



Slide 1 - Slide 1

Course 200: Traffic Noise Analysis Process
Prepare Noise Report


Module 8: Prepare a Noise Report




~10 Mins




~15 Mins




~15 Mins



~5 Mins



~15 Mins



~10 Mins

1

Determine Study Area Limits

2

Build the TNM

3

Validate the TNM

4

Predict Noise Levels and Impacts

5

Evaluate Noise Abatement

6

Assess Construction Noise

7

Provide Information to Local Officials

8

Prepare a Noise Report

You will be able to:

- ◆ Define a traffic noise study area
- ◆ Obtain data for noise analysis
- ◆ Identify noise-sensitive receptors
- ◆ Demonstrate modeling point placement
- ◆ Gather field noise measurements
- ◆ Validate the TNM
- ◆ Predict traffic noise levels and impacts
- ◆ Determine where to place noise barriers
- ◆ Analyze traffic noise abatement measures
- ◆ Evaluate and control construction noise
- ◆ Provide information to local officials for undeveloped lands
- ◆ Prepare a noise report to NDOT standards

Slide notes

Welcome to Module Eight, Prepare a Noise Report. After completing this module, you will be able to prepare a traffic noise analysis report to N-dot standards.

Text Captions

Module 8: Prepare a Noise Report

You will be able to:

Prepare a Noise Report

- ◆ Prepare a noise report to NDOT standards

Determine Study Area Limits

- ◆ Define a traffic noise study area

Build the TNM

- ◆ Obtain data for noise analysis
- ◆ Identify noise-sensitive receptors
- ◆ Demonstrate modeling point placement

Validate the TNM

- ◆ Gather field noise measurements

- ◆ Validate the TNM

Predict Noise Levels and Impacts

- ◆ Predict traffic noise levels and impacts

Evaluate Noise Abatement

- ◆ Determine where to place noise barriers
- ◆ Analyze traffic noise abatement measures

Assess Construction Noise

- ◆ Evaluate and control construction noise

Provide Information to Local Officials


- ◆ Provide information to local officials for undeveloped lands

Prepare a Noise Report

- ◆ Prepare a noise report to NDOT standards

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Course 200: Traffic Noise Analysis Process Prepare Noise Report



The image shows a man in a yellow shirt standing in a modern office, holding a white sign. The sign lists the following steps for preparing a noise report:

- Modeling point selection
- Model validation
- Noise modeling methodology
- Noise modeling results
- Impact analysis
- Evaluation of abatement

Slide notes


Now that you've completed the noise analysis, prepare a report that documents your findings. Although N-dot allows flexibility in how to prepare a report, it should include modeling point selection, model validation, noise modeling methodology, noise modeling results, impact analysis, and evaluation of abatement.

Text Captions

- Modeling point selection
- Model validation
- Noise modeling methodology
- Noise modeling results
- Impact analysis
- Evaluation of abatement

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Course 200: Traffic Noise Analysis Process Prepare Noise Report



Recommended Report Sections:

- ◆ Executive Summary
- ◆ Introduction
- ◆ Project Background
- ◆ Methodology
- ◆ Noise Sensitive Land Uses in the Study Area
- ◆ Model Validation
- ◆ Existing Noise Environment
- ◆ Future Noise Environment and Impact Analysis
- ◆ Noises Abatement Analysis
- ◆ Construction Noise
- ◆ Information for Local Officials
- ◆ Conclusion
- ◆ Appendices

Slide notes

The recommended sections for a noise technical report include Executive Summary; Introduction; Project Background; Methodology; Noise Sensitive Land Uses in the Study Area; Model Validation; Existing Noise Environment; Future Noise Environment and Impact Analysis; Noises Abatement Analysis; Construction Noise; Information for Local Officials; Conclusion; and Appendices.

Text Captions

Recommended Report Sections:

- ◆ Executive Summary
- ◆ Introduction
- ◆ Project Background
- ◆ Methodology
- ◆ Noise Sensitive Land Uses in the Study Area
- ◆ Model Validation
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- ◆ Information for Local Officials
- ◆ Conclusion
- ◆ Appendices

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Course 200: Traffic Noise Analysis Process Prepare Noise Report

This outline is based on the NDOT Traffic Noise Analysis Guidance Manual, but is not the only approach. Direct any specific questions about report format to the NDOT Noise PQS.

Recommended Report Sections:

- ◆ Executive Summary
- ◆ Introduction
- ◆ Project Background
- ◆ Methodology
- ◆ Noise Sensitive Land Uses in the Study Area
- ◆ Model Validation
- ◆ Existing Noise Environment
- ◆ Future Noise Environment and Impact Analysis
- ◆ Noises Abatement Analysis
- ◆ Construction Noise
- ◆ Information for Local Officials
- ◆ Conclusion
- ◆ Appendices

Slide notes

This report outline is based on the N-dot Traffic Noise Analysis Guidance Manual, but is not the only approach. Direct any specific questions about report format to the N-dot Noise P-Q-S.

Text Captions

This outline is based on the NDOT Traffic Noise Analysis Guidance Manual, but is not the only approach. Direct any specific questions about report format to the NDOT Noise PQS.

Recommended Report Sections:

- ◆ Executive Summary
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- ◆ Model Validation
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- ◆ Information for Local Officials
- ◆ Conclusion
- ◆ Appendices

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Course 200: Traffic Noise Analysis Process
Prepare Noise Report

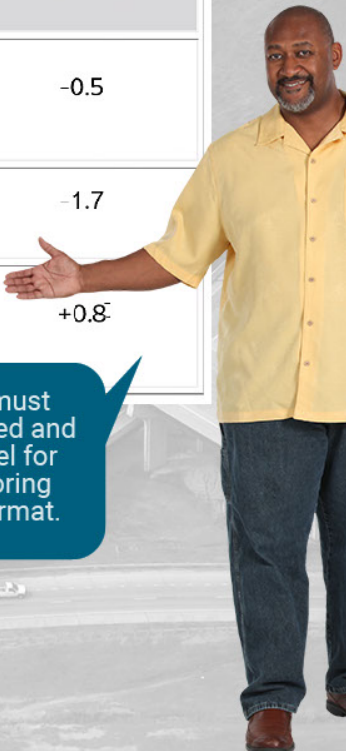
Table 3: Field Recorded and TNM Predicted Noise Levels

Location	Field Recorded Noise Levels	TNM Predicted Noise Levels	Difference L(eq)
Meter Location 1 (Single-family residential along SR-22 east of SR-390)	54.7	54.2	-0.5
Meter Location 2 (Emily Block Park and river access)	59.8	58.1	-1.7
Meter Location 3 (Multi-family residential along SR-22 near Iron Rock Road)	71.4	71.9	+0.8

If you used adjustment factors in the validation of the model, include them in the table.

Report differences in noise level between the monitored and modeled values to the nearest tenth of a decibel.

The noise report must contain the monitored and modeled noise level for each noise monitoring location in table format.



Slide notes

To ensure model validation is documented accurately, the noise report must contain the monitored and modeled noise level for each noise monitoring location in table format. Report differences in noise level between the monitored and modeled values to the nearest tenth of a decibel to avoid rounding errors. If you used adjustment factors in the validation of the model, include them in the table.

Text Captions

The noise report must contain the monitored and modeled noise level for each noise monitoring location in table format. Report differences in noise level between the monitored and modeled values to the nearest tenth of a decibel. If you used adjustment factors in the validation of the model, include them in the table.

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Course 200: Traffic Noise Analysis Process Prepare Noise Report

Include aerial maps depicting the noise study area, monitored locations, receiver locations, impacted and benefited receivers and modeled noise barriers.

Fig 3c. Supplemental Noise Barriers

Project No. S 580 9(1100)
C.N. 22162
Douglas County

0 200 680 Feet

I-660 Additional Northbound Lane, West Center to Big Pablo Bridge

Slide notes

Include aerial maps depicting the noise study area, monitored locations, receiver locations, impacted and benefited receivers and modeled noise barriers.

Text Captions


Include aerial maps depicting the noise study area, monitored locations, receiver locations, impacted and benefited receivers and modeled noise barriers.

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Course 200: Traffic Noise Analysis Process

Prepare Noise Report

Include any construction noise mitigation measures that will be, or are likely to be, incorporated into the project.



The image shows a man in a yellow short-sleeved shirt speaking directly to the camera. He is positioned in the lower-left foreground. Behind him, a large orange and white construction machine, likely a concrete saw, is cutting through asphalt. The machine is emitting a large amount of dust and debris. The background is a construction site with asphalt and concrete.

Slide notes

Include any construction noise mitigation measures that will be, or are likely to be, incorporated into the project.

Text Captions

Include any construction noise mitigation measures that will be, or are likely to be, incorporated into the project.

Slide 8 - Slide 8

Course 200: Traffic Noise Analysis Process Prepare Noise Report

TIWA TNM 2.5

File Edit View Setup Input Calculate Barrier Analysis Parallel Barriers Contours Tables Window Help

Plan View: Build_130701:1

Roadway Input: Build_130701:2

Name: I-680 NB 1 Width (ft): 70.00 Average pavement type shall be used unless a highway agency substantiates the use of another type with the approval of FHWA

On Structure? Pavement Type: Average

	Pnt.Name	Pnt.No	X (ft)	Y (ft)	Z(pavement) (ft)	Pvmt Type
1	680_NB_01	1	2,717,096.5	533,277.2	1,120.68	Average
2	680_NB_2	3	2,717,103.5	533,476.8	1,117.68	Average
3	680_NB_3	4	2,717,110.8	533,676.3	1,114.52	Average
4	680_NB_4	5	2,717,118.3	533,876.6	1,110.44	Average
5	680_NB_5	6	2,717,127.8	534,075.5	1,107.25	Average
6	680_NB_6	7	2,717,142.0	534,274.7	1,105.92	Average
7	680_NB_7	8	2,717,156.0	534,474.2	1,105.44	Average
8	680_NB_8	9	2,717,172.5	534,673.5	1,106.13	Average
9	680_NB_9	10	2,717,186.5	534,873.0	1,082.81	Average
10	680_NB_10	11	2,717,200.0	535,072.6	1,112.80	Average
11	680_NB_11	12	2,717,214.5	535,272.1	1,118.19	Average
12	680_NB_12	13	2,717,229.5	535,471.6	1,123.15	Average
13	680_NB_13	14	2,717,243.3	535,672.3	1,128.56	Average

Exit New Delete

Finally, submit all TNM files, noise monitoring data sheets, and other supporting documentation to the NDOT Noise PQS in electronic format.

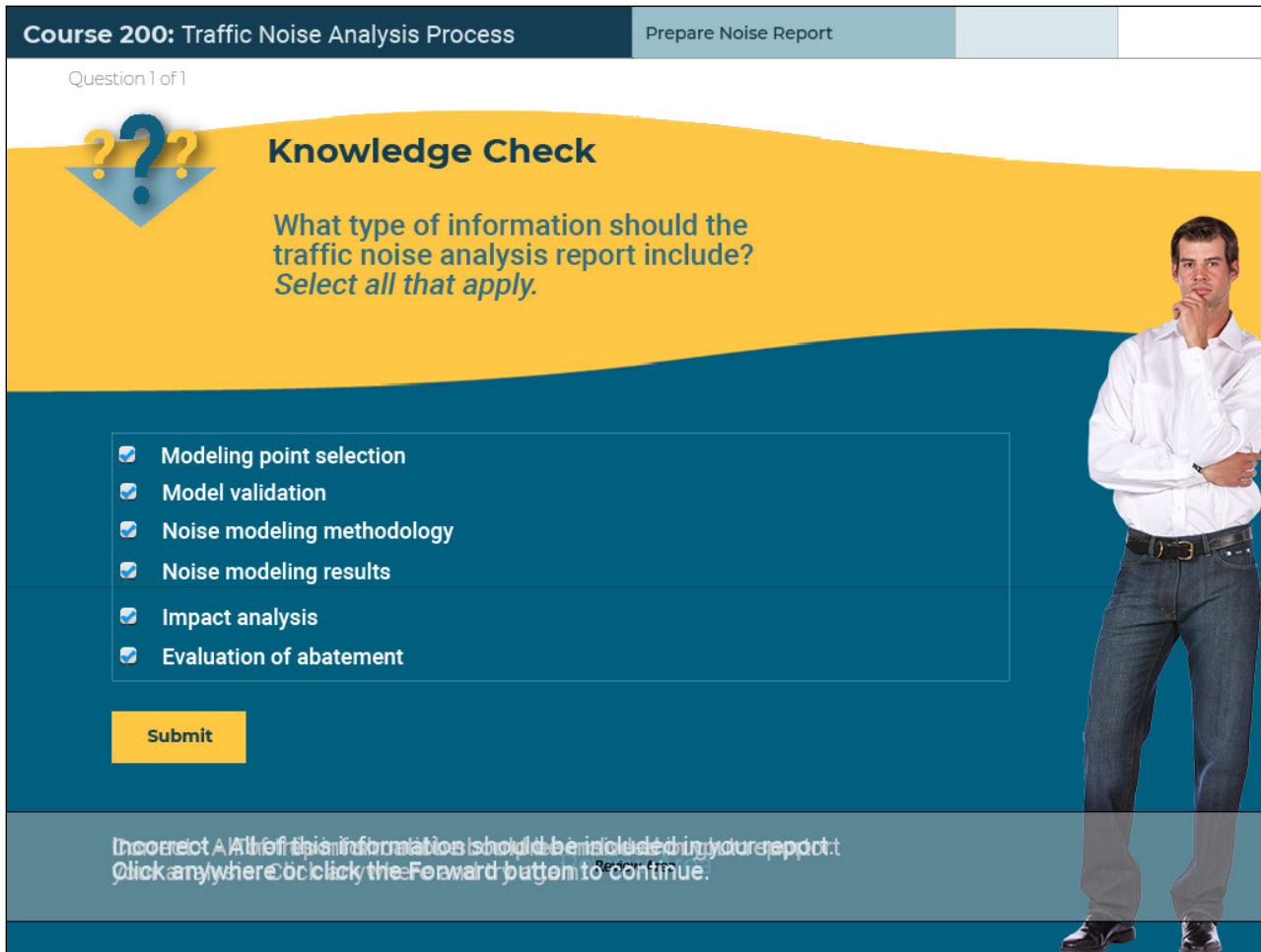
Slide notes

Finally, submit all T-N-M files, noise monitoring data sheets, and other supporting documentation to the N-dot Noise P-Q-S in electronic format.

Text Captions

Finally, submit all TNM files, noise monitoring data sheets, and other supporting documentation to the NDOT Noise PQS in electronic format.

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Course 200: Traffic Noise Analysis Process Prepare Noise Report

Question 1 of 1

???

Knowledge Check

What type of information should the traffic noise analysis report include?
Select all that apply.

- Modeling point selection
- Model validation
- Noise modeling methodology
- Noise modeling results
- Impact analysis
- Evaluation of abatement

Submit

Incorrect. All of this information should be included in your report. Click anywhere or click the Forward button to continue.

Slide notes

What type of information should the traffic noise analysis report include?

Text Captions

Knowledge Check

What type of information should the traffic noise analysis report include?

Select all that apply.

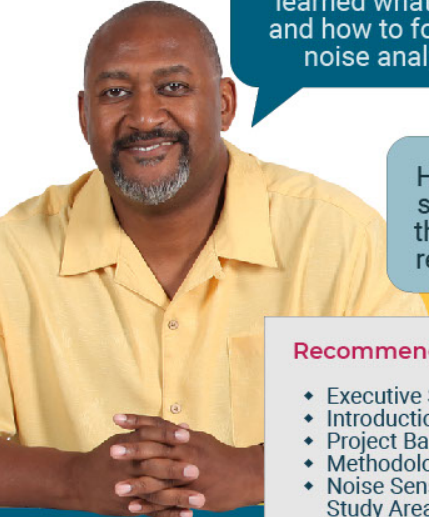
Correct feedback: Correct - All of this information should be included in your report. Click anywhere or click the Forward button to continue.

1st incorrect feedback: Incorrect - The report should be comprehensive enough to support your analysis. Click anywhere and try again.

2nd incorrect feedback: Incorrect - All of this information should be included in your report. Click anywhere or click the Forward button to continue.

Slide 10 - Slide 10

Course 200: Traffic Noise Analysis Process
Prepare Noise Report



That completes Module 8, Prepare a Noise Report. You learned what to include in, and how to format, a traffic noise analysis report.

Here's a quick summary and the suggested report outline.

Recommended Report Sections:

- ◆ Executive Summary
- ◆ Introduction
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8

Prepare a Noise Report

- ◆ The traffic noise analysis report should document your findings and include:
 - Modeling point selection
 - Model validation
 - Noise modeling methodology
 - Noise modeling results
 - Impact analysis
 - Evaluation of abatement
- ◆ The suggested outline is based on the NDOT Traffic Noise Analysis Guidance Manual, but is not the only approach.
- ◆ Include aerial maps depicting the noise study area, monitored locations, receiver locations, impacted and benefited receivers and modeled noise barriers.
- ◆ Submit all TNM files, noise monitoring data sheets, and other supporting documentation to the NDOT Noise PQS in electronic format.

Slide notes

That completes Module Eight, Prepare a Noise Report. In this module, you learned the type of information to include in the report and the delivery format. Here's a quick summary and the suggested report outline.

Text Captions

That completes Module 8, Prepare a Noise Report. You learned what to include in, and how to format, a traffic noise analysis report.

Here's a quick summary and the suggested report outline.

Prepare Noise Report

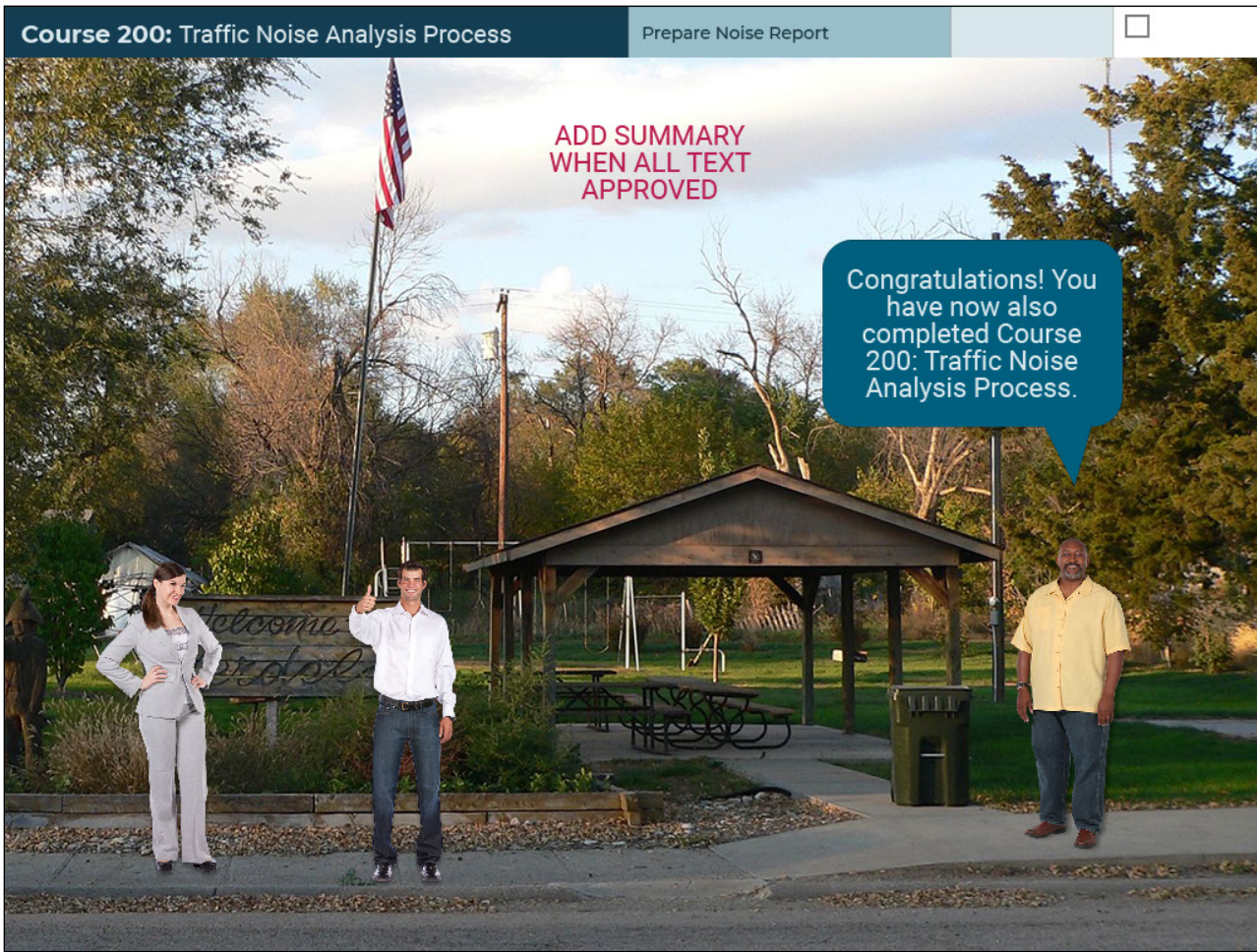
- ◆ The traffic noise analysis report should document your findings and include:
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Slide 11 - Slide 11



Slide notes

Congratulations! You have now also completed the N-Dot Two-hundred Level Noise Course, Traffic Noise Analysis Process. Your next step is to complete the mastery test, which will test your understanding of this course. Upon passing the test, you will receive a Certification of Completion and will be certified to conduct noise studies for N-dot.

Text Captions

Course 200: Traffic Noise Analysis Process

Prepare Noise Report

Congratulations! You have now also completed Course 200: Traffic Noise Analysis Process.

ADD SUMMARY WHEN ALL TEXT APPROVED