



NORTH CAROLINA
Department of Transportation

P8 Highway Modernization Subcommittee Meeting #6

NCDOT SPOT Office

February 25, 2025

Connecting people, products and places safely and efficiently with customer focus, accountability
and environmental sensitivity to enhance the economy and vitality of North Carolina

Agenda

- Additional Analysis
 - Scenario F Stats Comparison
 - Scenario G for Lane/Shoulder Width Deficiency % Difference
- Discussion Follow-Up
 - Proposed Modernization Changes/Improvements
 - SIT-16 and SIT-24 Definitions
 - Cross Sections for Modernization projects
- Adjourn

Housekeeping

- Virtual etiquette:
 - When you are not speaking, please mute yourself. This limits disruption from background noise.
 - Feel free to use the “Raise Hand” feature if you have a question. You can also type “Q” in the chat.

Meeting Goals

- ***Desire to reach agreement*** on the following items:
 - Reducing Pavement Condition criteria weight to zero for Modernization scoring
 - Combining Lane Width and Paved Shoulder Width
 - Including a Congestion weight at the Division Needs level
 - Determine which scenarios over-correct Modernization scoring
- ***Finish revising definitions and reach agreement*** for SIT-16 and SIT-24 and discuss addition of cross-sections for Modernization projects in SPOT Online

Additional Analysis



Scenario F and Mobility Stats

Scenario F Results

	Statewide Mobility	Regional Impact	Division Needs
Average Score	60.71	27.60	16.81
Median Score	59.04	27.85	17.01
Top Quartile	72.12	33.16	21.58
Bottom Quartile	54.28	22.75	11.40

VS

Mobility Results

	Statewide Mobility	Regional Impact	Division Needs
Average Score	58.96	35.17	22.45
Median Score	60.22	35.36	22.48
Top Quartile	70.55	41.70	30.48
Bottom Quartile	49.72	29.06	14.28

- Summary

- Statistical values for Modernization projects are greater than Mobility projects at Statewide Mobility level
- 197 projects were evaluated for Modernization compared to 1,244 projects for Mobility

P7 Score Analysis without Pavement Condition Criterion

- **Scenario G:** Same weight distribution as Scenario F. Using *percent difference* instead of standard difference for combined Lane/Shoulder Width deficiency.

Criteria	<u>Existing Weights</u>			Criteria	<u>Scenario G Weights</u>		
	Statewide Mobility (100%)	Regional Impact (70%)	Division Needs (50%)		Statewide Mobility (100%)	Regional Impact (70%)	Division Needs (50%)
Congestion	10%	5%	-	Congestion	10%	10%	10%
Safety	25%	25%	20%	Safety	35%	30%	25%
Freight	25%	10%	5%	Freight	30%	20%	10%
Lane Width	10%	10%	5%	Lane Width & [Paved] Shoulder	25%	10%	5%
[Paved] Shoulder Width	20%	10%	10%	[Paved] Shoulder Width	-	-	-
Pavement Condition	10%	10%	10%	Pavement Condition	-	-	-

P7 High Scoring Modernization Projects – Scenario G

Existing Results

Scenario G Results

Mobility Results

	Statewide Mobility	Regional Impact	Division Needs
Average Score	53.89	25.52	15.82
Median Score	52.28	26.03	14.18
Top Quartile	61.65	29.77	20.37
Bottom Quartile	50.25	21.46	11.28

VS

	Statewide Mobility	Regional Impact	Division Needs
Average Score	64.22	28.85	17.46
Median Score	63.35	28.82	17.01
Top Quartile	76.95	33.57	22.38
Bottom Quartile	56.51	24.40	11.88

VS

	Statewide Mobility	Regional Impact	Division Needs
Average Score	58.96	35.17	22.45
Median Score	60.22	35.36	22.48
Top Quartile	70.55	41.70	30.48
Bottom Quartile	49.72	29.06	14.28

- Summary

- Statistical values for Modernization projects Scenario G are greater than Mobility projects at Statewide Mobility level

Discussion

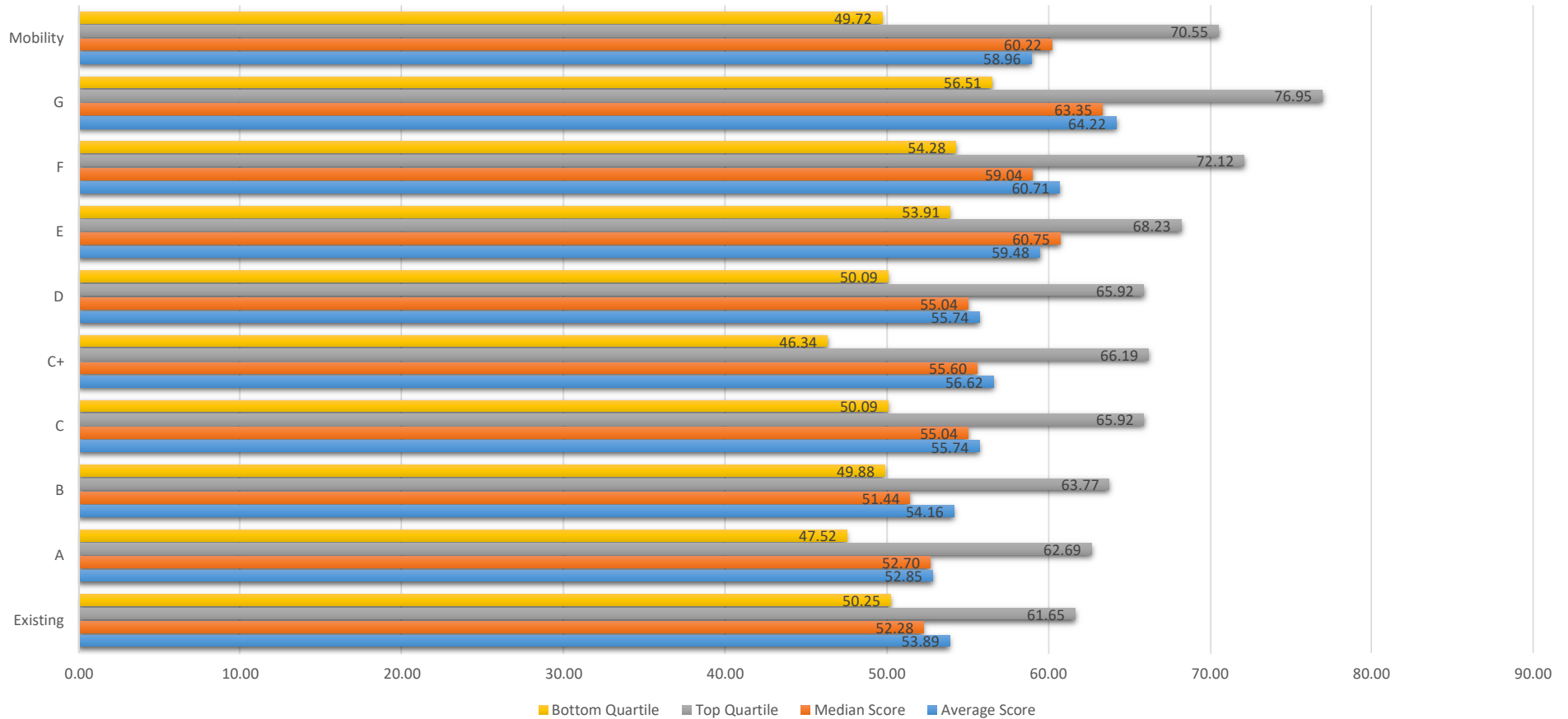


Reference Slide: Scenario Descriptions

- Scenario A
 - Distribute Pavement Condition weight (10%) to Lane and Shoulder Widths
- Scenario B
 - Add Pavement Condition weight (10%) to Safety
- Scenario C
 - Distribute Pavement Condition weight (10%) to Safety and Freight
- Scenario C+
 - Scenario C plus add 5% from Paved Shoulder Width to Freight at Division Category and distribute (10%) from Paved Shoulder Width to Safety and Freight at Statewide Category
- Scenario D
 - Distribute Pavement Condition weight (10%) to Safety and Freight and add 5% from Paved Width to Congestion @ DN Category
- Scenario E
 - Combine Shoulder and Lane Widths into one criterion
- Scenario F
 - Distribute Pavement Condition weight (10%) to Safety and Freight. Combine Shoulder and Lane Widths and distribute weights: 25% SM, 10% RI, and 5% DN
- Scenario G
 - Same weight distribution as Scenario F. Using *percent difference* instead of standard difference for combined Lane/Shoulder Width deficiency.

Current Scenarios

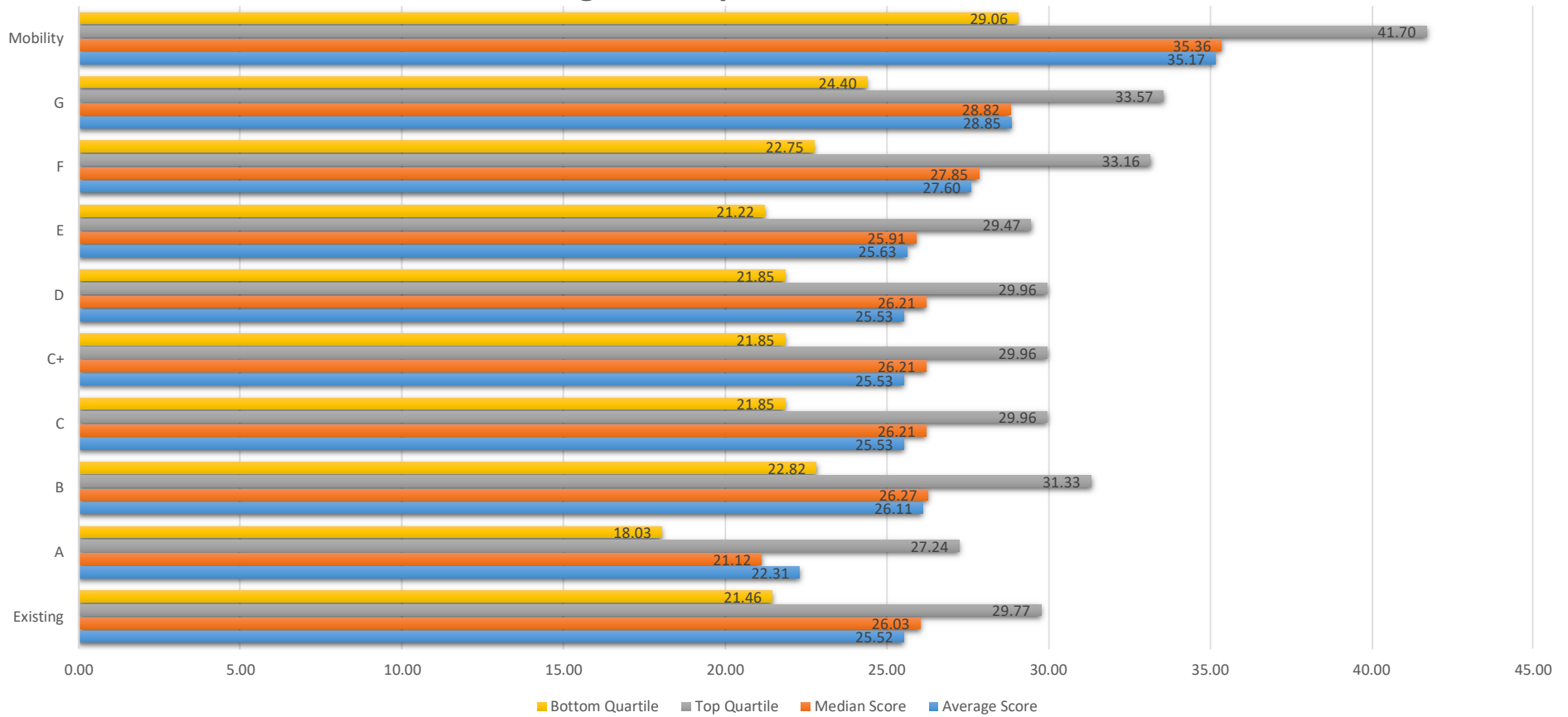
Statewide Mobility



- What stands out from this data?
- Which scenarios do we think are over-correcting Modernization scoring?

Current Scenarios

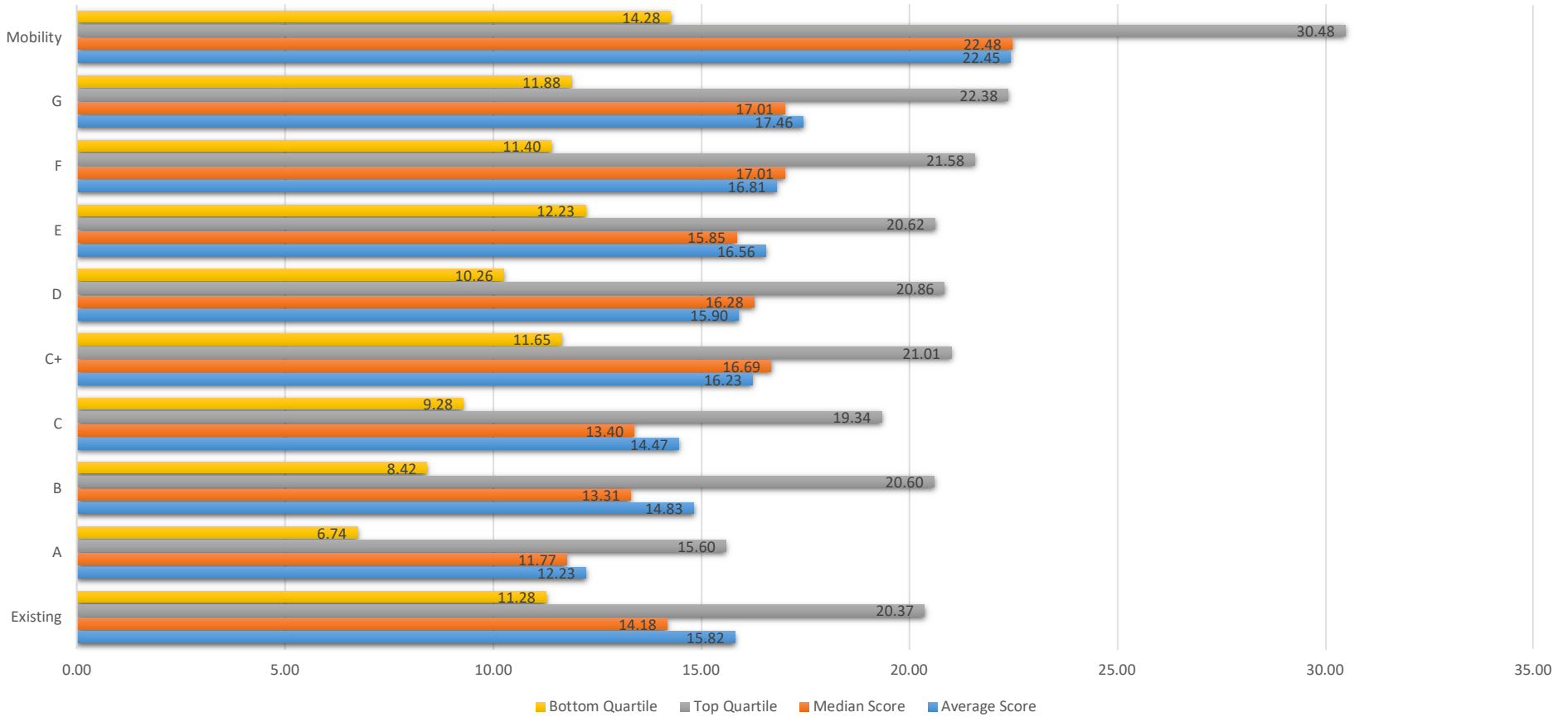
Regional Impact



- What stands out from this data?
- Which scenarios do we think are over-correcting Modernization scoring?

Current Scenarios

Division Needs



- What stands out from this data?
- Which scenarios do we think are over-correcting Modernization scoring?

SIT-16 Definition Revision

- ***Desire to reach agreement*** on proposed revision
 - **Existing:** Modernize Roadway (segment): - Improving a roadway to current design standards primarily by increasing the lane and/or shoulder width. Could also include improving the horizontal or vertical geometry. Could also include adding turn lanes at intersections to help improve mobility on the through route
 - **Proposed:** Modernize Roadway (segment): - Improve roadway safety and traffic operations primarily by increasing the lane and/or shoulder width to current design standards. This could include needed safety and minor capacity improvements to help improve mobility that are related to the Modernization of the facility

SIT-24 Definition Revision

- ***Desire to reach agreement*** on proposed revision
 - **Existing:** Implement Road Diet to Improve Safety (segment) – Enhancing the safety of a roadway by reducing the lanes within the cross-section
 - **Proposed:** Implement Road Diet to Improve Safety (segment) – Enhancing the safety of a roadway by primarily reducing the lanes within the cross-section. This could include the reallocation of roadway width to improve safety and function of the facility

Modernization Cross-Sections

- **Improvement Suggested:** Including cross-sections in SPOT Online for Modernization projects
- **Desired Outcome:** Improved cost estimates for Modernization projects
- **SPOT Office Recommendation:** Improved use of “Primary Purpose” and “Additional Notes” fields in SPOT Online
- **SPOT Office Rationale:** Detailed information is what is needed to improve cost estimates, and it could be provided in these fields in SPOT Online. Submitters could identify a cross-section here if they so desired. Detailed information will help the Feasibility Studies Unit review of cost

Next Steps & Adjourn

- Next Steps
 - Follow-Up Analysis (if any)
 - Follow-Up Discussions
- Next Meeting
 - **March 13th, 2025 @ 2:00 PM to 3:30 PM**

Thank you!
