

APPENDIX D
NOISE WORKSHEETS

Golden Shore Master Plan Project

Draft EIR

Noise Worksheets

Provided by PCR Services Corporation

September 2009

- D-1 Ambient Noise Data
- D-2 Construction Noise Calculations
- D-3 Off-Site Traffic Noise Calculations

Appendix D-1

- Ambient Noise Data

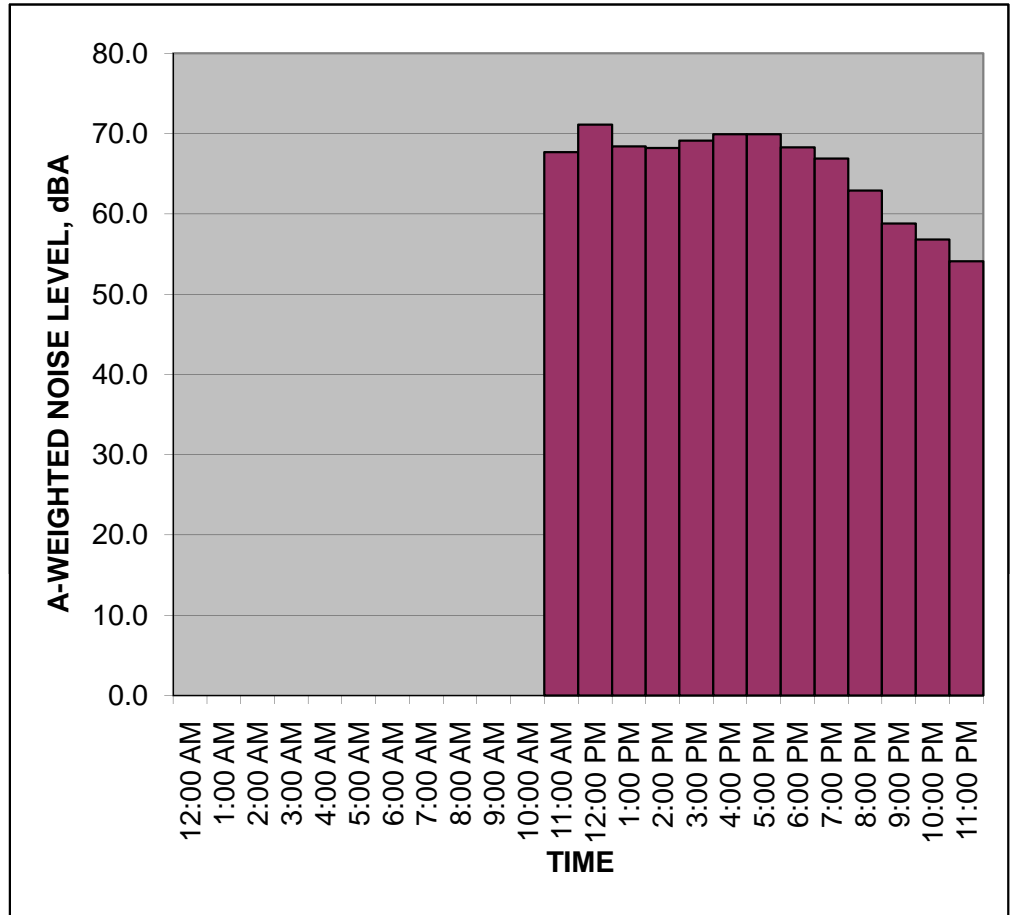
Measured Ambient Noise Levels



Project: Golden Shore Master Plan
 Location: R1 - North Property Line
 Sources: Ambient

Date: November 20, 2008

| TIME | HNL, dB(A) |
|---------------------|---------------|
| 12:00 AM | 0.0 |
| 1:00 AM | 0.0 |
| 2:00 AM | 0.0 |
| 3:00 AM | 0.0 |
| 4:00 AM | 0.0 |
| 5:00 AM | 0.0 |
| 6:00 AM | 0.0 |
| 7:00 AM | 0.0 |
| 8:00 AM | 0.0 |
| 9:00 AM | 0.0 |
| 10:00 AM | 0.0 |
| 11:00 AM | 67.7 |
| 12:00 PM | 71.1 |
| 1:00 PM | 68.4 |
| 2:00 PM | 68.2 |
| 3:00 PM | 69.1 |
| 4:00 PM | 69.9 |
| 5:00 PM | 69.9 |
| 6:00 PM | 68.3 |
| 7:00 PM | 66.9 |
| 8:00 PM | 62.9 |
| 9:00 PM | 58.8 |
| 10:00 PM | 56.8 |
| 11:00 PM | 54.1 |
| CNEL, dB(A): | 68.8 |



NOTES:

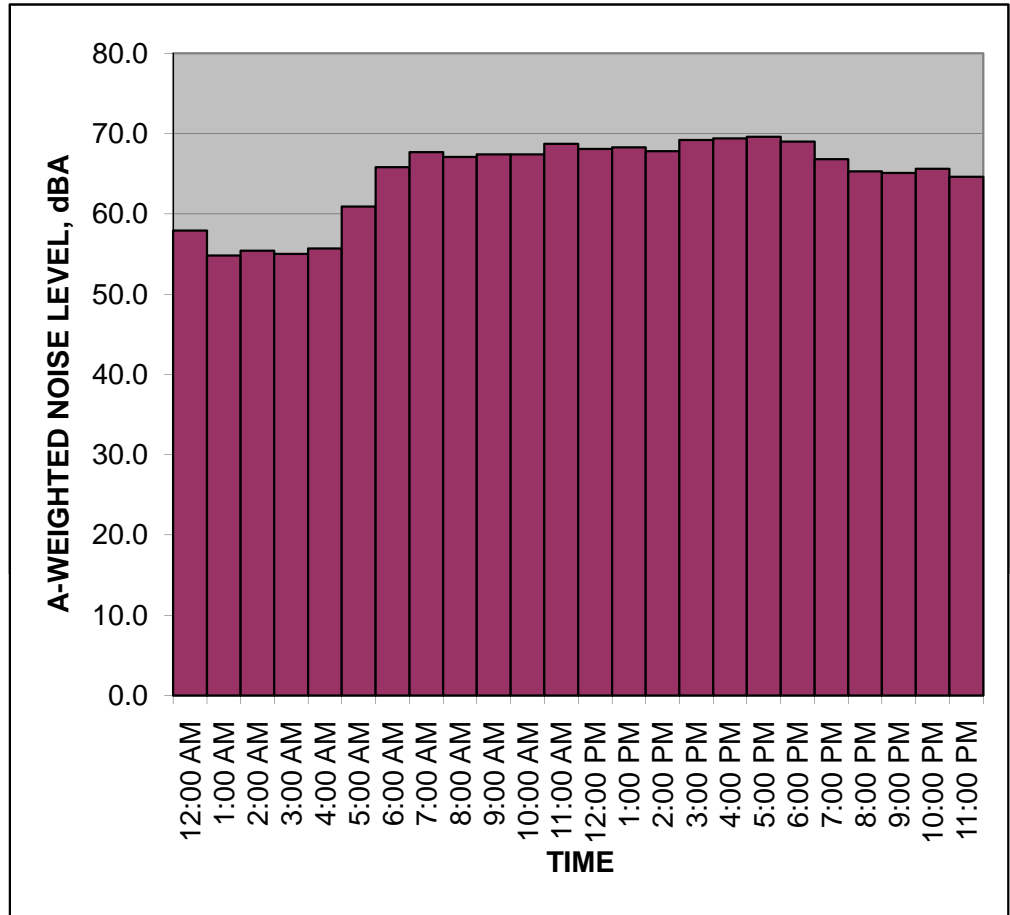
Measured Ambient Noise Levels



Project: Golden Shore Master Plan
 Location: R1 - North Property Line
 Sources: Ambient

Date: November 21, 2008

| TIME | HNL, dB(A) |
|---------------------|---------------|
| 12:00 AM | 57.9 |
| 1:00 AM | 54.8 |
| 2:00 AM | 55.4 |
| 3:00 AM | 55.0 |
| 4:00 AM | 55.7 |
| 5:00 AM | 60.9 |
| 6:00 AM | 65.8 |
| 7:00 AM | 67.7 |
| 8:00 AM | 67.1 |
| 9:00 AM | 67.4 |
| 10:00 AM | 67.4 |
| 11:00 AM | 68.7 |
| 12:00 PM | 68.1 |
| 1:00 PM | 68.3 |
| 2:00 PM | 67.8 |
| 3:00 PM | 69.2 |
| 4:00 PM | 69.4 |
| 5:00 PM | 69.6 |
| 6:00 PM | 69.0 |
| 7:00 PM | 66.8 |
| 8:00 PM | 65.3 |
| 9:00 PM | 65.1 |
| 10:00 PM | 65.6 |
| 11:00 PM | 64.6 |
| CNEL, dB(A): | 70.2 |



NOTES:

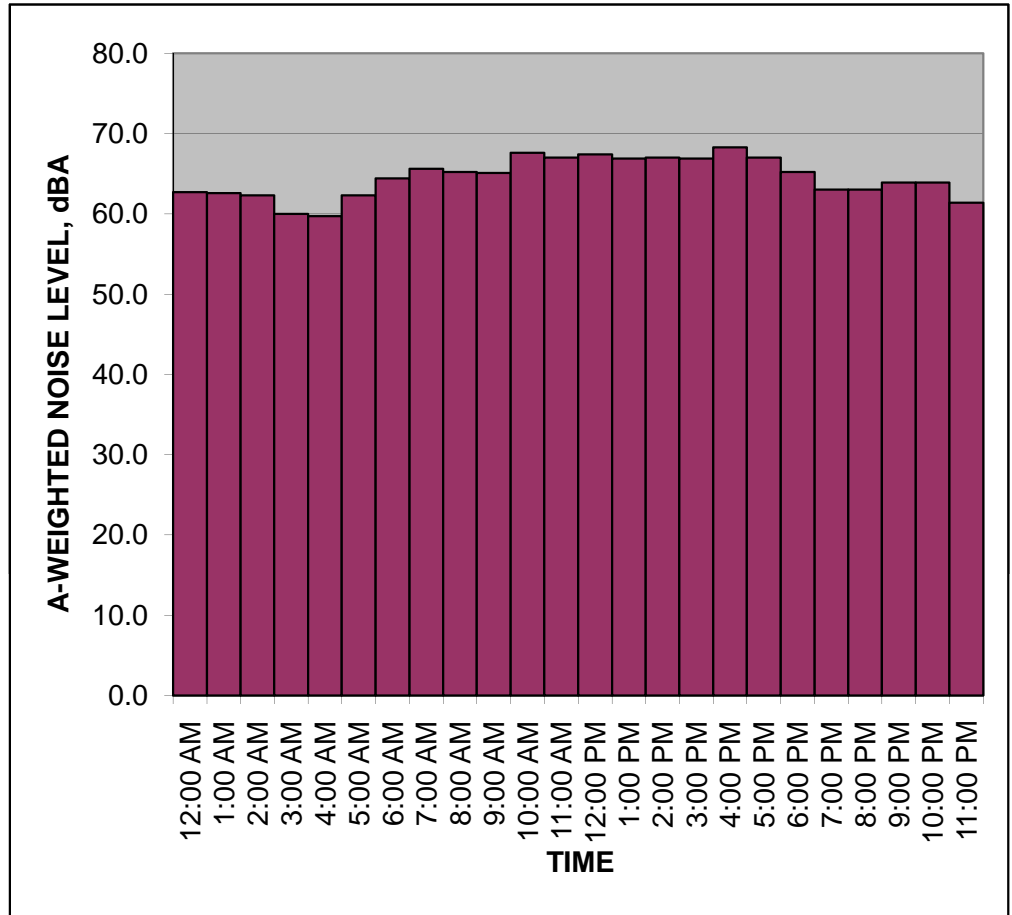
Measured Ambient Noise Levels



Project: Golden Shore Master Plan
 Location: R1 - North Property Line
 Sources: Ambient

Date: November 22, 2008

| TIME | HNL, dB(A) |
|---------------------|---------------|
| 12:00 AM | 62.7 |
| 1:00 AM | 62.6 |
| 2:00 AM | 62.3 |
| 3:00 AM | 60.0 |
| 4:00 AM | 59.7 |
| 5:00 AM | 62.3 |
| 6:00 AM | 64.4 |
| 7:00 AM | 65.6 |
| 8:00 AM | 65.2 |
| 9:00 AM | 65.1 |
| 10:00 AM | 67.6 |
| 11:00 AM | 67.0 |
| 12:00 PM | 67.4 |
| 1:00 PM | 66.9 |
| 2:00 PM | 67.0 |
| 3:00 PM | 66.9 |
| 4:00 PM | 68.3 |
| 5:00 PM | 67.0 |
| 6:00 PM | 65.2 |
| 7:00 PM | 63.0 |
| 8:00 PM | 63.0 |
| 9:00 PM | 63.9 |
| 10:00 PM | 63.9 |
| 11:00 PM | 61.4 |
| CNEL, dB(A): | 69.9 |



NOTES:

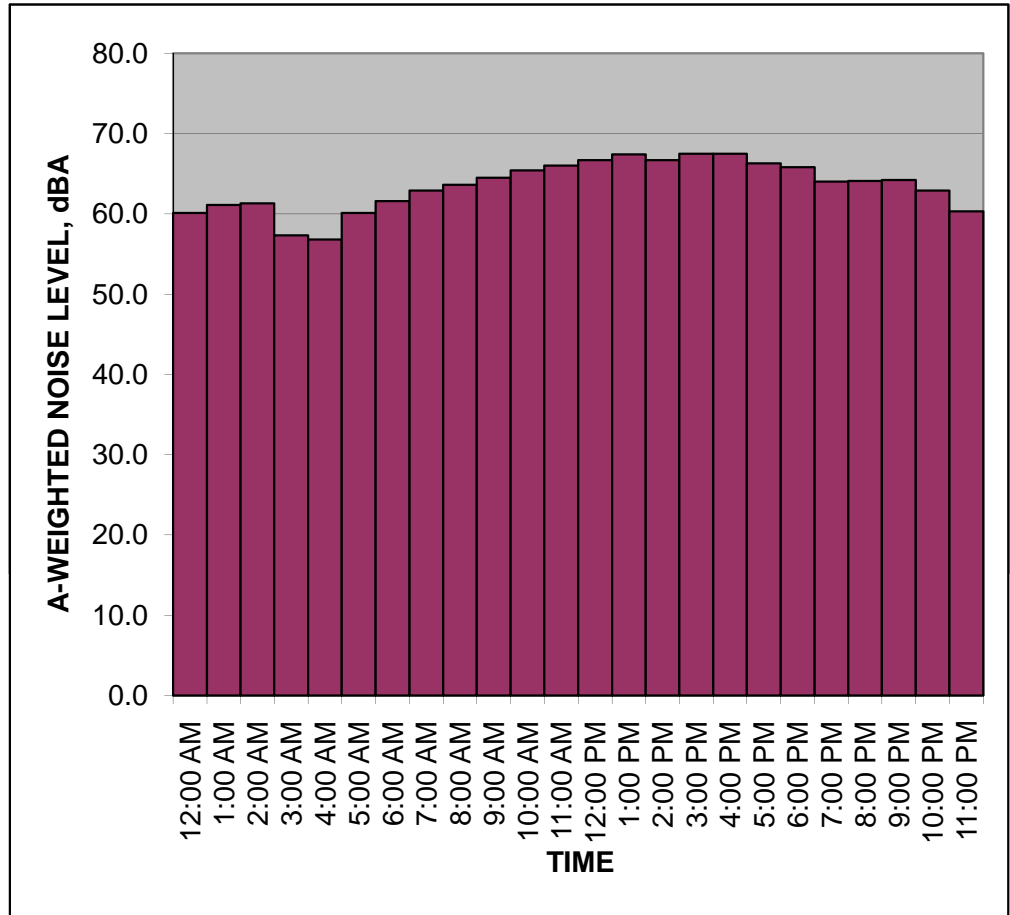
Measured Ambient Noise Levels



Project: Golden Shore Master Plan
 Location: R1 - North Property Line
 Sources: Ambient

Date: November 23, 2008

| TIME | HNL, dB(A) |
|---------------------|---------------|
| 12:00 AM | 60.1 |
| 1:00 AM | 61.1 |
| 2:00 AM | 61.3 |
| 3:00 AM | 57.3 |
| 4:00 AM | 56.8 |
| 5:00 AM | 60.1 |
| 6:00 AM | 61.6 |
| 7:00 AM | 62.9 |
| 8:00 AM | 63.6 |
| 9:00 AM | 64.5 |
| 10:00 AM | 65.4 |
| 11:00 AM | 66.0 |
| 12:00 PM | 66.7 |
| 1:00 PM | 67.4 |
| 2:00 PM | 66.7 |
| 3:00 PM | 67.5 |
| 4:00 PM | 67.5 |
| 5:00 PM | 66.3 |
| 6:00 PM | 65.8 |
| 7:00 PM | 64.0 |
| 8:00 PM | 64.1 |
| 9:00 PM | 64.2 |
| 10:00 PM | 62.9 |
| 11:00 PM | 60.3 |
| CNEL, dB(A): | 68.6 |



NOTES:

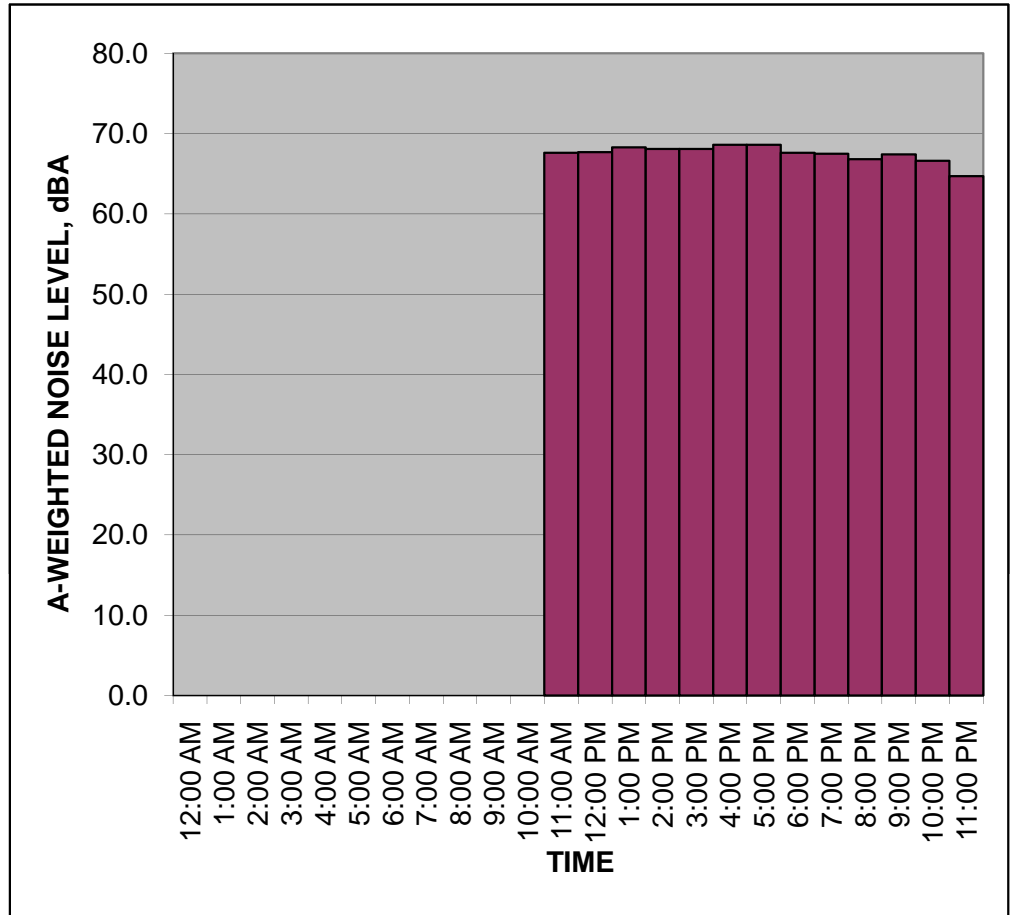
Measured Ambient Noise Levels



Project: Golden Shore Master Plan
 Location: R2 - Southwest Property Line
 Sources: Ambient

Date: November 20, 2008

| TIME | HNL, dB(A) |
|---------------------|---------------|
| 12:00 AM | 0.0 |
| 1:00 AM | 0.0 |
| 2:00 AM | 0.0 |
| 3:00 AM | 0.0 |
| 4:00 AM | 0.0 |
| 5:00 AM | 0.0 |
| 6:00 AM | 0.0 |
| 7:00 AM | 0.0 |
| 8:00 AM | 0.0 |
| 9:00 AM | 0.0 |
| 10:00 AM | 0.0 |
| 11:00 AM | 67.6 |
| 12:00 PM | 67.7 |
| 1:00 PM | 68.3 |
| 2:00 PM | 68.1 |
| 3:00 PM | 68.1 |
| 4:00 PM | 68.6 |
| 5:00 PM | 68.6 |
| 6:00 PM | 67.6 |
| 7:00 PM | 67.5 |
| 8:00 PM | 66.8 |
| 9:00 PM | 67.4 |
| 10:00 PM | 66.6 |
| 11:00 PM | 64.7 |
| CNEL, dB(A): | 71.3 |



NOTES:

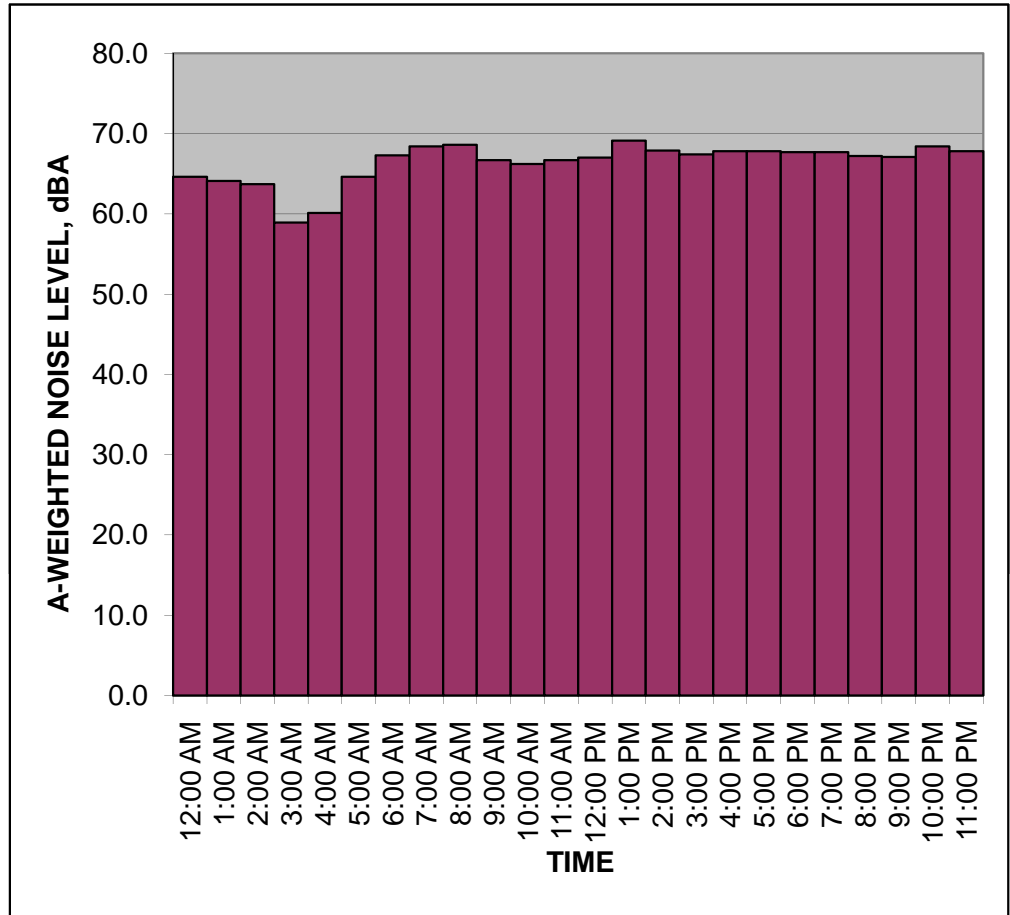
Measured Ambient Noise Levels



Project: Golden Shore Master Plan
 Location: R2 - Southwest Property Line
 Sources: Ambient

Date: November 21, 2008

| TIME | HNL, dB(A) |
|---------------------|---------------|
| 12:00 AM | 64.6 |
| 1:00 AM | 64.1 |
| 2:00 AM | 63.7 |
| 3:00 AM | 58.9 |
| 4:00 AM | 60.1 |
| 5:00 AM | 64.6 |
| 6:00 AM | 67.3 |
| 7:00 AM | 68.4 |
| 8:00 AM | 68.6 |
| 9:00 AM | 66.7 |
| 10:00 AM | 66.2 |
| 11:00 AM | 66.7 |
| 12:00 PM | 67.0 |
| 1:00 PM | 69.1 |
| 2:00 PM | 67.9 |
| 3:00 PM | 67.4 |
| 4:00 PM | 67.8 |
| 5:00 PM | 67.8 |
| 6:00 PM | 67.7 |
| 7:00 PM | 67.7 |
| 8:00 PM | 67.2 |
| 9:00 PM | 67.1 |
| 10:00 PM | 68.4 |
| 11:00 PM | 67.8 |
| CNEL, dB(A): | 72.5 |



NOTES:

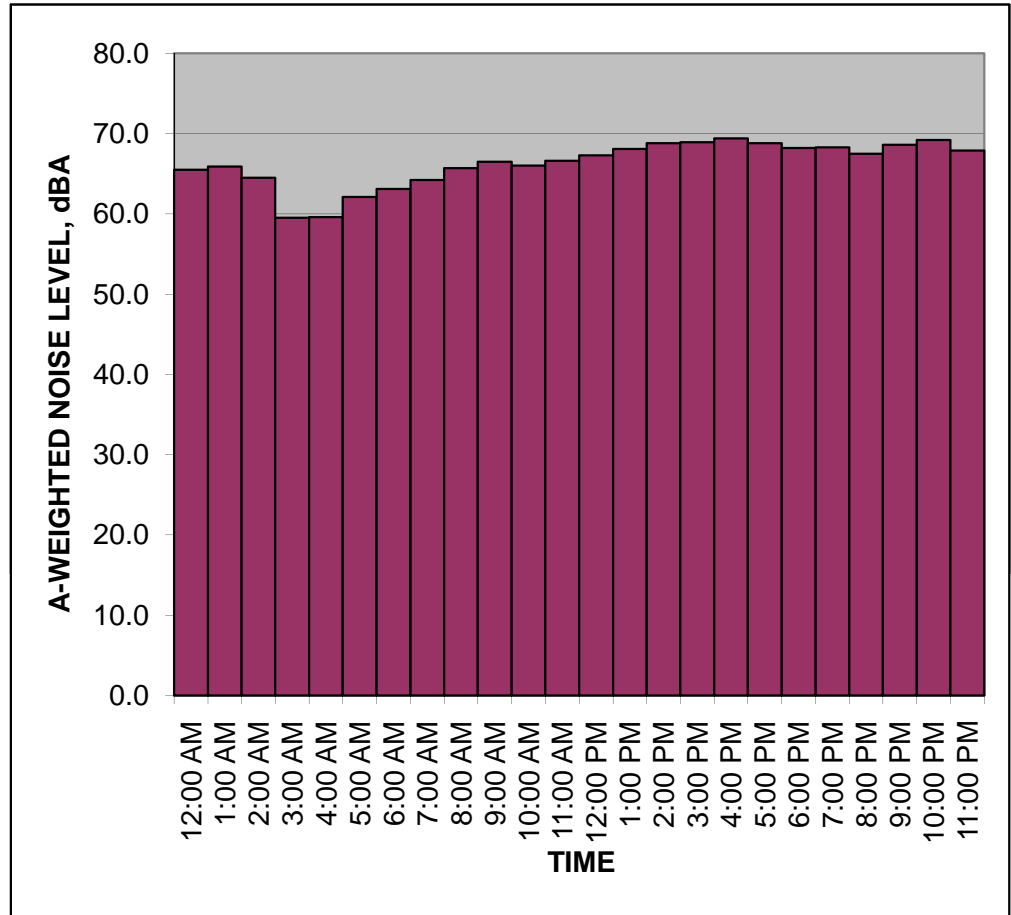
Measured Ambient Noise Levels



Project: Golden Shore Master Plan
 Location: R2 - Southwest Property Line
 Sources: Ambient

Date: November 22, 2008

| TIME | HNL, dB(A) |
|---------------------|---------------|
| 12:00 AM | 65.5 |
| 1:00 AM | 65.9 |
| 2:00 AM | 64.5 |
| 3:00 AM | 59.5 |
| 4:00 AM | 59.6 |
| 5:00 AM | 62.1 |
| 6:00 AM | 63.1 |
| 7:00 AM | 64.2 |
| 8:00 AM | 65.7 |
| 9:00 AM | 66.5 |
| 10:00 AM | 66.0 |
| 11:00 AM | 66.6 |
| 12:00 PM | 67.3 |
| 1:00 PM | 68.1 |
| 2:00 PM | 68.8 |
| 3:00 PM | 68.9 |
| 4:00 PM | 69.4 |
| 5:00 PM | 68.8 |
| 6:00 PM | 68.2 |
| 7:00 PM | 68.3 |
| 8:00 PM | 67.5 |
| 9:00 PM | 68.6 |
| 10:00 PM | 69.2 |
| 11:00 PM | 67.9 |
| CNEL, dB(A): | 72.6 |



NOTES:

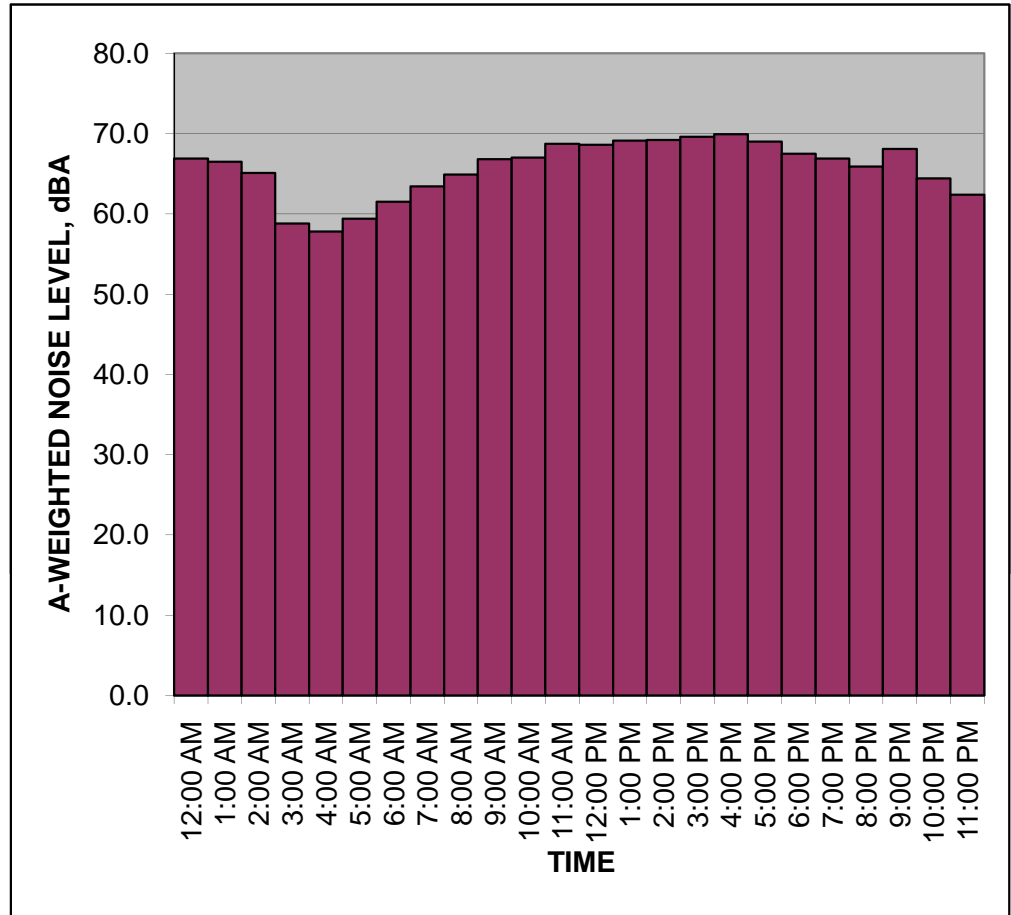
Measured Ambient Noise Levels



Project: Golden Shore Master Plan
 Location: R2 - Southwest Property Line
 Sources: Ambient

Date: November 23, 2008

| TIME | HNL, dB(A) |
|---------------------|---------------|
| 12:00 AM | 66.9 |
| 1:00 AM | 66.5 |
| 2:00 AM | 65.1 |
| 3:00 AM | 58.8 |
| 4:00 AM | 57.8 |
| 5:00 AM | 59.4 |
| 6:00 AM | 61.5 |
| 7:00 AM | 63.4 |
| 8:00 AM | 64.9 |
| 9:00 AM | 66.8 |
| 10:00 AM | 67.0 |
| 11:00 AM | 68.7 |
| 12:00 PM | 68.6 |
| 1:00 PM | 69.1 |
| 2:00 PM | 69.2 |
| 3:00 PM | 69.6 |
| 4:00 PM | 69.9 |
| 5:00 PM | 69.0 |
| 6:00 PM | 67.5 |
| 7:00 PM | 66.9 |
| 8:00 PM | 65.9 |
| 9:00 PM | 68.1 |
| 10:00 PM | 64.4 |
| 11:00 PM | 62.4 |
| CNEL, dB(A): | 71.4 |



NOTES:

Appendix D-2

- Construction Noise Calculations

Project: Golden Shore Master Plan

Construction Phase: Phase 1

Demolition

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Concrete Saw | 1 | 90 | | 20% | 200 | 0 |
| Cranes | 1 | 81 | | 40% | 200 | 0 |
| Compressors | 1 | 78 | | 50% | 200 | 0 |
| Other Equipment | 1 | 85 | | 50% | 200 | 0 |
| Tractor/Loader/Backhoe | 1 | 80 | | 50% | 200 | 0 |

Receptor: ***R2***

Results: **Hourly Leq: 75**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 1
Site Grading

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Water Trucks | 1 | 80 | | 10% | 400 | 0 |
| Excavator | 1 | 81 | | 40% | 400 | 0 |
| Graders | 1 | 85 | | 40% | 400 | 0 |
| Other Equipment | 1 | 85 | | 50% | 400 | 0 |
| Rubber Tired Loader | 1 | 79 | | 50% | 400 | 0 |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 400 | 0 |

Receptor: R2

Results: Hourly Leq: 68

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 1

Foundation

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 400 | 0 |
| Pumps | 1 | 81 | | 50% | 400 | 0 |
| Concrete Mixer Trucks | 1 | 79 | | 40% | 400 | 0 |
| Water Trucks | 1 | 80 | | 10% | 400 | 0 |
| Pile Driver (Sonic) | 1 | 96 | | 20% | 400 | 0 |
| Other Equipment | 1 | 85 | | 50% | 400 | 0 |

Receptor: ***R2***

Results: **Hourly Leq: 72**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 1

Building Construction

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|--------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Cement and Mortar Mixers | 1 | 79 | | 40% | 400 | 0 |
| Forklift | 1 | 75 | | 10% | 400 | 0 |
| Generator Sets | 1 | 81 | | 50% | 400 | 0 |
| Other Equipment | 1 | 85 | | 50% | 400 | 0 |
| Cranes | 1 | 81 | | 40% | 400 | 0 |
| Welders | 1 | 74 | | 40% | 400 | 0 |

Receptor: *R2*

Results: **Hourly Leq: 67**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 1

Demolition

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Concrete Saw | 1 | 90 | | 20% | 1500 | 10 |
| Cranes | 1 | 81 | | 40% | 1500 | 10 |
| Compressors | 1 | 78 | | 50% | 1500 | 10 |
| Other Equipment | 1 | 85 | | 50% | 1500 | 10 |
| Tractor/Loader/Backhoe | 1 | 80 | | 50% | 1500 | 10 |

Receptor: *R4*

Results: **Hourly Leq: 47**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 1
Site Grading

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Water Trucks | 1 | 80 | | 10% | 1500 | 10 |
| Excavator | 1 | 81 | | 40% | 1500 | 10 |
| Graders | 1 | 85 | | 40% | 1500 | 10 |
| Other Equipment | 1 | 85 | | 50% | 1500 | 10 |
| Rubber Tired Loader | 1 | 79 | | 50% | 1500 | 10 |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 1500 | 10 |

Receptor: *R4*

Results: **Hourly Leq: 47**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 1

Foundation

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 1500 | 10 |
| Pumps | 1 | 81 | | 50% | 1500 | 10 |
| Concrete Mixer Trucks | 1 | 79 | | 40% | 1500 | 10 |
| Water Trucks | 1 | 80 | | 10% | 1500 | 10 |
| Pile Driver (Sonic) | 1 | 96 | | 20% | 1500 | 10 |
| Other Equipment | 1 | 85 | | 50% | 1500 | 10 |

Receptor: *R4*

Results: **Hourly Leq: 51**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 1

Building Construction

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|--------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Cement and Mortar Mixers | 1 | 79 | | 40% | 1500 | 10 |
| Forklift | 1 | 75 | | 10% | 1500 | 10 |
| Generator Sets | 1 | 81 | | 50% | 1500 | 10 |
| Other Equipment | 1 | 85 | | 50% | 1500 | 10 |
| Cranes | 1 | 81 | | 40% | 1500 | 10 |
| Welders | 1 | 74 | | 40% | 1500 | 10 |

Receptor: *R4*

Results: **Hourly Leq: 45**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 1

Demolition

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Concrete Saw | 1 | 90 | | 20% | 800 | 5 |
| Cranes | 1 | 81 | | 40% | 800 | 5 |
| Compressors | 1 | 78 | | 50% | 800 | 5 |
| Other Equipment | 1 | 85 | | 50% | 800 | 5 |
| Tractor/Loader/Backhoe | 1 | 80 | | 50% | 800 | 5 |

Receptor: *R5*

Results: **Hourly Leq: 58**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 1
Site Grading

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Water Trucks | 1 | 80 | | 10% | 800 | 5 |
| Excavator | 1 | 81 | | 40% | 800 | 5 |
| Graders | 1 | 85 | | 40% | 800 | 5 |
| Other Equipment | 1 | 85 | | 50% | 800 | 5 |
| Rubber Tired Loader | 1 | 79 | | 50% | 800 | 5 |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 800 | 5 |

Receptor: *R5*

Results: **Hourly Leq: 57**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 1

Foundation

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 800 | 5 |
| Pumps | 1 | 81 | | 50% | 800 | 5 |
| Concrete Mixer Trucks | 1 | 79 | | 40% | 800 | 5 |
| Water Trucks | 1 | 80 | | 10% | 800 | 5 |
| Pile Driver (Sonic) | 1 | 96 | | 20% | 800 | 5 |
| Other Equipment | 1 | 85 | | 50% | 800 | 5 |

Receptor: ***R5***

Results: **Hourly Leq: 61**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan
Construction Phase: Phase 1
Building Construction
Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|--------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Cement and Mortar Mixers | 1 | 79 | | 40% | 800 | 5 |
| Forklift | 1 | 75 | | 10% | 800 | 5 |
| Generator Sets | 1 | 81 | | 50% | 800 | 5 |
| Other Equipment | 1 | 85 | | 50% | 800 | 5 |
| Cranes | 1 | 81 | | 40% | 800 | 5 |
| Welders | 1 | 74 | | 40% | 800 | 5 |

Receptor: *R5*
Results: Hourly Leq: 56

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 1

Demolition

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Concrete Saw | 1 | 90 | | 20% | 150 | 0 |
| Cranes | 1 | 81 | | 40% | 150 | 0 |
| Compressors | 1 | 78 | | 50% | 150 | 0 |
| Other Equipment | 1 | 85 | | 50% | 150 | 0 |
| Tractor/Loader/Backhoe | 1 | 80 | | 50% | 150 | 0 |

Receptor: *R6*

Results: **Hourly Leq:** **77**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 1
Site Grading

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Water Trucks | 1 | 80 | | 10% | 150 | 0 |
| Excavator | 1 | 81 | | 40% | 150 | 0 |
| Graders | 1 | 85 | | 40% | 150 | 0 |
| Other Equipment | 1 | 85 | | 50% | 150 | 0 |
| Rubber Tired Loader | 1 | 79 | | 50% | 150 | 0 |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 150 | 0 |

Receptor: *R6*

Results: **Hourly Leq:** **77**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 1

Foundation

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 150 | 0 |
| Pumps | 1 | 81 | | 50% | 150 | 0 |
| Concrete Mixer Trucks | 1 | 79 | | 40% | 150 | 0 |
| Water Trucks | 1 | 80 | | 10% | 150 | 0 |
| Pile Driver (Sonic) | 1 | 96 | | 20% | 150 | 0 |
| Other Equipment | 1 | 85 | | 50% | 150 | 0 |

Receptor: ***R6***

Results: **Hourly Leq: 81**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 1

Building Construction

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|--------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Cement and Mortar Mixers | 1 | 79 | | 40% | 200 | 0 |
| Forklift | 1 | 75 | | 10% | 200 | 0 |
| Generator Sets | 1 | 81 | | 50% | 200 | 0 |
| Other Equipment | 1 | 85 | | 50% | 200 | 0 |
| Cranes | 1 | 81 | | 40% | 200 | 0 |
| Welders | 1 | 74 | | 40% | 200 | 0 |

Receptor: ***R6***

Results: **Hourly Leq: 73**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 2
Site Grading

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Water Trucks | 1 | 80 | | 10% | 200 | 0 |
| Excavator | 1 | 81 | | 40% | 200 | 0 |
| Graders | 1 | 85 | | 40% | 200 | 0 |
| Other Equipment | 1 | 85 | | 50% | 200 | 0 |
| Rubber Tired Loader | 1 | 79 | | 50% | 200 | 0 |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 200 | 0 |

Receptor: *R2*

Results: **Hourly Leq: 74**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 2
Foundation

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 200 | 0 |
| Pumps | 1 | 81 | | 50% | 200 | 0 |
| Concrete Mixer Trucks | 1 | 79 | | 40% | 200 | 0 |
| Water Trucks | 1 | 80 | | 10% | 200 | 0 |
| Pile Driver (Sonic) | 1 | 96 | | 20% | 200 | 0 |
| Other Equipment | 1 | 85 | | 50% | 200 | 0 |

Receptor: ***R2***

Results: **Hourly Leq: 78**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 2

Building Construction

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|--------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Cement and Mortar Mixers | 1 | 79 | | 40% | 200 | 0 |
| Forklift | 1 | 75 | | 10% | 200 | 0 |
| Generator Sets | 1 | 81 | | 50% | 200 | 0 |
| Other Equipment | 1 | 85 | | 50% | 200 | 0 |
| Cranes | 1 | 81 | | 40% | 200 | 0 |
| Welders | 1 | 74 | | 40% | 200 | 0 |

Receptor: *R2*

Results: **Hourly Leq: 73**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 2
Site Grading

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Water Trucks | 1 | 80 | | 10% | 1500 | 10 |
| Excavator | 1 | 81 | | 40% | 1500 | 10 |
| Graders | 1 | 85 | | 40% | 1500 | 10 |
| Other Equipment | 1 | 85 | | 50% | 1500 | 10 |
| Rubber Tired Loader | 1 | 79 | | 50% | 1500 | 10 |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 1500 | 10 |

Receptor: *R4*

Results: **Hourly Leq: 47**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 2
Foundation

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 1500 | 10 |
| Pumps | 1 | 81 | | 50% | 1500 | 10 |
| Concrete Mixer Trucks | 1 | 79 | | 40% | 1500 | 10 |
| Water Trucks | 1 | 80 | | 10% | 1500 | 10 |
| Pile Driver (Sonic) | 1 | 96 | | 20% | 1500 | 10 |
| Other Equipment | 1 | 85 | | 50% | 1500 | 10 |

Receptor: *R4*

Results: **Hourly Leq: 51**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 2

Building Construction

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|--------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Cement and Mortar Mixers | 1 | 79 | | 40% | 1500 | 10 |
| Forklift | 1 | 75 | | 10% | 1500 | 10 |
| Generator Sets | 1 | 81 | | 50% | 1500 | 10 |
| Other Equipment | 1 | 85 | | 50% | 1500 | 10 |
| Cranes | 1 | 81 | | 40% | 1500 | 10 |
| Welders | 1 | 74 | | 40% | 1500 | 10 |

Receptor: *R4*

Results: **Hourly Leq: 45**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 2
Site Grading

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Water Trucks | 1 | 80 | | 10% | 1000 | 5 |
| Excavator | 1 | 81 | | 40% | 1000 | 5 |
| Graders | 1 | 85 | | 40% | 1000 | 5 |
| Other Equipment | 1 | 85 | | 50% | 1000 | 5 |
| Rubber Tired Loader | 1 | 79 | | 50% | 1000 | 5 |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 1000 | 5 |

Receptor: R5

Results: Hourly Leq: 55

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 2
Foundation

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 1000 | 5 |
| Pumps | 1 | 81 | | 50% | 1000 | 5 |
| Concrete Mixer Trucks | 1 | 79 | | 40% | 1000 | 5 |
| Water Trucks | 1 | 80 | | 10% | 1000 | 5 |
| Pile Driver (Sonic) | 1 | 96 | | 20% | 1000 | 5 |
| Other Equipment | 1 | 85 | | 50% | 1000 | 5 |

Receptor: ***R5***

Results: **Hourly Leq: 59**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 2

Building Construction

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|--------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Cement and Mortar Mixers | 1 | 79 | | 40% | 1000 | 5 |
| Forklift | 1 | 75 | | 10% | 1000 | 5 |
| Generator Sets | 1 | 81 | | 50% | 1000 | 5 |
| Other Equipment | 1 | 85 | | 50% | 1000 | 5 |
| Cranes | 1 | 81 | | 40% | 1000 | 5 |
| Welders | 1 | 74 | | 40% | 1000 | 5 |

Receptor: *R5*

Results: **Hourly Leq: 54**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 2
Site Grading

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Water Trucks | 1 | 80 | | 10% | 400 | 5 |
| Excavator | 1 | 81 | | 40% | 400 | 5 |
| Graders | 1 | 85 | | 40% | 400 | 5 |
| Other Equipment | 1 | 85 | | 50% | 400 | 5 |
| Rubber Tired Loader | 1 | 79 | | 50% | 400 | 5 |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 400 | 5 |

Receptor: R6

Results: Hourly Leq: 63

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 2

Foundation

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 400 | 5 |
| Pumps | 1 | 81 | | 50% | 400 | 5 |
| Concrete Mixer Trucks | 1 | 79 | | 40% | 400 | 5 |
| Water Trucks | 1 | 80 | | 10% | 400 | 5 |
| Pile Driver (Sonic) | 1 | 96 | | 20% | 400 | 5 |
| Other Equipment | 1 | 85 | | 50% | 400 | 5 |

Receptor: ***R6***

Results: **Hourly Leq:** **67**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 2

Building Construction

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|--------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Cement and Mortar Mixers | 1 | 79 | | 40% | 400 | 5 |
| Forklift | 1 | 75 | | 10% | 400 | 5 |
| Generator Sets | 1 | 81 | | 50% | 400 | 5 |
| Other Equipment | 1 | 85 | | 50% | 400 | 5 |
| Cranes | 1 | 81 | | 40% | 400 | 5 |
| Welders | 1 | 74 | | 40% | 400 | 5 |

Receptor: *R6*

Results: **Hourly Leq: 62**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 3
Demolition

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Concrete Saw | 1 | 90 | | 20% | 350 | 5 |
| Rubber Tired Loader | 1 | 79 | | 50% | 350 | 5 |
| Compressors | 1 | 78 | | 50% | 350 | 5 |
| Other Equipment | 1 | 85 | | 50% | 350 | 5 |
| Tractor/Loader/Backhoe | 1 | 80 | | 50% | 350 | 5 |

Receptor: *R2*

Results: **Hourly Leq: 65**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 3
Site Grading

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Water Trucks | 1 | 80 | | 10% | 350 | 5 |
| Excavator | 1 | 81 | | 40% | 350 | 5 |
| Graders | 1 | 85 | | 40% | 350 | 5 |
| Other Equipment | 1 | 85 | | 50% | 350 | 5 |
| Rubber Tired Loader | 1 | 79 | | 50% | 350 | 5 |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 350 | 5 |

Receptor: *R2*

Results: **Hourly Leq: 64**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 3

Foundation

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 350 | 5 |
| Pumps | 1 | 81 | | 50% | 350 | 5 |
| Concrete Mixer Trucks | 1 | 79 | | 40% | 350 | 5 |
| Water Trucks | 1 | 80 | | 10% | 350 | 5 |
| Pile Driver (Sonic) | 1 | 96 | | 20% | 350 | 5 |
| Other Equipment | 1 | 85 | | 50% | 350 | 5 |

Receptor: *R2*

Results: **Hourly Leq: 69**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 3

Building Construction

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|--------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Cement and Mortar Mixers | 1 | 79 | | 40% | 350 | 5 |
| Forklift | 1 | 75 | | 10% | 350 | 5 |
| Generator Sets | 1 | 81 | | 50% | 350 | 5 |
| Other Equipment | 1 | 85 | | 50% | 350 | 5 |
| Cranes | 1 | 81 | | 40% | 350 | 5 |
| Welders | 1 | 74 | | 40% | 350 | 5 |

Receptor: *R2*

Results: **Hourly Leq: 63**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 3
Demolition

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Concrete Saw | 1 | 90 | | 20% | 1200 | 10 |
| Rubber Tired Loader | 1 | 79 | | 50% | 1200 | 10 |
| Compressors | 1 | 78 | | 50% | 1200 | 10 |
| Other Equipment | 1 | 85 | | 50% | 1200 | 10 |
| Tractor/Loader/Backhoe | 1 | 80 | | 50% | 1200 | 10 |

Receptor: *R4*

Results: **Hourly Leq: 49**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 3
Site Grading

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Water Trucks | 1 | 80 | | 10% | 1200 | 10 |
| Excavator | 1 | 81 | | 40% | 1200 | 10 |
| Graders | 1 | 85 | | 40% | 1200 | 10 |
| Other Equipment | 1 | 85 | | 50% | 1200 | 10 |
| Rubber Tired Loader | 1 | 79 | | 50% | 1200 | 10 |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 1200 | 10 |

Receptor: *R4*

Results: **Hourly Leq: 49**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 3

Foundation

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 1200 | 10 |
| Pumps | 1 | 81 | | 50% | 1200 | 10 |
| Concrete Mixer Trucks | 1 | 79 | | 40% | 1200 | 10 |
| Water Trucks | 1 | 80 | | 10% | 1200 | 10 |
| Pile Driver (Sonic) | 1 | 96 | | 20% | 1200 | 10 |
| Other Equipment | 1 | 85 | | 50% | 1200 | 10 |

Receptor: ***R4***

Results: **Hourly Leq: 53**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 3

Building Construction

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|--------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Cement and Mortar Mixers | 1 | 79 | | 40% | 1200 | 10 |
| Forklift | 1 | 75 | | 10% | 1200 | 10 |
| Generator Sets | 1 | 81 | | 50% | 1200 | 10 |
| Other Equipment | 1 | 85 | | 50% | 1200 | 10 |
| Cranes | 1 | 81 | | 40% | 1200 | 10 |
| Welders | 1 | 74 | | 40% | 1200 | 10 |

Receptor: *R4*

Results: **Hourly Leq: 47**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 3

Demolition

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Concrete Saw | 1 | 90 | | 20% | 800 | 10 |
| Rubber Tired Loader | 1 | 79 | | 50% | 800 | 10 |
| Compressors | 1 | 78 | | 50% | 800 | 10 |
| Other Equipment | 1 | 85 | | 50% | 800 | 10 |
| Tractor/Loader/Backhoe | 1 | 80 | | 50% | 800 | 10 |

Receptor: *R5*

Results: **Hourly Leq: 53**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 3
Site Grading

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Water Trucks | 1 | 80 | | 10% | 800 | 10 |
| Excavator | 1 | 81 | | 40% | 800 | 10 |
| Graders | 1 | 85 | | 40% | 800 | 10 |
| Other Equipment | 1 | 85 | | 50% | 800 | 10 |
| Rubber Tired Loader | 1 | 79 | | 50% | 800 | 10 |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 800 | 10 |

Receptor: *R5*

Results: **Hourly Leq: 52**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 3

Foundation

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 900 | 10 |
| Pumps | 1 | 81 | | 50% | 900 | 10 |
| Concrete Mixer Trucks | 1 | 79 | | 40% | 900 | 10 |
| Water Trucks | 1 | 80 | | 10% | 900 | 10 |
| Pile Driver (Sonic) | 1 | 96 | | 20% | 900 | 10 |
| Other Equipment | 1 | 85 | | 50% | 900 | 10 |

Receptor: ***R5***

Results: **Hourly Leq: 55**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 3

Building Construction

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|--------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Cement and Mortar Mixers | 1 | 79 | | 40% | 900 | 10 |
| Forklift | 1 | 75 | | 10% | 900 | 10 |
| Generator Sets | 1 | 81 | | 50% | 900 | 10 |
| Other Equipment | 1 | 85 | | 50% | 900 | 10 |
| Cranes | 1 | 81 | | 40% | 900 | 10 |
| Welders | 1 | 74 | | 40% | 900 | 10 |

Receptor: *R5*

Results: **Hourly Leq: 50**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 3
Demolition

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Concrete Saw | 1 | 90 | | 20% | 180 | 0 |
| Rubber Tired Loader | 1 | 79 | | 50% | 180 | 0 |
| Compressors | 1 | 78 | | 50% | 180 | 0 |
| Other Equipment | 1 | 85 | | 50% | 180 | 0 |
| Tractor/Loader/Backhoe | 1 | 80 | | 50% | 180 | 0 |

Receptor: ***R6***

Results: **Hourly Leq: 76**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 3
Site Grading

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Water Trucks | 1 | 80 | | 10% | 150 | 0 |
| Excavator | 1 | 81 | | 40% | 150 | 0 |
| Graders | 1 | 85 | | 40% | 150 | 0 |
| Other Equipment | 1 | 85 | | 50% | 150 | 0 |
| Rubber Tired Loader | 1 | 79 | | 50% | 150 | 0 |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 150 | 0 |

Receptor: *R6*

Results: **Hourly Leq:** **77**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 3

Foundation

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Tractor/Loader/Backhoe | 1 | 80 | | 40% | 200 | 0 |
| Pumps | 1 | 81 | | 50% | 200 | 0 |
| Concrete Mixer Trucks | 1 | 79 | | 40% | 200 | 0 |
| Water Trucks | 1 | 80 | | 10% | 200 | 0 |
| Pile Driver (Sonic) | 1 | 96 | | 20% | 200 | 0 |
| Other Equipment | 1 | 85 | | 50% | 200 | 0 |

Receptor: ***R6***

Results: **Hourly Leq: 78**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: Golden Shore Master Plan

Construction Phase: Phase 3

Building Construction

Equipment

| Description | No. of Equip. | Reference Noise | | Acoustical Usage Factor | Distance to Receptor, ft | Estimated Noise Shielding, dBA |
|--------------------------|---------------|---------------------|--|-------------------------|--------------------------|--------------------------------|
| | | Level at 50ft, Lmax | | | | |
| Cement and Mortar Mixers | 1 | 79 | | 40% | 200 | 0 |
| Forklift | 1 | 75 | | 10% | 200 | 0 |
| Generator Sets | 1 | 81 | | 50% | 200 | 0 |
| Other Equipment | 1 | 85 | | 50% | 200 | 0 |
| Cranes | 1 | 81 | | 40% | 200 | 0 |
| Welders | 1 | 74 | | 40% | 200 | 0 |

Receptor: ***R6***

Results: **Hourly Leq:** **73**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Appendix D-3

- Off-Site Traffic Noise Calculations

Roadway Traffic Noise Calculations



Project: Long Beach Master Plan

| Existing | | | | | | | | | | |
|---|-----------|-----------------|------|-----|------|---------|---------|------|---------|---------|
| Roadway/Segment | Speed MPH | Traffic Volumes | | | Leq | | | CNEL | | |
| | | AM | PM | ADT | ROW | 25 Feet | 50 Feet | ROW | 25 Feet | 50 Feet |
| Golden Ave./Golden Shore n/o Ocean Blvd. | 30 | 780 | 1039 | 0 | 66.4 | 63.4 | 61.6 | 67.6 | 64.6 | 62.8 |
| Golden Shore between Ocean Blvd. and Seaside Way | 30 | 454 | 858 | 0 | 65.5 | 62.6 | 60.8 | 66.8 | 63.8 | 62.0 |
| Golden Shore between Seaside Way and I-710 SB Off-Ramp | 30 | 563 | 497 | 0 | 63.7 | 60.7 | 59.0 | 64.9 | 61.9 | 60.2 |
| Golden Shore between I-710 SB Off-Ramp and EB Shoreline Dr. C | 30 | 509 | 510 | 0 | 63.3 | 60.3 | 58.5 | 64.5 | 61.5 | 59.8 |
| | 0 | | | 0 | - | - | - | - | - | - |
| Future No Project | | | | | | | | | | |
| Roadway/Segment | Speed MPH | Traffic Volumes | | | Leq | | | CNEL | | |
| | | AM | PM | ADT | ROW | 25 Feet | 50 Feet | ROW | 25 Feet | 50 Feet |
| Golden Ave./Golden Shore n/o Ocean Blvd. | 30 | 1058 | 1292 | 0 | 67.3 | 64.3 | 62.6 | 68.5 | 65.5 | 63.8 |
| Golden Shore between Ocean Blvd. and Seaside Way | 30 | 536 | 1002 | 0 | 66.2 | 63.2 | 61.5 | 67.4 | 64.4 | 62.7 |
| Golden Shore between Seaside Way and I-710 SB Off-Ramp | 30 | 655 | 576 | 0 | 64.4 | 61.4 | 59.6 | 65.6 | 62.6 | 60.8 |
| Golden Shore between I-710 SB Off-Ramp and EB Shoreline Dr. C | 30 | 570 | 570 | 0 | 63.8 | 60.8 | 59.0 | 65.0 | 62.0 | 60.2 |
| | 0 | | | 0 | - | - | - | - | - | - |
| Future With Project | | | | | | | | | | |
| Roadway/Segment | Speed MPH | Traffic Volumes | | | Leq | | | CNEL | | |
| | | AM | PM | ADT | ROW | 25 Feet | 50 Feet | ROW | 25 Feet | 50 Feet |
| Golden Ave./Golden Shore n/o Ocean Blvd. | 30 | 1205 | 1397 | 0 | 67.7 | 64.7 | 62.9 | 68.9 | 65.9 | 64.1 |
| Golden Shore between Ocean Blvd. and Seaside Way | 30 | 820 | 1244 | 0 | 67.2 | 64.2 | 62.4 | 68.4 | 65.4 | 63.6 |
| Golden Shore between Seaside Way and I-710 SB Off-Ramp | 30 | 796 | 783 | 0 | 65.2 | 62.2 | 60.5 | 66.4 | 63.4 | 61.7 |
| Golden Shore between I-710 SB Off-Ramp and EB Shoreline Dr. C | 30 | 630 | 640 | 0 | 64.3 | 61.3 | 59.5 | 65.5 | 62.5 | 60.7 |
| | 0 | | | 0 | - | - | - | - | - | - |

| Summary | CNEL | | | |
|---|-------------------|----------------------|-------------------|----------------------|
| | 25 ft. from ROW | | At ROW | |
| | Project Increment | Cumulative Increment | Project Increment | Cumulative Increment |
| Roadway/Segment | | | | |
| Golden Ave./Golden Shore n/o Ocean Blvd. | 0.4 | 1.3 | 0.4 | 1.3 |
| Golden Shore between Ocean Blvd. and Seaside Way | 1.0 | 1.6 | 1.0 | 1.6 |
| Golden Shore between Seaside Way and I-710 SB Off-Ramp | 0.8 | 1.5 | 0.8 | 1.5 |
| Golden Shore between I-710 SB Off-Ramp and EB Shoreline Dr. C | 0.5 | 1.0 | 0.5 | 1.0 |
| | - | - | - | - |

| Vehicle Type | % of ADT | | | Sub total |
|--------------|----------|--------|--------|-----------|
| | Day | Eve | Night | |
| Auto | 77.60% | 9.70% | 9.70% | 97.00% |
| Medium Truck | 1.60% | 0.20% | 0.20% | 2.00% |
| Heavy Truck | 0.80% | 0.10% | 0.10% | 1.00% |
| | 80.00% | 10.00% | 10.00% | 100.00% |

Roadway Traffic Noise Calculations



Project: Long Beach Master Plan

| Existing | | | | | | | | | | |
|--|-----------|-----------------|------|-----|------|---------|---------|------|---------|---------|
| Roadway/Segment | Speed MPH | Traffic Volumes | | | Leq | | | CNEL | | |
| | | AM | PM | ADT | ROW | 25 Feet | 50 Feet | ROW | 25 Feet | 50 Feet |
| Ocean Blvd. w/o Golden Shore | 45 | 2437 | 3016 | 0 | 72.4 | 70.4 | 69.0 | 73.6 | 71.6 | 70.2 |
| Ocean Blvd. between Golden Shore and Magnolia Ave. | 30 | 3080 | 3489 | 0 | 69.4 | 67.4 | 66.0 | 70.6 | 68.6 | 67.2 |
| Ocean Blvd. between Magnolia Ave. and Chestnut Pl. | 30 | 2885 | 3450 | 0 | 69.4 | 67.3 | 66.0 | 70.6 | 68.6 | 67.2 |
| Ocean Blvd. between Chestnut Pl. and Pacific Ave. | 30 | 2942 | 3508 | 0 | 69.4 | 67.4 | 66.0 | 70.7 | 68.6 | 67.3 |
| | 0 | 0 | | 0 | - | - | - | - | - | - |
| Future No Project | | | | | | | | | | |
| Roadway/Segment | Speed MPH | Traffic Volumes | | | Leq | | | CNEL | | |
| | | AM | PM | ADT | ROW | 25 Feet | 50 Feet | ROW | 25 Feet | 50 Feet |
| Ocean Blvd. w/o Golden Shore | 45 | 2738 | 3389 | 0 | 72.9 | 70.9 | 69.5 | 74.2 | 72.1 | 70.8 |
| Ocean Blvd. between Golden Shore and Magnolia Ave. | 30 | 3643 | 4047 | 0 | 70.1 | 68.0 | 66.7 | 71.3 | 69.2 | 67.9 |
| Ocean Blvd. between Magnolia Ave. and Chestnut Pl. | 30 | 3502 | 4150 | 0 | 70.2 | 68.1 | 66.8 | 71.4 | 69.4 | 68.0 |
| Ocean Blvd. between Chestnut Pl. and Pacific Ave. | 30 | 3546 | 4190 | 0 | 70.2 | 68.2 | 66.8 | 71.4 | 69.4 | 68.0 |
| | 0 | 0 | | 0 | - | - | - | - | - | - |
| Future With Project | | | | | | | | | | |
| Roadway/Segment | Speed MPH | Traffic Volumes | | | Leq | | | CNEL | | |
| | | AM | PM | ADT | ROW | 25 Feet | 50 Feet | ROW | 25 Feet | 50 Feet |
| Ocean Blvd. w/o Golden Shore | 45 | 2823 | 3477 | 0 | 73.1 | 71.0 | 69.7 | 74.3 | 72.2 | 70.9 |
| Ocean Blvd. between Golden Shore and Magnolia Ave. | 30 | 3813 | 4231 | 0 | 70.3 | 68.2 | 66.9 | 71.5 | 69.4 | 68.1 |
| Ocean Blvd. between Magnolia Ave. and Chestnut Pl. | 30 | 3553 | 4208 | 0 | 70.2 | 68.2 | 66.8 | 71.4 | 69.4 | 68.0 |
| Ocean Blvd. between Chestnut Pl. and Pacific Ave. | 30 | 3678 | 4327 | 0 | 70.3 | 68.3 | 66.9 | 71.6 | 69.5 | 68.2 |
| | 0 | 0 | | 0 | - | - | - | - | - | - |

| Summary | CNEL | | | |
|--|-------------------|----------------------|-------------------|----------------------|
| | 25 ft. from ROW | | At ROW | |
| | Project Increment | Cumulative Increment | Project Increment | Cumulative Increment |
| Roadway/Segment | | | | |
| Ocean Blvd. w/o Golden Shore | 0.1 | 0.6 | 0.1 | 0.7 |
| Ocean Blvd. between Golden Shore and Magnolia Ave. | 0.2 | 0.8 | 0.2 | 0.9 |
| Ocean Blvd. between Magnolia Ave. and Chestnut Pl. | 0.0 | 0.8 | 0.0 | 0.8 |
| Ocean Blvd. between Chestnut Pl. and Pacific Ave. | 0.1 | 0.9 | 0.2 | 0.9 |
| | 0 | - | - | - |

| Vehicle Type | % of ADT | | | Sub total |
|--------------|----------|--------|--------|-----------|
| | Day | Eve | Night | |
| Auto | 77.60% | 9.70% | 9.70% | 97.00% |
| Medium Truck | 1.60% | 0.20% | 0.20% | 2.00% |
| Heavy Truck | 0.80% | 0.10% | 0.10% | 1.00% |
| | 80.00% | 10.00% | 10.00% | 100.00% |

Roadway Traffic Noise Calculations



Project: Long Beach Master Plan

| Existing | | | | | | | | | | |
|--|-----------|-----------------|------|-----|------|---------|---------|------|---------|---------|
| Roadway/Segment | Speed MPH | Traffic Volumes | | | Leq | | | CNEL | | |
| | | AM | PM | ADT | ROW | 25 Feet | 50 Feet | ROW | 25 Feet | 50 Feet |
| Magnolia Blvd. between 3rd St. and 5th St. | 25 | 660 | 739 | 0 | 63.3 | 60.3 | 58.6 | 64.5 | 61.5 | 59.8 |
| Magnolia Blvd. between 5th St. and 6th St. | 25 | 679 | 815 | 0 | 63.7 | 60.7 | 59.0 | 64.9 | 62.0 | 60.2 |
| Magnolia Blvd. n/o 6th St. | 25 | 730 | 859 | 0 | 63.9 | 61.0 | 59.2 | 65.2 | 62.2 | 60.4 |
| Chestnut Pl. between Seaside Wy. and Ocean Blvd. | 25 | 198 | 203 | 0 | 59.7 | 55.6 | 53.5 | 60.9 | 56.8 | 54.7 |
| Seaside Way w/o Chestnut Pl. | 25 | 241 | 330 | 0 | 59.8 | 56.8 | 55.1 | 61.0 | 58.0 | 56.3 |
| Future No Project | | | | | | | | | | |
| Roadway/Segment | Speed MPH | Traffic Volumes | | | Leq | | | CNEL | | |
| | | AM | PM | ADT | ROW | 25 Feet | 50 Feet | ROW | 25 Feet | 50 Feet |
| Magnolia Blvd. between 3rd St. and 5th St. | 25 | 860 | 966 | 0 | 64.5 | 61.5 | 59.7 | 65.7 | 62.7 | 60.9 |
| Magnolia Blvd. between 5th St. and 6th St. | 25 | 886 | 1062 | 0 | 64.9 | 61.9 | 60.1 | 66.1 | 63.1 | 61.4 |
| Magnolia Blvd. n/o 6th St. | 25 | 943 | 1108 | 0 | 65.1 | 62.1 | 60.3 | 66.3 | 63.3 | 61.5 |
| Chestnut Pl. between Seaside Wy. and Ocean Blvd. | 25 | 264 | 274 | 0 | 61.0 | 56.9 | 54.8 | 62.2 | 58.1 | 56.0 |
| Seaside Way w/o Chestnut Pl. | 25 | 270 | 370 | 0 | 60.3 | 57.3 | 55.6 | 61.5 | 58.5 | 56.8 |
| Future With Project | | | | | | | | | | |
| Roadway/Segment | Speed MPH | Traffic Volumes | | | Leq | | | CNEL | | |
| | | AM | PM | ADT | ROW | 25 Feet | 50 Feet | ROW | 25 Feet | 50 Feet |
| Magnolia Blvd. between 3rd St. and 5th St. | 25 | 977 | 1090 | 0 | 65.0 | 62.0 | 60.3 | 66.2 | 63.2 | 61.5 |
| Magnolia Blvd. between 5th St. and 6th St. | 25 | 1002 | 1185 | 0 | 65.3 | 62.4 | 60.6 | 66.6 | 63.6 | 61.8 |
| Magnolia Blvd. n/o 6th St. | 25 | 1013 | 1191 | 0 | 65.4 | 62.4 | 60.6 | 66.6 | 63.6 | 61.9 |
| Chestnut Pl. between Seaside Wy. and Ocean Blvd. | 25 | 346 | 353 | 0 | 62.1 | 58.0 | 55.9 | 63.3 | 59.2 | 57.2 |
| Seaside Way w/o Chestnut Pl. | 25 | 460 | 558 | 0 | 62.1 | 59.1 | 57.4 | 63.3 | 60.3 | 58.6 |

| Summary | CNEL | | | |
|--|-------------------|----------------------|-------------------|----------------------|
| | 25 ft. from ROW | | At ROW | |
| | Project Increment | Cumulative Increment | Project Increment | Cumulative Increment |
| Roadway/Segment | | | | |
| Magnolia Blvd. between 3rd St. and 5th St. | 0.5 | 1.7 | 0.5 | 1.7 |
| Magnolia Blvd. between 5th St. and 6th St. | 0.5 | 1.6 | 0.5 | 1.7 |
| Magnolia Blvd. n/o 6th St. | 0.3 | 1.4 | 0.3 | 1.4 |
| Chestnut Pl. between Seaside Wy. and Ocean Blvd. | 1.1 | 2.4 | 1.1 | 2.4 |
| Seaside Way w/o Chestnut Pl. | 1.8 | 2.3 | 1.8 | 2.3 |

| Vehicle Type | % of ADT | | | Sub total |
|--------------|----------|--------|--------|-----------|
| | Day | Eve | Night | |
| Auto | 77.60% | 9.70% | 9.70% | 97.00% |
| Medium Truck | 1.60% | 0.20% | 0.20% | 2.00% |
| Heavy Truck | 0.80% | 0.10% | 0.10% | 1.00% |
| | 80.00% | 10.00% | 10.00% | 100.00% |

Roadway Traffic Noise Calculations



Project: Long Beach Master Plan

| Existing | | | | | | | | | | |
|--|-----------|-----------------|------|-----|------|---------|---------|------|---------|---------|
| Roadway/Segment | Speed MPH | Traffic Volumes | | | Leq | | | CNEL | | |
| | | AM | PM | ADT | ROW | 25 Feet | 50 Feet | ROW | 25 Feet | 50 Feet |
| Alamitos Ave. between Ocean Blvd. and Broadway | 30 | 1243 | 1407 | 0 | 66.5 | 64.1 | 62.5 | 67.7 | 65.3 | 63.7 |
| Alamitos Ave. between Broadway and 4th St. | 30 | 1417 | 1878 | 0 | 67.8 | 65.3 | 63.8 | 69.0 | 66.5 | 65.0 |
| Alamitos Ave. n/o 4th St. | 30 | 1418 | 1760 | 0 | 67.5 | 65.0 | 63.5 | 68.7 | 66.3 | 64.7 |
| 0 | 0 | | | 0 | - | - | - | - | - | - |
| 0 | 0 | | | 0 | - | - | - | - | - | - |
| Future No Project | | | | | | | | | | |
| Roadway/Segment | Speed MPH | Traffic Volumes | | | Leq | | | CNEL | | |
| | | AM | PM | ADT | ROW | 25 Feet | 50 Feet | ROW | 25 Feet | 50 Feet |
| Alamitos Ave. between Ocean Blvd. and Broadway | 30 | 1450 | 1411 | 0 | 66.6 | 64.2 | 62.6 | 67.9 | 65.4 | 63.9 |
| Alamitos Ave. between Broadway and 4th St. | 30 | 1657 | 1510 | 0 | 67.2 | 64.8 | 63.2 | 68.4 | 66.0 | 64.4 |
| Alamitos Ave. n/o 4th St. | 30 | 1681 | 2083 | 0 | 68.2 | 65.8 | 64.2 | 69.4 | 67.0 | 65.4 |
| 0 | 0 | | | 0 | - | - | - | - | - | - |
| 0 | 0 | | | 0 | - | - | - | - | - | - |
| Future With Project | | | | | | | | | | |
| Roadway/Segment | Speed MPH | Traffic Volumes | | | Leq | | | CNEL | | |
| | | AM | PM | ADT | ROW | 25 Feet | 50 Feet | ROW | 25 Feet | 50 Feet |
| Alamitos Ave. between Ocean Blvd. and Broadway | 30 | 1599 | 1815 | 0 | 67.6 | 65.2 | 63.6 | 68.8 | 66.4 | 64.8 |
| Alamitos Ave. between Broadway and 4th St. | 30 | 1806 | 2341 | 0 | 68.7 | 66.3 | 64.7 | 69.9 | 67.5 | 65.9 |
| Alamitos Ave. n/o 4th St. | 30 | 1829 | 2238 | 0 | 68.5 | 66.1 | 64.5 | 69.7 | 67.3 | 65.7 |
| 0 | 0 | | | 0 | - | - | - | - | - | - |
| 0 | 0 | | | 0 | - | - | - | - | - | - |

| Summary | CNEL | | | |
|--|-------------------|----------------------|-------------------|----------------------|
| | 25 ft. from ROW | | At ROW | |
| | Project Increment | Cumulative Increment | Project Increment | Cumulative Increment |
| Roadway/Segment | | | | |
| Alamitos Ave. between Ocean Blvd. and Broadway | 1.0 | 1.1 | 0.9 | 1.1 |
| Alamitos Ave. between Broadway and 4th St. | 1.5 | 1.0 | 1.5 | 0.9 |
| Alamitos Ave. n/o 4th St. | 0.3 | 1.0 | 0.3 | 1.0 |
| 0 | - | - | - | - |
| 0 | - | - | - | - |

| Vehicle Type | % of ADT | | | Sub total |
|--------------|----------|--------|--------|-----------|
| | Day | Eve | Night | |
| Auto | 77.60% | 9.70% | 9.70% | 97.00% |
| Medium Truck | 1.60% | 0.20% | 0.20% | 2.00% |
| Heavy Truck | 0.80% | 0.10% | 0.10% | 1.00% |
| | 80.00% | 10.00% | 10.00% | 100.00% |