Column Heading	Description
Primary Service Concept	A conceptual bundle of projects that would support 3 daily train roundtrips in the specified corridor.
Potential Project - Description	An individual capital project that could be funded on a standalone basis or as part of a Service Concept
ROM Estimate ($2024) [SCC 10-100 except 70]	A high-level cost estimate based on the GoTriangle 2024 commuter rail cost estimating methodology *(Note: high-level nature of study requires additional guidance from NCDOT Rail Division to confirm cost estimates shown)*
Start MP **End MP**	Milepost where the project begins (point projects like a station or a grade separation are listed only in MP) Milepost where the project ends
Service Concepts Supported	Identifies how many of the studied Service Concepts an individual Potential Project may support.
NCDOT Corridor ID Overlap	Indicates which of the USDOT Corridor ID grants received by NCDOT in Dec 2023 overlaps with this project
Local Decision Tree Category	Identifies the category of projects described in the Local Decision Tree to help stakeholders prioritize investments OUTSIDE of a Service Concept
Connects to National Passenger Rail Network	Existing Stations that provide one-seat ride Amtrak service to locations outside of the Triangle region and NC allow connections with other Amtrak trains
Positive Eligibility Triggers	Identification of project attributes that are likely to be able to be asserted as benefits under state or federal funding programs
Freight Rail Compatibiilty	Key attributes that indicate greater potential success for negotiations with freight railroads if either of them is "Yes"
Federal Eligibility	Which federal programs under current FRA policymaking the project is eligible to be funded
Attractiveness to Federal Critieria	How well an individual project is likely to match any criteria it is eligible for
Attractiveness to State Criteria	How well an individual project is likely to receive funding under the most recent SPOT guidelines in the REGIONAL IMPACT TIER. This rating is primarily generated from feedback from Alix Demers at NCDOT Rail and Alex Rickard at CAMPO, who are both top tier SPOT experts in NC. For example, one of the nuances that Alix Demers shared was: "Within the current Rail Mode scoring methodology (which can change every round of SPOT), if a rail corridor (or section thereof) that serves freight flows is currently congested and passenger operations are desired to be increased (or newly added), then submit-ting a project under SIT Code 1 (Freight rail corridor improvement or construction (main line track, sid-ings)) is wise because it would score at the Statewide Mobility level and not a lower level as it would if the project were submitted under SIT Code 5 (Passenger rail service). Notice the above text, “corridor … that serves freight flows is currently congested” – the section of track between Mebane and Raleigh is generally not highly congested from a freight standpoint. Therefore, add-ing additional infrastructure such as interlockings and sidings can be beneficial, but not necessarily need-ed for additional freight flows to operate in the corridor – and this is what partly drives the scor-ing. Hence, a project may rank better if it is under SIT Code 1than if under SIT Code 5 simply because it has a shot at the Statewide Mobility level, but how much better I could not tell you." **What This Means for How This Impacts the State Funding Rating In This Study:** Generally speaking, any individual capital project that has a chance to be categorized as a freight project scores higher on Attractiveness to State Criteria because it may have access to funding in the Statewide Tier in addition to the Regional and Division Tiers of SPOT funding. Projects that are more likely to be in areas that see higher rail congestion (near the East Durham yard, in between Cary and Raleigh with its significant traffic and most Service Concepts using that stretch in the future)

Railroad Term	Definition
Control Point (CP)	A designated location on a railway line where signals and switches are remotely controlled by a train dispatcher.
Crossover	Trackwork hardware that allows trains to switch from one track to another
Interlocking	An arrangement of signal apparatus that prevents conflicting movements through an arrangement of tracks such as junctions or crossings.
Positive Train Control (PTC)	A processor-based/communication-based train control system designed to prevent train accidents. This is a requirement on lines that have regularly scheduled intercity/commuter rail passenger service.
Siding	A short section of track that branches off from the main line, allowing trains to be routed off the main track for various purposes. These purposes can include storing rolling stock, enabling trains to pass each other, or providing access to facilities like warehouses or industries.

Project Term	Definition
CP Modifications	Addition/relocation of crossovers to allow for more movements between tracks
Siding Conversion to Main	Connecting the gap between multiple sidings into one long stretch of main track. This allows for dedicated tracks to isolate freight and passenger train traffic.
Siding Extension	Extending sidings to accommodate expected freight train lengths. Some freight trains can go as long as 10,000 ft.
Signal Upgrade	Implementing Positive Train Control to an existing line that does not have the required signals
Track Upgrade	Consists fo upgrading the track infrastructure such as replacing and upgrading ties, installing more heavy-duty rail, etc.
Track Curve Realignment	Flattening the sharpness of an existing curve to allow for higher speeds
Yard Modifications	For this specific instance, the Raleigh to Wake Forest FSP design proposes to reroute the northern connection point to a more direct connection to the S-Line

Triangle Rail Study Service Concepts & Project Matrix

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Primary Service Concept	Potential Project - Description	ROM Estimate ($2024) [SCC 10-100 except 70]	Milepost Reference Database Weblink Start MP	Milepost Reference Database Weblink End MP	Service Concepts Supported: Mebane to Clayton	Apex to Wake Forest	Sanford to Franklinton	Durham to Raleigh	Lillington to Raleigh	Carrboro to Durham	NCDOT Corridor ID Overlap: Winston-Salem to Raleigh	Raleigh to Wilmington	Raleigh to Fayetteville	Charlotte to Washington DC
Mebane to Clayton	Station - Mebane (New)	$25 M	H 31.5		Y						Y			Y
Mebane to Clayton	Station - Hillsborough (New)	$25 M	H 40.6		Y						Y			Y
Mebane to Clayton	Track - Siding between Hillsborough/Wye	$70 M	H 40.6	H 46.5	Y						Y			Y
Mebane to Clayton	Yard - Heavy Maintenance Facility (Regional)	$220 M	H 47.1		Y	Y	Y	Y	Y	Y	Y			Y
Mebane to Clayton	Station - Durham Second Platform Track - Second Track at Durham Station	$260 M	H 54.6		Y			Y		Y	Y			Y
Mebane to Clayton	Track & Systems - Bypass Track and Interlocking modifications at D&S junction	$170 M	H 56.0	H 56.8	Y			Y			Y			Y
Mebane to Clayton	Station - RTP (New)	$20 M	H 64.2		Y			Y			Y			Y
Mebane to Clayton	Station - Morrisville (New)	$25 M	H 67.0		Y	Y	Y	Y			Y			Y
Mebane to Clayton	Station - Cary Third Platform Track - Second H-Line Track at Cary Station	$80 M	H 72.7		Y	Y	Y	Y			Y			Y
Mebane to Clayton	Track - Two sidings between Cary/Raleigh	$140 M	H 72.7	H 80.8 S 157.3	Y	Y	Y	Y			Y			Y
Mebane to Clayton	Track -Siding between Raleigh/Garner	$160 M	H 80.8	H 86.3	Y							Y		
Mebane to Clayton	Station - Garner (New)	$25 M	H 86.3		Y							Y		
Mebane to Clayton	Station - Clayton (New)	$25 M	H 96.3		Y							Y		
Mebane to Clayton	Track -Layover Track south of Clayton Station	$60 M	H 96.3		Y							Y		
Apex to Wake Forest	Station - Apex (New)	$20 M	S 171.6			Y	Y							
Apex to Wake Forest	Track - Layover Track south of Apex Station	$60 M	S 171.6			Y	Y							
Apex to Wake Forest	Track & Systems - Cary to Raleigh Third Track (Convert sidings to Third Main), Control Point modifications	$340 M	H 72.7 S 165.3	H 80.8 S 157.3		Y	Y				Y			Y
Apex to Wake Forest	**Known Project FSP FY '23 - Raleigh to Wake Forest** - Station - Raleigh (Second Platform) - Yard - Modifications - Track & Systems - Sidings, Realignments, Signalization	**$1.3 B**	S 157.3	S 140.0		Y	Y		Y					Y
Apex to Wake Forest	**Known Project RAISE FY '25 - Wake Forest Mobility Hub** - Station - Wake Forest (New)	**$ 16.4 M**	S 140.5			Y	Y							Y
Sanford to Franklinton	Station - Sanford (New)	$25 M	S 199.0				Y							
Sanford to Franklinton	Station - Youngsville (New) Track & Systems - Track upgrades, Track Curve realignments, and Signalization of existing tracks between Wake Forest/Youngsville	$200 M	S 136.5	S 140.0			Y							Y
Sanford to Franklinton	Station - Franklinton (New) Track & Systems - Track upgrades, Track Curve realignments, and Signalization of existing tracks between Youngsville/Franklinton	$200 M	S 130.3	136.5			Y							Y
Durham to Raleigh	Track - Durham to Cary Second Track (Convert sidings to Second Main)	$340 M	H 54.6	H 72.7	Y	Y	Y	Y			Y			Y
Durham to Raleigh	Track - Cary to Raleigh Third Track (Convert sidings to Third Main)	$140 M	H 72.7 S 165.3	H 80.8 S 157.3	Y	Y	Y	Y			Y			Y
Raleigh to Lillington	Station - Fuquay-Varina (New) Track & Systems - Track upgrades and Signalization of existing tracks between Raleigh/Fuquay-Varina	$200 M	NS 233.0	NS 250.6					Y				Y	
Raleigh to Lillington	Track - Siding between Raleigh/Fuquay-Varina	$70 M	NS 233.0	NS 250.6					Y				Y	
Raleigh to Lillington	Station - Lillington (New) Track & Systems - Track upgrades and Signalization of existing tracks between Fuquay-Varina/Lillington	$200 M	NS 250.6	VF 14.9										
Raleigh to Lillington	Track - Siding between Fuquay-Varina/Lillington	$70 M	NS 250.6	VF 14.9					Y				Y	
Carborro to Durham	Station - Carboro (New) Track & Systems - Track upgrades and Signalization of existing tracks between Carborro/Wye	$130 M	J 10.2	J 0.0						Y	Y			Y
Carborro to Durham	Track - Siding between Wye/Durham	$70 M	H 46.5	H 54.6	Y					Y	Y			Y

Triangle Rail Study Service Concepts & Project Matrix

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Primary Service Concept	Potential Project - Description	Local Decision Tree Category	Positive Eligibility Triggers					Freight Rail Compatibility	
			Connects to National Passenger Rail Network	Benefits Existing Passenger Rail	Benefits Existing Freight Rail	Expands Passenger Rail Service/Capacity	Expands Freight Rail Service/Capacity	Existing Freight Rail Operating Agreement for Passenger Rail?	Freight Operator Interested in Passenger Rail?
Mebane to Clayton	Station - Mebane (New)	2-Station Projects				Y		Yes	Seek latest information from NCDOT Rail
Mebane to Clayton	Station - Hillsborough (New)	2-Station Projects				Y		Yes	Seek latest information from NCDOT Rail
Mebane to Clayton	Track - Siding between Hillsborough/Wye	4-Sidings & Interlockings			Y	Y	Y	Yes	Seek latest information from NCDOT Rail
Mebane to Clayton	Yard - Heavy Maintenance Facility (Regional)	3-Regional Maintenance Yards		Y				Yes	Seek latest information from NCDOT Rail
Mebane to Clayton	Station - Durham Second Platform Track - Second Track at Durham Station	2-Station Projects	Y	Y				Yes	Seek latest information from NCDOT Rail
Mebane to Clayton	Track & Systems - Bypass Track and Interlocking modifications at D&S junction	4-Sidings & Interlockings		Y	Y			Yes	Seek latest information from NCDOT Rail
Mebane to Clayton	Station - RTP (New)	2-Station Projects				Y		Yes	Seek latest information from NCDOT Rail
Mebane to Clayton	Station - Morrisville (New)	2-Station Projects				Y		Yes	Seek latest information from NCDOT Rail
Mebane to Clayton	Station - Cary Third Platform Track - Second H-Line Track at Cary Station	2-Station Projects and 5-Raleigh/Cary Improvements	Y	Y			Y	Yes	Seek latest information from NCDOT Rail
Mebane to Clayton	Track - Two sidings between Cary/Raleigh	4-Sidings & Interlockings and 5-Raleigh/Cary Improvements			Y	Y	Y	Yes	Seek latest information from NCDOT Rail
Mebane to Clayton	Track -Siding between Raleigh/Garner	4-Sidings & Interlockings		Y	Y	Y	Y	Yes	Seek latest information from NCDOT Rail
Mebane to Clayton	Station - Garner (New)	2-Station Projects				Y		Yes	Seek latest information from NCDOT Rail
Mebane to Clayton	Station - Clayton (New)	2-Station Projects				Y		Yes	Seek latest information from NCDOT Rail
Mebane to Clayton	Track -Layover Track south of Clayton Station	3-Regional Maintenance Yards		Y		Y		Yes	Seek latest information from NCDOT Rail
Apex to Wake Forest	Station - Apex (New)	2-Station Projects				Y		No	Seek latest information from NCDOT Rail
Apex to Wake Forest	Track - Layover Track south of Apex Station	3-Regional Maintenance Yards				Y		No	Seek latest information from NCDOT Rail
Apex to Wake Forest	Track & Systems - Cary to Raleigh Third Track (Convert sidings to Third Main), Control Point modifications	4-Sidings & Interlockings and 5-Raleigh/Cary Improvements		Y	Y	Y	Y	No	Seek latest information from NCDOT Rail
Apex to Wake Forest	**Known Project FSP FY '23 - Raleigh to Wake Forest** - Station - Raleigh (Second Platform) - Yard - Modifications - Track & Systems - Sidings, Realignments, Signalization	2-Station Projects & 3-Regional Maintenance Yards & 4-Sidings & Interlockings	Y		Y	Y		No	Seek latest information from NCDOT Rail
Apex to Wake Forest	**Known Project RAISE FY '25 - Wake Forest Mobility Hub** - Station - Wake Forest (New)	2-Station Projects				Y		No	Seek latest information from NCDOT Rail
Sanford to Franklinton	Station - Sanford (New)	2-Station Projects				Y		No	Seek latest information from NCDOT Rail
Sanford to Franklinton	Station - Youngsville (New) Track & Systems - Track upgrades, Track Curve realignments, and Signalization of existing tracks between Wake Forest/Youngsville	2-Station Projects and 4-Sidings & Interlockings				Y	Y	No	Seek latest information from NCDOT Rail
Sanford to Franklinton	Station - Franklinton (New) Track & Systems - Track upgrades, Track Curve realignments, and Signalization of existing tracks between Youngsville/Franklinton	2-Station Projects and 4-Sidings & Interlockings				Y	Y	No	Seek latest information from NCDOT Rail
Durham to Raleigh	Track - Durham to Cary Second Track (Convert sidings to Second Main)	4-Sidings & Interlockings		Y	Y			Yes	Seek latest information from NCDOT Rail
Durham to Raleigh	Track - Cary to Raleigh Third Track (Convert sidings to Third Main)	4-Sidings & Interlockings		Y	Y			Yes	Seek latest information from NCDOT Rail
Raleigh to Lillington	Station - Fuquay-Varina (New) Track & Systems - Track upgrades and Signalization of existing tracks between Raleigh/Fuquay-Varina	2-Station Projects and 4-Sidings & Interlockings				Y	Y	No	Interested
Raleigh to Lillington	Track - Siding between Raleigh/Fuquay-Varina	4-Sidings & Interlockings				Y		No	Interested
Raleigh to Lillington	Station - Lillington (New) Track & Systems - Track upgrades and Signalization of existing tracks between Fuquay-Varina/Lillington	2-Station Projects and 4-Sidings & Interlockings				Y	Y	No	Interested
Raleigh to Lillington	Track - Siding between Fuquay-Varina/Lillington	4-Sidings & Interlockings				Y		No	Interested
Carborro to Durham	Station - Carboro (New) Track & Systems - Track upgrades and Signalization of existing tracks between Carborro/Wye	2-Station Projects and 4-Sidings & Interlockings				Y		No	Seek latest information from NCDOT Rail
Carborro to Durham	Track - Siding between Wye/Durham	4-Sidings & Interlockings		Y	Y		Y	No	Seek latest information from NCDOT Rail

Triangle Rail Study Service Concepts & Project Matrix

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Primary Service Concept	Potential Project - Description	Federal Eligibility						Attractiveness to Fed Criteria						Attractiveness to State Criteria
		MEGA	INFRA	CRISI	RAISE	FSP	RCE	MEGA	INFRA	CRISI	RAISE	FSP	RCE	
Mebane to Clayton	Station - Mebane (New)	N	N	N	Y	Y	N	N	N	N	Med	Med	N	Low to Medium
Mebane to Clayton	Station - Hillsborough (New)	N	N	N	Y	Y	N	N	N	N	Med	Med	N	Low to Medium
Mebane to Clayton	Track - Siding between Hillsborough/Wye	N	N	Y	Y	Y	N	N	N	Med	Low	Low	N	Medium
Mebane to Clayton	Yard - Heavy Maintenance Facility (Regional)	Y	N	N	N	Y	N	Low	N	N	N	Med	N	Low
Mebane to Clayton	Station - Durham Second Platform Track - Second Track at Durham Station	Y	N	N	N	Y	N	Low	N	N	N	High	N	Low to Medium
Mebane to Clayton	Track & Systems - Bypass Track and Interlocking modifications at D&S junction	Y	Y	Y	N	Y	N	Low	Low	High	N	High	N	Medium to High
Mebane to Clayton	Station - RTP (New)	N	N	N	Y	Y	N	N	N	N	Med	Med	N	Low to Medium
Mebane to Clayton	Station - Morrisville (New)	N	N	N	Y	Y	N	N	N	N	Med	Med	N	Low
Mebane to Clayton	Station - Cary Third Platform Track - Second H-Line Track at Cary Station	N	N	N	N	Y	N	N	N	N	N	Med	N	Medium
Mebane to Clayton	Track - Two sidings between Cary/Raleigh	Y	Y	Y	N	Y	N	Low	Low	Med	N	Med	N	Medium to High
Mebane to Clayton	Track -Siding between Raleigh/Garner	Y	Y	Y	N	Y	N	Low	Low	Med	N	Med	N	Medium
Mebane to Clayton	Station - Garner (New)	N	N	N	Y	Y	N	N	N	N	Med	Med	N	Low to Medium
Mebane to Clayton	Station - Clayton (New)	N	N	N	Y	Y	N	N	N	N	Med	Med	N	Low to Medium
Mebane to Clayton	Track -Layover Track south of Clayton Station	N	N	N	Y	Y	N	N	N	N	Med	Med	N	Low to Medium
Apex to Wake Forest	Station - Apex (New)	N	N	N	Y	Y	N	N	N	N	Med	Med	N	Low
Apex to Wake Forest	Track - Layover Track south of Apex Station	N	N	N	Y	Y	N	N	N	N	Med	Med	N	Low
Apex to Wake Forest	Track & Systems - Cary to Raleigh Third Track (Convert sidings to Third Main), Control Point modifications	Y	Y	Y	N	Y	N	Low	Low	Med	N	High	N	Medium to High
Apex to Wake Forest	**Known Project FSP FY '23 - Raleigh to Wake Forest** - Station - Raleigh (Second Platform) - Yard - Modifications - Track & Systems - Sidings, Realignments, Signalization	Y	Y	Y	N	Y	N	Low	Low	Med	N	High	N	Low to Medium
Apex to Wake Forest	**Known Project RAISE FY '25 - Wake Forest Mobility Hub** - Station - Wake Forest (New)	N	N	N	N	Y	N	N	N	N	N	High	N	Low
Sanford to Franklinton	Station - Sanford (New)	N	N	N	Y	Y	N	N	N	N	Med	Med	N	Low
Sanford to Franklinton	Station - Youngsville (New) Track & Systems - Track upgrades, Track Curve realignments, and Signalization of existing tracks between Wake Forest/Youngsville	N	N	N	N	Y	N	N	N	N	N	High	N	Low
Sanford to Franklinton	Station - Franklinton (New) Track & Systems - Track upgrades, Track Curve realignments, and Signalization of existing tracks between Youngsville/Franklinton	N	N	N	N	Y	N	N	N	N	N	High	N	Low
Durham to Raleigh	Track - Durham to Cary Second Track (Convert sidings to Second Main)	Y	Y	Y	N	Y	N	Low	Low	High	N	High	N	Medium
Durham to Raleigh	Track - Cary to Raleigh Third Track (Convert sidings to Third Main)	Y	Y	Y	N	Y	N	Low	Low	High	N	High	N	Medium
Raleigh to Lillington	Station - Fuquay-Varina (New) Track & Systems - Track upgrades and Signalization of existing tracks between Raleigh/Fuquay-Varina	N	N	N	N	Y	N	N	N	N	N	High	N	Low
Raleigh to Lillington	Track - Siding between Raleigh/Fuquay-Varina	N	N	N	Y	Y	N	N	N	N	Med	Med	N	Medium
Raleigh to Lillington	Station - Lillington (New) Track & Systems - Track upgrades and Signalization of existing tracks between Fuquay-Varina/Lillington	Y	Y	N	N	Y	N	Y	Low	N	N	High	N	Low
Raleigh to Lillington	Track - Siding between Fuquay-Varina/Lillington	N	N	N	Y	Y	N	N	N	N	Med	Med	N	Medium
Carborro to Durham	Station - Carboro (New) Track & Systems - Track upgrades and Signalization of existing tracks between Carborro/Wye	N	Y	N	N	Y	N	N	Low	N	N	High	N	Low
Carborro to Durham	Track - Siding between Wye/Durham	N	N	Y	Y	Y	N	N	N	Low	Med	Med	N	Medium