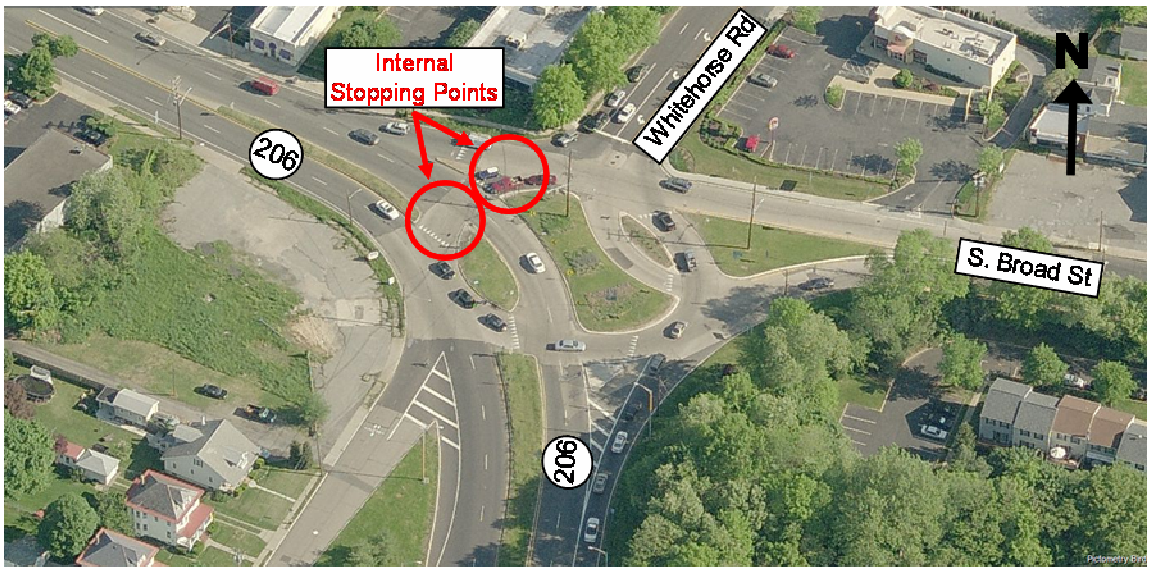


Figure 1: Site Location Map

Table 1: Accident Summary for January 2000 to June 2001

Type	Number	Percent	2001 State Avg Percent*
Angle	47	68.12%	22.09%
Rear End	10	14.49%	40.42%
Side-Swipe	6	8.70%	15.49%
Fixed Object	5	7.25%	6.53%
Right Turn	1	1.44%	N/A
Total	69	100%	N/A
	57 (83%) were reportable accidents 11 (16%) were injury accidents 13 injuries were reported		

*2001 NJDOT Bureau of Safety Programs Accident Summary – Total Accidents at Intersections for State System Roads (Excluding Toll Roads and Interstates)

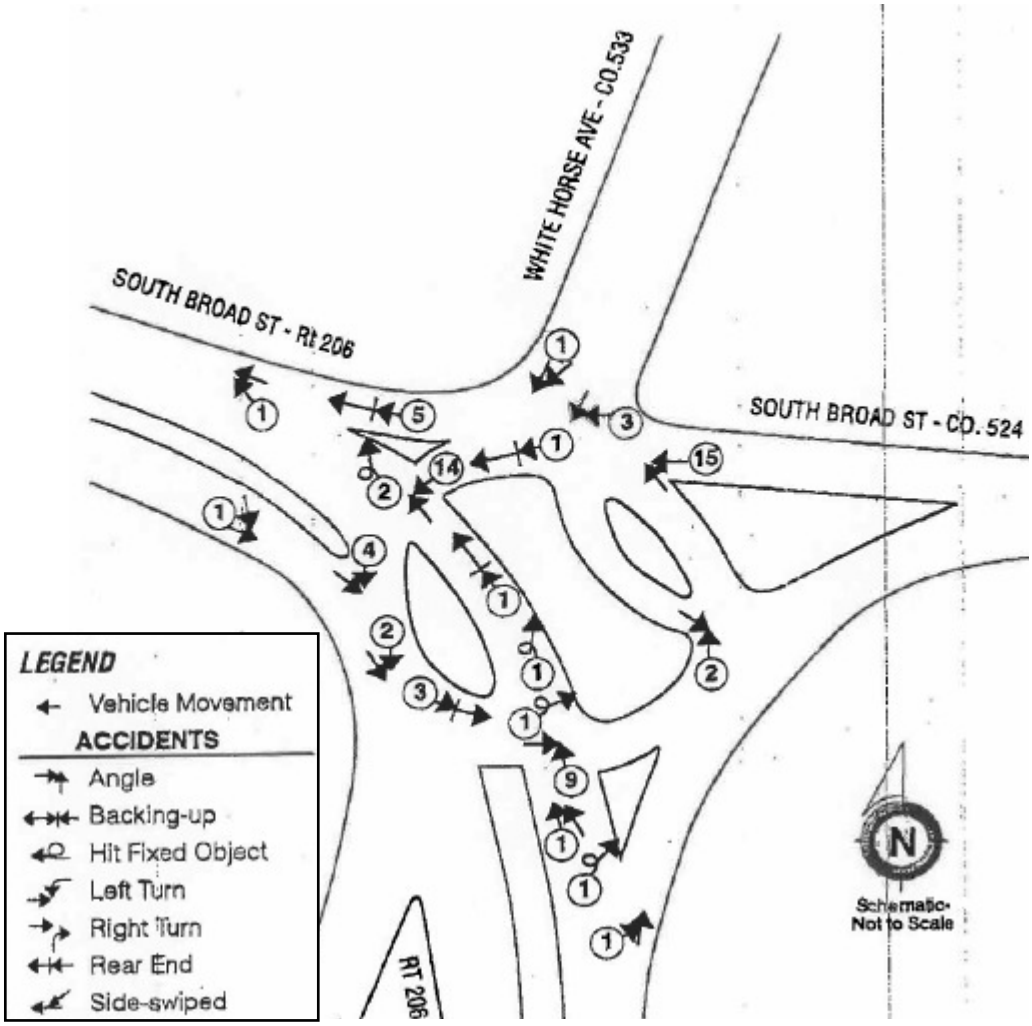


Figure 2: January 2000 – June 2001 Collision Diagram

Initial Mitigation Measures and Results

With the results from the crash analysis, NJDOT decided on several low cost, short term mitigation measures to implement at the circle in an effort to reduce the number of angle crashes. During the summer of 2002, the circle was retrofitted with improved signing and striping, and updated regulatory and warning signs at all yield-controlled intersection conflict points. The NJDOT evaluated this location as part of their 2004 Annual Safety Report only to find the improvements were unable to reduced angle crashes, overall frequency or injury crash percentages. It was then documented by the NJDOT that to resolve underlying deficiencies (i.e., inadequate storage areas and internal conflict points) at this location significant reconstruction into a modern roundabout or at-grade, signalized intersection would be required. The BSP/TE&I concurred with the need for a major study effort to revise the circle. At the time, the Mayor of Hamilton Township, Glen Gilmore, indicated that both short and long term measures to address safety at this location would likely be warranted.

NJDOT 2006-2008 Crash Summary

As part of the US Route 206 Whitehorse Circle Feasibility Assessment Study, crash data were requested from the NJDOT for the following locations:

- US Route 206 MP 38.59 – 39.23
- CR 533 (Whitehorse Road) MP 00.00 – 00.25
- CR 524 (South Broad Street) MP 00.00 – 00.30

The BSP provided crash summaries and details of motor vehicle accidents for the years January 1, 2006, through December 31, 2008 for all three locations listed above (***Appendix A***). The reports show the frequency, severity, conditions and circumstances surrounding the crashes. The crash summary revealed a total of 274 crashes had occurred in and around the Circle. A more detailed review of the police reports was completed to narrow the list of crashes to those occurring within the circle or as a result of congestion in the Circle. The results from the crash analysis with a comparison to statewide crash averages are shown in ***Table 2*** and a collision diagram with the four key collision areas (labeled A through D) highlighted is shown in ***Figure 2***.

Table 2: Crash Summary for January 2006 to December 2008

Type	Number	Percent	2008 State Avg Percent*
Angle	62	38.5%	25.32%
Rear End	68	42.2%	34.90%
Side-Swipe	23	14.3%	14.67%
Fixed Object	8	5.0%	6.93%
Total	161	100%	N/A
	42 (26%) were injury crashes 56 injuries were reported (19 annual)		

*2008 NJDOT Bureau of Safety Programs Crash Summary – Total Crashes at Intersections for State System Road (Excluding Toll Roads and Interstates)

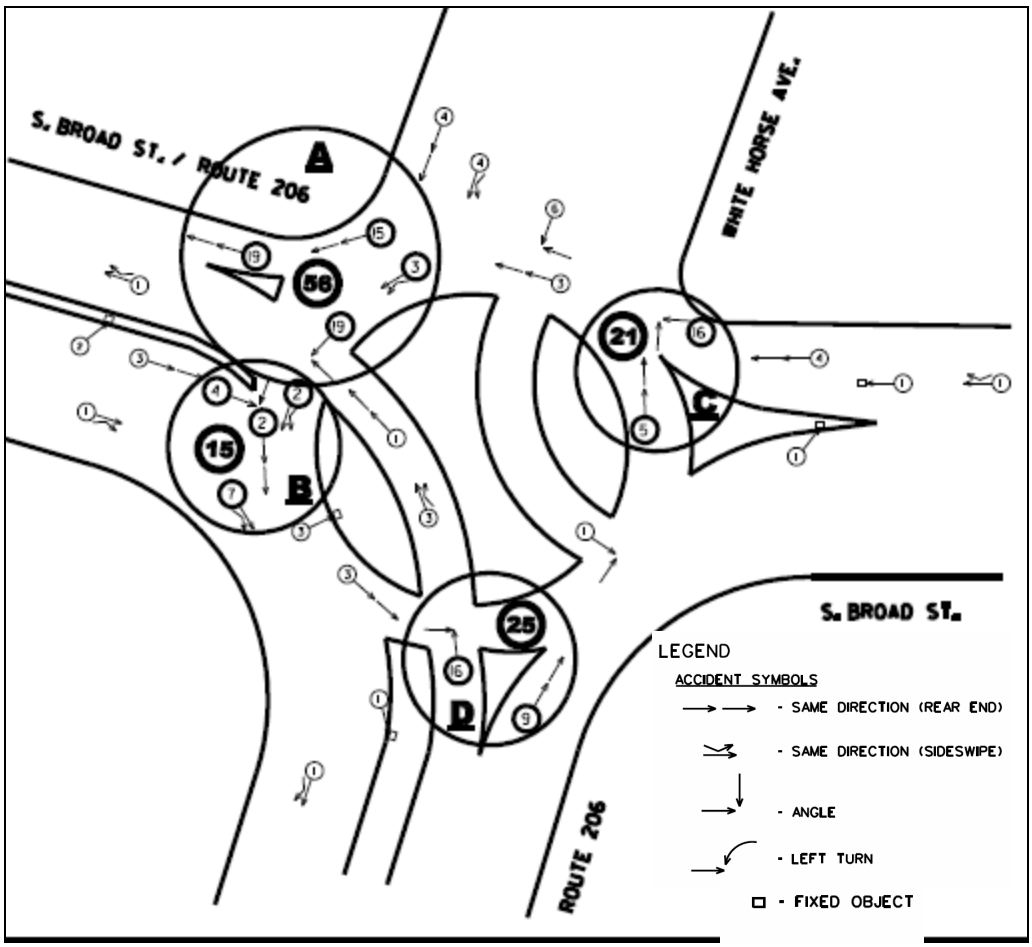


Figure 2: 2006 – 2008 Collision Diagram

The results from ***Table 2*** show that the most common accident type is rear end crashes with 68 in a 36 month period equating to 23 rear end crashes annually, and the second most being angle crashes with 62 equating to 21 angle crashes annually. The number of angle crashes far exceeded the criteria of five right-angle crashes per year to be eligible for treatment as part of the Right-Angle Crash Reduction Program.

Figure 3 **shows** the four key collision areas further divided by crash clusters and crash types within each collision area.

Location A

Located on the northwest corner of the circle where Whitehorse Road approaches the intersection with a total of 56 crashes most of which are rear end and angle crashes. Location A has three key crash locations within it.

- A1 – The crash analysis revealed 15 rear end collisions where drivers looking to move to the internal stopping points within the circle acted with hesitation causing rear end accidents based on the rear driver assuming the front driver was accelerating through the intersection.
- A2 – This location had 19 rear end collisions stemming from rear drivers assuming the front driver would enter the RT 206 northbound traffic stream.
- A3 – This location had 19 angle crashes resulting from vehicle hesitation across RT 206 northbound or insufficient queue storage at the second, westerly internal stopping point within the intersection.

Location B

Located on the west side of the intersection at the second, westerly internal stopping point approximately 15 crashes with a mix of rear end, angle and side-swipe crash types making up the total. It is not uncommon for vehicles destined for northbound Whitehorse Road and eastbound S. Broad Street that yield to RT 206 northbound traffic to queue into Location B causing driver confusion and thru lane blockages at Location B.

Location C

Located on the northeast corner of the intersection where S. Broad Street and Whitehorse Road meet at the intersection a total of 16 angle and five rear end crashes occurred.

- C1 – This location contained the 16 angle crashes which mainly resulted from driver confusion as to which driver had the right-of-way.
- C2 – This location contained five rear end crashes which mainly results from driver confusion associated with unexpected queuing from location C2.

Location D

Located on the southern approach where RT 206 northbound meets the intersection a total of 16 angle and nine rear end crashes occurred.

- D1 – This location contained the 16 angle crashes which mainly resulted from drivers not seeing any vehicles approaching on RT 206 northbound, then beginning to move across RT 206 northbound, and RT 206 northbound vehicles quickly approaching that would collide with vehicles trying to cross.
- D2 – This location contained 9 rear end crashes from traffic queuing at Location D2 and driver inattention. Location D2 includes crashes along RT 206 northbound between the southern metering signal and the circle.

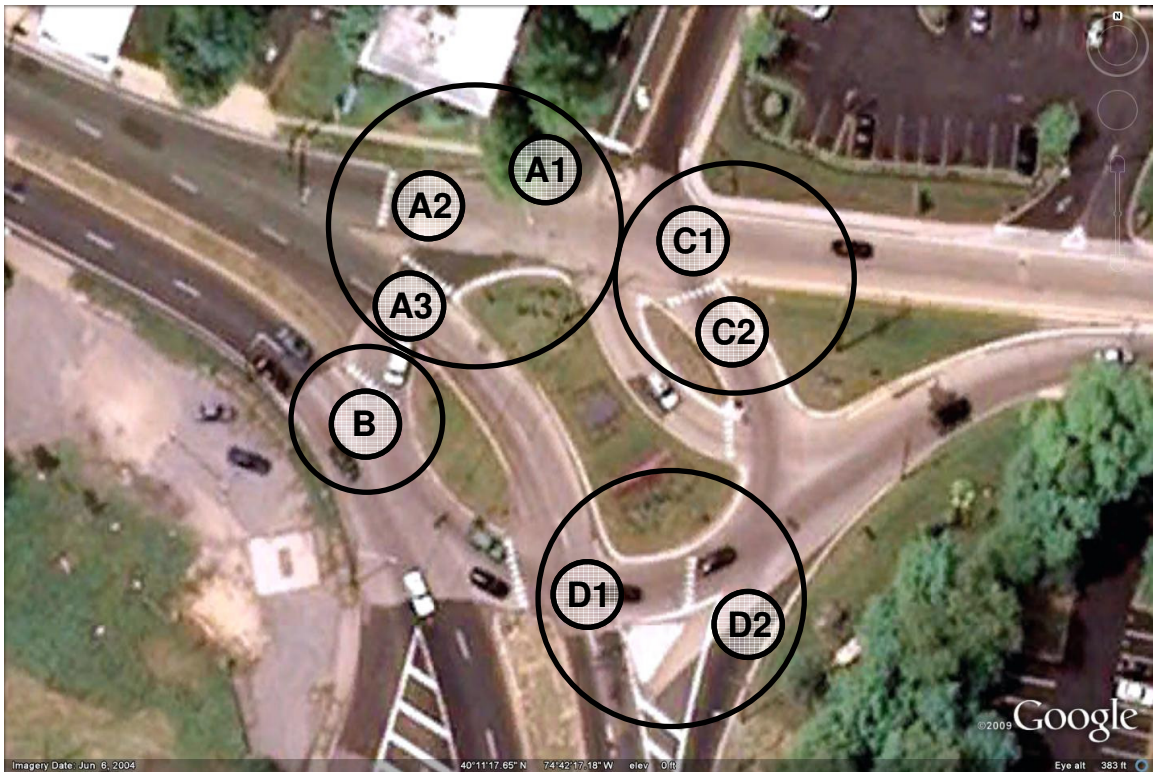


Figure 3: Key Collision Areas

Crash Summary

The results from ***Table 3*** show that the annual crash frequency has increased from 46 to 54 crashes per year. The results also show the percentage of crashes that involved an injury increased from 16 to 26 percent and the annual number of injuries per year increased from 7 to 19 annually at this location. Although most of the statistics show the crash rate increasing, the percent and annual average of angle crashes has decreased.

Table 3: Accident Summary Comparison for Crashes Occurring at the Whitehorse Circle

	Jan 2000 – Jun 2001				Jan 2006 – Dec 2008			
Type	**Number**	**Percent**	**2001 State Avg Percent***	**Annual Avg**	**Number**	**Percent**	**2008 State Avg Percent***	**Annual Avg**
Angle	47	**68.12%**	22.09%	31	62	**38.51%**	25.32%	21
Rear End	10	14.49%	40.42%	7	68	**42.23%**	34.90%	23
Side-Swipe	6	8.70%	15.49%	4	23	14.29%	14.67%	7
Fixed Object	5	**7.25%**	6.53%	3	8	4.97%	6.93%	3
Right Turn	1	1.44%	N/A	1	0	0.00%	N/A	0
Total	69	100%	N/A	46	161	100%	N/A	54
	57 (83%) were reportable crashes 11 (16%) were injury crashes 13 injuries were reported (7 annual)				There were 0 (0%) fatal crashes 42 (26%) were injury crashes 56 injuries were reported (19 annual) 0 (0%) reported pedestrian/bicyclist crashes			

*2001 and 2008 NJDOT Bureau of Safety Programs Crash Summary – Total Crashes at Intersections for State System Roads (Excluding Toll Roads and Interstates)

Table 3 also shows the 2006 to 2008 crash results are above the 2008 statewide average for angle, rear end and side-swipe crash types.

Possible Solutions

Short Term

During the summer of 2002 the NJDOT retrofitted the Whitehorse Circle with improved signing and striping, and updated regulatory and warning signs at all yield-controlled intersection conflict points only to find out in 2004 that the crash rates had failed to be reduced by these low cost, short term mitigation measures. Other possible low cost measures include restricting movements (except US 206 through traffic) to single lane flow utilizing edge line treatments and gore area markings and converting southbound Whitehorse Road approach to a single through lane. The conversion of Whitehorse Road was previously identified by NJDOT, but was not implemented. The benefit of the strategy would be a reduction in the number of conflict points and congestion at the internal stopping locations to improve safety. This geometric setup was simulated using VISSIM under the 2009 PM peak hour conditions. Preliminary analysis indicated that the changes on Whitehorse road would likely lead to extensive queuing along Whitehorse Road past the intersection of Whitehorse Road and S. Clinton Avenue. It also appeared to increase internal queueing as traffic from S. Broad Street and Whitehorse Road were limited to one (1) lane to access southbound Route 206 where as today this is used as two lanes.

At this time the low cost, short term mitigation measures have been exhausted and recommendations by the NJDOT, TE&I, BSP for long term improvements conclude that a full circle elimination project will be necessary at the Whitehorse Circle for operational and safety compliance.

Long Term

The two main types of full circle elimination design options for the Whitehorse Circle include an at-grade signalized intersection and a modern roundabout. The signalized intersection design option includes varying lanes of travel with left turn pockets and channelized right turns. The modern roundabout design option includes varying number of approach and circulating lanes. Both design options and alternatives of each are described in detail with operational analysis in Section X.

Concept Development Study

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US Route 206 - White Horse Circle Concept Development Study

Core Group Meeting

Concept Development Study

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Agenda

- Project Background
  - Project Delivery Process – Concept Development
  - Location
  - History
- Existing Conditions
  - Traffic and Safety
  - Geometrics
- Purpose and Need
- Concepts
  - Intersection Alternatives
  - Roundabout Alternatives
- Discussion
- Next Steps

Concept Development Study

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Project Background

Concept Development Study

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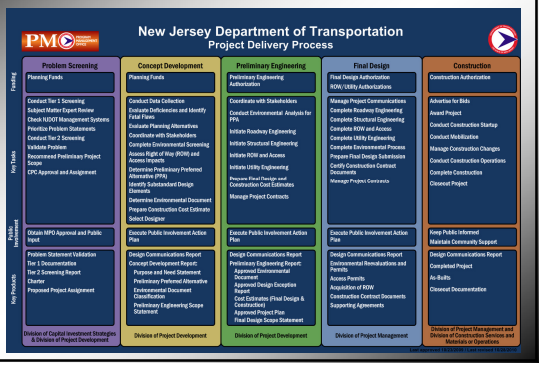
Project Delivery Process



Concept Development Study

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Project Delivery Process

OBJECTIVES

- Identify and Analyze Reasonable Alternatives
- Select a Preliminary Preferred Alternative
- Procure a Designer for Future Phases of Work
  - ***NJDOT or Consultant Designer***
  - ***Preliminary Engineering, Final Design & Construction***

Concept Development Study

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Project Location

Concept Development Study

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Project Location

Concept Development Study

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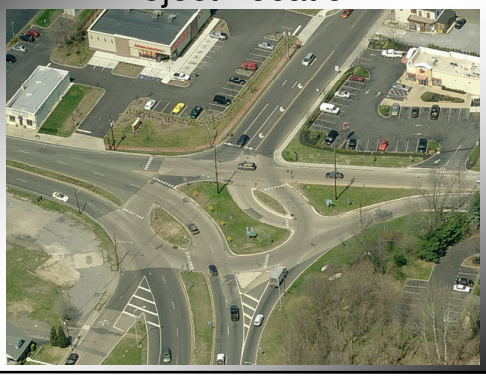
Project Location



Concept Development Study

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Project Background

- Safety studies began back in 1999/2000
- BSP/TE&I investigated
  - High number of angle crashes
  - Total number 69 crashes in 1.5 years
- Developed short-term mitigation measures
  - Improved signing and striping
  - Updated regulatory and warning signs
- Evaluated as part of 2004 Annual Safety Report
  - No reduction in angle crashes, overall frequency or percent injury
- Problem Statement Completed in 2005
  - Recommended study to develop a “larger” solution

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Existing Conditions

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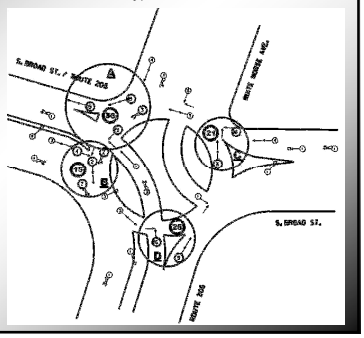
Safety

- Location (MP 38.9) showed on SMS Top Intersection Crash Locations #364 (27 Crashes, 33 Severity) – 2003 to 2005
- Crash Reports (2006 to 2008) indicate 161 crashes occurred at or near the Circle
- 62 Angle
- 68 Rear-End
- 26% Injury



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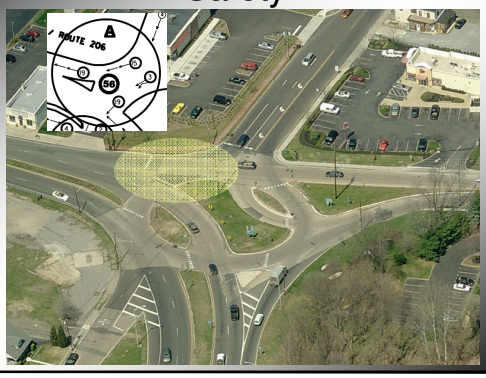
Safety



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Safety
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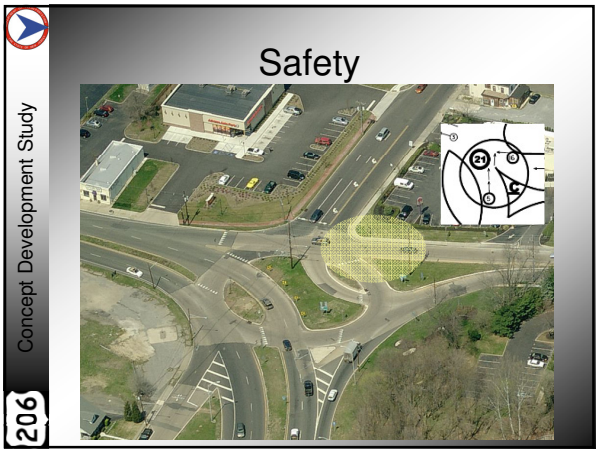
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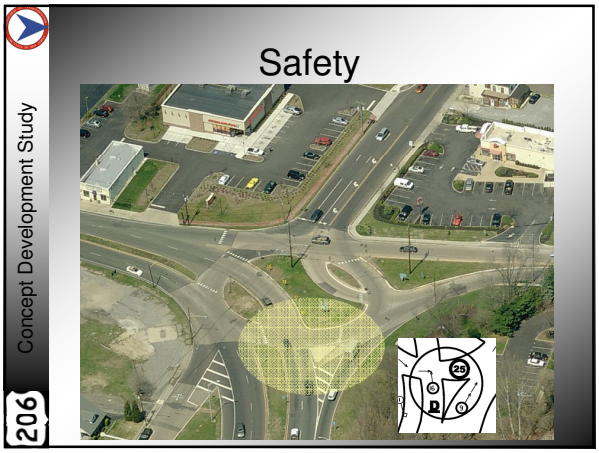
Concept Development Study
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Safety
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D

Traffic Operations

- Traffic Volumes
  - 21,000 vpd on Route 206 North of the Circle
  - 11,000 vpd on White Horse Road
  - 14,000 vpd on Broad St.
  - 2,350 vehicles entering AM and 2,750 in PM
- Level of Service (AM/PM): LOS C/C
  - LOS E on Southbound White Horse Road (PM)
- Queuing in the circle creates occasional blocking of thru movements on US 206

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Traffic Operations - Queues

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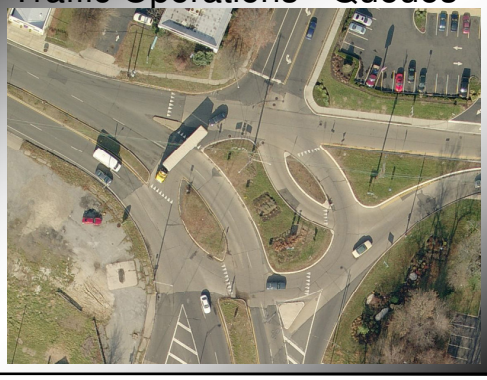
Traffic Operations - Queues



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Traffic Operations - Queues

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Traffic Operations - Queues

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Fact Sheet Review

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Project Purpose and Need

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Project Purpose and Need

Project Purpose:

- The purpose of the US 206 Whitehorse Circle Concept Development Study is to develop concepts that improve the identified safety and operational issues

Project Needs:

- Improve Safety:
  - There are a high overall number of crashes
  - The number of angle crashes exceeds statewide averages
  - Crashes are concentrated at four primary locations
- Improve Traffic Operations:
  - Queuing within the circle affects traffic flow

Concept Development Study

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Concepts

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Projected Conditions

- Growth Rate of 0.50% per year
- Design Year of 2035
- Level of Service (AM/PM): LOS D/D
  - Failing LOS on some movements
- Queuing frequently blocks movements on US 206

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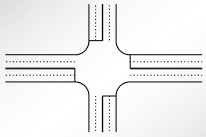
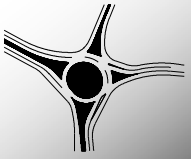
Concepts

- Intersections



- Roundabouts



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Concepts

- Alternative 1 – No Build

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Intersections

- Alternative 2

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Intersections

- Alternative 3

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Intersections

- Alternative 4

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Roundabouts

- Alternative 5

Concept Development Study

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Roundabouts

- Alternative 5A

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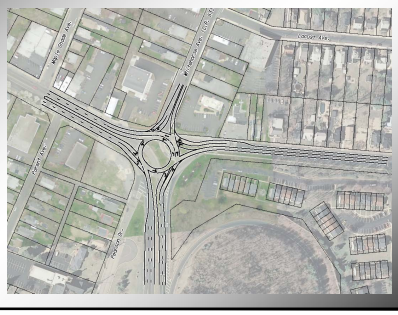
Roundabouts

- Alternative 5B



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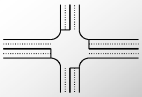
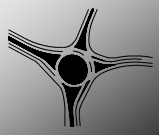
Concepts

- Intersections
  - Benefits
    - Addresses safety and operational issues
    - "Works" for existing and projected traffic volumes
  - Limitations/Issues
    - Difficult to accommodate Parent Avenue
    - Left Turn for Route 206 NB



- Roundabouts
  - Benefits
    - Addresses safety and operational issues
    - Roundabouts have a good safety record
    - No issue with Pearson Drive or Parent Avenue
  - Limitations/Issues
    - May need to be converted to a full two lane roundabout
    - Could be seen as a circle… Changes to driver behavior (yield on entry)



Concept Development Study

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Next Steps

- Refine/Finalize Concepts
- Meet with Locals/Resolution of Support
- Complete Concept Development Report

Concept Development Study

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Questions?

URBAN ENGINEERS, INC.
Colwick Business Center, Suite 200
55 Haddonfield Road
Cherry Hill, NJ 08002
Phone: (856) 663-5550
Fax: (856) 663-4836

MEMORANDUM

TO: John Zim, NJDOT

FROM: Bill McGarrigel, Urban Engineers

DATE: March 22, 2011

RE: US Route 206 White Horse Circle – Local Officials Briefing – Technical Staff

CC: George Fallat, Rich Williams, Tom Saylor, John Zim, Bill McGarrigel, Scott Diehl

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Mercer County and Hamilton Township were presented with the current alternatives under consideration. They were in agreement that both alternatives should be presented to their respective administrations.

Action Items/Next Steps:

1. NJDOT to coordinate a meeting with the administrations on Mercer County and Hamilton Township. John Zim to work with OCR.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

MEMORANDUM

TO: Tom Wospil, Director
Capital Investment Planning and Development

FROM: Tom Saylor
Manager, Region South
Division of Project Development

DATE: 3/25/2011

PHONE: 530-2739

SUBJECT: Rt. 206, Whitehorse Circle (CR 533, 524), UPC number 950526

Discussion of project status

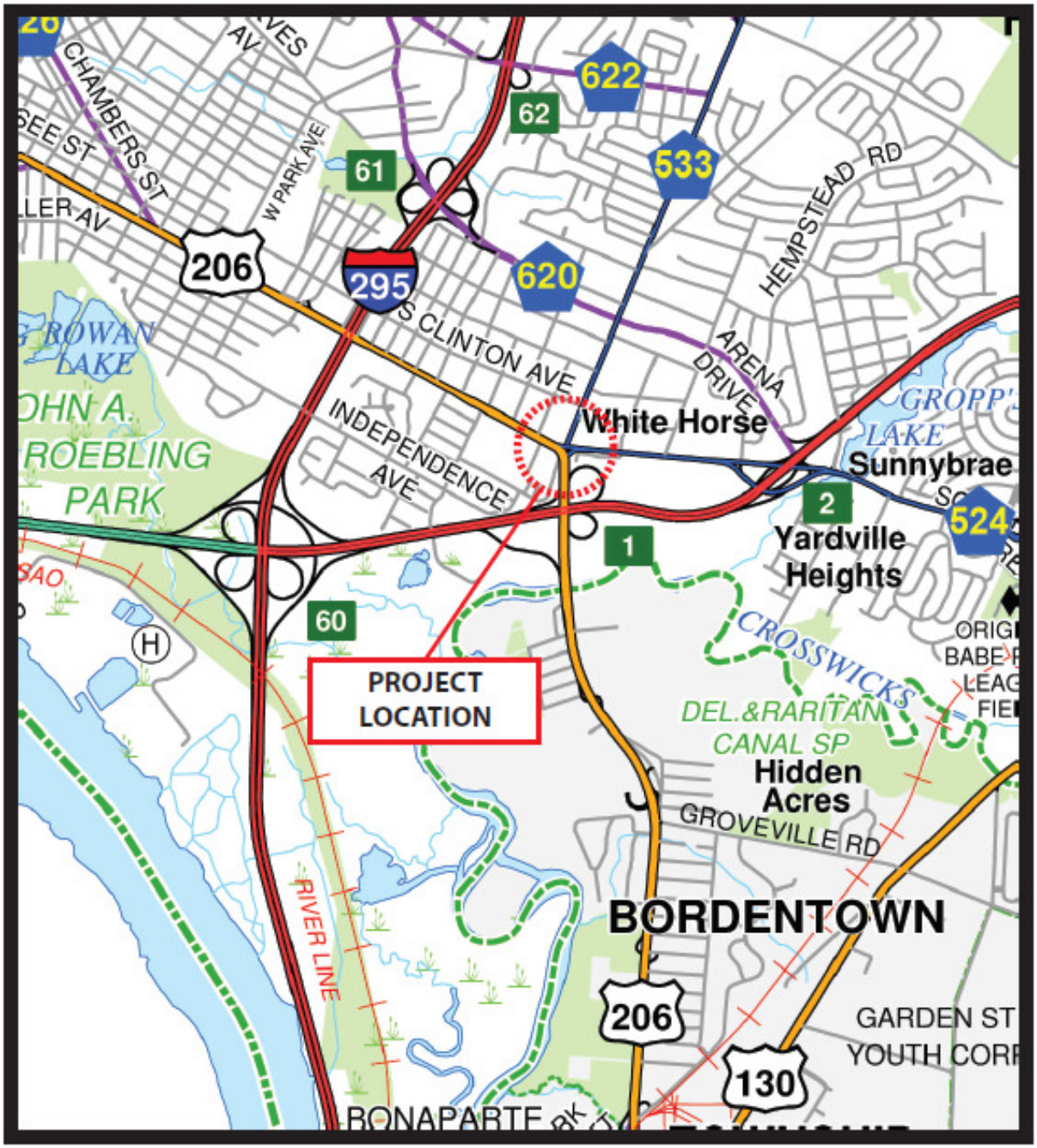
The Division of Project Development (DPD) requests that this project be placed on the next CPC agenda. The intent is to request concurrence on the project status and receive an approval to continue the Concept Development study.

Due to the recent changes to the NJDOT Project Delivery Process, it was determined by DPD that the project obtain concurrence from CPC prior to continuing the study and advancement of project alternatives, including presenting alternatives to local officials and the general public.

PROBLEM BACKGROUND

The Concept Development study for Whitehorse Circle (Circle) was initiated by DPD in 2010 as a result of a Bureau of Safety Programs (BSP) recommendation based on the results of previously implemented solutions. The Whitehorse Circle (Circle) is located in the Township of Hamilton and serves both local and regional traffic (See Project Location Map – **Figure 1**).

The project has a long history that started with a problem statement prepared in 2005 by the Safety Management System South Jersey Transportation Planning Organization (SJTPO). The statement indicated that Hamilton Township identified the facility as being a high priority accident location. At the time, the number of crashes far exceeded the criteria of five right-angle crashes per year to be eligible for treatment as part of the Right-Angle Crash Reduction Program. Because attempted quick fix solutions did not realize material safety improvements, BSP recommended the project be re-evaluated for concept development study.



PROJECT LOCATION MAP
Route 206/CR 533/CR 524 Whitehorse Circle
Hamilton Township, Mercer County

Project Limits
The project study limits are along Route 206 from M.P. 38.59 to M.P. 39.23, C.R. 533 from M.P. 0.00 to M.P. 0.47, and C.R. 524 from M.P. 0.00 to 0.45.

Location Characteristics
The circle has an unconventional design where vehicles traveling on Route 206 have the right-of-way and all other vehicles must yield. **Figure 2** shows the Whitehorse Circle with the internal stopping points.

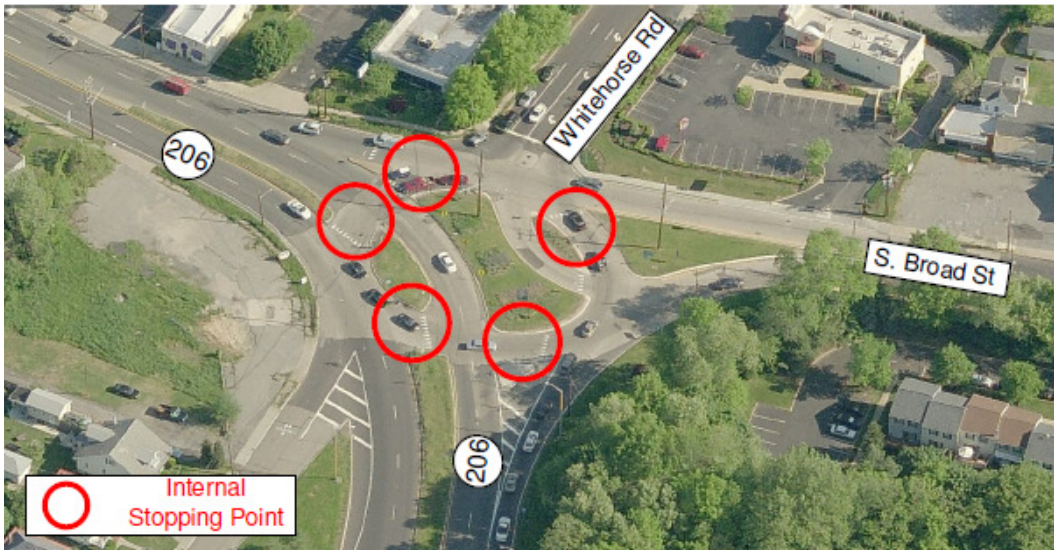


Figure 2: Site Location Map with Internal Stopping Points

The Circle's design forces vehicles within the Circle to yield to the Route 206 through traffic resulting in queueing onto Route 206. The Circle is located on Route 206 and processes traffic volumes of approximately 21,000 ADT.

The northbound Route 206 approach operates with a traffic signal that meters the volume entering the Circle. This signal is approximately 375 feet south of the intersection and operates on a 90 second cycle with approximately 60 seconds of green time and 30 seconds of red time. When the signal is red it helps the other three approaches clear, and when the signal returns to green the northbound through vehicles queue back frequently to the beginning of the auxiliary turn pocket on US 206.

Summary of Issues and Concerns

The primary purpose of the Whitehorse Circle project is to improve safety. Crash analyses were completed for the Whitehorse Circle using crash data collected from January 2006 to December 2008. There were 62, 56 and 43 crashes in 2006, 2007 and 2008, respectively. The results of the analysis including comparison to state averages are outlined in ***Table 2***. The results in ***Table 2*** indicate that the percentage of angle crashes and rear-end crashes exceeds statewide averages.

Table 2: Crash Summary for January 2006 to December 2008

Type	Number	Percent	2008 State Avg Percent*
Angle	62	38.51 %	25.32 %
Rear End	68	42.24 %	34.90 %
Side-Swipe	23	14.29 %	14.67 %
Fixed Object	8	4.97 %	6.93 %
Total	161	100.00 %	N/A
	42 (26%) were injury crashes 56 injuries were reported (19 annual)		

*2008 NJDOT Bureau of Safety Programs Crash Summary – Total Crashes at Intersections for State System Road (Excluding Toll Roads and Interstates)

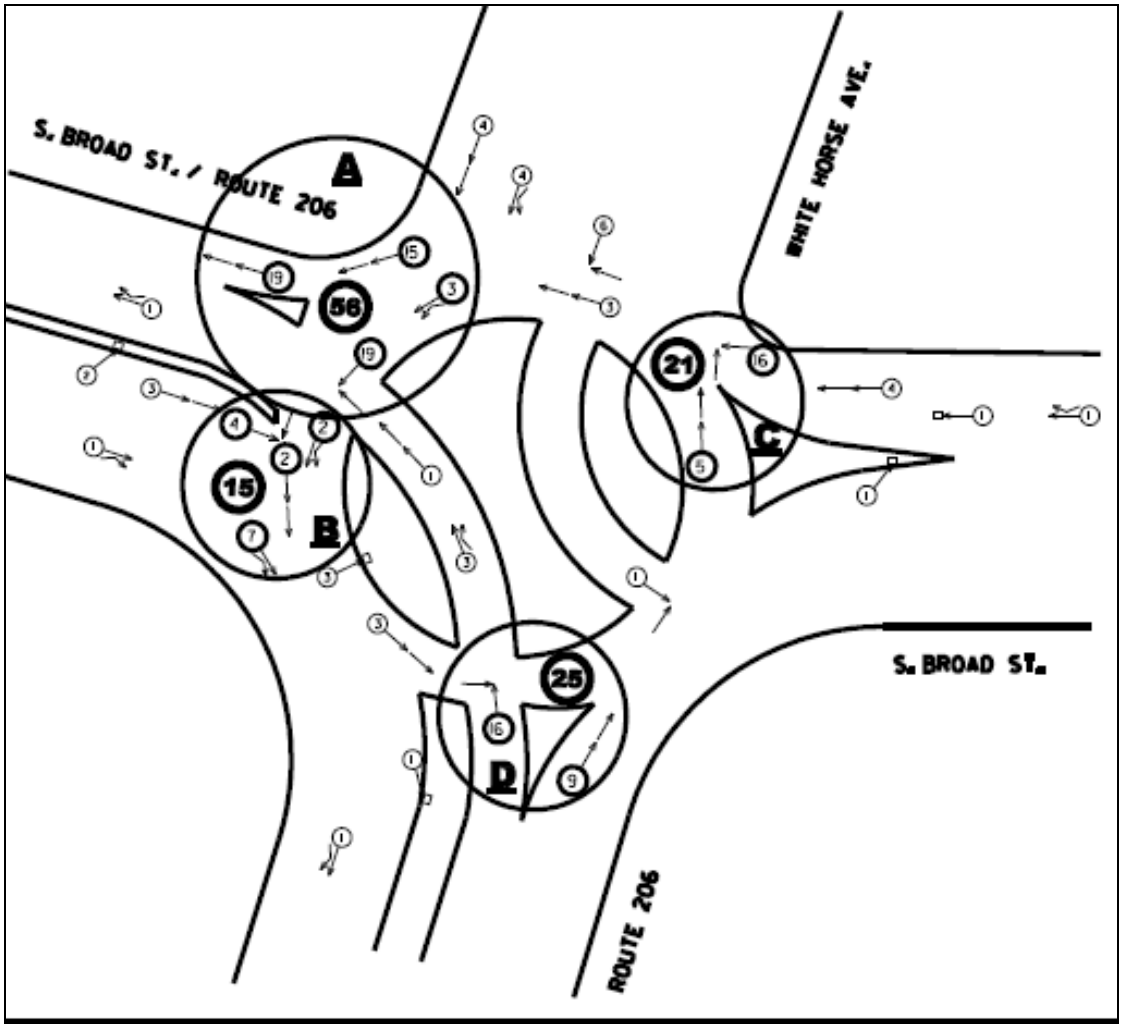


Figure 2: Crashes By Location for 2006-2008

Figure 2 shows the individual crashes between 2006 and 2008 by location and highlights the four key crash areas within the Whitehorse Circle. Location A on the northwest corner of the circle had a total of 56 crashes with 19 angle crashes

where vehicles cross Route 206. Location B on the west side of the intersection had 15 crashes with a mix of all crash types. Location C on the east side of the intersection had 21 crashes with 16 angle crashes where vehicles cross over South Broad Street moving towards Whitehorse Road. Location D on the south side had 16 angle crashes where vehicles attempted to cross northbound Route 206.

MANAGEMENT SYSTEM INFORMATION

Safety Management System (SMS)

A review of the SMS database revealed that Route 206 (MP 38.9) at County Route 533 showed up on the Top Intersection Crash Locations List by Total Severity for 2003 to 2005 at rank number 364 based on a severity score of 33 with a crash frequency of 27. As a comparison, the crash analysis completed by DPD for crashes occurring between 2006 and 2008 revealed 161 crashes occurred at or near the circle.

Based on discussions with the Bureau of Safety Programs (BSP) it was determined that the physical nature of the location (i.e., the size and shape of the circle and resulting conflict locations) results in the location being significantly underestimated as far as the number of crashes and the severity score in the safety management system and that the actual score would be much higher.

PROJECT PURPOSE AND NEED

A summary of the project Purpose and Need is provided below.

Project Purpose

The purpose of the project is to develop concepts that will improve safety and operational problems at the White Horse Circle.

Project Need

Following an evaluation of existing conditions, the main project need is to improve safety as the Whitehorse Circle has a high number of crashes, and more specifically angle crash type.

CONCEPTUAL IMPROVEMENT ALTERNATIVES

A number of concepts were developed based on two main themes: signalized intersection and roundabout. Based on coordination with Subject Matter Experts and the local professional staff, one concept of each improvement option was identified as preferred (Alternatives 3 and 5). The alternatives are depicted in the attached plans and associated impacts of each alternative are presented in the attached alternatives impacts matrix.

Both alternatives will help mitigate the safety issues at the Whitehorse Circle by reducing the number of conflict points for drivers and also by eliminating the existing atypical design. Both alternatives provide acceptable traffic operations in the 2035 design year.

COST ESTIMATE

The preliminary construction cost estimate (not including ROW) for Alternatives 3 (signalized intersection) and 5 (roundabout) is approximately $2.1M and 1.65M, respectively.

RECOMMENDATIONS

The proposed project is recommended for completion of CD with the intent to advance to PE pending the outcome of CD and the availability of funds. The two identified preferred alternatives address the established purpose and need, and were viewed favorably by professional staff from the County and Hamilton Township. Since the Department's study's program focus has changed since the start of the project, DPD seeks concurrence from CPC on DPD's continued study and advancement of project alternatives prior to presenting alternatives to local officials and the general public.

As indicated above, there are anticipated limited ROW impacts and the project has limited other anticipated impacts including utilities. The following additional information is attached for your use: A Straight Line Diagram and a 11x17 plans of two primary alternatives (roundabout and intersection).

If you have any questions please contact John Zim at 609-530-2314 or myself.

cc: John Zim, DPD

Urban Engineers, Inc.

Colwick Business Center
55 Haddonfield Road, Suite 200
Cherry Hill, NJ 08002
Telephone: (856) 663-5550

New Jersey Department of Transportation

US Route 206 White Horse Circle
Concept Development Study

MINUTES OF MEETING

SUBJECT: Local Officials Meeting

DATE: 9/22/11

TIME: 2:30 P.M. – 4:00 P.M.

LOCATION: Hamilton Township Municipal Building

PRESENT: See Attached Attendance List

The purpose of the meeting was to: (1) solicit comments and address questions from Hamilton Township Officials and Professional Staff regarding two proposed concepts to address the safety issues at the White Horse Circle, and (2) if possible, identify one of the concepts as a preferred concept that could be recommended for advancement.

The meeting began with the Project Manager, John Zim-DPD, presenting a general overview of the project. The Deparmtment's consultants (Urban Engineers) then provided a power point presentation providing greater project detail with respect to project background and history, existing conditions, areas of concerns (purpose and need), and concepts developed.

The following provides a summary of the presentation and the key discussion items:

Presentation

The first section covered was the project background, project location and project history. It was noted that the project is in the Concept Development Phase of the Project Delivery Process and that with the new process a key, new step in the CD phase includes selecting a Preliminary Preferred Alternative (PPA). It was explained that the project team is meeting with the local officials to determine if the feel one of the two concepts is a PPA that can be presented to the public and town council for a resolution of support.

The project team reviewed the project location characteristics including the unique operating conditions and traffic controls at the circle as well as the project history.

The project team then presented the team's analysis of the existing conditions including safety, traffic operations, and geometrics. The first area covered was the safety. It was noted that MP 38.9 (within the Whitehorse Circle) is listed in the SMS Top Intersection Crash Locations (#364) for 2003 to 2005 data. The ranking is based on a reported total of 27 crashes resulting in a 33 severity score.

A review of recent crash data showed that 161 crashes occurred at or on the approaches to the circle between 2006 and 2008. It was discussed with attendees that the large difference in the number of crashes in the SMS and the project team's review (other than the timeframe) is a result of the SMS ranking locations being based on crashes occurring at a specific MP where as the project team used a larger section of roadway. It was noted that it is not uncommon for crashes at Traffic Circles to be identified over a number of MP locations due to the size of the circle and entry point and circulating conflict locations.

In addition to reviewing the total number of crashes, the project team explained that their review indicated that crashes appear to be clustered at four locations around/in the circle. The project team reviewed the locations and the team's assessment of the reasons for the high crash clusters. Attendees generally agreed with the assessment adding in their own experiences with the operations.

The project team then reviewed the traffic characteristics and operations at the circle. It was noted that the circle actually operates fairly well with an overall Level of Service C (LOS C) during both peak hours. It was explained that the main traffic operation issue at the circle is the occasional queueing which can traffic flow on US 206 (blocking thru lanes) and likely contributes to the high crash totals. The project team went thru the locations where the queueing mainly occurs and noted the reasons why. The meeting attendees agreed with the locations and reasons.

Following the review of safety and traffic operations, the project team provided a brief review of the project location's physical features and underlying deficiencies. These include less than desirable shoulder widths, varying approach speed limits, and unusual lane configurations for turning movements. There are several places where turning traffic queues into the travel path of through movements, at times blocking circulation.

The project team then reviewed with attendees the project's purpose and need:

Project Purpose:

- The purpose of the US 206 Whitehorse Circle Concept Development Study is to develop concepts that improve the identified safety and operational issues

Project Needs:

- Improve Safety:
  - There are a high overall number of crashes
  - The number of angle crashes exceeds statewide averages
  - Crashes are concentrated at four primary locations

- Improve Traffic Operations:
  - Queuing within the circle affects traffic flow

The project team then reviewed with attendees the two build concepts (signalized intersection and roundabout) proposed to address the project purpose and need. It was noted that there were variations of each type of build concept with the two being presented today as being the best of each from an operation and safety perspective. The first alternative discussed was the signalized intersection alternative. It was explained that the signalized alternative would work quite well (LOS C or better during peak hours) and would address the identify safety problem areas. It was mentioned that one potential drawback or limitation with this alternative is the northbound Route 206 move will need to be a double left-turn even though it is the "thru" move.

The next alternative discussed was the roundabout alternative. The project team explained that the location is a good candidate for a modern roundabout from a number of perspectives including traffic volumes, size of available area, intersecting roadway angles, and roadway speeds. There were two main roundabout alternatives: a full two lane roundabout and a partial two lane roundabout. The project team explained that if the future traffic volumes do occur, the roundabout would need to be a full two lane roundabout, and we are presenting the two lane concept to make sure everyone understand the potential impacts. However, using today's traffic volumes, the roundabout works quite well as a partial two lane roundabout. The project team noted that roundabouts have a very good safety record and are being used more frequently in NJ and around the Country. Mayor Bencivengo noted that Hamilton Township has its own roundabout at the intersection of xx and xxx. The project team asked about the Township's experience and attendees noted that there were some concerns at first, but most people like it and it has addressed that safety issues at the intersection.

The project team noted that with both alternatives the one-way access in to Pearson Drive would be closed. It was explained that the access is currently one-way in and with both alternatives would create safety issues. The project team explained that this would have some impact, but it was intended to be mitigated through improvements to an alleyway between Pearson Drive and Parent Avenue.

During and following the presentation, there were a number of questions about specific details of the concepts as well as an open discussion about issues, concerns, and ideas that the local officials and professional staff had with the concepts. The key questions and discussions points are provided below.

- Township Officials asked if the proposed changes would affect access to the gym located off of southbound Route 206. After some discussions, it was determined that the access

to the gym is located a little south of the project area and it would not be impacted by the proposed project.

- It was asked if either alternative resulted in better traffic operations, specifically on the Whitehorse Avenue approach. It was noted that both alternatives have very good traffic operations during the peak hours (and even better during off-peak). As far as Whitehorse Avenue, the maximum queue during the PM peak hour (2035) is longer with the roundabout alternative, but is still less than where the queues get to today (i.e., extending back into S. Clinton Avenue intersection).

- It was asked what would be the primary reasons for a roundabout option. The project team indicated that (1) safety records are extremely good (20-40%) reduction in the total number of crashes and an even higher percentage (60-80) reduction in injury/fatal crashes, (2) there's no signal maintenance with a roundabout, (3) the tend to operate better than signals during both peak hours and especially during peak hours since you don't have to wait for the red light, (4) the location could serve with landscaping as a gateway to Hamilton Township.

Action Items/Next Steps:

1. NJDOT to provide a sample resolution of support to Hamilton Township

2. Hamilton Township will contact NJDOT to set-up a meeting for presentation to the town council (estimated Late Nov/Early Dec).

We believe the foregoing record to be an accurate summary of the discussion and related decisions. We would appreciate notification of exceptions or corrections to these Minutes within five (5) working days. Without notification, we will consider these minutes to be a record of fact.

Respectfully Submitted,

Scott Diehl, PE, PTOE

URBAN ENGINEERS, INC

NJDOT ATTENDANCE RECORD
PUBLIC INFORMATION CENTER
PLEASE PRINT

PROJECT: Rt. 206 Whitehorse **DATE:** 9/22/11

MEETING LOCATION: Hamilton Twsp Municipal Building

Name	Phone Number	Mailing Address/Affiliation	Email Address
Kimberley Nance	530-6542	NJDOT / Community Relations	Kimberly.Nance@dot.state.nj.us
NAYAN BRAHMBHATT	530-4678	NJDOT / TRAFFIC ENGINEERING	nayan.brahmbhatt@dot.state.nj.us
JOHN ZIM	530-2314	NJDOT / Project Mngmnt	john.zim@dot.state.nj.us
Scott DIEHL	(856) 663 5550	URBAN ENGINEERS	sjdiehl@urbanengineers.com
Bill McGarrigel	(856) 663-5550	URBAN ENGINEERS	wpmcgarrigel@urbanengineers.com
MIKE ANGARONE	609 890 3519	Ham Twp Econ Dev	mangarone@optonline.net
Rick WILLIAMS	609-890-3636	Twp. of Hamilton ENGINEERING	rwilliams@hamiltonnj.com
Rob Warney	609-890-3683	Hamilton Twp	rwarney@hamiltonnj.com
Denise Peck	6095302853	1035 PARKWAY AVE. TRENTON, NJ 08625 NJDOT-OCR	Denise.peck@dot.state.nj.us
John Ricci	890-3506	Ham. Hn Twp.	JRicci@Ham.Hn.NJ.com
George Fallat	989-6642	Mercer County	gfallat@mercercounty.org

Urban Engineers, Inc.

Colwick Business Center
55 Haddonfield Road, Suite 200
Cherry Hill, NJ 08002
Telephone: (856) 663-5550

New Jersey Department of Transportation

US Route 206 White Horse Circle
Concept Development Study

MINUTES OF MEETING

SUBJECT: Presentation to the Hamilton Township Council

DATE: 4/17/12

TIME: 8:00 PM

LOCATION: Hamilton Township Municipal Building

The purpose of the presentation was to provide the Township Council with a cursory view of the project efforts to date and the anticipated steps moving forward. The goal was to receive a resolution of support from the community so that the project could advance into Preliminary Engineering.

The following provides a summary of the presentation and the key discussion items:

Presentation

The brief presentation covered the project background, existing conditions, purpose and need, and the proposed alternative. It was noted that the project is in the Concept Development Phase of the Project Delivery Process and that with the new process a key, new step in the CD phase includes selecting a Preliminary Preferred Alternative (PPA).

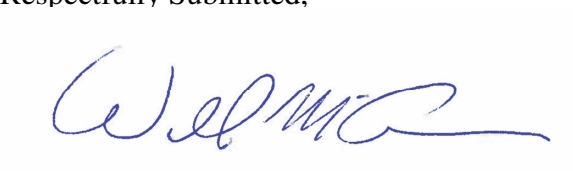
Action Items/Next Steps:

1. NJDOT will provide Hamilton Township with a draft Resolution for their review.

2. Hamilton Township will provide a Resolution of Support for the project.

We believe the foregoing record to be an accurate summary of the discussion and related decisions. We would appreciate notification of exceptions or corrections to these Minutes within five (5) working days. Without notification, we will consider these minutes to be a record of fact.

Respectfully Submitted,



William P. McGarrigel, PE

Project Manager

Concept Development Study

206

US Route 206 - White Horse Circle Concept Development Study

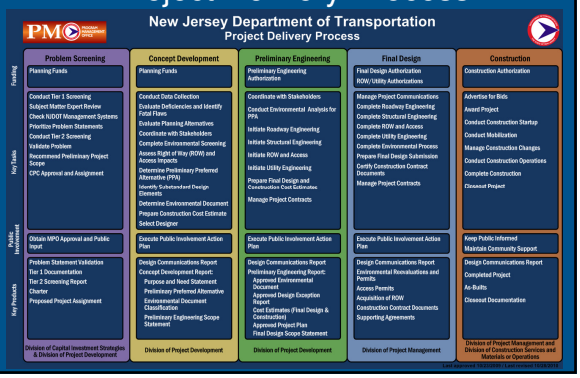
Township Council Presentation
April 17, 2012

Agenda

- Project Background
  - Project Delivery Process – Concept Development
  - Location
  - History
- Existing Conditions
  - Traffic and Safety
  - Geometrics
- Purpose and Need
- Preliminary Preferred Alternative
  - Modern Roundabouts
- Discussion
- Next Steps

Project Background

Project Delivery Process

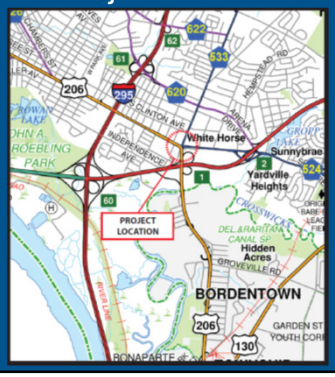


Project Delivery Process

OBJECTIVES

- Identify and Analyze Reasonable Alternatives
- Select a Preliminary Preferred Alternative
- Advance Project into Preliminary Engineering

Project Location



Project Location

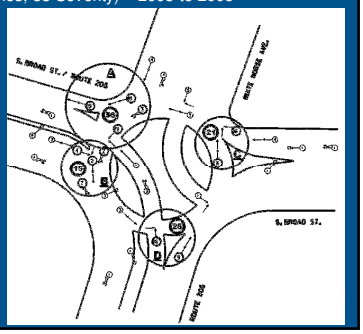
Project Background

- Safety studies began back in 1999/2000
- NJDOT BSP/TE&I investigated
  - High number of angle crashes
  - Total number 69 crashes in 1.5 years
- Developed short-term mitigation measures
  - Improved signing and striping
  - Updated regulatory and warning signs
- Evaluated as part of an Annual Safety Report
  - No reduction in angle crashes, overall frequency or percent injury
- Problem Statement Completed
  - Recommended study to develop a "larger" solution

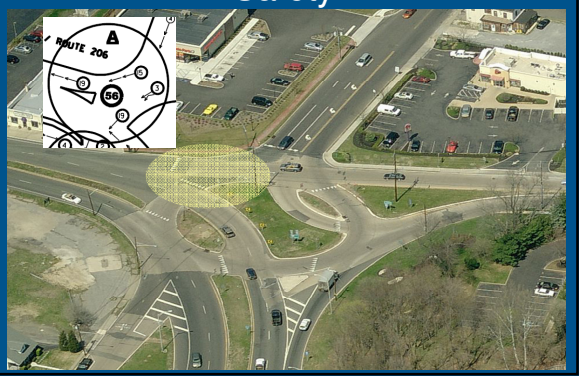
Existing Conditions

Safety

- Location (MP 38.9) showed on SMS Top Intersection Crash Locations #364 (27 Crashes, 33 Severity) – 2003 to 2005
- Crash Reports (2006 to 2008) indicate 161 crashes occurred at or near the Circle
  - 62 Angle
  - 68 Rear-End
  - 26% Injury



Safety



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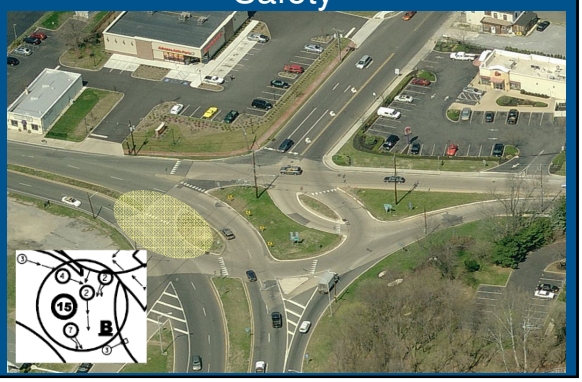

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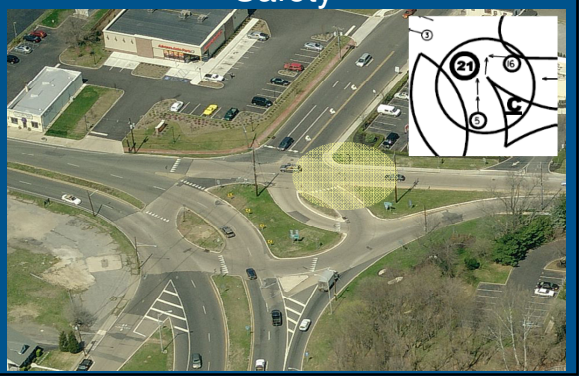

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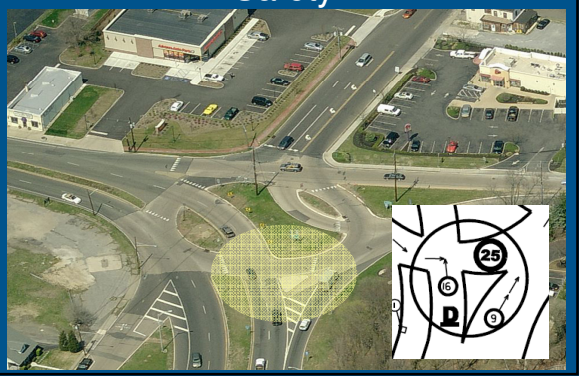
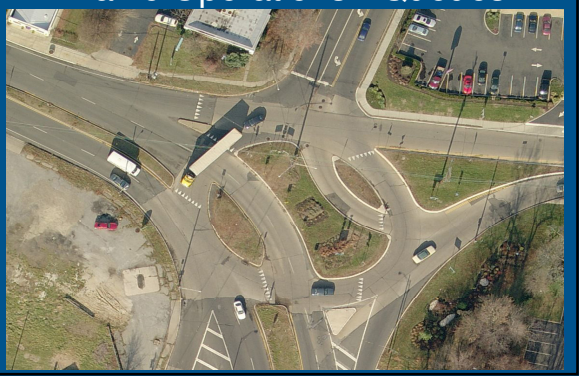


Traffic Operations

- Traffic Volumes
  - 21,000 vpd on Route 206 North of the Circle
  - 11,000 vpd on White Horse Road
  - 14,000 vpd on Broad St.
  - 2,350 vehicles entering AM and 2,750 in PM
- Level of Service (AM/PM): LOS C/C
  - LOS E on Southbound White Horse Road (PM)
- Queuing in the circle creates occasional blocking of thru movements on US 206

Traffic Operations - Queues

Traffic Operations - Queues



Traffic Operations - Queues

Traffic Operations - Queues

Project Purpose and Need

Project Purpose and Need

Project Purpose:

- The purpose of the US 206 Whitehorse Circle Concept Development Study is to develop concepts that improve the identified safety and operational issues

Project Needs:

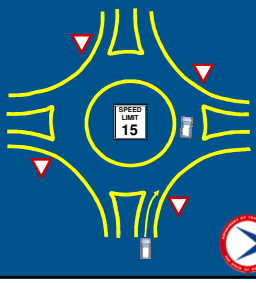
- Improve Safety:
  - There are a high overall number of crashes
  - The number of angle crashes exceeds statewide averages
  - Crashes are concentrated at four primary locations
- Improve Traffic Operations:
  - Queuing within the circle affects traffic flow

Preliminary Preferred Alternative Modern Roundabout

What is a Modern Roundabout?

A roundabout is a form of intersection control, generally circular in shape with specific design and operations characteristics

- **Yield on Entry**
- Deflection on Entry
- Splitter islands
- Central Island
- Slow circulating speeds
- No Parking or Driveways



Why Consider a Modern Roundabout?

- Increases safety
- Improves efficiency
- Cost Effective
- Context Sensitive

Common Misconceptions

Common Misconception…

1. *"I thought they were taking out all the traffic circles in New Jersey... "*

Flemington Circle, NJ

Route 28 Roundabout, Westfield, NJ

Roundabouts and Circles are NOT the same

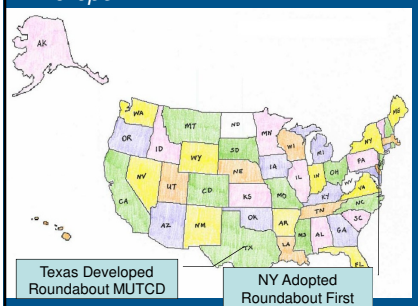
Common Misconception…

1. *"I thought they were taking out all the traffic circles in New Jersey... "*

	Modern Roundabouts	Traffic Circles
Typical Size	100-150' Diameter	>600' Diameter
Traffic Control	Yield on Entry	Varies
Right-of-way	Circulating Traffic	Varies
Circulating Speeds	15-20 mph	>35 mph
Deflection on Entry	Sharper Curve	Smooth curve or no deflection

Common Misconception…

2. "They don't work in the US. They only work in Europe…"



- Introduced in US in early 1990's
- First US Roundabout in Nevada
- Currently over 1,000 throughout the US
- Only Two States do not have roundabouts (shown in white)

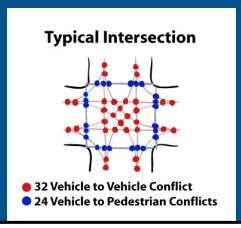
Common Misconception…

3. "They cause more accidents"

According to FHWA, there were 2.7 million intersection crashes in 2004.

These accounted for:

- 45% of all injury crashes
- 21% of all fatalities
- A financial loss of $96 Billion



An Intersection is a planned point of conflict in the roadway system.

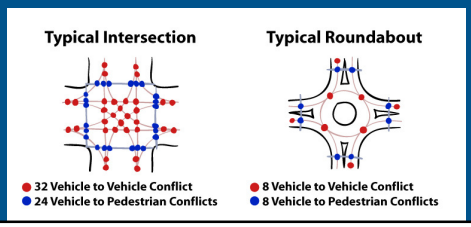
- 32 vehicle to vehicle conflicts
- 24 vehicle to pedestrian conflicts
- Allows for angle and head-on collisions

Common Misconception…

3. "They cause more accidents"

A 2007 Study by the National Cooperative Highway Research Program (NCHRP) showed that roundabouts:

- Reduced overall crashes by up to 35%
- Reduced injury & fatal crashes by up to 76%

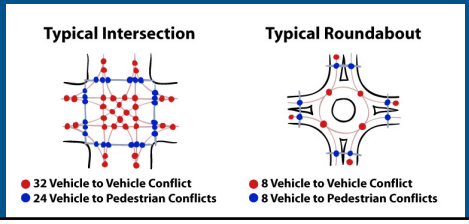


Common Misconception…

3. "They cause more accidents"

A 2002 Study of 15 roundabouts in Maryland showed:

- Reduced crashes by 60%
- Reduced property damage crashes by 27%
- Reduced injury crashes by up to 82%
- Reduced fatal crashes by 100%



Common Misconception…

4. "They make traffic worse"

A 2004 study* in Kansas showed that at 11 state intersections which had been converted from signal or stop control to roundabouts

- Average vehicle delay was reduced by 65%
- Average vehicle stops were reduced by 52%

*Russell, E.R; Mandavilli, S.; and Rys, M.J. 2004. Operational performance of Kansas roundabouts: phase II. Report no. K-TRAN KSU-02-04, Final Report 01-04. Manhattan, KS: Kansas State University, Department of Civil Engineering.

Common Misconception…

4. "They make traffic worse"

Another study** in 2004 showed that the reduction in delay at roundabouts:

- Reduced carbon monoxide emissions by 32%
- Reduced nitrous oxide emissions by 34%
- Reduced carbon dioxide emissions by 37%
- Reduce hydrocarbon emissions by 42%

**Mandavelli, S; Russell, E.R.; and Rys, M. 2004. Modern roundabouts in United States: an efficient intersection alternative for reducing vehicular emissions. Poster Presentation at the 83rd Annual Meeting of the Transportation Research Board, Washington DC.

Common Misconception…

5. "They cannot be used on high-speed roadways…"

Novelty Roundabout, King County, WA

2 Lane Roundabout at intersection of a 4-lane high speed state highway, and 3 lane arterial.

18 ½ Mile Roundabout, Sterling Heights, Michigan

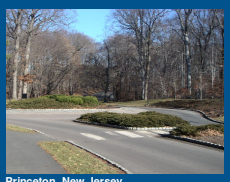
3 Lane Roundabout at the end of M-53 Freeway. Carries 47,000 ADT with 45 mph approach speeds.

NJ Route 12 (S. Main St. Roundabout), Flemington, New Jersey
2/1 Roundabout at the intersection of S. Main St. and Route 12. Route 12 carries 16,000 ADT with 40 mph approach speeds.

Aesthetics

Alexander Road, West Windsor, New Jersey

Park Ave, Rutherford, New Jersey



Princeton, New Jersey

Route 28, Westfield, New Jersey

NJDOT Roundabouts

Location	Status
Alexander Road in West Windsor	Open to traffic
Faculty Road in Princeton	Open to traffic
Rutgers Busch Campus Intersection	Open to traffic
Denow Rd in Hopewell (off RT 31)	Open to traffic
Cinnaminson Ave off RT 130	Open to traffic
Park Avenue in Rutherford	Open to traffic (Circle to Roundabout)
RT 28 in Westfield	Open to traffic (Circle to Roundabout)
Allwood Road and Bloomfield Ave in Clifton	Open to traffic (Circle to Roundabout)
RT40 and RT 77 in Elmer	Open to traffic (Circle to Roundabout)
Estates Blvd and George Dye Rd in Hamilton	Open to traffic
Route 322 in Glassboro	Open to Traffic
College Drive (off RT 42)	Open to Traffic
Route 12 (Main Street) in Flemington	Open to Traffic (Circle to Roundabout)

Preferred Concept

Preferred Concept

LOS and Delay

Approach	AM Peak LOS (Delay)	PM Peak LOS (Delay)
NB US 206	B (13)	C (32)
SB US 206	A (3)	A (6)
Whitehorse Ave	C (30)	C (26)
S. Broad St	C (21)	B (13)
Overall	**B (14)**	**B (17)**

Preliminary Preferred Alternative

ROUNDABOUT:

- Key Points:
  - Addresses safety and operational issues (Project Needs)
  - Has operational capacity for the long-term
  - Provides Access to Pearson and Parent
  - Limited impacts to existing businesses
  - Provides for possible "gateway" into Hamilton

Next Steps

- Township Resolution of Support
- Complete Concept Development Report
- Present to CPC for advancement to Design

Questions?

Urban Engineers, Inc.

Colwick Business Center
55 Haddonfield Road, Suite 200
Cherry Hill, NJ 08002
Telephone: (856) 663-5550

New Jersey Department of Transportation

US Route 206 White Horse Circle
Concept Development Study

MINUTES OF MEETING

SUBJECT: SME Meeting

DATE: 6/12/12

TIME: 9:30 A.M. – 11:30 A.M.

LOCATION: NJDOT Conference Room 3B

PRESENT: See Attached Attendance List

The purpose of the meeting was to solicit comments and address questions from the Subject Matter Experts regarding the decision to advance a roundabout alternative as the Preliminary Preferred Alternative (PPA) and gain concurrence on conducting a Public Information Center.

The following provides a summary of the presentation and the key discussion items:

Presentation

The project team reviewed the project location characteristics including the unique operating conditions and traffic controls at the circle as well as the project history.

The project team reviewed the safety concerns. A review of recent crash data showed that 161 crashes occurred at or on the approaches to the circle between 2006 and 2008. In addition to reviewing the total number of crashes, the project team explained that their review indicated that crashes appear to be clustered at four locations around/in the circle. The project team reviewed the locations and the team's assessment of the reasons for the high crash clusters. Attendees generally agreed with the assessment adding in their own experiences with the operations.

The project team then reviewed the traffic characteristics and operations at the circle. It was noted that the circle actually operates fairly well with an overall Level of Service C (LOS C) during both peak hours. It was explained that the main traffic operation issue at the circle is the

occasional queueing which can limit traffic flow on US 206 (blocking thru lanes) and likely contributes to the high crash totals. The project team went thru the locations where the queueing mainly occurs and noted the reasons why. The meeting attendees agreed with the locations and reasons.

The project team then reviewed with attendees the project's purpose and need:

Project Purpose:

- The purpose of the US 206 Whitehorse Circle Concept Development Study is to develop concepts that improve the identified safety and operational issues

Project Needs:

- Improve Safety:
  - There are a high overall number of crashes
  - The number of angle crashes exceeds statewide averages
  - Crashes are concentrated at four primary locations

- Improve Traffic Operations:
  - Queuing within the circle affects traffic flow

The project team then reviewed with attendees the PPA. The review included a brief explanation as to history of the decisions made. Key points in the process were provided:

- A number of concepts were developed based on two main themes: signalized intersection and roundabout. Based on coordination with Subject Matter Experts and the local professional staff, one concept of each improvement option was initially identified for further consideration as both alternatives will help mitigate the safety issues at the Whitehorse Circle by reducing the number of conflict points for drivers and also by eliminating the existing atypical design. Both alternatives provide acceptable traffic operations in the 2035 design year.

- After further consideration and discussion with NJDOT, County and Township officials, the decision was to recommend the roundabout for advancement as the PPA. The solution addresses the established purpose and need, and was viewed favorably by professional staff from the County and Hamilton Township. As indicated, there are anticipated limited ROW impacts and the project has limited other anticipated impacts including utilities.

Within the discussion, there were a number of questions pertaining to the roundabout alternative as the PPA. Specifically the questions pertained to the operations of a roundabout at this

location, the acceptability of it as the preferred solution by the Township and County, ROW impacts to the adjacent properties and utility impacts.

After the discussion, the attendees were asked about the concurrence with the solution as the PPA and the advancement to a Public Information Center. Collectively there was agreement to advance with the stipulation that the Traffic Division, who was unable to attend the meeting, review and agree with the group's perspective prior to moving forward.

Action Items/Next Steps:

1. Urban will submit information to the Traffic Division, for their review and concurrence.

2. Urban will request updated crash data.

We believe the foregoing record to be an accurate summary of the discussion and related decisions. We would appreciate notification of exceptions or corrections to these Minutes within five (5) working days. Without notification, we will consider these minutes to be a record of fact.

Respectfully Submitted,

William P. McGarrigel, PE

Project Manager

NEW JERSEY DEPARTMENT OF TRANSPORTATION

MEMORANDUM

TO: William Birch, Project Manager
Program Management Group C

FROM: Chris Barretts, Manager
Bureau of Traffic Engineering

DATE: July 17, 2012

PHONE: 5-2600

SUBJECT: Route US 206 Whitehorse Circle, MP 38.81
Hamilton Twp, Mercer County
BTE Log# 2012 - 0352

This is in reference to a request, dated June 21, 2012 from Mr. Scott Diehl, Urban Engineers to review the Concept Development Study for the modification of the Whitehorse Circle. The alternatives featured a traffic signal (Alternative 3) and a roundabout (Alternative 5) that were to replace the existing traffic circle. Based on the information provided, we have the following comments:

TRAFFIC SECTION: (A.Aliaj, 5-2092)

1. The capacity analysis for the year 2035 show that the traffic queues generated by the installation of a roundabout at the above location are greater than the traffic queues generated by the installation of a traffic signal.
2. The levels of service for both alternatives appear to be satisfactory.

Therefore, based on the above, we recommend the replacement of the traffic circle by a traffic signal as the long-term preferred alternative.

ELECTRICAL SECTION: (Claudette Bailey, 5-4978)
No involvement at this time.

CADD SECTION: (Noel Barbosa, 5-2620)
No involvement at this time.

CAB:RRK:AA

NEW JERSEY DEPARTMENT OF TRANSPORTATION

DATE: 08/9/2012

TO: Bill Birch
Division of Project Management

FROM: Urban Engineers – Cherry Hill, New Jersey

SUBJECT: **Whitehorse Circle Traffic Analysis – Comment Response**

The NJDOT Bureau of Traffic Engineering (BTE) recommended replacement of the existing traffic circle with a signalized intersection based on traffic analysis results that indicate maximum queues for the proposed roundabout concept would be greater than those of the proposed signalized intersection concept for the projected year 2035 conditions. Since the roundabout concept was viewed favorably by county and local officials and was identified as the preliminary preferred alternative (PPA), Urban reviewed our previously completed traffic analysis in more detail and evaluated a modification to the initial design.

The tables below provide a comparison of average and maximum queue lengths for the 2035 AM and PM peak hours between the two alternatives.

	Queue Length (ft)			
	2035 AM Peak			
	Average		**Max**	
Approach	**Signal**	**Roundabout**	**Signal**	**Roundabout**
Eastbound (US 206)	78	4	149	112
Westbound (S. Broad St)	107	69	205	272
Northbound (US 206)	107	47	244	339
Southbound (Whitehorse Ave)	78	28	147	162

	Queue Length (ft)			
	2035 PM Peak			
	Average		**Max**	
Approach	**Signal**	**Roundabout**	**Signal**	**Roundabout**
Eastbound (US 206)	90	18	126	273
Westbound (S. Broad St)	105	39	148	192
Northbound (US 206)	91	178	135	653
Southbound (Whitehorse Ave)	94	38	122	231

Comparing the average queue length for the two alternatives, the Roundabout has a lower average queue length for all approaches with the exception of the northbound approach during

the 2035 PM peak hour. When comparing the maximum queue length, the Roundabout alternative generally has higher values compared to the Signalized alternative.

As part of our evaluation, we took into consideration direction provided by FHWA. The FHWA Publication, "Roundabouts: An Informational Guide", which discusses queue length and its importance to assessing the adequacy of the geometric design of roundabout approaches in Section 4.4.3. This section provides the following guidance on average queue length:

"It (average queue length) is useful for comparing roundabout performance with other intersection forms, and other planning procedures that use intersection delay as an input."

While the average queue may be the best way to compare alternatives, we recognize that the longer maximum queue on northbound US 206 approach may be undesirable. As such we evaluated a modification to the existing roundabout concept that includes a northbound right-turn bypass lane to separate the right turning traffic (121/190 vph in 2035 AM/PM peak hours) from the traffic entering the circle. The result of this modification is a reduction in the northbound maximum queue during the 2035 peak hours from 339 to 241 feet in the AM and from 653 to 325 feet in the PM peak hour.

It should be noted that both alternatives work quite well (i.e., from a LOS, delays and queues perspective) with today's traffic volumes, and the roundabout alternative has a maximum queue of 240 feet and 345 feet on the northbound approach for the AM and PM peak hours, respectively.

Based on the traffic analysis results both alternatives should operate quite well in 2035 and both are sound choices from a traffic operations perspective. If a roundabout alternative is advanced it may be appropriate to design the roundabout such that a northbound right turn bypass lane can be added in the future if the queues on the northbound approach become significant.

Based on our review of the traffic analysis, and with consideration of the potential need to add a northbound right turn bypass lane, we feel both alternatives should be acceptable from a traffic operations perspective.

Lastly, while traffic operations is an important measure of effectiveness for comparing alternatives, it is important to note that safety was the primary driver for this project as captured in the Purpose and Need. Based on the performance record of roundabouts from a safety perspective, the roundabout may be a preferred alternative and was a primary reason that led the Project Team to the selection of a roundabout as the Preliminary Preferred Alternative.

Please let us know if you have any questions or need any additional analysis results.

>>> "Robert Klinger" <Robert.Klinger@dot.state.nj.us> 9/4/2012 12:46 PM >>>
Scott,
BTE finds the roundabout concept with the modification to add a by pass lane in the future as the preliminary preferred alternative. Thanks

>>> "Scott Diehl" <sjdiehl@urbanengineers.com> 8/28/2012 11:11 AM >>>
Bob,

Good talking to you this morning. I appreciate your time. As discussed, attached is the memo we put together based on the feedback we received from BTE. Please let me know if you have any questions, would like any additional information, etc..

As background information, we have a PIC meeting scheduled for the end of September, and originally intended to present the Roundabout Concept as the PPA. We wanted to touch base with you via a meeting or phone conversation regarding this additional analysis and supporting details offered as a response to the concerns provided to our initial information.

Thanks - Scott

_____
Scott Diehl, PE, PTOE

Urban Engineers, Inc.
Colwick Business Center, Suite 200
55 Haddonfield Road
Cherry Hill, NJ 08002
Phone: (856) 663-5550
Direct: (856) 663-5367 ext. 2990
Fax: (856) 663-4836

NEW JERSEY DEPARTMENT OF TRANSPORTATION

Route 206/CR 533/CR 524 Whitehorse Circle Improvements

Hamilton Township, Mercer County
Public Information Center
Thursday, September 27, 2012, 4 – 7 PM

The New Jersey Department of Transportation (NJDOT) committed to developing transportation improvements that best balance the transportation needs, environment, community concerns and costs, will hold a **Public Information Center** to inform local residences and businesses of the improvements to **Route 206, CR 533 and CR 524 Whitehorse Circle**, One of the critical elements related to the success of a project is the relationship that the NJDOT continues to maintain with a community during the development of a transportation project. You are encouraged to participate in the Public Information Center to review the proposed project and provide your feedback prior to final design.

The Meeting

The **Public Information Center** will be held at the **Whitehorse Fire Department Hall, 19 Locust Avenue, Hamilton, New Jersey, on Thursday, September 27, 2012, 4 PM to 7 PM.** Please come at a time that is convenient for you. You will have an opportunity to review exhibits of the proposed project, ask questions and discuss any concerns with NJDOT representatives. Property owners with rental units are advised that tenants are invited and encouraged to participate in this process.

If you are unable to attend the meeting but are interested in learning more about the project, or if you are physically challenged and require additional assistance to participate in this meeting, please contact **Kimberly Nance** at the address and telephone number listed below.

Project Background

Route 206 travels from south to north through the Whitehorse Circle in Hamilton Township on the way to Trenton and further points north. Within the project limits, Route 206 is functionally classified as an Urban Principal Arterial. Jurisdiction changes from NJDOT to Hamilton Township at the circle. The circle has an unconventional design where vehicles traveling on Route 206 have the right-of-way and all vehicles entering from S. Broad Street (CR 524 and Whitehorse Road (CR 533) must yield.

This project was initiated by a NJDOT Bureau of Safety Programs (BSP) problem statement in which Hamilton Township identified the facility as being a high ranking accident location. Following unsuccessful attempts to reduce crashes through low cost, quick fix methods, NJDOT BSP recommended the project be re-evaluated for concept development study.

Purpose

The purpose of the US 206 Whitehorse Circle Concept Development Study is to develop concepts that improve the identified safety and operational issues

Project need

Improve Safety:

- There are a high overall number of crashes
- The number of angle crashes exceeds statewide averages
- Crashes are concentrated at four primary locations

Improve Traffic Operations:

- Queuing within the circle affects traffic flow

Preliminary Preferred Alternative

After consideration and discussion with NJDOT, Mercer County and Hamilton Township officials, the decision is to recommend the roundabout solution as the Preliminary Preferred Alternative. The solution addresses the established purpose and need, and was viewed favorably by the participating entities.

Key Points:

- Addresses safety and operational needs
- Has operational capacity for the long-term
- Limited impacts to existing businesses
- Provides gradual speed reduction into the local Hamilton Township Transportation Network

For further information or to submit comments on the project, please contact:

Kimberly Nance, Regional Manager
New Jersey Department of Transportation
Office of Community Relations
1035 Parkway Avenue, PO Box 600
Trenton, NJ 08625-0600
Phone: 609-530-2110; Fax: 609-530-4638
E-mail: Kimberly.Nance@dot.state.nj.us

NEW JERSEY DEPARTMENT OF TRANSPORTATION

Route 206/ Whitehorse Circle PIC Summary

Hamilton Township, Mercer County
Public Information Center
Thursday, September 27, 2012, 4 – 7 PM

The Public Information Center (PIC) held for the Whitehorse Circle project was hosted by NJDOT (Bill Birch, Kimberly Nance) and Urban Engineers (Scott Diehl, Bill McGarrigel, Chris Burke and Orla Pease) to discuss the preliminary preferred alternative (PPA) of a roundabout to replace the existing unconventional circle. Approximately 50 people attended the PIC, and generally the feedback was positive on the idea of a roundabout as most people noted the need for a change. There were some concerns identified including the following:

- Fire Company concerns:
    - The Whitehorse Fire Co wanted to see how their trucks (a 100' hook and ladder firetruck making turns) could navigate through the circle safely. They wanted to see if possible to cut through directly to Pearson for emergency response.

    It was noted that a truck turning template (for their type of fire truck) will be used for autoturn turning template analysis. It was explained that the fire truck will use the truck apron. We also showed a video of fire trucks navigating a roundabout and a fire captain speaking about an existing roundabout. The answers appeared to address the concern, but it is a concern that will need to be followed-up on during design.

    As far as Pearson Drive, it was explained that it may be possible to design the changes (the closure of Pearson) such that emergency vehicles still have access.

- Property owner to the east of the Taco Bell is concerned about drivers making a U-turn in her parking lot to get to the Taco Bell. This is an existing condition/situation.
- Concerns about the westbound left turn pocket length from RT 206 onto Parent Ave. It was noted there is a church/school at the end of Parent Ave, and significant, concentrated bus activity occurs around 8AM, noon and 3PM.
    - It was suggested to restrict parking on Parent Ave near RT 206 due to the narrow width of Parent Ave
    - It was suggested that the DOT consider the empty lot on the southwest corner and use it for this project (possible connection to Pearson Dr)

    - Lack of connection to Pearson Drive will force all traffic heading to Church/School to come down Parent Ave.
- Lack of connection from Circle to Pearson will impact response times from fire station to homes on Pearson Drive. Someone commented there is a fire station to the southwest (along I-195) that should be responsible for calls to these locations.
- Church has lots of lighting that looks attractive to drivers as a bypass to the circle. When they get to the end of Parent and see that it is a dead-end, the U-turn and go back to RT 206.
- A number of residents were concerned about widening the "alley" between Parent Ave and Pearson Drive as, in their opinion, this will promote cut-through traffic. Possible solution is one-way. It was noted that this could be worked on with the neighborhood residents to try to develop a solution that worked for the neighborhood.
- A resident commented that Maple Shade Ave has speed bumps and they should be installed on Parent Ave.
- Taco Bell owner asked about why his parking lot was being disturbed. It was explained that during the conceptual phase (CD Phase) of the project, the project team needs to identify potential impacts. As currently shown, his parking lot may be impacted since the proposed design increase the curb radius allowing for easier turns for vehicles coming west on South Broad St turning right on Whitehorse Avenue. It was noted that during the design phase, the DOT would work with him to try to develop a plan that minimizes impacts to his site.

- There were a few questions about potential impacts to properties.
    - It was noted that as currently shown there is potential impacts to properties on all four (4) corners of the roundabout with the Taco Bell property being the most apparent change since as shown the Taco Bell parking lot may need to be slightly reconfigured.
    - In addition to the Taco Bell, there's potential for a small impact to the Advance Auto site on the northwest corner of the project area as the need to provide deflection of the Whitehorse Avenue approach pushed the roadway and sidewalk towards the Advance Auto site. It was noted that the site access will not be impacted.
    - Similar to the Advance Auto site there's potential for impacts to the properties on the SE and SW corner of the project area. In both cases, the impact to these sites is a result of the addition of sidewalk, which may or may not be included in the final design depending on feedback from the community and input from the NJDOT SME's and how the design meets the NJDOT's Complete Street Policy

- There were a few questions about potential traffic impacts during construction (i.e., how will you build this? Are there going to be big backups?, etc).
    - It was explained that with almost any construction project, there will be traffic impacts, but the current configuration (i.e., the general shape and size of the circle) is not much different than the proposed roundabout and that much of the existing pavement could be used to limit impacts. As an example, it was explained that the construction staging would likely close the “cut-thrus” so that work on the “inside” part of the roundabout could be completed and then followed by modifications to the approaches.

Overall the concerns for residents included slowing drivers coming off I-195 down when approaching the roundabout, advanced signage to get into appropriate lanes, and education on how to navigate the roundabout. Out of the approximately 50 people who attended the PIC, only a few were noted as being strongly against the roundabout concept in favor of a signalized intersection. Most of the rest of the attendees were pleased to see change and a number who were unsure as to what to expect with a roundabout were notably more comfortable with the idea of a roundabout following review of the boards and discussions with the project team.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

MEMORANDUM

TO: Richard Dube
Bureau of Access Design

FROM: William J. Birch
Division of Project Management

DATE: October 23, 2012

PHONE: 530-3003

SUBJECT: **Request for Access Concurrence**
Route 206/CR 533/CR 524 Whitehorse Circle Improvements
Township of Hamilton, Mercer County
Concept Development (CD)

The Division of Project Management (DPM) is requesting concurrence with the Preliminary Preferred Alternative (PPA) for the above subject project, which is currently in Concept Development. Following a positive outcome of our Public Information Center held on September 27, 2012, we are submitting the PPA for your review and concurrence.

The following information may be helpful to you.

Project Purpose and Need

The purpose of the project is to develop concepts that will improve safety and operational problems at the White Horse Circle. Following an evaluation of existing conditions, the primary project need is to improve safety as the Whitehorse Circle has a high number of crashes, and more specifically angle crash type.

Preliminary Preferred Alternative (PPA)

After consideration and discussion with NJDOT, Mercer County and Hamilton Township officials, the decision is to advance a two lane roundabout as the PPA. The solution addresses the established purpose and need, and was viewed favorably by the participating entities. All movements (e.g., from US Route 206 to Whitehorse Avenue) currently provided at the circle will be provided with the PPA design with the exception of access to Pearson Drive.

Specifically, the PPA consists of the following:

- Provides for two lanes on each approach

- Provides for two circulating lanes and two exit lanes with the exception of Northbound Whitehorse Avenue, which will have one exiting lane
- Traffic currently using the one-way entrance to Pearson Drive from the circle will access Pearson Drive via Parent Drive and the existing alley way or will use Hobson Avenue from the intersection with South Broad Street.
- Construction of crosswalks and sidewalks where appropriate
- Removes the metering signal at MP 38.81 (including signal equipment, and pavement markings)
- Revises signs and pavement markings (removes/adds) at and on the approaches to be consistent with latest MUTCD signing and pavement marking standards for roundabouts
- Relocates utility poles

The PPA reduces the number of conflict points and eliminates the yielding while in the circle condition thereby helping to reduce confusion which should help reduce the number of crashes. The PPA also provides a reduction in average vehicle delay, provides for a gradual speed reduction into the local Hamilton Township and Mercer County transportation network and has operational capacity for the long-term.

Access Summary

The project falls in a unique location where three of the four intersecting roads are not under NJDOT Jurisdiction. NJDOT currently maintains jurisdiction entering and exiting from the south along US Route 206. US Route 206 (also designated South Broad Street) entering and exiting from the west is under the jurisdiction of Hamilton Township. Both White Horse Avenue (CR 533) from the north and South Broad Street (CR 524) from the east are under Mercer County Jurisdiction.

An Access Impact Summary is provided for the driveways within the project limits. Within the NJDOT Jurisdiction, there are no driveways.

Attached, please find the Concept Development PPA Plan, Existing Access Plan and the Access Impact Summary for your information and review. The anticipated construction cost estimate is $2.7 million.

If you need additional information, please contact me at 609-530-3003. We would appreciate your response by **November 5, 2012**.

Thanks.

Attachments

Cc: William McGarrigel, Urban Engineers

NEW JERSEY DEPARTMENT OF TRANSPORTATION

MEMORANDUM

TO: John Varrelmann
Bureau of Construction Engineering

FROM: William J. Birch
Division of Project Management

DATE: November 28, 2012

PHONE: 530-3003

SUBJECT: **Request for Constructability Review**
Route 206 Whitehorse Circle (CR 533,524)
Township of Hamilton, Mercer County
Concept Development (CD)

The Division of Project Management (DPM) is requesting your input for the constructability of the above subject project. DPM is in the process of finalizing Concept Development of this project and would like to obtain your comments, which are an integral part to the successful completion of the preliminary construction staging of this project.

The following information may be helpful to you.

Project Purpose and Need

The purpose of the project is to develop concepts that will improve safety and operational problems at the White Horse Circle. Following an evaluation of existing conditions, the primary project need is to improve safety as the Whitehorse Circle has a high number of crashes.

Preliminary Preferred Alternative (PPA)

After consideration and discussion with NJDOT, Mercer County and Hamilton Township officials, the decision is to advance a two lane roundabout as the PPA. The solution addresses the established purpose and need, and was viewed favorably by the participating entities. All movements (e.g., from US Route 206 to Whitehorse Avenue) currently provided at the circle will be provided with the PPA design with the exception of access to Pearson Drive.

Specifically, the PPA consists of the following:

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- Removes the metering signal at MP 38.81 (including signal equipment, and pavement markings)
- Revises signs and pavement markings (removes/adds) at and on the approaches to be consistent with latest MUTCD signing and pavement marking standards for roundabouts
- Relocates utility poles

The PPA reduces the number of conflict points and eliminates the yielding while in the circle condition thereby helping to reduce confusion which should help reduce the number of crashes. The PPA also provides a reduction in average vehicle delay, provides for a gradual speed reduction into the local Hamilton Township and Mercer County transportation network and has operational capacity for the long-term.

Utilities

Aerial and underground facilities exist within the project site. While significant utility impacts are not anticipated for the implementation of the proposed improvements at this time, coordination with facilities owners is required.

Please find attached the PPA and associated construction staging plans for your information and review. The anticipated construction cost estimate is $2.7 million.

If you need additional information, please contact me at 609-530-3003. We would appreciate your response by **December 14, 2012**.

Thanks.

Attachments

Cc: William McGarrigel, Urban Engineers

NEW JERSEY DEPARTMENT OF TRANSPORTATION

MEMORANDUM

TO: Janet Fittipaldi, Manager
Bureau of Landscape Architecture and Environmental Solutions

FROM: William J. Birch
Division of Project Management

DATE: October 23, 2012

PHONE: 530-3003

SUBJECT: **Request for Concurrence of Anticipated Environmental Document**
Route 206 Whitehorse Circle (CR 533,524)
Township of Hamilton, Mercer County
Concept Development (CD)

The Division of Project Management (DPM) is requesting your input and confirmation of the anticipated environmental document for the above subject project. DPM is in the process of finalizing Concept Development of this project and would like to obtain your comments, which are an integral part to the successful completion of the preliminary construction staging of this project.

The following information may be helpful to you.

Project Purpose and Need

The purpose of the project is to develop concepts that will improve safety and operational problems at the White Horse Circle. Following an evaluation of existing conditions, the primary project need is to improve safety as the Whitehorse Circle has a high number of crashes, and more specifically angle crash type.

Preliminary Preferred Alternative (PPA)

After consideration and discussion with NJDOT, Mercer County and Hamilton Township officials, the decision is to advance a two lane roundabout as the PPA. The solution addresses the established purpose and need, and was viewed favorably by the participating entities. All movements (e.g., from US Route 206 to Whitehorse Avenue) currently provided at the circle will be provided with the PPA design with the exception of access to Pearson Drive.

Specifically, the PPA consists of the following:

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- Revises signs and pavement markings (removes/adds) at and on the approaches to be consistent with latest MUTCD signing and pavement marking standards for roundabouts
- Relocates utility poles

The PPA reduces the number of conflict points and eliminates the yielding while in the circle condition thereby helping to reduce confusion which should help reduce the number of crashes. The PPA also provides a reduction in average vehicle delay, provides for a gradual speed reduction into the local Hamilton Township and Mercer County transportation network and has operational capacity for the long-term.

Right of Way Requirements

This project requires permanent right of way acquisitions from one (1) parcel, which will also require temporary site mitigation work easements. The parcel, acquisition and temporary easement areas are outlined in the table below.

Block	Lot	Intersection	Total Area	ROW Taking	T.S.M.W. Easement
2524	1	S. Broad St. (CR 524)/Whitehorse Rd.	0.701 acres	0.033 ac.	0.100 ac.

Environmental Screening Summary

An Environmental Screening was performed for the project by the NJDOT Division of Environmental Resources on March 8, 2010. The Screening Summary stated the project has the potential to impact archaeological resources, historic places, sensitive receptors to air and noise, forests, a sole source aquifer, rare/threatened/endangered species and their habitats, stormwater and other environmentally sensitive areas. This project also has the potential for involvement with hazardous waste or contaminated sites.

Stormwater Management

The PPA is anticipated to be classified as a Major Development and subject to the Stormwater Management Rules. The current amount of net impervious coverage is 0.19 acres, and may be reduced slightly during the Preliminary Engineering (PE) phase. The amount of disturbance is anticipated to exceed 1.0 acres, triggering the Major Development status.

The following summarizes the coverage elements.

Coverage Element	Square Ft	Acres	TSS Removal
Existing Pavement	104,050	2.39	
Proposed Pavement	87,350	2.01	
Proposed Shoulder	18,780	0.43	
Proposed Sidewalk/Driveways	6,100	0.14	
Net Change Pavement	2,080	0.05	80%
Net Change Sidewalk	6,100	0.14	N/A
Total Added Impervious	8,180	0.19	
Reconstructed Pavement Portion	TBD	TBD	50%

Pavement design recommendations will be performed during the PE Phase. At that time a determination regarding the amount of roadway reconstruction, reclamation, and mill and overlay will occur. The "reconstructed" portion that would trigger 50 percent TSS removal would only apply to areas that constitute "disturbance" involving the exposure or transport of soils. Sidewalks are not subject to the water quality restrictions, but apply to impervious coverage totals and pre and post runoff peak analyses.

The project site's proximity to regulated NJDEP jurisdiction such as Freshwater Wetlands or the Flood Hazard Control Act appears to avoid NJDEP permit jurisdiction.

There are ample opportunities for stormwater management within the existing right of way areas adjacent to the project to provide in-line water quality and water quantity BMP facilities to address the stormwater management rule standards.

Anticipated Environmental Document

The anticipated NEPA environmental document required for implementation of the project is a Class II Action-- Categorical Exclusion, per 23 CFR 771.117 (d) (1) and (2).

Please find attached a copy of the environmental screening and the PPA plan for your information and review. The anticipated construction cost estimate is $2.7 million. If you need additional information, please contact me at 609-530-3003. We would appreciate your response by **November 5, 2012**.

Thanks.

Attachments

Cc: William McGarrigel, Urban Engineers

NEW JERSEY DEPARTMENT OF TRANSPORTATION

MEMORANDUM

TO: Bob Britton
Bureau of Right of Way

FROM: William J. Birch
Division of Project Management

DATE: October 23, 2012

PHONE: 530-3003

SUBJECT: **Request for Right of Way Cost Estimate**
Route 206/CR 533/CR 524 Whitehorse Circle Improvements
Township of Hamilton, Mercer County
Concept Development (CD)

The Division of Project Management (DPM) is requesting a Right of Way Cost Estimate for the above subject project, which is currently in Concept Development. Based on our Public Information Center held on September 27, 2012, we are submitting the Preliminary Preferred Alternative (PPA) for your review and comments and requesting a R.O.W. Cost Estimate.

The following information may be helpful to you.

Project Purpose and Need

The purpose of the project is to develop concepts that will improve safety and operational problems at the White Horse Circle. Following an evaluation of existing conditions, the primary project need is to improve safety as the Whitehorse Circle has a high number of crashes, and more specifically angle crash type.

Preliminary Preferred Alternative (PPA)

After consideration and discussion with NJDOT, Mercer County and Hamilton Township officials, the decision is to advance a two lane roundabout as the PPA. The solution addresses the established purpose and need, and was viewed favorably by the participating entities. All movements (e.g., from US Route 206 to Whitehorse Avenue) currently provided at the circle will be provided with the PPA design with the exception of access to Pearson Drive.

Specifically, the PPA consists of the following:

- Provides for two lanes on each approach

- Provides for two circulating lanes and two exit lanes with the exception of Northbound Whitehorse Avenue, which will have one exiting lane
- Traffic currently using the one-way entrance to Pearson Drive from the circle will access Pearson Drive via Parent Drive and improved alley way
- Construction of crosswalks and sidewalks where appropriate
- Removes the metering signal at MP 38.81 (including signal equipment, and pavement markings)
- Revises signs and pavement markings (removes/adds) at and on the approaches to be consistent with latest MUTCD signing and pavement marking standards for roundabouts
- Relocates utility poles

The PPA reduces the number of conflict points and eliminates the yielding while in the circle condition thereby helping to reduce confusion which should help reduce the number of crashes. The PPA also provides a reduction in average vehicle delay, provides for a gradual speed reduction into the local Hamilton Township and Mercer County transportation network and has operational capacity for the long-term.

Right of Way Requirements

This project requires permanent right of way acquisitions from one (1) parcel, which will also require temporary site mitigation work easements. The parcel, acquisition and temporary easement areas are outlined in the table below.

Block	Lot	Intersection	Total Area	ROW Taking	T.S.M.W. Easement
2524	1	S. Broad St. (CR 524)/Whitehorse Rd.	0.701 acres	0.033 ac.	0.100 ac.

Attached, please find the Concept Development ROW Impact Plan for your information and review. The anticipated construction cost estimate is $2.7 million.

If you need additional information, please contact me at 609-530-3003. We would appreciate your response by **November 5, 2012**.

Thanks.

Attachments

Cc: William McGarrigel, Urban Engineers

NEW JERSEY DEPARTMENT OF TRANSPORTATION

MEMORANDUM

TO: Robert Abitz
Value Solutions

FROM: William J. Birch
Division of Project Management

DATE: November 2, 2012

PHONE: 530-3003

SUBJECT: **Request for Concurrence – Preliminary Preferred Alternative**
Route 206 Whitehorse Circle (CR 533,524)
Township of Hamilton, Mercer County
Concept Development (CD)

The Division of Project Management (DPM) is requesting concurrence with the Preliminary Preferred Alternative (PPA) for the above subject project, which is currently in Concept Development. Following a positive outcome of our Public Information Center held on September 27, 2012, we are submitting the PPA for your review and concurrence.

The following information may be helpful to you.

Project Purpose and Need

The purpose of the project is to develop concepts that will improve safety and operational problems at the White Horse Circle. Following an evaluation of existing conditions, the primary project need is to improve safety as the Whitehorse Circle has a high number of crashes.

Preliminary Preferred Alternative (PPA)

After consideration and discussion with NJDOT, Mercer County and Hamilton Township officials, the decision is to advance a two lane roundabout as the PPA. The solution addresses the established purpose and need, and was viewed favorably by the participating entities. All movements (e.g., from US Route 206 to Whitehorse Avenue) currently provided at the circle will be provided with the PPA design with the exception of access to Pearson Drive.

Specifically, the PPA consists of the following:

- Provides for two lanes on each approach

- Provides for two circulating lanes and two exit lanes with the exception of Northbound Whitehorse Avenue, which will have one exiting lane
- Traffic currently using the one-way entrance to Pearson Drive from the circle will access Pearson Drive via Parent Drive and the existing alley way or will use Hobson Avenue from the intersection with South Broad Street.
- Construction of crosswalks and sidewalks where appropriate
- Removes the metering signal at MP 38.81 (including signal equipment, and pavement markings)
- Revises signs and pavement markings (removes/adds) at and on the approaches to be consistent with latest MUTCD signing and pavement marking standards for roundabouts
- Relocates utility poles

The PPA reduces the number of conflict points and eliminates the yielding while in the circle condition thereby helping to reduce confusion which should help reduce the number of crashes. The PPA also provides a reduction in average vehicle delay, provides for a gradual speed reduction into the local Hamilton Township and Mercer County transportation network and has operational capacity for the long-term.

Included for your review, the following are provided:

- Truck turning assessments for each of the movements associated with US Route 206, US Route 206 (South Broad Street –Hamilton Jurisdiction), White Horse Avenue (CR 533 –Mercer County Jurisdiction) and South Broad Street (CR 524 – Mercer County Jurisdiction)
- Fastest Path assessments for each of the movements to and from US Route 206, US Route 206 (South Broad Street), White Horse Avenue (CR 533) and South Broad Street (CR 524)
- Proposed geometry for each entrance and exit of US Route 206, US Route 206 (South Broad Street), White Horse Avenue (CR 533) and South Broad Street (CR 524)
- Traffic Analysis Memo – Comparison of the signalized intersection and roundabout alternatives. The memo notes that in the future (2035), a northbound right turn bypass lane may be warranted to address queuing concerns.

Please find attached a copy of the PPA plan, the Truck Turning Assessments, the Fastest Path Assessments, the Geometry Plan and the traffic memo for your information and review. The anticipated construction cost estimate is $2.7 million. If you need additional information, please contact me at 609-530-3003. We would appreciate your response by **November 23, 2012**.

Thanks.

Attachments

Cc: William McGarrigel, Urban Engineers

STATE OF NEW JERSEY
DEPARTMENT OF TRANSPORTATION
Quality Management

Design Communications Report

PROJECT NAME: Route 206 Whitehorse Circle (CR 533,524)

UPC#: 950526

DESIGNER: Urban Engineers

DESIGNER PROJECT MANAGER: William McGarrigel

NJDOT PROJECT MANAGER: William Birch

Design Communications Report Entry Form

Project Name: Route 206 Whitehorse Circle (CR 533,524)

Design Activity No. 2300	Approved by Department's PM 03/08/2010	DCR Entry No. 1 _____ Develop Alternatives

Attending: Tom Saylor, John Zim, Bill McGarrigel, Scott Diehl

Meeting Date: March 2, 2010
Meeting Purpose: Project Coordination Meeting

Key Issues, Decisions and Action Items
The following is a list of identified key points, follow-up tasks and next steps:

1. Based on the results of the crash analysis, there was agreement that the previously identified safety problem remains and that we should develop alternatives to address the safety issues.

2. Prepare a table identifying the crashes that were used from the original, larger area crash list provided by BSP.

3. Check with BSP (Kevin Conover) to determine if BSP can provide a more detailed assessment of the crash data. Check with BSP to determine if they can calculate a cost savings based on a anticipated percent reduction in the different types of crashes as a result of changing the intersection configuration (existing vs. signalized intersection and existing vs. modern roundabout). If that type of analysis is not possible or practical, perhaps BSP can identify a location that was similar in nature to the White Horse Circle that has been subsequently improved. The results of the similar location could be used to estimate the % reduction and cost savings.

4. Check the alternatives that contain a merge and/or weave to determine if we can calculate LOS for those sections. Provide merging/weaving analysis (quantitative if possible) in the Traffic Analysis matrix.

5. Conduct traffic analysis to determine the impact (operations and queueing) of "yielding" SB 206 at the intersection. This would eliminate the merging and weaving concerns in some Alternatives as well as the need to modify the entrance ramp to I-195.

6. Check to see what the pedestrian/bicycle volume and if there are any pedestrian/bicyclists crashes

7. Modify alternatives to include a crosswalk on the north side of the intersection (i.e., the Whitehorse Road approach).

Project Name: Route 206 Whitehorse Circle (CR 533,524)

8. Identify more clearly on the plans the access issues (modification, etc.). Provide a table identifying the block and lot.

9. Evaluate drainage treatments and locations and determine anticipated stormwater impact (i.e., amount of new impervious and disturbance)

10. Urban to develop a Project Schedule based on the new CD Process.

11. Evaluate the SB 206 approach to determine if we can include both sidewalk and bicycle lanes on SB approach. Include a typical section as part of the core group meeting.

12. NJDOT to schedule a core group meeting to discuss the alternatives and issues, and identify which alternatives to discuss with local officials.

Design Communications Report Entry Form

Project Name: Route 206 Whitehorse Circle (CR 533,524)

Design Activity No. 2260	Approved by Department's PM 11/30/2010	DCR Entry No. 2 _____ Hold Scope Team Meeting

Attending: John Zim, Tom Carbone, Tom Saylor, Kevin Conover, Robert Raachini, Paul Schenider, Bill McGarrigel, Scott Diehl, Ryan Cavender

Meeting Date: November 30, 2010
Meeting Purpose: Scope Team/Core Group Meeting

Key Issues, Decisions and Action Items

The purpose of the meeting was to: (1) solicit comments and address questions from the Core Group regarding the proposed concepts and whether they meet the project's purpose and need, (2) discuss any additional concepts that should be evaluated, and (3) determine if any concepts should not move forward.

The meeting began with the Project Manager, John Zim-DPD, presenting a general overview of the project. The DPD's consultants (Urban Engineers) then provided a power point presentation providing greater project detail with respect to project background and history, existing conditions, areas of concerns (purpose and need), and concepts developed.

The following provides a summary of the presentation and the key discussion items:

Presentation

The first section covered was the project background, project location and project history. It was noted that the project is in the Concept Development Phase of the Project Delivery Process and that with the new process a key, new step in the CD phase includes selecting a Preliminary Preferred Alternative (PPA). It was explained that the project team has not met with the locals and that a main point of the meeting was to discuss which concepts should be presented to the local officials.

The project team reviewed the project location characteristics including the unique operating conditions and traffic controls at the circle as well as the project history.

The project team then presented the team's analysis of the existing conditions including safety, traffic operations, and geometrics. The first area covered was the safety. It was noted that MP 38.9 (within the Whitehorse Circle) is listed in the SMS Top Intersection Crash Locations (#364) for 2003 to 2005 data. The ranking is based on a reported total of 27 crashes resulting in a 33 severity score.

A review of recent crash data showed that 161 crashes occurred at or on the approaches to the circle between 2006 and 2008. It was discussed with attendees that the large difference in the number of crashes in the SMS and the project team's review (other than the timeframe) is a result of the SMS ranking locations being based on crashes occurring at a

Project Name: Route 206 Whitehorse Circle (CR 533,524)

specific MP where as the project team used a larger section of roadway. It was noted that it is not uncommon for crashes at Traffic Circles to be identified over a number of MP locations due to the size of the circle and entry point and circulating conflict locations. Kevin Conover indicated that BSP would review the recent crash data and determine an appropriate number and ranking.

In addition to reviewing the total number of crashes, the project team explained that their review indicated that crashes appear to be clustered at four locations around/in the circle. The project team reviewed the locations and the team's assessment of the reasons for the high crash clusters. Attendees generally agreed with the assessment adding in their own experiences with the operations.

The project team then reviewed the traffic characteristics and operations at the circle. It was noted that the circle actually operates fairly well with an overall Level of Service C (LOS C) during both peak hours. It was explained that the main traffic operation issue at the circle is the occasional queueing which can traffic flow on US 206 (blocking thru lanes) and likely contributes to the high crash totals. The project team went thru the locations where the queueing mainly occurs and noted the reasons why. The meeting attendees agreed with the locations and reasons.

Following the review of safety and traffic operations, the project team provided a brief review of the project location's physical features and underlying deficiencies. These include less than desirable shoulder widths, varying approach speed limits, and unusual lane configurations for turning movements. There are several places where turning traffic queues into the travel path of through movements, at times blocking circulation.

The project team then reviewed with attendees the project's purpose and need:

Project Purpose:

- The purpose of the US 206 Whitehorse Circle Concept Development Study is to develop concepts that improve the identified safety and operational issues

Project Needs:

- Improve Safety:
  - There are a high overall number of crashes
  - The number of angle crashes exceeds statewide averages
  - Crashes are concentrated at four primary locations

- Improve Traffic Operations:
  - Queuing within the circle affects traffic flow

The project team then reviewed with attendees the developed concepts proposed to address the project purpose and need. It was noted that the build concepts could be categorized as one of two types: signalized intersection and roundabout. The first alternatives discussed were the signalized intersection alternatives (Alternatives 2-4). It was noted that the general idea was to start with the smallest footprint (Alt. 2) and then expand to provide more desired geometric design parameters. As an example, a key difference between Alt.

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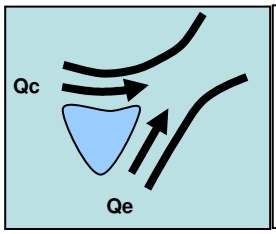
2 and Alt. 3 is the right-turn from westbound S. Broad St. to NB Whitehorse Avenue. In Alt. 2, the project team maintained the existing radius which is not designed for larger vehicles where as in Alt.3 the design was modified to accommodate larger vehicles (WB-62), but it was noted that there would be significant ROW impacts. In general the attendees noted that they liked the idea of starting with a minimization/practical alternative (Alt.2) and that if a signalized concept is pursued it would likely be a combination of Alternatives 2 and 3. Attendees asked to see more detail on the dimensions and design standards used to layout the alternatives.

A question was asked about whether there was a need for two lanes on S. Broad St considering the volumes were similar in magnitude to what is on Whitehorse Avenue and that approach is only showing one lane. It was noted that alternative was considered, but it was believe to be dismissed based on LOS (i.e., the 2nd lane was needed to achieve acceptable LOS). The project team indicated that they would check the results to confirm and include the results in the meeting summary action items (see below discussion items for more information).

The key design feature of Alternative 4 is the two-lane ramp from SB US 206 to SB US 206. The project team explained that while this may be a desirable feature, the traffic analysis did not indicate that a 2nd lane on the ramp was needed to provide acceptable level of service. Additionally, it was noted that this configuration could make the weaving area between the SB US 206 ramp and the ramp to I-195 worse. Attendees agreed that Alternative 4 could be removed from further consideration considering the potential negative impacts and the acceptable traffic operations from the other alternatives.

The next set of alternatives discussed were the roundabout alternatives (5, 5a, and 5b). The project team explained that the location is a good candidate for a modern roundabout from a number of perspectives including traffic volumes, size of available area, intersecting roadway angles, and roadway speeds. There were two main roundabout alternatives: a full two lane roundabout and a partial two lane roundabout. The project team explained that if the future traffic volumes do occur, the roundabout would need to be a full two lane roundabout. However, using today's traffic volumes, the roundabout works quite well as a partial two lane roundabout. It was asked if there was a guide on when a one lane alternative needs to be two lanes. The project team noted that the general guidance was that if the circulating and entering traffic volumes on an approach were less than 1000 vehicles per hour a one lane roundabout should work fine (see figures below). Between 1000 and 1200 vehicles you would need to do more detailed analysis to determine if a single lane worked. After about 1200 vehicles the roundabout would need to be two lanes.



Qc = Circulating Flow
Qe = Entering Flow

When Qc + Qe < 1000 (single lane),
Detailed analysis may not be necessary

Basic Roundabout Assessment Principle

Project Name: Route 206 Whitehorse Circle (CR 533,524)

During and following the presentation, there were a number of questions about specific details of some of the concepts as well as an open discussion about issues, concerns, and ideas that core group members had with some of the concepts. The key questions and discussions points are provided below.

- It was noted that in Alternative 3 the 2nd EB thru lane on US 206 to S. Broad Street had a very short amount of room to queue cars before the queue would block access to the SB 206 ramp. All attendees agreed that the design needs to be investigated/modified to limit the possibility of the ramp being blocked by thru traffic. The project team noted that they would look at the queue results and the design to identify potential changes.
- It was requested that the matrix be expanded/clarified so that at attendees could better understand where the impacts would occur (ROW, utility). Urban indicated that they would revise the figures and table to better show the requested information.
- There was a question about whether a 2nd lane was needed in the east-west direction on S. Broad St/US 206. At the meeting, it was indicated that the alternative was evaluated but the information was not readily available, although the belief was that LOS was not acceptable. Urban indicated that they would check the results and document the findings in the meeting summary. *The LOS results indicate that one lane on S. Broad St could work although in the westbound direction the alternative was tested with two (2) WB lanes since there are two (2) WB receiving lanes for the NB US 206 double left. Based on these results the project team will re-evaluate this concept for inclusion in the concepts moving forward.*
- There was a lengthy discussion on how best to accommodate traffic heading to Pearson Drive. Urban will evaluate options as part of next steps, but the general agreement from attendees is that the existing location is not desirable to maintain as part of either the signalized alternatives or the roundabout alternatives. Alternatives discussed included shifting the access point slight south on US 206 or providing access via Parent Avenue and the alley way that currently connects Parson Dr and Parent Avenue.
- There was discussion on the possibility of converting Whitehorse Avenue to one-way away from the circle. After some discussion it was agreed that a right-in/right-out option would be a more practical concept considering the impacts that one-way conversion would create. Urban will evaluate the option from a practical standpoint (benefits, drawbacks, etc.) and identify any additional information that would be needed to do a more comprehensive analysis.

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Action Items/Next Steps:

1. Urban to modify the concepts based on the discussion regarding Pearson Drive and Parent Avenue
2. NJDOT - BSP (Kevin Conover) will do additional crash analysis to determine appropriate safety ranking
3. Urban to review the need for two (2) lanes EB/WB on S. Broad St. *Completed see discussion items*
4. Urban to evaluate from a practical standpoint the idea of RI/RO on White Horse Avenue and identify additional information that would be needed to do a more comprehensive analysis.
5. Urban to revise Alternatives Matrix/Concept Plans to include more information on utility and ROW impacts
6. Urban to check queueing to make sure SB 206 to EB S. Broad St will not block SB 206 channelized right-turn lane (signalized alternatives)
7. Urban to calculate what is needed for the deceleration lane from SB 206 to I-196
8. NJDOT – DPD (John Zim) to set-up meeting with County to discuss concepts
9. Urban/DPD need to check with Traffic about whether there is an issue with locating a roundabout at this location considering the posted speed on US 206.

Design Communications Report Entry Form

Project Name: Route 206 Whitehorse Circle (CR 533,524)

Design Activity No. 2270	**Approved by Department's PM 03/22/11**	**DCR Entry No. 3** **Initial Local Officials Briefing**
Attending: George Fallat, J. Vaughn, Tom Saylor, John Zim, Bill McGarrigel, Scott Diehl		
Meeting Date: March 22, 2011 **Meeting Purpose:** Initial Local Officials Briefing		
Key Issues, Decisions and Action Items The following is a list of identified key points, follow-up tasks and next steps: Mercer County and Hamilton Township were presented with the current alternatives under consideration. They were in agreement that both alternatives should be presented to their respective administrations. **Action Items/Next Steps:** 1. NJDOT to coordinate a meeting with the administrations on Mercer County and Hamilton Township. John Zim to work with OCR.		

Design Communications Report Entry Form

Project Name: Route 206 Whitehorse Circle (CR 533,524)

Design Activity No. 2460	Approved by Department's PM 09/27/12	DCR Entry No. 4 _____ Hold Public Information Center

Attending: William Birch, Kimberly Nance, Bill McGarrigel, Scott Diehl

Meeting Date: September 27, 2012
Meeting Purpose: Public Information Center

Key Issues, Decisions and Action Items

The Public Information Center (PIC) held for the Whitehorse Circle project was hosted by NJDOT (Bill Birch, Kimberly Nance) and Urban Engineers (Scott Diehl, Bill McGarrigel, Chris Burke and Orla Pease) to discuss the preliminary preferred alternative (PPA) of a roundabout to replace the existing unconventional circle. Approximately 50 people attended the PIC, and generally the feedback was positive on the idea of a roundabout as most people noted the need for a change. There were some concerns identified including the following:

- Fire Company concerns:
  - The Whitehorse Fire Co wanted to see how their trucks (a 100' hook and ladder firetruck making turns) could navigate through the circle safely. They wanted to see if possible to cut through directly to Pearson for emergency response.

  It was noted that a truck turning template (for their type of fire truck) will be used for autoturn turning template analysis. It was explained that the fire truck will use the truck apron. We also showed a video of fire trucks navigating a roundabout and a fire captain speaking about an existing roundabout. The answers appeared to address the concern, but it is a concern that will need to be followed-up on during design.

  As far as Pearson Drive, it was explained that it may be possible to design the changes (the closure of Pearson) such that emergency vehicles still have access.
- Property owner to the east of the Taco Bell is concerned about drivers making a U-turn in her parking lot to get to the Taco Bell. This is an existing condition/situation.
- Concerns about the westbound left turn pocket length from RT 206 onto Parent

Project Name: Route 206 Whitehorse Circle (CR 533,524)

Ave. It was noted there is a church/school at the end of Parent Ave, and significant, concentrated bus activity occurs around 8AM, noon and 3PM.

- It was suggested to restrict parking on Parent Ave near RT 206 due to the narrow width of Parent Ave
- It was suggested that the DOT consider the empty lot on the southwest corner and use it for this project (possible connection to Pearson Dr)
- Lack of connection to Pearson Drive will force all traffic heading to Church/School to come down Parent Ave.

- Lack of connection from Circle to Pearson will impact response times from fire station to homes on Pearson Drive. Someone commented there is a fire station to the southwest (along I-195) that should be responsible for calls to these locations.
- Church has lots of lighting that looks attractive to drivers as a bypass to the circle. When they get to the end of Parent and see that it is a dead-end, the U-turn and go back to RT 206.
- A number of residents were concerned about widening the "alley" between Parent Ave and Pearson Drive as, in their opinion, this will promote cut-through traffic. Possible solution is one-way. It was noted that this could be worked on with the neighborhood residents to try to develop a solution that worked for the neighborhood.
- A resident commented that Maple Shade Ave has speed bumps and they should be installed on Parent Ave.
- Taco Bell owner asked about why his parking lot was being disturbed. It was explained that during the conceptual phase (CD Phase) of the project, the project team needs to identify potential impacts. As currently shown, his parking lot may be impacted since the proposed design increase the curb radius allowing for easier turns for vehicles coming west on South Broad St turning right on Whitehorse Avenue. It was noted that during the design phase, the DOT would work with him to try to develop a plan that minimizes impacts to his site.

- There were a few questions about potential impacts to properties.
  - It was noted that as currently shown there is potential impacts to properties on all four (4) corners of the roundabout with the Taco Bell property being

Project Name: Route 206 Whitehorse Circle (CR 533,524)

the most apparent change since as shown the Taco Bell parking lot may need to be slightly reconfigured.

- In addition to the Taco Bell, there's potential for a small impact to the Advance Auto site on the northwest corner of the project area as the need to provide deflection of the Whitehorse Avenue approach pushed the roadway and sidewalk towards the Advance Auto site. It was noted that the site access will not be impacted.
- Similar to the Advance Auto site there's potential for impacts to the properties on the SE and SW corner of the project area. In both cases, the impact to these sites is a result of the addition of sidewalk, which may or may not be included in the final design depending on feedback from the community and input from the NJDOT SME's and how the design meets the NJDOT's Complete Street Policy

- There were a few questions about potential traffic impacts during construction (i.e., how will you build this? Are there going to be big backups?, etc).
  - It was explained that with almost any construction project, there will be traffic impacts, but the current configuration (i.e., the general shape and size of the circle) is not much different than the proposed roundabout and that much of the existing pavement could be used to limit impacts. As an example, it was explained that the construction staging would likely close the "cut-thrus" so that work on the "inside" part of the roundabout could be completed and then followed by modifications to the approaches.

Overall the concerns for residents included slowing drivers coming off I-195 down when approaching the roundabout, advanced signage to get into appropriate lanes, and education on how to navigate the roundabout. Out of the approximately 50 people who attended the PIC, only a few were noted as being strongly against the roundabout concept in favor of a signalized intersection. Most of the rest of the attendees were pleased to see change and a number who were unsure as to what to expect with a roundabout were notably more comfortable with the idea of a roundabout following review of the boards and discussions with the project team.

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Project Name: Route 206 Whitehorse Circle (CR 533,524)

Design Activity No. 2410	**Approved by Department's PM 12/5/12**	**DCR Entry No. 5** _____ **Obtain SME Input**
Attending: N/A		
Meeting Date: N/A **Meeting Purpose:** N/A		
Key Issues, Decisions and Action Items The Project Team sent information to several critical SME units for their concurrence with the Preliminary Preferred Alternative in advance of the PE Scope Statement. A Comment Resolution Summary captures the information offered in response by the contacted units and is provided in the following pages.		

Design Communications Report Entry Form

Project Name: Route 206 Whitehorse Circle (CR 533,524)

Number	Reviewers' Comments/Questions	Remarks	Done By
Office of Access Design			
1	Those driveways located with-in the State Jurisdiction and impacted by the proposed improvements. These can be either, Changes, Adjustments and/or Modifications to the property access and will require a Access Design Cutout (ACO). a. Block 2488 Lot 20 b. Block 2524 Lot 1 c. Block 2524 Lot 29 d. Block 2487 Lot 2 e. Block 2523 Lot 1	This comment will be included in the Concept Development Report	WPM
2	Those driveways located outside the State Jurisdiction, falling under the Local or County Jurisdiction and are impacted by the proposed improvements. These driveways are not covered under the State's Access Code, but will require an ACO stating such and will be labeled Changes to Access. a. Block 2488 Lot 2 b. Block 2488 Lot 21 c. Block 2488 Lot 1 d. Block 2488 Lot 3 e. Block 2488 Lot 4	This comment will be included in the Concept Development Report	WPM
3	Those driveways located outside the State's Jurisdiction, falling under the Local or County Jurisdiction and are with-in the project limits that are not impacted by the proposed improvements. These driveways are not covered under the State's Access Code and will not require an ACO. a. All other driveway with-in the project limits.	This comment will be included in the Concept Development Report	WPM
4	This office as no objections to the location of the existing and proposed driveways as shown on the Preliminary Preferred Alternative (PPA) design.	N/A	N/A

Project Name: Route 206 Whitehorse Circle (CR 533,524)

5	The above comments may change upon submission of the Overall Project Access Plan (PAP) based on the proposed improvements which must show the existing Right-of-way (ROW) lines and Jurisdictional limits superimposed on the plan.	N/A	N/A
6	Submit a Preliminary Access Plan (PAP) to reflect the resolution of the above comments	To be completed during PE	Selected Designer
7	Resubmit a revised Access Impact Summary (AIP) to reflect the resolution of the above comments.	To be completed during PE	Selected Designer

Design Communications Report Entry Form

Project Name: Route 206 Whitehorse Circle (CR 533,524)

Number	Reviewers' Comments/Questions	Remarks	Done By
Bureau of Traffic Engineering			
1	Please provide a pedestrian crossing on the southern leg of the roundabout.	This was discussed with Debbie Kingsland from Bike/Ped. She was agreeable with the decision to not include a crosswalk on the southern leg of the roundabout due to no sidewalk connectivity south of the intersection.	WPM
2	The turning movement analysis does not show the cases of the design vehicles traveling along the adjacent lanes within the roundabout.	The design was developed to accommodate single unit trucks operating in a side by side fashion. We have provided a graphic representing that maneuver. *(See attached – Internal Circulation – SU side by side.pdf)* It is common practice for larger vehicles such as WB 67's to use both lanes in roundabouts as a means to navigate through their intended maneuver. We have included an excerpt from NCHRP 672, Roudabouts: An informational Guide regarding Design Vehicle Considerations to support this perspective. *(See attached Pages from nchrp_rpt_672 - (6-44 and 6-45).pdf)* Regarding the truck traffic, we have provided some information from our data collection effort that supports this approach *(See attached – Heavy Vehicle Percentage Analysis.pdf)*	WPM
3	Please modify the northwest corner of the proposed roundabout to allow for a safe right turn movement of the design vehicle. The design should provide for a safe right turn movement of the design vehicle from the right lane of the southbound approach.	As mentioned in the response to comment 2, NCHRP 672 discusses truck turns and the use of both approaches when the truck volumes are limited. Our intent is for this to be the method versus increasing the radius size to allow for a WB 67 to make the right turn. If desired, the radius can be adjusted to allow for the move and stay within the existing	WPM

Project Name: Route 206 Whitehorse Circle (CR 533,524)

		ROW.	
4	Please modify the northeast corner of the proposed roundabout to allow for a safe right turn movement of the design vehicle. The design should provide for a safe right turn movement of the design vehicle from the right lane of the westbound approach.	This maneuver, as it exists today is very limiting. Presently the turn can be properly made by a SU Truck *(See attached – Existing RT – West to North.pdf).* To address future need, we accommodated a Bus as the design vehicle. Utilizing a WB 67 would adversely impact the Taco Bell that currently occupies the property. Considering the location and the impacts, we felt that we should not design for a WB 67 making that move.	N/A

Design Communications Report Entry Form

Project Name: Route 206 Whitehorse Circle (CR 533,524)

Number	Reviewers' Comments/Questions	Remarks	Done By
Value Solutions (Geometrics)			
1	Please explain why the shape of the roundabout is oblong rather than true circle.	The shape evolved through the CD Phase. The intent is to provide a tangential exit in some maneuvers, allowing for vehicles to clear the roundabout efficiently. We anticipate the design will be further developed during the PE Phase by NJDOT and the selected designer.	WPM
2	Can the entry deflection angles from both S. Broad St. approaches to the roundabout be tightened? A tighter entry radius at these two locations would be preferred.	This can be included in the advancing design if desired by NJDOT. We anticipate the design will be further developed during the PE Phase by NJDOT and the selected designer.	Selected Designer
Value Solutions (Roadside Design and ADA Compliance)			
3	Curb ramps must be provided at all crosswalks.	The Project Team concurs. This will be included in the PE Scope Statement.	WPM
4	All curb ramps and walkway openings must have detectable warning surfaces.	The Project Team concurs. This will be included in the PE Scope Statement.	WPM
5	Refer to public sidewalk curb ramps Section 5.7.4 of the NJDOT Design Manual-Roadway and Construction Detail CD-606-1 when designing curb ramps. Provide ramp types to be used in project on construction plans and ensure that the ramps specified fit the field conditions.	The Project Team concurs. This will be included in the PE Scope Statement.	WPM

Design Communications Report Entry Form

Project Name: Route 206 Whitehorse Circle (CR 533,524)

Number	Reviewers' Comments/Questions	Remarks	Done By
Construction			
1	Potential Constructability Concern - Utilities	The utilities present some concerns and at this phase we have only completed utility letter #1. We expect some aerial facility relocations and hope to minimize the underground work by maintaining the existing elevations/footprint and trying to limit any major excavation.	WPM
2	Potential Constructability Concern – Staging areas for equipment	Specific to staging, our hope was to use the DOT right of way adjacent to Pearson and possibly use part of Pearson to stage the project. We'll make it a point to suggest in the report that staging areas for equipment will be a priority item to include in the coordination with your group.	WPM
3	Since Pearson Drive is being eliminated, why are you not using a regular signalized intersection?	As to the PPA, we looked at both a roundabout and a signalized intersection at the location. The primary purpose and need was to address safety. Both options improved on the safety and addressed the congestion. The roundabout offers some elements that gave it the edge. One primary element is it operates at a slower speed which limits the opportunity for high intensity crashes that typically result in greater injury and damage. Also, it will limit the speeds that vehicle enter into the surrounding area, consistent with the current circle. The signal has the potential to promote higher speeds on the intersecting roads which was not considered favorable by Hamilton	WPM

Project Name: Route 206 Whitehorse Circle (CR 533,524)

		Township.	

NEW JERSEY DEPARTMENT OF TRANSPORTATION

MEMORANDUM

TO: Polina Knaster, P.E. PMP
District Program Manager
Right of Way and Access Management

FROM: Mark W. Foss
Realty Specialist 3, Right of Way and Access Management

DATE: November 19, 2012

PHONE: 732-308-4064

SUBJECT: Right of Way Cost Estimate
Rt. 206 Whitehorse Circle (CR 533 & 524)
M.P. 38.81 to M.P. 39.95
Hamilton Township,
Mercer County
Job No. 4510011
Sub Job No. 5980

Attached is the report requested. Estimated amount is **$54,000.00**
Relocation: $0.00

Comments: The detail regarding the taking for Block 2524 Lot 1 is minimal. It is assumed the reconfiguring of the parking will be completed under the Access Modification since it is also assumed the entrance along South Broad Street will be closed. No valued has been given for the parking lot modifications within this cost estimate. It is also assumed that the business sign located within the area of the reconfigured parking is either unaffected by construction or will be relocated by the State's contractor. Any cost associated with the sign relocation is not part of this cost estimate.

RIGHT OF WAY COST ESTIMATE
Rt. 206 Whitehorse Circle (CR 533 & 524)
M.P. 38.81 to M.P. 39.95
Hamilton Township,
Mercer County
Job No. 4510011
Sub Job No. 5980

LOT & BLOCK	OWNERS	ACQUISITION ACRES/SF	ESTIMATED VALUE
Lot 1 Block 2524	JAT Properties, LLC PO Box 8635 Hamilton, NJ 08650-0635	Fee Area 1,438 s/f ($14,380) TSMW 4,356 s/f ($2,500)	$17,000
		TOTAL	$ 17,000
		SAY	**$ 17,000**

RIGHT OF WAY COST ESTIMATE SUMMARY
Rt. 206 Whitehorse Circle (CR 533 & 524)
M.P. 38.81 to M.P. 39.95
Hamilton Township,
Mercer County
Job No. 4510011
Sub Job No. 5980

RIGHT OF WAY COSTS		**$**	17,000
REPLACEMEMT HOUSING OWNER		**$**	0
REPLACEMENT HOUSING TENANT		**$**	0
RESIDENTIAL MOVING PAYMENT		**$**	0
BUSINESS AND FARM PAYMENTS		**$**	0
SIGNS & BILLBOARDS note included in estimate		**$**	*
DEMOLITION COSTS		**$**	0
LAST RESORT HOUSING		**$**	0
APPRAISAL FEES (1) SPECIALIST(0)		**$**	3,000
AWARDS & JUDGEMENTS (50 %)		**$**	20,000
CONTINGENCIES (3%)		**$**	600
TOTAL		**$**	40,600
COST TO ACQUIRE (20k)	35,000		
RELOCATION SERVICES COST	0		
INCIDENTAL COSTS		**$**	35,000
GRAND TOTAL CAPITAL & INCIDENTALS		**$**	**75,600**
SAY		**$**	**75,600**

Relocation Cost Estimate
Rt. 206 Whitehorse Circle (CR 533 & 524)
M.P. 38.81 to M.P. 39.95
Hamilton Township,
Mercer County
Job No. 4510011
Sub Job No. 5980

Block /Lot Parcel	Owner	Housing Payment Owner	Housing Payment Tenant	Moving Payment	Business Payment	Signs Billboards	Demolition	Last Resort Housing
Total								

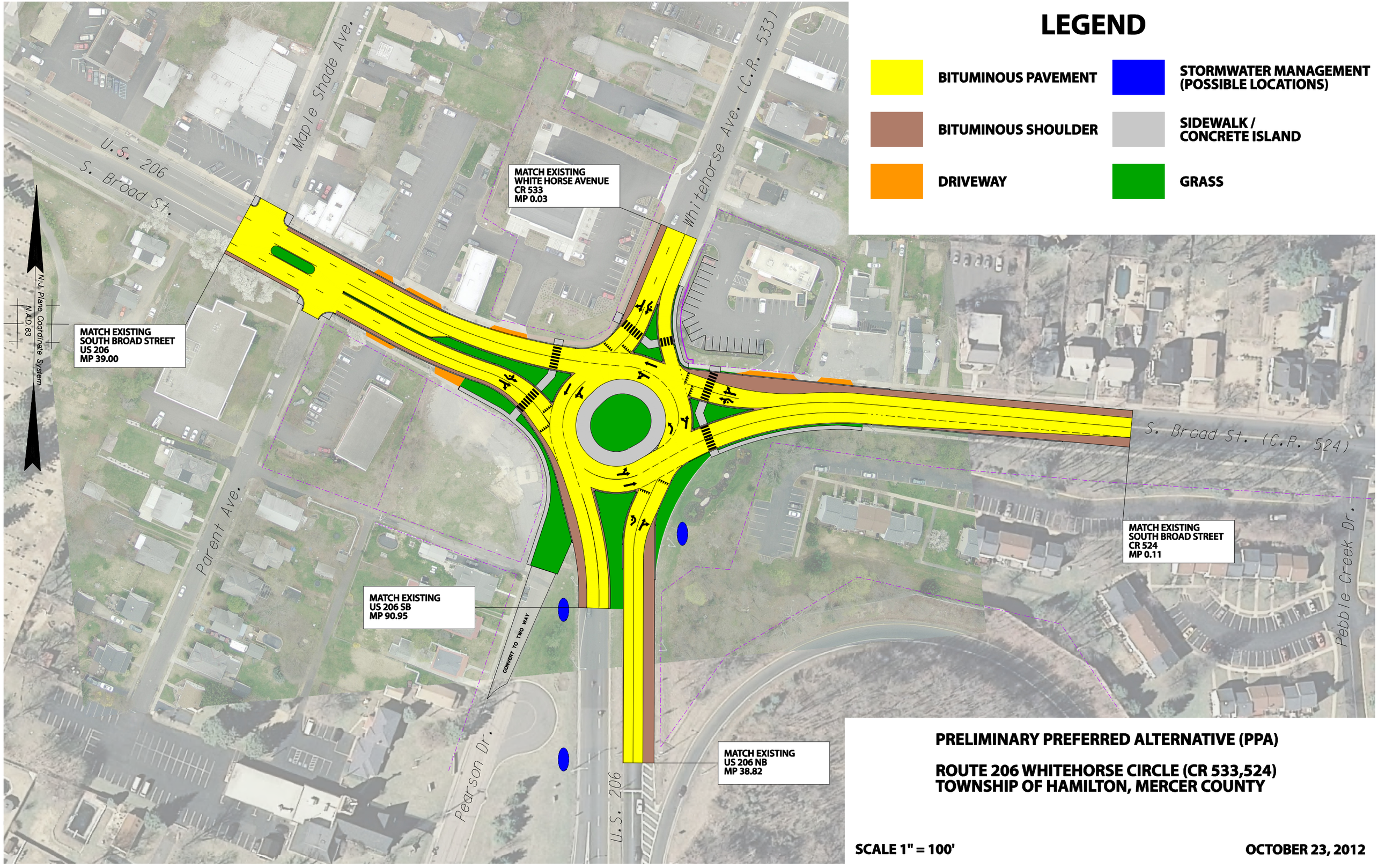
* All Signs and Billboards are included in the acquisition estimate.

RELOCATION RECAPITULATION
Rt. 206 Whitehorse Circle (CR 533 & 524)
M.P. 38.81 to M.P. 39.95
Hamilton Township,
Mercer County
Job No. 4510011
Sub Job No. 5980

NO. OF PAYMENTS	TYPE OF RELOCATION	RELO CODE	AMOUNT
0	REPLACEMENT HOUSING PAYMENT --OWNERS	RHO	0
0	REPLACEMENT HOUSING PAYMENT-- TENANT	RHT	0
0	RESIDENTIAL MOVING PAYMENT	RMP	0
0	BUSINESS OR FARM PAYMENT	BFP	0
0	SIGNS & BILLBOARDS RELOCATION	SBR	
		SUB TOTAL	0
	RELOCATION SERVICE COSTS	RSC	
		TOTAL	0
	DEMOLITION COSTS	DEMO	0
	LAST RESORT HOUSING	LRH	0

OCCUPANTS TO BE RELOCATED		BUILDINGS TO BE DEMOLISHED	0
RESIDENTIAL OWNERS	0	DWELLINGS	0
RESIDENTIAL TENANTS	0	GARAGES & BARNS	0
BUSINESSES	-0-	SHEDS	0
NON-PROFIT ORGANIZATIONS	-0-	COMMERCIAL BUILDINGS	0
TOTAL		TOTAL	0
		BILLBOARDS TO BE PURCHASED	0
		SIGNS TO BE RELOCATED	0

Appendix J - Preliminary Preferred Alternative

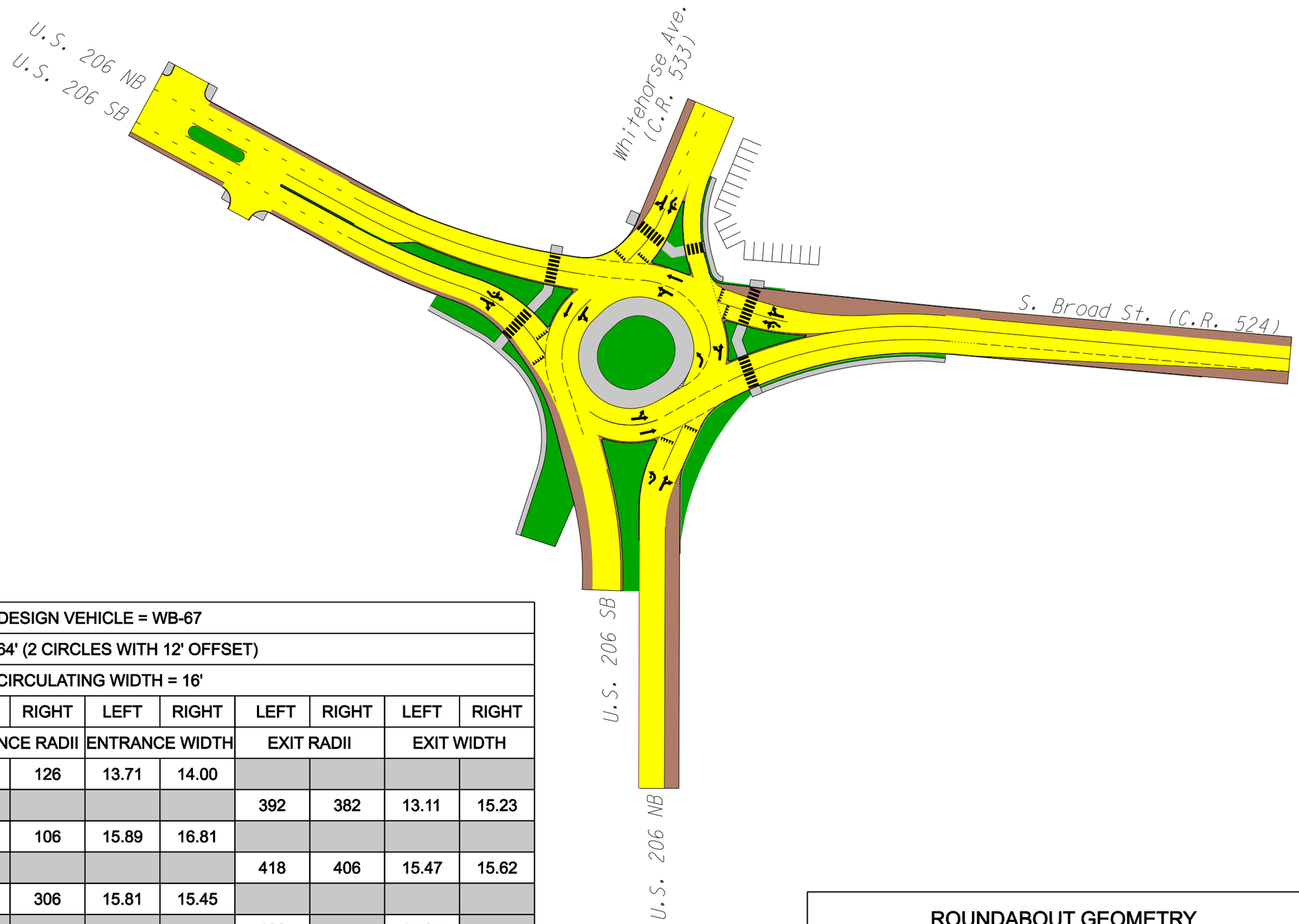


PRELIMINARY PREFERRED ALTERNATIVE (PPA)

ROUTE 206 WHITEHORSE CIRCLE (CR 533,524)
TOWNSHIP OF HAMILTON, MERCER COUNTY

SCALE 1" = 100'

OCTOBER 23, 2012



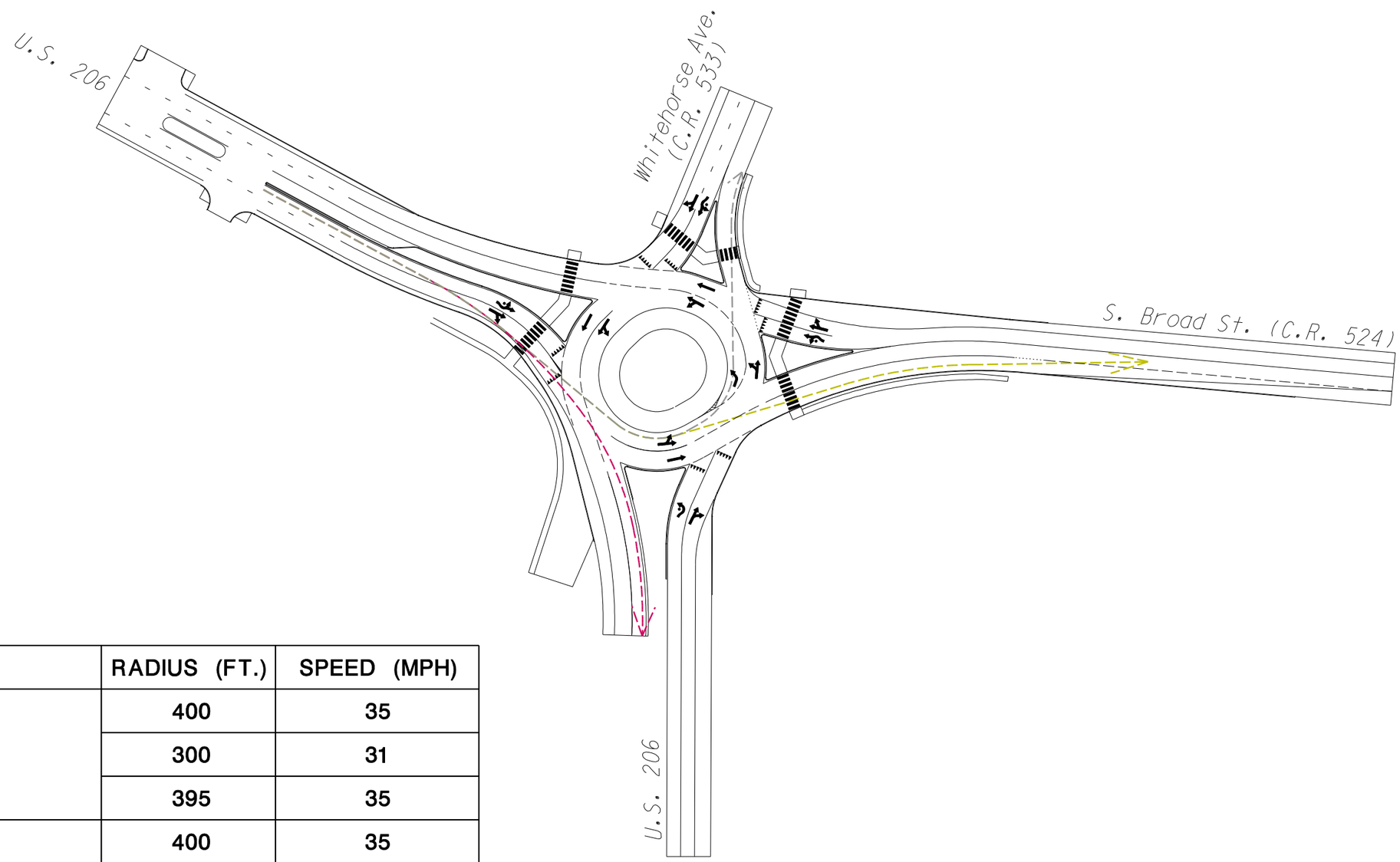
DESIGN VEHICLE = WB-67								
ICD = 164' (2 CIRCLES WITH 12' OFFSET)								
CIRCULATING WIDTH = 16'								
MOVE	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT
	ENTRANCE RADII		ENTRANCE WIDTH		EXIT RADII		EXIT WIDTH	
ROUTE 206 SB ENTRANCE	142	126	13.71	14.00				
ROUTE 206 SB EXIT					392	382	13.11	15.23
ROUTE 206 NB ENTRANCE	118	106	15.89	16.81				
S. BROAD ST. EXIT					418	406	15.47	15.62
S. BROAD ST. ENTRANCE	318	306	15.81	15.45				
WHITEHORSE AVE. EXIT					126		15.95	
WHITEHORSE AVE. ENTRANCE	118	106	15.74	15.84				
ROUTE 206 NB EXIT					668	656	15.00	15.13

ROUNDABOUT GEOMETRY

PRELIMINARY PREFERRED ALTERNATIVE (PPA)

ROUTE 206 WHITEHORSE CIRCLE (CR 533,524)
TOWNSHIP OF HAMILTON, MERCER COUNTY

NOVEMBER 2012



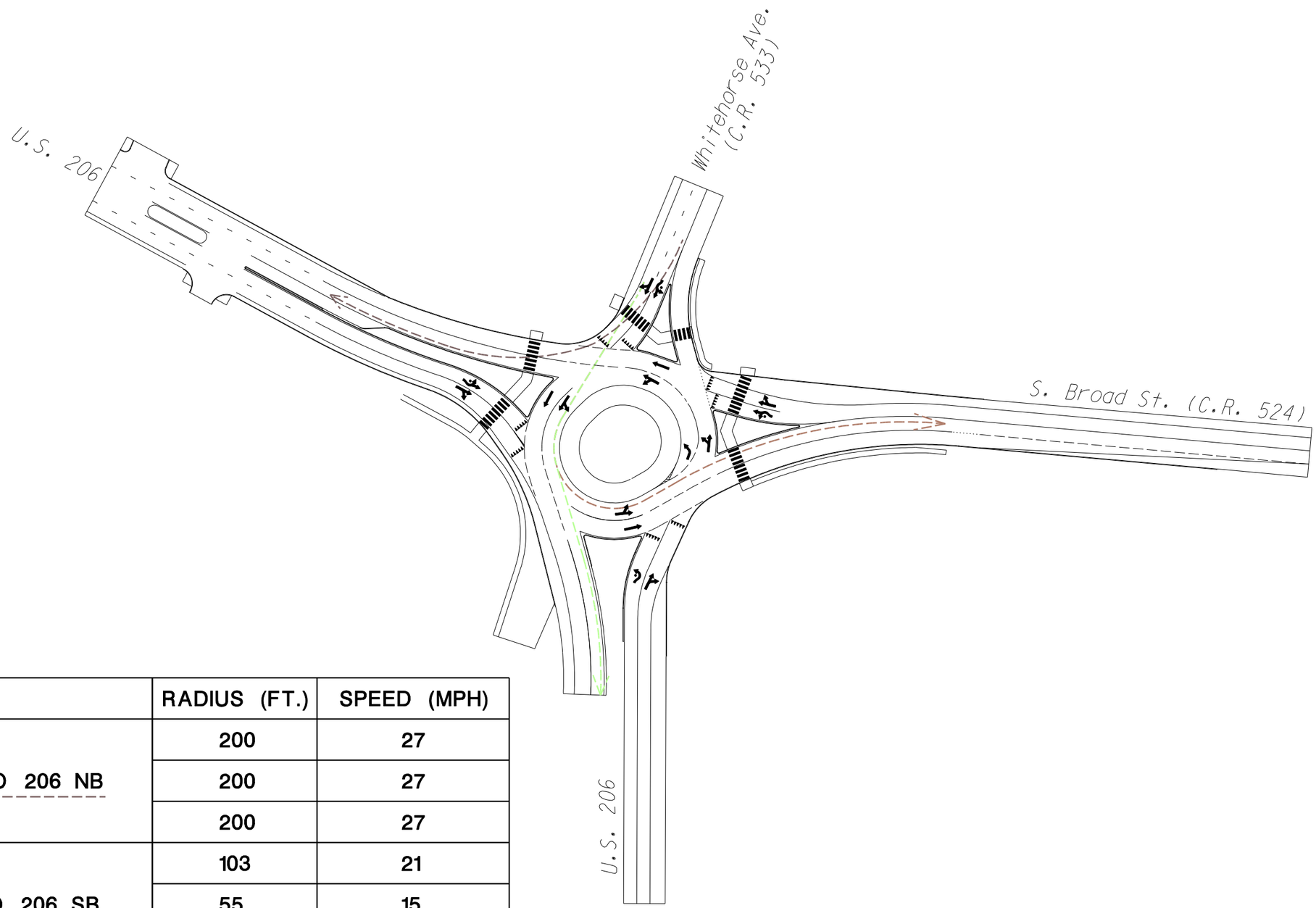
MOVE	RADIUS (FT.)	SPEED (MPH)
206 SB TO 206 SB	400	35
	300	31
	395	35
206 SB TO S. BROAD ST.	400	35
	55	15
	405	33
206 SB TO WHITEHORSE AVE.	400	35
	55	15
	55	15
	123	22

FASTEST PATH

PRELIMINARY PREFERRED ALTERNATIVE (PPA)

ROUTE 206 WHITEHORSE CIRCLE (CR 533,524)
TOWNSHIP OF HAMILTON, MERCER COUNTY

NOVEMBER 2012



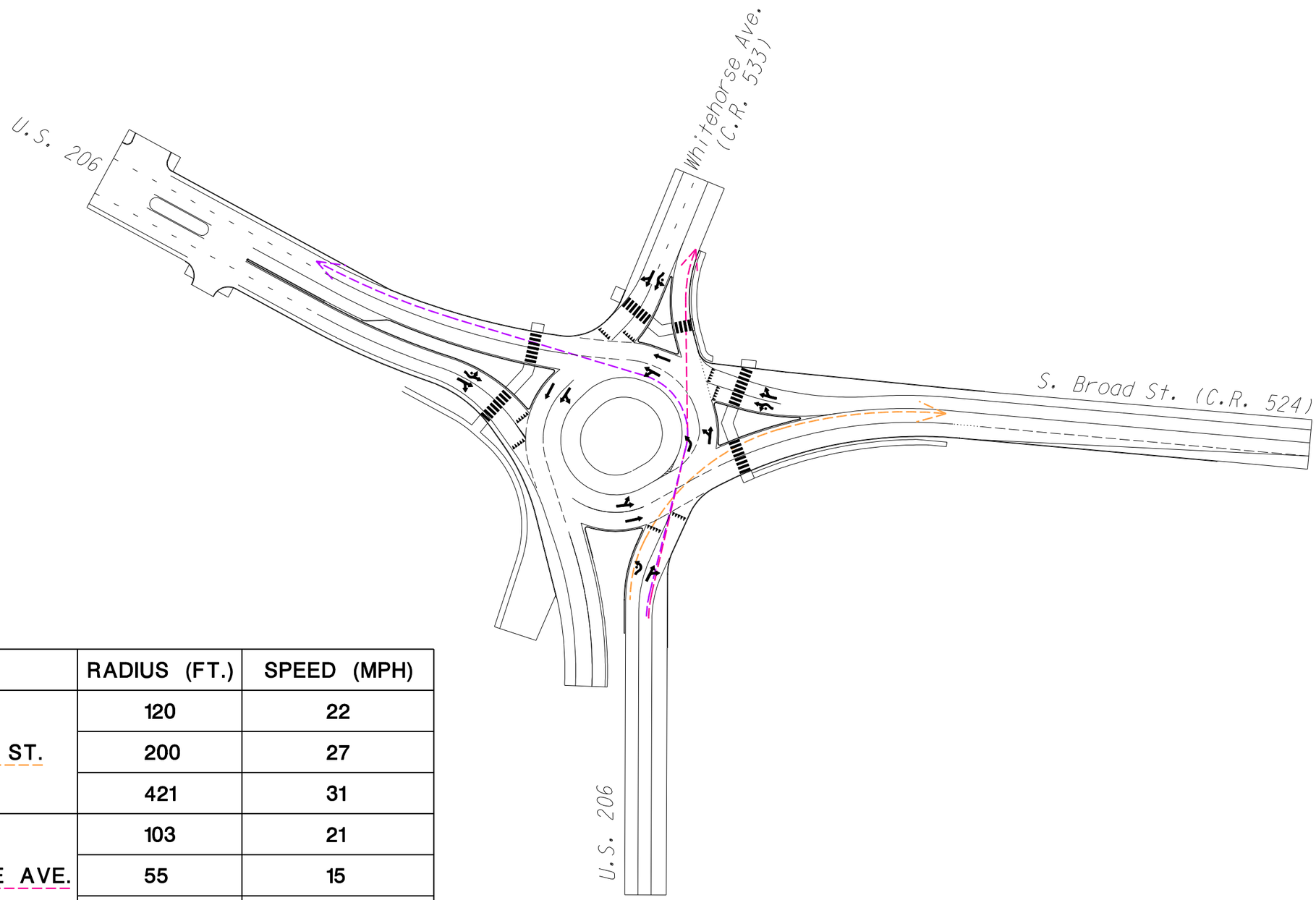
MOVE	RADIUS (FT.)	SPEED (MPH)
WHITEHORSE AVE. TO 206 NB	200	27
	200	27
	200	27
WHITEHORSE AVE. TO 206 SB	103	21
	55	15
	395	35
WHITEHORSE AVE. TO S. BROAD ST.	105	21
	55	15
	655	35

FASTEST PATH

PRELIMINARY PREFERRED ALTERNATIVE (PPA)

ROUTE 206 WHITEHORSE CIRCLE (CR 533,524)
TOWNSHIP OF HAMILTON, MERCER COUNTY

NOVEMBER 2012



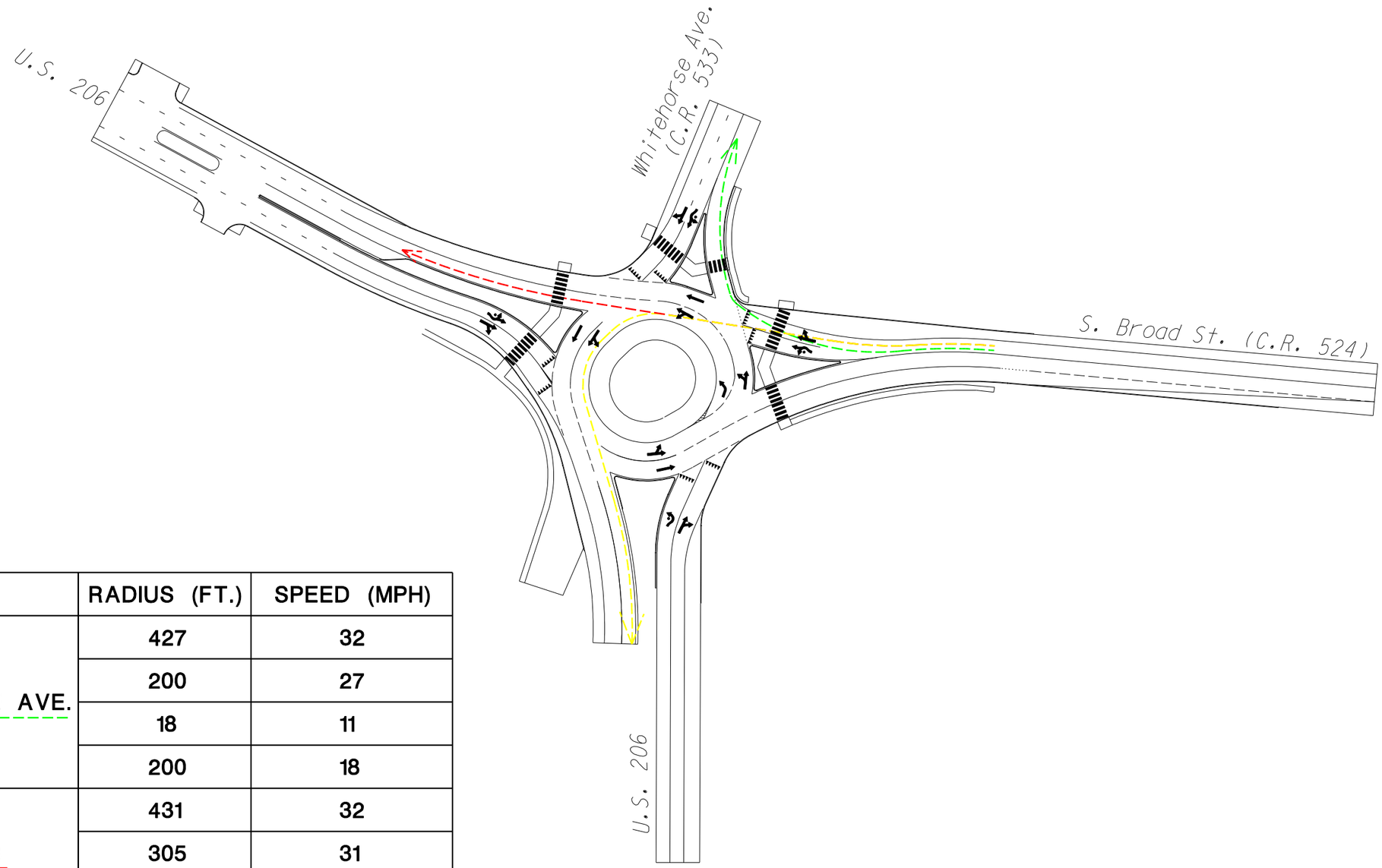
MOVE	RADIUS (FT.)	SPEED (MPH)
206 NB TO S. BROAD ST.	120	22
	200	27
	421	31
206 NB TO WHITEHORSE AVE.	103	21
	55	15
	123	22
206 NB TO 206 NB	105	21
	55	15
	655	35

FASTEST PATH

PRELIMINARY PREFERRED ALTERNATIVE (PPA)

ROUTE 206 WHITEHORSE CIRCLE (CR 533,524)
TOWNSHIP OF HAMILTON, MERCER COUNTY

NOVEMBER 2012



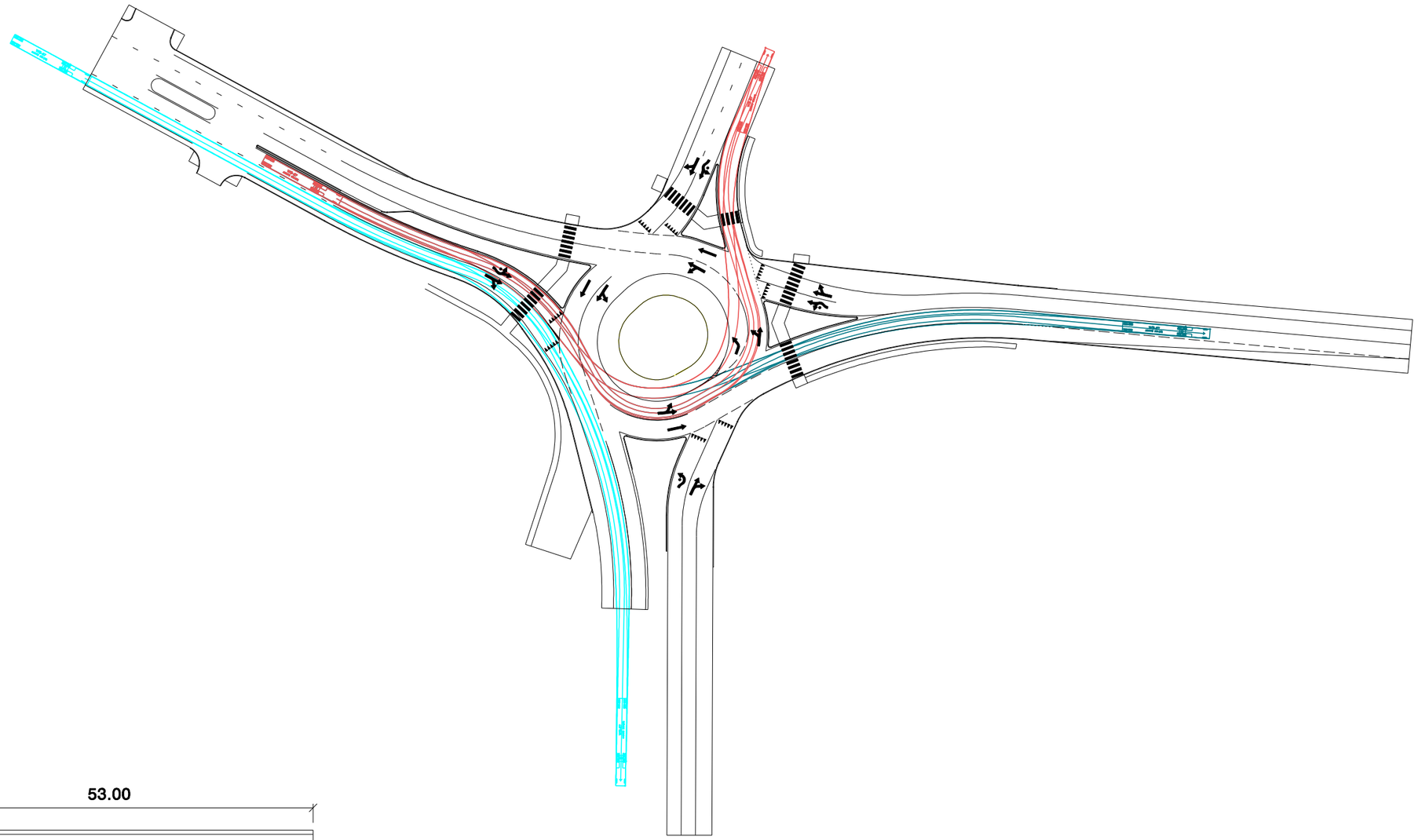
MOVE	RADIUS (FT.)	SPEED (MPH)
S. BROAD ST. TO WHITEHORSE AVE.	427	32
	200	27
	18	11
	200	18
S. BROAD ST. TO 206 NB	431	32
	305	31
	670	35
S. BROAD ST. TO 206 SB	431	32
	305	31
	55	15
	55	15
	395	31

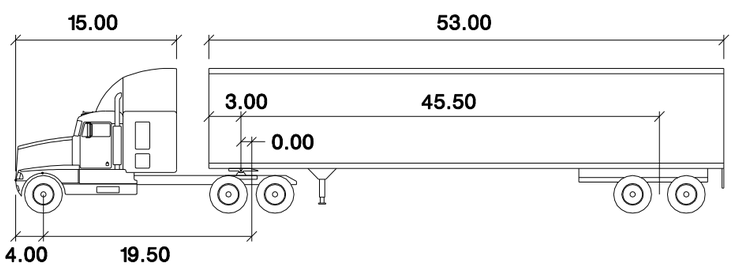
FASTEST PATH

PRELIMINARY PREFERRED ALTERNATIVE (PPA)

ROUTE 206 WHITEHORSE CIRCLE (CR 533,524)
TOWNSHIP OF HAMILTON, MERCER COUNTY

NOVEMBER 2012





WB-67 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

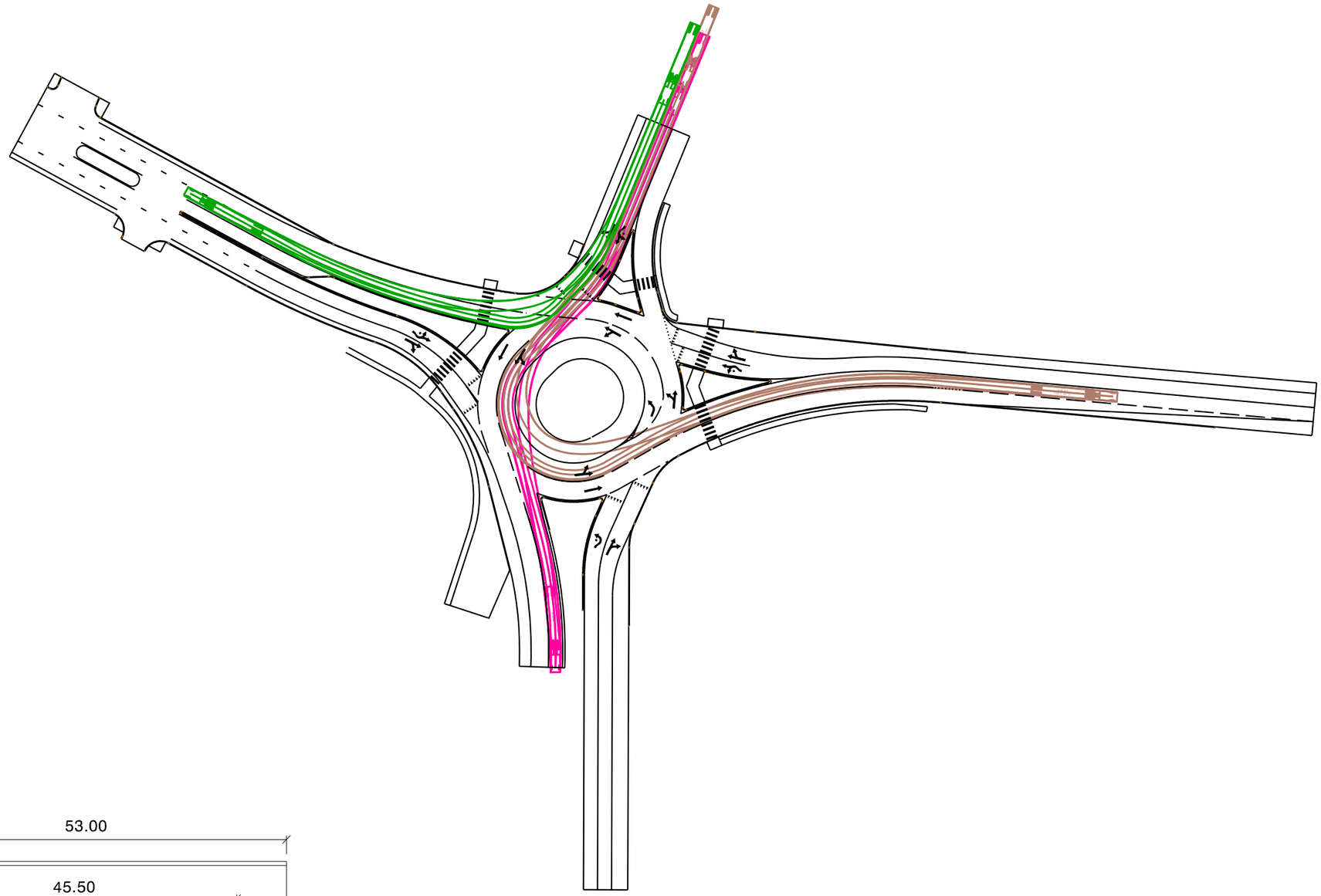
EASTBOUND MOVES

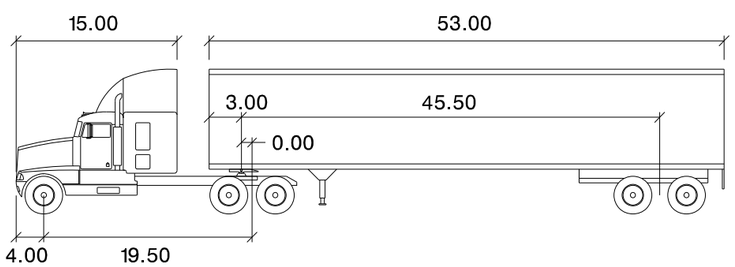
WB - 67 TURNING TEMPLATES

PRELIMINARY PREFERRED ALTERNATIVE (PPA)

ROUTE 206 WHITEHORSE CIRCLE (CR 533,524)
TOWNSHIP OF HAMILTON, MERCER COUNTY

NOVEMBER 2012





WB-67 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

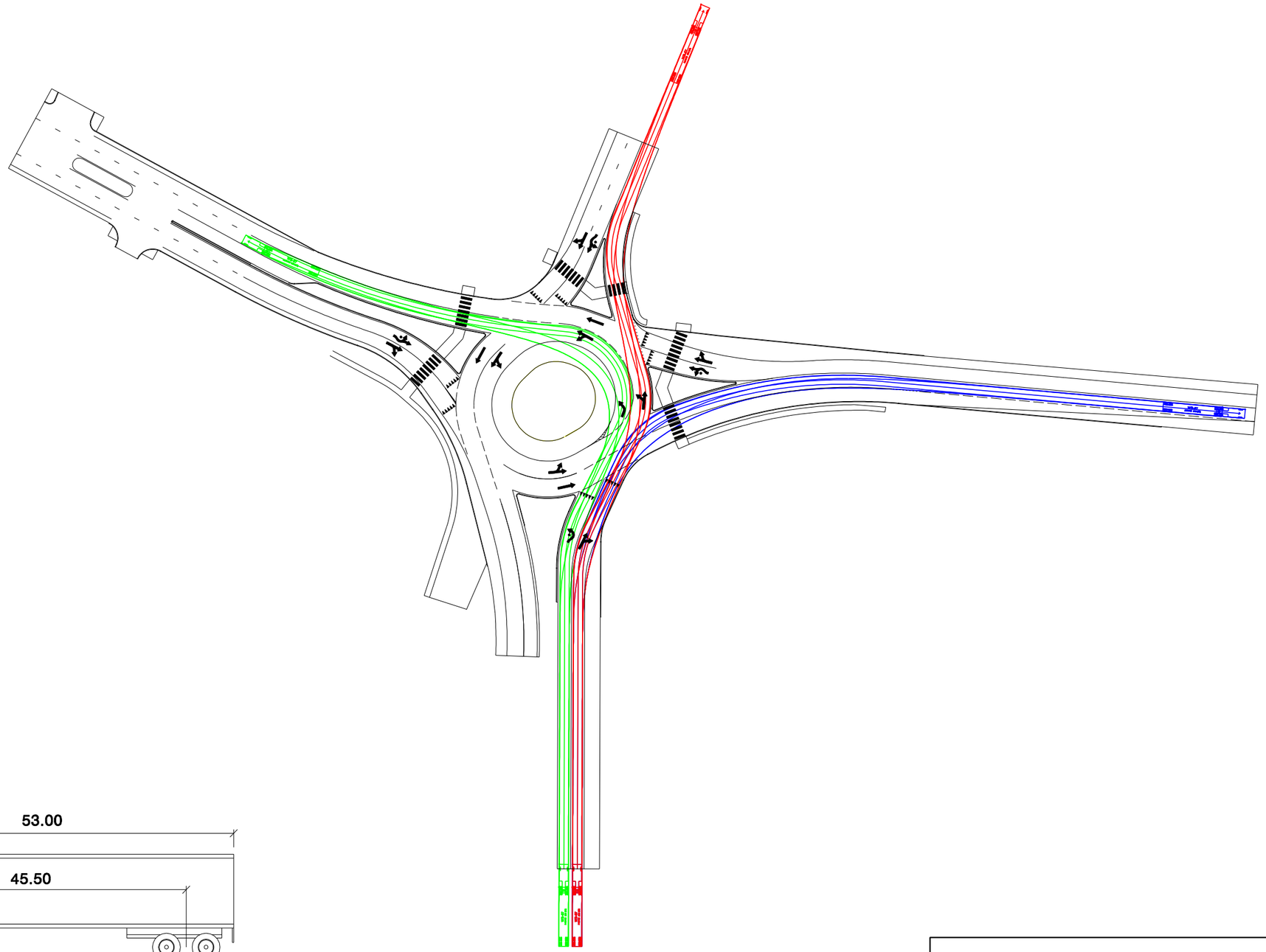
SOUTHBOUND MOVES

WB - 67 TURNING TEMPLATES

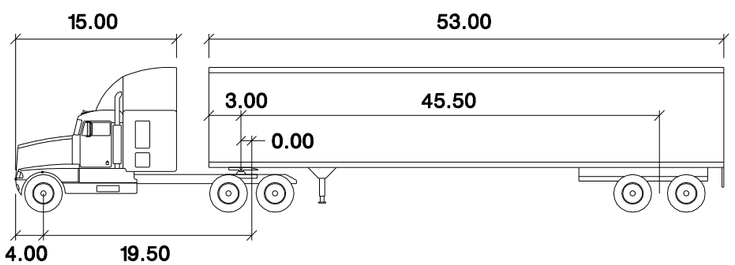
PRELIMINARY PREFERRED ALTERNATIVE (PPA)

ROUTE 206 WHITEHORSE CIRCLE (CR 533,524)
TOWNSHIP OF HAMILTON, MERCER COUNTY

NOVEMBER 2012



NORTHBOUND MOVES



WB-67 feet

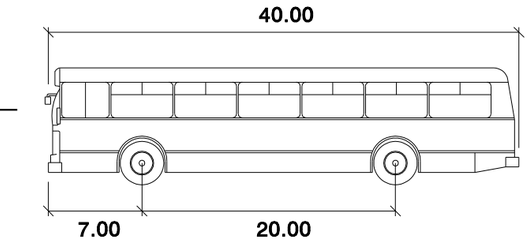
Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

WB - 67 TURNING TEMPLATES

PRELIMINARY PREFERRED ALTERNATIVE (PPA)

ROUTE 206 WHITEHORSE CIRCLE (CR 533,524)
TOWNSHIP OF HAMILTON, MERCER COUNTY

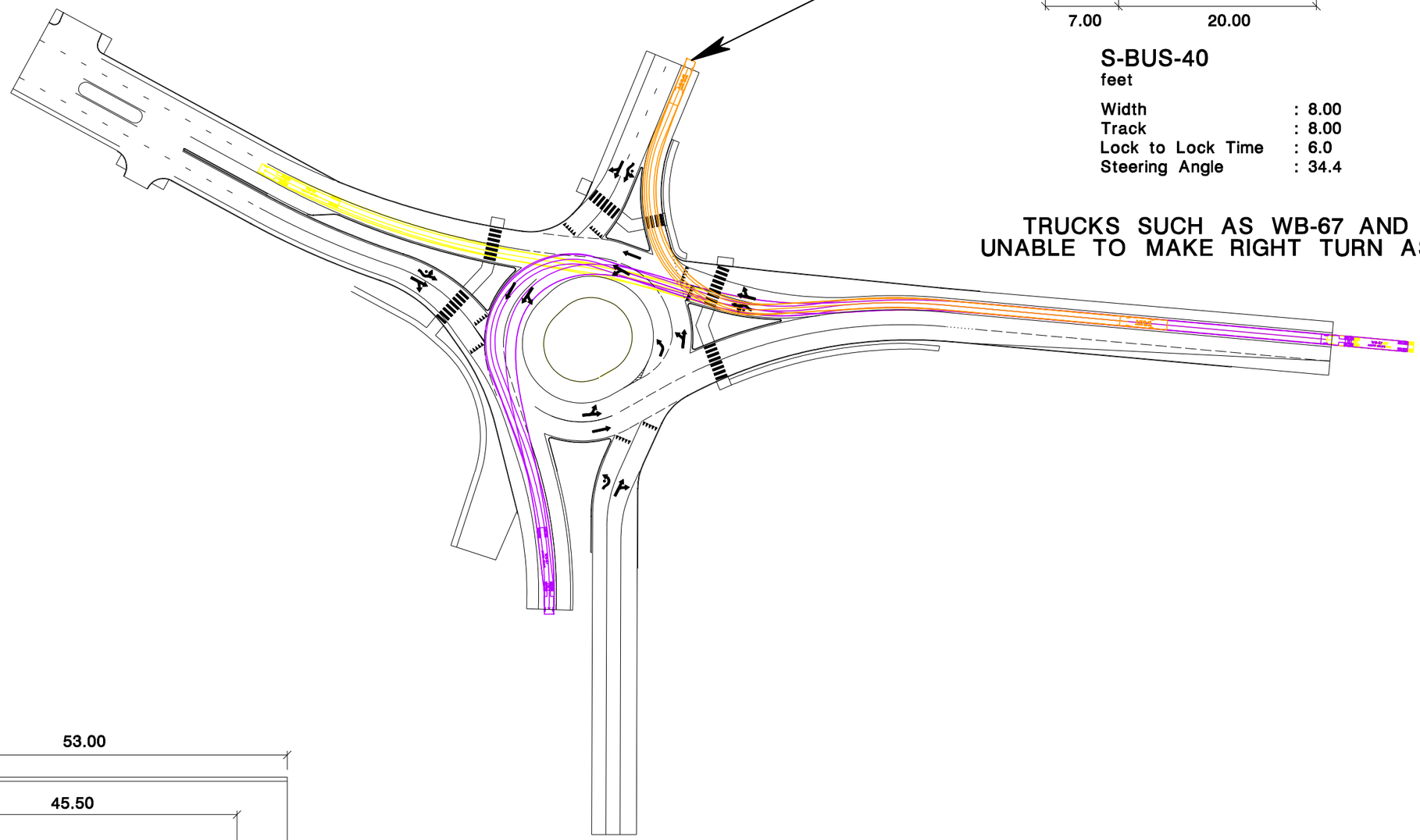
NOVEMBER 2012

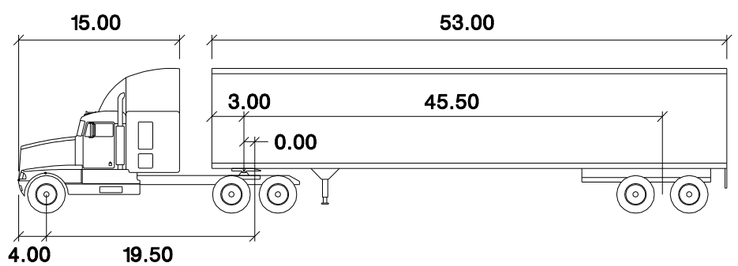


S-BUS-40
feet

Width	: 8.00
Track	: 8.00
Lock to Lock Time	: 6.0
Steering Angle	: 34.4

TRUCKS SUCH AS WB-67 AND WB-50
UNABLE TO MAKE RIGHT TURN AS SHOWN





WB-67
feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 28.4
Tractor Track	: 8.00	Articulating Angle	: 75.0
Trailer Track	: 8.50		

WESTBOUND MOVES

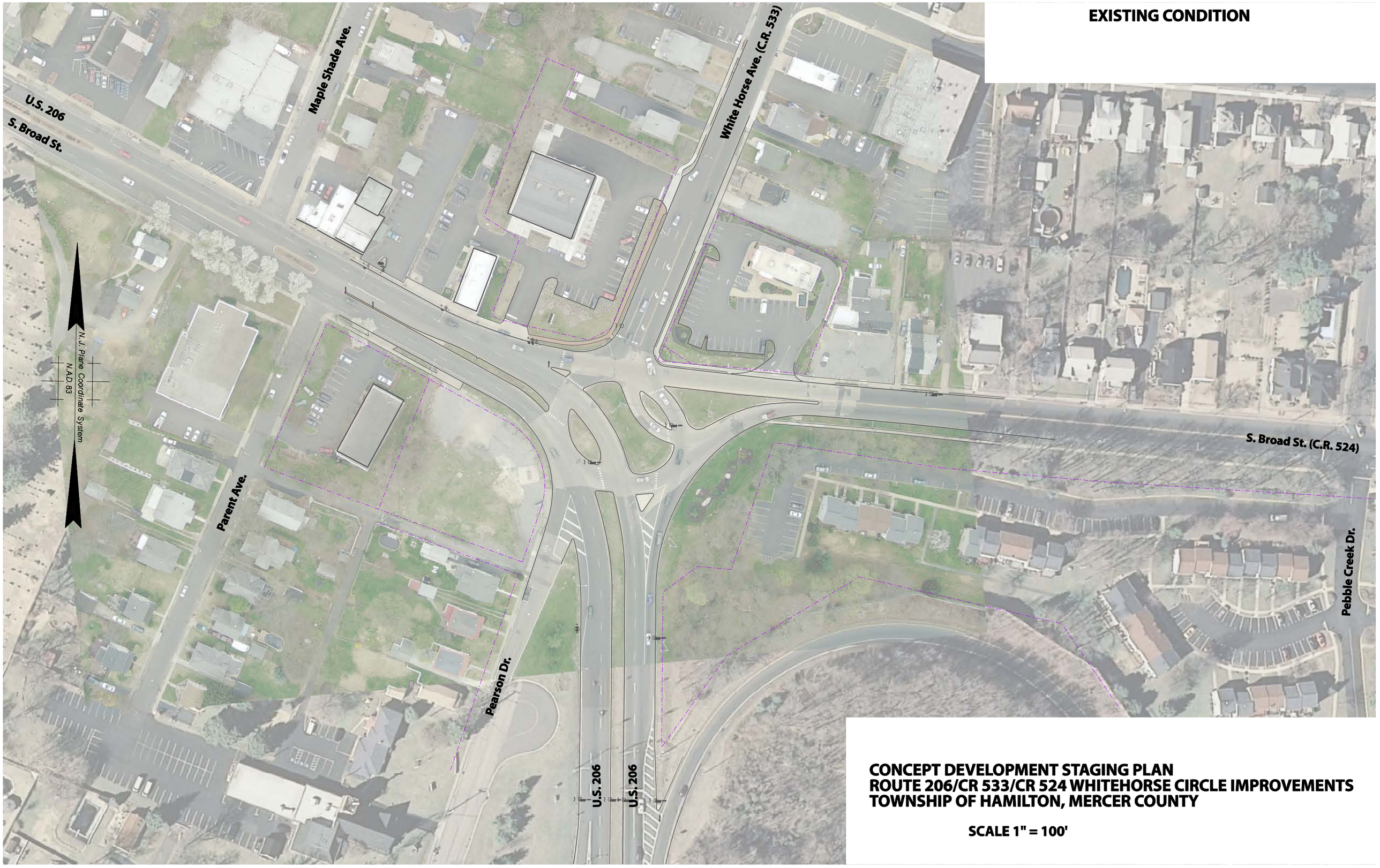
WB - 67 TURNING TEMPLATES

PRELIMINARY PREFERRED ALTERNATIVE (PPA)

ROUTE 206 WHITEHORSE CIRCLE (CR 533,524)
TOWNSHIP OF HAMILTON, MERCER COUNTY

NOVEMBER 2012

EXISTING CONDITION

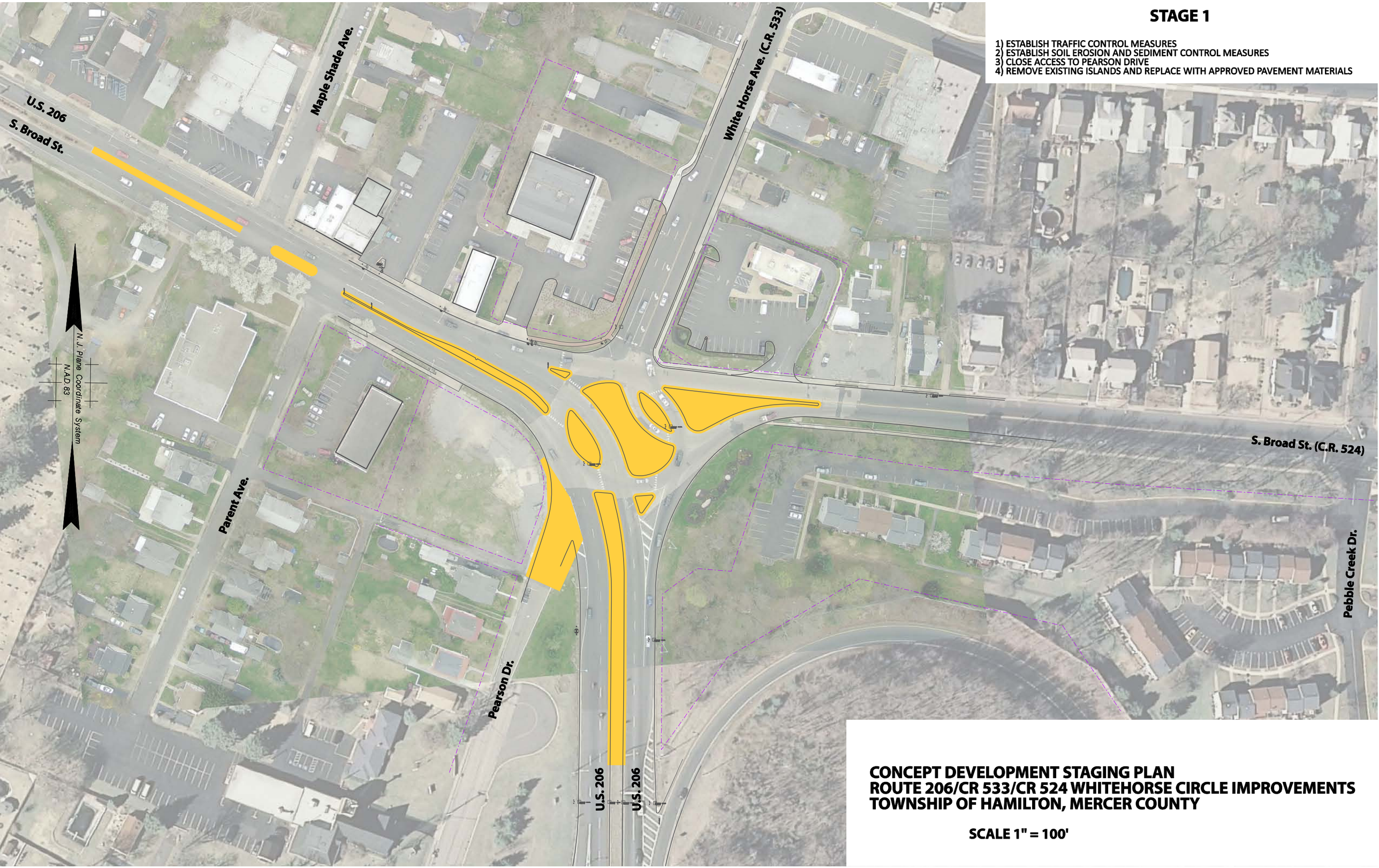


CONCEPT DEVELOPMENT STAGING PLAN
ROUTE 206/CR 533/CR 524 WHITEHORSE CIRCLE IMPROVEMENTS
TOWNSHIP OF HAMILTON, MERCER COUNTY

SCALE 1" = 100'

STAGE 1

1) ESTABLISH TRAFFIC CONTROL MEASURES
2) ESTABLISH SOIL EROSION AND SEDIMENT CONTROL MEASURES
3) CLOSE ACCESS TO PEARSON DRIVE
4) REMOVE EXISTING ISLANDS AND REPLACE WITH APPROVED PAVEMENT MATERIALS

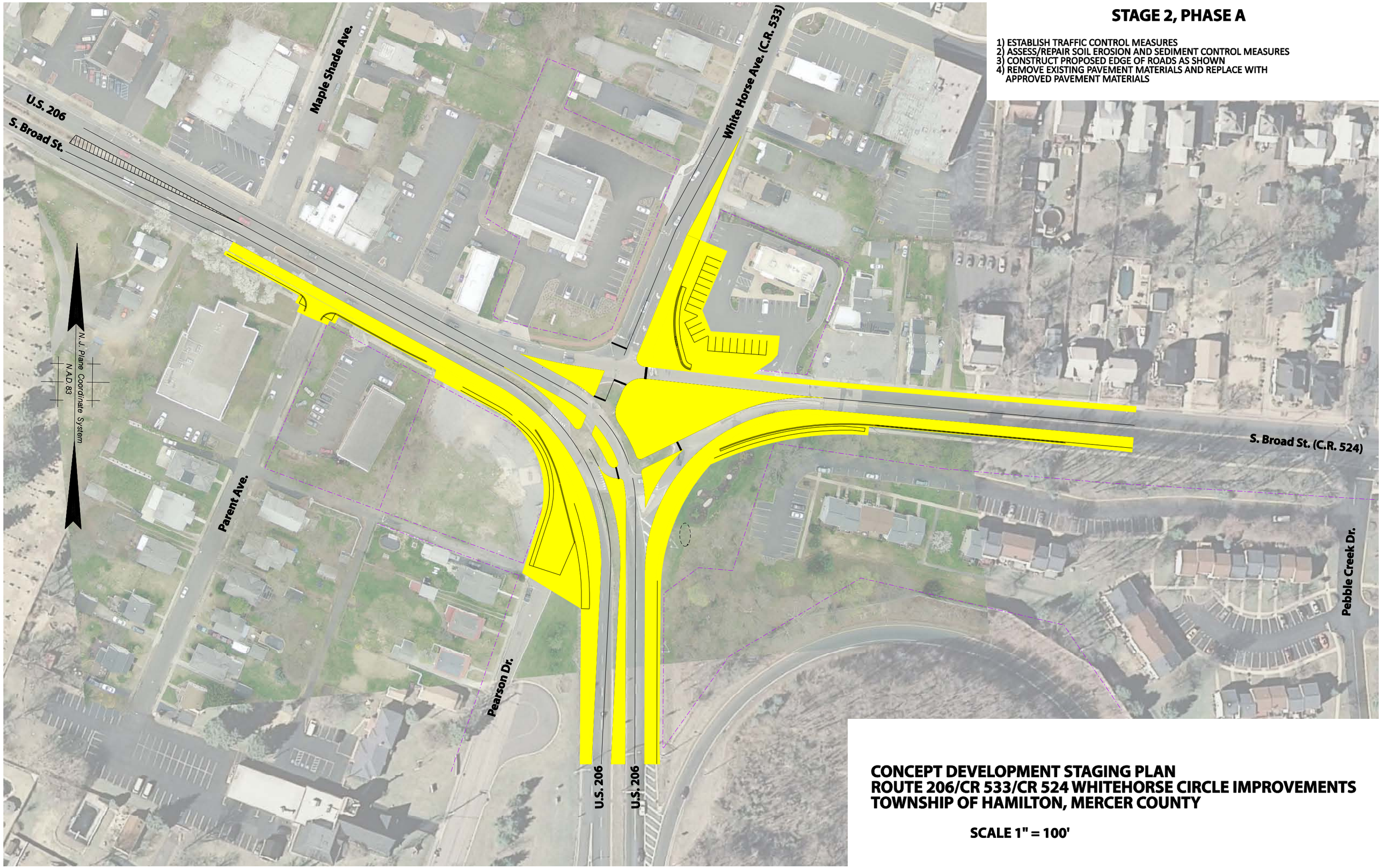


CONCEPT DEVELOPMENT STAGING PLAN
ROUTE 206/CR 533/CR 524 WHITEHORSE CIRCLE IMPROVEMENTS
TOWNSHIP OF HAMILTON, MERCER COUNTY

SCALE 1" = 100'

STAGE 2, PHASE A

1) ESTABLISH TRAFFIC CONTROL MEASURES
2) ASSESS/REPAIR SOIL EROSION AND SEDIMENT CONTROL MEASURES
3) CONSTRUCT PROPOSED EDGE OF ROADS AS SHOWN
4) REMOVE EXISTING PAVEMENT MATERIALS AND REPLACE WITH APPROVED PAVEMENT MATERIALS

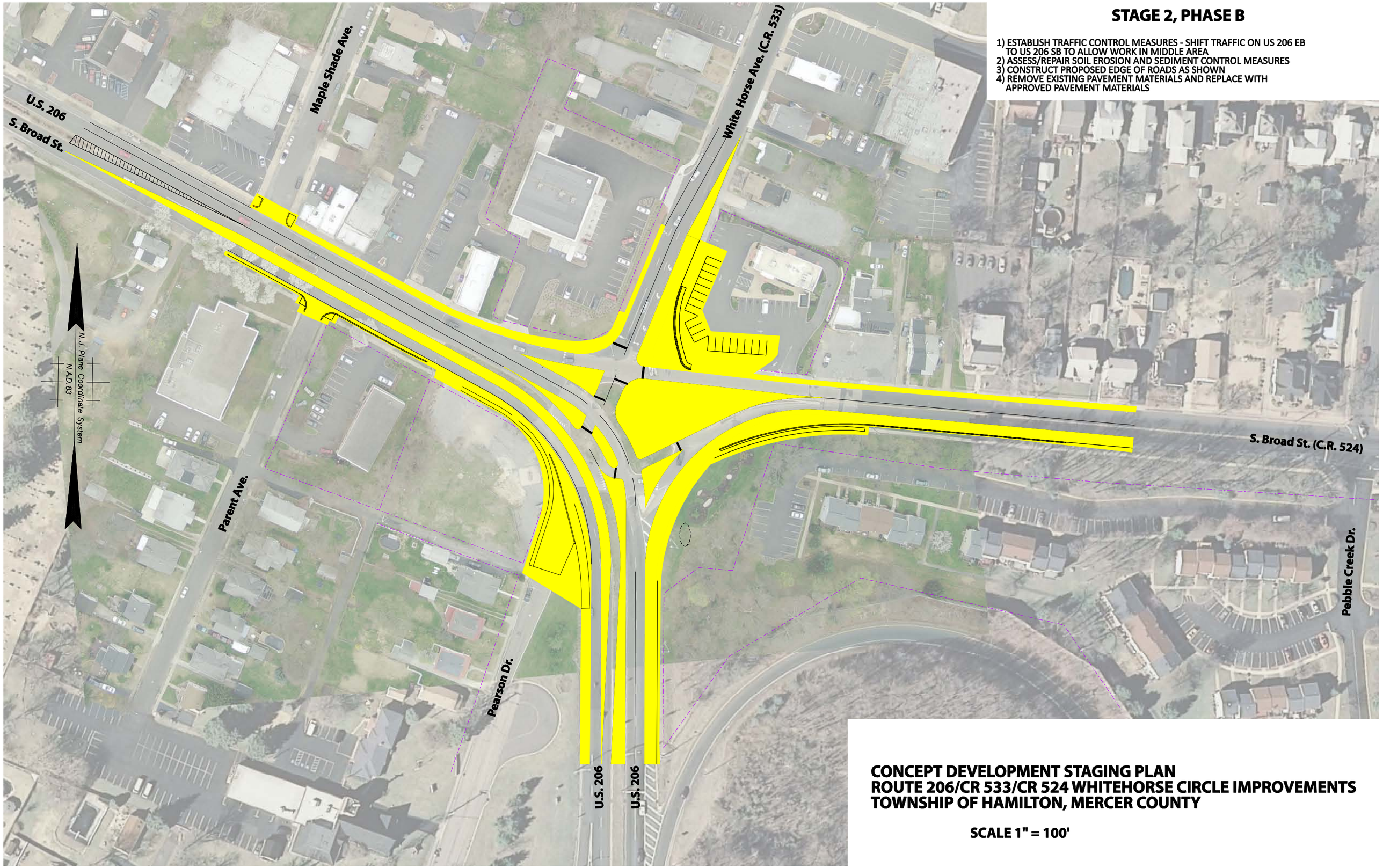


CONCEPT DEVELOPMENT STAGING PLAN
ROUTE 206/CR 533/CR 524 WHITEHORSE CIRCLE IMPROVEMENTS
TOWNSHIP OF HAMILTON, MERCER COUNTY

SCALE 1" = 100'

STAGE 2, PHASE B

1) ESTABLISH TRAFFIC CONTROL MEASURES - SHIFT TRAFFIC ON US 206 EB TO US 206 SB TO ALLOW WORK IN MIDDLE AREA
2) ASSESS/REPAIR SOIL EROSION AND SEDIMENT CONTROL MEASURES
3) CONSTRUCT PROPOSED EDGE OF ROADS AS SHOWN
4) REMOVE EXISTING PAVEMENT MATERIALS AND REPLACE WITH APPROVED PAVEMENT MATERIALS

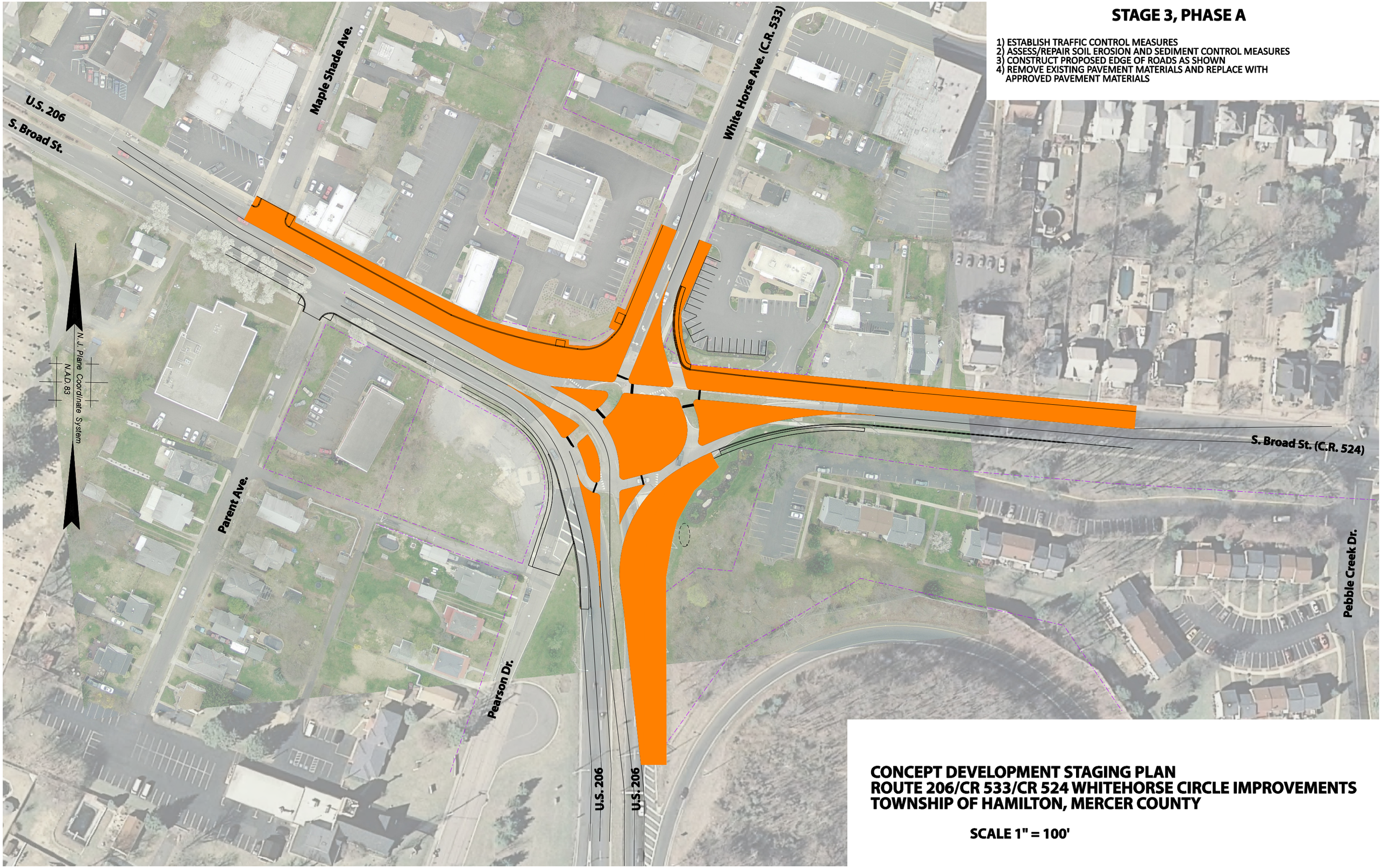


CONCEPT DEVELOPMENT STAGING PLAN
ROUTE 206/CR 533/CR 524 WHITEHORSE CIRCLE IMPROVEMENTS
TOWNSHIP OF HAMILTON, MERCER COUNTY

SCALE 1" = 100'

STAGE 3, PHASE A

1) ESTABLISH TRAFFIC CONTROL MEASURES
2) ASSESS/REPAIR SOIL EROSION AND SEDIMENT CONTROL MEASURES
3) CONSTRUCT PROPOSED EDGE OF ROADS AS SHOWN
4) REMOVE EXISTING PAVEMENT MATERIALS AND REPLACE WITH APPROVED PAVEMENT MATERIALS

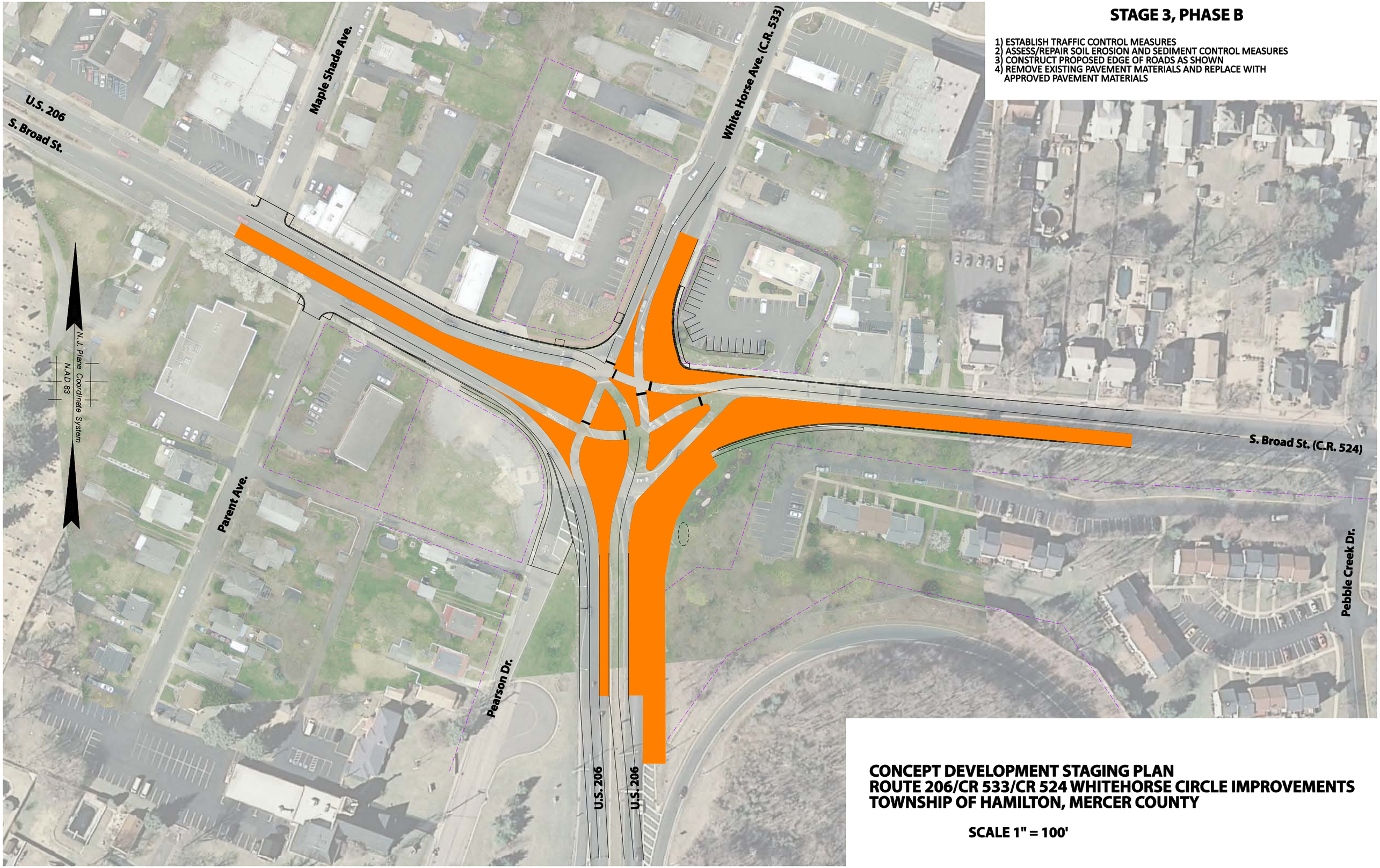


CONCEPT DEVELOPMENT STAGING PLAN
ROUTE 206/CR 533/CR 524 WHITEHORSE CIRCLE IMPROVEMENTS
TOWNSHIP OF HAMILTON, MERCER COUNTY

SCALE 1" = 100'

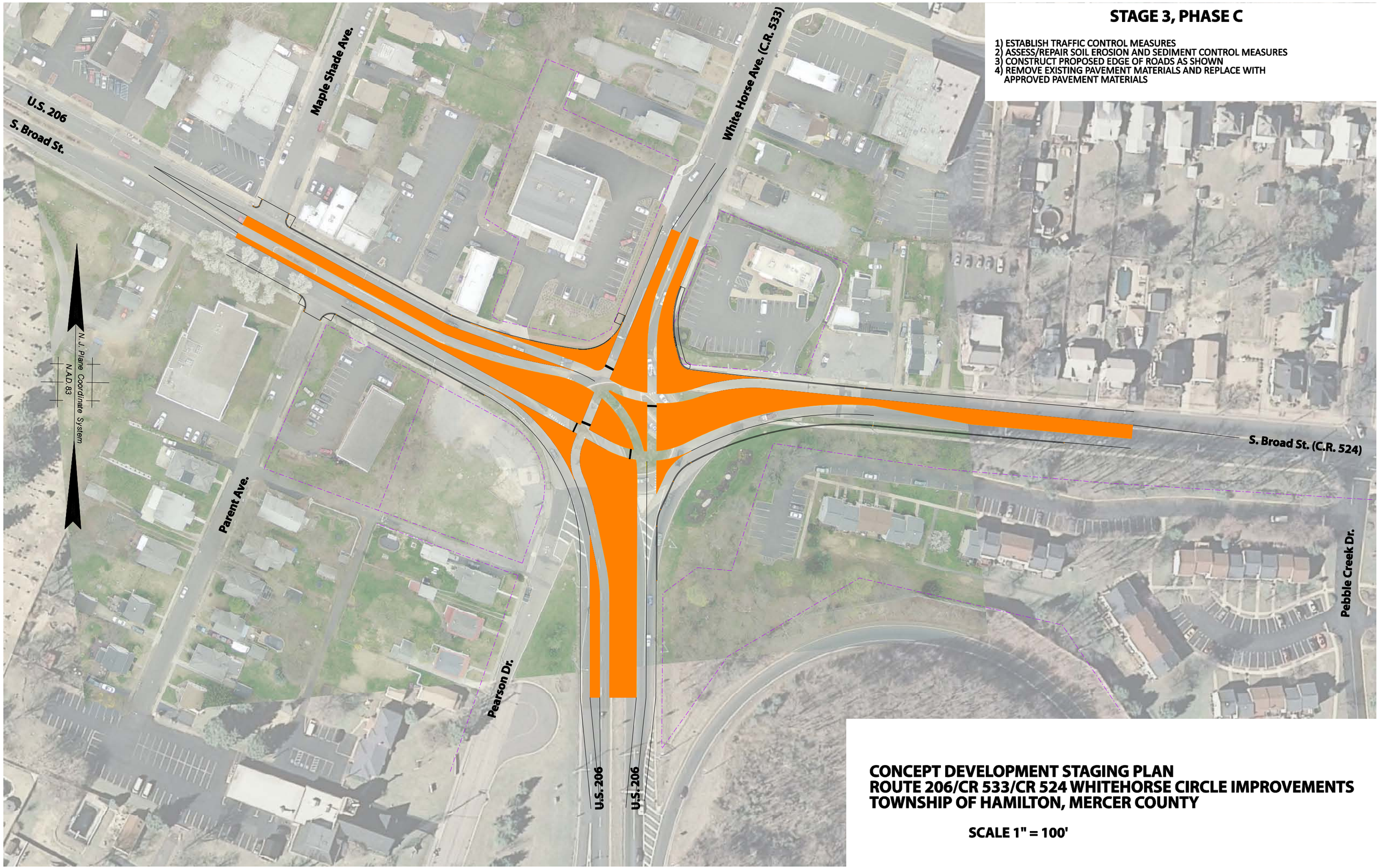
STAGE 3, PHASE B

1) ESTABLISH TRAFFIC CONTROL MEASURES
2) ASSESS/REPAIR SOIL EROSION AND SEDIMENT CONTROL MEASURES
3) CONSTRUCT PROPOSED EDGE OF ROADS AS SHOWN
4) REMOVE EXISTING PAVEMENT MATERIALS AND REPLACE WITH APPROVED PAVEMENT MATERIALS



CONCEPT DEVELOPMENT STAGING PLAN
ROUTE 206/CR 533/CR 524 WHITEHORSE CIRCLE IMPROVEMENTS
TOWNSHIP OF HAMILTON, MERCER COUNTY

SCALE 1" = 100'



STAGE 3, PHASE C

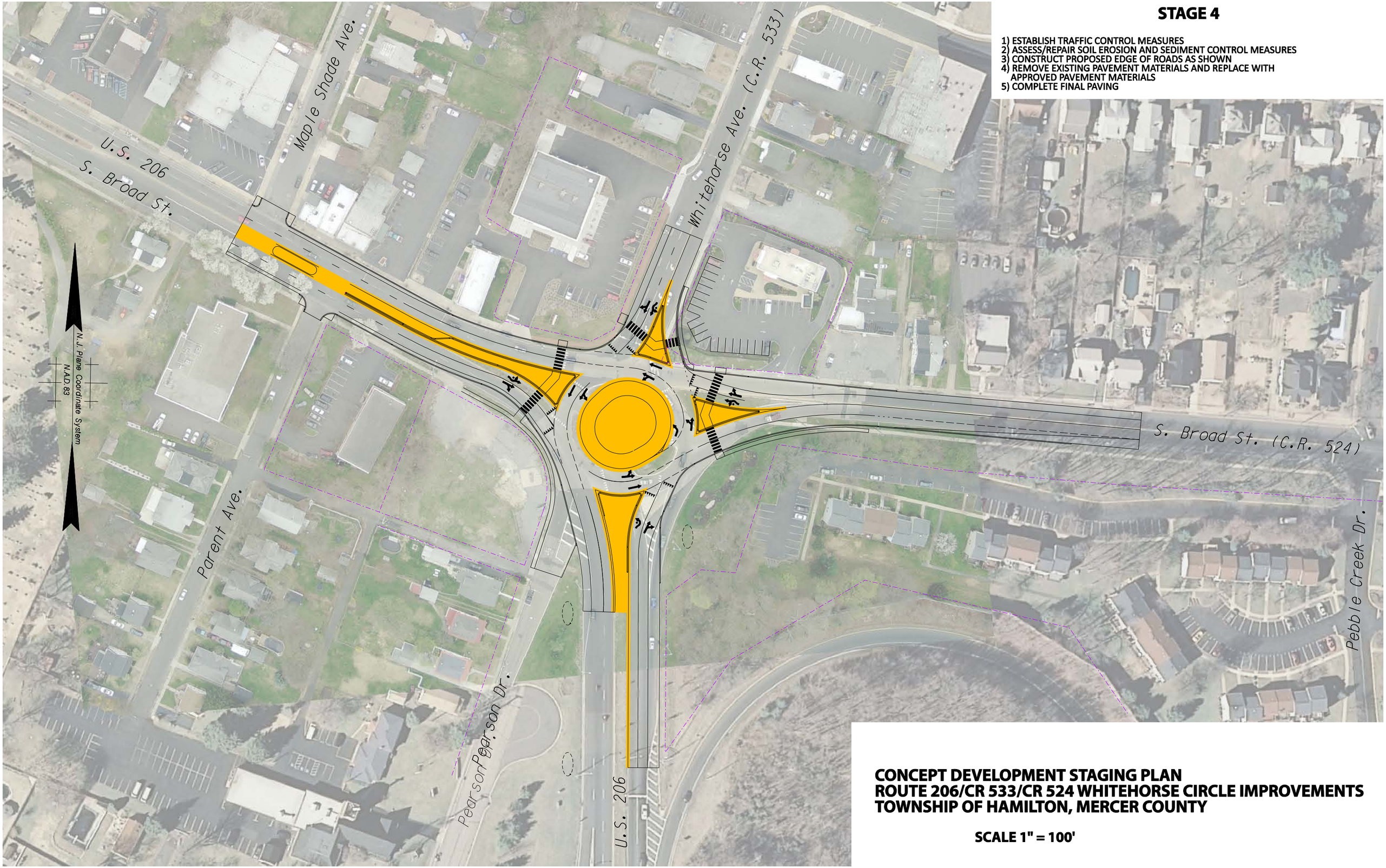
1) ESTABLISH TRAFFIC CONTROL MEASURES
2) ASSESS/REPAIR SOIL EROSION AND SEDIMENT CONTROL MEASURES
3) CONSTRUCT PROPOSED EDGE OF ROADS AS SHOWN
4) REMOVE EXISTING PAVEMENT MATERIALS AND REPLACE WITH APPROVED PAVEMENT MATERIALS

CONCEPT DEVELOPMENT STAGING PLAN
ROUTE 206/CR 533/CR 524 WHITEHORSE CIRCLE IMPROVEMENTS
TOWNSHIP OF HAMILTON, MERCER COUNTY

SCALE 1" = 100'

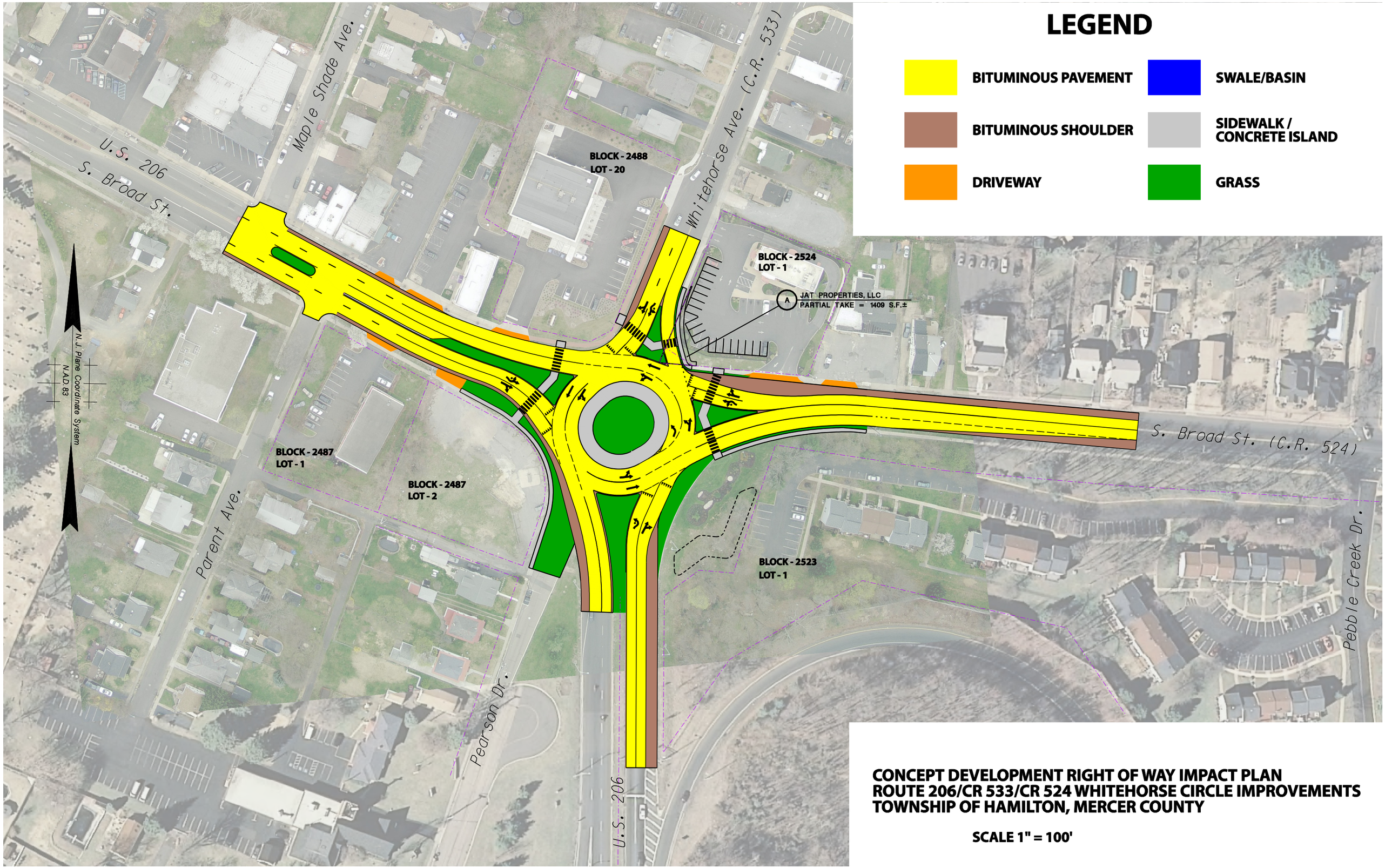
STAGE 4

1) ESTABLISH TRAFFIC CONTROL MEASURES
2) ASSESS/REPAIR SOIL EROSION AND SEDIMENT CONTROL MEASURES
3) CONSTRUCT PROPOSED EDGE OF ROADS AS SHOWN
4) REMOVE EXISTING PAVEMENT MATERIALS AND REPLACE WITH APPROVED PAVEMENT MATERIALS
5) COMPLETE FINAL PAVING



CONCEPT DEVELOPMENT STAGING PLAN
ROUTE 206/CR 533/CR 524 WHITEHORSE CIRCLE IMPROVEMENTS
TOWNSHIP OF HAMILTON, MERCER COUNTY

SCALE 1" = 100'



CONCEPT DEVELOPMENT RIGHT OF WAY IMPACT PLAN
ROUTE 206/CR 533/CR 524 WHITEHORSE CIRCLE IMPROVEMENTS
TOWNSHIP OF HAMILTON, MERCER COUNTY

SCALE 1" = 100'

PRELIMINARY ENGINEERING COST ESTIMATE SUMMARY

SUMMARY OF CONSTRUCTION PAY ITEMS	COST	
Earthwork (Not including MPT)	$	246,647
Pavement (Not including MPT)	$	670,670
Structures (Bridges and & Demolition)	$	0
Structures (Retaining Walls)	$	0
Drainage	$	127,525
Landscaping	$	89,485
Incidental Items (Guide Rail, Curb, Fence, etc.)	$	137,215
Electrical (Lighting)	$	60,000
PAY ITEMS SUBTOTAL =	**$**	1,331,541

GENERAL ITEMS		
Performance Bond	$	27,000
Insurance	$	10,000
Progress Schedule	$	10,000
Mobilization (10%)	$	133,154
Training (0.5%)	$	6,658
Field Office & Materials Lab	$	34,839
Construction Layout	$	45,000
Erosion Control (0.5%)	$	6,658
Maintenance & Protection of Traffic (10%)	$	133,154
Fuel & Asphalt Price Adjustment (0.5%)	$	6,658
Clearing Site	$	40,000
GENERAL ITEMS SUBTOTAL =	**$**	453,120

CONSTRUCTION ITEMS SUBTOTAL =	**$**	1,784,662

Design Contingency (3%)	$	53,540
Escalation (for 1 years) Est. 2016.5 Midpoint of Construction	$	0
CONSTRUCTION TOTAL =	**$**	1,838,201

Construction Engineering (20.3%)	$	362,286
Construction Change Order Contingencies	$	79,852
TOTAL CONSTRUCTION COST =	**$**	2,280,340
UTILITY RELOCATION COST (12%) =	**$**	273,641
RIGHT OF WAY COST =	**$**	100,000
TOTAL PROJECT COST =	**$**	2,653,980
SAY	**$**	2,700,000

PRELIMINARY CONSTRUCTION COST ESTIMATE

EARTHWORK

Item	Unit	Quantity	Unit Cost	Total
Excavation, Unclassified	CY	6,800	$ 26.80	$ 182,240
Excavation, Regulated Material	CY		$	$ 0
Excavation, Acid Producing Soil	CY		$	$ 0
Stripping (4"-6" Depth)	Acre	1	$ 6,869.66	$ 6,870
Borrow Excavation	SY	2,700	$ 21.31	$ 57,537
			EARTHWORK TOTAL COST =	**$ 246,647**

PAVMENT

Item	Unit	Quantity	Unit Cost	Total
HMA Surface Course	Tons	1,280	$ 58.85	$ 75,328
HMA Intermediate Course	Tons	1,920	$ 74.49	$ 143,021
HMA Base Course	Tons	3,200	$ 78.08	$ 249,856
Dense Graded Aggregate Base Course, 8" Thick	SY	11,200	$ 9.04	$ 101,248
Concrete Sidewalk, 4" Thick	SY	1,000	$ 60.96	$ 60,960
Milling, 2" Average	SY	7,100	$ 5.67	$ 40,257
			PAVEMENT TOTAL COST =	**$ 670,670**

STRUCTURES (BRIDGES & DEMOLITION)

Item	Unit	Quantity	Unit Cost	Total
N/A	LS		$	$ 0
			STRUCTURES (BRIDGES & DEMOLITION) TOTAL COST =	**$ 0**

STRUCTURES (RETAINING WALLS)

Item	Unit	Quantity	Unit Cost	Total
N/A	LS		$	$ 0
			STRUCTURES (RETAINING WALLS) TOTAL COST =	**$ 0**

DRAINAGE

Item	Unit	Quantity	Unit Cost	Total
Length of Project - Rt. 206 - Urban (with curb)	MILE	0.35	$ 364,356.00	$ 127,525
			DRAINAGE TOTAL COST =	**$ 127,525**

LANDSCAPING

Item	Unit	Quantity	Unit Cost	Total
Topsoil & Seeding - Mainline - Project Length in Miles	MILES	0.35	$ 112,815.00	$ 39,485
Plantings - Stormwater Management Basins	EA	1	$ 50,000.00	$ 50,000
			LANDSCAPING TOTAL COST =	**$ 89,485**

INCIDENTAL ITEMS

Item	Unit	Quantity	Unit Cost	Total
9x16 Conc. Vertical Curb	LF	5,500	$ 23.79	$ 130,845
Striping	LF	13,000	$ 0.49	$ 6,370
			DRAINAGE TOTAL COST =	**$ 137,215**

ELECTRICAL

Item	Unit	Quantity	Unit Cost	Total
Luminaires	UNIT	8	$ 7,500.00	$ 60,000
			ELECTRICAL TOTAL COST =	**$ 60,000**

PRELIMINARY ENGINEERING COST ESTIMATE SUMMARY

Class. No. 2 - RECONSTRUCTION, WIDENING, & DUALIZATION

CONTINGENCIES & ESCALATION

$1,784,661.54	X 1.03	X 1	= $1,838,201.39
Project Total	(1 + C)	1 + [0.01 (Y + 1) (Y - 2)] Y = Number of Years until midpoint of construction duraction. If midpoint is less than 2 years no escalation is required.	Construction Cost for PD Estimate

Project Cost (Mil.)	Contingencies (C) Percent	Average Construction Duration in Years
0-5	3%	1
5-20	2.5%	2
Over 20	2%	3

ROW COST

If there is now ROW cost on the project indicate "No ROW in the box | 100,000 |

CONSTRUCTION ENGINEERING (CE)

Project Cost (Mil.)	% of Construction Cost
Less than 1.0	31.1%
1.0 to 5.0	20.3%
5.0 to 10.0	16.2%
10.0 & above	12.2%
CONSTRUCTION ENGINEERING AMOUNT	$362,286.29

CONTINGENCIES FOR CONSTRUCTION CHANGE ORDER

Total Federal Participating Items in Millions of $	Construction Change Order Contingency Amount
$0 to 0.1	$6,000
0.1 to 0.5	25,000
0.5 to 5.0	25,000 + 4% of amount in excess of $500,000
5.0 to 10.0	205,000 + 3% of amount in excess of $5,000,000
10.0 to 15.0	355,000 + 2% of amount in excess of $10,000,000
15.0 and Above	500,000

For State Funded Projects, Contingencies for Change orders = 0

CONTINGENCIES = $79,851.85

JOB ESTIMATE REPORT

JOB NUMBER : WHC PRELIM SPEC YEAR: 07
DESCRIPTION: WHC RT 206/CR 533/CR 524 PPA PRELIM
PPA PRELIMINARY COST EST.

ITEMS FOR JOB WHC PRELIM

LINE	ITEM	ALT	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0001	607018P		LF	9" X 16" CONCRETE VERTICAL CURB	5500.000	23.79	130845.00
0002	606012P		SY	CONCRETE SIDEWALK, 4" THICK	1000.000	60.96	60960.00
0004	202009P		CY	EXCAVATION, UNCLASSIFIED	6800.000	26.80	182240.00
0005	202003P		ACRE	STRIPPING	1.000	6869.66	6869.66
0006	804015P		CY	BORROW TOPSOIL	2700.000	21.31	57537.00
0007	401009P		SY	HMA MILLING, 3" OR LESS	7100.000	5.67	40257.00
0008	401057M		T	HOT MIX ASPHALT 12.5 H 64 SURFACE COURSE	1280.000	58.85	75328.00
0009	401072M		T	HOT MIX ASPHALT 12.5 M 64 INTERMEDIATE C	1920.000	74.49	143020.80
0010	401099M		T	HOT MIX ASPHALT 25 M 64 BASE COURSE	3200.000	78.08	249856.00
0011	302042P		SY	DENSE-GRADED AGGREGATE BASE COURSE, 8" T	11200.000	9.04	101248.00
0012	610003M		LF	TRAFFIC STRIPES, LONG LIFE, EPOXY RESIN	13000.000	0.49	6370.00
0013	151003M		LS	PERFORMANCE BOND AND PAYMENT BOND	1.000		
0014	152003P		LS	OWNER'S AND CONTRACTOR'S PROTECTIVE LIAB	1.000		
0015	153003P		LS	PROGRESS SCHEDULE	1.000		
0016	155006M		U	FIELD OFFICE TYPE B SET UP	1.000	18105.42	18105.43
0017	156003M		U	MATERIALS FIELD LABORATORY SET-UP	1.000	16733.42	16733.42
0018	157003M		LS	CONSTRUCTION LAYOUT	1.000		
0019	201003P		LS	CLEARING SITE	1.000		

ITEM TOTAL 1089340.25
INFLATED ITEM TOTAL 1089340.25

TOTALS FOR JOB WHC PRELIM

ESTIMATED COST: 1089370.31
CONTINGENCY PERCENT (0.0): 0.00

ESTIMATED TOTAL: 1089370.31

NJDOT Complete Streets Checklist

Background

The New Jersey Department of Transportation's Complete Streets Policy promotes a "comprehensive, integrated, connected multi-modal network by providing connections to bicycling and walking trip generators such as employment, education, residential, recreational and public facilities, as well as retail and transit centers." The policy calls for the establishment of a checklist to address pedestrian, bicyclist and transit accommodations "with the presumption that they shall be included in each project unless supporting documentation against inclusion is provided and found to be justifiable."

Complete Streets Checklist

The following checklist is an accompaniment to NJDOT's Complete Streets Policy and has been developed to assist Project Managers and designers develop proposed alternatives in adherence to the policy. Being in compliance with the policy means that Project Managers and designers plan for, design, and construct all transportation projects to provide appropriate accommodation for bicyclists, pedestrians, and transit users on New Jersey's roadways, in addition to those provided for motorists. It includes people of all ages and abilities. The checklist applies to all NJDOT projects that undergo the Capital Project Delivery (CPD) Process and is intended for use on projects during the earliest stages of the Concept Development or Preliminary Engineering Phase so that any pedestrian or bicycle considerations are included in the project budget. The Project Manager is responsible for completing the checklist and must work with the Designer to ensure that the checklist has been completed prior to advancement of a project to Final Design.

Using the Complete Streets Checklist

The Complete Streets Checklist is a tool to be used by Project Managers and designers throughout Concept Development and Preliminary Engineering to ensure that all developed alternatives reflect compliance with the Policy. When completing the checklist, a brief description is required for each **"Item to be Addressed"** as a means to document that the item has been considered and can include supporting documentation.

CONCEPT DEVELOPMENT CHECKLIST

Instructions:
For each box checked, please provide a brief description for how the item is addressed, not addressed or not applicable and include documentation to support your answer.

Item to be Addressed	Checklist Consideration	YES	NO	N/A	Required Description
Existing Bicycle, Pedestrian and Transit Accommodations	Are there accommodations for bicyclists, pedestrians (including ADA compliance) and transit users included on or crossing the current facility? **Examples include (but are not limited to):** Sidewalks, public seating, bike racks, and transit shelters	☒	☐	☐	Currently the project has sidewalk within the project limits
Existing Bicycle and Pedestrian Operations	Has the existing bicycle and pedestrian suitability or level of service on the current transportation facility been identified?	☐	☒	☐	Not part of the project SOW
	Have the bicycle and pedestrian conditions within the study area, including pedestrian and/or bicyclist treatments, volumes, important connections and lighting been identified?	☒	☐	☐	The proposed project will incorporate additional sidewalks and crossings at the intersection
	Do bicyclists/pedestrians regularly use the transportation facility for commuting or recreation?	☐	☒	☐	Limited. The current condition is hazardous to pedestrians and bicyclists
	Are there physical or perceived impediments to bicyclist or pedestrian use of the transportation facility?	☒	☐	☐	High accident location and no dedicated bicycle or pedestrian realm
	Is there a higher than normal incidence of bicyclist/pedestrian crashes within the study area?	☐	☒	☐	Expectation is the area is avoided for safety concerns

Item to be Addressed	Checklist Consideration	YES	NO	N/A	Required Description
	Have the existing volumes of pedestrian and/or bicyclist crossing activity at intersections including midblock and nighttime crossing been collected/provided?	☐	☒	☐	Not part of the project SOW
Existing Transit Operations	Are there existing transit facilities within the study area, including bus and train stops/stations?	☒	☐	☐	Bus Stops adjacent to the project location
	Is the transportation facility on a transit route?	☒	☐	☐	Bus route
	Is the transportation facility within two miles of "park and ride" or "kiss and go" lots?	☐	☒	☐	
	Are there existing or proposed bicycle racks, shelters, or parking available at these lots or transit stations? Are there bike racks on buses that travel along the facility?	☐	☐	☒	
Existing Motor Vehicle Operations	Are there existing concerns within the study area, regarding motor vehicle safety, traffic volumes/congestion or access?	☒	☐	☐	High accident location
Existing Truck/Freight Operations	Are there existing concerns within the study area, regarding truck/freight safety, volumes, or access?	☐	☒	☐	Low truck traffic
Existing Access and Mobility	Are there any existing access or mobility considerations, including ADA compliance?	☒	☐	☐	Limited ADA compliance. Proposed project will rectify
	Are there any schools, hospitals, senior care facilities, educational buildings, community centers, residences or businesses of persons with disabilities within or proximate to the study area?	☒	☐	☐	Several facilities close to project location
Land Usage	Have you identified the predominant land uses and densities within the study area, including any historic districts or special zoning districts?	☒	☐	☐	Varies

Item to be Addressed	Checklist Consideration	YES	NO	N/A	Required Description
	Is the transportation facility in a high-density land use area that has pedestrian/bicycle/motor vehicle and transit traffic?	☒	☐	☐	Multimodal needs
Major Sites	Have you identified the major sites, destinations, and trip generators within or proximate to the study area, including prominent landmarks, employment centers, recreation, commercial, cultural and civic institutions, and public spaces?	☒	☐	☐	Various
Existing Streetscape	Are there existing street trees, planters, buffer strips, or other environmental enhancements such as drainage swales within the study area?	☒	☐	☐	Limited items
Existing Plans	Are there any comprehensive planning documents that address bicyclist, pedestrian or transit user conditions within or proximate to the study area? **Examples include (but are not limited to):** • SRTS Travel Plans • Municipal or County Master or Redevelopment Plan • Local, County and Statewide Bicycle and Pedestrian Plans • Sidewalk Inventories • MPO Transportation Plan • NJDOT Designated Transit Village	☐	☒	☐	Not available

PROJECT MANAGER SIGN-OFF

Statement of Compliance	YES	NO	If NO, Please Describe Why (refer to Exemptions Clause)
The Preliminary Preferred Alternative (PPA) accommodates bicyclists and pedestrians as set forth in the New Jersey Department of Transportation's Complete Streets Policy.	☒	☐	

PRELIMINARY ENGINEERING CHECKLIST

Instructions:
For each box checked, please provide a brief description for how the item is addressed, not addressed or not applicable and include documentation to support your answer.

Item to be Addressed	Checklist Consideration	YES	NO	N/A	Required Description
Bicyclist, Pedestrian, and Transit Accommodations	Does the proposed project design include accommodations for bicyclists? **Examples include (but are not limited to):** **Bicycle facilities:** bicycle path; bicycle lane; bicycle route; bicycle boulevard; wide outside lanes or improved shoulders; bicycle actuation at signals (loop detectors and stencil or other means); signs, signals and pavement markings specifically related to bicycle operation on roadways or shared-use facilities; bicycle safe inlet grates **Bicycle amenities**: Call boxes (for trail or bridge projects); drinking fountains (also for trail projects); secure long term bicycle parking (e.g., for commuters and residents); and secure short term bicycle parking.	☒	☐	☐	Roundabout intersection control, Sidewalks and crosswalks, ADA Compliance
	Does the proposed project design address accommodations for pedestrians? **Examples include (but are not limited to):** **Pedestrian facilities**: Sidewalks (preferably on both sides of the street); mid-block crosswalks; striped crosswalks; geometric modifications to reduce crossing distances such as curb extensions (bulb-outs); pedestrian-actuated traffic signals such as High Intensity Activated Crosswalk Beacons, Rapid Rectangular Flashing Beacons; dedicated pedestrian phase; pedestrian signal heads and pushbuttons;	☒	☐	☐	Roundabout intersection control, Sidewalks and crosswalks, ADA Compliance

Item to be Addressed	Checklist Consideration	YES	NO	N/A	Required Description
	pedestrian signs for crossing and wayfinding, lead pedestrian intervals; high visibility crosswalks (e.g., ladder or zebra); pedestrian-level lighting; in-road warning lights; pedestrian safety fencing; pedestrian detection system; pedestrian overpass/underpass; and median safety islands for roadways with (two or more traffic lanes in each direction). **Pedestrian amenities:** Shade trees; public seating; drinking fountains				
	Have you coordinated with the corresponding transit authority to accommodate transit users in the project design? **Transit facilities**: Transit shelters, bus turnouts **Transit amenities:** public seating, signage, maps, schedules, trash and recycling receptacles	☐	☒	☐	Not part of the project SOW
Bicyclist and Pedestrian Operations	Does the proposed design consider the desired future bicyclist and walking conditions within the project area including safety, volumes, comfort and convenience of movement, important walking and/or bicycling connections, and the quality of the walking environment and/or availability of bicycle parking?	☒	☐	☐	Roundabout intersection control, Sidewalks and crosswalks, ADA Compliance
Transit Operations	Does the proposed design address the desired/anticipated future transit conditions within the project area, including bus routes and operations and transit station access support transit usage and users?	☒	☐	☐	Roundabout intersection control, Sidewalks and crosswalks, ADA Compliance

Item to be Addressed	Checklist Consideration	YES	NO	N/A	Required Description
Motor Vehicle Operations	Does the proposed design address the desired future motor vehicle conditions within the project area, including volumes, access, important motor vehicle connections, appropriateness of motor vehicle traffic to the particular street (e.g., local versus through traffic) and the reduction of the negative impacts of motor vehicle traffic?	☒	☐	☐	Roundabout intersection control, Sidewalks and crosswalks, ADA Compliance
Truck/Freight Operations	Does the proposed design address the desired future truck conditions within the project area, including truck routes, volumes, access, mobility and the reduction of the negative impacts of truck traffic?	☒	☐	☐	Roundabout intersection control, Sidewalks and crosswalks, ADA Compliance
Access and Mobility	Does the proposed design address accommodations for those with access or mobility challenges such as the disabled, elderly, and children, including ADA compliance? **Examples include (but are not limited to):** Curb ramps, including detectable warning surface; accessible signal actuation; adequate sidewalk or paved path (length & width or linear feet); acceptable slope and cross-slope (particularly for driveway ramps over sidewalks, over crossings and trails); and adequate green signal crossing time	☒	☐	☐	Roundabout intersection control, Sidewalks and crosswalks, ADA Compliance
Land Usage	Is the proposed design compatible with the predominant land uses and densities within the project area, including any historic districts or special zoning districts?	☒	☐	☐	Yes. It preserves the existing context.
Major Sites	Can the proposed design support the major sites, destinations, and trip generators within or proximate to the project area, including prominent landmarks, *commercial*, cultural and civic institutions, and public spaces?	☒	☐	☐	Yes. It preserves the existing context.

Item to be Addressed	Checklist Consideration	YES	NO	N/A	Required Description
Streetscape	Does the proposed design include landscaping, street trees, planters, buffer strips, or other environmental enhancements such as drainage swales?	☐	☐	☒	To be determined
Design Standards or Guidelines	Does the proposed design follow all applicable design standards or guidelines appropriate for bicycle and/or pedestrian facilities? **Examples include (but are not limited to):** American Association of State Highway and Transportation Officials (AASHTO) - *A Policy on Geometric Design of Highway and Streets, Guide for the Development of Bicycle Facilities, Guide for the Planning, Design, and Operation of Pedestrian Facilities; Public Right-of-Way Accessibility Guide* (PROWAG); *Manual on Uniform Traffic Control Devices* (MUTCD); *Americans with Disabilities Act Accessibility Guidelines* (ADAAG); National Association of City Transportation Officials (NACTO) - *Urban Bikeway Design Guide;* New Jersey Department of Transportation (NJDOT) - *Bicycle Compatible Roadways & Bikeways Planning and Design Guidelines, Pedestrian Planning and Design Guidelines.*	☒	☐	☐	To be further addressed during Preliminary Engineering.

PROJECT MANAGER SIGN-OFF

Statement of Compliance	YES	NO	If NO, Please Describe Why (refer to Exemptions Clause)
The Approved Project Plan (APP) accommodates bicyclists and pedestrians as set forth in the New Jersey Department of Transportation's Complete Streets Policy.	☒	☐	

Appendix K – Resolution of Support

TOWNSHIP OF HAMILTON
COUNTY OF MERCER, NEW JERSEY

RESOLUTION No. 12-179

APPROVED AS TO FORM AND LEGALITY

TOWNSHIP ATTORNEY

FACTUAL CONTENTS CERTIFIED TO BY

TITLE

RESOLUTION CONCURRING WITH THE REDESIGN OF THE ROUTE 206 WHITEHORSE CIRCLE

WHEREAS, in the interest of promoting safety and better traffic flow, the New Jersey Department of Transportation has redesigned the exiting Route 206 Whitehorse Circle, creating a roundabout; and

WHEREAS, NJDOT has presented the redesign at a Public Meeting of the Hamilton Township Council; and

WHEREAS, the Township Engineering, Police Division and Mayor support the redesign of the existing circle; and

WHEREAS, the cost of constructing the new design would be the responsibility of the State of New Jersey.

NOW, THEREFORE, BE IT RESOLVED by the Township Council of the Township of Hamilton, in the County of Mercer and State of New Jersey does hereby support the redesign and construction of a roundabout to replace the existing Route 206 Whitehorse Circle; and

12-179 2a

ADOPTED BY COUNCIL ON APRIL 17, 2012
DATE

PRESIDENT

MUNICIPAL CLERK

RECORD OF VOTE						
COUNCIL	AYE	NAY	N.V.	A.B.	RES.	SEC.
DAVID KENNY	✓				✓	
KELLY YAEDE	✓					✓
DENNIS PONE	✓					
EDWARD GORE	✓					
KEVIN MEARA	✓					

X – Indicates Vote A.B. – Absent N.V. – Not Voting RES. - Moved SEC. – Seconded

RESOLUTION CONCURRING WITH THE REDESIGN OF THE ROUTE 206 WHITEHORSE CIRCLE

WHEREAS, in the interest of promoting safety and better traffic flow, the New Jersey Department of Transportation has redesigned the existing Route 206 Whitehorse Circle, creating a roundabout; and

WHEREAS, NJDOT has presented the redesign at a Public Meeting of the Hamilton Township Council; and

WHEREAS, the Township Engineer, Police Division and Mayor support the redesign of the existing circle; and

WHEREAS, the cost of constructing the new design would be the responsibility of the State of New Jersey.

NOW, THEREFORE, BE IT RESOLVED by the Township Council of the Township of Hamilton, in the County of Mercer and State of New Jersey does hereby support the redesign and construction of a roundabout to replace the existing Route 206 Whitehorse Circle; and

I certify this to be a true copy of a resolution adopted by the Township Council of the Township of Hamilton at a meeting held on April 18, 2012.

20

12-179

_____

REQUEST FOR COUNCIL ACTION

DATE: April 2, 2012

SERVICE REQUESTED

____ Ordinance

_X_ Resolution

____ Item for Discussion (explain)

INITIATING DEPT/DIV: Business Administration

SUBJECT MATTER: Resolution Concurring with the Redesign of the Route 206 Whitehorse Circle

LIST SUPPORTING DATA: Resolution

AMOUNT OF FUNDING: $ -0-
(If applicable)

BUDGET ACCOUNT NAME: _____
(i.e. Dept. of Adm., Professional Services)

BUDGET ACCOUNT NO(S). _____
(i.e. 9-01-20-120-000-028)

APPROVED BY: _____
John F. Ricci, Business Administrator

Deadline for submission to the Office of the Business Administrator for review and approval is 3:00 pm on the Monday preceding the Council Meeting.

APR 3 2012

2a

12-179

John F. Bencivengo
MAYOR

The Township of Hamilton

Department of Community Planning and Compliance
Robert S. Warney, *Director*

April 18, 2012

Ms. Kimberley Nance, Regional Manager
Community & Constituent Relations
NJ Department of Transportation
1035 Parkway Avenue, P. O. Box 600
Trenton, New Jersey 08625-0600

RE: Route 206 – Whitehorse Circle

Dear Ms. Nance:

Enclosed please find a certified copy of Resolution No. 12 179 in which the Township of Hamilton concurs with the redesign of the Route 206 Whitehorse Circle.

I can be reached at 609-890-3636 should you need to discuss this further.

Very truly yours,

Richard S. Williams, P.E., P.P., C.M.E.
Township Engineer

RSW/jv
enclosure
c: John F. Ricci, Bus. Adm.
Robert S. Warney, Dir.of CP&C
Eileen Gore, Municipal Clerk
File (Whitehorse Circle)
Cron

2090 Greenwood Avenue · P.O. Box 00150 · Hamilton, NJ 08650-0150
Website www.HamiltonNJ.com

Appendix L – Preliminary Engineering Scope Statement

NJDOT Scope Statement

Preliminary Engineering

Route 206 Whitehorse Circle (CR 533,524)

Purpose: The Preliminary Engineering Scope Statement lists the proposed project's deliverables and the activities required to create those deliverables. The scope statement also provides a common understanding of the proposed project's scope to stakeholders, subject matter experts, and the designer and lists the proposed project's major objectives. It enables the Project Manager to perform more detailed planning, it helps guide the design team's work during execution, and provides the baseline for evaluating whether change requests or additional work are contained within or outside the proposed project's boundaries.

Notes: The intent of the Preliminary Engineering (PE) Scope Statement is to provide useful project information to designers who are interested in becoming the designer of record for PE and possibly Final Design and Construction for this project. In addition, it will be used to solicit a man-hour estimate and cost proposal. The PE Scope Statement identifies the key elements of PE that are necessary to advance the proposed project to the Final Design (FD) Phase.

The PE Scope Statement is developed by the Division of Project Management (DPM) Project Manager and the Concept Development (CD) Designer near the conclusion of CD, prior to requesting the services of a designer to perform PE. The Scope of Work section is approved by the appropriate Subject Matter Experts (SME).

Section 1 of the document focuses on Proposed Project Identification Information and CD data including the location and description. Section 2 of the document specifies the Scope of Work for PE.

PROPOSED PROJECT IDENTIFICATION INFORMATION

PROPOSED PROJECT SPECIFICS

Proposed Project Name	Limits
Route 206 Whitehorse Circle (CR 533,524)	The project study limits are along Route 206 from M.P. 38.5 to M.P. 39.3, CR 533 from M.P. 0.0 to M.P. 0.5, and CR 524 from M.P. 0.0 to 0.5
NJDOT Project Manager	**NJDOT Program Manager**
William Birch	Mark Rollo
Counties	**Municipalities**
Mercer Not Selected Not Selected	Hamilton Township _____ _____
UPC Number	950526
DB Number	_____
Legislative District(s)	14 _____ _____
Congressional District (s)	12 _____ _____
Route	206
Start Milepost	38.5
End Milepost	39.3
Alternate Route	N/A
Alternate Start Milepost	N/A
Alternate End Milepost	N/A
STIP Information	_____
Structure Numbers	N/A
Project Classification:	2 - Reconstruction
MPO	DVRPC

NJDOT Scope Statement

Preliminary Engineering

PROPOSED PROJECT ESTIMATE

List the Proposed Project estimates for each category from Concept Development.

Project Item:	CD Phase Estimated Amount
ROW	$100,000
Utility Relocation	$275,000
Construction	$1,839,000
Construction Engineering	$363,000
Contingencies	$80,000
Total	$2,656,000

CONCEPT DEVELOPMENT INFORMATION

Date of Concept Development Report:	1/2013	**Date of Federal Approval of CD Report:**	_____
Date of CPC decision to advance project to PE:	_____		
CD Designer:	Urban Engineers, Inc.		
PE to be Completed by (check one):	☐ In-House ☒ Consultant		

Purpose and Need: The purpose of the project is to develop concepts that will improve safety and operational problems at the White Horse Circle. Following an evaluation of existing conditions, the main project need is to improve safety as the Whitehorse Circle has a high number of crashes.

Description of Preliminary Preferred Alternative: After consideration and discussion with NJDOT, Mercer County and Hamilton Township officials, the decision is to advance a two lane roundabout as the PPA. The solution addresses the established purpose and need, and was viewed favorably by the participating entities. All movements (e.g., from US Route 206 to Whitehorse Avenue) currently provided at the circle will be provided with the PPA design with the exception of access to Pearson Drive.

Specifically, the PPA consists of the following:

- Provides for two lanes on each approach
- Provides for two circulating lanes and two exit lanes with the exception of Northbound Whitehorse Avenue, which will have one exiting lane
- Traffic currently using the one-way entrance to Pearson Drive from the circle will access Pearson Drive via Parent Drive and the existing alley way or will use Hobson Avenue from the intersection with South Broad Street.
- Construction of crosswalks and sidewalks where appropriate
- Removes the metering signal at MP 38.81 (including signal equipment, and pavement markings)
- Revises signs and pavement markings (removes/adds) at and on the approaches to be consistent with latest MUTCD

signing and pavement marking standards for roundabouts

- Relocates utility poles

The PPA reduces the number of conflict points and eliminates the yielding while in the circle condition thereby helping to reduce confusion which should help reduce the number of crashes. The PPA also provides a reduction in average vehicle delay, provides for a gradual speed reduction into the local Hamilton Township and Mercer County transportation network and has operational capacity for the long-term.

Project Goals and Objectives: Alternatives developed to address the identified needs should be consistent with the following goals and objectives:

- Improve the safety and movement of traffic within the Whitehorse Circle.
- Improve safety and accessibility for everyone on or near the road including neighborhood residents, pedestrians, bicyclists and motorists.
- Improve and enhance the safety of residential properties abutting the roadway.
- Preserve and enhance the character of the roadway and surrounding environment, so that the roadway "fits" into the community.
- Encourage a more walkable environment.
- Improve the environmental quality within the project area.

PRELIMINARY ENGINEERING INFORMATION (to be filled in upon selection of a designer)

PE Designer:	_____	
FMIS Contract ID Number (e.g., 89 00766):	_____	**Funding Source:** _____
Agreement Number (e.g., 2001PM03):	_____	

NJDOT Scope Statement

Preliminary Engineering

PRELIMINARY ENGINEERING DELIVERABLES

3.1 Preliminary Engineering Initiation	☒ Utility Agreement	☐ Environmental Assessment
☒ Kickoff Meeting Minutes	☒ Subsurface Utility Engineering Test Pit Report	☐ Finding of No Significant Impact (FONSI)
3.2 Roadway Engineering	☒ Updated Base Plans (With Identified Conflicts)	☐ Environmental Commitments/Plan Sheets
☒ Control Survey Report	☐ Railroad Diagnostic Team Meeting Memo of Record	☐ Historic Sites Council Concurrence
☒ Topographic Survey	**3.6 Quality Management**	**3.9 Preliminary Engineering Report**
☒ Base Maps	☒ PE Quality Management Certification	☒ Approved Project Plan
☒ Preliminary Drainage Design Report	**3.7 Communications**	☒ Construction Cost Estimate
☒ Traffic Engineering Facility Location	☒ Design Communications Report	☐ Design Exception Report
☒ Constructability and Maintenance Review Comments	**3.8 Environmental Documents**	☒ Final Design Scope Statement
☐ Preliminary ITS Facility Design Plans	*Technical Environmental Studies*	☐ Updated Project Management Plan
☒ Updated Preliminary Detour and Construction Staging Plans	☒ Air Study	☐ Project Management Plan (Major Projects
☒ Preliminary Roadway Plans	☒ Noise Study	☒ Alternatives Analysis Report
☒ Pavement Design Data	☒ Ecology Study	☒ Core Group Meeting Minutes
☒ Pavement Recommendation	☒ Hazardous Waste Study	☒ Final Design Public Involvement Action Plan
☒ Lighting Warrant Analysis Report	☒ Socio-Economic Study	☒ Complete Streets Checklist
☐ Initial Deforestation/ Reforestation Plan	☒ Cultural Resources Study	**3.10 Contracts**
☒ Preliminary Construction Schedule	*Section 4(f)*	*Final Design Addendum*
3.3 Structural Engineering	☒ Individual Section 4(f) Evaluation	☒ Final Design Designer Fee Proposal
☐ Structural Design Recommendation Summary	☐ Programmatic Section 4(f) Evaluation	
☐ Preliminary Geotechnical Engineering Report	☐ De Minimis Section 4(f) Evaluation	☒ Final Invoice
3.4 Right of Way and Access	☐ Net Benefit Section 4(f) Evaluation	*Final Design Independent Cost Estimate*
☒ Project Access Plan		☒ Summary Independent Cost Estimate Report
☒ Access Impact Summary	☐ Executive Order 215 (E.O. 215) Document	
☒ Right of Way Report		☒ Final Design Schedule
☒ Right of Way Impact Plan	☐ Environmental Impact Statement	☒ Final Design Budget
☒ Initial Right of Way Estimate	☐ Record of Decision (ROD)	☒ Notice of Authorization
3.5 Utility Engineering		**3.11 Preliminary Engineering Approvals**
☒ Utility Base Plans	☒ Categorical Exclusion Document	☒ Capital Program Screening Committee Recommendation
☒ Utility Letter No. 2	☐ Certified Categorical Exclusion Document	☒ Capital Program Committee Approval
☒ Utility Engineering Funding Authorization		☒ FHWA Approval

SUMMARY OF COMMITMENTS

List any commitments made to the public, local officials or other government agencies:

Project Commitment	Unit Requesting the Commitment	Unit Fulfilling Commitment	Special Needs
ITS Facilities	Traffic Operations South	DPM	None

List any anticipated commitments that may be made:

APPROVAL		
Name	**Title**	**Date Approved**
William Birch	Project Manager Division of Project Management	
Mark Rollo	Program Manager Division of Project Management	
E. David Lambert	Director Division of Project Management	
Joseph Sweger	Manager Bureau of Landscape Architecture and Environmental Solutions	

PRELIMINARY ENGINEERING SCOPE OF WORK

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NOTE: The PE Designer will perform the tasks associated with PE as so marked, in preparation for Final Design. The Project Manager will review and negotiate the proposal, execute the Agreement and instruct the designer to begin work. The Project Manager will direct the proposed project through PE.

Right of Way

Activity No.	Activity Name	Execute	Responsible Unit	Comments
3110	Prepare ROW Report	☒ Yes ☐ No	☒ Designer	
3115	Initiate ROW Impact Plan	☒ Yes ☐ No	☒ Designer	
3120	Hold ROW Kickoff Meeting	☒ Yes ☐ No	☒ ROW ☒ DPM ☒ Designer	
3125	Prepare Initial ROW Estimate	☒ Yes ☐ No	☒ ROW ☒ DPM	

Total Number of Parcels: 1

1. Fee Parcel /Easements

Number of fee parcels (partial):	1	**Number of fee parcels (entire):**	0	**Number of residential relocations:**	0
Number of permanent easements (E parcels):		**Number of temporary easements:**	1	**Number of commercial relocations:**	0

2. List any known or potential environmental problems or issues that may impact Right of Way processes or decisions (cross reference with the Environmental section of the Scope Statement document: 0

3. List any environmentally sensitive parcels (ESPs), underground storage tanks, freshwater wetlands: 0

4. Identify Riparian Parcels (currently flowed), Easements and/or Green Acres Diversions by contacting NJDEP for any Right of Way to be acquired: 0

5. Identify parcels that can be eliminated by design change modifications and attempts to mitigate damages suffered by the remaining properties. 1

6. Decision to expand parcel for further use or contingency. 0

7. List the number of Non Real Estate Engineering (NRE) parcels. 1, Block 2524, Lot 1

8. List any commitments and conditions made to the public or to private property owners that may impact Right of Way processes or decisions: 0

9. Green Acres mitigation method: ☐ **Dollar Reimbursement** ☐ **Property Replacement**

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include number and type of parcels, known environmental problems, riparian parcels, public commitments, etc.

Access

Activity No.	Activity Name	Execute	Responsible Unit	Comments
3105	Prepare Project Access Plan and Access Impact Summary	☒ Yes ☐ No	☒ DPM ☒ Designer ☒ OAD	

Number of Adjustments:	2	Number of Modifications:	0	Number of Revocations:	0

1. Note any pending agreements or access applications within the proposed project limits: None

2. Are proposed left turn lanes in compliance with the Access Level? ☐ Yes ☒ No

3. Is the proposed Typical Section of the roadway in compliance with the Highway Access Code? ☒ Yes ☐ No

4. Total No. of Driveways impacted: 2

5. Any commercial properties with access modifications and/or Revocations that have potential impacts to site parking slots, circulations and operation of business? ☒ Yes ☐ No
If yes, provide details of impact with Block and Lot Nos. Block 2524, Lots 1 & 29 - Modifications to current access, parking spaces and possibly circulation

6. Any commercial properties that will require necessary assistance in the establishment of the alternative access (as per NJAC 16:47-4.33)? ☐ Yes ☒ No
If yes, provide details of assistance with Block and Lot Nos. _____

7. Any commercial properties that will require the preparation of an Access Impact Assistance (AIA) report? ☐ Yes ☒ No
If yes, provide Block and Lot Nos. _____

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include number of driveways impacted, pending agreements or major access permit applications, driveway modifications causing circulation issues, alternative access issues, Access Impact Assistance issues, etc.

Drainage Management
Regional Maintenance
Hydrology and Hydraulics

Activity No.	Activity Name	Execute	Responsible Unit	Comments
3085	Prepare Preliminary Drainage Design	☒ Yes ☐ No	☒ DPM ☒ Designer	

Drainage Management

1. Identify all existing drainage deficiencies as per the Drainage Management System: n/a

Regional Maintenance

2. Identify all existing drainage deficiencies (undersized system, excessive spread into travel lanes, insufficient inlets, flooding at low points, etc.): n/a

Hydrology and Hydraulics

3. List proposed improvements including outfalls (especially tidal): new inlets, pipes and basin to satify SWM
4. Is compliance with Stormwater Management rules triggered (> 1/4 acre new impervious surface, or 1 acre disturbance)? ☒ Yes ☐ No
5. Identify all NJDEP permits required: Water Quality
6. List proposed structural Best Management Practices (BMP) (e.g., Bioretention System, Constructed Wetlands, extended detention basins, infiltration system, wet ponds, porous pavement): n/a
7. List proposed nonstructural BMP (e.g., Vegetation and Landscaping, Minimize Site Disturbance, Impervious Area Management, and Time of Concentration Modifications): _____
8. Identify drainage outflow owner: _____ Will property rights need to be acquired? ☐ Yes ☒ No

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include drainage deficiencies, new/improved outfalls, storm water management rules, permits, Best Management Practices (structural and non-structural), easements/right-of-way, etc.

Landscape

Activity No.	Activity Name	Execute	Responsible Unit	Comments
3010	Determine and Calculate Deforested Areas	☐ Yes ☒ No	☐ BLAES ☐ Designer	

1. List any landscape architecture related commitments such as:

a. Wetland or Riparian Mitigation Planting:	
b. Historic Site commitments	
c. Vegetative Screens or Buffers	
d. Noise Barrier Aesthetics:	
e. Architectural Treatments on Bridge Retaining Walls:	
f. Tree Removal Mitigation:	
g. Urban Design Work (paving, streetscapes, etc.):	
h. Aesthetic plantings:	
i. Existing tree preservation and protection:	
j. Reforestation Application:	

2. Anticipated visualization work for in-house and public information meetings:

a. Rendered Plans:	
b. 2D computer generated before & after photographs:	
c. 3D computer generated mode:	

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include screens or buffers, aesthetic plantings, mitigation plantings, reforestation, etc.

Environmental

Activity No.	Activity Name	Execute	Responsible Unit	Comments
3300	Initiate Cultural Resources (Section 106) Process	☒ Yes ☐ No	☒ BLAES ☐ Designer	
3305	Conduct CR Survey	☒ Yes ☐ No	☒ BLAES ☐ Designer	
3310	Prepare CR Survey Report	☒ Yes ☐ No	☒ BLAES ☐ Designer	
3315	Review CR Survey Report	☐ Yes ☒ No	☐ BLAES	
3320	Address Comments on CR Survey Report	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3325	Approve CR Survey Report	☒ Yes ☐ No	☐ BLAES	
3330	Obtain SHPO Concurrence (No Resources, No Effect, No Adverse Effect)	☒ Yes ☒ No	☒ BLAES ☐ SHPO	
3335	Prepare Draft MOA (Adverse Effect Only)	☐ Yes ☒ No	☐ BLAES ☒ Designer	
3340	Obtain SHPO Concurrence (No Adverse Effect with Conditions or Adverse Effect)	☒ Yes ☐ No	☒ BLAES ☐ SHPO	
3345	Obtain FHWA Approval of CR Survey Report	☒ Yes ☐ No	☐ FHWA ☐ BLAES	
3350	Prepare Adverse Effect Documentation & Submit to FHWA (Adverse Effect Only)	☐ Yes ☒ No	☐ BLAES	
3355	FHWA Sends Adverse Effect Documentation to ACHP	☐ Yes ☒ No	☐ FHWA	
3360	ACHP Reviews and Accepts or Declines Participation	☐ Yes ☒ No	☐ ACHP	
3365	Resolve Adverse Effects	☐ Yes ☒ No	☐ BLAES ☐ FHWA	
3370	Circulate MOA for Comment	☐ Yes ☒ No	☐ BLAES	

3375	Prepare Final MOA	☐ Yes ☒ No	☐ BLAES	
3380	Execute the MOA	☐ Yes ☒ No	☐ BLAES ☐ DPM ☐ FHWA ☐ ACHP ☐ SHPO	
3390	Submit Historic Sites Council Application	☐ Yes ☒ No	☐ BLAES ☐ Designer ☐ SHPO	
3395	Present to Historic Sites Council	☐ Yes ☒ No	☐ BLAES ☐ Historic Sites Council	
3400	Inform Jurisdictional Agency Regarding Programmatic Section 4(f) Impacts	☐ Yes ☒ No	☐ BLAES	
3405	Receive Concurrence Regarding Programmatic Section 4(f) Impacts	☐ Yes ☒ No	☐ Jurisdictional Agencies	
3410	Prepare Programmatic Section 4(f) Evaluation	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3420	Prepare De Minimis Section 4(f) Evaluation	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3425	Prepare Programmatic Net Benefit Section 4(f) Evaluation	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3430	NJDOT Reviews Programmatic Section 4(f) Evaluation	☐ Yes ☒ No	☐ BLAES	
3435	Revise Programmatic Section 4(f) Evaluation (NJDOT Comments)	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3440	FHWA Reviews Programmatic Section 4(f) Evaluation	☐ Yes ☒ No	☐ FHWA	
3445	Revise Programmatic Section 4(f) Evaluation (FHWA Comments)	☐ Yes ☒ No	☐ BLAES ☐ Designer ☐ FHWA	
3450	FHWA Approves Programmatic Section 4(f) Evaluation	☐ Yes ☒ No	☐ FHWA	
3460	Inform Jurisdictional Agency Regarding Draft Individual Section 4(f) Impacts	☐ Yes ☒ No	☐ BLAES	
3465	Receive Concurrence Regarding Draft Individual Section 4(f) Impacts	☐ Yes ☒ No	☐ Jurisdictional Agencies	

3470	Prepare Draft Individual Section 4(f) Evaluation	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3475	NJDOT Reviews Draft Individual Section 4(f) Evaluation	☐ Yes ☒ No	☐ BLAES	
3480	Revise Draft Individual Section 4(f) Evaluation (NJDOT Comments)	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3485	FHWA Reviews and Comments on Draft Individual Section 4(f) Evaluation	☐ Yes ☒ No	☐ FHWA	
3490	Revise Draft Individual Section 4(f) Evaluation (FHWA Comments)	☐ Yes ☒ No	☐ BLAES ☐ Designer ☐ FHWA	
3495	Conduct Draft Individual Section 4(f) Legal Sufficiency Review	☐ Yes ☒ No	☐ BLAES ☐ Designer ☐ FHWA	
3500	Circulate Draft Individual Section 4(f) Evaluation	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3505	Prepare Final Individual Section 4(f) Evaluation	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3510	FHWA Approves Final Individual Section 4(f) Evaluation	☐ Yes ☒ No	☐ FHWA	
3520	Inform Green Acres Program and Local Officials	☐ Yes ☒ No	☐ BLAES	
3525	Receive Concurrence on Green Acres Impacts	☐ Yes ☒ No	☐ Green Acres Prog. ☐ Local Officials	
3530	Hold Green Acres Pre-Application Meeting	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3535	Negotiate Green Acres Compensation	☐ Yes ☒ No	☐ BLAES ☐ Designer ☐ Green Acres Prog. ☐ Local Officials ☐ ROW Tech. Support	
3540	Identify Alternatives (EA Only)	☐ Yes ☒ No	☐ BLAES ☐ DPM ☐ Designer	
3545	Prepare EA or EA/4(f)	☐ Yes ☒ No	☐ Designer	
3550	NJDOT Reviews EA	☐ Yes ☒ No	☐ BLAES	

3555	Revise EA (NJDOT Comments)	☐ Yes ☒ No	☐ Designer	
3560	FHWA Reviews EA	☐ Yes ☒ No	☐ FHWA	
3565	Revise EA (FHWA Comments)	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3570	FHWA Approves EA	☐ Yes ☒ No	☐ FHWA	
3575	Conduct Draft Individual Section 4(f) Legal Sufficiency Review (EA)	☐ Yes ☒ No	☐ BLAES ☐ Designer ☐ FHWA	
3580	Circulate EA	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3585	Hold EA Public Hearing and Comment Period	☐ Yes ☒ No	☐ BLAES ☐ Designer ☐ CCR	
3590	Address EA Comments	☐ Yes ☒ No	☐ BLAES ☐ Designer ☐ FHWA	
3595	Submit FONSI Request Package	☐ Yes ☒ No	☐ BLAES	
3600	FHWA Approves Final Individual Section 4(f) (EA)	☐ Yes ☒ No	☐ FHWA	
3605	FHWA Reviews and Issues FONSI	☐ Yes ☒ No	☐ FHWA	
3610	Publish Notice of FONSI Availability	☐ Yes ☒ No	☐ BLAES ☐ Designer ☐ CCR	
3620	Publish Notice of Intent in Federal Register (EIS Only)	☐ Yes ☒ No	☐ BLAES ☐ FHWA	
3625	Invite Cooperating Agencies (EIS Only)	☐ Yes ☒ No	☐ FHWA	
3630	Hold NEPA Scope Meeting (EIS Only)	☐ Yes ☒ No	☐ BLAES ☐ DPM ☐ Designer ☐ FHWA	
3635	Prepare Alternatives Analysis Report	☐ Yes ☒ No	☐ BLAES ☐ DPM ☐ Designer	
3640	Prepare DEIS or DEIS/4(f)	☐ Yes ☒ No	☐ Designer	

3645	NJDOT Reviews DEIS	☐ Yes ☒ No	☐ BLAES	
3650	Revise DEIS (NJDOT Comments)	☐ Yes ☒ No	☐ Designer	
3655	FHWA Reviews DEIS	☐ Yes ☒ No	☐ FHWA	
3660	Revise DEIS (FHWA Comments)	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3665	FHWA Approves DEIS to Circulate	☐ Yes ☒ No	☐ FHWA	
3670	Publish Notice of Availability in Federal Register (DEIS)	☐ Yes ☒ No	☐ BLAES ☐ EPA	
3675	Circulate DEIS	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3680	Hold EIS Public Hearing and Comment Period	☐ Yes ☒ No	☐ BLAES ☐ CCR ☐ Designer	
3685	Address Public and Agency Comments	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3690	Select Final Alternative	☐ Yes ☒ No	☐ DPM ☐ FHWA ☐ SME's	
3215	Present to Capital Program Screening Committee	☐ Yes ☒ No	☐ DPM	
3220	Capital Program Committee Approves Final Alternative	☐ Yes ☒ No	☐ DPM ☐ CPC	
3700	Prepare and Submit FEIS	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3705	FHWA Reviews and Comments on FEIS	☐ Yes ☒ No	☐ FHWA	
3710	Address FEIS Comments	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3715	FHWA Reviews FEIS for Legal Sufficiency and Approval	☐ Yes ☒ No	☐ BLAES ☐ Designer ☐ FHWA	
3720	Publish EIS Notice of Availability in Newspaper	☐ Yes ☒ No	☐ BLAES ☐ CCR	
3725	Publish FEIS Notice in Federal Register	☐ Yes ☒ No	☐ BLAES ☐ EPA	

3730	FHWA Publishes ROD in Federal Register	☐ Yes ☒ No	☐ FHWA	
3735	Circulate FEIS	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3740	Conduct Air Quality Study	☒ Yes ☐ No	☒ BLAES ☐ Designer	
3745	Prepare Air Quality TES	☒ Yes ☐ No	☒ BLAES ☐ Designer	
3750	NJDOT Reviews Air Quality TES	☐ Yes ☒ No	☐ BLAES	
3755	Address Air Quality TES Comments	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3760	Approve Air Quality TES	☒ Yes ☐ No	☐ FHWA ☒ BLAES	
3765	Conduct Ecology Study	☒ Yes ☐ No	☒ BLAES ☐ Designer	
3770	Prepare Ecology TES	☒ Yes ☐ No	☒ BLAES ☐ Designer	
3775	NJDOT Reviews Ecology TES	☐ Yes ☒ No	☐ BLAES	
3780	Address Ecology TES Comments	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3785	Approve Ecology TES	☒ Yes ☐ No	☒ BLAES	
3790	Conduct Socio-Economic Study	☒ Yes ☐ No	☒ BLAES ☐ Designer	
3795	Prepare Socio-Economic TES	☒ Yes ☐ No	☒ BLAES ☐ Designer	
3800	NJDOT Reviews Socio-Economic TES	☐ Yes ☒ No	☐ BLAES	
3805	Address Socio-Economic TES Comments	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3810	Approve Socio-Economic TES	☒ Yes ☐ No	☒ BLAES	
3815	Conduct Noise Study	☒ Yes ☐ No	☒ BLAES ☐ Designer	
3820	Prepare Noise TES	☒ Yes ☐ No	☒ BLAES ☐ Designer	

3825	NJDOT Reviews Noise TES	☐ Yes ☒ No	☐ BLAES	
3830	Address Noise TES Comments	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3835	Approve Noise TES	☒ Yes ☐ No	☒ BLAES ☐ FHWA	
3840	Conduct Hazardous Waste Study	☒ Yes ☐ No	☒ BLAES ☐ Designer	
3845	Prepare Hazardous Waste TES	☒ Yes ☐ No	☒ BLAES ☐ Designer	
3850	NJDOT Reviews Hazardous Waste TES	☐ Yes ☒ No	☐ BLAES	
3855	Address Hazardous Waste TES Comments	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3860	Approve Hazardous Waste TES	☒ Yes ☐ No	☒ BLAES	
3865	Hold Public Information Center	☒ Yes ☐ No	☒ BLAES ☒ CCR ☒ Designer ☒ DPM	
3870	Prepare CED	☒ Yes ☐ No	☒ BLAES ☐ Designer	
3875	NJDOT Reviews and Approves CED	☒ Yes ☐ No	☒ BLAES	
3880	Initiate Environmental Technical Studies	☒ Yes ☐ No	☒ BLAES	
3890	Prepare Certified Categorical Exclusion (CCED) Document	☐ Yes ☒ No	☐ BLAES	
3900	Review and Approve Certified Categorical Exclusion Document (CCED)	☐ Yes ☒ No	☐ BLAES	
3910	Prepare Draft EO 215 Document	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3920	NJDOT Reviews Draft EO 215 Document	☐ Yes ☒ No	☐ BLAES	
3925	Revise Draft EO 215 Document (NJDOT Comments)	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3930	NJDEP Reviews EO 215 Document	☐ Yes ☒ No	☐ NJDEP	

3940	Address NJDEP Comments and Prepare Final EO 215 Document	☐ Yes ☒ No	☐ BLAES ☐ Designer	
3945	NJDEP Approves EO 215 Document	☐ Yes ☒ No	☐ NJDEP	

Anticipated Environmental Document: ☐ CCED ☒ CED ☐ EA ☐ EIS ☐ EO 215

Total Number of Permits: 1

1. List any environmental impacts and/or issues: Stormwater Management must be in compliance with NJDEP Stormwater Management Rules
2. List any environmental commitments (made in approved environmental documents, through Memoranda of Agreement with environmental agencies, other commitments made to the public, local officials or other government agencies such as 4f, Section 106 (historic architecture, archaeology), air, noise, hazardous waste and ecology: TBD
3. Check the environmental clearances or permits required on the project:

Federal

☐ U.S. Coast Guard (Bridge)
☐ USACOE Section 404 (Individual/Nationwide) discharge of fill
☐ USACOE Section 10 (Navigable Waters)
☐ USACOE Section 9 (Dam or Dike)
☐ National (or State) Wild & Scenic Rivers
☐ USDOA Forms AS-1006
☐ Section 7 Endangered Species Consultation
☐ NMFS Essential Fish Habitat Study

State

☐ CAFRA
☐ NJDEP Water Lowering
☐ NJDEP Riparian
☐ Hazardous Waste Site Investigation (SI/RI)
☐ HazWaste Remedial Action Work plan
☐ NJDEP Sanitary Facilities
☐ NJDEP Tidal Wetlands
☐ NJDEP Waterfront Development
☐ NJDEP Freshwater Wetlands
☐ NJDEP Pollutant Discharge
☐ NJDEP Flood Hazard Area
☒ NJDEP Water Quality Certificate
☒ NJDEP NJPDES Stormwater Construction GP (RFA)

Other

☐ Delaware River Basin Commission
☐ Delaware & Raritan Canal Commission
☐ Hackensack Meadowlands Commission
☐ Pinelands Commission
☐ Highlands Commission
☐ State Agriculture Development Commission

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include a list of the anticipated NEPA document, type of permits anticipated, anticipated environmental impacts and environmental commitments made in CD if any, etc.

Quality Management Services

Activity No.	Activity Name	Execute	Responsible Unit	Comments
		☐ Yes ☐ No		

Quality Management Services Reviewed? ☐ Yes ☒ No

Value Analysis to be Performed? ☐ Yes (if total cost of project >$20 million) ☒ No

Combined Estimated Cost of Construction, ROW, and Utilities: ☒ <$3 million ☐ $3-5 million ☐ $5-$15 million ☐ >$15 million

Lane Occupancy Charges and Road User Costs to be completed? ☒ Yes ☐ No

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include QMS review, lane occupancy charges/road user cost information, etc.

Utilities

Activity No.	Activity Name	Execute	Responsible Unit	Comments
3035	Prepare Utility Base Plans	☒ Yes ☐ No	☒ Designer	
3040	Establish Utility Engineering Funding	☒ Yes ☐ No	☒ DPM ☐ Designer ☒ Program Coord.	
3045	Send Letter No. 2 and Plans to Utility Company	☒ Yes ☐ No	☐ DPM ☒ Designer ☒ Utility Co.	
3050	Prepare Utility Agreement	☒ Yes ☐ No	☒ DPM ☒ Designer	
3055	Update Base Plans and Identify Conflicts	☒ Yes ☐ No	☐ DPM ☒ Designer ☐ Utility Co.	
3060	Execute Utility Agreement	☒ Yes ☐ No	☒ DPM ☒ Utility Co. ☐ DAG	
3080	Conduct Subsurface Utility Engineering (SUE)	☒ Yes ☐ No	☐ DPM ☐ Designer ☒ SUE Contractor ☐ Utility Co.	

Total Number of Utility Companies: _____

Utility Type	Utility Company	Size (Units of Measure)	Location (aerial/underground)
Gas	PSE&G	Pipe	UNDERGROUND
Electric	PSE&G	Volts	AERIAL
Cable	Cablevision of Hamilton	Pairs/ Strands	AERIAL
Telephone	Verizon	Pairs/ Strands	AERIAL/UNDERGROUND
Water	Trenton Water Works	Pipe	UNDERGROUND
Sewer	Hamilton	Pipe	UNDERGROUND
Fiber-Optic (non-Department)			
Other:	AT&T Communications		AERIAL/UNDERGROUND
Other:			
Other:			
Other:			

1. Identify if the Utility Discover and Verification requires sub-surface utility exploration: No
2. Is a SUE (Subsurface Utility Engineering) Consultant required? ☒ Yes ☐ No

3. Identify Potential Conflicts: Aerial Pole may require relocation; Determination on plan for underground facilities requires coordination with facility owners
4. Identify Temporary Relocations that are needed during construction: TBD
5. Number of poles? TBD based on final staging plan
6. Number of guy wires on existing poles? _____
7. Are there cell towers or substations? No
8. Can utility relocations be avoided or performed in advance of the project? TBD
9. Can utility design/construction be performed by designer/contractor? TBD
10. Can ROW needed for utilities be identified? Not required

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include location of cell towers, location/presence of fiber optic lines, etc.

Jurisdiction

Activity No.	Activity Name	Execute	Responsible Unit	Comments
		☐ Yes ☐ No		

Total Number of Maps: TBD Total Number of Agreements: TBD

Are there streetscape or esthetic items intended for this project? ☒ Yes ☐ No

If yes, has a resolution of support been acquired for jurisdictional assignment? ☐ Yes ☐ No ☐ NA

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include the anticipated number of maps and agreements, presence of streetscape or aesthetic treatments, local approval of such, etc.

Jurisdictional changes are possible due to the multiple jurisdictions (NJDOT, Mercer County, and Hamilton Township) located within the project limits.

Geometrics & Roadway

Activity No.	Activity Name	Execute	Responsible Unit	Comments
3030	Prepare Horizontal & Vertical Geometry	☒ Yes ☐ No	☐ DPM ☒ Designer	
3070	Prepare Preliminary Roadway Plans	☒ Yes ☐ No	☐ DPM ☒ Designer ☐ SME's	
3135	Prepare Construction Cost Estimate	☒ Yes ☐ No	☐ DPM ☒ Designer	
3150	Prepare Design Exception Report	☐ Yes ☒ No	☐ DPM ☐ Designer ☐ QMS ☐ State Trans. Engr. ☐ FHWA	
3165	Finalize Project Plan	☒ Yes ☐ No	☐ DPM ☒ Designer	

Construction Plans/Estimated Number of Sheets

Roadway and Bridges

1	Key Map	with drainage plans	Grades	1	Method of Cross Sections
1	Estimate-Distribution of Quantities	8	Traffic Control and Staging Plans	5	Cross Sections
2	Typical Sections	2	Traffic Control Plans	____	Alternate Retaining Wall System
`	Plan Sheet Index	____	ITS Plans	____	Estimate of Quantities – Bridge
5	Construction Plans	1	Electrical Details	1	Earthwork Summary
5	Environmental Plans	____	Traffic Signal Plans	____	Earthwork Chart Sheet
2	Profiles	1	Highway Lighting Plans	2	Non-standard Roadway Construction Details
1	Ties	1	Landscape Plans	____	Non-standard Bridge Construction Details
		5	Traffic Signing and Striping Plans	5	Drainage Plans

Right of Way Documents

1	Entire Tract Map	1	Tabulation Sheets	1	Individual Property Maps (IPM)
2	General Property Parcel Maps	1	Parcel Descriptions	1	Alignment Sheets

Other Documents

1	Jurisdictional Maps	7	Utility Agreements Plans	____	Railroad Crossing Element Plans

yes Project Specific Specifications

Are there any additional documents? ☐ Yes ☒ No

Please identify any additional documents: _____

1. Existing Roadway(s):

	Roadway No. 1	**Roadway No. 2**	**Roadway No. 3**	**Roadway No. 4**
Roadway Name:	US Route 206	US Route 206 (S. Broad St.)	Whitehorse Avc. (CR 533)	S. Broad St. (CR 524)
Posted Speed(s):	**45**	**35**	**35**	**40**
Highway Classification:	Urban Principal Arterial	Urban Principal Arterial	Urban Minor Arterial	Urban Principal Arterial
Significance (local or regional):	Regional	Regional	Local	Local
No. of Interchanges:	0	0	0	0
Traffic Volumes:				
Design Speeds:	50	40	40	45
Development Class:				
No. of Traffic Signals:	0	0	0	0
No. of Intersections:	1 (Shared)	1 (Shared)	1 (Shared)	1 (Shared)

2. Typical Section(s):

	Typical Section No. 1	**Typical Section No. 2**	**Typical Section No. 3**	**Typical Section No. 4**
Right of Way width:				
Number of Lanes:				
Lane width & cross slope:				
Shoulder width & cross slope:				
Median width:				
Sidewalk/border width:				
Median description and the overall roadway width:				

3. Intersection/Interchange (describe the existing intersection and/or interchanges including turning and auxiliary lanes.): The Whitehorse Circle (Circle) is located in the Township of Hamilton and serves both local and regional traffic.

4. Existing Deficiencies (provide an overview of the existing deficiencies. *Geometric*: Substandard horizontal and vertical sight distance, insufficient sight triangle, substandard vertical clearance, substandard or no shoulders, acceleration/deceleration lanes, etc. *Safety Issues*: check crash data for indicators of specific problems. Substandard/nonexistent guiderail, attenuators, pavement condition, skid resistance, median, etc. Note on substandard guiderail: the project limits should be extended to include upgrading any existing substandard guiderail run that extends beyond the proposed work limits as required by the Design Manual.): Shoulder width

5. Proposed Improvements (provide a brief narrative of the proposed improvements and how they address the identified deficiencies. Note changes to be made to profiles, alignment, guiderail, and typical section): After consideration and discussion with NJDOT, Mercer County and Hamilton Township officials, the decision is to advance a two lane roundabout as the PPA. The solution addresses the established purpose and need, and was viewed favorably by the participating entities. All movements (e.g., from US Route 206 to Whitehorse Avenue) currently provided at the circle will be provided with the PPA design with the exception of access to Pearson Drive.

Specifically, the PPA consists of the following:

- Provides for two lanes on each approach
- Provides for two circulating lanes and two exit lanes with the exception of Northbound Whitehorse Avenue, which will have one exiting lane
- Traffic currently using the one-way entrance to Pearson Drive from the circle will access Pearson Drive via Parent Avenue and the existing alley way or will use Hobson Avenue from the intersection with South Broad Street.
- Construction of crosswalks and sidewalks where appropriate
- Removes the metering signal at MP 38.81 (including signal equipment, and pavement markings)
- Revises signs and pavement markings (removes/adds) at and on the approaches to be consistent with latest MUTCD signing and pavement marking standards for roundabouts
- Relocates utility poles

The PPA reduces the number of conflict points and eliminates the yielding while in the circle condition thereby helping to reduce confusion which should help reduce the number of crashes. The PPA also provides a reduction in average vehicle delay, provides for a gradual speed reduction into the local Hamilton Township and Mercer County transportation network and has operational capacity for the long-term.

6. Bicycle/Pedestrian Compatible? ☒ Yes ☐ No

If no, please explain: _____

7. Design Exception(s):

a. Is a Design Exception required? ☐ Yes ☒ No

b. List substandard features that are to remain and require Design Exception: _____

c. Has the Design Exception Crash Analysis been received from the Bureau of Safety Programs? ☐ Yes ☐ No

d. Has the Design Exception Crash Data for each controlling substandard design element been requested from the Bureau of Safety Programs? ☐ Yes ☐ No

e. Has FHWA provided preliminary concurrence on the Design Exceptions decisions (a) and (b) above? ☐ Yes ☐ No

f. Has Quality Management Services provided Reasonable Assurance on the Design Exceptions decisions (a) and (b) above ☐ Yes ☐ No

8. List any commitments made to the public, local officials or other government agencies: None

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include a discussion of substandard design elements, design exceptions, and perhaps a quick description of the proposed geometry if it is unusual, commitments made to the community, etc.

Pavement

Activity No.	Activity Name	Execute	Responsible Unit	Comments
3960	Obtain Pavement Design Data	☒ Yes ☐ No	☐ DPM ☒ Designer	
3970	Collect Existing Pavement and Subgrade Soil Information	☒ Yes ☐ No	☐ Pvmt. Design Unit ☒ Designer	
3975	Conduct Pavement Testing Program	☒ Yes ☐ No	☐ Pvmt. Design Unit ☒ Designer	
3980	Prepare Pavement Recommendation	☒ Yes ☐ No	☐ Pvmt. Design Unit ☒ Designer	

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include evidence of subsurface drainage issues, settlement problems, stability problems, etc.

Structures

Activity No.	Activity Name	Execute	Responsible Unit	Comments
3100	Prepare Structural Design Recommendation Summary	☐ Yes ☒ No	☐ Designer ☐ SME's	

Total Number of New Bridges:		**Total Number of New Spans:**	
Total Number of Rehab Bridges:		**Total Number of Rehab Spans:**	
Total Number of Replacement Bridges:		**Total Number of Replacement Spans:**	

1. Condition of existing bridge(s):

	Bridge No. 1	**Bridge No. 2**	**Bridge No. 3**	**Bridge No. 4**
a. NJDOT Structure Number:				
b. Year Built:				
c. Date/type of any major modifications:				
d. Type & material of superstructure:				
e. Type and material of substructure:				
f. Feature that is spanned:				
g. Type of roadway it carries:				
h. Vertical Clearance of structure if it spans a roadway or railroad:				
i. Number of Spans:				
j. Length of Structure:				
k. Width of Structure:				
l. Horizontal Clearance of the pier/abutment with respect to the riding lane:				
m. Typical Section (number of lanes, width and cross slope and width of each sidewalk):				

	Bridge No. 1	Bridge No. 2	Bridge No. 3	Bridge No. 4
n. Parapet railing Type:				
o. Identify the structural deficiencies:				
p. Bridges over waterways (Identify scouring evaluation, bridge opening capacity, and frequency of storm):				

2. Proposed Bridge(s)/Bridge Improvements:

	Bridge No. 1	Bridge No. 2	Bridge No. 3	Bridge No. 4
a. Number of spans:				
b. Identify the type of maintenance of traffic that will be used (staging or detour):				
c. Identify the changes to the typical section of the existing structure:				
d. Vertical Clearance of structure if it spans a roadway or railroad:				
e. Length of Structure:				
f. Width of Structure:				
g. Horizontal Clearance of the pier/abutment with respect to the riding lane:				
h. Typical Section (number of lanes, width and cross slope and width of each sidewalk):				
i. Parapet railing Type:				
j. Identify the structural deficiencies:				
k. Coast Guard Permit Required:				

3. Are the minimum vertical clearance requirements over waterways, roadways, railroads met? ☐ Yes ☐ No

a. If no, please explain? _____

4. List other substandard features of proposed bridge: _____

5. Other Existing Structure(s):

a. Identify existing minor structures (Noise barriers, Retaining Walls (cast in place or alternate system), Gabions, High Tower Lighting foundations, Pre-cast Culverts, Culvert extensions, Type and number of Overhead Sign Structures): _____

b. Specify type and number of each substandard feature: _____

6. Proposed Other Structure(s):

	Structure No. 1	Structure No. 2	Structure No. 3	Structure No. 4
a. Identify changes in the existing minor structure that are being improved:				
b. List substandard features to be included in the design exception:				
c. Length:				
d. Width:				
e. Number of spans/units:				

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include scour, unusual existing or proposed structural elements, clearances, substandard elements, design exceptions, etc.

Geotechnical

Activity No.	Activity Name	Execute	Responsible Unit	Comments
3095	Prepare Preliminary Geotechnical Engineering Report	☐ Yes ☒ No	☐ Geotechnical Engineering Unit ☐ DPM ☐ Designer	

1. **Is there evidence of subsurface drainage problems? _____**
2. **Is there evidence of settlement problems? _____**
3. **Is there evidence of stability problems? _____**
4. **Is there evidence of scour problems? _____**
5. **Are there existing soil-borings within the project limits? _____**
6. **Are there rock slopes/cuts located within the project limits? _____**
   a. **Are the rock cuts listed in the Rockfall Hazard Rating System? _____**
   b. **Do catchment areas need to be cleaned or modified? _____**
   c. **Are there apparent safety problems with protruding rock, sight lines, rock-fall and substandard existing mitigation measures? _____**
7. **Alternate site exploration (test pits)? _____**

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include rock slope issues, soil borings, scour, unusual existing or proposed structural elements, clearances, etc.

Survey

Activity No.	Activity Name	Execute	Responsible Unit	Comments
3015	Prepare Control Survey Report	☒ Yes ☐ No	☐ DPM ☒ Designer ☐ Geodetic Survey	
3020	Conduct Topographic Survey	☒ Yes ☐ No	☒ Designer ☐ Geodetic Survey	
3025	Prepare Base Maps	☒ Yes ☐ No	☐ DPM ☒ Designer ☐ Geodetic Survey ☐ CADD Support	

1. **Identify available mapping information (aerial/conventional methods):** Preliminary conventional field survey with control to existing monuments was performed to support the CD effort
2. **How were the existing and proposed baselines established?** N/A
3. **How were the existing and proposed ROW lines established?** GIS with some deed research for properties adjacent to the circle.
4. **How was the horizontal and vertical control established; and which existing monumentation was used?** _____
5. **Is project in Tidal area?** ☐ **Yes** ☒ **No**

   If yes, then current mean high water elevation must be established in tidal water areas under Tidelands Bureau jurisdiction. _____
6. **Has NJDOT Regional Survey office been contacted regarding existing Control, and as-built plans within the project?** As - Built information was available
7. **Compliance with MAP filing law required?** ☒ **Yes** ☐ **No**
8. **Has NJDOT Geodetic Survey been contacted regarding existing control within the project?** ☐ Yes ☒ No
9. **Does Primary Control exist within the project limits or immediately adjacent to the project?** ☐ Yes ☒ No

   If yes, what year was control established in? _____

   If no, will primary control be required? Yes
10. **Will plans be developed from aerial photogrammetry or as-built plans and conventional survey?** Aerial Photogrammetry with supplemental conventional survey
11. **Geodetic Survey Services will be provided by:** ☐ In-House ☒ Consultant

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include base mapping obtained in CD, tidal issues, compliance with MAP filing laws, geodetic control issues, etc.

Railroads

Activity No.	Activity Name	Execute	Responsible Unit	Comments
3075	Hold Diagnostic Team Meeting	☐ Yes ☒ No	☐ Railroad Eng. & Safety Unit ☐ DPM ☐ Designer	

Railroads Affected	Select RR Line	Select RR Line 2	Select RR Line 3	_____ _____ _____

1. **Grade Crossings Affected?** ☐ Yes ☐ No
   a. **How many?** _____
2. **Is there sufficient overhead structure clearance?** ☐ Yes ☐ No
3. **Diagnostic Team Meeting Required:** ☐ Yes ☐ No
4. **Diagnostic Team Meeting Held:** _____ (DATE)

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include presence of at-grade crossings, overhead structure clearances, diagnostic team meetings, etc.

Construction

Activity No.	Activity Name	Execute	Responsible Unit	Comments
3130	Update Preliminary Detour and Construction Staging Plans	☒ Yes ☐ No	☒ Designer ☐ TSSE ☐ SME's	
3145	Conduct Constructability and Maintenance Review	☒ Yes ☐ No	☐ DPM ☒ Designer ☒ Const. Mgmt.	

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include commitments made to local officials or other agencies, staging details, detour discussion, schedule constraints, utility conflicts, etc.

Traffic Signal and Safety Engineering

Activity No.	Activity Name	Execute	Responsible Unit	Comments
3090	Determine Traffic Engineering Facility Locations	☒ Yes ☐ No	☐ TSSE ☒ Designer	

Number of New Traffic Signals:	N/A	**Number of Revised Traffic Signals:**	Remove metering signal
New overhead signs and sign structures	☒ Yes ☐ No	**Revised overhead signs and sign structures**	☒ Yes ☐ No
New Guide Signs	☒ Yes ☐ No	**Revised Guide Signs**	☒ Yes ☐ No
Number of Roundabouts:		**Emergency signal pre-emption**	☐ Yes ☒ No
Revised Highway Lighting	☒ Yes ☐ No	**Temporary Lighting "for staging and diversion roadways"**	☒ Yes ☐ No
Raised Pavement Markers	☒ Yes ☐ No		

1. Maintenance of Traffic: (What type of maintenance of traffic will be used during construction, i.e. staging, detour, permanent lane closures, or diversion road): Staged Construction

2. Identify the number and location of temporary traffic signal(s) required during Staging or Detours: N/A

3. Is there an adequate corner ROW cutout for signal equipment installation? ☐ Yes ☐ No

4. Identify if a new or revised traffic signal agreement is required: _____

5. Identify overhead utility conflicts for traffic signals to be identified and resolved: _____

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include discussion of need for temporary signals, right-of-way constraints (related to traffic signal equipment), utility conflicts, etc.

Electrical

Activity No.	Activity Name	Execute	Responsible Unit	Comments
		☐ Yes ☒ No		

1. **Do any elements of this project scope require additional planned maintenance activities that would necessitate an increase in personnel or equipment resources?** ☐ Yes ☐ No

   If yes, provide details: _____

2. **Do any elements of this project scope include new roadway/electrical appurtenances that would require specialized training, equipment or materials to properly maintain the item (e.g., Vortech drainage chamber, ornamental lighting, and brick pavers)?** ☐ Yes ☐ No

   If yes, provide details: _____

3. **Does this project scope include or overlap sections of roadway that are simultaneously being planned or scheduled for Operations maintenance/construction activities?** ☐ Yes ☐ No

   If yes, provide details: _____

4. **Should consideration be given to canceling or postponing the Operations activity?** ☐ Yes ☐ No

   If yes, provide details: _____

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include elements of the design that will necessitate an increase in maintenance personnel or equipment, conflicting or overlapping projects with Operations, etc.

Traffic Operations and Intelligent Transportation System (ITS) Engineering

Activity No.	Activity Name	Execute	Responsible Unit	Comments
3065	Prepare Preliminary ITS Facility Design	☒ Yes ☐ No	☒ Designer ☒ ITS ☒ Traffic Ops	

1. Project scope complies with the requirements of the latest ITS Investment Strategy and ITS Architecture? ☒ Yes ☐ No

2. Traffic Operations (North/ South) has been consulted for needs and impacts? ☒ Yes ☐ No

Identify needs and impacts. CCTV Requested

3. Transportation Data Development has been consulted for needs and impacts? ☒ Yes ☐ No

Identify needs and impacts. None

4. Project limits have been visually inspected for the existing ITS facilities? ☒ Yes ☐ No

5. Check if the project includes the construction or relocation of any of the following Intelligent Transportation System (ITS) facilities:

- ☐ Controlled Traffic Signal Systems (CTSS)
- ☐ Weigh-in-Motion (WIM)
- ☒ Closed Circuit TV Cameras (CCTV)
- ☐ Traffic Volume Stations
- ☐ Dynamic Message Signs (DMS)
- ☐ Roadway Weather Information Systems (RWIS)
- ☐ Highway Advisory Radio (HAR)
- ☐ In-Road Sensors
- ☐ Traffic Detection systems
- ☐ Fiber Optic Conduit and/or Cable
- ☐ Bridge Sensors
- ☐ Electrical or Communication Installations for the above systems
- ☐ Other ITS Devices: _____

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include compliance with latest ITS Investment Strategy and Architecture, consultation with Traffic Ops during CD, etc.

Commuter Mobility

Activity No.	Activity Name	Execute	Responsible Unit	Comments
		☐ Yes ☐ No		

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Examples of information for this section include bicycle and pedestrian compatibility, Complete Streets compliance, presence of bus stops, interruption of pedestrian accommodations during construction, ADA issues, etc.

Technical and Administrative Activities

Activity No.	Activity Name	Execute	Responsible Unit	Comments
3005	Initiate Preliminary Engineering	☒ Yes ☐ No	☒ DPM ☐ Designer	
3160	Prepare Draft Preliminary Engineering Report	☒ Yes ☐ No	☐ DPM ☒ Designer	
3170	Prepare Final Design Scope Statement	☒ Yes ☐ No	☒ SME's ☒ DPM ☒ Designer	
3175	Complete Preliminary Engineering Quality Certification	☒ Yes ☐ No	☒ Designer	
3180	Update Project Management Plan	☐ Yes ☒ No	☐ DPM	
3185	Prepare FD Public Involvement Action Plan	☒ Yes ☐ No	☐ DPM ☐ Designer ☒ CCR	
3195	Prepare Project Management Plan (**Major Projects**)	☐ Yes ☒ No	☐ DPM ☐ Designer	
3200	FHWA Approves Draft Project Management Plan (**Major Projects**)	☐ Yes ☒ No	☐ DPM ☐ Designer ☐ FHWA	
3205	NJDOT Reviews Draft Preliminary Engineering Report	☒ Yes ☐ No	☒ DPM ☒ SME's ☒ Designer	
3210	FHWA Reviews and Approves Preliminary Engineering Report	☒ Yes ☐ No	☒ DPM ☒ Designer ☒ FHWA	
3225	Assess Designer	☒ Yes ☐ No	☒ DPM	
3230	Develop FD Designer Fee Proposal	☒ Yes ☐ No	☒ Designer	
3235	Develop FD Independent Cost Estimate	☒ Yes ☐ No	☒ DPM ☒ OSBM	
3240	Create FD Schedule	☒ Yes ☐ No	☒ DPM ☒ OSBM	
3245	Negotiate FD Addendum	☒ Yes ☐ No	☒ DPM ☒ Designer ☒ OSBM	

3250	Approve FD Schedule	☒ Yes ☐ No	☒ DPM ☒ OSBM	
3255	Develop FD Budget	☒ Yes ☐ No	☒ DPM ☒ OSBM	
3260	Finalize FD Budget	☒ Yes ☐ No	☒ DPM	
3265	Approve FD Budget	☒ Yes ☐ No	☒ DPM ☒ OSBM	
3270	Authorize Final Design	☒ Yes ☐ No	☒ DPM ☒ CIPD	
3275	Execute FD Addendum	☒ Yes ☐ No	☒ DPM ☒ Designer	
3285	Complete PE Closeout	☒ Yes ☐ No	☒ DPM	

1. Have the objectives of the Public Involvement Action Plan (PIAP) been satisfied? ☒ Yes ☐ No

2. Number of Local Workshop Meetings conducted in CD: 1

3. Public Information Centers conducted in CD (number of meetings, location & dates): 1 - 9/27/12 at Hamilton Twp Fire Hall

4. Number of Officials Briefings conducted in Concept Development: 2

5. List Issues, Commitments or Concerns: Operations for the Fire Department regardign access to Pearson Drive

6. Is the mailing list up to date? ☒ Yes ☐ No

7. Are the Displays adequate to reuse in PE: ☐ Yes ☒ No

8. Resolution of Support Number: _____

Resolution of Support Date: _____

9. Other Coordination:

a. List additional organizations (Historic Society, Chamber of Commerce, Board of Education, Fire Company's etc.) or authorities (NJ Transit, NJ Turnpike, NJ Highway Authority, Port Authority, etc.) that have interest in the project: Fire Department

b. Proposed Formal Public Involvement Program (estimate number of Official Briefings and Public Info Centers/Meetings/Hearings): 1 Local Officials Briefing anticipated during PE

c. If additional displays are required, provide the specifics (number, scale, special graphics 3D, simulations, models, etc): Updates to the graphics should occur during PE

d. If a mailing list is required, provide the approximate number of property owners: TBD

Who is responsible for putting the mailing list together and providing mail labels? ☐ Consultant? ☐ In-house Design ☐ Other (Specify) _____

e. If handouts are required (provide the specifics, number, size, color or black and white, mapping, etc): TBD

f. List special needs (i.e. Community Involvement Sub-Consultant, Facility Needs, Interpreter, Website, etc.): TBD

g. Traffic Staging: How many lanes of traffic need to be maintained? TBD

What will be the available working hours? TBD

Can the project duration be significantly reduced by reducing the number of stages? Yes

Can detours be used? No

h. Schedule - Identify scheduling constraints (environmental, seasonal construction limitations, community). N/A

What is the optimum period to start construction? TBD

i. Is the scope focused on replacement or rehabilitation of road/bridge? N/A

Is condition likely to change/deteriorate between scoping and construction? No

ADDITIONAL INPUT

This section has been provided for the CD designer and the functional units to state any assumptions, to clarify and customize standard activities, and to add important information. Please be clear and concise. Provide your unit's contact person and number.

Summary of Approvals

SME Unit	Manager	Approval	SME Involved	Remarks
Right of Way	Paul Ignarri		Mark Foss/David Kook	
Access	Dick Dube		Greg Spiritisanto	See Atttached Comment Resoultion
Drainage Management	Sue Gresavage			
Regional Maintenance	Michael Davis		Michael Moran	
Hydrology and Hydraulics	Joseph Sweger		David Ahdout	
Landscape	David Earl			
Environmental	Joseph Sweger		Tina Shultz	
Quality Management Services	Rich Jaffe			
Utilities	Frank Pinto			
Jurisdiction	Mike Horan			
Geometrics & Roadway	Bob Abitz		Binh Vo	See Atttached Comment Resoultion
Pavement	Sue Gresavage			
Structures				N/A
Geotechnical				N/A
Survey	Robert Marshall			

Railroads				N/A
Construction	Snehal Patel		John Varrelmann	See Atttached Comment Resoultion
Traffic Signal Design				N/A
Electrical	Michael Davis		John Miller	
Traffic Operations & ITS	Vincent Cortese			
Commuter Mobility	Sheree Davis		Debbie Kingsland	
Community Relations			Kim Nance	
Traffic Engineering	Chris Barretts		Altin Aliaj	See Atttached Comment Resoultion

Appendix M – Photo Log/Aerials

Figure 1: White Horse Circle facing U.S. 206 NB/ S. Broad Street (C.R. 524) WB.

Figure 2: White Horse Circle facing SB from White Horse Avenue (C.R. 533).

Figure 3: White Horse Circle facing U.S. 206 SB

Figure 4: White Horse Circle along inner-circle lane U.S. 206 NB.

Figure 5: White Horse Circle facing U.S. 206 NB

Figure 6: White Horse Circle traffic stacking up heading NB to U.S. 206 and C.R. 533 N/ C.R. 524 E split.

Figure 7: White Horse Circle

Figure 8: White Horse Circle traffic stacking up heading NB to U.S. 206 and C.R. 533 N/ C.R. 524 E split.

Figure 9: White Horse Circle

Figure 10: White Horse Circle traffic stacking up heading NB to U.S. 206 and C.R. 533 N/ C.R. 524 E split.

Figure 11: White Horse Circle approach to S. Broad St. (C.R. 524) EB.

Figure 12: White Horse Circle approach to White Horse Avenue (C.R. 533) NB.

Figure 13: White Horse Circle approach to S. Broad St. (C.R. 524) WB.

Figure 14: White Horse Circle approach to Pearson Avenue.

Figure 15: White Horse Circle approach to U.S. 206, facing SB.

Figure 16: Intersection of S. Broad St. (C.R. 524) and Lacy Ave./ Pebble Creek Ave.

Figure 17: Intersection of S. Broad St. (C.R. 524) and Parent Avenue.

Figure 18: Intersection of S. Broad St. (C.R. 524) and Maple Avenue.

Figure 19: Intersection of S. Broad St. (C.R. 524) and Colonial Avenue.

Figure 20: Intersection of S. Broad St. (C.R. 524) and Homestead Ave.

Figure 21: Intersection of S. Broad St. (C.R. 524) and Hobson Avenue.

Figure 22: Intersection of White Horse Ave. (C.R. 533) and Locust Ave.

Figure 23: Intersection of White Horse Ave. (C.R. 533) and S. Clinton Ave.

Figure 24: Intersection of White Horse Ave. (C.R. 533) and Phillips Ave.

Figure 25: Pavement deficiency in White Horse Circle.

Figure 26: Pavement deficiency at intersection of S. Broad St. (C.R. 524) and Lacy Ave.

Figure 27: Pavement deficiency along S. Broad St. (C.R. 524).

Figure 28: Pavement deficiency at intersection of White Horse Ave. (C.R. 533) and Phillips Ave.

Figure 29: Pavement deficiency in White Horse Circle.

Figure 30: Pavement deficiency at intersection of S. Broad St. (C.R. 524) and Homestead Ave.

Figure 31: Pavement deficiency at intersection of S. Broad St. (C.R. 524) and Colonial Ave.

Figure 32: Pavement deficiency at intersection of S. Broad St. (C.R. 524) and Maple Shade Ave.

Figure 33: Pavement deficiency at intersection of S. Broad St. (C.R. 524) and Colonial Ave.

Figure 34: Pavement deficiency in White Horse Circle.

Figure 35: Non-compliant inlet grate along S. Broad St. (C.R. 524).

Figure 36: Non-compliant inlet grate along S. Broad St. (C.R. 524).

Figure 37: Faded striping at intersection of S. Broad St. (C.R. 524) and Homestead Ave.

Figure 38: Faded striping along S. Broad St. (C.R. 524).

Figure 39: Faded striping at intersection of White Horse Ave. (C.R. 533) and S. Clinton Ave.

Figure 40: Deficient sidewalk at intersection of S. Broad St. (C.R. 524) and Homestead Ave.

Figure 41: Deficient sidewalk along S. Broad St. (C.R. 524).

Figure 42: Deficient warning surface at intersection of S. Broad St. (C.R. 524) and Homestead Ave.

Figure 43: Sign deficiency at intersection of S. Broad St. (C.R. 524) and Lacy Ave/ Pebble Creek Dr.

Figure 44: Sign deficiency at intersection of S. Broad St. (C.R. 524) and Pebble Creek Dr.

Figure 45: Sign deficiency at intersection of S. Broad St. (C.R. 524) and Lacy Ave.

Figure 46: Sign deficiency along S. Broad St. (C.R. 524).

Figure 47: Sign deficiency along S. Broad St. (C.R. 524).