

Appendix D – Supporting Data

Interchange 3 Outside Toll Improvements - Traffic Analysis Memo

Table – Properties within the Project Study Area

NJDEP Natural Heritage Program Response – May 30, 2024

USFWS IPaC Response Letter – September 5, 2024

Table – Composite Plant Species List

Interchange 3 Outside Toll Improvements
Traffic Analysis Memo
February 17, 2025

Date: February 17, 2025

From: Samuel Donelson, P.E., AECOM Program Manager

To: Maynard Abuan, P.E., NJTA Program Manager and Senior Project Engineer

Cc: P. Sayani, A. Melvin, M. Rao, E. Sitler, T. Patel, DMC

Subject: Interchange 3 Outside Toll Improvements - Traffic Analysis Memo

Document Number: T3839A_AEM_TPK_002_MEM_TR_0

Attachments: Appendix A – Traffic Volume Flow Diagrams

This memorandum summarizes the results of traffic analysis performed by the Interchanges 1 to 4 Capacity Enhancements Program (Program) on alternatives at Interchange 3 of the New Jersey Turnpike (Turnpike) to improve access between Route 168 (Black Horse Pike) and the Turnpike Toll Plaza. The purpose of this analysis is to address chronic congestion along Route 168 which affects Turnpike traffic exiting the Turnpike, especially from the Toll Plaza to Route 168 northbound and minimize or eliminate the potential for such congestion to extend onto the Turnpike mainline. These alternatives included direct connection to the existing signalized intersection of Route 168 and Benigno Boulevard. These “outside toll” alternatives arose from the Program Team’s ongoing effort, as included in the T3839 RFP, to investigate measures to improve traffic flow on the congested Route 168 corridor near the Turnpike access. The proposed improvements aim to enhance traffic flow and accommodate increased capacity needs while maintaining access to properties along Route 168.

Background

In January 2021, the NJTA issued a Request for Proposal for the Program Management and Environmental Services for the Interchange 1 to 4 Widening Program (later renamed the Capacity Enhancements Program). The scope of services includes providing operational improvements at Interchange 3 with the local roadway network. Additionally, the RFP notes that the Borough of Runnemede had requested that the Authority review potential connections to Route 42 at Interchange 3 to mitigate traffic congestion along Black Horse Pike (Route 168). As such, an origin-destination study at Interchange 3 was included to determine existing and future traffic patterns to aid in developing alternatives.

Prior to the beginning of the Interchanges 1 to 4 Capacity Enhancements Program, the Interchange 3 connection to Route 168 was also identified as a congested location during a feasibility study initiated by NJDOT. The study was developed prior to any discussion between the Authority and NJDOT to address congestion along Route 168 between Interchange 3 and the I-295 Interchange, and took into consideration improving safety, maintaining access driveways, enhancing pedestrian and bike mobility, and minimizing right of way and environmental impacts along the corridor of study. This study was an expansion of a CD project by NJDOT that began with the I-295/Route 168 interchange; following an initial analysis of the full corridor, the scope was reduced by NJDOT to focus just on the I-295/Route 168 interchange.

The Program Team has held multiple coordination meetings with NJDOT to review potential collective approaches to address congestion along the corridor and has also coordinated extensively with local, state, and federal officials. NJDOT has indicated that corridor-wide improvements are not currently progressing, aside from some signal optimization along the corridor. As such, the Program Team has developed the Interchange 3 Outside Toll alternative to address one contributor to congestion along the corridor. The geometric improvements to Ramp TW will improve traffic flow from the Turnpike to northbound Route 168, provide sufficient stacking room, and connect the ramp to the intersection with Benigno Blvd., removing an existing short weave condition between the existing Ramp TW and the intersection. It is noted that congestion along the Route 168 corridor is a complex issue that these proposed improvements alone will not completely resolve.

These improvements are separate from the Preliminary Preferred Alternative (PPA) for Interchange 3 under the Mainline Preliminary Design Report. The Preliminary Design Report PPA is focused on addressing Mainline capacity issues with improvements inside the toll plaza, such as the addition of a second ramp lane on Ramp NT to prevent possible backups from extending onto the Mainline. These outside toll improvements are designed to address the location-specific issue of Route 168 congestion, and as such have independent utility from the widening and may be advanced on a separate track.

Existing Geometry

At Turnpike Interchange 3, outside the toll plaza, i.e. toward the local street system, the existing Ramp TW, which provides access from the Toll Plaza to Route 168 northbound, extends approximately 600 feet from the split from Ramp TE before merging with Route 168. The merge area is under Yield control. During peak travel periods on Route 168, traffic build-up on Ramp TW routinely impacts the Toll Plaza operations.

The existing Ramp TE is a 150-foot radius loop ramp and provides access from the Toll Plaza to Route 168 southbound. It includes a ramp bridge that carries Ramp TE and Ramp WT over Route 168. No modifications to Ramp TE or the ramp bridge are proposed under the Interchange 3 Outside Toll improvement alternatives; these are being separately addressed as part of the Program.

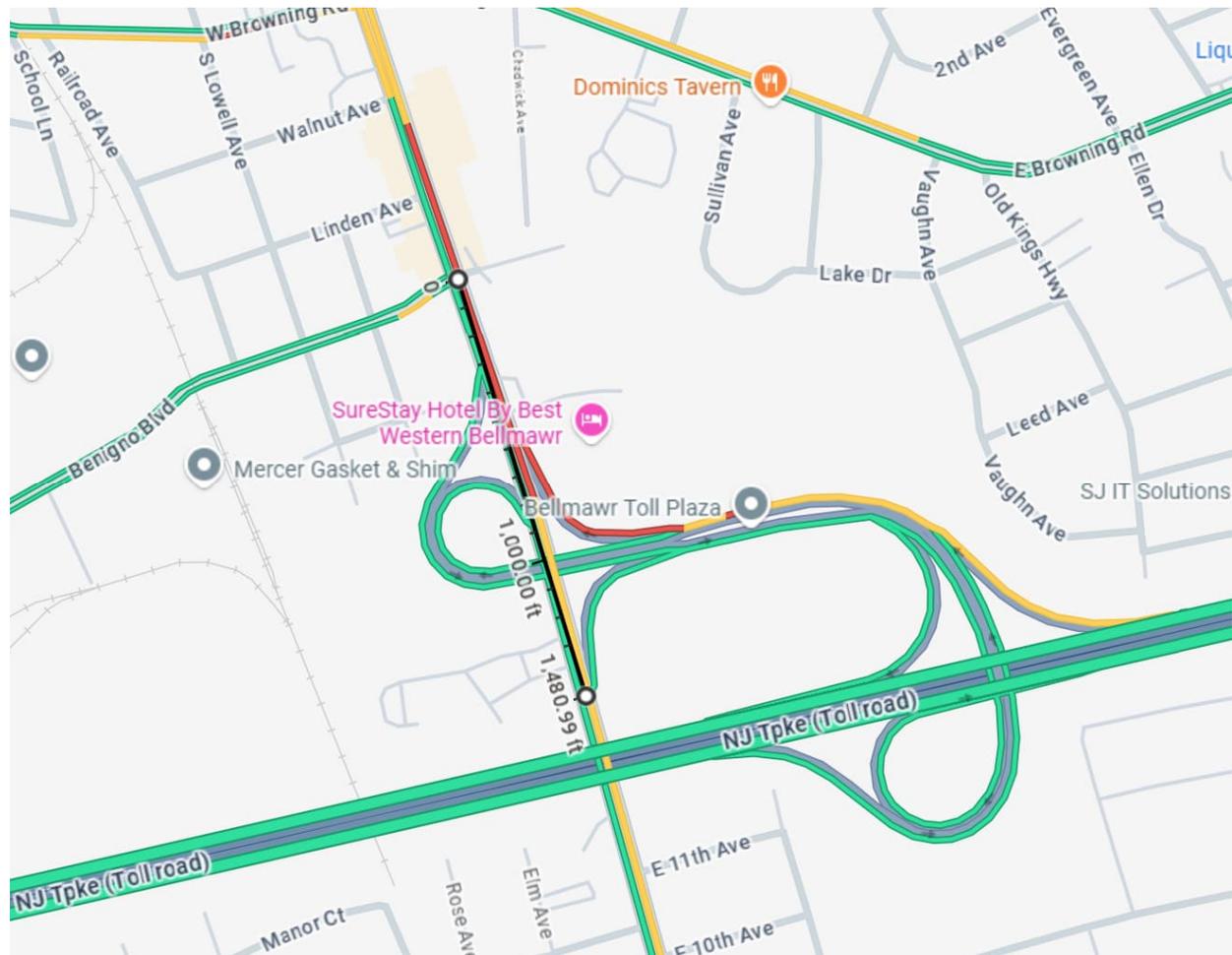
Existing Ramp WT (Route 168 southbound to the Turnpike) and Ramp ET (Route 168 northbound to the Turnpike) are to be maintained under the Interchange 3 Outside Toll improvement alternatives.

The existing intersection of Route 168 and Benigno Boulevard is a three-phase signalized intersection with a two-lane northbound approach (dedicated left-turn lane and shared through and right-turn lane); three southbound approach lanes (dedicated left, thru, and right-turn lanes); and two-lane eastbound and westbound approaches (dedicated right-turn lanes and shared left-thru lanes) from both Benigno Boulevard and the hotel driveway. The northbound and southbound Route 168 carriageways are separated by raised curb medians on both sides of the intersection. Signals operate with permitted left turns from the southbound, eastbound and westbound approaches with protected-permitted left-turn phasing on the northbound approach.

Based on traffic counts taken during the 2019 base year weekday AM and PM peak hours, the throughput counted for the Route 168/Benigno Boulevard intersection in all directions is between 2,300 and 2,400 vehicles/hour (vph). This volume, however, is restricted by congestion along Route 168 from the Turnpike interchange to Browning Road. According to Regional Integrated Transportation Information System (RITIS) and Typical Weekday Speeds on Google Maps, the level of congestion derived based on analysis of the existing counts was determined to be too small compared to what was approximated using

RITIS and Google Maps. Figure 1 shows an example of peak weekday AM peak period congestion from Typical Traffic on Google Maps. The northbound congestion continues from north of Benigno Blvd. southward into the Turnpike interchange ramps, a distance of more than 500 feet of queuing. Analysis of the existing counts using Synchro showed northbound approach queues only up to 267 feet.

Figure 1: Typical Weekday AM Peak Hour Traffic Flow from Google Maps



Because of the difference between the observed queuing (based on the aforementioned resources) and the calculated queuing (based on throughput analysis), it was determined that the traffic counts collected did not account for the unmet demand on the approaches to the intersections along Route 168. The throughput was adjusted to account for this unmet, or latent, demand. To derive these adjustments, three sources were reviewed: RITIS, Replica and the DVRPC Travel Improvement Model (TIM) 2.5 model. Replica estimates mobility metrics based on a nationwide activity-based travel model that is updated quarterly with the latest socio-demographic, economic, land use, location based (GPS, cellphones, etc.) data, and other data sets. RITIS data in this area was not used because the segmentation along Route 168 is not as granular as the existing geometry.

To estimate the adjustment factor, the DVRPC model volume-to-capacity ratio (V/C) and a ratio of Replica volumes to existing flowed count data were compared for segments between the southern limit of the Turnpike interchange to north of Benigno Boulevard. For the Replica ratio, volumes from Replica during

the weekday AM and PM peak hours at these locations were then divided by the flowed count data to derive the factor. The model V/C at these locations were considered as a second factor. Table 1 summarizes the Replica-to-count volume ratios and the TIM 2.5 model V/C. In two cases, southbound during the weekday AM and northbound during the weekday PM, the average of the TIM 2.5 model ratio and the Replica ratio was estimated to be close to 1.0. Therefore, for these two peak volume scenarios, the throughput and demand were considered to be the same. For the other two cases, northbound during the weekday AM and southbound during the weekday PM, both the model V/C and the Replica ratio significantly exceeded 1.0, indicating demand unaccounted for in the flowed traffic volumes.

Table 1: Comparison of Replica-to-Flowed Counts Ratio and Model V/C

Factor	Weekday AM Peak		Weekday PM Peak	
	Northbound	Southbound	Northbound	Southbound
Model V/C	1.39	0.91	0.67	1.68
Ratio of Replica Volume to Flowed Count	2.17	1.04	1.40	2.30
Average	1.78	0.97	1.03	1.99
Factor Used	1.39	1.00	1.00	1.68

Initially, an average of the Replica ratio and the V/C Ratio from TIM 2.5 for northbound during the weekday AM and southbound during the weekday PM was used to estimate the demand. This demand was determined to be unrealistically large. After further review of Replica, the Replica volumes were determined to be too large, so that the TIM 2.5 V/C would be the factor used to account for latent demand for these movements. The factors used to derive demand from the throughput counts are summarized in the last row of Table 1. Appendix A illustrates the flowed demand volumes at the Turnpike interchange and the intersection of Route 168 and Benigno Boulevard for the Base Year traffic scenario, which includes latent demand. Table 2 summarizes the Level of Service (LOS) and queue lengths by movement at the signalized intersection. The overall intersection LOS in the weekday AM peak hour is LOS D, while the weekday PM peak hour LOS is E.

Table 2: Summary of Synchro Results – Route 168 and Benigno Blvd. 2019 Base Year Scenario (Includes Latent Demand)

Route 168 and Benigno Blvd													
MOVEMENT (lanes)	2019 Base Year A.M. Peak Hour						MOVEMENT (lanes)	2019 Base Year P.M. Peak Hour					
	VOLUME	LOS	DELAY	50TH QUEUE	95TH QUEUE	AVG RANGE		VOLUME	LOS	DELAY	50TH QUEUE	95TH QUEUE	AVG RANGE
EB LT (1)	174+1	F	288.0	163	299	231	EB LT (1)	135+4	F	122.4	96	223	160
EB R (1)	274	B	14.3	0	81	41	EB R (1)	237	B	19.5	17	113	65
WB LT (1)	4+1	D	39.0	3	14	9	WB LT (1)	5+2	D	39.2	4	18	11
WB R (1)	8	A	0.2	0	0	0	WB R (1)	8	A	0.2	0	0	0
NB L (1)	366	C	23.7	56	109	83	NB L (1)	322	F	273.7	279	423	351
NB TR (1)	1,061+3	D	46.4	828	976	902	NB TR (1)	765+2	A	9.7	235	314	275
SB L (1)	5	A	8.4	1	6	4	SB L (1)	11	A	7.5	3	10	7
SB T (1)	651	B	15.3	254	376	315	SB T (1)	1,094	E	63.7	810	1,059	935
SB R (1)	138	A	1.7	0	22	11	SB R (1)	86	A	3.1	5	24	15
Overall		D	45.5				Overall		E	70.8			

This analysis indicates unacceptable levels of service (i.e. E or F) for the eastbound left-through movement during both weekday peak hours. Additionally, similar LOS are noted for the northbound left turn and southbound through movements during the weekday PM peak hour.

Table 3 provides a similar summary of LOS and queue lengths for the merge of Ramp TW with Route 168, located about 500 feet to the south of the signalized intersection with Benigno Blvd. With the Yield control in place, this merge was analyzed as an unsignalized intersection.

**Table 3: Summary of Synchro Results – Route 168 and Ramp TW
2019 Base Year Scenario (Includes Latent Demand)**

Route 168 and Ramp TW (Merge)													
MOVEMENT (lanes)	2019 Base Year A.M. Peak Hour						MOVEMENT (lanes)	2019 Base Year P.M. Peak Hour					
	VOLUME	LOS	DELAY	50TH QUEUE	95TH QUEUE	AVG RANGE		VOLUME	LOS	DELAY	50TH QUEUE	95TH QUEUE	AVG RANGE
WB R (1)	440	F	566.9	-	920	-	WB R (1)	668	F	160.4	-	726	-
NB T (1)	990	-	0.0	-	-	-	NB T (1)	421	-	0.0	-	-	-
Overall		F	124.5				Overall		E	49.3			

This analysis notes LOS F for the ramp movement with maximum queue lengths extending into the Toll Plaza area.

Final Proposed Alternative (Enhanced PPA)

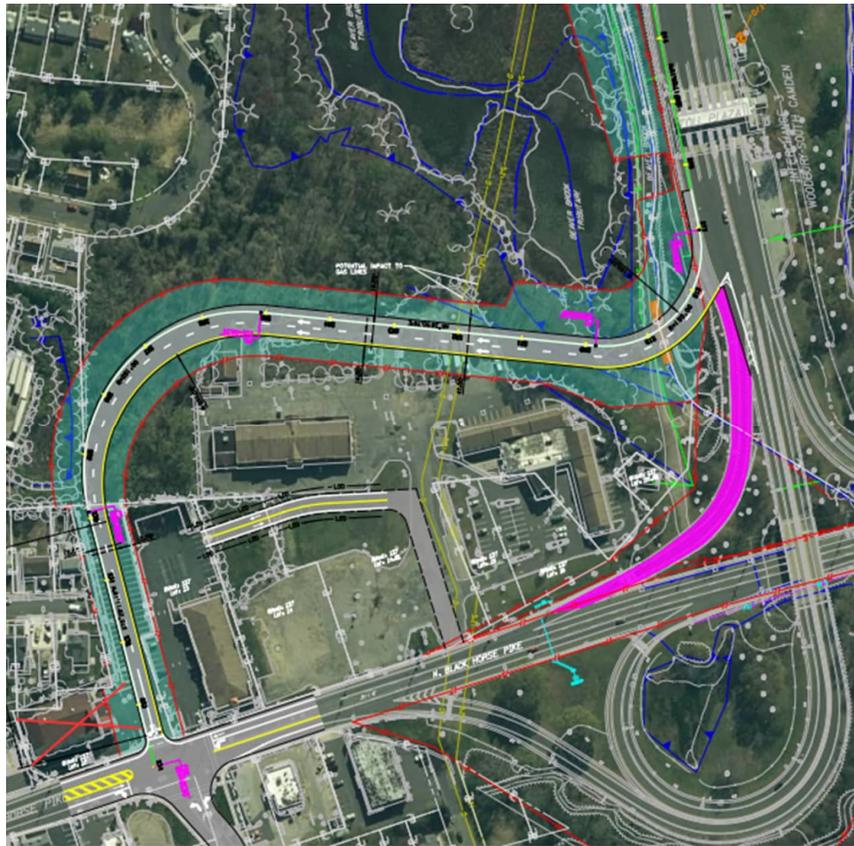
The Initial PPA maintained a single-lane Ramp TW which connected directly to the Route 168/Benigno Blvd. intersection as a fourth intersection leg. The ramp would widen to two lanes to facilitate turning movements at the intersection from this approach. The resulting half-length would have been shorter than the existing condition.

On November 1, 2024, the Program Team met with NJTA Operations and agreed to further evaluate the Initial IPA due to concerns Operations noted regarding providing a reduced half-length and corresponding weave concerns for traffic exiting the Toll Plaza.

The Program Team refined the Initial PPA to provide a widened throat at the exit gore to eliminate the weave from the center exit toll (cash) lane to Ramp TW and reduce the weave from the far-left toll lane in order to mitigate concerns relating to the reduction in half-length proposed. In addition, a continuous two-lane ramp is proposed providing continuity as well as additional width over existing Transco natural gas lines addressing potential concerns over future utility access.

The enhanced PPA design of the proposed Ramp TW will utilize a 25-mph design speed and a minimum curve radius of 150 feet, similar to the Initial PPA; however, this alternative provides a two-lane ramp as opposed to the Initial PPA single-lane ramp design. The Enhanced PPA provides the same half-length as the Initial PPA which does not meet the minimum desirable half-length of 500 feet, however the two-lane realigned ramp does provide a widened and re-aligned throat at the exit gore from the Toll Plaza which will eliminate a weave from the center lane and reduces the weave needed for vehicles in the far-left toll lane to enter Ramp TW. Figure 2 provides the plan view of the Enhanced PPA geometry.

Figure 2. Proposed Ramp TW Alignment (Enhanced PPA)



The hotel access that currently serves as the fourth leg of the Route 168/Benigno Blvd. intersection would be relocated to the existing hotel access driveway south of the intersection via an internal driveway connection. Hotel traffic would not be part of the proposed intersection operation.

On December 10, 2024, NJTA Operations provided their concurrence that the Enhanced PPA shall be advanced as the PPA for Final Design.

Figure 3 is a close-up view of the Route 168/Benigno Blvd. intersection from the Enhanced PPA, which includes a Relocated Ramp TW as a fourth leg of the intersection.

Figure 3. Proposed Ramp TW Intersection with Route 168 and Benigno Blvd.



Design Year No-Build and Build

Traffic analysis along the Route 168 corridor was performed using a Design Year of 2040. Because of the recurring congestion along the corridor, signalized intersections between the I-295 interchange and the Turnpike ramps were included in the Synchro analysis models, though results for intersections north of Benigno Blvd. are not reported here. Two volume demand scenarios were evaluated during the Design Year: No-Build and Build. The 2040 Design Year No-Build scenario assumed the widening of the mainline Turnpike to six lanes and a two-lane Ramp NT, with no geometric improvements outside toll or along Route 168. The 2040 Design Year Build scenario assumed the Outside Toll Improvements incorporating the relocated Ramp TW as generally shown in Figure 2, with no other geometric improvements along Route 168 north of the Benigno Blvd. intersection or south of the Turnpike ramp bridge.

Traffic forecasts were generated for the Design Year No-Build scenario; the forecasted flowed volume demands are illustrated in Appendix A. For the Design Year Build scenario, the Ramp TW forecast demand was reassigned to the Route 168/Benigno Blvd. intersection based on origin-destination patterns derived from the regional model (TIM 2.5), which showed that 64% and 92% of the forecast Route 168 northbound left turns to Benigno Blvd. under the Design Year No-Build scenario would originate from Ramp TW in the weekday AM and PM peak hours, respectively. The Design Year Build forecast flowed volume demands are also illustrated in Appendix A.

The following signalized intersection assumptions were incorporated into the analysis.

- The No-Build scenario incorporating Turnpike widening only assumes the existing traffic signal phasing/timing and intersection geometry, including hotel access, for the analysis.

- The following was assumed for the relocated Ramp TW scenario (Build with Outside Toll Improvements)
 - Access for traffic to the hotel located on Block 137, Lot 13, will be relocated from the intersection to the existing driveway south of the intersection providing access to other hotels between existing Ramp TW and the intersection.
 - The existing left-turn lane on Route 168 southbound would be removed because of the relocated hotel access.
 - The existing shared left-through lane on Benigno Boulevard eastbound would become a left-turn only lane.
 - Right turns from Route 168 northbound would be eliminated at the signalized intersection.
- No improvements are proposed at signalized intersections north of Benigno Blvd. or south of the Turnpike overpass. For this reason, the results summarized in this document will only include the Route 168/Benigno Blvd. intersection and the Ramp TW merge with Route 168 northbound (analysed as an unsignalized intersection). Further improvements would be needed to fully address congestion concerns on Route 168 beyond the boundaries of this analysis.

Traffic Analysis Results

Table 4 summarizes the traffic volumes, level of service (LOS), delay and expected queue lengths for each movement at the Route 168/Benigno Boulevard intersection under the 2040 Design Year No-Build scenario.

**Table 4: Summary of Synchro Results – Route 168 and Benigno Blvd.
2040 Design Year No-Build Scenario**

Route 168 and Benigno Blvd													
MOVEMENT (lanes)	2040 Design Year No-Build A.M. Peak Hour						MOVEMENT (lanes)	2040 Design Year No-Build P.M. Peak Hour					
	VOLUME	LOS	DELAY	50TH QUEUE	95TH QUEUE	AVG RANGE		VOLUME	LOS	DELAY	50TH QUEUE	95TH QUEUE	AVG RANGE
EB LT (1)	180+1	F	139.5	144	284	214	EB LT (1)	147 + 4	D	54.9	97	173	135
EB R (1)	268	A	9.7	32	102	67	EB R (1)	286	C	24.1	127	211	169
WB LT (1)	4 + 1	C	35.0	3	13	8	WB LT (1)	6+2	C	32.8	5	18	12
WB R (1)	8	A	0.1	0	0	0	WB R (1)	9	A	0.1	0	0	0
NB L (1)	406	E	70.8	112	241	177	NB L (1)	323	F	182.1	266	411	339
NB TR (1)	1,185+4	F	136.4	1,116	1,254	1,185	NB TR (1)	768 + 2	B	17.4	368	490	429
SB L (1)	5	B	12.8	1	8	5	SB L (1)	12	B	13.1	4	14	9
SB T (1)	636	B	21.2	304	445	375	SB T (1)	1,306	F	253.0	1,276	1,533	1,405
SB R (1)	142	A	2.3	0	27	14	SB R (1)	89	A	3.0	0	24	12
Overall		F	83.7				Overall		F	139.5			

Both northbound movements and the eastbound left-turn movement in the weekday AM peak hour and the southbound through and northbound left-turn movements in the weekday PM peak hour would deteriorate to a level of service E or F under this scenario. With these movements failing, the intersection in both weekday peak hours would deteriorate to a level of service of F.

Table 5 summarizes the unsignalized ramp merge analysis where Ramp TW joins Route 168 northbound. As no improvements are proposed at this location, overall level of service F would continue to be forecast for the weekday AM peak hour; the weekday PM peak hour LOS would also deteriorate to LOS F. (Unlike signalized intersections, the LOS F delay threshold for unsignalized intersections is 50

sec./vehicle). Maximum queue lengths increase over the Base Year figures, especially in the weekday AM peak hour, where it would extend through the Toll Plaza, nearly to the Ramp ST/Ramp NT merge.

**Table 5: Summary of Synchro Results – Ramp TW Merge with Route 168
2040 Design Year No-Build Scenario**

Route 168 and Ramp TW (Merge)													
MOVEMENT (lanes)	2040 Design Year No-Build A.M. Peak Hour						MOVEMENT (lanes)	2040 Design Year No-Build P.M. Peak Hour					
	VOLUME	LOS	DELAY	50TH QUEUE	95TH QUEUE	AVG RANGE		VOLUME	LOS	DELAY	50TH QUEUE	95TH QUEUE	AVG RANGE
WB R (1)	623	F	899.7	-	1,493	-	WB R (1)	677	F	168.2	-	754	-
NB T (1)	972	-	0.0	-	-	-	NBT (1)	415	-	0.0	-	-	-
Overall		F	263.8				Overall		F	51.6			

Table 6 reflects analysis results at the Route 168/Benigno Blvd. intersection for the 2040 Design Year Build scenario. The Route 168/Ramp TW merge would not exist in this scenario, so a comparable summary would not be relevant at that location.

**Table 6: Summary of Synchro Results – Route 168 and Benigno Blvd.
2040 Design Year Build Scenario**

Route 168 and Benigno Blvd													
MOVEMENT (lanes)	2040 Design Year Build A.M. Peak Hour						MOVEMENT (lanes)	2040 Design Year Build P.M. Peak Hour					
	VOLUME	LOS	DELAY	50TH QUEUE	95TH QUEUE	AVG RANGE		VOLUME	LOS	DELAY	50TH QUEUE	95TH QUEUE	AVG RANGE
EB LT (1)	177	E	65.1	100	225	163	EB LT (1)	147	F	129.1	88	219	154
EB R (1)	269	B	11.2	0	51	26	EB R (1)	290	C	21.5	11	114	63
WB LT (1)	2+191	D	43.3	122	198	160	WB LT (1)	2+298	F	82.9	208	380	294
WB R (1)	430	F	110.9	260	457	359	WB R (1)	377	B	10.9	7	100	54
NB L (1)	215	C	34.9	64	165	115	NB L (1)	27	A	9.0	6	15	11
NB T (1)	765	E	70.4	453	621	537	NB T (1)	400	B	12.6	144	197	171
SB T (1)	642	D	36.8	388	614	501	SB T (1)	1,319	F	231.1	1,252	1,510	1,381
SB R (1)	141	A	4.7	7	42	25	SB R (1)	89	A	2.5	0	22	11
Overall		E	55.4				Overall		F	122.3			

The same intersection geometry was assumed for the three Route 168 and Benigno Blvd. approaches as for the 2040 Design Year No-Build scenario. For the fourth leg, the turning movements into the former hotel access driveway would be removed, replaced by the relocated Ramp TW. Ramp TW would have two approach lanes, one shared left-through lane and one right-turn only lane.

In the weekday AM peak hour, the intersection level of service would improve to LOS E from the Design Year No-Build Scenario. The weekday PM peak hour level of service would continue to be LOS F, although there would be a notable incremental improvement. The eastbound left-through, westbound right, and northbound through movements in the weekday AM peak hour and the eastbound left-through, westbound left-through, and southbound through movements in the weekday PM peak hour would operate at a level of service E or F. While the total peak hour volume demands forecast to travel through the intersection would be similar between the Design Year No-Build and Build scenarios, the shift of traffic from the northbound approach to the westbound approach (the Ramp TW movement) would result in a larger westbound approach volume (Turnpike ramp versus hotel access driveway) to be accommodated under the traffic signal phasing and timing. Signal timings would be adjusted to accommodate these traffic shifts. The increase in delay for the westbound movements would be expected; differences in

eastbound delays would be because of the adjusted signal timings as well as the larger westbound opposing traffic conflict. As noted above, further improvements would be needed to fully address congestion concerns on Route 168 beyond the boundaries of this analysis.

As the primary focus of this improvement, Ramp TW traffic operation would improve significantly from a different perspective from the Design Year No-Build scenario to the Design Year Build scenario. Table 7 summarizes the average delay and maximum 95th percentile queue length that Ramp TW traffic does or would experience under Base Year and Design Year geometric conditions. It should be noted that under the existing geometry (i.e. Base Year and Design Year No-Build volume scenarios), the point of reference for delays is the Route 168 northbound stop line at Benigno Blvd. – the figures in Table 7 include the time traversing Route 168 between existing Ramp TW and Benigno Blvd. Queue lengths are referenced from an assumed Yield line where the ramp gore markings end. For the proposed geometry (i.e. Design Year Build volume scenario), the point of reference for delays and queues is the westbound stop line at the intersection, where Ramp TW directly connects to the intersection. For the weekday AM peak hour, Ramp TW traffic would experience an average reduction of 15.5 minutes of delay and 1,036 feet of queue length with geometric improvements proposed under the Design Year Build scenario. Unlike the Design Year No-Build scenario, anticipated queue lengths on Ramp TW ramp are not expected to extend through the Toll Plaza and potentially onto the Turnpike mainline. For the weekday PM peak hour, corresponding reductions in average delay and maximum queue length are expected to be 3.2 minutes and 374 feet, respectively, from the Design Year No-Build Scenario.

Table 7: Comparison of Delay and Queue Lengths for Ramp TW Traffic

Scenario	Weekday AM Peak Hour		Weekday PM Peak Hour	
	Average Delay (Min.)	Queue Length 95th percentile (ft.)	Average Delay (Min.)	Queue Length 95th percentile (ft.)
2019	10.1	920	4.1	726
2040 No-Build	17.0	1,493	3.9	754
2040 Build	1.5	457	0.7	380

Conclusion

Traffic congestion on Black Horse Pike (Route 168) is complex in the area of the Turnpike Interchange 3 ramps and Benigno Boulevard intersection. Due to downstream queuing at Browning Road backing up into and beyond Benigno Boulevard, traffic volumes collected for the 2019 Base Year scenario were measuring only throughput and not actual demand. A latent demand analysis was performed using resources such as RITIS, Replica and the DVRPC TIM 2.5 regional model to develop traffic demands that yield realistic delays, levels of service and queue lengths under analysis.

Traffic forecasts to the Design Year of 2040, under the existing outside toll ramp and Route 168 geometry (No-Build), would result in deterioration of level of service from LOS E to LOS F for several traffic movements. A Build scenario incorporating the outside toll improvement would result in incremental improvement in overall delay at the intersection but also result in more traffic movements operating at LOS E or F because of the shift in traffic distribution on the intersection approaches. With the effective replacement of local hotel access traffic with Turnpike ramp traffic on the westbound approach (shifted from the northbound approach), signal timing adjustments would be required to accommodate the

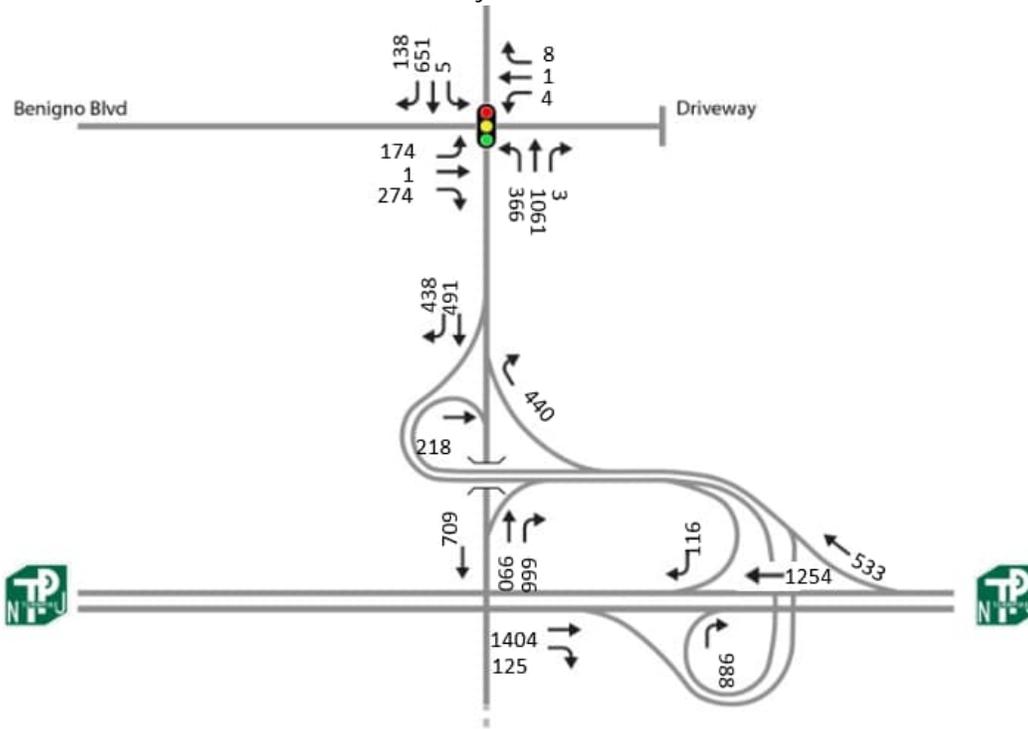
increased westbound approach demand. These adjustments would still result in westbound movements operating at LOS E or F.

While the Outside Toll Improvements would not fully resolve congestion and queuing along Route 168 between the Turnpike and I-295, Ramp TW traffic would benefit significantly from these improvements. Weekday AM peak hour delays and queue lengths would decrease by over 15 minutes (91%) and 1,000 feet (69%), respectively, from the Design Year No-Build scenario. Weekday PM peak hour benefits are more modest, but these reductions significantly reduce, if not eliminate, the potential of ramp traffic to queue as far as the toll plaza or further to the Turnpike mainline. The objective of this alternative analysis has been met, despite the continued influence of Route 168 congestion north of the Turnpike on the overall operation of the corridor. Further improvements would be needed to fully address congestion concerns on Route 168 beyond the boundaries of this analysis.

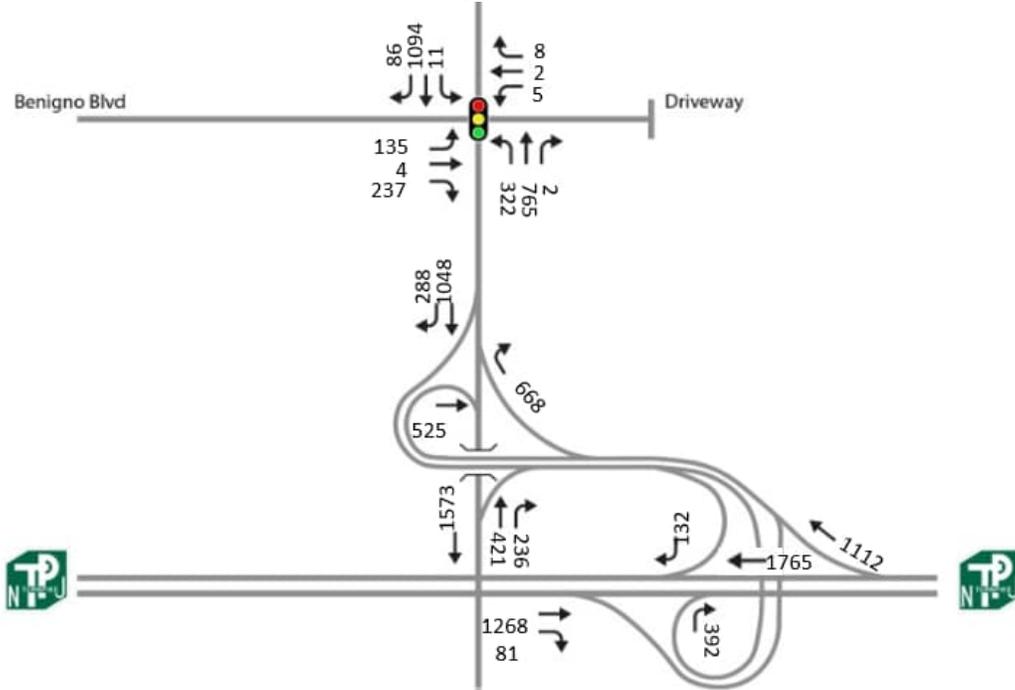
APPENDIX A

TRAFFIC VOLUME FLOW DIAGRAMS

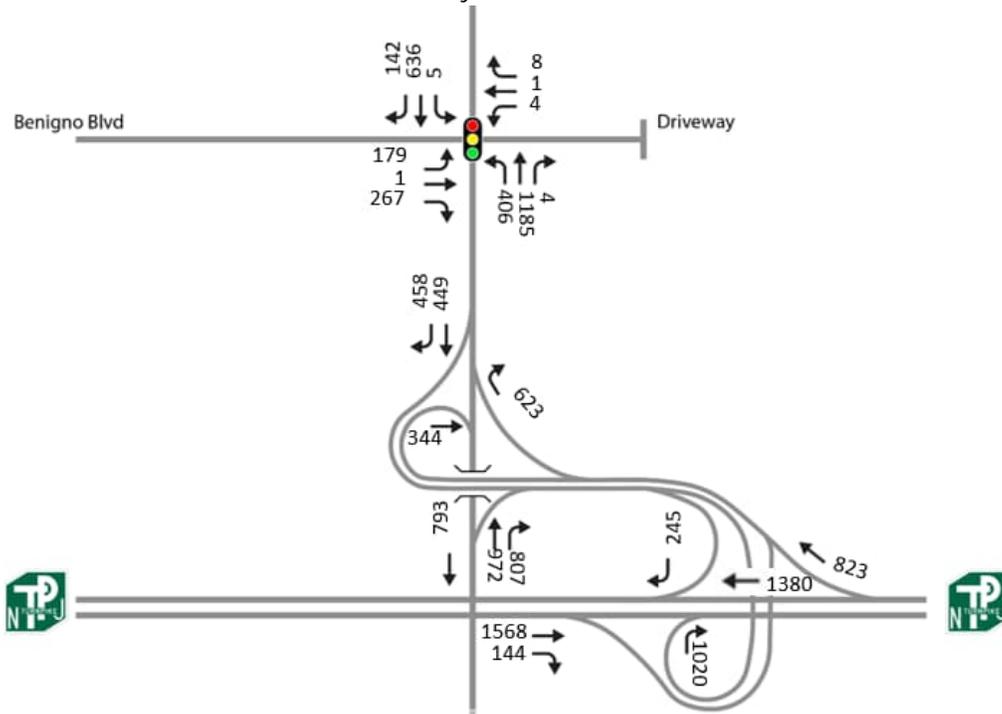
2019 Base Year Traffic Volumes
Weekday AM Peak Hour



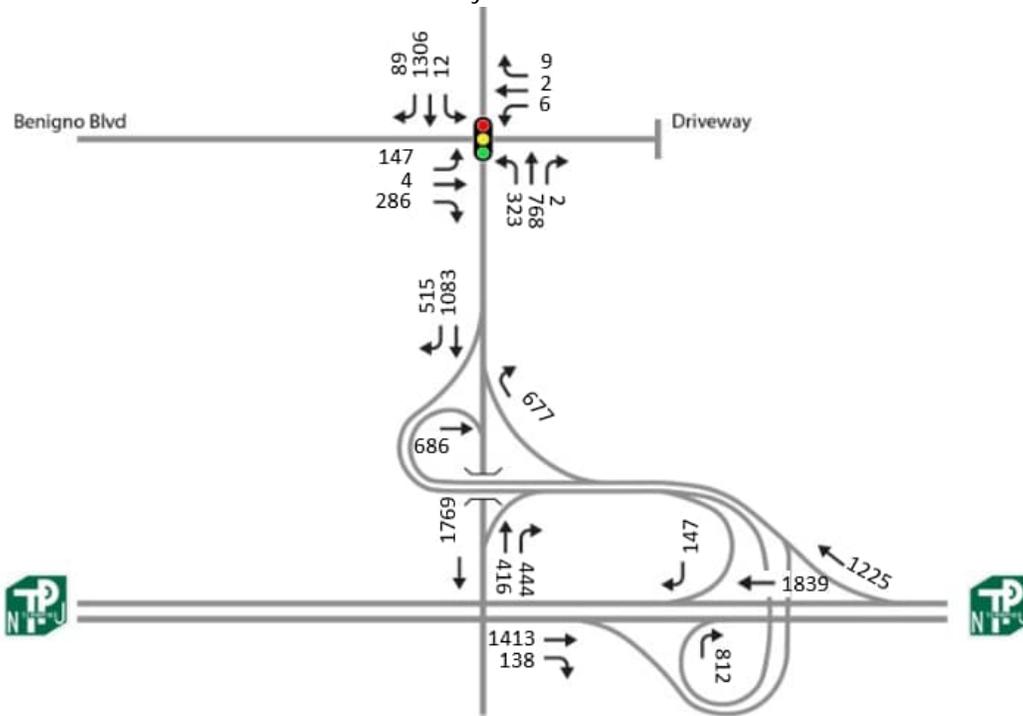
2019 Base Year Traffic Volumes
Weekday PM Peak Hour



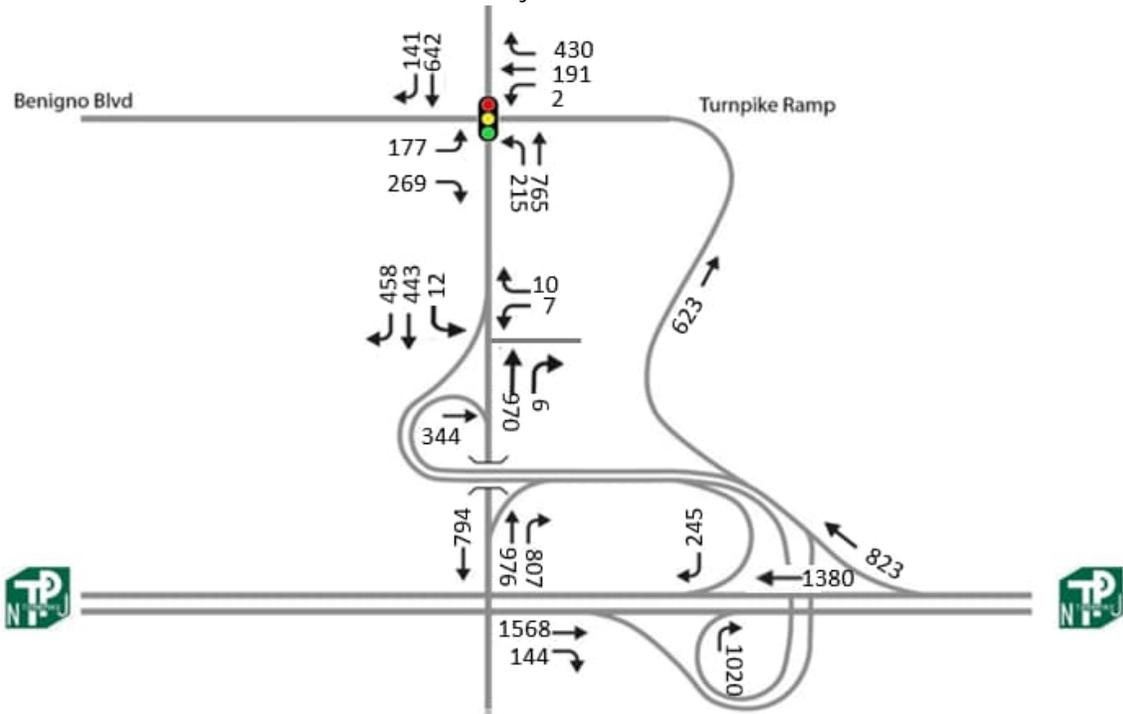
2040 Design Year No-Build (i.e. Widening Only) Traffic Demands
Weekday AM Peak Hour



2040 Design Year No-Build (i.e. Widening Only) Traffic Demands
Weekday PM Peak Hour



2040 Design Year Build (i.e. Outside Toll Improvements) Traffic Demands
Weekday AM Peak Hour



2040 Design Year Build (i.e. Outside Toll Improvements) Traffic Demands
Weekday PM Peak Hour

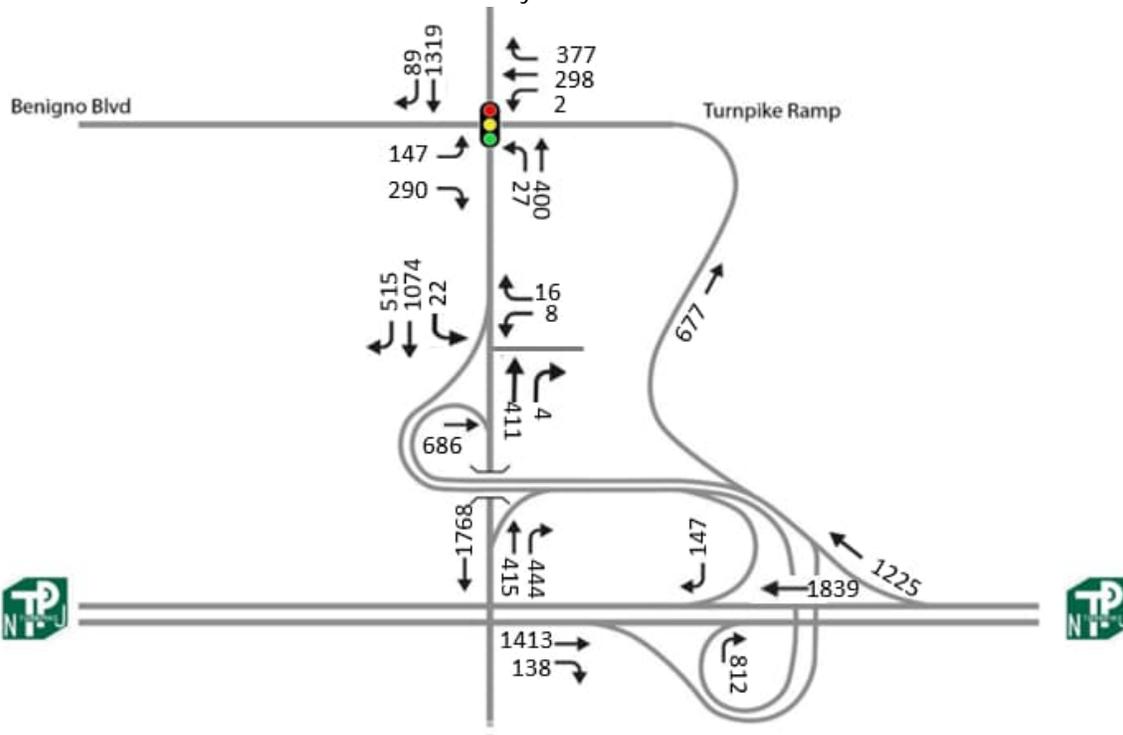


Table – Properties within the Project Study Area

Properties Within the Project Study Area

Block	Lots	Municipality	Property Use
30	1.01 and 1.03	Runnemedede	Commercial
137	13	Bellmawr	Commercial
137	10	Bellmawr	Commercial
137	50	Bellmawr	Residential
137	55.01	Bellmawr	Public Property (Pump Station)
137	11	Bellmawr	Commercial
137	43	Bellmawr	Industrial
137	52.01	Bellmawr	Residential
137	26	Bellmawr	Residential
137	24	Bellmawr	Residential
137	24.04	Bellmawr	Residential
137	56	Bellmawr	Residential
137	23 and 24.01	Bellmawr	Residential
137	12	Bellmawr	Commercial
137	25.01	Bellmawr	Residential
137	25	Bellmawr	Residential
137	29	Bellmawr	Residential
137	14	Bellmawr	Vacant
137	51	Bellmawr	Residential
137	14.01, 15, and 16	Bellmawr	Commercial
137	27	Bellmawr	Residential
137	50.01	Bellmawr	Residential
137	22.03	Bellmawr	Residential
137	52	Bellmawr	Residential
137	24.02	Bellmawr	Residential
137	28	Bellmawr	Residential
137	25.02	Bellmawr	Residential
137	56.01	Bellmawr	Residential
138	11	Bellmawr	Public Property (Playground)
138	11.03	Bellmawr	Residential
138	10	Bellmawr	Residential
138	11.01	Bellmawr	Residential
138	9	Bellmawr	Residential
138	11.02	Bellmawr	Residential
143	3	Bellmawr	Public School
146	2	Bellmawr	Residential
146	4	Bellmawr	Residential
146	7	Bellmawr	Residential
146	6	Bellmawr	Residential
146	5	Bellmawr	Residential
146	8	Bellmawr	Residential
146	10	Bellmawr	Residential
146	9	Bellmawr	Residential
146	3	Bellmawr	Residential
146.01	1.05	Bellmawr	Residential
146.01	1.07	Bellmawr	Residential
146.01	1.06	Bellmawr	Residential
146.01	1.08 and 1.09	Bellmawr	Commercial
146.01	1.01	Bellmawr	Residential
146.01	1.03	Bellmawr	Commercial
146.01	1.04	Bellmawr	Residential
147	6	Bellmawr	Residential
147	7	Bellmawr	Residential
147	5	Bellmawr	Residential
147	4	Bellmawr	Residential
147	1 and 2	Bellmawr	Commercial
147	9	Bellmawr	Residential
147	3	Bellmawr	Commercial
147	8	Bellmawr	Residential
148	11	Bellmawr	Residential
148	8	Bellmawr	Residential
148	14	Bellmawr	Residential
148	10	Bellmawr	Residential
148	12	Bellmawr	Residential
148	9	Bellmawr	Residential
148	6	Bellmawr	Residential

Properties Within the Project Study Area

Block	Lots	Municipality	Property Use
148	5	Bellmawr	Residential
148	13	Bellmawr	Residential
148	1	Bellmawr	Vacant
148	7	Bellmawr	Residential
148	4	Bellmawr	Residential
148	2	Bellmawr	Residential
148	3	Bellmawr	Residential
152	3	Bellmawr	Residential
152	2	Bellmawr	Residential
153	1	Bellmawr	Residential
154	1	Bellmawr	Commercial

Source: Program Team, 2024.

NJDEP Natural Heritage Program
Response
May 30, 2024



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE PARKS, FORESTS & HISTORIC SITES

OFFICE OF NATURAL LANDS MANAGEMENT

501 East State Street

P.O. Box 420, Mail Code 501-04

Trenton, New Jersey 08625-0420

Tel. (609) 984-1339 * Fax (609) 984-1427

<https://www.nj.gov/dep/parksandforests/natural/index.html>

PHILIP D. MURPHY

Governor

SHAWN M. LATOURETTE

Commissioner

TAHESHA L. WAY

Lt. Governor

May 30, 2024

Lauren Ringel
AECOM
30 Knightsbridge Road, Suite 520
Piscataway, NJ 08854

Re: NJTA Interchanges 1 to 4 Capacity Enhancements Program - Interchange 3 Outside Toll
Block(s) - 137; 135.02, Lot(s) - 12, 13, 14, 14.01, 15, 16, 24.02, 25.02, 43, 55.01; 1
Bellmawr and Runnemede, Camden County

Dear Lauren Ringel:

Thank you for your data request regarding rare species information for the above referenced project site.

Searches of the Natural Heritage Database and the Landscape Project (Version 3.3) are based on a representation of the boundaries of your project site in our Geographic Information System (GIS). We make every effort to accurately transfer your project bounds from the map(s) submitted with the Natural Heritage Data Request Form into our GIS. We do not typically verify that your project bounds are accurate, or check them against other sources.

We have checked the Landscape Project habitat mapping and the Biotics Database for occurrences of any rare wildlife species or wildlife habitat on the referenced site. The Natural Heritage Database was searched for occurrences of rare plant species or ecological communities that may be on the project site. Please refer to Table 1 (attached) to determine if any rare plant species, ecological communities, or rare wildlife species or wildlife habitat are documented on site. A detailed report is provided for each category coded as 'Yes' in Table 1.

We have also checked the Landscape Project habitat mapping and Biotics Database for occurrences of rare wildlife species or wildlife habitat in the immediate vicinity (within ¼ mile) of the referenced site. Additionally, the Natural Heritage Database was checked for occurrences of rare plant species or ecological communities within ¼ mile of the site. Please refer to Table 2 (attached) to determine if any rare plant species, ecological communities, or rare wildlife species or wildlife habitat are documented within the immediate vicinity of the site. Detailed reports are provided for all categories coded as 'Yes' in Table 2. These reports may include species that have also been documented on the project site.

We have also checked the Landscape Project habitat mapping and Biotics Database for all occurrences of rare wildlife species or wildlife habitat within one mile of the referenced site. Please refer to Table 3 (attached) to determine if any rare wildlife species or wildlife habitat is documented within one mile of the project site. Detailed reports are provided for each category coded as 'Yes' in Table 3. These reports may include species that have also been documented on the project site.

For requests submitted in order to make a riparian zone width determination as part of a Flood Hazard Area Control Act (FHACA) rule application, we report records for all rare plant species and ecological communities tracked by the Natural Heritage Program that may be on, or in the immediate vicinity of, your project site. A subset of these plant species is also covered by the FHACA rules when the records are located within one mile of the project site. One-mile searches for FHACA plant species will only report precisely located occurrences for those wetland plant species identified under the FHACA regulations as being critically dependent on the watercourse. Please refer to Table 3 (attached) to determine if any

NHP File No. 24-3907571-30559

precisely located rare wetland plant species covered by the FHACA rules have been documented. Detailed reports are provided for each category coded as 'Yes' in Table 3. These reports may include species that have also been documented on, or in the immediate vicinity of, the project site.

The Natural Heritage Program reviews its data periodically to identify priority sites for natural diversity in the State. Included as priority sites are some of the State's best habitats for rare and endangered species and ecological communities. Please refer to Tables 1, 2 and 3 (attached) to determine if any priority sites are located on, in the immediate vicinity, or within one mile of the project site.

A list of rare plant species and ecological communities that have been documented from the county (or counties), referenced above, can be downloaded from <https://nj.gov/dep/parksandforests/natural/heritage/database.html>. If suitable habitat is present at the project site, the species in that list have potential to be present.

Status and rank codes used in the tables and lists are defined in EXPLANATION OF CODES USED IN NATURAL HERITAGE REPORTS, which can be downloaded from https://nj.gov/dep/parksandforests/natural/docs/nhpcodes_2010.pdf.

Beginning May 9, 2017, the Natural Heritage Program reports for wildlife species will utilize data from Landscape Project Version 3.3. If you have questions concerning the wildlife records or wildlife species mentioned in this response, we recommend that you visit the interactive web application at the following URL, <https://njdep.maps.arcgis.com/apps/webappviewer/index.html?id=0e6a44098c524ed99bf739953cb4d4c7>, or contact the Division of Fish and Wildlife, Endangered and Nongame Species Program at (609) 292-9400.

For additional information regarding any Federally listed plant or animal species, please contact the U.S. Fish & Wildlife Service, New Jersey Field Office at <http://www.fws.gov/northeast/njfieldoffice/endangered/consultation.html>.

Information supplied by the Natural Heritage Program summarizes existing data known to the program at the time of the request regarding the biological elements (species and/or ecological communities) or their locations. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

Thank you for consulting the Natural Heritage Program. The attached invoice details the payment due for processing this data request. Feel free to contact us again regarding any future data requests.

Sincerely,



Robert J. Cartica
Administrator

c: NHP File No. 24-3907571-30559

Table 1: On Site Data Request Search Results (6 Possible Reports)

<u>Report Name</u>	<u>Included</u>	<u>Number of Pages</u>
1. Possibly on Project Site Based on Search of Natural Heritage Database: Rare Plant Species and Ecological Communities Currently Recorded in the New Jersey Natural Heritage Database	No	0 pages included
2. Natural Heritage Priority Sites On Site	No	0 pages included
3. Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.3 Species Based Patches	Yes	1 page(s) included
4. Vernal Pool Habitat on the Project Site Based on Search of Landscape Project 3.3	No	0 pages included
5. Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File	No	0 pages included
6. Other Animal Species On the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	No	0 pages included

**Rare Wildlife Species or Wildlife Habitat on the
Project Site Based on Search of
Landscape Project 3.3 Species Based Patches**

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection Status	State Protection Status	Grank	Srank
<i>Aves</i>	Great Blue Heron	Ardea herodias	Foraging	2	NA	Special Concern	G5	S3B,S4N

Table 2: Vicinity Data Request Search Results (6 possible reports)

<u>Report Name</u>	<u>Included</u>	<u>Number of Pages</u>
1. Immediate Vicinity of the Project Site Based on Search of Natural Heritage Database: Rare Plant Species and Ecological Communities Currently Recorded in the New Jersey Natural Heritage Database	No	0 pages included
2. Natural Heritage Priority Sites within the Immediate Vicinity	No	0 pages included
3. Rare Wildlife Species or Wildlife Habitat Within the Immediate Vicinity of the Project Site Based on Search of Landscape Project 3.3 Species Based Patches	Yes	1 page(s) included
4. Vernal Pool Habitat In the Immediate Vicinity of Project Site Based on Search of Landscape Project 3.3	No	0 pages included
5. Rare Wildlife Species or Wildlife Habitat In the Immediate Vicinity of the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File	No	0 pages included
6. Other Animal Species In the Immediate Vicinity of the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	No	0 pages included

**Rare Wildlife Species or Wildlife Habitat Within the
Immediate Vicinity of the Project Site Based on Search of
Landscape Project 3.3 Species Based Patches**

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection Status	State Protection Status	Grank	Srank
<i>Aves</i>	Bald Eagle	Haliaeetus leucocephalus	Foraging	4	NA	State Endangered	G5	S1B,S2N
	Great Blue Heron	Ardea herodias	Foraging	2	NA	Special Concern	G5	S3B,S4N

**Table 3: Within 1 Mile for Riparian Zone Width Determination
(6 possible reports)**

<u>Report Name</u>	<u>Included</u>	<u>Number of Pages</u>
1. Rare Plant Species Occurrences for Riparian Zone Width Determination (Flood Hazard Area Control Act Rule Application) - Within One Mile of the Project Site Based on Search of Natural Heritage Database	No	0 pages included
2. Natural Heritage Priority Sites for Riparian Zone Width Determination - Within One Mile of the Project Site	No	0 pages included
3. Rare Wildlife Species or Wildlife Habitat for Riparian Zone Width Determination - Within One Mile of the Project Site Based on Search of Landscape Project 3.3 Species Based Patches	Yes	1 page(s) included
4. Vernal Pool Habitat for Riparian Zone Width Determination - Within One Mile of the Project Site Based on Search of Landscape Project 3.3	Yes	1 page(s) included
5. Rare Wildlife Species or Wildlife Habitat for Riparian Zone Width Determination - Within One Mile of the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File	No	0 pages included
6. Other Animal Species for Riparian Zone Width Determination - Within One Mile of the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	No	0 pages included

**Rare Wildlife Species or Wildlife Habitat for Riparian Zone Width Determination
Within One Mile of the Project Site
Based on Search of Landscape Project 3.3 Species Based Patches**

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection Status	State Protection Status	Grank	Srank
<i>Aves</i>	Bald Eagle	Haliaeetus leucocephalus	Foraging	4	NA	State Endangered	G5	S1B,S2N
	Great Blue Heron	Ardea herodias	Foraging	2	NA	Special Concern	G5	S3B,S4N

**Vernal Pool Habitat for Riparian Zone Width Determination
Within One Mile of the Project Site
Based on Search of Landscape Project 3.3**

Vernal Pool Habitat Type	Vernal Pool Habitat ID
Potential vernal habitat area	1070
Potential vernal habitat area	1089
Potential vernal habitat area	1110
Total number of records:	3

USFWS IPaC Response Letter

September 5, 2024



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New Jersey Ecological Services Field Office
4 E. Jimmie Leeds Road, Suite 4
Galloway, NJ 08205
Phone: (609) 646-9310

In Reply Refer To:

09/05/2024 14:22:46 UTC

Project Code: 2024-0139863

Project Name: NJTA Interchange 3 Outside Toll Improvements

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through IPaC by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at: <https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see [Migratory Bird Permit | What We Do | U.S. Fish & Wildlife Service \(fws.gov\)](#).

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New Jersey Ecological Services Field Office

4 E. Jimmie Leeds Road, Suite 4

Galloway, NJ 08205

(609) 646-9310

PROJECT SUMMARY

Project Code: 2024-0139863

Project Name: NJTA Interchange 3 Outside Toll Improvements

Project Type: Road/Hwy - Maintenance/Modification

Project Description: The Interchange 3 Outside Toll project will address the congestion and safety concerns at NJ Turnpike's Interchange 3 connection to Route 168. This project will improve safety, maintain access driveways, enhance pedestrian and bike mobility, and minimize right-of-way and environmental impacts along the corridor. Providing improvements to the existing intersection affords the opportunity to address congestion and safety issues beyond the Interchange 3 toll plaza.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@39.86286605,-75.07682445153466,14z>



Counties: Camden County, New Jersey

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New Jersey Ecological Services Field Office
4 E. Jimmie Leeds Road, Suite 4
Galloway, NJ 08205
Phone: (609) 646-9310

In Reply Refer To:
Project code: 2024-0139863
Project Name: NJTA Interchange 3 Outside Toll Improvements

09/05/2024 14:29:47 UTC

Federal Nexus: no
Federal Action Agency (if applicable):

Subject: Technical assistance for 'NJTA Interchange 3 Outside Toll Improvements'

Dear Mikayla Thompson:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on September 05, 2024, for 'NJTA Interchange 3 Outside Toll Improvements' (here forward, Project). This project has been assigned Project Code 2024-0139863 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements are not complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project is not reasonably certain to cause incidental take of the northern long-eared bat. Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species and/or critical habitat listed above. Note that if a new species is listed that may be affected by the identified action before it is complete, additional review is recommended to ensure compliance with the Endangered Species Act.

Next Steps

Coordination with the Service is complete. This letter serves as technical assistance. All conservation measures should be implemented as proposed. Thank you for considering federally listed species during your project planning.

We are uncertain where the northern long-eared bat occurs on the landscape outside of known locations. Because of the steep declines in the species and vast amount of available and suitable forest habitat, the presence of suitable forest habitat alone is a far less reliable predictor of their presence. Based on the best available information, most suitable habitat is now expected to be unoccupied. During the interim period, while we are working on potential methods to address this uncertainty, we conclude take is not reasonably certain to occur in areas of suitable habitat where presence has not been documented.

If no changes occur with the Project or there are no updates on listed species, no further consultation/coordination for this project is required for the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place before project implements any changes which are final or commits additional resources.

If you have any questions regarding this letter or need further assistance, please contact the New Jersey Ecological Services Field Office and reference Project Code 2024-0139863 associated with this Project.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

NJTA Interchange 3 Outside Toll Improvements

2. Description

The following description was provided for the project 'NJTA Interchange 3 Outside Toll Improvements':

The Interchange 3 Outside Toll project will address the congestion and safety concerns at NJ Turnpike's Interchange 3 connection to Route 168. This project will improve safety, maintain access driveways, enhance pedestrian and bike mobility, and minimize right-of-way and environmental impacts along the corridor. Providing improvements to the existing intersection affords the opportunity to address congestion and safety issues beyond the Interchange 3 toll plaza.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@39.86286605,-75.07682445153466,14z>



DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect, but not likely to adversely affect” for the Endangered northern long-eared bat (*Myotis septentrionalis*).

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

No

3. Does any component of the action involve construction or operation of wind turbines?

Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

No

Table – Composite Plant Species List

COMPOSITE PLANT SPECIES LIST

NL = Not listed

N/A = Not Applicable

TREE SPECIES

COMMON NAME	SCIENTIFIC NAME	INDICATOR STATUS (AGCP)
Norway maple	<i>Acer platanoides</i>	UPL
Red maple	<i>Acer rubrum</i>	FAC
Pignut hickory	<i>Carya glabra</i>	FACU
Northern catalpa	<i>Catalpa speciosa</i>	FACU
American beech	<i>Fagus grandifolia</i>	FACU
Sweetgum	<i>Liquidambar styraciflua</i>	FAC
Black tupelo	<i>Nyssa sylvatica</i>	FAC
Black cherry	<i>Prunus serotina</i>	FACU
Sawtooth oak	<i>Quercus acutissima</i>	NL
Pin oak	<i>Quercus palustris</i>	FACW
Willow oak	<i>Quercus phellos</i>	FACW
Northern red oak	<i>Quercus rubra</i>	FACU
Black willow	<i>Salix nigra</i>	OBL
Slippery elm	<i>Ulmus rubra</i>	FAC

SHRUBS/VINES

COMMON NAME	SCIENTIFIC NAME	INDICATOR STATUS (AGCP)
Downy service-berry	<i>Amelanchier arborea</i>	FACU
English ivy	<i>Hedera helix</i>	FACU
Japanese honeysuckle	<i>Lonicera japonica</i>	FACU
Virginia creeper	<i>Parthenocissus quinquefolia</i>	FACU
Smooth sumac	<i>Rhus glabra</i>	NL
Horsebrier (Greenbrier)	<i>Smilax rotundifolia</i>	FAC
Eastern poison ivy	<i>Toxicodendron radicans</i>	FAC
Southern arrow-wood	<i>Viburnum dentatum</i>	FAC
Fox grape	<i>Vitis labrusca</i>	FAC

HERBACEOUS

COMMON NAME	SCIENTIFIC NAME	INDICATOR STATUS (AGCP)
White snakeroot	<i>Ageratina altissima</i>	FACU
Mustard species	<i>Alliaria sp.</i>	N/A
Annual ragweed	<i>Ambrosia artemisiifolia</i>	FACU
Common wormwood (Mugwort)	<i>Artemisia vulgaris</i>	UPL
Canadian thistle	<i>Cirsium arvense</i>	FACU
Chufa	<i>Cyperus esculentus</i>	FAC
Queen Anne's lace	<i>Daucus carota</i>	UPL
Deer-tongue rosette grass	<i>Dichanthelium clandestinum</i>	FACW

COMMON NAME	SCIENTIFIC NAME	INDICATOR STATUS (AGCP)
Fescue species	<i>Festuca sp.</i>	N/A
Bedstraw	<i>Galium sp.</i>	N/A
Ground ivy	<i>Glechoma hederacea</i>	FACU
Jewelweed	<i>Impatiens capensis</i>	FACW
Soft rush	<i>Juncus effusus</i>	OBL
Japanese stiltgrass	<i>Microstegium vimineum</i>	FAC
Sensitive fern	<i>Onoclea sensibilis</i>	FACW
Long-leaf basket grass	<i>Oplismenus hirtellus</i>	FAC
Cinnamon fern	<i>Osmundastrum cinnamomeum</i>	FACW
Halberd-leaf tearthumb	<i>Persicaria arifolia</i>	OBL
Pinkweed (Pennsylvania smartweed)	<i>Persicaria pennsylvanica</i>	FACW
Jumpseed	<i>Persicaria virginiana</i>	FAC
Common reed	<i>Phragmites australis</i>	FACW
Grass species/Maintained shoulder	<i>Poa sp.</i>	N/A
Foxtail species	<i>Setaria sp.</i>	N/A
Golden rod species	<i>Solidago sp.</i>	N/A
Aster species	<i>Symphyotrichum sp.</i>	N/A
Skunk cabbage	<i>Symplocarpus foetidus</i>	OBL
Common dandelion	<i>Taraxacum officinale</i>	FACU
Red clover	<i>Trifolium pratense</i>	FACU
White clover	<i>Trifolium repens</i>	FACU

Source: Program Team, 2022.