The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act has listed Assiscunk Creek at Hedding Road (upstream of the Turnpike crossing) in Mansfield Township (site ID AN0141) as having benthic macroinvertebrates occurring in the stream, as identified in NJDEP's Ambient Biological Monitoring Network.

Crafts Creek (M.P. 49.7)

Crafts Creek is a moderately stable, perennial stream flowing under the Turnpike under a 30-foot bridge span. The active channel width is approximately 20 feet, and the substrate is primarily silt. At the time of the fieldwork, the water was cloudy, but the maximum depth was estimated to be at least several feet. A dam is present approximately ¼-mile downstream from the Turnpike. The stream contains abundant overhanging vegetation, providing fair cover for fish and aquatic invertebrates. Crafts Creek is primarily bordered by forested land, except for nearby maintained utility rights-of-way.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act has listed Crafts Creek at Old York Road (downstream of the Turnpike crossing) in Mansfield Township (site ID AN0137) as having an impaired benthic macroinvertebrates community occurring in the stream, as identified in NJDEP's Ambient Biological Monitoring Network (ABMN).

Tributary to Crafts Creek (M.P. 50.2)

The tributary to Crafts Creek is a moderately stable, apparently perennial stream flowing under the Turnpike through a 4-foot culvert. The active channel width is 5 to 7 feet, and the substrate consists primarily of gravel and sand. At the time of the fieldwork, the water was clear, and depths were 6 to 12 inches. On the southbound side of the Turnpike, the channel has been diverted around an agricultural field (corn), is somewhat obstructed by concrete debris from an old dam and is partially lined with concrete and stabilized with riprap. A drainage ditch from the Turnpike enters the stream on the southbound side. The stream contains gravel, overhanging vegetation, aquatic vegetation, and woody debris, providing a diversity of cover for fish and aquatic invertebrates. Tadpoles, frogs, and numerous aquatic invertebrates were present. The stream is bordered by forested and agricultural land, except for nearby maintained utility rights-of-way.

The Tributary to Crafts Creek water quality can be comparable to that listed above in Crafts Creek (M.P. 49.7) discussion, as it is a tributary to Crafts Creek.

Interchange 6 to Interchange 7

Crystal Lake Creek (M.P. 51.8)

Crystal Lake Creek is a moderately stable, perennial stream flowing under the Turnpike through a 14foot box culvert. There is a two-foot drop at the west end of the culvert. The active channel width is 20 feet, and the substrate consists of boulders, gravel, and sand. At the time of the fieldwork, the water was partially cloudy and depths were at least several feet. The stream contains deep pools, boulders, gravel, overhanging vegetation, and woody debris, providing good cover for fish and aquatic invertebrates. A pipeline crossing the creek is covered with concrete armor, creating a riffle. Forested land borders Crystal Lake Creek, except for nearby maintained utility rights-of-way.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act does not list Crystal Lake Creek as having impaired water quality.

Blacks Creek (M.P. 53.4)

Blacks Creek is a steep-banked, perennial stream flowing under the Turnpike under two 20-foot wide concrete arches. This crossing structure is approximately 200 feet in length, as the stream also crosses underneath Interchange 7. The active channel width is 20 to 25 feet, and the substrate primarily consists of gravel and sand. At the time of the fieldwork, the water was fairly clear and the stream was approximately two feet deep. The stream contains gravel, overhanging vegetation, and woody debris, providing good cover for fish and aquatic invertebrates. Forested land borders Blacks Creek.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act has listed Blacks Creek at Georgetown Road (upstream of the Turnpike crossing) in Chesterfield Township as having the following impaired conditions/pollutants as occurring in the stream:

Site ID	Parameter	Data Source
01464527	Total Suspended Solids, Fecal Coliform	NJDEP/USGS Data
01464527	Temperature, Dissolved Oxygen, pH,	NJDEP/USGS Data
	Nitrate, Dissolved Solids, Unionized Ammo	onia
01464527	Phosphorus	NJDEP/USGS Data
AN0132	Benthic Macroinvertebrates	NJDEP AMNET

Interchange 7 to Interchange 7A

Laurel Run (M.P. 53.9)

Laurel Run is a relatively stable stream flowing under the Turnpike through three 4-foot round concrete culverts. A drop of several inches occurs at the west end of the culverts. The active channel width is 15 feet, and the substrate consists of gravel, sand, and silt. At the time of the fieldwork, the water was fairly clear and the stream was several feet deep. The stream contains pools, overhanging vegetation, riffles, and woody debris, providing good cover for fish and aquatic invertebrates. Fish were observed in the stream. Drainage ditches from the Turnpike enter the stream on the northbound side of the Turnpike. Forested land borders Laurel Run, except for nearby maintained rights of-way.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act does not list Laurel Run as having impaired water quality.

Thorton Creek (M.P. 55.3)

Thorton Creek crosses under the Turnpike through a 48-inch culvert. There was no flow in the creek during the field visit, so no stream assessment was conducted.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act does not list Thorton Creek as having impaired water quality.

Crosswicks Creek (M.P. 56.9)

Crosswicks Creek is a stable stream which flows under the Turnpike under a pier-supported bridge span. The active channel width is 40 feet, but the substrate and depth could not be determined. At the time of the fieldwork, the water was cloudy, and runoff from the Turnpike enters the creek. The creek contains pools, overhanging vegetation, riffles, and woody debris, providing good cover for fish and aquatic invertebrates. Forested land borders Crosswicks Creek, except for a utility right-of-way for an underground pipeline which crosses the creek on the northbound side of the Turnpike.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act does not list Crosswicks Creek as having impaired water quality.

Doctors Creek (M.P. 57.5)

Doctors Creek is a moderately stable stream which flows under the Turnpike through three 15-foot wide concrete arches. The active channel width is 20 feet, and the substrate primarily consists of gravel and sand. At the time of the fieldwork, the water was fairly clear and the stream was several feet deep. The stream contains overhanging vegetation, riffles, and woody debris, providing fair cover for fish and aquatic invertebrates. A drainage ditch from the Turnpike enters the stream on the east side of the Turnpike. Forested land borders Doctors Creek, except for right-of-way for overhead power lines and an underground pipeline which cross the creek on the northbound side of the Turnpike.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act has listed Doctors Creek in Allentown Township and Upper Freehold Township (both upstream of the Turnpike crossing) as having the following impaired conditions/pollutants as occurring in the stream:

Site ID	Parameter	Data Source
01464515	Fecal Coliform	NJDEP/USGS Data
01464515	Phosphorus	NJDEP/USGS Data
01464515	Temperature, pH, Dissolved Oxygen,	NJDEP/USGS Data
	Nitrate, Dissolved Solids, TSS	
AN0129, MB-123	Benthic Macroinvertebrates	NJDEP AMNET,
		Monmouth Co HD
AN0127	Benthic Macroinvertebrates	NJDEP AMNET
3	Fecal Coliform, Nitrate	Monmouth Co.
		Health Dept.
3	Phosphorus	Monmouth Co.
		Health Dept.
3	pH, Total Suspended Solids	Monmouth Co.
		Health Dept.
AN0130	Benthic Macroinvertebrates	NJDEP AMNET
MB-PARK1	Benthic Macroinvertebrates	Monmouth Co.
		Health Dept.
AN0127A	Benthic Macroinvertebrates	NJDEP AMNET

Interchange 7A to Interchange 8

Miry Run (M.P. 61.9)

Miry Run crosses under the Turnpike through a 48-inch culvert. There was no flow in this stream during the field visit, so no stream assessment was conducted.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act does not list any impaired conditions/pollutants for Miry Run upstream of the Turnpike crossing. Miry Run is listed as containing impaired conditions/pollutants approximately 2 miles below the Turnpike crossing.

Assunpink Creek (M.P. 63.3)

Assunpink Creek is a moderately stable, perennial stream flowing under the Turnpike through a box culvert. The active channel width is approximately 30 feet, and the substrate consists of gravel, sand, and silt. Water depths range from one to two feet, and the water was fairly cloudy. The stream contains some shallow pools, woody debris, and gravel, providing good habitat for fish and aquatic invertebrates. Agricultural land and residential developments border Assunpink Creek, and rights-of-way for an underground pipeline and overhead power lines cross the creek on the northbound side of the Turnpike.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act has listed Assunpink Creek in Upper Freehold Township and Millstone Township (both upstream of the Turnpike crossing) as having the following impaired conditions/pollutants as occurring in the stream:

Site ID	Parameter	Data Source
Assunpink Creek	Fish-Mercury	NJDEP Fish
_		Tissue Monitoring
AN0108	Benthic Macroinvertebrates	NJDEP AMNET
4	Fecal Coliform, Nitrate	Monmouth Co.
		Health Dept.
4	Phosphorus	Monmouth Co.
	-	Health Dept.
4	pH, Total Suspended Solids	Monmouth Co.
	-	Health Dept.
AN0109T	Benthic Macroinvertebrates	NJDEP AMNET

Bear Brook (M.P. 64.9)

Bear Brook crosses under the Turnpike through a 48-inch culvert. There was no flow in this stream during the field visit, so no stream assessment was conducted.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act does not list any impaired conditions/pollutants for Bear Brook upstream of the Turnpike crossing. Bear Brook is listed as containing impaired conditions/pollutants approximately 1 mile below the Turnpike crossing.

Peddie Brook (M.P. 66.2)

Peddie Brook is a moderately stable, perennial stream flowing under the Turnpike through a 20-foot wide winged box culvert. The active channel width ranges from 5 to 18 feet, and the substrate consists of sand, silt, and mud. Water depths range from one to two feet, and the water was partially cloudy. A number of drainage channels and small streams enter Peddie Brook on the southbound side of the Turnpike. The stream contains some shallow pools, riffles, and abundant woody debris, providing good habitat for fish and aquatic invertebrates. Agricultural land and residential development border Peddie Brook, and a right-of-way for an underground pipeline crosses the creek on the northbound side of the Turnpike.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act does not list Peddie Brook as having impaired water quality.

Tributary to Peddie Brook (M.P. 66.9)

A tributary to Peddie Brook crosses under the Turnpike through a 48-inch culvert. There was no flow in this stream during the field visit, so no stream assessment was conducted.

The Tributary to Peddie Brook water quality can be comparable to that listed above in Peddie Brook (M.P. 66.2) discussion, as it is a tributary to Peddie Brook.

Rocky Brook (M.P. 67.3)

Rocky Brook is a stable, perennial stream which flows under the Turnpike under a pier-supported bridge span. The active channel width is approximately 20 feet, and the substrate consists of silty sands, some cobbles, and rip-rap (near the Turnpike overpass). Water depths range from one to two feet, and the water was fairly clear. Riprap underneath the Turnpike presents a partial barrier to fish movement, but woody debris, overhanging and submerged vegetation, cobbles, and riffles provide fair habitat for fish and aquatic invertebrates. Agricultural land, as well as commercial and residential developments border Rocky Brook, and a right-of-way for an underground pipeline crosses the stream on the northbound side of the Turnpike.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act has listed Rocky Brook in Millstone Township and Perrineville Township (both upstream of the Turnpike crossing) as having the following impaired conditions/pollutants as occurring in the stream:

Site ID	Parameter	Data Source
MB-PARK5	Benthic Macroinvertebrates	Monmouth Co.
		Health Dept.
01400585	Phosphorus, Fecal Coliform,	NJDEP/USGS
	Temperature, pH, Dissolved Oxygen,	
	Data, 304(1) Nitrate, Dissolved Solids,	
	TSS, Unionized Ammonia	
01400585	Arsenic, Chromium, Lead, Zinc	NJDEP/USGS
		Data, 304(1)
01400585	Selenium, Silver	NJDEP/USGS
		Data, 304(1)
AN0380, MB-70	Benthic Macroinvertebrates	NJDEP AMNET,
		Monmouth Co.
		Heath Dept.

Interchange 8 to Interchange 8A

Timber Run Creek (M.P. 67.9)

Timber Run Creek is a moderately stable, ephemeral stream that crosses the Turnpike through a four-foot wide concrete culvert. The active channel width is approximately 8 to 12 feet, and the substrate consists of silty sands, some cobbles, and rip-rap. Water depths were 4 inches or less, and the water was cloudy with excessive organic debris, and appears to be stagnant for extended periods. A concrete wall lines a portion of the stream channel along a commercial parking lot on the northbound side of the Turnpike. Due to its very shallow depth and considerable amount of branches and leaf litter, the stream is poor fish habitat, and only fair aquatic invertebrate habitat. The stream has a very narrow riparian zone and is bordered by commercial developments and Monmouth Street. A right-of-way for an underground pipeline crosses the stream on the northbound side of the Turnpike.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act does not list Timber Run Creek as having impaired water quality.

Millstone River (M.P. 68.8)

The Millstone River is a stable, perennial stream that flows under a bridge span on the Turnpike. The active channel width is approximately 25 feet, and the substrate consists of silty sands, some cobbles, and rip-rap adjacent to the highway overpass. Water depths range from one to two feet, and the water was fairly cloudy. A number of drainage channels enter the river. Overhanging vegetation, riffles, and woody debris are present, providing good fish and aquatic invertebrate cover. Agricultural land and residential developments border the stream, and a right-of-way for an underground pipeline crosses the stream on the northbound side of the Turnpike.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act has listed the Millstone River in Millstone, East Windsor and Hillsborough Townships (all upstream of the Turnpike crossing) as having the following impaired conditions/pollutants as occurring in the stream:

Site ID	Parameter	Data Source
AN0382D	Benthic Macroinvertebrates	NJDEP AMNET
MB-MILL5,	Benthic Macroinvertebrates	Monmouth Co.
MB-MILL4		Health Dept.
01402000, 10-MIL-5,	Fecal Coliform	NJDEP/USGS
10-MIL-6		Data - Metal Recon
01402000, 10-MIL-5,	Phosphorus, Arsenic	NJDEP/USGS Data -
10-MIL-6		Metal Recon
01402000, 10-MIL-5,	Cadmium, Mercury	NJDEP/USGS Data -
10-MIL-6		Metal Recon
01402000, 10-MIL-5,	Temperature, pH, Dissolved Oxygen,	NJDEP/USGS Data -
10-MIL-6	Nitrate, Dissolved Solids, TSS,	Metal Recon
	Unionized Ammonia, Chromium,	
AN0410	Benthic Macroinvertebrates	NJDEP AMNET
MB-MILL1	Benthic Macroinvertebrates	Monmouth Co.
		Health Dept.
01400650	Cadmium, Lead, Mercury	NJDEP/USGS Data
5 Raritan 10		
AN0382	Benthic Macroinvertebrates	NJDEP AMNET
01401440, 10-MIL-2	Phosphorus, Fecal Coliform, pH,	NJDEP/USGS Data -
	Temperature, Arsenic, Mercury	Metal Recon
01401440, 10-MIL-2	Cadmium, Lead	NJDEP/USGS Data -
		Metal Recon
01401440, 10-MIL-2	Chromium, Copper, Nickel, Selenium,	NJDEP/USGS Data -
	Zinc	Metal Recon
MB-MILL3	Benthic Macroinvertebrates	Monmouth Co.
		Health Dept.
MB-MILL6	Benthic Macroinvertebrates	Monmouth Co.
		Health Dept.
MB-MILL6	Benthic Macroinvertebrates	Monmouth Co.
		Health Dept.
AN0379, AN0378,	Benthic Macroinvertebrates	NJDEP AMNET,
MB-MILL2		Monmouth Co.

AN0382B 01400540, 01400530, 5, 10-MIL-1	Benthic Macroinvertebrates Fecal Coliform	Health Dept. NJDEP AMNET NJDEP/USGS Data - Monmouth Co. Health Dept.
01400540, 01400530,		
5, 10-MIL-1	Phosphorus, pH, TSS, Arsenic	NJDEP/USGS Data -
		Monmouth Co.
		Health Dept.
01400540, 01400530,	Cadmium, Mercury	NJDEP/USGS Data -
5, 10-MIL-1	•	Monmouth Co.
		Health Dept.
01400540, 01400530,	Temperature, Dissolved Oxygen,	NJDEP/USGS Data -
5, 10-MIL-1	Dissolved Solids, Unionized Ammonia	, Monmouth Co.
•	Nitrate, Chromium, Copper, Lead, Nickel	Health Dept.

Indian Run Brook (M.P. 69.5)

Indian Run Brook is an unstable, intermittent stream with moderate erosion, which crosses the Turnpike through a 10-foot box culvert. The active channel width is approximately 5 feet on the northbound side and 15 feet on the southbound side, and the substrate consists of sand, silt, and mud. Water depths were 6 inches or less, and the water was murky. Approximately 150 feet west of the Turnpike, the stream becomes undefined and water was no longer present. Because of its shallowness, intermittent nature, and lack of in-stream cover, fish and aquatic invertebrate habitat is poor. The stream has a very narrow riparian zone, averaging only 6 feet in width. Agricultural land and woodlands border the stream, and a right-of-way for an underground pipeline crosses the stream on the northbound side of the Turnpike.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act does not list Indian Run Brook as having impaired water quality.

Cranbury Brook (M.P. 70.7)

Cranbury Brook is a moderately stable, perennial stream that flows under the Turnpike through a bridge span. The active channel width is approximately 25 feet, and the substrate consists of gravel, sand, and silt. Water depths ranged from one to two feet, and the water was cloudy. A drainage channel from the Turnpike enters the stream. A floating absorbent boom stringer crosses the stream on the southbound side of the highway. Some overhanging vegetation and woody debris is present, but overall, fish and aquatic invertebrate habitat was only fair. Agricultural and forested land borders the stream, and a right-of-way for an underground pipeline crosses the stream on the northbound side of the Turnpike.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act has listed the Cranbury Brook in Prospect Plains Township (all upstream of the Turnpike crossing) as having the following impaired conditions/pollutants as occurring in the stream:

Site ID	Parameter	Data Source
01400690	Fecal Coliform	NJDEP/USGS Data,
		EWQ
01400690	pН	NJDEP/USGS Data,
		EWQ
01400690	Phosphorus, Temperature, Dissolved	NJDEP/USGS Data
	Oxygen, Nitrate, Dissolved Solids,	EWQ
	TSS, Unionized Ammonia,	

Cedar Brook (M.P. 71.9)

Cedar Brook is a somewhat unstable stream which crosses under the Turnpike through a 16-foot box culvert. On the northbound side of the Turnpike, the active channel width is approximately 20 feet. The channel has been constricted to less than 8 feet in width on the southbound side of the Turnpike (downstream) by agriculture and an adjacent roadway. Abundant algae and stagnant flow were observed in the stream west of the highway. The substrate consists of silty sands and some gravel, and the water was one to two feet deep. Some woody debris, pools, and riffles are present, but fish and aquatic invertebrate habitat are only fair. The stream is primarily bordered by agriculture and commercial development, and a right-of-way for an underground pipeline crosses the stream on the northbound side of the Turnpike.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act does not list Cedar Brook as having impaired water quality.

Shallow Brook (M.P. 72.9)

Shallow Brook crosses under the Turnpike through a 48-inch culvert. There was no flow in this stream during the field visit, so no stream assessment was conducted.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act does not list Shallow Brook as having impaired water quality.

Interchange 8A to Interchange 9

Ireland Brook (M.P. 77.8)

Ireland Brook is a somewhat stable, perennial stream that flows under the Turnpike through a 16-foot box culvert. The active channel width is approximately 18 feet on the northbound side of the Turnpike and 6 feet on the southbound side. Depths range from one to two feet, and the substrate consists of silty sand and gravel. At the time of the fieldwork, the water was fairly cloudy. Sand bars and bank erosion are present on both sides of the highway. The stream contains shallow pools, overhanging vegetation, and some woody debris, which provide fair habitat for fish and aquatic invertebrates. Agricultural and forested land borders the stream, and a right-of-way for an underground pipeline crosses the stream on the northbound side of the Turnpike.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act does not list any impaired conditions/pollutants for Ireland Brook upstream of the Turnpike crossing. Ireland Brook is listed as containing impaired conditions/pollutants approximately 2 mile below the Turnpike crossing.

South Branch of Beaver Dam Brook (M.P. 79.1)

The South Branch of Beaver Dam Brook crosses under the Turnpike through a culvert which was bridged over during an earlier widening of the Turnpike. This stream has been extensively altered by erosion, and storm water control measures consisting of riprap and gabion line portions of the channel. The active channel width is approximately five feet on the southbound side of the Turnpike, and three feet on the northbound side, where it is also braided. The stream substrate is made up of silts and sands, with riprap adjacent to and underneath the Turnpike overpass. Depths were approximately 6 inches, and the water was mostly cloudy. There are numerous barriers to fish movement, and little instream fish cover is present. Aquatic invertebrate habitat is also poor. A right-of-way for an underground pipeline crosses the stream on the northbound side of the Turnpike. The stream is bordered by woodlands and by residential development, which is set back approximately 10 feet from the stream embankment.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act does not list the South Branch of Beaver Dam Brook as having impaired water quality.

North Branch of Beaver Dam Brook (M.P. 79.4)

The North Branch of Beaver Dam Brook is a moderately stable, perennial stream that crosses under the Turnpike through a culvert which was bridged over during an earlier widening of the Turnpike. The active channel width is approximately 10 feet on the northbound side of the Turnpike and 8 feet on the southbound side, and the substrate primarily consists of silty sands. Water depths ranged from three inches to two feet, and the water was fairly cloudy. A number of drainage channels enter the stream. The woody debris and shallow pools are present, and provide good fish and aquatic invertebrate cover, but woody debris on the northbound side of the Turnpike presents a significant barrier to fish movement. Agricultural and forested land borders the stream, and a right-of-way for an underground pipeline crosses the stream on the northbound side of the Turnpike.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act does not list the North Branch of Beaver Dam Brook as having impaired water quality.

Bog Brook (M.P. 80.3)

Bog Brook is a moderately stable, ephemeral stream which crosses under the Turnpike through a culvert which was bridged over during an earlier widening of the Turnpike. This stream has a defined channel only on the west side of the Turnpike, where most of it is within a 36-inch culvert. The stream substrate is primarily cobbles and riprap, with some silty sand. Water depths were three inches or less, and the water was clear. The stream is too shallow to support fish on a permanent basis. Little fish or aquatic invertebrate cover is present. A right-of-way for an underground pipeline crosses the stream on the northbound side of the Turnpike. The surrounding area is residential, with mowed lawns set back 10 feet or less from the stream embankments.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act does not list Bog Brook as having impaired water quality.

South Tributary to Weston Mills Pond (M.P. 80.7)

The South Tributary to Weston Mills Pond is an ephemeral stream which crosses under the Turnpike through a culvert which was bridged over during an earlier widening of the Turnpike. This stream has extensively altered banks and channel bottom (rip-rap and concrete). The active channel width is approximately four feet, and the substrate consists of silty sands, cobbles, riprap, and concrete. Water depths range from 6 to 12 inches and the water was slightly cloudy due to algal growth, as water appears to be ponded for most of the time. Fish barriers are present in the stream (culvert and erosion control devices) and the stream is too shallow to support fish on a permanent basis. Fish and aquatic invertebrate cover was poor. The riparian zone is only several feet in width. Residential and industrial/commercial development borders the stream, and are set back less than 10 feet from the stream embankments.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act does not list the South Tributary to Weston Mills Pond as having impaired water quality.

Sawmill Brook (M.P. 81.6)

Sawmill Brook is a moderately stable, perennial stream which flows under the Turnpike through a 12-foot box culvert which was bridged over during an earlier widening of the Turnpike. The active channel width is approximately 12 feet, and the substrate consists of silty sands, cobbles, and riprap (by the Turnpike overpass). Water depths range from three inches to two feet, and the water was clear. A drainage channel from the Turnpike enters the stream. The stream contains shallow pools, overhanging vegetation, riffles, and woody debris, providing good in-stream fish and aquatic invertebrate cover. Residential and forested land borders the stream, and a right-of-way for an underground pipeline crosses the stream on the northbound side of the Turnpike.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act does not list any impaired conditions/pollutants for Sawmill Brook upstream of the Turnpike crossing. Sawmill Brook is listed as containing impaired conditions/pollutants approximately ½ mile below the Turnpike crossing.

North Tributary to Weston Mills Pond (M.P. 82.5)

The North Tributary to Weston Mills Pond crosses under the Turnpike through a 48-inch culvert. There was no flow in this stream during the field visit, so no stream assessment was conducted.

The 2004 Report on the Water Quality In New Jersey Pursuant to The New Jersey Water Quality Planning Act, and Sections 305(b) and 303(d) of the Federal Clean Water Act does not list the North Tributary to Weston Mills Pond as having impaired water quality.

3.12.3.3 Existing Roadway Drainage System

Surface water from the existing Turnpike discharges to the local streams via umbrella drainage into roadside ditches. The median drainage is captured and piped to the outside roadway ditches. The roadside ditches are relatively small V-shaped swales and do not provide significant total suspended solids (TSS) removal. In addition, the embankment along the Turnpike is hydraulically short and the overland flow to the roadway ditch does not provide a significant amount of TSS removal. In addition, there are no structural Best Management Practices along the Turnpike used to remove TSS from runoff from the existing roadway surface.

3.12.4 Groundwater

The New Jersey Coastal Plain Aquifer System includes all or portions of the counties of Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Middlesex, Monmouth, Ocean, and Salem. The entire Project Corridor is located within this system, as shown on Figure 3-17.

The New Jersey Coastal Plain Aquifer System is susceptible to contamination across several interfaces. In the outcrop areas, the water table conditions and the highly permeable nature of the soil, with its low attenuation capability, facilitate the movement of contaminants from the land surface into the system. Significant pollution sources include septic tanks, landfills, chemical spills and dumping, chemical storage leaks, industrial waste lagoons, highway deicing and agricultural chemicals. These sources have immediate local impacts as well as long-term cumulative impacts as they progress through to the lower system. EPA has identified roughly 150 hazardous waste disposal sites within the New Jersey Coastal Plain area which have the potential for contaminating the environment.

The New Jersey Coastal Plain Aquifer System service area is heavily dependent upon the groundwater system for its drinking water supply. The many streams throughout the area might be considered alternative supplies; however, the streams are not as readily accessible to everyone as is groundwater. Since the groundwater has historically been the primary source of supply, considerable cost would be associated with tapping, treating and distributing this surface resource as an alternative supply. Most importantly, the close interrelationship between the groundwater system and quality and baseflow of the streams precludes stream resources as a viable long-term alternative in the event of groundwater contamination. The Delaware River may be considered an alternative source of supply for portions of the area; however, existing competitive uses severely limit the availability of additional water for drinking purposes. Since the groundwater resources of the New Jersey Coastal Plain Aquifer System are vast in magnitude and distribution, no alternative sources of water supply are considered viable.

Groundwater use for public supply in the Coastal Plain area was about 250 million gallons per day (MGD) in 1978. The use of surface water for public supply in this same area amounts to 79 MGD. Of the estimated 400 MGD withdrawn from the Coastal Plain aquifer system in 1978, approximately 75 percent was used for drinking water purposes to serve 2.3 million people. NJDEP records were searched to identify public well locations. Approximately 13 public community water supply wells are located within one mile of the proposed roadway. Table 3.45 lists the estimates of drinking water used per day for each county comprising the Project Corridor.

Well head protection areas (WHPAs) are areas calculated around Public Community Water Supply (PCWS) wells in New Jersey that delineate the horizontal extent of groundwater captured by a well pumping at a specific rate over a two-, five-, and twelve-year period of time for confined wells. Each confined well has a fifty foot radius delineated around it that serves as the WHPA, to be controlled by the water purveyor in accordance with the Safe Drinking Water Regulations (N.J.A.C. 7:10-11.7(b)1).

Table 3.45
Estimated Drinking Water Consumption (MGD)

County	USGS (a)	208 Plan (b)	NJWSMP (c)	Est. Private Use (c)
Burlington	30.5	25.5	32.4	4.7
Mercer	7.2	6.5	4.5	1.5
Middlesex	24.7	25.8	24.1	1.5

Sources of information:

- (a) USGS Report on the NJ Coastal Plain Area; Database: 1978.
- (b) Respective Water Quality Management Plans; database: 1970-75.
- (c) New Jersey Water Supply Master Plan; database: 1976.

A WHPA consists of three tiers; each tier is based on a groundwater time-of-travel (TOT) to the well. The outer boundaries of each tier have the following times of travel: Tier 1, two years; Tier 2, five years; Tier 3, twelve years. The portion of the zone of contribution designated as the WHPA is based upon the TOT of the groundwater to a pumping well. The TOT's are based on the need to assess the relative risk of contamination to the well, allowing priority to sources that pose an imminent threat.

The TOT for the outer boundary of Tier 1 is two years. This TOT is based on findings that bacteria have polluted wells as far as a 170 day TOT from the well, and that viruses have survived in groundwater for up to 270 days. Generally, pollution does not move in a uniform front, so a TOT represents an average. Significant pollution may reach a well before the average TOT. In addition, once a pollution plume gets too close to a water-supply well, plume containment usually is not feasible without an impact to the yield of the well. The two-year TOT provides a reasonable margin of safety beyond the 170 and 270 day figures.

The TOT for Tier 2 is five years. NJDEP is not reasonably certain that the containment of pollution from a known discharge or restoration of an aquifer can be ensured for areas where TOTs range from two to five years. Selection of the five-year TOT was based on the "smearing" effect observed in pollution plumes (caused by absorption/desorption and the variable rate of pollutant travel through pores), the acceleration of groundwater once it nears a pumping well and the complexity of groundwater pollution incidents.

Beyond Tier 2, NJDEP is reasonably certain that a viable pollution mitigation response is possible for significant, know discharges of pollutants. The purpose of Tier 3 is to ensure sufficient monitoring of potential pollution sources so timely and effective responses may be made. Most groundwater pollution sources located outside of the TOT of 12 years are either too minor to be of special concern or are major enough to ensure that current NJDEP regulations will protect the water supply.

The delineation of WHPAs are conducted in response to the Safe Drinking Water Act Amendments of 1986 and 1996, as part of the Source Water Area Protection Program (SWAP). A goal of the Well Head Protection Program is to prevent contamination of groundwater resources, which provide drinking water to roughly forty two percent of New Jersey's population. WHPA delineations are the first step in defining the sources of water contributing to a public supply well. Within these areas, potential contamination will be assessed and appropriate monitoring will be undertaken in subsequent phases of the SWAP.

Five WHPAs are present in the Project Corridor. These WHPAs are delineated around five wells owned and operated by the Monroe Township Municipal Utilities Authority (MTMUA). These five wells are located between M.P. 70.0 and M.P. 74.0 in Middlesex County. Four of these five wells are located in Monroe, while the fifth is located at Service Area 7S in Cranbury.



Legend

Project Location

County Boundary

Sole Source Aquifers

Buried Valley

Coastal Plain

Highlands

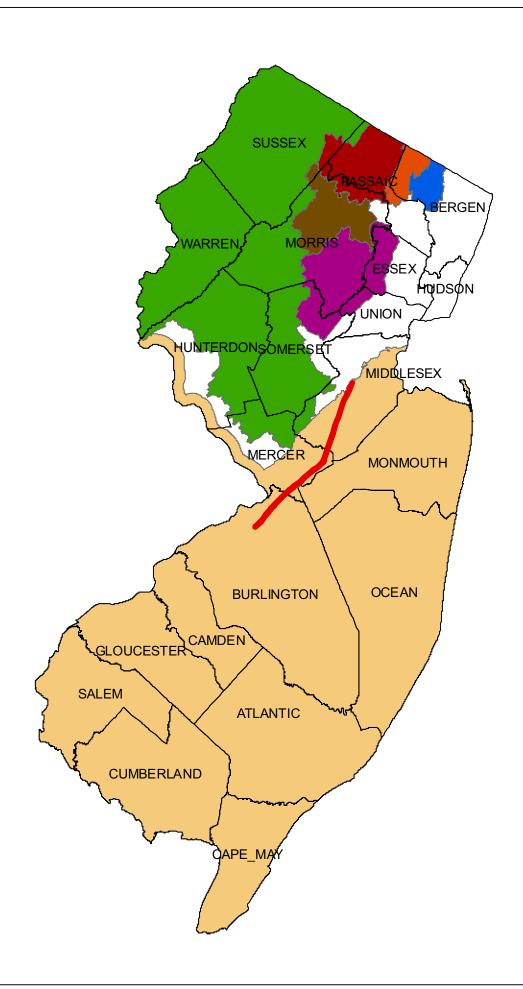
Northwest New Jersey

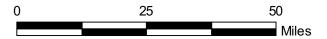
Not a SSA

Ramapo

Ridgewood

Rockaway





SOLE SOURCE AQUIFERS

New Jersey Turnpike Interchange 6 to 9 Widening Burlington, Mercer and Middlesex Counties Executive Order No. 215 Environmental Impact Statement



NEW JERSEY TURNPIKE AUTHORITY
NEW JERSEY TURNPIKE

FIGURE 3-17 Well No. 2803187 (MTMUA Well 1T) is located at Service Area 7S in Cranbury near M.P. 71.6 on the southbound side of the Turnpike. Both Tier 1 and Tier 2 of this well's WHPA are located on Authority property. The elongated shape of the WHPA zones indicates that the regional groundwater flow direction is directed toward the Turnpike. Consequently, the WHPA zones extend away from the Turnpike and into an adjacent agricultural field.

Only the Tier 3 WHPA zones of the four remaining wells extend into the Project Corridor. NJDEP has stated that "the purpose of Tier 3...is to ensure sufficient monitoring of potential pollution sources so that timely and appropriate responses may be made. Theoretically, Tier 3 could extend to the boundaries of the complete zone of contribution. However, the WHP Technical Advisory Committee determined that such an extensive area is not needed in New Jersey" (NJGS OFR 03-1 Guidelines for Delineation of Well Head Protection Areas in New Jersey) While the potential to contaminate a well is minimal in Tier 3, measures must still be implemented to ensure groundwater pollution does not occur.

All five wells draw water from the Potomac-Raritan-Magothy aquifer system, one of the five principal aquifers which comprise the New Jersey Coastal Plain Aquifer system. Figure 3-18 depicts generalized well locations and wellhead protection areas in relation to the Project Corridor.

Fresh, uncontaminated ground water in the New Jersey Coastal Plain is low in dissolved solids (generally less than 150 milligrams per liter (mg/l)). Calcium and bicarbonate are usually dominant ions in solution with smaller amounts of sodium, potassium, magnesium sulfate and chloride. Locally, concentrations of iron and manganese present a problem near the water table because the ground water tends to have a low pH. These waters are treated to make them palatable. Historically, no significant quantities of heavy metals, pesticides, organics or coliform bacteria have been found in the artesian aquifers. Except for specific parameters (e.g., iron) and contamination incidents, water quality in the artesian ground water system meets or exceeds federal and State drinking water standards. The quality of ground water in the outcrop area, on the other hand, is variable, being largely determined by local conditions at the land surface.

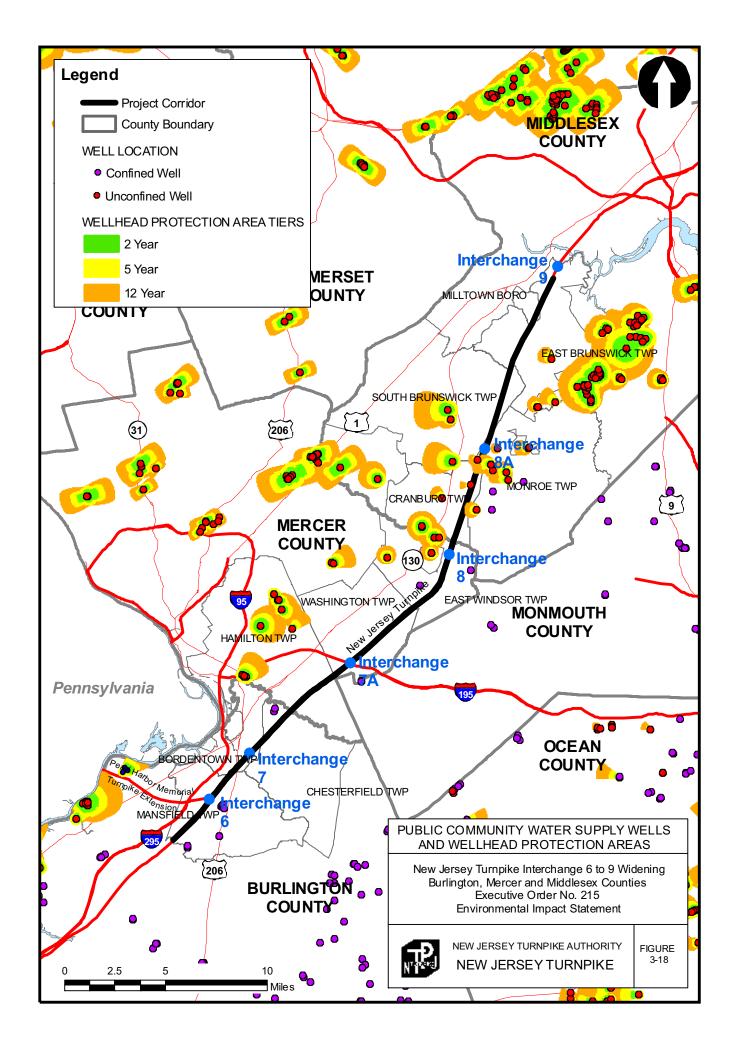
The Delaware River and Estuary, Sandy Hook Bay, the Atlantic Coast and the older, harder rocks of the Piedmont province constitute the recharge boundaries of the New Jersey Coastal Plain Aquifer System. These hydrographic features represent the interfaces across which water either moves into or out of the ground water reservoir. Natural recharge occurs primarily through direct precipitation on the outcrop area of the geologic formations. A smaller component of natural recharge to the deeper layers of the system occurs by vertical leakage from the upper layers. This accounts for a small percentage of the total amount of recharge; however, over a large area and a long period of time, the amount of water transmitted can be significant.

Natural recharge to the New Jersey Coastal Plain Area occurs primarily through direct precipitation on the outcrop area of the geologic formations.

3.13 Floodplains

3.13.1 Introduction

All watercourses in the state of New Jersey are regulated by NJDEP and are designated as being either delineated or non-delineated. For a stream to be designated as delineated, a 100-year flood discharge and a flood hazard area have been established and officially adopted by NJDEP's Bureau of Floodplain Management. All other streams are considered to be non-delineated.



Some floodplains located along larger streams and waterways in the Project Corridor have been mapped by the Federal Emergency Management Agency (FEMA). The first flood zone is Zone A, where no Base Flood Evaluations have been established for areas inundated by a 100-year flooding event; this zone has no detailed studies for determining flood limits. The second is Flood Zone AE, where Base Flood Evaluations have been established for areas inundated by a 100-year flooding event; detailed studies have been completed for determining the 100-year flood evaluation limit. The third is Flood Zone X500, where Base Flood Evaluations for the 500-year flood have been established through detailed studies.

3.13.2 Data Sources and Methodology

For purposes of this study, only streams to be crossed by the Proposed Project having a contributing drainage area greater than 50 acres have been analyzed. This approach is consistent with NJDEP's Flood Hazard Area Regulation (N.J.A.C. 7:13-2.1), which establishes the applicability of the engineering standards under the Flood Hazard Area Regulations.

With 28 creeks, streams and unnamed tributaries along the Project Corridor, the compiling of FEMA's Flood Insurance Rate Maps (FIRMs) becomes an important task in delineating the floodplain limits. The usage of FEMA's Q3 Digital Flood Data Maps allows for a more accurate and better representation of the existing floodplain limits and their corresponding effects on the Proposed Project. The Q3 Digital Flood Data Maps are digital portrayals of particular features of the FIRMs which are scanned and overlain atop aerial photographs. Based on the research of the 100-year floodplain limits, portions of the Project Corridor lie within the Regulatory, 100-year and 500-year floodplains.

The Regulatory Floodplains are defined by the Flood Hazard Area Design Flood (FHADF), which is the New Jersey State Adopted Study (NJSAS) 100-year flood peak discharge, increased by 25 percent. The Flood Hazard Area mappings for some of these watercourses were obtained from the NJDEP Bureau of Floodplain Management.

3.13.3 Existing Floodplains

The Bureau of Floodplain Management was contacted to determine if any of the 28 waterways which will be affected by the Proposed Project have existing floodplain mapping available and/or have had hydraulic/hydrologic analyses performed. Of these, NJDEP flood study information was found to be available for only nine of the Project Corridor waterways; three of these waterways (i.e., Ireland Brook, Beaverdam Brook and Sawmill Brook) are located in the Interchange 8A to Interchange 9 segment of the Turnpike, where proposed improvements are limited to simple excavation and paving. Table 3.46 provides a list of the data available from the NJDEP for the nine formally delineated waterways. Streams crossing the Turnpike in the Project Corridor that are not listed in Table 3.48 are considered non-delineated.

As shown in Table 3.46, the hydraulic model for Assunpink Creek/New Sharon Branch could not be obtained from the NJDEP Bureau of Floodplain Management. For the eight streams having both a state-adopted study and a hydraulic model available, the hydraulic model was obtained from NJDEP. The models obtained were prepared using the U.S. Army Corps of Engineers HEC-2 Water Surface Profile computer models.

Using the more readily available FEMA flood maps, Table 3.47 was compiled to show the FEMA flood zones for each waterway's floodplain where it crosses the Project Corridor:

Table 3.46 Available Flood Study Information

	State Adopted Study		
Watercourse	Map	Hydraulic Model	
Assunpink Creek	Yes	No	
and New Sharon Branch			
Rocky Brook	Yes	Yes	
Millstone River	Yes	Yes	
Cranbury Brook	Yes	Yes	
	***	***	
Cedar Brook	Yes	Yes	
Challery Dreat	Vac	Vac	
Shallow Brook	Yes	Yes	
Ireland Brook	Yes	Yes	
Trans Brook	105	100	
Beaverdam Brook	Yes	Yes	
Sawmill Brook	Yes	Yes	

Source: NJDEP Bureau of Floodplain Management.

Zone A is the flood insurance rate zone that corresponds to the 100-year floodplains that are determined in the Flood Insurance Study by approximate methods. Because detailed hydraulic analyses are not performed for such areas, no base flood elevations or depths are shown within this zone. Zone AE is the flood insurance rate zone that corresponds to the 100-year floodplains that are determined in the Flood Insurance Study by detailed methods. In most instances, base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone. A base flood elevation is the height of the base flood (typically the 100-year flood), usually in feet, in relation to the National Geodetic Vertical Datum of 1929, the North American Vertical Datum of 1988, or other datum referenced in the Flood Insurance Study report, or average depth of the base flood, usually in feet, above the ground surface. For the eight streams within the Project Corridor that are not delineated by FEMA, there is also no state-adopted study available either. Since the drainage areas for these streams are less than 50 acres, an engineering analysis is not required to analyze the floodplains as part of the stream encroachment permit process.

3.14 Ecology

3.14.1 Introduction

The *Ecology* baseline descriptions presented in this section of the EIS include five areas of analysis: 1) aquatic communities; 2) vegetative habitats; 3) regulated wetlands; 4) wildlife; and 5) threatened and endangered species. For each of these areas of analysis, the methodology and data sources used to document the ecology, as well as the findings for each, are presented. For the purpose of all of the ecological analyses, the Project Corridor is defined as the area within the existing Turnpike mainline

Table 3.47 FEMA Flood Zones

Water Course	County	Municipality	FEMA Flood Zones
Assiscunk Creek	Burlington	Mansfield	A
Crafts Creek	Burlington	Mansfield	A
Tributary to Crafts Creek	Burlington	Mansfield	A
Crystal Lake Creek	Burlington	Mansfield	A
Blacks Creek	Burlington	Bordentown	A
Laurel Run	Burlington	Bordentown	A
Thorton Creek	Burlington	Chesterfield	N/A
Crosswicks Creek ¹	Burlington	Chesterfield	A
Crosswicks Creek ¹	Mercer	Hamilton	AE
Doctor's Creek	Mercer	Hamilton	AE
Miry Run	Mercer	Washington	N/A
Assunpink Creek	Mercer	Washington	AE
Bear Brook	Mercer	East Windsor	A
Peddie Brook	Mercer	East Windsor	A
Tributary to Peddie Brook	Mercer	East Windsor	N/A
Rocky Brook	Mercer	East Windsor	AE
Timber Run Creek	Mercer	East Windsor	N/A
Millstone River ²	Mercer	East Windsor	AE
Millstone River ²	Middlesex	Cranbury	AE
Indian Run Brook	Middlesex	Cranbury	A
Cranbury Brook	Middlesex.	Cranbury	AE
Cedar Brook	Middlesex	Cranbury	AE
Shallow Brook	Middlesex	Monroe	AE
Ireland Brook	Middlesex	East Brunswick	AE
South Branch Beaver Dam Brook	Middlesex	East Brunswick	N/A
North Branch Beaver Dam Brook	Middlesex	East Brunswick	AE
Bog Brook	Middlesex	East Brunswick	N/A
South Tribrutary to Weston Mills Pond	Middlesex	East Brunswick	N/A
Sawmill Brook	Middlesex	East Brunswick	AE
North Tributary to Weston Mills Pond	Middlesex	East Brunswick	N/A

¹ Crosswicks Creek serves as the dividing line between Burlington and Mercer counties and therefore, appears on both sets of FEMA maps.

N/A indicates no FEMA map available.

² Millstone River serves as the dividing line between Mercer and Middlesex counties and therefore, appears on both sets of FEMA maps.

right-of-way between the southern terminus located south of Interchange 6 and the northern terminus near Interchange 9, including interchanges, as well as an area 150 feet beyond the right-of-way on both sides of the Turnpike. At Interchange 8, the Project Corridor also includes an expanded area that covers potential toll plaza relocation alternatives that are being studied.

A field review of the Project Corridor was completed to document the extent of existing vegetative communities and wildlife habitats. A list of botanical species observed within the Project Corridor was also compiled, as was a list of observed wildlife species. Vegetative communities were determined to be either wetland/open water or upland communities and then further characterized based upon vegetative cover.

3.14.2 Data Sources and Methodology

3.14.2.1 Aquatic Communities

Data sources used to identify aquatic communities or potential presence of aquatic species within the Project Corridor included the NJDEP Division of Fish and Wildlife web site data sources (i.e., Checklists of Freshwater Fish of New Jersey) and direct sightings from field reconnaissance conducted during the summer and fall of 2005.

For the Proposed Project, stream assessments were performed for all streams that cross under the Turnpike in the Project Corridor, and that were flowing at the time of the assessment. Streams were evaluated based on the U.S. Department of Agriculture's (USDA) Stream Visual Assessment Protocol (Technical Note 99-1). The protocol consists of two sections: 1) reach identification; and 2) assessment. Reach identification includes basic information about the reach such as location, surrounding land uses, and gradient. The assessment scores various stream elements based upon a comparison of the assessor's observations with the element descriptions provided in the protocol. Elements scored in the stream assessment included channel condition, hydrologic alteration, riparian zone, bank stability, water appearance, nutrient enrichment, barriers to fish movement, in-stream fish cover, pools, invertebrate habitat, canopy cover, and riffle embeddedness. The total score, which indicates the overall stream condition as an indicator of aquatic habitat value, is the average of all of the element scores.

3.14.2.2 Vegetative Habitats

Data sources used to identify vegetative habitats within the Project Corridor include the New Jersey Forest Service's web site, the New Jersey Natural Heritage correspondences and web site, and direct sightings from field reconnaissance. Previous environmental studies conducted for the Turnpike Authority (i.e., *NJ Turnpike 1985-90 Widening Final EIS: Interchange 8A to Interchange 9*) were also reviewed for information on vegetative species communities

Vegetation was examined during the delineation of wetland areas via pedestrian surveys of the Project Corridor, and from a review of aerial photography. Vegetative communities were determined to be wetland/open water or upland communities, and then further characterized based on vegetative cover. Major vegetative communities such as cropland, fields, and forests within the limits of the Project Corridor were identified. Dominant species associated with each vegetative community were determined through direct observation. The presence of threatened or endangered species of plants was also identified through a combination of literature review and field investigation.

3.14.2.3 Regulated Wetlands

Subsequent to the review of background data, an on-site investigation of jurisdictional wetlands and waters within the Project Corridor was conducted. Background information included NJDEP wetland GIS data; the U.S. Fish & Wildlife Service (USFWS) National Wetlands Inventory mapping; soil surveys of Burlington, Mercer and Middlesex Counties; and available aerial photography. Previous environmental studies (i.e., *NJ Turnpike 1985-90 Widening Final EIS: Interchange 8A to Interchange 9*) were also reviewed for relevant wetland information.

Field investigators first identified the general location of wetland habitat based upon the available background data stated above, and then examined soils, hydrology, and vegetation to classify the habitat as wetland or upland. If the habitat met the regulatory requirement of a wetland, the area was flagged with successively numbered survey flagging at the wetland/upland boundary, either tied to vegetation or pin flagged in the ground.

All wetlands within the Project Corridor that exist between the southern terminus at Assiscunk Creek located south of Interchange 6 to a point south of Interchange 8A were field delineated during the months of June through August 2005. The wetland delineation was conducted using the three-parameter approach of identifying wetlands according to the appropriate vegetation, soils and hydrology as per the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands* (1989). Wetland habitats were then categorized based on field observations during those same months using the *Classification of Wetlands and Deepwater Habitats of the United States*. Field data sheets, soil borings, and site photographs were also taken.

A sketch map was supplied to the surveyors identifying the approximate location and numbering scheme of the delineated wetlands. A New Jersey licensed surveyor then surveyed the wetland flags.

Whereas wetlands located to the south of Interchange 8A were field delineated, wetlands between Interchanges 8A and 9 were only field assessed and approximately mapped. Although no wetland boundary flagging was conducted along this segment, approximate wetland/upland boundaries were sketched on available mapping for purposes of identifying potential transition area impacts. This approach was considered to be appropriate for this segment since no physical wetland impacts are expected to occur due to the fact that three outer lanes in each direction were designed, cleared, and filled as part of the Turnpike Authority's 1985-90 Widening Program, even though only two outer lanes in each direction were actually paved.

3.14.2.4 Wildlife Data Sources

Data sources used to identify terrestrial wildlife or the potential presence of wildlife within the Project Corridor include NJDEP Division of Fish and Wildlife web site data sources (i.e., Checklists of New Jersey Wildlife) and direct sightings during field reconnaissance. Previous environmental studies conducted for the Turnpike Authority in the Interchange 8A to Interchange 9 portion of the Project Corridor (i.e., NJ Turnpike 1985-90 Widening EIS: Interchange 8A to Interchange 9) were also reviewed for relevant wildlife information.

The potential for terrestrial wildlife to be located within the Project Corridor was identified via a review of existing literature (NJDEP data sources) and previous environmental studies conducted for the Turnpike Authority. Pedestrian surveys were conducted in conjunction with the wetland delineation fieldwork to identify signs of various species, their scats, tracks, trails, rubbings, scratches, or other indicators of their presence.

Wildlife identified as being present, or expected to inhabit the Project Corridor, were categorized according to their habitat preference. Habitats of the Project Corridor were identified based on field surveys and review of aerial base maps.

3.14.2.5 Special Status Species and Critical Habitats Data Sources

The New Jersey Natural Heritage Program, the National Marine Fisheries Service (NMFS) and the USFWS were contacted for information regarding the likely presence or absence of special status plant and animal species, or their habitats in the vicinity of the Project Corridor, and any mitigation measures that may be required for potential impacts to these species. Other relevant data sources included previous environmental studies conducted for the Turnpike Authority and web site information.

Response letters from state and federal agencies and other relevant data sources were used to identify previous sightings, or historical records for special status species (Appendix B). Although these response letters do not include location mapping of the special status species listed in the letters, which is typical for such letters so as to keep the exact locations confidential to deter collectors, the USFWS response did give a specific stream name for the potential occurrence of a special status species. Potential habitat for New Jersey special status species can be found on the NJDEP Natural Lands Management Program database (NJ Landscape Project Database GIS mapping, 2004), which was used for this project mapping.

3.14.3 Aquatic Communities

There are 28 non-tidal, freshwater streams which cross the Turnpike within the Project Corridor. The locations of all streams within the corridor were previously depicted in Figures 3-16a through 3-16f.

As discussed previously in Section 3.12, *Water Resources*, all streams in the Project Corridor are classified by NJDEP as "FW2", which is the general surface water classification applied to fresh waters that are not designated as FW1, or Pinelands Waters, as identified in N.J.A.C. 7:9B. For FW2 waters, the designated uses are: maintenance, migration, and propagation of the natural and established biota; primary and secondary contact recreation; industrial and agricultural water supply; public potable water after such treatment as required by law or regulation; and any other reasonable uses.

All streams in the Project Corridor are also classified by NJDEP as "NT". This classification means "non-trout waters", which are fresh waters that have not been designated as trout production or trout maintenance in N.J.A.C. 7:9B-1.15(b) through (h). These waters are generally not suitable for trout because of their physical, chemical, or biological characteristics, but are suitable for a wide variety of other fish species.

The portion of Assunpink Creek in the Project Corridor, which is within the Assunpink Wildlife Management Area, is further classified as FW2-NT(C1). The "C1" classification indicates "Category One waters." This classification means that those waters designated in N.J.A.C. 7:9B-1.15(c) through (h), for purposes of implementing the antidegradation policies set forth at N.J.A.C. 7:9B-1.5(d), are protected from measurable changes in water quality characteristics because of their clarity, color, scenic setting, other characteristics of aesthetic value, exceptional ecological significance, exceptional recreational significance, exceptional water supply significance, or exceptional fisheries resource(s). Assunpink Creek is the only waterway within the Project Corridor that is classified as a "Category One water."

The stream assessments conducted in the Project Corridor characterized the stream water quality as "good" to "poor," with pollution problems of the type usually associated with highway runoff,

stormwater runoff from agriculture, construction sites, and suburban areas. The stream-by-stream information collected in the field and presented previously in Section 3.12 was considered in developing the stream assessment scores for identifying aquatic habitat value, ranging from 0 to 10, with all scores below "6" indicating "poor" habitat and all scores above "9" indicating "excellent" habitat. The stream assessment scores for the 28 streams in the Project Corridor are shown in Table 3.48, although the six streams that did not have any water flow during the time of the field assessment, were not actually given scores.

A discussion of each stream and its associated assessment score is presented below by Turnpike segment, in south-to-north order. These stream-by-stream assessments supplement the stream-by-stream discussions provided in Section 3.12.

3.14.3.1 Assiscunk Creek to Interchange 6

Assiscunk Creek (M.P. 48.2)

The overall stream assessment score for Assiscunk Creek, using the USDA Stream Assessment Classification, was "fair" (6.4 out of 10). The classification as "fair" is due to lack of pools, poor water appearance and lack of instream fish cover. The National Marine Fisheries Service (NMFS) reports that alewife (*Alosa pseudoharengus*), may be present in Assiscunk Creek between March 1st and May 31st.

Crafts Creek (M.P. 49.7)

The overall stream assessment score for Crafts Creek, using the USDA Stream Assessment Classification, was "poor" (4.4 out of 10). The classification as "poor" is due to lack of pools, low nutrient enrichment, poor water appearance and lack of canopy cover.

Tributary to Crafts Creek (M.P. 50.2)

The overall stream assessment score for the Tributary to Crafts Creek, using the USDA Stream Assessment Classification, was "fair" (7.4 out of 10). The classification as "fair" is due to lack of pools and lack of instream fish cover.

3.14.3.2 Interchange 6 to Interchange 7

Crystal Lake Creek (M.P. 51.8)

The overall stream assessment score for Crystal Lake Creek, using the USDA Stream Assessment Classification, was "poor" (6.0 out of 10). The classification as "poor" is due to barriers to fish movement, riffle embeddedness and lack of canopy cover.

Blacks Creek (M.P. 53.4)

The overall stream assessment score for Blacks Creek, using the USDA Stream Assessment Classification, was "fair" (6.7 out of 10). The classification as "fair" is due to lack of pools, lack of canopy cover and poor bank stability.

Table 3.48
Stream Assessment Scores within the Project Corridor

Stream Name	Turnpike Mile Post	USDA Stream Assessment Score ¹
Assiscunk Creek	48.2	6.4
Crafts Creek	49.7	4.4
Tributary to Crafts Creek	50.3	7.4
Crystal Lake Creek	51.8	6.0
Blacks Creek	53.4	6.7
Laurel Run	53.9	6.8
Thorton Creek	55.3	No flow
Crosswicks Creek	56.9	7.6
Doctors Creek	57.5	6.8
Miry Run	61.9	No flow
Assunpink Creek	63.3	4.9
Bear Brook	64.9	No flow
Peddie Brook	66.2	5.6
Tributary of Peddie Brook	66.9	No flow
Rocky Brook	67.3	6.0
Timber Run Creek	67.9	4.5
Millstone River	68.8	6.6
Indian Run Brook	69.5	3.3
Cranbury Brook	70.7	4.3
Cedar Brook	71.9	4.0
Shallow Brook	72.9	No flow
Ireland Brook	77.8	4.4
South Branch of Beaverdam Brook	79.2	2.5
North Branch of Beaverdam Brook	79.4	4.9
Bog Brook	80.3	2.4
South Tributary to Weston Mills Pond	80.7	2.4
Sawmill Brook	81.6	4.8
North Tributary to Weston Mills Pond	82.5	No flow

¹ USDA Stream Assessment Classification ranking:

<6.0 poor 6.1-7.4 fair 7.5-8.9 good >9.0 excellent

No flow Stream headwaters that flows only during storm events.

3.14.3.3 Interchange 7 to Interchange 7A

Laurel Run (M.P. 53.9)

The overall stream assessment score for Laurel Run, using the USDA Stream Assessment Classification, was "fair" (6.8 out of 10). The classification as "fair" is due to lack of pools, lack of canopy cover and barriers to fish movement.

Thorton Creek (M.P. 55.3)

Thorton Creek crosses under the Turnpike through a 48-inch culvert. There was no flow in the creek during the field visit, so no stream assessment was conducted.

Crosswicks Creek (M.P. 56.9)

The overall stream assessment score for Crosswicks Creek, using the USDA Stream Assessment Classification, was "good" (7.6 out of 10). The classification as "good" is due to a good riparian zone, channel condition and no barriers to fish movement.

Doctors Creek (M.P. 57.5)

The overall stream assessment score for Doctors Creek, using the USDA Stream Assessment Classification, was "fair" (6.8 out of 10). The classification as "fair" is due to lack of pools and instream fish cover, and riffle embeddedness.

3.14.3.4 Interchange 7A to Interchange 8

Miry Run (M.P. 61.9)

Miry Run crosses under the Turnpike through a 48-inch culvert. There was no flow in this stream during the field visit, so no stream assessment was conducted.

Assunpink Creek (M.P. 63.3)

The overall stream assessment score for Assunpink Creek, using the USDA Stream Assessment Classification, was "poor" (4.9 out of 10). The classification as "poor" is due to lack of canopy cover, poor bank stability, poor water appearance and low nutrient enrichment.

Bear Brook (M.P. 64.9)

Bear Brook crosses under the Turnpike through a 48-inch culvert. There was no flow in this stream during the field visit, so no stream assessment was conducted.

Peddie Brook (M.P. 66.2)

The overall stream assessment score for Peddie Brook, using the USDA Stream Assessment Classification, was "poor" (5.6 out of 10). The classification as "poor" is due to poor bank stability, lack of pools, and lack of a riparian zone.

Tributary to Peddie Brook (M.P. 66.9)

A tributary to Peddie Brook crosses under the Turnpike through a 48-inch culvert. There was no flow in this stream during the field visit, so no stream assessment was conducted.

Rocky Brook (M.P. 67.3)

The overall stream assessment score for Rocky Brook, using the USDA Stream Assessment Classification, was "poor" (6.0 out of 10). The classification as "poor" is due to lack of pools, lack of canopy cover and poor water appearance.

3.14.3.5 Interchange 8 to Interchange 8A

Timber Run Creek (M.P. 67.9)

The overall stream assessment score for Timber Run Creek, using the USDA Stream Assessment Classification, was "poor" (4.5 out of 10). The classification as "poor" is due to lack of pools, and lack of instream fish cover.

Millstone River (M.P. 68.8)

The overall stream assessment score for Millstone River, using the USDA Stream Assessment Classification, was "fair" (6.6 out of 10). The classification as "fair" is due to lack of pools, poor bank stability and poor water appearance.

Indian Run Brook (M.P. 69.5)

The overall stream assessment score for Indian Run Brook, using the USDA Stream Assessment Classification, was "poor" (3.3 out of 10). The classification as "poor" is due to lack of pools, poor canopy cover and low nutrient enrichment.

Cranbury Brook (M.P. 70.7)

The overall stream assessment score for Cranbury Brook, using the USDA Stream Assessment Classification, was "poor" (4.3 out of 10). The classification as "poor" is due to poor bank stabilization, poor water appearance, lack of pools and lack of canopy cover.

Cedar Brook (M.P. 71.9)

The overall stream assessment score for Cedar Brook, using the USDA Stream Assessment Classification, was "poor" (4.0 out of 10). The classification as "poor" is due to poor bank stabilization, lack of riparian zone and lack of pools.

Shallow Brook (M.P. 72.9)

Shallow Brook crosses under the Turnpike through a 48-inch culvert. There was no flow in this stream during the field visit, so no stream assessment was conducted.

3.14.3.6 Interchange 8A to Interchange 9

Ireland Brook (M.P. 77.8)

The overall stream assessment score for Ireland Brook, using the USDA Stream Assessment Classification, was "poor" (4.4 out of 10). The classification as "poor" is due to lack of pools and lack of riparian zone.

South Branch of Beaver Dam Brook (M.P. 79.1)

The overall stream assessment score for South Branch of Beaver Dam Brook, using the USDA Stream Assessment Classification, was "poor" (2.5 out of 10). The classification as "poor" is due to lack of pools, lack of riparian zone and barriers to fish movement.

North Branch of Beaver Dam Brook (M.P. 79.4)

The overall stream assessment score for North Branch of Beaver Dam Brook, using the USDA Stream Assessment Classification, was "poor" (4.9 out of 10). The classification as "poor" is due to lack of pools, low nutrient levels and poor bank stabilization.

Bog Brook (M.P. 80.3)

The overall stream assessment score for Bog Brook, using the USDA Stream Assessment Classification, was "poor" (2.4 out of 10). The classification as "poor" is due to lack of pools, lack of riparian zone and barriers to fish movement.

South Tributary to Weston Mills Pond (M.P. 80.7)

The overall stream assessment score for South Tributary to Weston Mills Pond, using the USDA Stream Assessment Classification, was "poor" (2.4 out of 10). The classification as "poor" is due to lack of pools, lack of riparian zone, poor bank stabilization and barriers to fish movement.

Sawmill Brook (M.P. 81.6)

The overall stream assessment score for Sawmill Brook, using the USDA Stream Assessment Classification, was "poor" (2.8 out of 10). The classification as "poor" is due to lack of pools, lack of riparian zone and poor bank stabilization.

North Tributary to Weston Mills Pond (M.P. 82.5)

The North Tributary to Weston Mills Pond crosses under the Turnpike through a 48-inch culvert. There was no flow in this stream during the field visit, so no stream assessment was conducted.

3.14.4 **Terrestrial and Wetland Communities**

3.14.4.1 General

The terrestrial (upland) and wetland communities found within the Project Corridor are described below. Vegetative communities were determined to be either upland or wetland/open water communities, and then further characterized based on vegetative cover. Upland communities include forest, scrub-shrub, mowed turf and agricultural lands. Wetland/open water communities include palustrine emergent wetlands, palustrine open water areas, palustrine scrub-shrub wetlands, palustrine forested wetlands, riverine open water and roadside ditches/swales. A list of vegetation observed within the Project Corridor is found in Table 3.49.

The vegetation in the Project Corridor has been divided into six geographic areas. The six areas are those located along the separate Turnpike segments located between the respective interchanges within the Project Corridor, and are discussed below.

The first area (Assiscunk Creek to Interchange 6) is dominated by upland vegetation associations such as agriculture (corn, soy and other grain crops) and upland forests. Other vegetative habitats within this section include scrub-shrub rights-of-way, forested wetlands, mowed turf (Turnpike berms), and roadside ditches/swales.

The second area (Interchange 6 to Interchange 7) is dominated by agriculture (corn, soy and other grain crops) and roadside ditches/swales. Other vegetative habitats within this section

Table 3.49 Vegetation Observed within the Project Corridor

Trees/Shrubs

Scientific Name	Common Name	Indicator Status
Acer rubrum	red maple	FAC
Acer saccharum	sugar maple	FACU-
Baccharis halimifolia	eastern false-willow	FACW
Berberis thunbergii	Japanese barberry	FACU
Betula alba	white birch	FAC+
Betula nigra	river birch	FACW
Betula pumila	bog birch	OBL
Carya ovata	shagbark hickory	FACU-
Cephalanthus occidentalis	common buttonbush	OBL
Cornus florida	flowering dogwood	FACU-
Fagus grandifolia	American beech	FAC+
Fraxinus pennsylvanica	green ash	FACW
Juniperus virginiana	red cedar	FACU
Lindera benzoin	northern spicebush	FACW-
Liquidambar styraciflua	sweet gum	FAC
Liriodendron tulipifera	tulip popular	FACU
Morus rubra	red mulberry	FACU
Nyssa sylvatica	black gum	FAC
Pinus strobus	eastern white pine	FACU
Populus tremula	quaking aspen	FACU
Prunus serotina	black cherry	FACU
Pyrus malus	apple	NL
Quercus alba	white oak	FACU-
Quercus bicolor	swamp white oak	FACW+
Quercus palustris	pin oak	FACW
Quercus rubra	red oak	UPL
Quercus stellata	post oak	UPL
Rhus copallinum	winged sumac	NI
Rhus typhina	staghorn sumac	NI
Robinia pseudoacacia	black locust	FACU-
Rosa multiflora	multi flora rose	FACU
Salix nigra	black willow	FACW+
Sambucus cannadensis	elderberry	FACW+
Sassafras albidum	sassafras	FACU-
Viburnum dentatum	arrow-wood	FAC
Viburnum recognitum	northern arrow-wood	FACW-

Table 3.49 (Continued) Vegetation Observed within the Project Corridor

Vines

Scientific Name	Common Name	Indicator Status
Lonicera japonica	Japanese honeysuckle	FAC-
Toxicodendron radicans	poison ivy	FAC
Parthenocissus quinquefolia	Virginia creeper	FACU
Smilax rotundiforia	greenbrier	FAC
Vitis sp.	grape	NI

Herbs/Forbs

Scientific Name	Common Name	Indicator Status
Apocynum cannabinum	clasping-leaf dogbane	FACU
Arisaema triphyllum	jack-in-the-pulpit	FACW-
Asclepias longifolia	milkweed	OBL
Betula nigra	river birch	FACW
Carex flava	yellow sedge	OBL
Carex lurida	shallow sedge	OBL
Carex rostrata	beaked sedge	OBL
Carex scoparia	pointed broom sedge	FACW
Cirsium arvense	Canada thistle	FACU
Dennstaedtia punctilobula	hayscented fern	FACU
Dichanthelium clandestinum	deer-tongue witchgrass	FAC+
Eleocharis erythropoda	spikerush	OBL
Eupatoriadelphus maculates	spotted joe pyeweed	FACW
Eupatorium perfoliatum	common boneset	FACW+
Geum laciniatum	rough avens	FAC+
Hieracium caespitosum	yellow hawkweed	UPL
Hypericum perforatum	St. Johns wort	FAC
Impatiens capensis	jewelweed	FACW+
Juncus bufonius	toad rush	FACW
Juncus effusus	soft rush	FACW+
Juncus tenuis	path rush	FAC-
Leersia oryzoides	rice cutgrass	OBL
Limosella aquatica	northern mudwort	OBL
Lythrum salicaria	purple loosestrife	FACW+
Microstegium vimineum	Japanese stilt grass	FAC
Myrica pensylvanica	northern bayberry	FAC
Onoclea sensibilis	sensitive fern	FACW
Osmunda regalis	royal fern	OBL
Panicum sp.	panic grass	NL
Peltandra virginica	arrow arum	OBL
Phalaris arundinacea	reed canary grass	FACW+
Phragmites australis	common reed	FACW
Phytolacca Americana	common pokeweed	FACU+

Table 3.49 (Continued) Vegetation Observed within the Project Corridor

Herbs/Forbs (cont'd.)

Scientific Name	Common Name	Indicator Status
Phytolacca americana	pokeberry	FACU+
Plantago lanceolata	English plantain	UPL
Polygonum cuspidatum	Japanese knotweed	FACU-
Polygonum pensylvanicum	Pennsylvania smartweed	FACW
Polygonum sagittatum	arrow-leaf tearthumb	OBL
Rubus idaeus	red raspberry	FAC-
Rubus uvidus	blackberry	NI
Rumus crispus	curly dock	FACU
Sagittaria latifolia	duck potato	OBL
Scirpus georgianus	dark-green bulrush	OBL
Solanum sp.	nightshade	NL
Solidago austrina	golden-rod	OBL
Ssphagnum sp.	sphagnum	NL
Taraxacum officinale	common dandelion	FACU-
Trifolium repens	white clover	FACU-
Typha angustifolia	narrow-leaf cattail	OBL
Typha latifolia	broadleaved cattail	OBL
Urtica dioica	stinging nettle	FACU
Verbena hastata	blue vervain	FACW+

Key to indicator categories:

OBL: Obligate Wetland, occur almost always (estimated probability >99%) under natural conditions

in wetlands.

FACW: Facultative Wetland, usually occur in wetlands (estimated probability 67%-99%), but

occasionally found in nonwetlands.

FAC: Facultative, equally likely to occur in wetlands or nonwetlands (estimated probability 34%-

66%).

FACU: Facultative Upland, usually occur in nonwetlands (estimated probability 67%-99%), but

occasionally found in wetlands (estimated probability 1%-33%).

NL: Not found on national listings of plants occurring in wetlands.

NA: Not Applicable, only vascular plants are assigned indicator statuses.

A positive (+) sign following an indicator indicates a frequency toward the higher end of a

category.

A negative (-) sign following an indicator indicates a frequency toward the lower end of a

category.

Sources: 1995 Supplement to the List of Plant Species that Occur in Wetlands: Northeast (Region 1), US

Fish and Wildlife Service, August, 1995.

National List of Plant Species that Occur in Wetlands: Northeast (Region I), US Fish and

Wildlife Service, May 1988.

The Louis Berger Group, Inc., 2006

include scrub-shrub rights-of-way, forested uplands and wetlands, and mowed turf (Turnpike berms).

- The third area (Interchange 7 to Interchange 7A) is dominated by roadside ditches/swales, agricultural (corn, soy and other grain crops) and upland forests. Other vegetative habitats within this section include scrub-shrub rights-of-way, forested and emergent wetlands, and mowed turf (Turnpike berms).
- The fourth area (Interchange 7A to Interchange 8) is dominated by upland vegetation associations such as upland forests, agricultural (corn, soy and other grain crops) and roadside ditches/swales. Other vegetative habitats within this section include scrub-shrub right-of-ways, forested wetlands, and mowed turf (Turnpike berms).
- The fifth area (Interchange 8 to Interchange 8A) is dominated by upland vegetation associations such as agricultural (corn, soy and other grain crops) and forested uplands. Other vegetative habitats in this section include roadside ditches/swales, scrub-shrub right-of-ways, forested wetlands, and mowed turf (Turnpike berms).
- The sixth area (Interchange 8A to Interchange 9) is dominated by agricultural (corn, soy and other grain crops). Other vegetative habitats within this section include roadside ditches/swales, scrub-shrub right-of-ways, and mowed turf (Turnpike berms).

It should be noted that two additional segments in the vicinity of Interchange 8 are also presented in this document, specifically with respect to wetland/open water communities. These segments reflect the expanded areas on either side of the Turnpike which encompass the potential interchange relocation alternatives that were considered. The inclusion of these two expanded areas provides the site-specific information regarding wetland boundaries and acreage that are necessary for regulatory compliance.

3.14.4.2 Upland Vegetation

Upland vegetation communities were examined through pedestrian surveys of the Project Corridor concurrent with the delineation of wetland areas. Each upland vegetative community was identified and the dominant species were recorded within each community.

Approximately 50 percent of the Project Corridor consists of agricultural fields with crops such as corn, soy and other grain crops. Other major upland community types include mixed deciduous forests (<50 years) – secondary growth woodlands; mowed turf; scrub-shrub; and young forests. These upland vegetation communities are described below.

Agricultural Fields

Agricultural fields comprise a large portion of the surrounding land. Dominant planted crops observed include corn, soy and other grain crops. Pasture land and farm buildings are also included in this land use classification.

Portions of the agricultural lands exhibit hydric conditions, and have been drained in the past through the use of sub-surface drains or ditches. These agricultural lands that exhibit hydric conditions, and meet the criteria for wetlands, were delineated as wetlands.

Mixed Deciduous Forest

The majority of mixed upland deciduous forests occurs between the Turnpike's outside drainage ditches/swales and the Turnpike's right-of-way line. These narrow forested areas may be contiguous with larger forested tracts or may end at the right-of-way line, adjacent to other land use such as agricultural lands. Dominant vegetation within the mixed deciduous forest includes black cherry, oak species, maple species, sweet gum and tulip poplar in the canopy. Scrub pine is occasionally present. The understory contains young canopy species as well as barberry, grape vines, forbs and grasses.

Mowed Turf

Roadside margins are characterized by narrow bands of mowed turf located between the edge of pavement and roadside ditches/swales or wooded areas. These areas are mowed regularly by Turnpike maintenance crews and keep the vegetation under six inches in height. Dominant species include grasses and forbs that withstand regular cutting.

Scrub-Shrub

Scrub-shrub areas are generally intermixed with young forests occurring along disturbed areas such as utility rights-of-way or old agricultural fields. Dominant vegetation within the scrub-shrub areas includes multiflora rose, blackberry and saplings of red maple, sweetgum, eastern red cedar and oak species.

Young Forest

Young upland forests are typically less than 30 years old. These areas may have originated from former agricultural lands, inactive rights-of-way, or clear cutting. The canopy is dominated by sweetgum, red maple, sassafras, and oaks. Common understory species consist of greenbrier, Japanese honeysuckle, multiflora rose and birches.

3.14.4.3 Regulated Wetlands – Types of Wetlands in Project Corridor

Wetlands within the Project Corridor were delineated using the methodology identified in the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands* (1989) and classified using *The Classification of Wetlands and Deepwater Habitats of the United States*. The wetlands identified within the Project Corridor are a combination of natural, man-made, and man-altered wetlands. Total wetlands in the Interchange 6 – 8A segment (i.e., Assiscunk Creek, located south of Interchange 6, to Interchange 8A, including the expanded Interchange 8 area) is approximately 362 acres. Approximate acreage of wetlands field assessed between Interchanges 8A and 9 is one acre.

Approximately half of the regulated wetlands found within the Project Corridor consist of roadside ditches/swales containing wetland hydrology, hydric soils and hydrophytic vegetation that have been fully or partially mowed. Other regulated wetlands delineated within the Project Corridor include non-tidal palustrine forested (PFO), scrub-shrub (PSS) and emergent (PEM) wetlands, as well as palustrine open waters (POW). These regulated wetland types are discussed below.

Palustrine Emergent Wetlands (PEM)

The majority of the wetlands delineated in the Project Corridor consisted of palustrine emergent wetlands (PEM) that were found in roadside ditches/swales that can be regularly mowed. Other PEM wetlands were found in agricultural fields and utility rights-of-way. These wetlands contained non-

woody stemmed plants, with the most common being reed canary grass, common reed, cattails, sedges, and purple loosestrife.

Palustrine Scrub-Shrub Wetlands (PSS)

The palustrine scrub-shrub (PSS) wetlands were found as transition areas between forested wetlands and emergent wetlands. Dominant vegetation within the PSS wetlands consisted of young sweetgum, red maple, patches of highbush blueberry and/or poison ivy, and a herbaceous layer of rushes and sedges.

Palustrine Forested Wetlands (PFO)

The dominant species found in palustrine forested (PFO) wetlands include sweetgum, green ash, red maple and pin oak. Understory and herbaceous dominates included silky dogwood, spice bush, sensitive fern, and sedges.

Palustrine Open Water (POW)

The palustrine open water (POW) wetlands consisted of floating or emergent vegetation within or on the edge of the open water habitat. Surrounding some of the open water habitat was PEM wetlands. Dominant vegetation within the POW included sedges, rushes and common reed.

3.14.4.4 Regulated Wetlands – Segment-by-Segment Inventory in Project Corridor

The discussion of wetlands below is organized by Turnpike segment between interchanges (i.e., Assiscunk Creek to Interchange 6, Interchange 6 to Interchange 7, Interchange 7 to Interchange 7A, etc.), in south-to-north order. Although there are actually six mainline segments studied, two additional segments in the vicinity of Interchange 8 are also presented for the wetlands discussion. These two additional segments (i.e., Expanded Interchange 8 Northbound Side and Expanded Interchange 8 Southbound Side) reflect the expanded wetlands inventory conducted to encompass the potential Interchange 8 relocation alternatives that were studied. All wetlands are also graphically depicted in Figures 3-19a through 3-19g.

Assiscunk Creek to Interchange 6

Wetlands and watercourses delineated south of Interchange 6 are listed in Table 3.50. A total of 17 wetlands exist along this segment of the corridor, each containing roadside ditches/swales, natural wetlands (i.e., emergent, scrub-shrub, and forested), and/or state open waters (i.e., Assiscunk Creek, Crafts Creek, and a tributary to Crafts Creek).

Interchange 6 to Interchange 7

Wetlands and watercourses delineated between Interchanges 6 and 7 are listed in Table 3.51. A total of 26 wetlands exist along this segment of the corridor, each containing roadside ditches, natural wetlands (emergent, scrub-shrub, and forested), and/or state open waters (Crystal Lake Creek and Blacks Creek).

Interchange 7 to Interchange 7A

Wetlands and watercourses delineated between Interchanges 7 and 7A are listed in Table 3.52. A total of 43 wetlands exist along this segment of the corridor, each containing roadside ditches/swales,

natural wetlands (emergent, scrub-shrub, and forested), and/or state open waters (Laurel Run, Thorton Creek, Doctors Creek, and Crosswicks Creek).

Interchange 7A to Interchange 8

Wetlands and watercourses delineated between Interchanges 7A and 8 are listed in Table 3.53. A total of 89 wetlands exist along this segment of the corridor, each containing roadside ditches/swales, natural wetlands (emergent, scrub-shrub, and forested), and/or state open waters (Miry Run, Assunpink Creek, Bear Brook, Peddie Brook, Tributary to Peddie Brook, and Rocky Brook).

Expanded Interchange 8 Northbound Side

Wetlands and watercourses delineated along the northbound side in the vicinity of the Expanded Interchange 8 area are listed in Table 3.54. A total of 34 wetlands exist along this segment of the corridor, each containing roadside ditches/swales and/or natural wetlands (emergent, scrub-shrub, and forested).

Expanded Interchange 8 Southbound Side

Wetlands and watercourses delineated along the southbound side in the vicinity of the Expanded Interchange 8 area are listed in Table 3.55. A total of 10 wetlands exist along this segment of the corridor, each containing roadside ditches/swales, natural wetlands (emergent, scrub-shrub, and forested), and/or state open waters (Timber Run Creek).

Interchange 8 to Interchange 8A

Wetlands and watercourses delineated between Interchanges 8 and 8A are listed in Table 3.56. A total of 78 wetlands exist along this segment of the corridor, each containing roadside ditches/swales, natural wetlands (emergent, scrub-shrub, and forested), and/or state open waters (Timber Run Creek, Millstone River, North Branch of Millstone River, Cranbury Brook, Cedar Brook, and Shallow Brook).

Interchange 8A to Interchange 9

Wetlands and watercourses that were field assessed between Interchanges 8A and 9 are listed in Table 3.57. A total of 59 wetlands exist along this segment of the corridor, each containing roadside ditches/swales, natural wetlands (emergent, scrub-shrub, and forested), and/or state open waters (Ireland Brook, South Branch of Beaverdam Brook, North Branch of Beaverdam Brook, Bog Brook, South Tributary to Weston Mills Pond, Sawmill Brook and North Tributary to Weston Mills Pond).

3.14.5 Wildlife

The discussion of wildlife and habitat in the Project Corridor has been divided into the six segments identified earlier. A list of wildlife observed or signings of species, their scats, tracks, trails, rubbings, scratches, or other indicators of their presence within the Project Corridor can be found in Table 3.58.

The most common wildlife observed, or signs of the species observed, was the white tailed deer (*Odocoileus Virginia*). This mammal was seen numerous times along the Project Corridor, as were its travel corridors and scat. Other dominant wildlife observed included ground hog (*Marmota monax*), grey squirrel (*Sciurus carolinensis*), Canada goose (*Branta Canadensis*), northern cardinal (*Cardinalis cardinalis*), American robin (*Turdus migratorius*), red tailed hawk (*Buteo jamaicensis*) and mourning dove (*Zenaida macroura*).







Matchline

Municipal / County Boundary

Delineated Wetland Line

Extent of Wetland within Study Area

Field Assessed Wetland Boundary

Note: Wetland polygons are created by connecting the straight line route between the opposite ends of a wetland line therefore, wetlands may appear to have straightedged boundaries that do not reflect the extent of the wetland which continues outside of the Project Corridor.

Source: Digital Orthophotos - 2006 Aerial Photography.



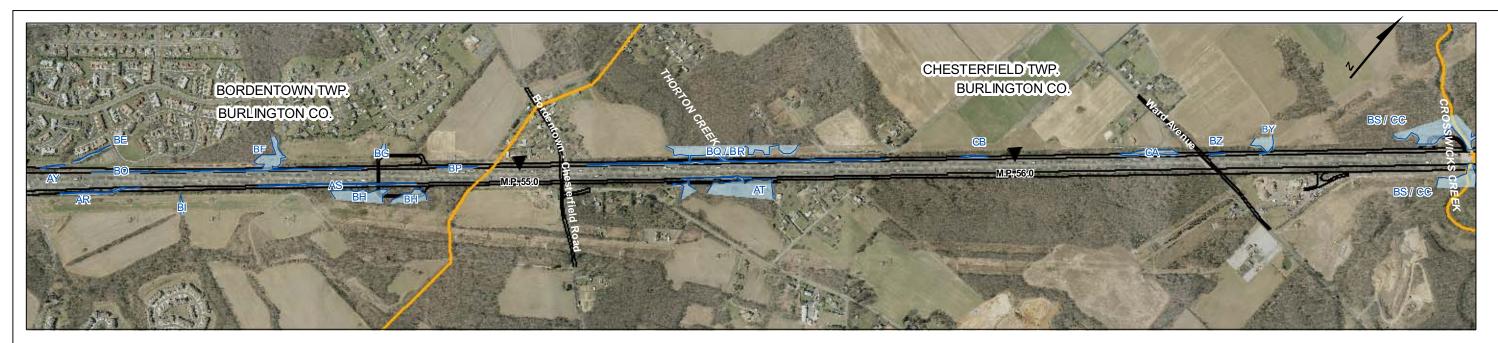
WETLANDS

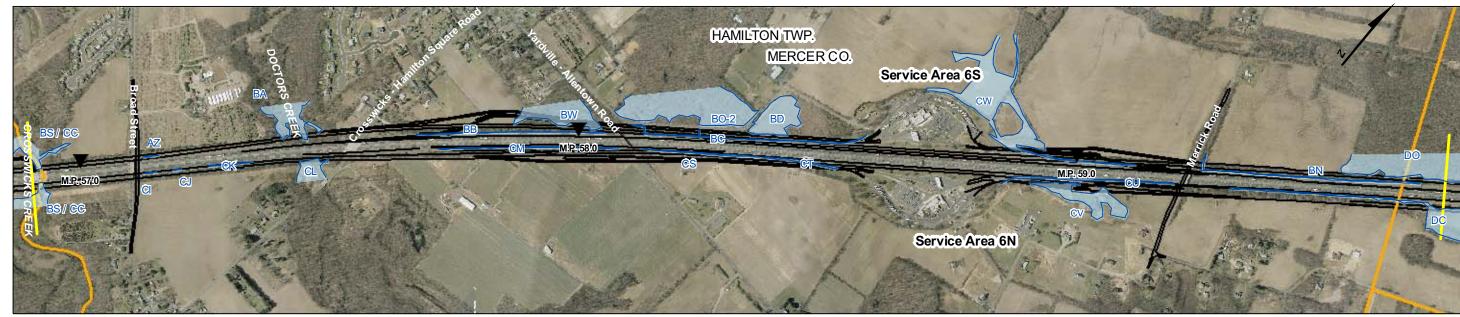
New Jersey Turnpike Interchange 6 to 9 Widening Burlington, Mercer and Middlesex Counties Executive Order No. 215 Environmental Impact Statement



NEW JERSEY TURNPIKE AUTHORITY
NEW JERSEY TURNPIKE

FIGURE 3-19a







Municipal / County Boundary Delineated Wetland Line Extent of Wetland within Study Area Field Assessed Wetland Boundary

New Jersey Turnpike Interchange 6 to 9 Widening Burlington, Mercer and Middlesex Counties Executive Order No. 215 **Environmental Impact Statement**

WETLANDS

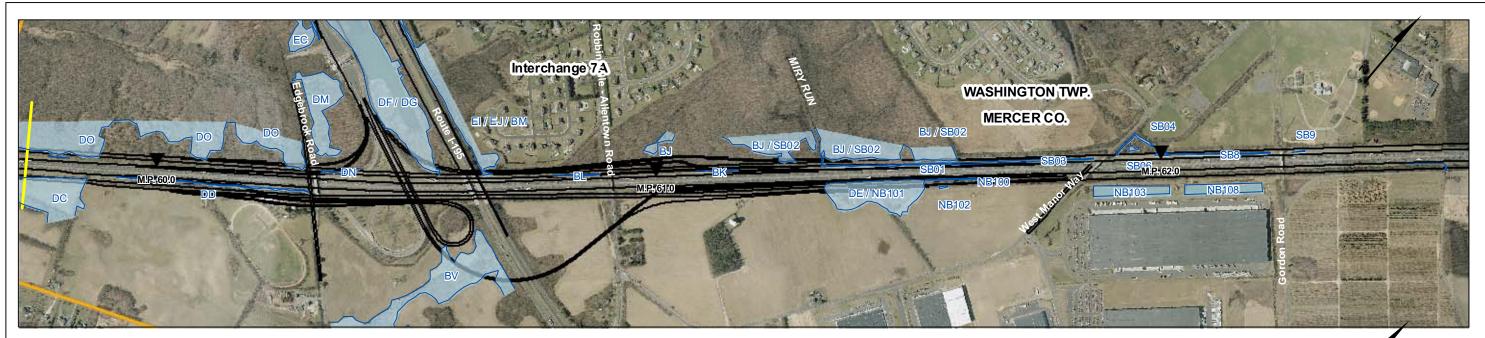


NEW JERSEY TURNPIKE AUTHORITY **NEW JERSEY TURNPIKE**

FIGURE 3-19b

Note: Wetland polygons are created by connecting the straight line route between the opposite ends of a wetland line, therefore wetlands may appear to have straight-edged boundaries that do not reflect the extent of the wetland which continues outside of the study area.

Source: Digital Orthophotos - 2006 Aerial Photography.







Matchline

Municipal / County Boundary

Delineated Wetland Line

Extent of Wetland within Study Area

Field Assessed Wetland Boundary

*See sheet 3-18g for additional aerial coverage at Interchange 7A.

Note: Wetland polygons are created by connecting the straight line route between the opposite ends of a wetland line, therefore wetlands may appear to have straightedged boundaries that do not reflect the extent of the wetland which continues outside of the study area.

Source: Digital Orthophotos - 2006 Aerial Photography.



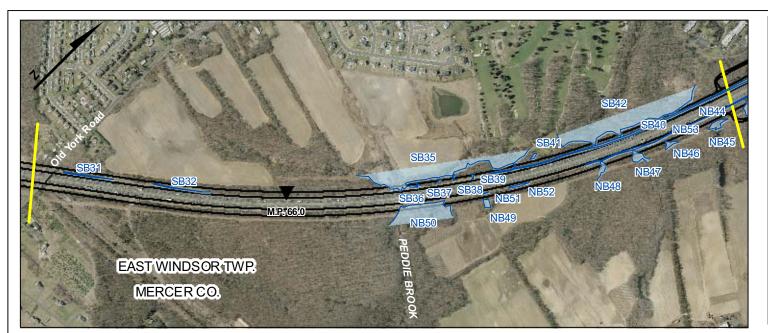
WETLANDS

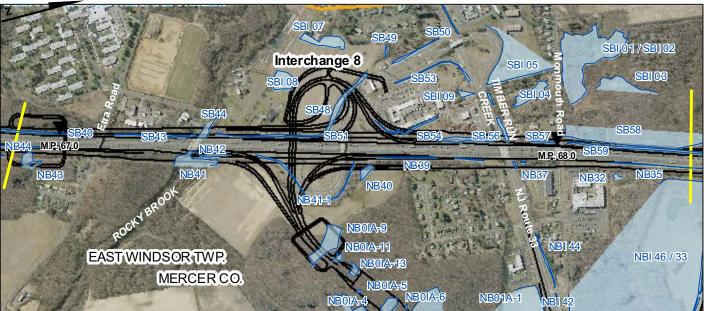
New Jersey Turnpike Interchange 6 to 9 Widening Burlington, Mercer and Middlesex Counties Executive Order No. 215 **Environmental Impact Statement**

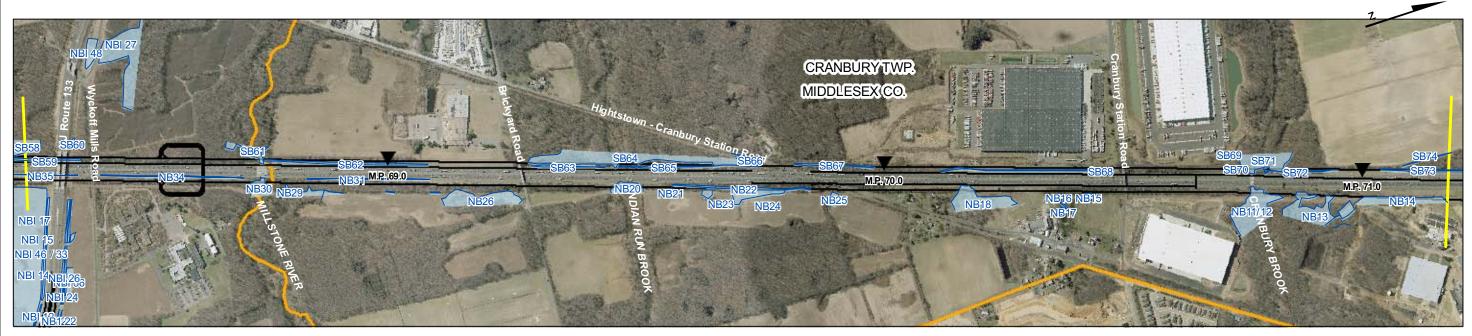


NEW JERSEY TURNPIKE AUTHORITY **NEW JERSEY TURNPIKE**

FIGURE 3-19c







Matchline

Municipal / County Boundary Delineated Wetland Line

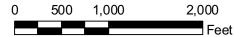
Extent of Wetland within Study Area

Field Assessed Wetland Boundary

*See sheet 3-18g for additional aerial coverage at Interchange 8.

Note: Wetland polygons are created by connecting the straight line route between the opposite ends of a wetland line, therefore wetlands may appear to have straightedged boundaries that do not reflect the extent of the wetland which continues outside of the study area.

Source: Digital Orthophotos - 2006 Aerial Photography.



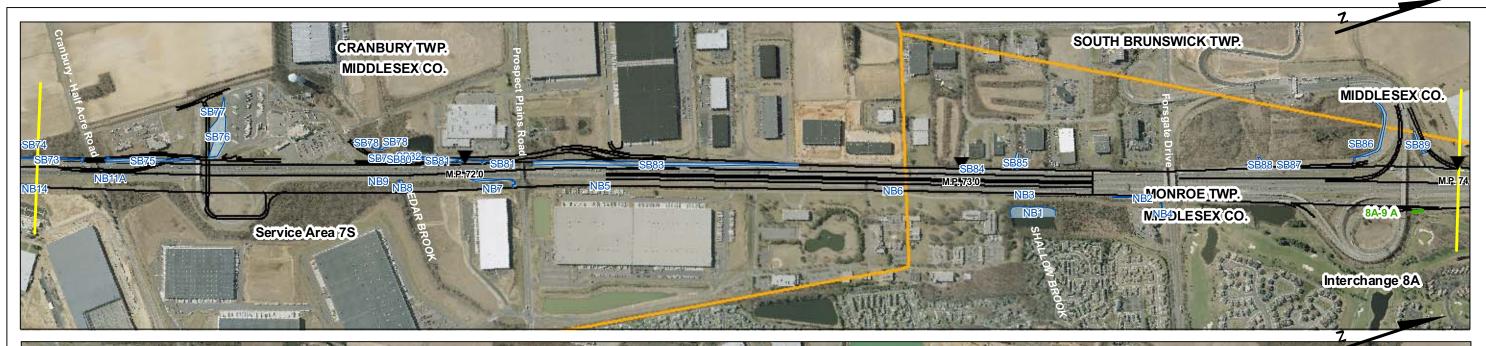
WETLANDS

New Jersey Turnpike Interchange 6 to 9 Widening Burlington, Mercer and Middlesex Counties Executive Order No. 215 **Environmental Impact Statement**



NEW JERSEY TURNPIKE AUTHORITY **NEW JERSEY TURNPIKE**

FIGURE 3-19d







Matchline

Municipal / County Boundary

Delineated Wetland Line

Extent of Wetland within Study Area

Field Assessed Wetland Boundary

500 1,000

WETLANDS

New Jersey Turnpike Interchange 6 to 9 Widening Burlington, Mercer and Middlesex Counties Executive Order No. 215 Environmental Impact Statement



NEW JERSEY TURNPIKE AUTHORITY
NEW JERSEY TURNPIKE

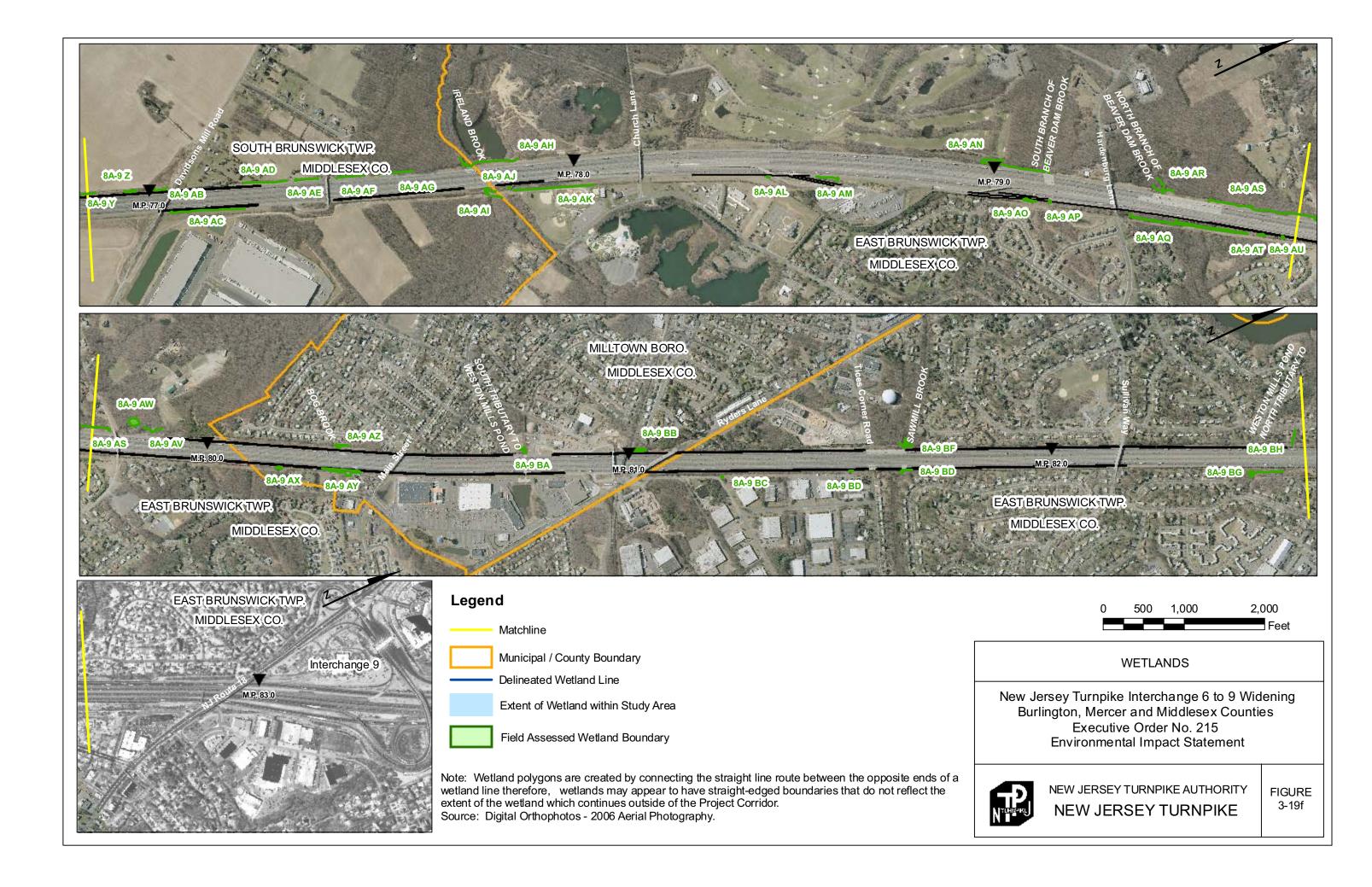
FIGURE 3-19e

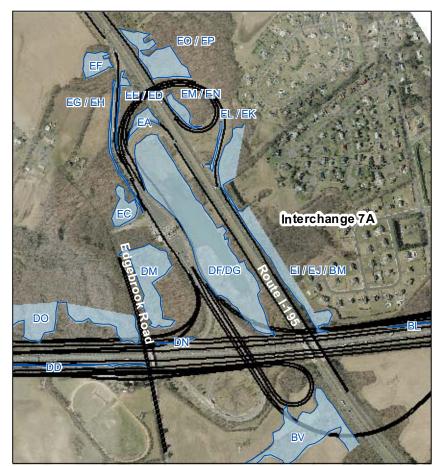
2,000

Feet

Note: Wetland polygons are created by connecting the straight line route between the opposite ends of a wetland line therefore, wetlands may appear to have straightedged boundaries that do not reflect the extent of the wetland which continues outside of the Project Corridor.

Source: Digital Orthophotos - 2006 Aerial Photography.







Matchline

Municipal / County Boundary

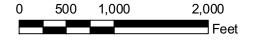
Delineated Wetland Line

Extent of Wetland within Study Area

Field Assessed Wetland Boundary

Note: Wetland polygons are created by connecting the straight line route between the opposite ends of a wetland line therefore, wetlands may appear to have straightedged boundaries that do not reflect the extent of the wetland which continues outside of the Project Corridor.

Source: Digital Orthophotos - 2006 Aerial Photography.



WETLANDS

New Jersey Turnpike Interchange 6 to 9 Widening Burlington, Mercer and Middlesex Counties Executive Order No. 215 Environmental Impact Statement



NEW JERSEY TURNPIKE AUTHORITY
NEW JERSEY TURNPIKE

FIGURE 3-19g

Table 3.50
Delineated Wetlands South of Interchange 6

Wetland	Approximate		Northbound/	
ID	Milepost	Comments	Southbound	Acres
Y	48.2	North Bank of Assiscunk Creek; Forested Wetland	Northbound	0.10
Z	48.5	Roadside Ditch	Northbound	0.19
AA	48.7	Forested Wetland; Roadside Ditch	Northbound	1.16
R	49.3	Roadside Ditch	Northbound	0.18
S	49.7	Crafts Creek; Emergent and Scrub-Shrub Wetland	Northbound	1.99
T	49.9	Roadside Ditch	Southbound	0.29
U	50.2	Roadside Ditch	Northbound	0.21
V	50.4	Culvert to Drainage Feature; Emergent Wetland	Northbound	0.52
X	50.6	Agricultural Field; Emergent Wetland	Northbound	0.24
K	48.2	North Bank of Assiscunk Creek; Forested Wetland	Southbound	0.13
J	48.5	Forested Wetland	Southbound	1.15
I	48.8	Forested Wetland	Southbound	0.26
G/H	49.8	Crafts Creek; Emergent, Scrub-Shrub and Forested Wetland	Southbound	0.77
F	49.9	Roadside Ditch	Southbound	0.36
Е	50.2	Pipeline ROW; Emergent and Forested Wetland	Southbound	0.89
D	50.4	Pipeline ROW; Emergent and Scrub-Shrub Wetland, Tributary to Crafts Creek	Southbound	0.60
С	50.6	Roadside Ditch; Pipeline ROW; Interchange 6; Emergent and Forested Wetland	Southbound	6.39

Table 3.51
Delineated Wetlands Between Interchanges 6 and 7

Wetland	Approximate		Northbound/	
ID	Milepost	Comments	Southbound	Acres
AK	51.4-52.5	Roadside Ditch; Crystal Lake Creek; Emergent, Scrub-Shrub and Forested Wetland	Northbound	8.06
W	50.6	Roadside Ditch; Agricultural Field; Emergent, Scrub-Shrub and Forested Wetland	Northbound	1.97
AB	51.0	Roadside Ditch	Northbound	0.10
AF	51.2	Roadside Ditch	Northbound	0.34
AG	51.3	Roadside Ditch	Northbound	0.16
AL	52.3	Emergent wetland in utility right-of-way	Northbound	0.67
AH	52.6	Emergent/Forested wetland in utility right-of-way	Northbound	0.29
AM	52.9	Roadside Ditch; Pipeline ROW	Northbound	0.45
AI	53.4	Powerline and Pipeline ROW; Blacks Creek; Emergent Wetland	Northbound	0.47
AJ	53.5	Roadside Ditch	Northbound	0.09
AP	53.6	Roadside Ditch	Northbound	0.15
AE	51.4-53.0	Roadside Ditch; Pipeline ROW; Crystal Lake Creek; Emergent, Scrub-Shrub and Forested Wetland	Southbound	3.15
L	50.6	Roadside Ditch; Interchange 6	Southbound	0.32
В	50.8	Roadside Ditch	Southbound	0.10
M	50.8	Interchange 6; Scrub-Shrub, Forested Wetland	Southbound	0.59
N	50.9	Interchange 6; Scrub-Shrub and Forested Wetland	Southbound	1.05
О	50.9	Roadside Ditch; Interchange 6	Southbound	0.31
P	50.9	Roadside Ditch; Interchange 6	Southbound	0.23
A	51.0	Roadside Ditch	Southbound	0.08
Q	51.0	Roadside Ditch	Southbound	0.27
AC	51.1	Roadside Ditch	Southbound	0.08
AD	51.3	Roadside Ditch	Southbound	0.32
AN	53.1	Roadside Ditch; Forested Wetland	Southbound	1.66
AO/AU	53.4	Blacks Creek; Emergent and Forested Wetland; Interchange 7	Southbound	2.87
AV	53.6	Roadside Ditch; Interchange 7; Emergent and Forested Wetland	Southbound	1.38
AW	53.7	Roadside Ditch; Interchange 7	Southbound	0.09

Table 3.52
Delineated Wetlands Between Interchanges 7 and 7A

Wetland	Approximate		Northbound/	
ID	Milepost	Comments	Southbound	Acres
AQ	53.9	Roadside Ditch; Laurel Run	Northbound	0.001
AR	54.1	Powerline and Pipeline ROW	Northbound	0.001
BI	54.3	Emergent/Scrub-Shrub ditch between fields	Northbound	0.10
AS	54.6	Roadside Ditch	Northbound	0.40
ВН	54.8	Forested Wetland	Northbound	1.96
AT	55.4	USFWS Potential Bog Turtle Habitat; Emergent and Forested Wetland; Thorton Creek	Northbound	2.84
BS/CC	56.9	Crosswicks Creek; Small Part of Agricultural Field	Northbound	1.21
CI	57.1	Roadside Ditch	Northbound	0.015
CJ	57.2	Roadside Ditch	Northbound	0.015
CK	57.3	Roadside Ditch	Northbound	0.09
CL	57.5	Doctors Creek	Northbound	1.22
CM	57.7-58.1	Roadside Ditch	Northbound	0.37
CS	58.3	Roadside Ditch	Northbound	0.30
CT	58.4	Roadside Ditch; Service Area 6N	Northbound	0.28
CU	59.0	Roadside Ditch	Northbound	0.53
CV	59.0	Emergent Wetland; Service Area 6N	Northbound	1.67
DC	59.3-59.8	Roadside Ditch; Agricultural Field	Northbound	6.79
DD	59.9-60.3	Roadside Ditch	Northbound	0.41
AX	53.9	Laurel Run	Southbound	1.93
AY	54.1	Drainage Ditch in Development	Southbound	0.06
BE	54.2	Drainage Ditch in Development	Southbound	0.07
ВО	54.2	Roadside Ditch	Southbound	0.08
BF	54.3-54.7	Roadside Ditch; Pipeline ROW; Forested Wetland	Southbound	1.41
BG	54.7	Emergent Wetland	Southbound	0.17
BP	54.9	Roadside Ditch	Southbound	0.07

Table 3.52 (Continued)
Delineated Wetlands Between Interchanges 7 and 7A

Wetland	Approximate		Northbound/	
ID	Milepost	Comments	Southbound	Acres
BQ/BR	55.2-55.7	USFWS Potential Bog Turtle Habitat; Roadside Ditch; Pipeline ROW; Thorton Creek	Southbound	2.39
СВ	55.9	Roadside Ditch	Southbound	0.08
CA	56.3	Roadside Ditch	Southbound	0.52
BZ	56.4	Roadside Ditch	Southbound	0.04
BY	56.5	Roadside Ditch; Old Field; Emergent Wetland	Southbound	0.61
AZ	57.2	Roadside Ditch	Southbound	0.025
BA	57.4	Doctors Creek	Southbound	2.45
BB	57.7-58.1	Roadside Ditch	Southbound	0.37
BW	58.0	Forested Wetland	Southbound	3.68
ВС	58.2-58.6	Roadside Ditch; Service Area 6S	Southbound	0.47
BO-2	58.3	Forested Wetland	Southbound	9.68
BD	58.4	Old Field; Scrub-Shrub Wetland	Southbound	3.37
CW	58.8	Roadside Ditch; Agricultural Field; Service Area 6S	Southbound	7.44
BN	59.3-59.7	Roadside Ditch	Southbound	0.57
DO	59.5-60.3	Large Forested Wetland	Southbound	20.18
ВТ	59.8	Roadside Ditch	Southbound	0.21
DM	60.4	Forested Wetland; Interchange 7A	Southbound	4.89
DN	60.4	Roadside Ditch	Southbound	0.10

Table 3.53
Delineated Wetlands Between Interchanges 7A and 8

Wetland	Approximate		Northbound/	
ID	Milepost	Comments	Southbound	Acres
BV	60.5	Forested Wetland; Agricultural Field; East of Interchange 7A	Northbound	13.33
DE/NB101	61.4	Roadside Ditch; Scrub-Shrub Wetland	Northbound	6.11
NB100/101	61.5	Roadside Ditch	Northbound	0.16
NB102	61.6	Forested Wetland; Miry Run	Northbound	0.04
NB103	61.9	Storm Water Detention Basin	Northbound	0.02
NB108	62.1	Storm Water Detention Basin	Northbound	1.78
NB107	62.5	Roadside Ditch	Northbound	0.02
NB110	63.2	Open Water	Northbound	0.04
NB111	63.3	Emergent and Forested Wetland; Assunpink Creek	Northbound	1.82
NB112	63.4	Roadside Ditch	Northbound	0.12
NB120	63.5	Forested Wetland	Northbound	1.50
NB113	64.2	Roadside Ditch	Northbound	0.01
NB121	64.7	Roadside Ditch	Northbound	0.02
NB122	64.7	Roadside Ditch	Northbound	0.11
NB57	64.8	Field; Emergent Wetland	Northbound	0.70
NB56	64.8	Roadside Ditch	Northbound	0.04
NB58	64.9	Roadside Ditch; Bear Brook	Northbound	0.16
NB55	65.0	Roadside Ditch	Northbound	0.16
NB54	65.3	Roadside Ditch	Northbound	0.04
NB50	66.3	Forested Wetland; Peddie Brook	Northbound	2.10
NB49	66.4	Roadside Ditch	Northbound	0.11
NB51	66.4	Roadside Ditch	Northbound	0.01
NB52	66.5	Roadside Ditch	Northbound	0.56
NB48	66.6	Forested Wetland	Northbound	0.13
NB53	66.7	Roadside Ditch	Northbound	0.20
NB47	66.7	Forested Wetland; Tributary of Peddie Brook	Northbound	0.26
NB46/33	66.7	Emergent Wetland	Northbound	0.12
NB44	66.8	Roadside Ditch	Northbound	0.15
NB45	66.8	Scrub-shrub Wetland	Northbound	0.22
NB43	66.9	Scrub-shrub Wetland	Northbound	0.40
NB41	67.3	Forested And Emergent Wetland; Rocky Brook	Northbound	0.20
NB42	67.3	Rocky Brook	Northbound	0.46

Table 3.53 (Continued)
Delineated Wetlands Between Interchanges 7A and 8

Wetland	Approximate		Northbound/	
ID	Milepost	Comments	Southbound	Acres
NB41-1	67.4	Roadside Ditch	Northbound	0.34
NB39	67.6	Roadside Ditch	Northbound	0.08
DF & DG	60.5	Beaver Impoundment; Emergent, Scrub-Shrub and Forested Wetland; Open Water	Southbound	18.02
EC	60.5	Forested Wetland	Southbound	1.02
EE/ED	60.5	Roadside Ditch	Southbound	0.11
EI/EJ/BM	60.5	Forested Wetland	Southbound	7.94
EF	60.5	Forested Wetland	Southbound	1.22
EG/EH	60.5	Roadside Ditch	Southbound	0.56
EL/EK	60.5	Roadside Ditch	Southbound	0.95
EA	60.5	Emergent and Forested Wetland	Southbound	0.77
EM/EN	60.5	Roadside Ditch	Southbound	0.55
EO/EP	60.5	Forested Wetland	Southbound	0.58
BL	60.8	Roadside Ditch	Southbound	0.08
BJ/SB02	61.0-61.5	Forested Wetland	Southbound	9.71
BK	61.1	Roadside Ditch	Southbound	0.04
SB04	61.4	Roadside Ditch	Southbound	0.02
SB06	61.4	Forested Wetland	Southbound	0.07
SB01	61.6	Roadside Ditch	Southbound	0.15
SB03	61.7	Roadside Ditch	Southbound	0.15
SB8	62.1	Roadside Ditch	Southbound	0.18
SB9	62.2	Roadside Ditch	Southbound	0.025
SB10	62.3	Roadside Ditch	Southbound	0.02
SB12	62.7	Roadside Ditch	Southbound	0.03
SB15	62.8	Forested Wetland; Roadside Ditch	Southbound	0.24
SB13	62.9	Roadside Ditch	Southbound	0.25
SB14	62.9	Forested Wetland; Roadside Ditch	Southbound	0.07
SB16	63.3	Forested Wetland; Assunpink Creek	Southbound	3.98
SB17	63.4	Roadside Ditch	Southbound	0.08
SB18	63.4	Forested Wetland	Southbound	1.16
SB19	63.6	Roadside Ditch	Southbound	0.07

Table 3.53 (Continued)
Delineated Wetlands Between Interchanges 7A and 8

Wetland	Approximate		Northbound/	
ID	Milepost	Comments	Southbound	Acres
SB20	63.7	Roadside Ditch	Southbound	0.02
SB21	63.8	Roadside Ditch	Southbound	0.05
SB23	63.8-64.3	Forested Wetland	Southbound	6.34
SB22	64.0	Roadside Ditch	Southbound	0.06
SB24	64.1-64.5	Roadside Ditch	Southbound	0.36
SB26	64.5	Roadside Ditch	Southbound	0.07
SB25	64.6	Forested Ditch	Southbound	0.86
SB27	64.7	Forested Wetland	Southbound	2.33
SB28	64.8	Roadside Ditch	Southbound	0.01
SB29	64.9	Roadside Ditch	Southbound	0.03
SB30	65.0-65.5	Roadside Ditch	Southbound	0.77
SB31	65.7	Roadside Ditch	Southbound	0.08
SB32	65.8	Roadside Ditch	Southbound	0.08
SB35	66.2-66.5	Forested Wetland; Peddie Brook	Southbound	4.93
SB36	66.3	Roadside Ditch	Southbound	0.05
SB37	66.4	Roadside Ditch	Southbound	0.01
SB40	66.5-67.0	Roadside Ditch	Southbound	1.06
SB41	66.5	Forested Wetland	Southbound	0.05
SB37	66.4	Forested Wetland	Southbound	0.01
SB42	66.7	Forested Wetland; Tributary of Peddie Brook	Southbound	5.67
SB38	66.4	Roadside Ditch	Southbound	0.01
SB39	66.4	Roadside Ditch	Southbound	0.01
SB43	67.1	Roadside Ditch	Southbound	0.23
SB44	67.3	Rocky Brook	Southbound	0.31
SB48	67.4	Roadside Ditch	Southbound	1.03
SB51	67.5	Forested Ditch; Interchange 8	Southbound	0.01
SB53	67.7	Roadside Ditch at Interchange 8 Maintenance Yard	Southbound	0.27

Table 3.54
Delineated Wetlands on the Northbound Side of Expanded Interchange 8

Wetland	Approximate		Northbound/	
ID	Milepost	Comments	Southbound	Acres
NB01	(T. 5			
A-9,11	67.5	Forested wetland	Northbound	2.32
NB01				
A-13	67.6	Forested wetland	Northbound	0.18
NB01A-5	67.6	Forested wetland	Northbound	1.19
NB01A-1	67.6	Emergent wetland; Agricultural; Roadside ditch	Northbound	14.76
NBI 02	67.7	Forested wetland	Northbound	1.39
NB0I -6	67.7	Forested wetland	Northbound	0.03
NB0IA-4	67.7	Forested wetland	Northbound	1.41
NBI 19	67.8	Roadside ditch; Forested wetland	Northbound	2.44
NBI 21	67.8	Emergent wetland	Northbound	0.09
NB01A-3	67.9	Roadside ditch	Northbound	0.02
NBI 10	67.9	Emergent Wetland; Agricultural	Northbound	0.72
NB01A-2	67.9	Roadside Ditch	Northbound	0.03
NBI 42	68.0	Roadside ditch	Northbound	0.05
NBI 44	68.0	Roadside ditch	Northbound	0.18
NBI 08	68.0	Scrub-shrub wetland	Northbound	0.50
NBI 40	68.1	Roadside ditch	Northbound	0.19
NBI 23	68.2	Forested wetland	Northbound	0.46
NBI 16	68.2	Forested wetland	Northbound	8.55
NBI 24	68.2	Roadside ditch	Northbound	0.20
NBI 46	68.2	Forested wetland	Northbound	46.83
NBI 18	68.3	Forested wetland	Northbound	0.63
NBI 34	68.3	Scrub-shrub wetland	Northbound	0.12
NBI 26	68.3	Roadside ditch	Northbound	0.20
NBI 12	68.3	Roadside ditch	Northbound	0.19
NBI 14	68.3	Roadside ditch	Northbound	0.18
NBI 15	68.3	Manmade emergent wetland	Northbound	0.63
NBI 17	68.3	Roadside ditch	Northbound	0.17
NBI 20	68.3	Roadside ditch	Northbound	0.16
NBI 22	68.3	Roadside ditch	Northbound	0.17
NBI 28	68.3	Roadside ditch	Northbound	0.16

Table 3.54 (Continued)
Delineated Wetlands on the Northbound Side of Expanded Interchange 8

Wetland	Approximate		Northbound/	
ID	Milepost	Comments	Southbound	Acres
NBI 30	68.3	Roadside ditch	Northbound	0.15
NBI 32	68.3	Emergent wetland	Northbound	0.07
NBI 36	68.3	Shrub-shrub wetland	Northbound	0.42
NBI 38	68.3	Shrub-shrub wetland	Northbound	0.48

Table 3.55
Delineated Wetlands on the Southbound Side of Interchange 8

Wetland	Approximate		Northbound/	
ID	Milepost	Comments	Southbound	Acres
SBI 08	67.4	Emergent wetland; Agricultural	Southbound	0.84
SBI 07	67.5	Emergent wetland; Agricultural	Southbound	0.88
SBI 09	67.5	Roadside ditch	Southbound	1.32
SB56	67.8	Timber Run Creek	Southbound	0.04
SBI 04	67.9	Shrub-shrub wetland	Southbound	0.85
SBI 05	67.9	Scrub-shrub wetland	Southbound	3.93
SBI 01,			Southbound	6.11
02	68.0	Forested wetland		
SBI 03	68.1	Forested wetland	Southbound	1.10
NBI 27	68.4	Forested wetland	Southbound	0.90
NBI 48	68.4	Forested wetland	Southbound	0.62

Table 3.56
Delineated Wetlands between Interchanges 8 and 8A

Wetland	Approximate		Northbound/	
ID	Milepost	Comments	Southbound	Acres
SB52	67.5	Forested Ditch; Interchange 8	Southbound	0.11
NB40	67.6	Scrub-shrub Wetland; Interchange 8	Northbound	0.26
NB38	67.8	Roadside Ditch	Northbound	0.05
NB36	67.9	Roadside Ditch	Northbound	0.01
NB37	67.9	Roadside Ditch	Northbound	0.02
NB32	68.1	Forested Wetland	Northbound	0.07
NB35	68.3	Roadside Ditch	Northbound	0.17
NB34	68.7	Roadside Ditch	Northbound	0.32
NB30	68.7	Forested Wetland; Millstone River	Northbound	0.76
NB29	68.8	Scrub-shrub Wetland	Northbound	0.54
NB31	69.0	Roadside Ditch	Northbound	0.23
NB28	69.0	Agricultural Ditch	Northbound	0.02
NB27	69.1	Agricultural Ditch	Northbound	0.03
NB26	69.3	Scrub-shrub Wetland	Northbound	2.14
NB20	69.5	Forested Wetland; Indian Run Brook	Northbound	0.72
NB23	69.5	Scrub-shrub Wetland	Northbound	0.18
NB24	69.6	Scrub-shrub Wetland	Northbound	0.90
NB25	69.6	Scrub-shrub Wetland	Northbound	0.26
NB18	69.7	Emergent Wetland	Northbound	2.23
NB21	69.8	Forested Wetland	Northbound	0.11
NB22	69.8	Forested Ditch	Northbound	0.40
NB16	69.9	Roadside Ditch	Northbound	0.05
NB17	69.9	Emergent Wetland; Utility Corridor	Northbound	0.07
NB15	70.0	Emergent Wetland	Northbound	0.12
NB11/12	70.8	Forested Wetland; Cranbury Brook	Northbound	2.93
NB13	70.9	Roadside Ditch	Northbound	2.73
NB11A	71.3	Roadside Ditch	Northbound	0.002
NB8	71.8	Roadside Ditch; Cedar Brook	Northbound	0.10
NB9	71.8	Roadside Ditch	Northbound	0.003
NB7	72.0	Roadside Ditch	Northbound	0.14
NB14	72.0	Roadside Ditch	Northbound	1.35
NB5	72.2	Roadside Ditch	Northbound	0.02

Table 3.56 (Continued)
Delineated Wetlands between Interchanges 8 and 8A

Wetland	Approximate		Northbound/	
ID	Milepost	Comments	Southbound	Acres
NB6	72.7	Roadside Ditch	Northbound	0.003
NB3	72.9	Forested Wetland; Shallow Brook	Northbound	0.03
NB2	73.2	Roadside Ditch	Northbound	0.11
NB4	73.2	Roadside Ditch	Northbound	0.02
NB1	73.2	Forested Wetland; Shallow Brook	Northbound	1.06
SB51	67.5	Forested Ditch; Interchange 8	Southbound	0.006
SB49	67.5	Forested Ditch; Interchange 8	Southbound	0.04
SB50	67.5	Forested Ditch; Interchange 8	Southbound	0.16
SB53	67.5	Forested Ditch; Interchange 8	Southbound	0.27
SB54	67.5	Forested Ditch; Interchange 8	Southbound	0.14
SB55	67.7	Roadside Ditch	Southbound	0.53
SB56	67.7	Roadside Ditch; Timber Run Creek	Southbound	0.19
SB57	67.8	Roadside Ditch; Timber Run Creek	Southbound	0.09
SB58	68.0	Forested Wetland	Southbound	5.46
SB59	68.0	Roadside Ditch	Southbound	0.76
SB60	68.3	Roadside Ditch	Southbound	0.057
SB61	68.7	Forested Wetland; Millstone River	Southbound	0.80
SB62	69.0	Forested Ditch	Southbound	0.67
SB64	69.3	Forested Wetland; Indian Run Brook	Southbound	5.17
SB63	69.3-69.8	Roadside Ditch	Southbound	0.27
SB65	69.5	Roadside Ditch	Southbound	0.25
SB66	69.8	Roadside Ditch	Southbound	0.06
SB67	69.9	Roadside Ditch	Southbound	0.33
SB68	70.2-70.5	Roadside Ditch	Southbound	0.39
SB69	70.7	Forested Wetland	Southbound	0.02
SB70	70.7	Roadside Ditch	Southbound	0.02
SB71	70.8	Forested Wetland; Cranbury Brook	Southbound	1.92
SB72	70.8	Roadside Ditch	Southbound	0.15
SB73	71.1	Roadside Ditch	Southbound	0.46
SB74	71.1	Roadside Ditch	Southbound	0.07
SB75	71.4	Roadside Ditch	Southbound	0.57
SB76	71.5	Roadside Ditch	Southbound	1.40

Table 3.56 (Continued) Delineated Wetlands between Interchanges 8 and 8A

Wetland	Approximate		Northbound/	
ID	Milepost	Comments	Southbound	Acres
SB77	71.5	Roadside Ditch	Southbound	0.06
SB81	71.8-72.1	Roadside Ditch	Southbound	0.53
SB78	71.8	Roadside Ditch	Southbound	0.07
SB80	71.8	Roadside Ditch; Cedar Brook	Southbound	0.05
SB79	71.8	Roadside Ditch	Southbound	0.14
SB82	71.9	Roadside Ditch	Southbound	0.24
SB83	72.1-72.5	Roadside Ditch	Southbound	2.14
SB84	72.8	Roadside Ditch	Southbound	0.05
SB85	72.9	Roadside Ditch; Shallow Brook	Southbound	0.16
SB87	73.6	Roadside Ditch	Southbound	0.023
SB88	73.6	Roadside Ditch	Southbound	0.19
SB86	73.8	Roadside Ditch	Southbound	0.53
SB89	73.9	Roadside Ditch	Southbound	0.11

Table 3.57
Field-Assessed Wetlands and Associated Buffer Areas between Interchanges 8A and 9

Wetland	Approximate		Northbound/	Approximate
ID	Milepost	Comments	Southbound	Acres
8A-9 A	73.9	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Northbound	0.27
8A-9 B	74.1	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Northbound	0.45
8A-9 C	74.3	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Northbound	0.29
8A-9 N	75.4	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Northbound	0.01
8A-9 O	75.4	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Northbound	0.01
8A-9 P	75.5	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Northbound	0.01
8A-9 R	75.7	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Northbound	0.29
8A-9 S	75.8	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Northbound	0.01
8A-9 W	76.3	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Northbound	0.29
8A-9 AC	77.1	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Northbound	0.07
0.4.0.4.7		Forested Wetland; Ireland Brook (Exceptional		0.04
8A-9 AI	77.7	Wetland- 150 ft. buffer)	Northbound	0.01
8A-9 AJ	77.8	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Northbound	0.01
8A-9 AK	78.1	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Northbound	0.14
8A-9 AL	78.4	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Northbound	0.01
8A-9				
AM	78.5	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Northbound	0.01
8A-9 AO	79.3	Emergent Wetland (Exceptional Wetland- 150 ft. buffer)	Northbound	0.01
8A-9-A	17.3	,	Northbound	0.01
AP	79.3	Emergent Wetland (Exceptional Wetland- 150 ft. buffer) South Branch of Beaverdam Brook	Northbound	0.01
8A-9 AQ	79.5	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Northbound	0.04
8A-9 AT	80.1	Roadside Ditch (Ordinary Wetland- 0 ft. buffer))	Northbound	0.02
8A-9 AU	80.1	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Northbound	0.02
8A-9 AX	80.3	Roadside Ditch (Ordinary Wetland- 0 ft. buffer))	Northbound	0.01
OH J HA	50.5	Roadside Ditch; Bog Brook (Ordinary Wetland-	Trofulbound	0.01
8A-9 AY	80.3	0 ft. buffer)	Northbound	0.03
8A-9 BC	81.2	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Northbound	0.01
8A-9 BD	81.5	Roadside Ditch; (Ordinary Wetland- 0 ft. buffer)	Northbound	0.01
8A-9 BE	81.6	Roadside Ditch; Forested Wetland (Exceptional Wetland- 150 ft. buffer)	Northbound	0.02

Table 3.57 (Continued)
Field-Assessed Wetlands and Associated Buffer Areas Between Interchanges 8A and 9

Wetland	Approximate		Northbound/	Approximate
ID	Milepost	Comments	Southbound	Acres
		Roadside Ditch; North Tributary to Weston Mills		
8A-9 BG	82.7	Pond (Ordinary Wetland- 0 ft. buffer)	Northbound	0.04
A-9 D	74.6	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.03
8A-9 E	74.9	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.02
8A-9 F	74.9	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.02
8A-9 G	75.0	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.02
8A-9 H	75.2	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.01
8A-9 I	75.2	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.01
8A-9 J	75.4	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.03
8A-9 K	75.4	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.02
8A-9 L	75.5	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.34
8A-9 M	75.5	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.01
8A-9 Q	75.7	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.28
8A-9 T	76.0	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.01
8A-9 U	76.1	Emergent Wetland (Ordinary Wetland- 0 ft. buffer)	Southbound	0.01
8A-9 V	76.2	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	2.79
8A-9 X	76.5	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	2.78
8A-9 Y	76.8	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.04
8A-9 Z	76.9	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.01
8A-9 AB	77.0	Emergent Wetland (Intermediate Wetland- 50 ft. buffer)	Southbound	0.01
8A-9 AD	77.2	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.05
8A-9 AE	77.4	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.02
8A-9 AF	77.5	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.03
8A-9 AG	77.5	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.04
8A-9 AH	77.8	Forested Wetland; Ireland Brook (Exceptional Wetland- 150 ft. buffer)	Southbound	0.03
8A-9 AN	79.2	Forested Wetland; South Branch of Beaverdam Brook (Exceptional Wetland- 150 ft. buffer)	Southbound	0.16
8A-9 AR	79.4	Forested Wetland; North Branch of Beaverdam Brook (Exceptional Wetland- 150 ft. buffer)	Southbound	0.02
8A-9 AS	79.6	Roadside Ditch; Forested Wetland (Exceptional Wetland- 150 ft. buffer)	Southbound	0.16
8A-9 AV	80.2	Forested Wetland (Exceptional Wetland- 150 ft. buffer)	Southbound	0.01

Table 3.57 (Continued)
Field-Assessed Wetlands and Associated Buffer Areas Between Interchanges 8A and 9

Wetland	Approximate		Northbound/	Approximate
ID	Milepost	Comments	Southbound	Acres
8A-9		Forested Wetland; (Exceptional Wetland- 150 ft.	Southbound	
AW	80.2	buffer)		0.02
8A-9 AZ	80.3	Roadside Ditch (Ordinary Wetland- 0 ft. buffer)	Southbound	0.01
		Emergent Wetland; South Tributary to Weston		
8A-9 BA	80.7	Mills Pond; (Ordinary Wetland- 0 ft. buffer)	Southbound	0.01
8A-9 BB	81.1	Emergent/Forested Wetland	Southbound	0.01
		Forested Wetland (Exceptional Wetland- 150 ft.		
8A-9 BF	81.6	buffer)	Southbound	0.02
		Roadside Ditch; North Tributary to Weston Mills		
8A-9 BH	82.7	Pond (Ordinary Wetland- 0 ft. buffer)	Southbound	0.02

Limited numbers of fish, reptiles, and amphibians were recorded, possibly due to the high daytime temperatures when field reconnaissance was conducted. As discussed previously in Section 3.14.3, the USFWS noted in correspondence that the alewife, may be present in Assiscunk Creek. Due to the cloudy appearance of Assiscunk Creek during the stream assessment, however, no fish were observed.

The distribution and abundance of wildlife depends largely upon the nature and availability of the habitat with respect to the species requirements. Important elements to consider in habitat evaluation include abiotic factors such as climate, topography, geology, soils, moisture regime, size and configuration of habitat, and land use. Biotic factors to consider include the physiological characteristics of the species (i.e., life history, reproductive strategy, and mobility), nutrient availability (i.e., plant and animal associations), and present community structure (i.e., the presence or absence of competitors, predators or symbiants). If any of these elements are missing, inadequate, or inaccessible, the dependent species will also be present or absent.

3.14.6 Threatened and Endangered Species and Critical Habitats

The New Jersey Natural Heritage Program identified eight species of concern in the Project Corridor. These include: 1) NJ-threatened bobolink (*Dolichonyx oryzivorus*); 2) NJ-threatened Cooper's hawk (*Accipiter cooperii*); 3) NJ-special concern eastern box turtle (*Terrapene Carolina*); 4) NJ-special concern Fowler's toad (*Bufo fowleri*); 5) NJ-special concern least flycatcher (*Empidonax minimus*); 6) NJ-threatened savannah sparrow (*Passerculus savanna*); 7) NJ-special concern spotted turtle (*Clemmys guttata*); and 8) NJ-endangered vesper sparrow (*Pooecetes gramineus*).

The initial Project Corridor mapping that was sent to the Natural Heritage Program included project limits greater than current project limits. The potential habitats for two species (least flycatcher and spotted turtle) occur outside currently defined project limits and, therefore, are not discussed below. A review of the N.J. Landscape Project Database GIS mapping (2004) has identified the approximately mapped location of these species as follows:

Table 3.58 Wildlife Observed Within the Project Corridor

Mammals

Scientific Name	Common Name	Segment of Turnpike
Canis familiaris	domestic dog	2,3,5
Canis latrans	coyote	2
Capra aegagrus	domestic goat	1
Castor canadensis	beaver	1,2,5,6
Dedelphis marsupialis	opossum	1,2,5
Felis domestica	domestic cat	3,4
Marmota monax	ground hog	1,2,3,4,5,6
Mephitis mephitis	striped skunk	4,
Odocoileus virginia	white tailed deer	1, 2, 3, 4, 5,6
Peromyscus leucopus	white-footed mouse	1,2,3
Procyon lator	raccoon	2,4,5
Sciurus carolinensis	grey squirrel	1,2,3,4,5,6
Syylvilagus floridanus	eastern cottontail-rabbit	1,2,4,5,6
Tamias striatus	eastern chipmunk	1,2,4,5
Tamiasciurus hudsonicus	red squirrel	1,2,4,5
Ursus americanus	black bear	1,2,3,4
Vulpes fulva	red fox	2,5

Reptiles/amphibians

Scientific Name	Common Name	Segment of Turnpike
Elaphe obsoleta	black rat snake	3
Notophthalmus viridescens	red newt	1,2
Rana catesbeiana	bullfrog	1,3,5
Rana clamitans	green frog	1,2,5
Terrapene Carolina	box turtle	3
Thamnophis sirtalis	garter snake	4

Birds

Scientific Name	Common Name	Segment of Turnpike
Agelaius phoeniceus	red-winged blackbird	1,3,5,6
Aix sponsa	wood duck	2,3,4
Anas platyrhynchos	mallard	1,2,3,4
Ardea herodias	great blue heron	2,3,4,5
Bonasa umbellus	ruffed grouse	2,4
Branta canadensis	Canada goose	3,5,6
Buteo jamaicensis	red-tailed hawk	1,2,3,4,5,6
Cardinalis cardinalis	northern cardinal	1,2,3,5,6
Carpodacus mexicanus	house finch	2,4

Table 3.58 (Continued) Wildlife Observed Within the Project Corridor

Birds (Cont'd.)

Scientific Name	Common Name	Segment of Turnpike
Cathartes aura	turkey vulture	1,3,4,5,6
Ceryle alcyon	belted kingfisher	1,3,5
Charadrius vociferous	killdeer	5,6
Columba livia	rock dove	1,2,3,4,5,6
Coragyps atratus	black vulture	4
Corvus brachyrhynchos	American crow	1,2,4,5,6
Cyanocitta cristata	blue jay	1,2,3,4,5
Dendroica petechia	yellow warbler	4,5
Dryocopus pileatus	pileated woodpecker	1,3,4,5
Dumetella carolinensis	gray catbird	1,5
Falco sparverius	American kestrel	5,6
Geothlypis trichas	common yellowthroat	4
Haliaeetus leucocephalus	bald eagle	3
Larus delawarensis	ring-billed gull	1,2,3,4,5,6
Lcterus galbula	northern oriole	4,5
Meleagris gallopavo	wild turkey	1,2,4,5
Melospiza melodia	song sparrow	2,5
Mimus polyglottos	northern mockingbird	1,4,5
Nycticorax nycticorax	black night heron	4
Pandion haliaetus	osprey	4
Parus atricapillus	black-capped chickadee	1,3,4,5
Passer domesticus	house sparrow	1,3,4
Phasianus colchicus	ring-necked pheasant	2,4,5,6
Picoides pubescens	downy woodpecker	4
Quiscalus quiscula	common grackle	3,5
Scolopax minor	American woodcock	4
Sturnus vulgaris	European starling	1,5,6
Tachycineta bicolor	tree swallow	5,6
Troglodytes aedon	house wren	2,5
Turdus migratorius	American robin	1,2,3,4,5,6
Tyrannus tyrannus	eastern kingbird	1,2,4,5
Zenaida macroura	mourning dove	1,2,3,4,5,6

Key: Segment 1 = Assiscunk Creek- Interchange 6

Segment 3 = Interchange 6 to Interchange 7
Segment 4 = Interchange 7 to Interchange 8
Segment 5 = Interchange 8 to Interchange 8A
Segment 6 = Interchange 8A to Interchange 9

- M.P. 53.7 (southbound side of Interchange 7) forested wetland habitat suitable for Cooper's hawk, Fowler's toad, and eastern box turtle.
- M.P. 55.5 (northbound side of Turnpike) open agricultural land suitable for bobolink.
- M.P. 61.0 63.2 (northbound side of Turnpike) open agricultural land and meadows suitable for Fowler's toad, savannah sparrow, vesper sparrow, and eastern box turtle.

Correspondence from NMFS yielded no findings of state- and/or federally-listed endangered or threatened species, or special habitats of concern other than the federally-endangered shortnose sturgeon, which is only found outside the project limits within the Delaware River (Appendix B).

Correspondence from the USFWS requests a habitat assessment survey for the state-listed (endangered) and federally-listed (threatened) bog turtle at Thorton Creek (M.P. 55.3) (Appendix B). Also, during wetland delineation field work, potential bog turtle habitat was found at the Assunpink Creek crossing (M.P. 63.3).

Because of the USFWS's response regarding the need to conduct a bog turtle habitat survey at the Thorton Creek crossing in Chesterfield Township (M.P. 55.3), and the field finding of potential bog turtle habitat at the Assunpink Creek crossing (M.P. 63.3), additional studies for the listed bog turtle were conducted in May 2006.

The bog turtle habitat survey at the Thorton Creek area did not identify suitable habitat for bog turtles on either side of the Turnpike. The habitat on the southbound side of the Turnpike consisted of firm/disturbed soils in an emergent wetland along an underground utility corridor with forested wetlands adjacent. No mucky soils were found, nor a spring-fed water source. No bog turtles were observed at this location.

The northbound side of the Turnpike at M.P. 55.3 consists of the headwaters to Thorton Creek. These headwaters originate in a forested wetland that drains west, under the Turnpike into the wetland mentioned above. The soils were not mucky and no emergent or scrub-shrub habitat was observed. Therefore, this area was not identified as suitable bog turtle habitat. No bog turtles were observed at this location.

The survey in the area around Assunpink Creek did identify suitable bog turtle habitat, although no bog turtles were observed. Wetlands on the southbound side of the Turnpike contain mucky soils in an emergent and scrub-shrub setting. A smaller area was identified on the northbound side, northeast of the creek. It also contained mucky soils in an emergent and scrub-shrub setting.

Locations are graphically depicted in Figures 3-20a through 3-20c. No locations known to contain special status species, or identified to have habitat that could potentially contain such species, exist north of M.P. 63.3 (Figure 3-20c).

3.15 Infrastructure

3.15.1 Introduction

The Project Corridor for the analysis of infrastructure is defined as the area within 500 feet of either side of the existing Turnpike mainline right-of-way between the southern terminus located south of Interchange 6 and the northern terminus near Interchange 9. The Project Corridor also generally includes an equivalent distance around the Turnpike interchanges, except the area around Interchange 8, where an expanded area was considered to incorporate potential toll plaza relocation alternatives that have been studied.



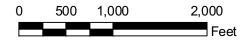


Matchline

Municipal / County Boundary

Special Status Species Habitat

State Threatened Coopers Hawk State Special Concern Eastern Box Turtle State Special Concern Fowler's Toad



SPECIAL STATUS SPECIES

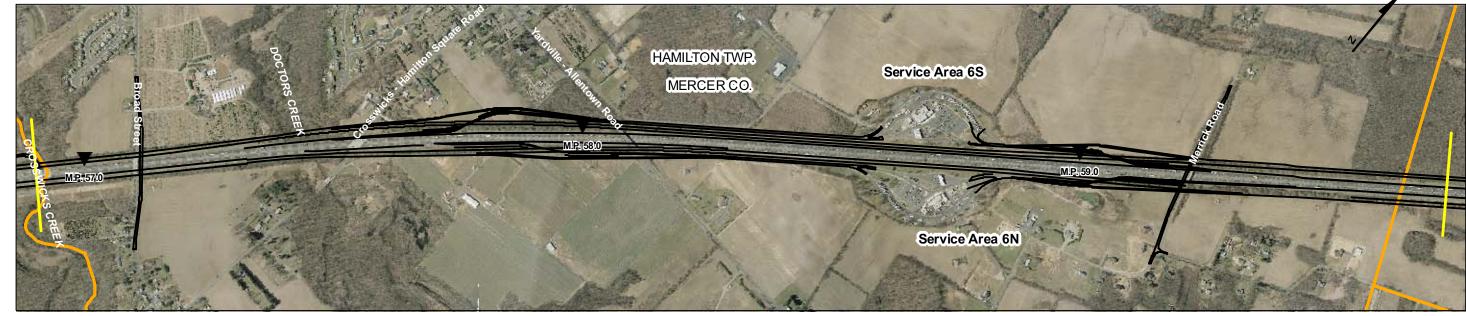
New Jersey Turnpike Interchange 6 to 9 Widening Burlington, Mercer and Middlesex Counties Executive Order No. 215 Environmental Impact Statement



NEW JERSEY TURNPIKE AUTHORITY
NEW JERSEY TURNPIKE

FIGURE 3-20a





Matchline

Municipa

Municipal / County Boundary

Special Status Species Habitat State Threatened Bobolink SPECIAL STATUS SPECIES

500 1,000

New Jersey Turnpike Interchange 6 to 9 Widening Burlington, Mercer and Middlesex Counties Executive Order No. 215 Environmental Impact Statement



NEW JERSEY TURNPIKE AUTHORITY
NEW JERSEY TURNPIKE

FIGURE 3-20b

2,000



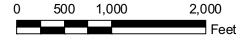


Matchline

Municipal / County Boundary

Special Status Species Habitat

State Endangered Vesper Sparrow State Threatened Savannah Sparrow State Special Concern Eastern Box Turtle State Special Concern Fowler's Toad



SPECIAL STATUS SPECIES

New Jersey Turnpike Interchange 6 to 9 Widening Burlington, Mercer and Middlesex Counties Executive Order No. 215 Environmental Impact Statement



NEW JERSEY TURNPIKE AUTHORITY
NEW JERSEY TURNPIKE

FIGURE 3-20c For the purposes of this section, *infrastructure* includes utilities (both aboveground and/or underground) and transportation facilities. *Utilities* have been differentiated between major utilities and local service utilities. *Major utilities* are defined as including: high-voltage overhead electric transmission lines and their associated switching stations and substations; underground natural gas transmission pipelines and their associated pressure/pumping stations; underground petroleum transmission pipelines and their associated pressure/pumping stations; and underground fiber optic lines. *Local utilities* are defined as including: sanitary and combined storm and sewage lines and treatment facilities; water distribution lines and treatment facilities; natural gas distribution and local service lines; electric distribution and local service lines; telephone lines; and cable television facilities. Finally, *transportation facilities* include railroads and local, county, and state roadways and highways. Sanitary landfills, although regulated by the New Jersey Board of Public Utilities, are not included in this analysis, as they are discussed in Section 3.16 (*Solid Waste*).

The infrastructure inventory led to the identification of 14 major utility elements and approximately 156 local utility elements of notable size and capacity, which either cross or are located immediately adjacent to the existing Turnpike right-of-way. A total of 45 roadway crossings have also been identified within the Project Corridor, not including the structures associated with any interchange, service area, or maintenance/emergency U-turn ramps. The majority of roadway crossings are either local (21) or county (18) roads, but also include Route I-195, U.S. Route 206, and N.J. Routes 33, 133, 32, and 18. The Turnpike also crosses four railroad lines in the Project Corridor. Two of these are active freight lines and two are abandoned. No navigable waterways, port facilities, or airports were identified within the Project Corridor.

3.15.2 Data Sources and Methodology

For the inventory of utilities and transportation facilities, information was compiled from a utility report prepared by Arora & Associates, P.C. in support of the preliminary design of the Proposed Project (*Utility Report, New Jersey Turnpike*, December, 2005). The information contained in that report was supplemented by an examination of Turnpike utility maps, aerial photographs, U.S.G.S. topographic mapping, municipal tax maps, and interviews with utility operators.

Because the Arora report did not extend north of Interchange 8A, the basis for utility information along the Interchange 8A to Interchange 9 segment of the Project Corridor was the Environmental Impact Statement for the Turnpike Authority's 1985-90 Widening Program (New Jersey Turnpike 1985-90 Widening Program, Final Environmental Impact Statement, Interchange 8A to Interchange 9, January 1987). That document was supplemented with information gathered from a review of utility maps, aerial photographs, U.S.G.S. topographic mapping, and municipal tax maps, as well as from interviews with utility operators. All identified infrastructure was field verified.

3.15.3 Existing Utilities and Transportation Facilities

Utilities and transportation facilities in the Project Corridor are presented in Table 3.59 and Figures 3-21a through 3-21f. All transportation facilities listed on Table 3.59 are denoted in bold type for easy reference. A more detailed discussion of all utilities and transportation facilities in the Project Corridor is provided below in south-to-north order.

The utilities that have been examined, and which are presented in Table 3.59 and Figures 3-21a through 3-21f include the following:

Table 3.59

NJ Turnpike Infrastructure Inventory (Utilities and Transportation Facilities) from Assiscunk

Creek to Interchange 9

Approx. Milepost	Infrastructure Element, Description, Locational Feature, and Operator	Relation to Turnpike	Municipality	County
	Assiscunk Creek to Interchange 6			
48.2-50.95	30-inch Colonial petroleum pipeline running parallel to NB side	Ab.		1
48.2-50.95	16-inch Sunoco petroleum pipeline running parallel to NB side	Ab.		
48.3-50.95	500-kV PSE&G electric transmission line (New Freedom-Deans Line) running parallel to NB side	Ab.		
48.2-50.95	NJTA's fiber optic cable running parallel to SB side	Ab.		
48.2-50.95	36-inch Transco natural gas pipeline running parallel to SB side	Ab.		
48.2-50.95	16-inch Transco natural gas pipeline running parallel to SB side	Ab.	_	
49.15	Columbus-Florence Road (CR 543) Overhead electric line in four 3.5-inch conduits on bridge structure (PSE&G)	Opass Opass	-	
49.13	Overhead telephone line in two 3.5-inch conduits on bridge structure (Verizon - New Jersey)	Opass	Mansfield Twp.	Burlington Co.
50.06	Hedding Road (CR 628)	Opass	1	
50.06	Overhead telephone line in two 3.5-inch conduits on bridge structure (Verizon - New Jersey)	Opass		
50.50	Sunoco metering station on the NB side	Ab.		
50.50	Mill Lane (abandoned Penn. RR Kinkora Branch)	Upass		
50.50	Hedding Avenue (Local Road) (no utilities at crossing)	Upass		
50.95	Columbus-Hedding Road (CR 678)	Opass	_	
	8-inch natural gas main in conduit on bridge structure (PSE&G)	Opass		
50.05.52.50	Interchange 6 to Interchange 7			
50.95-52.50 50.95-52.50	36-inch Transco natural gas pipeline running parallel to SB side	Ab.	Mansfield Twp.	
50.95-52.50	16-inch Transco natural gas pipeline running parallel to SB side 500-kV PSE&G electric transmission line (New Freedom-Deans Line) running parallel to NB side	Ab.	 	1
50.95-53.75	30-inch Colonial petroleum pipeline running parallel to NB side	Ab.	Mansfield Twp.	
50.95-53.75	16-inch Sunoco petroleum pipeline running parallel to NB side	Ab.	Bordentown Twp.	
50.95-53.75	NJTA's fiber optic cable running parallel to SB side	Ab.		
	Hedding-Mansfield Road (Local Road)	Opass		
51.42	Electric and telephone lines to Transco's valve station in 2-inch conduit on bridge structure (Verizon - New Jersey and PSE&G) Transco valve station	Opass	Mansfield Twp.	
51.48 52.50-53.00	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to SB side	Ab.	 	{
52.50-53.00	MCI/WorldCom (Lightnet) fiber optic cable running parallel to SB side	Ab.	1	
52.50	36-inch Transco natural gas pipeline	UXing	1	Burlington Co.
52.50-53.75	36-inch Transco natural gas pipeline running parallel to NB side	Ab.	1	
	U.S. Route 206	Upass		
	13-kV & 26-kV overhead electric lines (PSE&G)	Upass]	
53.00	Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	Upass	Bordentown Twp.	
	Television cable (Comcast of Burlington County LLC)	Upass		
	12-inch natural gas main in conduit on bridge structure (PSE&G)	Upass	_	
53.00	Sanitary sewer (Bordentown Sewerage Authority)	Upass AXing	4	
53.00	132-kV PSE&G electric transmission line (Trenton-Burlington Line) MCI/WorldCom (Lightnet) fiber optic cable	UXing	-	
53.00-53.75	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side	Ab.	1	
53.00-53.75	MCI/WorldCom (Lightnet) fiber optic cable running parallel to NB side	Ab.		
	Interchange 7 to Interchange 7A		•	
52.75.54.05				
	136-inch Transco natural gas nineline running parallel to NR side	Ab		ı
53.75-54.85 53.75-56.50	36-inch Transco natural gas pipeline running parallel to NB side 132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side	Ab.	1	
53.75-56.50 53.75-56.50	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side	Ab. Ab. Ab.	Bordentown Twp.	Burlington Co.
53.75-56.50		Ab.	Bordentown Twp. Chesterfield Twp.	Burlington Co.
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.90	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCI/WorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side	Ab. Ab.	Chesterfield Twp.	L
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.90 53.75-60.50	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCI/WorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 500-kV PSE&G electric transmission line (New Freedom-Deans Line) running parallel to NB side	Ab. Ab. Ab. Ab. Ab.	Chesterfield Twp. All 4 Municipalities	Burlington Co.
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.90 53.75-60.50 53.75-60.50	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCI/WorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 500-kV PSE&G electric transmission line (New Freedom-Deans Line) running parallel to NB side 30-inch Colonial petroleum pipeline running parallel to NB side	Ab. Ab. Ab. Ab. Ab. Ab. Ab.	Chesterfield Twp.	L
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.90 53.75-60.50	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCI/WorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 500-kV PSE&G electric transmission line (New Freedom-Deans Line) running parallel to NB side 30-inch Colonial petroleum pipeline running parallel to NB side NJTA's fiber optic cable running parallel to SB side	Ab. Ab. Ab. Ab. Ab. Ab. Ab. Ab. Ab.	Chesterfield Twp. All 4 Municipalities	Burlington Co.
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.90 53.75-60.50 53.75-60.50	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCI/WorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 16-inch Sunoco petroleum pipeline running parallel to NB side 500-kV PSE&G electric transmission line (New Freedom-Deans Line) running parallel to NB side 30-inch Colonial petroleum pipeline running parallel to NB side NTA's fiber optic cable running parallel to SB side Bordentown-Georgetown Road (CR 545)	Ab. Ab. Ab. Ab. Ab. Ab. Ab. Ab. Upass	Chesterfield Twp. All 4 Municipalities	Burlington Co.
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.90 53.75-60.50 53.75-60.50	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCI/WorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 500-kV PSE&G electric transmission line (New Freedom-Deans Line) running parallel to NB side 30-inch Colonial petroleum pipeline running parallel to NB side NJTA's fiber optic cable running parallel to SB side Bordentown-Georgetown Road (CR 545) 13-kV overhead electric line (PSE&G)	Ab. Ab. Ab. Ab. Ab. Ab. Ab. Upass Upass	Chesterfield Twp. All 4 Municipalities	Burlington Co.
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.90 53.75-60.50 53.75-60.50	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCI/WorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 500-kV PSE&G electric transmission line (New Freedom-Deans Line) running parallel to NB side 30-inch Colonial petroleum pipeline running parallel to NB side NJTA's fiber optic cable running parallel to SB side Bordentown-Georgetown Road (CR 545) 13-kV overhead electric line (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	Ab. Ab. Ab. Ab. Ab. Ab. Ab. Upass Upass	Chesterfield Twp. All 4 Municipalities	Burlington Co.
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.90 53.75-60.50 53.75-60.50	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCLWorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 16-inch Sunoco petroleum pipeline running parallel to NB side 300-inch Colonial petroleum pipeline running parallel to NB side 300-inch Colonial petroleum pipeline running parallel to NB side NJTA's fiber optic cable running parallel to SB side NJTA's fiber optic cable running parallel to SB side Bordentown-Georgetown Road (CR 545) 13-kV overhead electric line (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC)	Ab. Ab. Ab. Ab. Ab. Ab. Ab. Upass Upass Upass Upass	Chesterfield Twp. All 4 Municipalities below	Burlington Co.
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.90 53.75-60.50 53.75-60.50	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCI/WorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 16-inch Sunoco petroleum pipeline running parallel to NB side 30-inch Colonial petroleum pipeline running parallel to NB side NJTA's fiber optic cable running parallel to SB side NJTA's fiber optic cable running parallel to SB side Bordentown-Georgetown Road (CR 545) 13-kV overhead electric line (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) 12-inch natural gas main (PSE&G)	Ab. Ab. Ab. Ab. Ab. Ab. Ab. Upass Upass Upass Upass Upass Upass	Chesterfield Twp. All 4 Municipalities below	Burlington Co.
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.90 53.75-60.50 53.75-60.50	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCLWorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 16-inch Sunoco petroleum pipeline running parallel to NB side 300-inch Colonial petroleum pipeline running parallel to NB side 300-inch Colonial petroleum pipeline running parallel to NB side NJTA's fiber optic cable running parallel to SB side NJTA's fiber optic cable running parallel to SB side Bordentown-Georgetown Road (CR 545) 13-kV overhead electric line (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC)	Ab. Ab. Ab. Ab. Ab. Ab. Ab. Upass Upass Upass Upass	Chesterfield Twp. All 4 Municipalities below	Burlington Co.
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.90 53.75-60.50 53.75-60.50	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCI/WorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 500-kV PSE&G electric transmission line (New Freedom-Deans Line) running parallel to NB side 30-inch Colonial petroleum pipeline running parallel to NB side NJTA's fiber optic cable running parallel to SB side Bordentown-Georgetown Road (CR 545) 13-kV overhead electric line (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) 12-inch natural gas main (PSE&G) 8-inch sanitary sewer (Bordentown Sewerage Authority)	Ab. Ab. Ab. Ab. Ab. Ab. Ab. Upass Upass Upass Upass Upass Upass Upass	Chesterfield Twp. All 4 Municipalities below	Burlington Co.
53,75-56.50 53,75-56.50 53,75-56.50 53,75-56.90 53,75-60.50 53,75-60.50 53,75-60.50 53,75-60.50	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCI/WorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 500-kV PSE&G electric transmission line (New Freedom-Deans Line) running parallel to NB side 30-inch Colonial petroleum pipeline running parallel to NB side NJTA's fiber optic cable running parallel to SB side MJTA's fiber optic cable running parallel to SB side Bordentown-Georgetown Road (CR 545) 13-kV overhead electric line (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) 12-inch natural gas main (PSE&G) 8-inch sanitary sewer (Bordentown Sewerage Authority) 12-inch water main (Bordentown Water Department) 36-inch Transco gas pipeline Bordentown-Chesterfield Road (CR 528)	Ab. Ab. Ab. Ab. Ab. Ab. Ab. Ab. Upass	Chesterfield Twp. All 4 Municipalities below	Burlington Co.
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.50 53.75-60.50 53.75-60.50 53.75-60.50 54.00	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCI/WorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 16-inch Sunoco petroleum pipeline running parallel to NB side 500-kV PSE&G electric transmission line (New Freedom-Deans Line) running parallel to NB side 30-inch Colonial petroleum pipeline running parallel to NB side NJTA's fiber optic cable running parallel to SB side Bordentown-Georgetown Road (CR 545) 13-kV overhead electric line (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) 12-inch natural gas main (PSE&G) 8-inch sanitary sewer (Bordentown Sewerage Authority) 12-inch water main (Bordentown Water Department) 36-inch Transco gas pipeline Bordentown-Chesterfield Road (CR 528) Two 13-kV, two 26-kV and one 69-kV overhead electric lines (PSE&G)	Ab. Ab. Ab. Ab. Ab. Ab. Ab. Upass	Chesterfield Twp. All 4 Municipalities below	Burlington Co. Mercer Co.
53,75-56.50 53,75-56.50 53,75-56.50 53,75-56.90 53,75-60.50 53,75-60.50 53,75-60.50 53,75-60.50	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCLWorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 16-inch Sunoco petroleum pipeline running parallel to NB side 300-inch Colonial petroleum pipeline running parallel to NB side 300-inch Colonial petroleum pipeline running parallel to NB side NJTA's fiber optic cable running parallel to SB side Bordentown-Georgetown Road (CR 545) 13-kV overhead electric line (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) 12-inch natural gas main (PSE&G) 8-inch sanitary sewer (Bordentown Sewerage Authority) 12-inch water main (Bordentown Water Department) 36-inch Transco gas pipeline Bordentown-Chesterfield Road (CR 528) Two 13-kV, two 26-kV and one 69-kV overhead electric lines (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	Ab. Ab. Ab. Ab. Ab. Ab. Ab. Ab. Upass	Chesterfield Twp. All 4 Municipalities below	Burlington Co.
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.50 53.75-60.50 53.75-60.50 53.75-60.50 54.00	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCI/WorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 16-inch Sunoco petroleum pipeline running parallel to NB side 30-inch Colonial petroleum pipeline running parallel to NB side 30-inch Colonial petroleum pipeline running parallel to NB side NJTA's fiber optic cable running parallel to SB side Bordentown-Georgetown Road (CR 545) 13-kV overhead electric line (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) 12-inch natural gas main (PSE&G) 8-inch sanitary sewer (Bordentown Sewerage Authority) 12-inch water main (Bordentown Water Department) 36-inch Transco gas pipeline Bordentown-Chesterfield Road (CR 528) Two 13-kV, two 26-kV and one 69-kV overhead electric lines (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC)	Ab. Ab. Ab. Ab. Ab. Ab. Ab. Upass	Chesterfield Twp. All 4 Municipalities below	Burlington Co. Mercer Co.
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.90 53.75-60.50 53.75-60.50 53.75-60.50 54.00 54.85 55.10	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCI/WorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 500-kV PSE&G electric transmission line (New Freedom-Deans Line) running parallel to NB side 30-inch Colonial petroleum pipeline running parallel to NB side NJTA's fiber optic cable running parallel to SB side Bordentown-Georgetown Road (CR 545) 13-kV overhead electric line (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) 12-inch natural gas main (PSE&G) 8-inch sanitary sewer (Bordentown Sewerage Authority) 12-inch water main (Bordentown Water Department) 36-inch Transco gas pipeline Bordentown-Chesterfield Road (CR 528) Two 13-kV, two 26-kV and one 69-kV overhead electric lines (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) PSE&G Crosswicks Substation on NB side	Ab. Ab. Ab. Ab. Ab. Ab. Ab. Upass Up	Chesterfield Twp. All 4 Municipalities below	Burlington Co. Mercer Co.
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.50 53.75-60.50 53.75-60.50 53.75-60.50 54.00 54.85	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCLWorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 16-inch Sunoco petroleum pipeline running parallel to NB side 16-inch Sunoco petroleum pipeline running parallel to NB side 16-inch Colonial petroleum pipeline running parallel to NB side 18-inch Colonial petroleum pipeline running parallel to NB side 18-inch Colonial petroleum pipeline running parallel to NB side 18-inch voerhead electric line (PSE&G) 13-kV overhead electric line (PSE&G) 13-kV overhead electric line (PSE&G) 15-inch and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) 12-inch natural gas main (PSE&G) 8-inch sanitary sewer (Bordentown Sewerage Authority) 12-inch water main (Bordentown Water Department) 36-inch Transco gas pipeline Bordentown-Chesterfield Road (CR 528) Two 13-kV, two 26-kV and one 69-kV overhead electric lines (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) PSE&G Crosswicks Substation on NB side 10-inch Colonial petroleum pipeline	Ab. Ab. Ab. Ab. Ab. Ab. Ab. Ab. Ab. Upass UVass UVass UVAING UXing	Chesterfield Twp. All 4 Municipalities below	Burlington Co. Mercer Co.
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.50 53.75-60.50 53.75-60.50 53.75-60.50 54.00 54.85 55.10	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCI/WorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 16-inch Sunoco petroleum pipeline running parallel to NB side 30-inch Colonial petroleum pipeline running parallel to NB side 30-inch Colonial petroleum pipeline running parallel to NB side NTA's fiber optic cable running parallel to SB side Bordentown-Georgetown Road (CR 545) 13-kV overhead electric line (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) 12-inch natural gas main (PSE&G) 8-inch sanitary sewer (Bordentown Sewerage Authority) 12-inch water main (Bordentown Water Department) 36-inch Transco gas pipeline Bordentown-Chesterfield Road (CR 528) Two 13-kV, two 26-kV and one 69-kV overhead electric lines (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) PSE&G Crosswicks Substation on NB side 10-inch Colonial petroleum pipeline	Ab. Ab. Ab. Ab. Ab. Ab. Ab. Ab. Ab. Upass Uvass	Chesterfield Twp. All 4 Municipalities below Bordentown Twp.	Burlington Co. Mercer Co.
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.90 53.75-60.50 53.75-60.50 53.75-60.50 54.00 54.85 55.10	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCI/WorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 16-inch Sunoco petroleum pipeline running parallel to NB side 30-inch Colonial petroleum pipeline running parallel to NB side 30-inch Colonial petroleum pipeline running parallel to NB side NJTA's fiber optic cable running parallel to SB side Bordentown-Georgetown Road (CR 545) 13-kV overhead electric line (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Concast of Burlington County LLC) 12-inch natural gas main (PSE&G) 8-inch sanitary sewer (Bordentown Sewerage Authority) 12-inch water main (Bordentown Water Department) 36-inch Transco gas pipeline Bordentown-Chesterfield Road (CR 528) Two 13-kV, two 26-kV and one 69-kV overhead electric lines (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) PSE&G Crosswicks Substation on NB side 10-inch Colonial petroleum pipeline Ward Avenue (Local Road) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	Ab. Ab. Ab. Ab. Ab. Ab. Ab. Ab. Upass Uxing Opass Opass Opass Opass Opass Opass Opass Ab. UXing Opass Opass	Chesterfield Twp. All 4 Municipalities below Bordentown Twp.	Burlington Co. Mercer Co.
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.90 53.75-60.50 53.75-60.50 53.75-60.50 53.75-60.50 53.75-60.50 53.75-60.50 53.75-60.50 53.75-60.50 53.75-60.50	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCL/WorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 16-inch Sunoco petroleum pipeline running parallel to NB side 16-inch Sunoco petroleum pipeline running parallel to NB side 16-inch Sunoco petroleum pipeline running parallel to NB side 18-inch Colonial petroleum pipeline running parallel to NB side NJTA's fiber optic cable running parallel to SB side NJTA's fiber optic cable running parallel to SB side Bordentown-Georgetown Road (CR 545) 13-kV overhead electric line (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) 12-inch natural gas main (PSE&G) 8-inch sanitary sewer (Bordentown Sewerage Authority) 12-inch water main (Bordentown Water Department) 36-inch Transco gas pipeline Bordentown-Chesterfield Road (CR 528) Two 13-kV, two 26-kV and one 69-kV overhead electric lines (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) PSE&G Crosswicks Substation on NB side 10-inch Colonial petroleum pipeline Ward Avenue (Local Road) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC)	Ab.	Chesterfield Twp. All 4 Municipalities below Bordentown Twp.	Burlington Co. Mercer Co.
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.90 53.75-60.50 53.75-60.50 53.75-60.50 53.75-60.50 54.00 54.85 55.10 55.40 56.38	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCI/WorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 16-inch Sunoco petroleum pipeline running parallel to NB side 30-inch Colonial petroleum pipeline running parallel to NB side 30-inch Colonial petroleum pipeline running parallel to NB side NJTA's fiber optic cable running parallel to SB side Bordentown-Georgetown Road (CR 545) 13-kV overhead electric line (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Concast of Burlington County LLC) 12-inch natural gas main (PSE&G) 8-inch sanitary sewer (Bordentown Sewerage Authority) 12-inch water main (Bordentown Water Department) 36-inch Transco gas pipeline Bordentown-Chesterfield Road (CR 528) Two 13-kV, two 26-kV and one 69-kV overhead electric lines (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) PSE&G Crosswicks Substation on NB side 10-inch Colonial petroleum pipeline Ward Avenue (Local Road) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	Ab. Ab. Ab. Ab. Ab. Ab. Ab. Ab. Ab. Upass Uxing Opass Opass Opass Opass Ab. UXing Opass Opass Ab. Axing	Chesterfield Twp. All 4 Municipalities below Bordentown Twp.	Burlington Co. Mercer Co.
53.75-56.50 53.75-56.50 53.75-56.50 53.75-56.90 53.75-60.50 53.75-60.50 53.75-60.50 53.75-60.50 53.75-60.50 53.75-60.50 53.75-60.50 53.75-60.50 53.75-60.50	132-kV PSE&G electric transmission line (Trenton-Burlington Line) running parallel to NB side MCI/WorldCom (Lightnet) fiber optic cable running parallel to NB side 16-inch Transco natural gas pipeline running parallel to SB side 16-inch Sunoco petroleum pipeline running parallel to NB side 16-inch Sunoco petroleum pipeline running parallel to NB side 300-inch Sunoco petroleum pipeline running parallel to NB side 300-inch Colonial petroleum pipeline running parallel to NB side NTA's fiber optic cable running parallel to SB side Bordentown-Georgetown Road (CR 545) 13-kV overhead electric line (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) 12-inch natural gas main (PSE&G) 8-inch sanitary sewer (Bordentown Sewerage Authority) 12-inch water main (Bordentown Water Department) 36-inch Transco gas pipeline Bordentown-Chesterfield Road (CR 528) Two 13-kV, two 26-kV and one 69-kV overhead electric lines (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) PSE&G Crosswicks Substation on NB side 10-inch Colonial petroleum pipeline Ward Avenue (Local Road) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Television cable (Comcast of Burlington County LLC) PSE&G Crosswicks Substation on NB side 10-inch Colonial petroleum pipeline 10-inch Colonial petroleum pipelin	Ab.	Chesterfield Twp. All 4 Municipalities below Bordentown Twp.	Burlington Co. Mercer Co.

Table 3.59 (Continued) NJ Turnpike Infrastructure Inventory (Utilities and Transportation Facilities) from Assiscunk Creek to Interchange 9

57.10	uth Broad Street (CR 672) 13-kV overhead electric line (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) nch water main (Aqua New Jersey, Inc.) osswicks-Hamilton Square Road (Local Road) 13-kV overhead electric line (PSE&G)	Opass Opass Opass Upass Upass		
57.43 6-in Cro	Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) nch water main (Aqua New Jersey, Inc.) osswicks-Hamilton Square Road (Local Road) 13-kV overhead electric line (PSE&G)	Opass Upass Upass		
57.55 <u>Yar</u>	osswicks-Hamilton Square Road (Local Road) 13-kV overhead electric line (PSE&G)	Upass]	
57.55 Yar	13-kV overhead electric line (PSE&G)			
57.55 Yar			4 I	
Yar		Upass	1	
Yar	Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	Upass	·	
Yar	6-inch water main (Aqua New Jersey, Inc.) 4-inch natural gas main (PSE&G)	Upass Upass	1	
	ardville-Allentown Road (CR 524)	Opass	1	
	4-kV & 13k-V overhead electric lines (PSE&G)	Opass	Hamilton Twp.	
	Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	Opass	1	Mercer Co.
I	Television cable (Comcast Cablevision of Central New Jersey)	Opass		
	6-inch natural gas main (PSE&G)	Opass		
	icle Petes Road (Local Road)	Ab.	1 1	
	12-inch water main (Aqua New Jersey, Inc.)	Ab.	! I	
	6-inch sewer main (Hamilton Township Dpt. of Water Pollution Control)	Ab.	1	
	30-inch sleeve between service areas 6S and 6N carrying telephone (Verizon - New Jersey), water (Aqua New Jersey, Inc.), and sewer (Hamilton Township Dpt. of Water Pollution Control)	UXing		
Mor	errick Road (Local Road)	Opass	i	
	Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	Opass	1	
TEdo	gebrook Road (Local Road)	Opass	i	
	Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	Opass	Washington Twp.	
	Interchange 7A to Interchange 8	1		
60.50-65.52 500	0-kV PSE&G electric transmission line (New Freedom-Deans Line) running parallel to NB side	Ab.	Doth March 1 197	
	inch Colonial petroleum pipeline running parallel to NB side	Ab.		
	TA's fiber optic cable running parallel to SB side	Ab.	below	
	stbound Route I-195 (no utilities on structure)	Opass	i=1	
60.70 Wes	estbound Route I-195 (no utilities on structure)	Opass		
	bbinsville-Allentown Road (CR 526)	Opass		
	12-inch natural gas main (PSE&G)	Opass		
	4-kV & 13-kV ovehead electric lines (PSE&G)	Opass		
	Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	Opass	l I	
	inch water main (Aqua New Jersey, Inc.)	Upass	·	
	est Manor Way (Local Road)	Opass	1	
l —	Two 4-kV overhead electric lines (PSE&G) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	Opass Opass		
	ordon Road (Local Road)	Opass	Washington Twp.	
	13-kV overhead electric line (PSE&G)	Opass	1	
	Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	Opass	1	
	aron Road (Local Road)	Opass		
02.80	Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	Opass		Mercer Co.
	eshanan Road (Local Road)	Ab.		
	indsor-Carson Road (Local Road)	Opass	1 1	
	Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	Opass	Hamilton Twp. Washington Twp. Both Municipalities below Washington Twp. E. Windsor Twp.	
	indsor-Perrineville Road (Local Road)	Opass	·	
	Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) 5-kV JCP&L overhead electric transmission Line.	Opass		
	S-KV JCP&L overhead electric transmission Line. second 34.5-kV transmission line is in the planning stage.	AXing	1	
	.5-kV and 230-kV JCP&L electric transmission lines	AXing	j	
	d York Road (CR 539)	Opass	1	
	Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	Opass	1 1	
	8-inch natural gas main (PSE&G)	Opass	E Windsor Two	
Etra	ra Road (CR 571)	Opass	E. WHUSOF I WP.	
	13-kV overhead electric line (JCP&L)	Opass	1 1	
	Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	Opass	ļ l	
	8-inch natural gas main (PSE&G)	Opass	į l	
	-inch gravity sewer line (East Windsor MUA)	UXing	 	
67 20 67 60 10	wer Pumping Station and 12-inch sewer force main (East Windsor MUA)	Ab.		
67.30-67.60 Sew	The Area around Relocated Interchange 8			
·		Ab.		
67.60 12-i	inch sanitary sewer force main (East Windsor MUA)	· · · · · ·		
67.60 12-i	TA's fiber optic cable running parallel to SB side.		E. Windsor Twp.	Mercer Co.
67.60 12-i 67.60 NJT Also	TA's fiber optic cable running parallel to SB side. so branching out from mainline to connect Toll Plaza and Central Shops.	UXing	E. Windsor Twp.	Mercer Co.
67.60 12-i 67.60 NJT Also	TA's fiber optic cable running parallel to SB side. so branching out from mainline to connect Toll Plaza and Central Shops. inch Colonial petroleum pipeline running parallel to NB side and ramp loop.		E. Windsor Twp.	Mercer Co.
67.60 12-i 67.60 NJT Also	TA's fiber optic cable running parallel to SB side. so branching out from mainline to connect Toll Plaza and Central Shops.	UXing	E. Windsor Twp.	Mercer Co.
67.60 12-i 67.60 NJT Alsc 67.60 30-i	TA's fiber optic cable running parallel to SB side. so branching out from mainline to connect Toll Plaza and Central Shops. inch Colonial petroleum pipeline running parallel to NB side and ramp loop.	UXing		Mercer Co. Mercer Co. Middlesex Co.

Table 3.59 (Continued) NJ Turnpike Infrastructure Inventory (Utilities and Transportation Facilities) from Assiscunk Creek to Interchange 9

Miles Mile	Approx.		Relation	35 14	G .
S.J. Router 3.7 Franklin Street Upass S-N coverhead deterrise line (CFRL) Upass Fiber and coastal telephone cables (overhead and underground) (Verizon - New Jersey) Upass S-inch patrol gas min (FSEAG) Upass S-inch patrol gas min (FSEAG) Upass S-inch patrol gas min (FSEAG) Upass		Infrastructure Element, Description, Locational Feature, and Operator	to Turnnike	Municipality	County
13-kV overhead electric line (CFR&L) CFR&L)		IN I Payte 22 / Franklin Street			
Fiber and Coxstal telephone cables (overhead and underground) (Verizon - New Jersey) Upass				+	
Sinch parting ages main (PSEAG) 67.92 Sewer pumping station No. 10 (East Windoor MUA) Monomorth Road (EAST) Two 3.4-3-4V independent of the Common of the	67.80			+	
Simb gravity sewer lime (East Windsor MUA)	07.07			†	
For St. Sewer pumping station No. 10 (Fast Windoor MUA)				†	
Monmouth Road (CR 63) Upass	67.02			†	
Two 34.54V underground electric lines (CPRE) Upass Fiber and coastal telephone cables (correlated and underground) (Verizon - New Jersey) Upass Television cable (Concast Cablevision of Central New Jersey) Upass Concast Cablevision of Central New Jersey Upass Concast Cablevision Concast Cab	07.92			†	
Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Verizon - New Jersey) Fiber and coaxial telephone cables (overhead and undergroumd) (Veriz				†	
Record Co. Television cable (Connear Cablevision of Central New Jersey) Upass L2-inch water main (East Windsor MUA) Upass Upass L2-inch water main (EAST Windsor Mua) Upass Upass L2-inch water main (EAST Windsor Mua) Upass				†	
4-inch natural gas main (PS&G) Upass	68.01			E. Windsor Twp.	Mercer Co.
12-inch water main (East Windsort MUA)				1	
Sanitary sewer (East Windsor MUA)			_	†	
68.35 Eastbound N.J. Route 133 (to millities on bridge) Opass				†	
68.35 Westbound N.J. Route 133 (no utilities on bridge)	68.35			†	
			_	†	
13-14 Voverhead electric line (JCP&L)				1	
Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	68.40			†	
10-junk-pastiary_sewer_force_main_(East Windsor MUA)				†	
Strick Yard Road (Local Road) Opass	68 40			1	
4-kV overhead electric line (JCP&L)				 	
Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)				†	
Comardi Mareir Assets Operations Railroad (Hightstown Industrial Track) Upass	69.27			†	
Go. Concall Shared Assets Operations Railroad (Hightstown Industrial Track) Upass Hightstown-Crambury Station Road (Local Road) Upass 13-kV and 34.5-kV overhead electric lines (JCP&L) Using 69.90-70.10 34.5-kV overhead electric ine (JCP&L) Using A3.5-kV overhead electric line (JCP&L) Using A3.5-kV overhead electric line (JCP&L) AXing Crambury Station Road (Co. (G. 615) Opass Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Opass Crambury Harlf Arre Road (Local Road) Opass Tiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Opass 13-kV overhead electric line (JCP&L) Opass Tiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Opass Tiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Opass Tiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Opass Tiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Opass Tiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Opass Tiber and coaxial telephone cables (overhead and Underground) (Verizon - New Jersey) Ab. Opass Tiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Opass Tiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Opass Tiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Opass Tiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Opass Tiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Opass Tiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Opass Tiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Opass Tiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Opass Tiber and coa				†	
Hightstown-Cranbury Station Road (Local Road)	69.90			†	
69.90 13-kV and 34.5-kV overhead electric lines (ICP&L) Uning Uxing 69.90-70.10 34.5-kV overhead electric line (ICP&L) unning parallel to SB side	05.50			†	
Underground fiber optic cable (AT&T) UXing	69.90			†	
Gego-70.10 34.5-kV overhead electric line (JCP&L) running parallel to SB side Ab.				†	
Tourish Tour	69.90-70.10			†	
Cranbury Station Road (CR 615)				1	
Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Cranbury-Half Acre Road (Local Road) 71.26 71.26 Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) 71.26 12-inch water main (NJ American Water) 71.26 12-inch water main (NJ American Water) 71.90 Sewer pumping station located on the western edge of Service Area 7S (Cranbury Twp. Public Works) Ab. 71.70-72.10 10-inch water main running parallel to Service Area 7S and SB right-of-way (NJ American Water) 71.70-72.10 5-inch sanitary sewer force main running parallel to Service Area 7S and SB right-of-way (Cranbury Twp. Public Works) 72.10 Sewer pumping station under construction located on the SB side (Cranbury Twp. Public Works) 48-inch sleeve containing a 12-inch water main (NJ American Water) and a 6-inch sanitary sewer force main (Cranbury Twp. Public Works). 72.10 72.10 Prospect Plains Road (CR 614) 72.10 13-kV overhead electric line (ICP&L) Type-Public Works) Ab. 72.10 12-inch water main (SI American Water) and a 6-inch sanitary sewer force main (NJ American Water) and a 6-inch sanitary sewer force main (NJ American Water) and a 6-inch sanitary sewer force main (NJ American Water) and a 6-inch sanitary sewer force main (NJ American Water) and a 6-inch sanitary sewer force main (NJ American Water) and a 6-inch sanitary sewer force main (NJ American Water) and a 6-inch sanitary sewer force main (NJ American Water) and a 6-inch sanitary sewer force main (NJ American Water) and a 6-inch sanitary sewer force main (NJ American Water) and a 6-inch sanitary sewer force main (NJ American Water) and a 6-inch sanitary sewer force main (NJ American Water) and a 6-inch sanitary sewer force main (NJ American Water) and a 6-inch sanitary sewer force main (NJ American Water) and a 6-inch sanitary sewer force main (NJ American Water) and a 6-inch sanitary sewer force main (NJ American Water) and a 6-inch sanitary sewer force main (NJ American Water) and a 6-inch sanitary sewer force	5 0.40			1	
Cranbury-Half Acre Road (Local Road)	70.48			1	
The content of the				1	
Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) 71.26 12-inch water main (NJ American Water) 71.90 Sewer pumping station located on the western edge of Service Area 7S (Cranbury Twp. Public Works) 71.70-72.10 10-inch water main running parallel to Service Area 7S and SB right-of-way (NJ American Water) 71.70-72.10 Public Works) 72.10 Sewer pumping station under construction located on the SB side (Cranbury Twp. Public Works) Ab. 48-inch sleeve containing a 12-inch water main (NJ American Water) and a 6-inch sanitary sewer force main (Cranbury Twp. Public Works). A future 12-inch water main is in the planning stage. Prospect Plains Road (CR 614) 72.10 Prospect Plains Road (CR 614) 72.10 13-kV overhead electric line (JCP&L) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) 72.10-72.90 12-inch natural gas main (PSE&G) 73.07 6-inch natural gas main (PSE&G) 73.07 6-inch sanitary sewer force main (Monroe Township MUA) 73.07 6-inch sanitary sewer force main (Monroe Township MUA) running parallel to SB side 73.42 Three 3.5-inch telephone conduits on bridge structure (Verizon - New Jersey) Opass 73.43 Westbound N.J. Route 32 73.44 26-inch sleeve containing a 16-inch water main (Monroe Township MUA) UXing 73.43 Westbound N.J. Route 32 Opass 73.44 26-inch sleeve containing a 16-inch water main (Monroe Township MUA) UXing 73.45	71.26			1	
T1.26 12-inch water main (NJ American Water) UXing	/1.26			1	
T1.90 Sewer pumping station located on the western edge of Service Area 7S (Cranbury Twp. Public Works) Ab.		12-inch water main (NJ American Water)	Opass	Cranbury Twp.	
71.70-72.10 10-inch water main running parallel to Service Area 7S and SB right-of-way (NJ American Water) Ab. 71.70-72.10 6-inch sanitary sewer force main running parallel to Service Area 7S and SB right-of-way (Cranbury Twp. Public Works) 72.10 Sewer pumping station under construction located on the SB side (Cranbury Twp. Public Works) Ab. 48-inch sleeve containing a 12-inch water main (NJ American Water) and a 6-inch sanitary sewer force main (Cranbury Twp. Public Works). A future 12-inch water main is in the planning stage. Prospect Plains Road (CR 614) 72.10 13-kV overhead electric line (JCP&L) Opass Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) Opass 72.10 12-inch natural gas main (PSE&G) running parallel to NB side 72.90 12-inch natural gas main (PSE&G) 73.00 6-inch natural gas main (PSE&G) 73.20 6-inch natural gas main (Monroe Township MUA) 73.20 6-inch sanitary sewer force main (Monroe Township MUA) 73.20 6-inch sanitary sewer force main (Monroe Township MUA) 73.24 6-inch sanitary sewer force main (Monroe Township MUA) running parallel to SB side 73.343 Westbound N.J. Route 32 Three 3.5-inch telephone conduits on bridge structure (Verizon - New Jersey) 73.43 Westbound N.J. Route 32 Three 3.5-inch telephone conduits on bridge structure (Verizon - New Jersey) 73.44 26-inch saleve containing a 16-inch water main (Monroe Township MUA) 73.45 Westbound N.J. Route 32 73.46 26-inch sleeve containing a 16-inch water main (Monroe Township MUA) 74.47 26-inch sleeve containing a 16-inch water main (Monroe Township MUA) 75.48 Westbound N.J. Route 32 75.49 26-inch sleeve containing a 16-inch water main (Monroe Township MUA) 76.50 26-inch sleeve containing a 16-inch water main (Monroe Township MUA) 77.50 20 20 20 20 20 20 20 20 20 20 20 20 20	71.26	12-inch water main (NJ American Water)	UXing	1	
T1.70-72.10	71.90	Sewer pumping station located on the western edge of Service Area 7S (Cranbury Twp. Public Works)	Ab.	1	
T1.70-72.10	71.70-72.10	10-inch water main running parallel to Service Area 7S and SB right-of-way (NJ American Water)	Ab.	1	
T2.10 Sewer pumping station under construction located on the SB side (Cranbury Twp. Public Works) Ab.		6-inch sanitary sewer force main running parallel to Service Area 7S and SB right-of-way (Cranbury Twp.	Ab.	1	Middlesex Co.
48-inch sleeve containing a 12-inch water main (NJ American Water) and a 6-inch sanitary sewer force main (Cranbury Twp. Public Works). A future 12-inch water main is in the planning stage. Prospect Plains Road (CR 614) 72.10 13-kV overhead electric line (JCP&L) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) 72.10-72.90 12-inch natural gas main (PSE&G) 73.07 6-inch natural gas main (PSE&G) 73.20 6-inch sanitary sewer force main (Monroe Township MUA) 73.20 73.20 6-inch sanitary sewer force main (Monroe Township MUA) 73.20 73.21 6-inch sanitary sewer force main (Monroe Township MUA) 73.22 6-inch sanitary sewer force main (Monroe Township MUA) running parallel to SB side 73.34-73.42 10-inch water main (Monroe Township MUA) running parallel to SB side Ab. 73.42 Three 3.5-inch telephone conduits on bridge structure (Verizon - New Jersey) Opass 73.43 Westbound N.J. Route 32 Opass 73.44 26-inch sleeve containing a 12-inch water main (Monroe Township MUA) UXing Monroe Twp.	72.10		Ab.	1	
A future 12-inch water main is in the planning stage. Prospect Plains Road (CR 614) 72.10 13-kV overhead electric line (JCP&L) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) 72.10-72.90 12-inch natural gas main (PSE&G) running parallel to NB side 72.90 12-inch natural gas main (PSE&G) 73.07 6-inch natural gas main (PSE&G) 73.20 6-inch sanitary sewer force main (Monroe Township MUA) 73.20-73.42 6-inch sanitary sewer force main (Monroe Township MUA) running parallel to SB side 73.34-73.42 10-inch water main (Monroe Township MUA) running parallel to SB side Ab. 6-inch water main (Monroe Township MUA) running parallel to SB side 73.42 Eastbound N.J. Route 32 Three 3.5-inch telephone conduits on bridge structure (Verizon - New Jersey) Opass 73.43 Westbound N.J. Route 32 Opass 73.44 26-inch sleeve containing a 16-inch water main (Monroe Township MUA) UXing				1	
Prospect Plains Road (CR 614)	72.10	(Cranbury Twp. Public Works).	UXing		
Prospect Plains Road (CR 614)		A future 12-inch water main is in the planning stage.			
Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey) 72.10-72.90 12-inch natural gas main (PSE&G) running parallel to NB side 73.07 6-inch natural gas main (PSE&G) 73.07 6-inch natural gas main (PSE&G) 73.20 6-inch sanitary sewer force main (Monroe Township MUA) 73.20 6-inch sanitary sewer force main (Monroe Township MUA) 73.20-73.42 6-inch sanitary sewer force main (Monroe Township MUA) running parallel to SB side 73.34-73.42 10-inch water main (Monroe Township MUA) running parallel to SB side 73.42 Sestbound N.J. Route 32 Opass 73.43 Westbound N.J. Route 32 Opass 73.44 26-inch sleeve containing a 16-inch water main (Monroe Township MUA) UXing			Opass	1	
72.10-72.90 12-inch natural gas main (PSE&G) running parallel to NB side Ab. 72.90 12-inch natural gas main (PSE&G) UXing 73.07 6-inch natural gas main (PSE&G) UXing 73.20 6-inch sanitary sewer force main (Monroe Township MUA) UXing 73.20 73.20 6-inch sanitary sewer force main (Monroe Township MUA) UXing 73.20 73.20 73.20 73.20 10-inch water main (Monroe Township MUA) running parallel to SB side Ab. 73.34-73.42 10-inch water main (Monroe Township MUA) running parallel to SB side Ab. 73.42 Eastbound N.J. Route 32 Opass 73.43 Westbound N.J. Route 32 Opass 73.44 26-inch sleeve containing a 16-inch water main (Monroe Township MUA) UXing 73.44 26-inch sleeve containing a 16-inch water main (Monroe Township MUA) UXing	72.10	13-kV overhead electric line (JCP&L)	Opass	1	
72.90 12-inch natural gas main (PSE&G) UXing 73.07 6-inch natural gas main (PSE&G) UXing 73.20 6-inch sanitary sewer force main (Monroe Township MUA) 73.20 73.20 6-inch sanitary sewer force main (Monroe Township MUA) running parallel to SB side 73.20 73.42 10-inch water main (Monroe Township MUA) running parallel to SB side Ab. 73.34-73.42 10-inch water main (Monroe Township MUA) running parallel to SB side Ab. 73.42 Castbound N.J. Route 32 Opass Tree 3.5-inch telephone conduits on bridge structure (Verizon - New Jersey) Opass 73.43 Westbound N.J. Route 32 Opass 73.44 26-inch sleeve containing a 16-inch water main (Monroe Township MUA) UXing UXing UXing Opass UXing UXing Opass Opass UXing UXing Opass Opass UXing UXing Opass Opass UXing UXing Opass UXing UXing Opass UXing Opass Opass UXing UXing Opass UXing UXing Opass UXing UXing Opass UXing Opass Opass UXing UXing		Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	Opass	1	
73.07 6-inch natural gas main (PSE&G)	72.10-72.90	12-inch natural gas main (PSE&G) running parallel to NB side	Ab.	1	
73.07 6-inch natural gas main (PSE&G)	72.90		UXing	1	
73.20-73.42 6-inch sanitary sewer force main (Monroe Township MUA) running parallel to SB side Ab. 73.34-73.42 10-inch water main (Monroe Township MUA) running parallel to SB side Ab. 8	73.07]
73.34-73.42 10-inch water main (Monroe Township MUA) running parallel to SB side Ab. 73.42 Eastbound N.J. Route 32 Opass Tree 3.5-inch telephone conduits on bridge structure (Verizon - New Jersey) Opass 73.43 Westbound N.J. Route 32 Opass 73.44 26-inch sleeve containing a 16-inch water main (Monroe Township MUA) UXing	73.20	6-inch sanitary sewer force main (Monroe Township MUA)	UXing	1	
73.42 Eastbound N.J. Route 32 Opass Monroe Twp. Three 3.5-inch telephone conduits on bridge structure (Verizon - New Jersey) Opass 73.43 Westbound N.J. Route 32 Opass 73.44 26-inch sleeve containing a 16-inch water main (Monroe Township MUA) UXing	73.20-73.42	6-inch sanitary sewer force main (Monroe Township MUA) running parallel to SB side	Ab.]	
Three 3.5-inch telephone conduits on bridge structure (Verizon - New Jersey) Opass 73.43 Westbound N.J. Route 32 Opass 73.44 26-inch sleeve containing a 16-inch water main (Monroe Township MUA) UXing	73.34-73.42		Ab.	1	
Three 3.5-inch telephone conduits on bridge structure (Verizon - New Jersey) Opass 73.43 Westbound N.J. Route 32 Opass 73.44 26-inch sleeve containing a 16-inch water main (Monroe Township MUA) UXing	72.42	Eastbound N.J. Route 32	Opass	Monroe Twp.	
73.44 26-inch sleeve containing a 16-inch water main (Monroe Township MUA) UXing	13.42		Opass]	
73.44 26-inch sleeve containing a 16-inch water main (Monroe Township MUA) UXing	73.43	Westbound N.J. Route 32	Opass		
		26-inch sleeve containing a 16-inch water main (Monroe Township MUA)	UXing	1	
	73.62		UXing	I	

Table 3.59 (Continued)

NJ Turnpike Infrastructure Inventory (Utilities and Transportation Facilities) from Assiscunk Creek to Interchange 9

Approx. Milepost	Infrastructure Element, Description, Locational Feature, and Operator	Relation to Turnpike	Municipality	County
	Interchange 8A to Interchange 9			
73.86-83.42	30-inch Colonial petroleum pipeline running parallel to NB side	Ab.	All 4 Municipalities	
73.86-83.42	NJTA's fiber optic cable running parallel to SB side	Ab.	below	
74.28	500-kV PSE&G overhead electric transmission line (New Freedom-Deans Line)	AXing	4	
74.31	Conrail Shared Assets Operations Railroad (Jamesburg Branch) 6.6-kV catenary lines (Conrail)	Upass Upass	1	
	Cranbury-South River Road (CR 535)	Upass	Monroe Twp.	
74.39	Telephone cables contained in two 3.5-inch conduits on bridge structure (Verizon - New Jersey)	Upass	4	
74.39-74.55	12-inch natural gas main (PSE&G) 12-inch natural gas main (PSE&G) running parallel to SB side	Upass Ab.	{-··-··	
75.55	Ridge Road (CR 522) (no utilities on structure)	Opass		
75.79-76.56	10-inch and 24-inch Texas Eastern natural gas pipelines running parallel to NB side	Ab.]	
76.10	Deans-Rhode Hall Road (CR 610) (no utilities on structure)	Opass	-	
75.50-76.50	500-kV PSE&G overhead electric transmission line (New Freedom-Deans Line) running parallel to SB side	Ab.	S. Brunswick Twp.	
76.55	500-kV JCP&L overhead electric transmission line (Deans-Smithburg Line)	AXing]	
70.00	10-inch and 24-inch Texas Eastern natural gas pipelines	UXing	4	
77.07	Davidsons Mill Road (Local Road) Fiber and coaxial telephone cables (overhead and underground) (Verizon - New Jersey)	Opass Opass	1	
77.08	16-inch water main (South Brunswick Utilities Department)	UXing	1	
	Church Lane (Local Road)	Opass		
78.19	13-kV overhead electric line (PSE&G) Telephone cables contained in four 3.5-inch conduits on bridge structure (Verizon - New Jersey)	Opass Opass	-	
	8-inch natural gas main (PSE&G)	Opass	†	
78.20	24-inch sleeve containing two 12-inch water mains (East Brunswick Public Works and Water Resources)	UXing		
70.20	-		4	
	Hardenburg Lane (Local Road) 13-kV overhead electric line (PSE&G)	Opass Opass	E. Brunswick Twp.	
79.31	Telephone cables contained in two 3.5-inch conduits on bridge structure (Verizon - New Jersey)	Opass		
	12-inch water main (East Brunswick Public Works and Water Resources)	Opass]	
	12-inch natural gas main (PSE&G) Dutch Road (Local Road)	Opass Opass	-	
79.80	Four 13-kV overhead electric lines (PSE&G)	Opass	†	
	Telephone cables contained in two 3.5-inch conduits on bridge structure (Verizon - New Jersey)	Opass]	
79.82 80.09	24-inch sleeve containing a 12-inch water main (East Brunswick Public Works and Water Resources) 10-inch natural gas main (PSE&G)	UXing UXing	·	
80.11	42-inch natural gas main (PSE&G)	UXing]	Middlesex Co.
80.35	24-inch stormwater sewer (Milltown Department of Utilities)	UXing		
	10-inch sanitary sewer (Milltown Department of Utilities) Main Street (CR 606)	UXing Opass	1	
	Two 4-kV electric lines contained in conduits (Milltown Department of Utilities)	Opass	1	
80.45	Telephone cables contained in four 3.5-inch conduits on bridge structure (Verizon - New Jersey)	Opass]	
	12-inch natural gas main (PSE&G) 8-inch water main (Milltown Department of Utilities)	Opass UXing	Milltown Borough	
80.45-80.75	4-inch natural gas main (PSE&G) running parallel to NB side	Ab.	†	
	Two 24-inch pipes encasing a 10-inch water main, a 12-inch sanitary sewer, and two 4-kV electric lines (all	UXing	1	
80.75	operated by Milltown Department of Utilities) One concrete box culvert for stormwater		4	
	Conrail Shared Assets Operations Railroad (Sayreville Secondary Line)	UXing Opass	1	
80.99	26-kV overhead electric line (JCP&L)	Opass	1	
	Ryders Lane (CR 617)	Opass		
81.09	13-kV overhead electric line (PSE&G) Telephone cables contained in two 3.5-inch conduits on bridge structure (Verizon - New Jersey)	Opass Opass	-	
	6-inch natural gas main (PSE&G)	Opass	1	
81.09-81.58	12-inch water main running parallel to NB side (East Brunswick Public Works and Water Resources)	Åb.		
	Tices Corner Road (Local Road)	Upass	4	
81.58	4-kV overhead electric line (PSE&G) 8-inch natural gas main (PSE&G)	Upass Upass	+	
	12-inch and 24-inch water main (East Brunswick Public Works and Water Resources)	UXing		
81.66	14-inch sanitary sewer Line (East Brunswick Sewerage Authority)	UXing]	
82.13	12-inch water main (East Brunswick Public Works and Water Resources) (Abandoned) Sullivan Way (Local Road)	UXing Opass	E. Brunswick Twp.	
92.15	4-kV overhead electric line (PSE&G)	Opass	1	
82.15	Telephone cables contained in two 3.5-inch conduits and aerial on bridge structure (Verizon - New Jersey)	Opass	1	
82.55	10-inch sanitary sewer line (East Brunswick Sewerage Authority)	UXing	1	
82.95	24-inch natural gas main (PSE&G)	UXing	<u> </u>	
	N.J. Route 18	Opass		
82.97	13-kV overhead electric line (PSE&G) Telephone cables contained in eight 3.5-inch conduits on bridge structure (Verizon - New Jersey)	Opass Opass	-	
	16-inch water main (East Brunswick Public Works and Water Resources)	UXing	-	

Acronyms:

UXing	Underground Crossing	SB	NJ Turnpike Southbound Lanes
AXing	Aerial Crossing	MUA	Municipal Utility Authority
Opass	Overpass	NJTA	NJ Turnpike Authority
Upass	Underpass	PSE&G	Public Service Electric & Gas Company
Ab.	Abutting	JCP&L	Jersey Central Power & Light Company
NB	NI Turnpike Northbound Lanes		

Petroleum and Natural Gas Transmission Pipelines

- Colonial Pipeline Company
- Sunoco Pipeline Company
- Transcontinental Gas Pipe Line Corporation (Transco)
- Texas Eastern Transmission Corporation

Electric and Gas Distribution Facilities

- Public Service Electric & Gas Company (PSE&G)
- Jersey Central Power & Light Company (JCP&L)

Communication Facilities

- NJ Turnpike Authority (NJTA)
- Verizon New Jersey, Inc.
- MCI WorldCom
- AT&T Corporation
- Comcast of Burlington County, LLC
- Comcast Cablevision of Central New Jersey, LLC

Water Supply Facilities

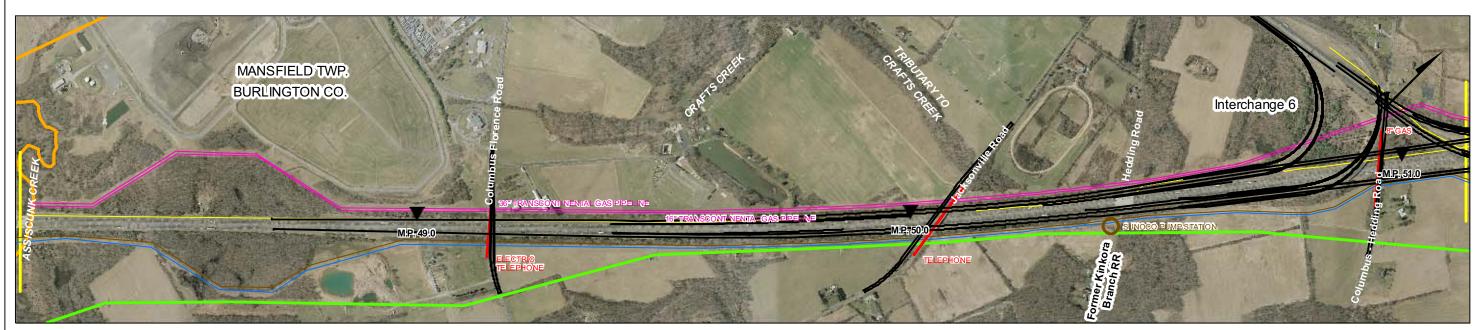
- Bordentown Water Department
- Aqua New Jersey, Inc.
- East Windsor Municipal Utility Authority
- NJ American Water Company
- Monroe Township Municipal Utility Authority
- South Brunswick Township Public Works Water and Sewer
- East Brunswick Department of Public Works and Water Resources
- New Brunswick Water Company

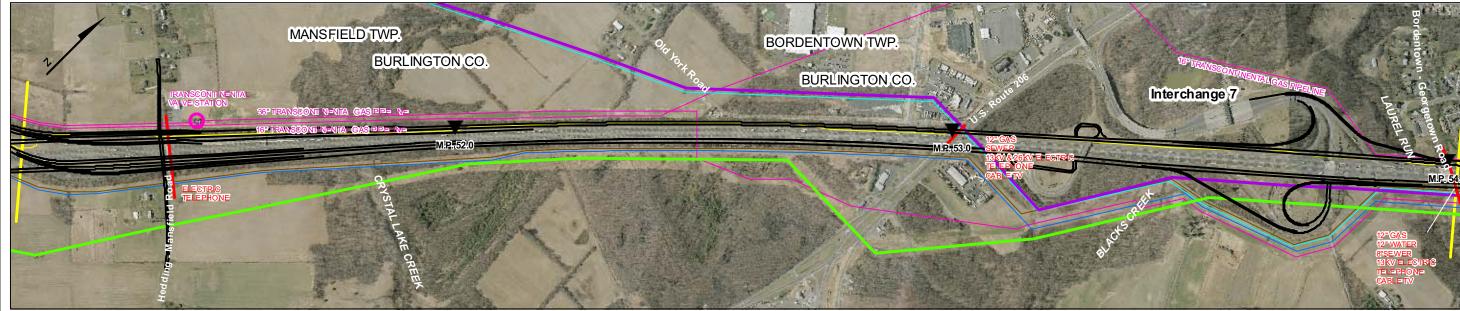
Sanitary and Combined Storm/Sewage Facilities

- Bordentown Sewerage Authority
- Hamilton Township Department of Water Pollution Control
- East Windsor Municipal Utility Authority
- Cranbury Township Public Works
- Monroe Township Municipal Utility Authority
- South Brunswick Township Public Works
- East Brunswick Sewerage Authority
- Milltown Borough Department of Utilities

3.15.3.1 Assiscunk Creek to Interchange 6

The following utilities and transportation facilities are located in this segment of the Project Corridor.





---- Matchline

Municipal / County Boundary

UTILITIES

- ——— 16 IN. SUNOCO PETROLEUM PIPELINE
- —— 30 IN. COLONIAL PETROLEUM PIPELINE
- LIGHTNET FIBER OPTIC CABLE
- NEW FREEDOM DEANS LINE (PSE&G)
- ---- NJ TURNPIKE FIBER OPTIC
- TRANSCONTINENTAL GAS PIPELINE
- TRENTON BURLINGTON LINE (PSE&G)
- ---- UTILITY CROSSINGS

Source: Digital Orthophotos - 2006 Aerial Photography.



UTILITIES AND INFRASTRUCTURE

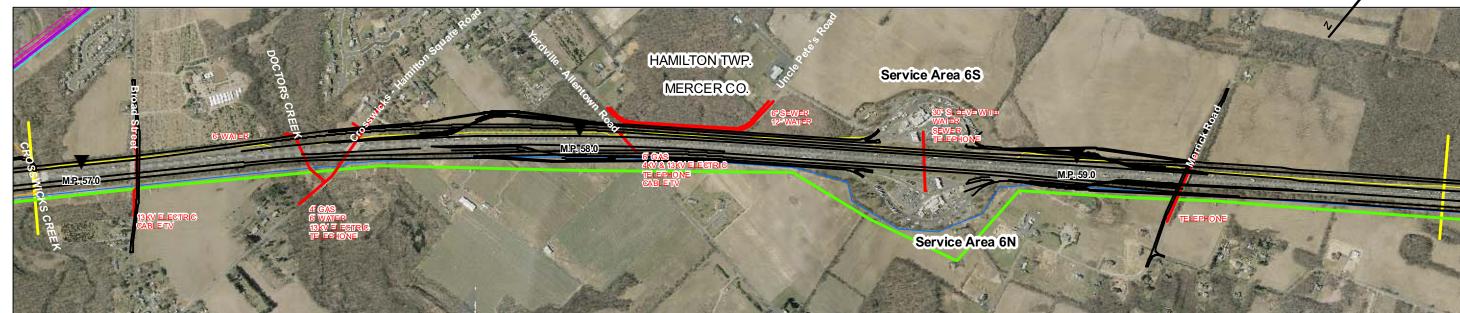
New Jersey Turnpike Interchange 6 to 9 Widening Burlington, Mercer and Middlesex Counties Executive Order No. 215 Environmental Impact Statement



NEW JERSEY TURNPIKE AUTHORITY
NEW JERSEY TURNPIKE

FIGURE 3-21a





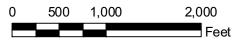
---- Matchline

Municipal / County Boundary

UTILITIES

- —— 16 IN. SUNOCO PETROLEUM PIPELINE
- —— 30 IN. COLONIAL PETROLEUM PIPELINE
- LIGHTNET FIBER OPTIC CABLE
- NEW FREEDOM DEANS LINE (PSE&G)
- NJ TURNPIKE FIBER OPTIC
- TRANSCONTINENTAL GAS PIPELINE
- TRENTON BURLINGTON LINE (PSE&G)
- ---- UTILITY CROSSINGS

Source: Digital Orthophotos - 2006 Aerial Photography.



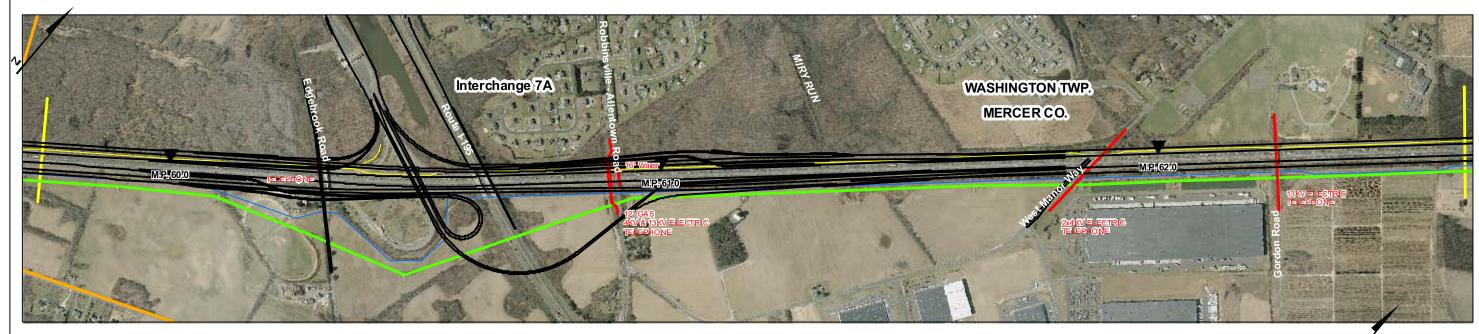
UTILITIES AND INFRASTRUCTURE

New Jersey Turnpike Interchange 6 to 9 Widening Burlington, Mercer and Middlesex Counties Executive Order No. 215 Environmental Impact Statement



NEW JERSEY TURNPIKE AUTHORITY
NEW JERSEY TURNPIKE

FIGURE 3-21b





---- Matchline

Municipal / County Boundary

UTILITIES

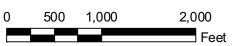
30 IN. COLONIAL PETROLEUM PIPELINE

NEW FREEDOM - DEANS LINE (PSE&G)

NJ TURNPIKE FIBER OPTIC

JCP&L

UTILITY CROSSINGS



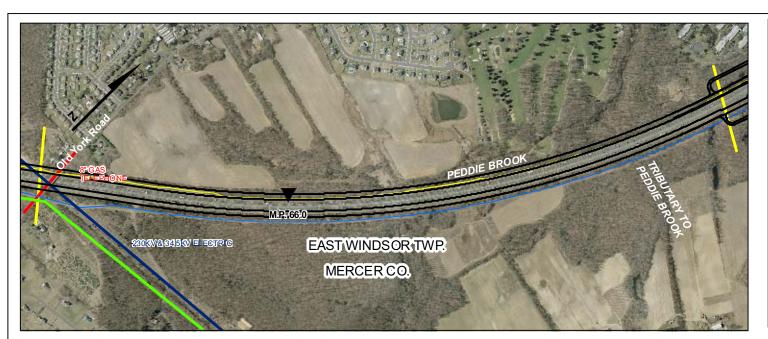
UTILITIES AND INFRASTRUCTURE

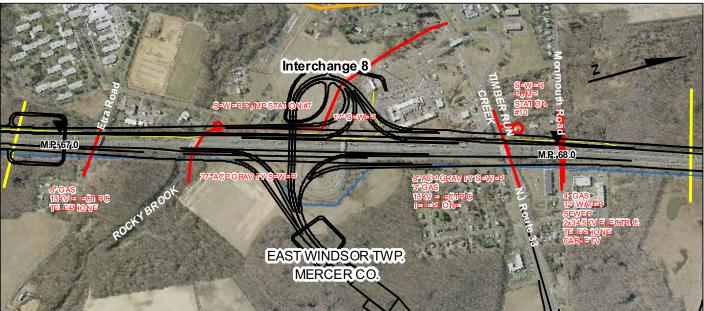
New Jersey Turnpike Interchange 6 to 9 Widening Burlington, Mercer and Middlesex Counties Executive Order No. 215 Environmental Impact Statement

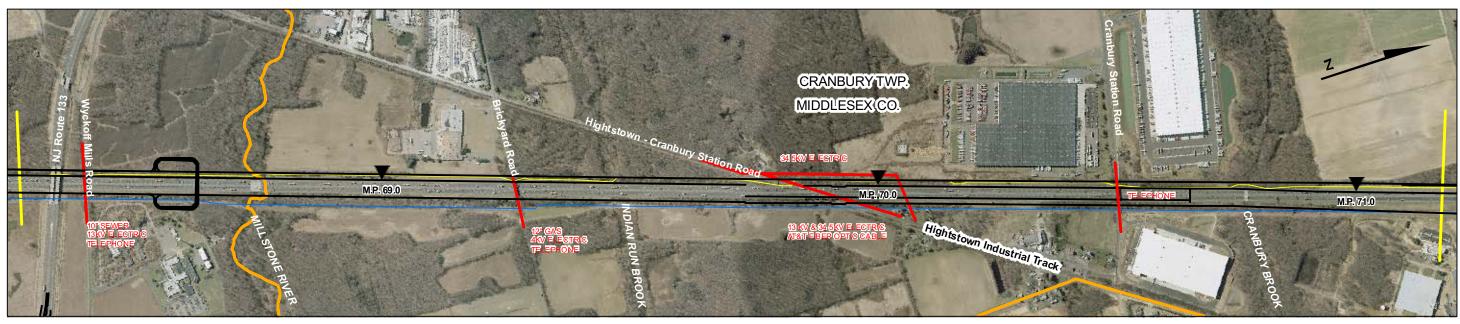


NEW JERSEY TURNPIKE AUTHORITY
NEW JERSEY TURNPIKE

FIGURE 3-21c







Matchline

Municipal / County Boundary

UTILITIES

30 IN. COLONIAL PETROLEUM PIPELINE

NEW FREEDOM - DEANS LINE (PSE&G)

---- NJ TURNPIKE FIBER OPTIC

JCP&L

---- UTILITY CROSSINGS



UTILITIES AND INFRASTRUCTURE

500 1,000

New Jersey Turnpike Interchange 6 to 9 Widening Burlington, Mercer and Middlesex Counties Executive Order No. 215 Environmental Impact Statement

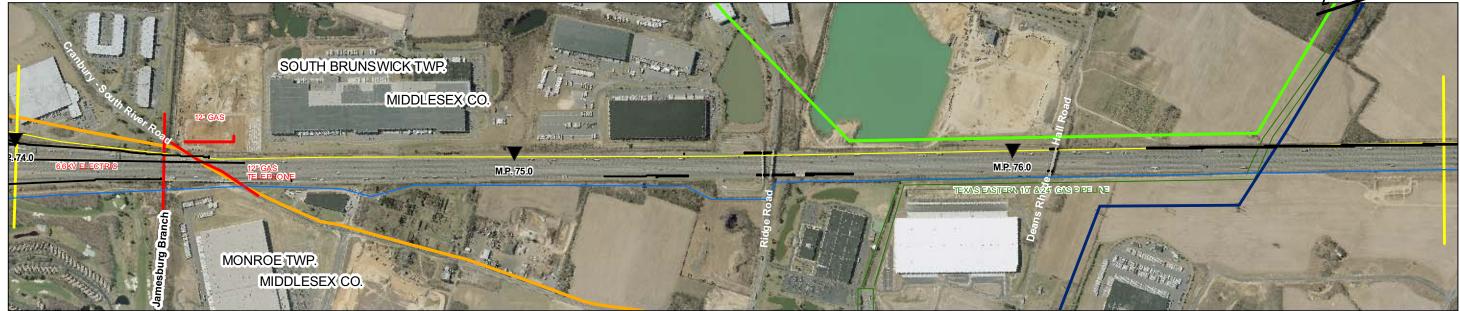


NEW JERSEY TURNPIKE AUTHORITY
NEW JERSEY TURNPIKE

FIGURE 3-21d

2,000





---- Matchline

Municipal / County Boundary

UTILITIES

—— 30 IN. COLONIAL PETROLEUM PIPELINE

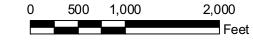
NEW FREEDOM - DEANS LINE (PSE&G)

NJ TURNPIKE FIBER OPTIC

—— TEXAS EASTERN GAS PIPELINE

---- UTILITY CROSSINGS

— JCP&L DEANS TO SMITHBURG LINE



UTILITIES AND INFRASTRUCTURE

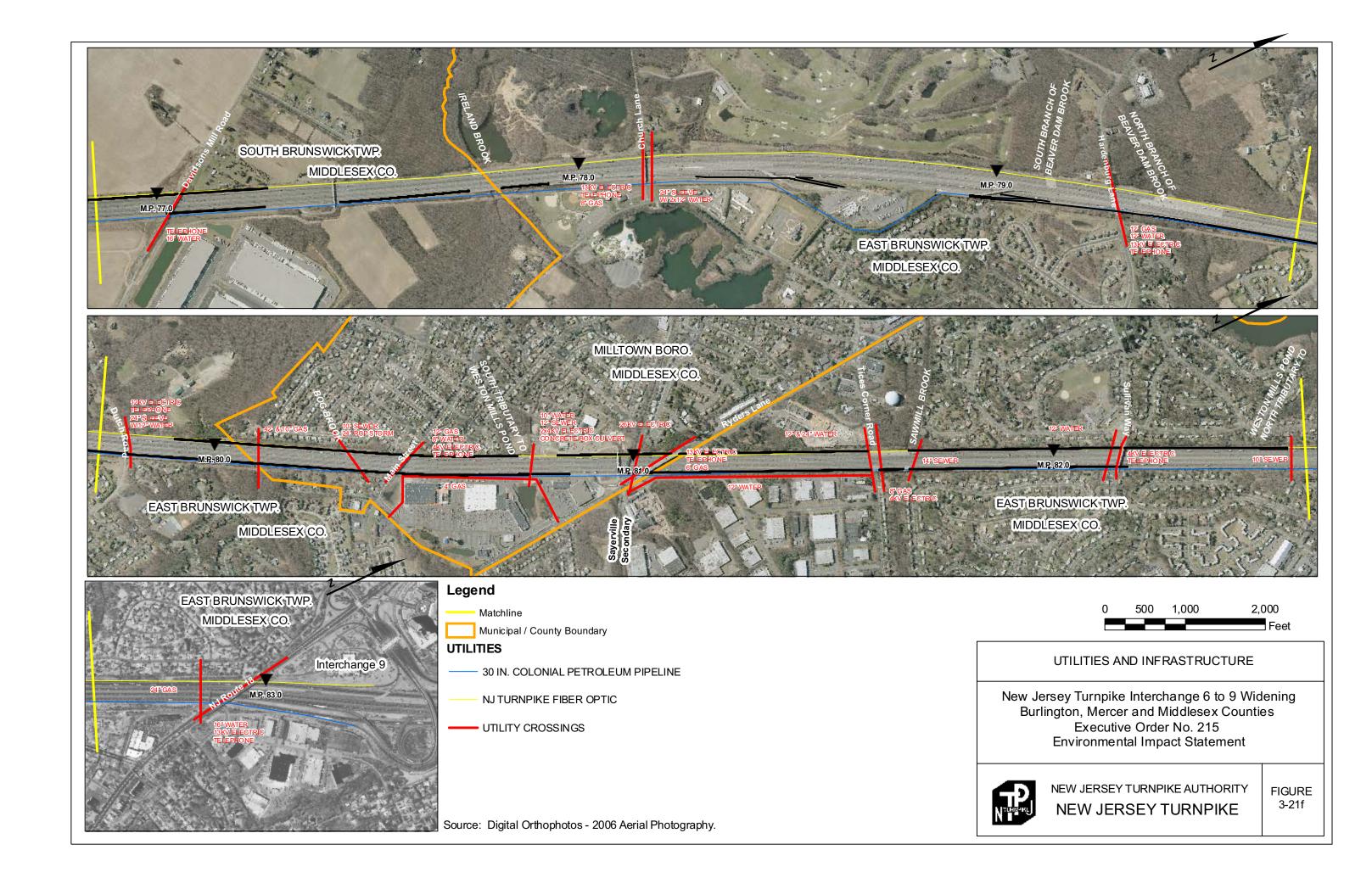
New Jersey Turnpike Interchange 6 to 9 Widening Burlington, Mercer and Middlesex Counties Executive Order No. 215 Environmental Impact Statement



NEW JERSEY TURNPIKE AUTHORITY
NEW JERSEY TURNPIKE

FIGURE 3-21e

Source: Digital Orthophotos - 2006 Aerial Photography.



Northbound Side of the Turnpike

A 30-inch Colonial petroleum pipeline is located on the northbound side of the Turnpike. It runs parallel to the roadway throughout this entire segment and is located almost immediately adjacent to the existing right-of-way. The pipeline is owned by the Colonial Pipeline Company, which operates a 5,519-mile interstate pipeline system that transports petroleum products from Texas, Louisiana, Mississippi and Alabama to 267 marketing terminals located near the major population centers of the Southeast and Eastern Seaboard. Based in Alpharetta, Georgia, the Colonial Pipeline Company delivers a daily average of 100 million gallons of gasoline, home heating oil, aviation fuel and other refined petroleum products to communities and businesses throughout the Southern and Eastern United States.

A 16-inch Sunoco petroleum pipeline is also located on the northbound side of the Turnpike. It runs parallel to the roadway throughout this entire segment and is located almost immediately adjacent to the existing right-of-way and to the Colonial Petroleum Pipeline. Near M.P. 50.5 is a Sunoco metering station which is located adjacent to the existing Turnpike right-of-way line. The pipeline is owned by the Sunoco Pipeline Company and is part of the Eastern Pipeline System, which is an approximately 1,740-mile pipeline system in the Northeast for the transportation of refined products, principally from several Sunoco refineries, and from third parties, to markets in New York, New Jersey, Pennsylvania, Ohio, and Michigan. The products transported in these pipelines include multiple grades of gasoline, middle distillates (such as heating oil, diesel, and jet fuel), LPGs (such as propane, butane, isobutane, and a butane/butylene mixture), refining feedstocks, and other hydrocarbons (such as toluene and xylene).

A PSE&G overhead power line, the New Freedom – Deans Line (a 500-kV transmission line), approaches the Turnpike from the southeast near M.P. 48.3 and turns north, at which point it runs almost immediately adjacent to the existing Turnpike right-of-way from M.P. 49.5 to Interchange 6. This power line sits within a 175-foot easement, centered on the towers. In most locations, however, PSE&G has acquired an additional 175-foot easement to accommodate the construction of a future transmission line.

Southbound Side of the Turnpike

On the southbound side of the Turnpike in this segment, two Transcontinental (Transco) natural gas pipelines (36-inch and 16-inch) are located almost immediately adjacent to the Turnpike's existing right-of-way. The pipelines are owned by the Transcontinental Gas Pipeline Corporation, a wholly owned subsidiary of Williams Gas Pipeline Company. Those two pipelines are part of the 10,500-mile pipeline system that provides interstate natural gas transportation from the Gulf Coast to markets in eastern and southeastern states.

Also located on the southbound side is the Authority's fiber optic line, which is located within the existing right-of-way along the entire segment and, in some places, beneath the southbound shoulder.

Crossing the Turnpike

Within this segment of the Project Corridor, the Turnpike crosses three county roads and one local road. Several of these roads also contain local utilities within their rights-of-way. The New Jersey American Water Company provides water and wastewater services to Mansfield Township; however, there are neither public water facilities nor sewer facilities located within this segment of the Project Corridor. The infrastructure crossings are further discussed below.

Columbus-Florence Road (CR 543) - M.P. 49.15

This two-lane county road crosses over the Turnpike and provides a link between U.S. Route 130 and Route I-295 to the north and U.S. Route 206 to the south. It also provides access to Columbus Road where the truck entrances to the Burlington County Landfill are located. The bridge structure spans 190 feet over the Turnpike. The western approach to the bridge provides an additional central turning lane in order to provide access to the Rutgers Environmental Research and Extension Center, located approximately 300 feet from the bridge structure. Approximately 250 feet from the bridge structure on the eastern approach, a residential driveway intersects with CR 543. The bridge structure carries PSE&G electrical service lines in four 3.5-inch conduits, and Verizon telephone lines in two 3.5-inch conduits.

Hedding Road (CR 628) - M.P. 50.06

This two-lane county road crosses over the Turnpike and provides a link between Old York Road (CR 539) and Mount Holly Township in Burlington County. The bridge structure spans 230 feet over the Turnpike at an angle. Rural driveways were identified in the vicinity of the bridge structure, but beyond the Project Corridor. The bridge structure carries Verizon telephone lines in two 3.5-inch conduits.

Hedding Avenue - M.P. 50.43

This two-lane local road passes beneath the Turnpike and provides a link between Hedding Road to the north and West Main Street to the south. In this area, the road lies partially within the former right-of-way of an adjacent abandoned railroad, the Kinkora Branch of the former Pennsylvania Railroad. The Turnpike spans 210 feet over both Hedding Avenue and the railroad right-of-way. On the eastern approach, approximately 100 feet from the bridge structure, is the driveway to a metering station associated with Sunoco's 16-inch pipeline. There are no utilities located at this crossing.

Columbus-Hedding Road (CR 678) - M.P. 50.95

This two-lane county road crosses over the Turnpike and provides a link between U.S. Route 130 to the north and U.S. Route 206 to the south. The bridge structure spans 190 feet over the Turnpike. Approximately 500 feet from the bridge structure on the western approach, Columbus-Hedding Road runs adjacent to the northbound Turnpike exit ramp to the Pearl Harbor Memorial Turnpike Extension (PHMTE) and underneath the southbound Turnpike exit ramp to the PHMTE. A residential driveway is located approximately 360 feet to the east of the bridge structure. There is an 8-inch PSE&G gas main located at this crossing.

3.15.3.2 Interchange 6 to Interchange 7

The following utilities and transportation facilities are located in this segment of the Project Corridor.

Northbound Side of the Turnpike

The Colonial 30-inch pipeline continues to run parallel to the northbound Turnpike within this segment and is located almost immediately adjacent to the existing right-of-way. The Sunoco 16-inch pipeline also continues to run parallel to the northbound Turnpike in this segment and is located almost immediately adjacent to the existing right-of-way and to the Colonial pipeline. The PSE&G New Freedom-Deans 500-kV transmission line is located on the northbound side, as far as 500 feet from the existing Turnpike right-of-way in some places.

Southbound Side of the Turnpike

On the southbound side, the two Transco gas pipelines (36-inch and 16-inch) continue to run parallel and almost immediately adjacent to the existing right-of-way. Located approximately 300 feet north of Hedding-Mansfield Road and 100 feet west of the Turnpike is a Transco valve station at M.P. 51.5. At approximately M.P. 52.5, the 36-inch pipeline crosses beneath the Turnpike from the southbound side and turns to the northeast, moving away from the Turnpike, before moving closer at Interchange 7. Also at this point, the 16-inch pipeline turns to the northwest and moves away from the Turnpike.

A second PSE&G overhead transmission line, the Trenton-Burlington line (a 132-kV transmission line) approaches the southbound side of the Turnpike from the southwest and turns north at M.P. 52.5 to run parallel to the roadway. At U.S. Route 206 (M.P. 53.0), the Trenton-Burlington line crosses the Turnpike to run parallel on the northbound side and adjacent to the existing right-of-way.

For the entire distance between Interchanges 6 and 7 on the southbound side, the Authority's fiber optic line is located within the existing right-of-way and, in some places, beneath the southbound shoulder.

Another fiber optic line, operated by MCI/Worldcom (Lightnet), is located within the right-of-way of PSE&G's 132-kV Trenton-Burlington Line as detailed above. Just like the PSE&G transmission line, the fiber optic line approaches the southbound side of the Turnpike from the southwest and turns north at M.P. 52.5 to run parallel to the roadway. At U.S. Route 206 (M.P. 53.0), the fiber optic line crosses under the Turnpike to run parallel to the northbound side and adjacent to the existing right-of-way.

Crossing the Turnpike

Within this segment of the Project Corridor, the Turnpike crosses one local road and U.S. Route 206. These roads contain local utilities within their rights-of-way. In addition, a major utility crossing at a location unrelated to a roadway crossing also exists. While other operators of sewer and water mains are discussed below, it should be noted that the New Jersey American Water Company provides water and wastewater services to the community of Mansfield Township, but none of its sewer or water mains have been identified to cross this segment of the Turnpike. Additionally, the Bordentown Water Department provides water services to the community of Bordentown Township, but none of its water mains have been identified to cross this segment of the Turnpike. The infrastructure crossings are further discussed below.

Hedding- Mansfield Road - M.P. 51.42

This two-lane local road crosses over the Turnpike and provides a link between Old York Road to the north and U.S. Route 206 to the south. The bridge structure spans 370 feet over both the Turnpike mainline and the PHMTE entrance and exit ramps. Approximately 500 feet from the bridge structure on the western approach, a residential driveway and a driveway to the Transco valve station intersect with the roadway. Approximately 320 feet from the bridge structure on the eastern approach, a residential driveway intersects with the roadway. The bridge structure carries PSE&G electric and Verizon telephone service connections to the nearby Transco valve station.

Utility Crossing - M.P. 52.5

The 36-inch Transco pipeline that generally parallels the Turnpike as discussed above crosses from the southbound side of the Turnpike to the northbound side at this location.

U.S. Route 206 - M.P. 53.0

U.S. Route 206 is a north-south federal-aid highway passing through the states of New Jersey and Pennsylvania, connecting Milford, Pennsylvania and Hammonton, New Jersey. In the Project Corridor, U.S. Route 206 crosses under the Turnpike and consists of four lanes separated by a median. The Turnpike spans 290 feet over U.S. Route 206. Several commercial driveways intersect with U.S. Route 206 on either side of the Turnpike, and Old York Road intersects approximately 100 feet west of the Turnpike overpass. The following utilities are located at this crossing:

- Two PSE&G overhead electrical service lines (13 kV and 26 kV);
- PSE&G's 132-kV Trenton-Burlington Line;
- A PSE&G 12-inch gas main;
- Verizon fiber and coaxial telephone cables (overhead and underground);
- MCI/WorldCom's Lightnet fiber optic cable;
- A television cable operated by Comcast of Burlington County LLC; and
- A sewer main of unidentified diameter operated by the Bordentown Sewerage Authority.

3.15.3.3 **Interchange 7 to Interchange 7A**

The following utilities and transportation facilities are located in this segment of the Project Corridor.

Northbound Side of the Turnpike

At Interchange 7 on the northbound side, the 30-inch Colonial pipeline is in close proximity to the Turnpike's existing right-of-way. At approximately M.P. 54.5, it turns toward the northeast, away from the Turnpike to eventually move back closer at M.P. 56.7. Located at M.P. 56.6 is a Colonial pressure station, fronting on Ward Avenue, approximately 800 feet east of the Turnpike.

The 16-inch Sunoco pipeline mentioned above is located on the northbound side, almost immediately adjacent to the existing Turnpike right-of-way. At approximately M.P. 54.5, it turns toward the northeast, away from the Turnpike, to return at approximately M.P. 56.9, where it crosses to the southbound side and runs to the northwest, away from the Turnpike.

Near Interchange 7 on the northbound side, the 36-inch Transco pipeline mentioned above is in close proximity to the Turnpike's existing right-of-way. At approximately M.P. 54.85, it crosses beneath the Turnpike to the southbound side.

The two PSE&G transmission lines (132-kV and 500-kV) identified above generally parallel the Turnpike's existing right-of-way on the northbound side in this segment. At approximately M.P. 54.5, these facilities turn toward the northeast, away from the Turnpike and toward the Crosswicks Substation, located at M.P. 55.4. At approximately M.P. 56.5, these facilities return to being in close proximity to the existing right-of-way. At this point, the 132-kV Trenton-Burlington Line crosses the Turnpike and heads northwest, away from the Turnpike. The Lightnet fiber optic line, operated by MCI/WorldCom, is located within the right-of-way of the Trenton-Burlington Line and also crosses the Turnpike at this point to run northwest, away from the Turnpike.

Southbound Side of the Turnpike

On the southbound side at Interchange 7, Transco's 16-inch pipeline approaches the Turnpike from the west, then turns and runs north, adjacent to the Turnpike right-of-way and the 36-inch Transco pipeline. At approximately M.P. 54.9, the 36-inch Transco line turns to the northwest, away from the Turnpike to avoid a residential development, only to return and run adjacent at approximately M.P.

55.3. From this point north to approximately M.P. 56.5, the two pipelines run parallel and in close proximity to the Turnpike right-of-way. At approximately M.P. 56.5, the two pipelines turn to the northwest, away from the Turnpike.

From approximately M.P. 58.1 to M.P. 58.4, Uncle Petes Road is located approximately 100 feet from the existing right-of-way. A 12-inch water main operated by Aqua New Jersey, Inc. is located on the north side of Uncle Petes Road, and a 6-inch sewer main operated by the Hamilton Township Department of Water Pollution Control is located on the south side.

For the entire distance of this segment of the Project Corridor on the southbound side, the Authority's fiber optic line is located within the existing right-of-way and, in some places, beneath the southbound shoulder.

Crossing the Turnpike

Within this segment of the Project Corridor, the Turnpike crosses four county roads and four local roads, all of which contain local utilities. In addition, four major utility crossings and two local utility crossings at locations unrelated to a roadway crossing also exist. While other operators of sewer and water mains are discussed below, it should be noted that in Chesterfield Township, Aqua New Jersey, Inc. provides both water and wastewater services to the community, but none of its sewer or water mains are located in the Project Corridor. Additionally, in Washington Township, Aqua New Jersey, Inc. and the Hamilton Township Department of Water Pollution Control provide water and wastewater services, respectively, but none of their sewer or water mains are located in the Project Corridor. The infrastructure crossings are further discussed below.

Bordentown-Georgetown Road (CR 545) - M.P. 54.0

This two-lane county road passes underneath the Turnpike and provides a link between U.S. Route 206 to the north and Old York Road to the south. No driveways intersect with this road within the Project Corridor. The following are local utilities located at this crossing:

- A PSE&G 13 kV electrical service line;
- A PSE&G 12-inch gas main;
- Verizon fiber and coaxial telephone cables (overhead and underground);
- A television cable operated by Comcast of Burlington County LLC;
- A 12-inch water main operated by the Bordentown Water Department; and
- An 8-inch sanitary sewer main operated by the Bordentown Sewerage Authority.

Utility Crossing - M.P. 54.85

The 36-inch Transco pipeline mentioned above crosses beneath the Turnpike from the northbound side to the southbound side at this location.

Bordentown-Chesterfield Road (CR 528) - M.P. 55.1

This two-lane county road passes over the Turnpike and provides a link between U.S. Routes 130 and 206 to the north and Old York Road to the south. The bridge structure spans 140 feet over Bordentown-Chesterfield Road. No driveways intersect with the road within the Project Corridor, but Bordentown-Crosswicks Road (CR 672) intersects with it approximately 90 feet from the bridge structure on the eastern approach. The following utilities are located at this crossing:

- PSE&G overhead electrical service lines, including two 13 kV, two 26 kV, and one 69 kV
- Verizon fiber and coaxial telephone cables (overhead and underground); and
- A television cable operated by Comcast of Burlington County LLC.

Utility Crossing – M.P. 55.8

At approximately M.P. 55.8, a 10-inch Colonial pipeline crosses beneath the Turnpike in the right-ofway of the former Shanahan Road and runs to the northwest, away from the Turnpike.

Ward Avenue - M.P. 56.38

This two-lane local road crosses over the Turnpike and provides a link between Bordentown Township and U.S. Routes 130 and 206 to the north and Old York Road and Bordentown-Crosswicks Road (CR 672) to the south. The bridge structure spans 260 feet over the Turnpike at an approximately 45-degree angle. Approximately 750 feet from the bridge on the western approach, some residential driveways intersect with the roadway on either side of Ward Avenue. Approximately 600 feet from the bridge on the eastern approach, driveways of a commercial establishment and the Authority's Maintenance District No. 3 intersect with the roadway on either side of Ward Avenue. Verizon fiber and coaxial telephone cables (overhead and underground), and a television cable operated by Comcast of Burlington County LLC are located at this crossing.

Utility Crossing - M.P. 56.5

PSE&G's 132-kV Trenton-Burlington Line and the Lightnet fiber optic line cross to the southbound side of the Turnpike at this location and head northwest, away from the Turnpike.

Utility Crossing - M.P. 56.9

At M.P. 56.9, the 16-inch Sunoco pipeline that has been closely paralleling the Turnpike on the northbound side since Assiscunk Creek, crosses beneath the Turnpike to the southbound side and moves to the west, away from the Turnpike.

Broad Street (CR 672) - M.P. 57.10

This two-lane county road crosses over the Turnpike and provides a link between U.S. Route 130 to the north and Church Street to the south. The bridge structure spans 190 feet over the Turnpike. Approximately 460 feet from the bridge structure on the western approach, two residential driveways intersect with the roadway on either side. Approximately 500 feet from the bridge structure on the eastern approach, a residential driveway intersects with the roadway on the south side. A PSE&G 13 kV overhead electrical service line, and Verizon fiber and coaxial telephone cables (overhead and underground) are located at this crossing.

Local Utility Crossing - M.P. 57.4

A 6-inch water main, operated by Aqua New Jersey, Inc., crosses the Turnpike at Doctors Creek. This water main runs parallel to the creek and underneath the Turnpike overpass.

Crosswicks-Hamilton Square Road - M.P. 57.55

This two-lane local road passes beneath the Turnpike at an approximately 45-degree angle and provides a link between Yardville-Allentown Road (CR 524) to the north and Broad Street (CR 672) to the south. The Turnpike spans 140 feet over this road. Approximately 300 feet from the overpass on the

southbound side of the Turnpike, several residential driveways intersect with the roadway on either side. Approximately 200 feet from the overpass on the northbound side of the Turnpike, a residential driveway intersects with the roadway on the north side. The following utilities are located at this crossing:

- A PSE&G 13 kV overhead electrical service line;
- A PSE&G 4-inch gas main;
- Verizon fiber and coaxial telephone cables (overhead and underground); and
- A 6-inch water main operated by Aqua New Jersey, Inc.

Yardville-Allentown Road (CR 524) - M.P. 58.10

This two-lane county road crosses over the Turnpike and provides a link between U.S. Route 130 to the north and Church Street/South Main Street (CR 539) to the south. The bridge structure spans 260 feet over the Turnpike at a 45-degree angle. Approximately 750 feet from the bridge structure on the western approach, Uncle Petes Road connects with CR 524. Approximately 380 feet from the bridge structure on the eastern approach, a rural service road intersects with the roadway on the south side. The following utilities are located at this crossing:

- PSE&G overhead 4 kV and 13 kV electrical service lines;
- A PSE&G 6-inch gas main;
- Verizon fiber and coaxial telephone cables (overhead and underground); and
- A television cable operated by Comcast Cablevision of Central New Jersey LLC.

Local Utility Crossing - M.P. 58.70

A 30-inch underground utility sleeve crosses the Turnpike and connects Service Areas 6S and 6N. This underground sleeve carries the following local utilities:

- Verizon telephone (underground) lines;
- A water main of unidentified diameter operated by the Aqua New Jersey, Inc.; and
- A sewer main of unidentified diameter operated by the Hamilton Township Department of Water Pollution Control.

Merrick Road - M.P. 59.23

This two-lane local road crosses over the Turnpike and provides a link between Edgebrook Road to the north and Yardville-Allentown Road to the south. The bridge structure spans 200 feet over the

Turnpike. No driveways or roads intersect with this local road within the Project Corridor. Verizon fiber and coaxial telephone cables (overhead and underground) cross the Turnpike at this location.

Edgebrook Road - M.P. 60.31

This local two-lane road crosses over the Turnpike and provides a link between Crosswicks-Hamilton Square Road to the north and Robbinsville-Allentown Road to the south. The bridge structure spans 250 feet over the Turnpike at an angle. No driveways or roads intersect with the western approach to the bridge within the Project Corridor. Approximately 380 feet from the bridge structure on the eastern approach, a residential driveway intersects with the roadway on the south side. Verizon fiber and coaxial telephone cables (overhead and underground) cross the Turnpike at this location.

3.15.3.4 Interchange 7A to Interchange 8

The following utilities and transportation facilities are located in this segment of the Project Corridor.

Northbound Side of the Turnpike

At Interchange 7A on the northbound side, the 30-inch Colonial pipeline is in close proximity to the Turnpike's existing right-of-way, and continues north to Interchange 8.

From Interchange 7A to approximately M.P. 65.5, PSE&G's New Freedom – Deans Line (500-kV transmission line) continues to parallel the Turnpike in close proximity. At M.P. 65.5, it turns to the east, away from the Turnpike toward a switching station located approximately 1,500 feet away from the Turnpike beyond the Project Corridor.

Southbound Side of the Turnpike

For the entire distance between Interchanges 7A and 8 on the southbound side, the Authority's fiber optic line is located within the existing right-of-way and, in some places, beneath the southbound shoulder.

From approximately M.P. 62.86 to M.P. 63.00, Breshanan Road is located approximately 100 feet from the existing right-of-way and contains no abutting utilities.

Crossing the Turnpike

Along this segment of the Project Corridor, the Turnpike crosses three county roads, five local roads, and Interstate Route I-195, as well as numerous local utilities. While other operators of sewer and water mains are discussed below, it should be noted that in Washington Township, Aqua New Jersey, Inc. and the Hamilton Township Department of Water Pollution Control provide water and wastewater services, respectively, but have no facilities in this segment of the Project Corridor. Additionally, the East Windsor Municipal Utility Authority (MUA) provides both water and wastewater services to the community of East Windsor, but none of its water mains are located in this segment of the Project Corridor. The infrastructure crossings are further discussed below.

Interstate Route 195 - M.P. 60.60 and M.P. 60.70

Interstate Route 195 (I-195) begins at Route 34 in Wall Township and ends at I-295 just south of Trenton. The highway, occasionally known as the Central Jersey Expressway, measures 34.2 miles in length. It crosses over the Turnpike on two separate bridge structures for its eastbound and westbound mainlines. These two bridge structures span 420 feet over the Turnpike and provide two lanes in each travel direction. These long bridge spans allow for an approximately 100-foot opening on either side of the Turnpike mainline. There are no utilities located at this crossing.

Robbinsville-Allentown Road (CR 526) - M.P. 60.91

This two-lane county road crosses over the Turnpike and provides a link between U.S. Route 130 and N.J. Route 33 to the northwest and Main Street to the southeast. The bridge structure spans 190 feet over the Turnpike. At a point approximately 450 feet from the bridge structure on the western approach, a driveway intersects with the roadway on the south side. No driveways or roads intersect with the eastern approach to the bridge within the Project Corridor, but West Manor Way intersects at a 3-leg signalized intersection approximately 800 feet from the bridge. The following utilities are located at this crossing:

- PSE&G overhead 4 kV and 13 kV electrical service lines;
- A PSE&G 12-inch gas main; and
- Verizon fiber and coaxial telephone cables (overhead and underground).

Local Utility Crossing - M.P. 60.91

Just north of Robbinsville-Allentown Road, a 16-inch water main, operated by Aqua New Jersey Inc., crosses underneath the Turnpike.

West Manor Way - M.P. 61.87

This two-lane local road crosses over the Turnpike and provides a link between Gordon Road and Sharon Road to the north and Robbinsville-Allentown Road to the south. The bridge structure spans 260 feet over the Turnpike at a 45-degree angle. Approximately 640 feet from the bridge structure on the western approach, Patriot Drive and a driveway intersect with the roadway on either side. No driveways or roads intersect with the eastern approach to the bridge within the Project Corridor. Two PSE&G 4 kV overhead electrical service lines and Verizon fiber and coaxial telephone cables (overhead and underground) cross the Turnpike at this location.

Gordon Road - M.P. 62.24

This two-lane local road crosses over the Turnpike and provides a link between Sharon Road to the northwest and Old York Road to the southeast. The bridge structure spans 190 feet over the Turnpike. No driveways or roads intersect with the western approach to the bridge in the Project Corridor. Approximately 370 feet from the bridge structure on the eastern approach, Walters Road intersects with the roadway on the north side. A PSE&G 13 kV overhead electrical service line, and Verizon fiber and coaxial telephone cables (overhead and underground) cross the Turnpike at this location.

Sharon Road - M.P. 62.86

This two-lane local road crosses over the Turnpike and provides a link between U.S. Route 130 to the southwest and Old York Road to the southeast. The bridge structure spans 350 feet over the Turnpike at a 45-degree angle. Approximately 470 feet from the bridge structure on the western approach, Bresnahan Road intersects with the roadway on the north side. No driveways or roads intersect with the eastern approach to the bridge within the Project Corridor. Verizon fiber and coaxial telephone cables (overhead and underground) cross the Turnpike at this location.

Windsor-Carson Mill Road - M.P. 63.43

This two-lane local road crosses over the Turnpike and provides a link between U.S. Route 130 to the northwest and Sharon Road to the southeast. The bridge structure spans 190 feet over the Turnpike. No driveways or roads intersect with either approach to the bridge within the Project Corridor. Verizon fiber and coaxial telephone cables (overhead and underground) cross the Turnpike at this location.

Windsor-Perrineville Road - M.P. 64.79

This two-lane local road crosses over the Turnpike and provides a link between Windsor-Carson Road and U.S. Route 130 to the northwest and Old York Road to the southeast. The bridge structure spans 190 feet over the Turnpike. Approximately 470 feet from the bridge structure on the western approach, a residential driveway intersects with the roadway its north side. Approximately 440 feet from the bridge structure on the eastern approach, both a PSE&G access road and Allens Road intersect with the

roadway on its south side. Verizon fiber and coaxial telephone cables (overhead and underground) cross the Turnpike at this location.

Local Utility Crossing - M.P. 64.90

At approximately M.P. 65.9, a JCP&L 34.5 kV transmission line crosses the Turnpike. A second 34.5 kV line is planned at this location.

Old York Road (CR 539) - M.P. 65.52

This two-lane county road crosses over the Turnpike and provides a link between Hightstown and U.S. Route 130 to the north and Burlington Township and I-195 to the south. The bridge structure spans 220 feet over the Turnpike at a slight angle. Approximately 500 feet from the bridge structure on the western approach, both residential driveways and Pemberton Lane intersect with the roadway on its south side. No driveways or roads intersect with the eastern approach to the bridge within the Project Corridor. Old York Road is an old north-south corridor that links several communities along its alignment and provides access to several east-west corridors, including I-195 as mentioned above. An 8-inch PSE&G gas main and Verizon fiber and coaxial telephone cables (overhead and underground) cross the Turnpike at this location. Also at this location, two JCP&L transmission lines (34.5 kV and 230 kV respectively) cross the Turnpike and run toward a switching station located approximately 1,500 feet to the east, beyond the Project Corridor.

Etra Road (CR 571) - M.P. 67.08

This two-lane county road crosses over the Turnpike and provides a link between South Main Street in Hightstown to the west and Windsor Road to the east. The bridge structure spans 190 feet over the Turnpike. Approximately 460 feet from the bridge structure on the western approach, a driveway to an assisted-living development and Ward Street both intersect with the roadway on either side. Approximately 320 and 520 feet, respectively, from the bridge structure on the eastern approach, two residential driveways intersect with the roadway on its south side. Etra Road is also considered a secondary state highway (although signed as a county highway) in New Jersey, extending 44 miles from N.J. Route 37 in Toms River to N.J. Route 27 in Princeton. A JCP&L 13 kV overhead electrical service line, a PSE&G 8-inch gas main, and Verizon fiber and coaxial telephone cables (overhead and underground) cross the Turnpike at this location.

Crossing and Abutting Local Utilities - M.P. 67.27 to M.P. 67.60

A 27-inch gravity sewer main, operated by East Windsor Municipal Utilities Authority (MUA), crosses the Turnpike at the highway's Rocky Brook crossing. The sewer line runs parallel to the brook and underneath the Turnpike overpass, and is connected to Sewer Pump Station No. 7, located approximately 90 feet west of the Turnpike at M.P. 67.3 on the southbound side. Between MP 67.3 and MP 67.6, a 12-inch sewer main, also operated by the MUA, runs north from this station along the southbound side of the Turnpike before making a turn toward the Interchange 8 Toll Plaza.

3.15.3.5 The Expanded Area Around Interchange 8

In the expanded area around Interchange 8, two major utilities and one local utility are located within the Project Corridor. They are:

• The Authority's fiber optic line branches out from the mainline westward at M.P. 67.66 toward the existing Interchange 8 Toll Plaza;

- The 30-inch Colonial Petroleum Pipeline runs parallel and adjacent to the mainline's northbound side and interchange ramps of the Turnpike's existing right-of-way; and
- The 12-inch sewer main operated by the East Windsor MUA runs westward and adjacent to the Interchange 8 Toll Plaza and southbound entrance ramp of the Turnpike's existing right-ofway, as mentioned above.

3.15.3.6 **Interchange 8 to Interchange 8A**

The following utilities and transportation facilities are located in this segment of the Project Corridor.

Northbound Side of the Turnpike

At Interchange 8 on the northbound side, the 30-inch Colonial Petroleum Pipeline is in close proximity to the Turnpike's existing right-of-way, and continues north to Interchange 8A. A PSE&G 12-inch gas main runs adjacent to the Turnpike from MP 72.1, just north of Prospect Plains Road, to M.P. 72.9, where it crosses the Turnpike underground.

Southbound Side of the Turnpike

A JCP&L 34.5 kV transmission line runs parallel and adjacent to the southbound side of the Turnpike's existing right-of-way from M.P. 69.9 to M.P. 70.1, where it crosses over the Turnpike and continues eastward, away from the Turnpike. For the entire distance between Interchanges 8 and 8A on the southbound side, the Authority's fiber optic line is located within the existing right-of-way and, in some places, beneath the southbound shoulder.

East Windsor MUA's Sewer Pump Station No. 10 is located near M.P. 68.0, approximately 170 feet west of the Turnpike's existing right-of-way line on the southbound side.

From approximately M.P. 71.7 to M.P. 72.1, a 10-inch water main operated by the N.J. American Water Company and a 6-inch sewer main operated by the Cranbury Township Department of Public Works run parallel to the entrance ramps to Service Area 7S and extend north to Prospect Plains Road, where they interconnect with other utilities beneath that road. A sewer pumping station is located adjacent to the service area near M.P. 71.9 and a second pumping station (currently under construction) is located on the south side of Prospect Plains Road, approximately 90 feet from the Turnpike's existing right-of-way line (M.P. 72.1).

A 6-inch sewer force main, operated by the Monroe Township Municipal Utilities Authority (MUA), runs adjacent to the Turnpike's southbound side from M.P. 73.2 to M.P. 73.4. A 10-inch water main, also operated by the Monroe Township MUA, runs adjacent to the Turnpike's southbound side from M.P. 73.34 north to an interconnection with a 16-inch water main at Forsgate Drive at M.P. 73.42.

From approximately M.P. 81.09 to M.P. 81.58, a 12-inch water main operated by the East Brunswick Department of Public Works and Water Resources runs parallel to the existing right-of-way. At M.P. 81.58, it crosses to the northbound side of the Turnpike and heads west, away from the Turnpike within the right-of-way of Tices Corner Road.

Crossing the Turnpike

Along this segment of the Project Corridor, the Turnpike crosses three county roads, four local roads, and three state highways, all of which, with the exception of one state highway, contain local utilities. In addition, utility crossings also exist at four locations unrelated to any roadway crossings. These infrastructure crossings are further discussed below.

N.J. Route 33/Franklin Street – M.P. 67.89

State Highway 33 (known locally as Franklin Street) runs from Trenton to Neptune Township. The highway was originally built to remove inter-county traffic between Princeton and Monmouth County from Hightstown. The roadway crosses under the Turnpike and provides two lanes in each direction with approximately 10-12 foot wide shoulders. The Turnpike overpass spans 140 feet over N.J. Route 33. Approximately 1,000 feet to the west of the Turnpike crossing, Route 33 connects to Interchange 8 of the Turnpike. The following utilities cross the Turnpike at this location:

- A JCP&L 13 kV overhead electrical service line;
- A PSE&G 3-inch gas main;
- Verizon fiber and coaxial telephone cables (overhead and underground); and
- An 8-inch gravity sewer operated by the East Windsor MUA.

Monmouth Road (CR 633) - M.P. 68.01

This two-lane county road crosses beneath the Turnpike and provides a link between North Main Street in Hightstown to the west and N.J. Route 33 to the east. The Turnpike overpass spans 110 feet over Monmouth Road. The following utilities cross the Turnpike at this location:

- Two JCP&L 34.5 kV underground electrical service lines;
- A PSE&G 4-inch gas main;
- Verizon fiber and coaxial telephone cables (overhead and underground);
- A television cable operated by Comcast Cablevision of Central New Jersey LLC;
- A 12-inch water main operated by the East Windsor MUA; and
- A sewer main of unidentified diameter operated by the East Windsor MUA.

N.J. Route 133 - M.P. 68.35

New Jersey Route 133 is a 3.6-mile state highway providing a bypass around downtown Hightstown, running from N.J. Route 33 just east of the Turnpike at Interchange 8, west around the north side of Hightstown and across U.S. Route 130, terminating at Princeton-Hightstown Road (CR 571) just east of Old Trenton Road. Route 133 is a freeway, but has no direct connections to any other freeways (the connection to the Turnpike at Route 33 passes through several signalized intersections). Route 133 crosses over the Turnpike on two separate and abutting bridge structures for its eastbound and westbound mainlines. Those two structures span 410 feet over the Turnpike and provide two lanes in each direction. These long bridge spans allow for an approximately 100-foot opening on either side of the Turnpike mainline. There are no utilities crossing the Turnpike at this location.

Wyckoffs Mill Road - M.P. 68.40

This two-lane local road crosses over the Turnpike and provides a link between North Main Street in Hightstown to the west and Probasco Road to the east. The bridge structure spans 190 feet over the Turnpike. No driveways or roads intersect with the eastbound or westbound approaches to the bridge within the Project Corridor. A JCP&L 13 kV overhead electrical service line and Verizon fiber and coaxial telephone cables (overhead and underground) cross the Turnpike at this location.

Local Utility Crossing - M.P. 68.40

While running alongside the bridge and roadway of Wyckoffs Mill Road, a 10-inch sewer force main, operated by the East Windsor MUA, crosses the Turnpike underground at M.P. 68.4. This sewer main is not carried within the bridge structure of Wyckoffs Mill Road.

Brick Yard Road - M.P. 69.27

This two-lane local road crosses over the Turnpike and provides a link between the intersection of U.S. Route 130 and North Main Street in Cranbury to the west, and Wyckoffs Mill Road in Monroe to the east. The bridge structure spans 190 feet over the Turnpike. No driveways or roads intersect with the western approach to the bridge within the Project Corridor. Approximately 250 feet from the bridge structure on the eastern approach, two agricultural roads intersect with the roadway on either side. A JCP&L 4 kV overhead electrical service line, a PSE&G 12-inch gas main, and Verizon fiber and coaxial telephone cables (overhead and underground) cross the Turnpike at this location.

Hightstown-Cranbury Station Road and Conrail Shared Assets Operations Railroad - M.P. 69.90

This two-lane local road and abandoned freight railroad abut each other and run southwest to northeast underneath the Turnpike at a tight angle. The railroad, the Hightstown Industrial Track, is located on the south side of Hightstown-Cranbury Station Road. Formerly the Camden and Amboy Branch of the Pennsylvania Railroad, it is owned by Conrail Shared Assets Operations. The segment in the Project Corridor and vicinity is active, although currently not in use. Hightstown-Cranbury Station Road provides a link between Wyckoffs Mill Road to the southwest and Cranbury Station Road to the northeast. The Turnpike overpass spans 600 feet over both Hightstown-Cranbury Station Road and the railroad. Two JCP&L overhead electrical service lines (13 kV and 34.5 kV) and an AT&T underground fiber optic cable cross the Turnpike at this location.

Utility Crossing - M.P. 70.1

The JCP&L 34.5 kV line mentioned above crosses from the southbound side of the Turnpike to the northbound side at this location and runs east, away from the Turnpike.

Cranbury Station Road (CR 615) - M.P. 70.48

This two-lane county road crosses over the Turnpike and provides a link between U.S. Route 130 and South Main Street in Cranbury to the west and Applegarth Road in Monroe to the east. The bridge structure spans 190 feet over the Turnpike. Approximately 280 feet from the bridge structure on the western approach, residential driveways intersect with the roadway on its north side. Approximately 270 feet from the bridge structure on the eastern approach, a residential driveway intersects with the roadway on its north side. Verizon fiber and coaxial telephone cables (overhead and underground) cross the Turnpike at this location.

Cranbury-Half Acre Road - M.P. 71.26

This two-lane local road crosses over the Turnpike and provides a link between U.S. Route 130 to the west and Prospect Plains Road to the east. The bridge structure spans 200 feet over the Turnpike at a slight angle. Approximately 290 feet from the bridge structure on the western approach, the driveway to the headquarters of Troop D of the N.J. State Police intersects with the roadway on its north side. This driveway also serves as an access road to Service Area 7S to the north. No driveways or roads intersect with the eastern approach to the bridge within the Project Corridor; however, turning lanes have been added at a driveway to a large warehouse under construction (approximately 750 feet from the bridge). A JCP&L 13 kV overhead electrical service line and Verizon fiber and coaxial telephone cables (overhead and underground) cross the Turnpike at this location. A 12-inch water main, operated by NJ American Water, crosses underneath the Turnpike just north of the bridge structure.