# Appendix I
# Noise

Existing Conditions Noise Contours Result Summary Table

| Roadway | Segment | Daily Traffic Volumes | Noise level at 50 feet (dBA CNEL) | Distance to noise contour (feet) | | |
|---|---|---|---|---|---|---|
| | | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL |
| 19th Street | West of Placentia Ave | 14,980 | 69.3 | 37 | 117 | 371 |
| 19th Street | Placentia Ave to Harbor Blvd. | 23,100 | 71.2 | 57 | 181 | 573 |
| Hamilton Avenue | West of Magnolia St | 9,360 | 68.5 | 31 | 98 | 310 |
| Hamilton Avenue | Magnolia St to Bushard Av | 12,480 | 69.7 | 41 | 131 | 414 |
| Hamilton Avenue | Bushard Ave to Brookhurst Street | 17,680 | 71.3 | 59 | 185 | 586 |
| 17th Street | West of Monrovia Ave | 5,250 | 63.1 | 9 | 30 | 95 |
| 15th Street | West of Placentia Ave | 4,700 | 62.3 | 8 | 27 | 85 |
| West Coast Highway | Brookhurst St to Prospect St | 39,390 | 71.4 | 131 | 413 | 1,307 |
| West Coast Highway | Prospect St to Superior Ave | 32,320 | 70.5 | 107 | 339 | 1,072 |
| West Coast Highway | Superior Ave to Newport Blvd | 40,400 | 71.5 | 134 | 424 | 1,340 |
| West Coast Highway | East of Dover Dr | 51,510 | 72.7 | 171 | 540 | 1,709 |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: 19th Street
Segment: West of Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 14,980 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

**CALCULATION AREA**

| | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 979 | 10 | 10 | 343 | 3 | 3 | 212 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.4 | -21.3 | -21.3 | -6.0 | -25.9 | -25.9 | -8.1 | -28.0 | -28.0 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.4 | 55.5 | 60.3 | 61.9 | 50.9 | 55.8 | 59.8 | 48.8 | 53.7 |
| VEHICULAR NOISE | DAY= | 67.7 | Leq | EVENING= | 63.1 | Leq | NIGHT= | 61.0 | Leq |

**RESULTS**

NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): **Ldn= 69.0**, **CNEL= 69.3**

| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
|---|---|---|---|---|
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **35** | **110** | **347** |
| | **CNEL:** | **37** | **117** | **371** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: 19th Street
Segment: Placentia Ave to Harbor Blvd.
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 23,100 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1509 | 15 | 15 | 528 | 5 | 5 | 327 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.5 | -19.5 | -19.5 | -4.1 | -24.0 | -24.0 | -6.2 | -26.1 | -26.1 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.3 | 57.4 | 62.2 | 63.8 | 52.8 | 57.6 | 61.7 | 50.7 | 55.6 |
| VEHICULAR NOISE | DAY= | 69.5 | Leq | EVENING= | 65.0 | Leq | NIGHT= | 62.9 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.9** |
| | | | **CNEL=** | **71.2** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **54** | **169** | **535** |
| | **CNEL:** | **57** | **181** | **573** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: Hamilton Avenue
Segment: West of Magnolia St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 9,360 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 612 | 6 | 6 | 214 | 2 | 2 | 132 | 1 | 1 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -4.0 | -23.9 | -23.9 | -8.5 | -28.4 | -28.4 | -10.6 | -30.5 | -30.5 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 65.9 | 54.2 | 58.8 | 61.3 | 49.7 | 54.2 | 59.2 | 47.6 | 52.1 |
| VEHICULAR NOISE | DAY= | 66.9 | Leq | EVENING= | 62.3 | Leq | NIGHT= | 60.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.2** |
| | | | **CNEL=** | **68.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **29** | **92** | **290** |
| | **CNEL:** | **31** | **98** | **310** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: Hamilton Avenue
Segment: Magnolia St to Bushard Av
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 12,480 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 815 | 8 | 8 | 285 | 3 | 3 | 177 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.7 | -22.6 | -22.6 | -7.3 | -27.2 | -27.2 | -9.4 | -29.3 | -29.3 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.1 | 55.5 | 60.0 | 62.6 | 50.9 | 55.4 | 60.5 | 48.8 | 53.4 |
| VEHICULAR NOISE | DAY= | 68.1 | Leq | EVENING= | 63.6 | Leq | NIGHT= | 61.5 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.5** |
| | | | **CNEL=** | **69.7** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **39** | **122** | **387** |
| | **CNEL:** | **41** | **131** | **414** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: Hamilton Avenue
Segment: Bushard Ave to Brookhurst Street
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 17,680 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1155 | 12 | 12 | 404 | 4 | 4 | 250 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.2 | -21.1 | -21.1 | -5.8 | -25.7 | -25.7 | -7.9 | -27.8 | -27.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.6 | 57.0 | 61.5 | 64.1 | 52.4 | 57.0 | 62.0 | 50.4 | 54.9 |
| VEHICULAR NOISE | DAY= | 69.6 | Leq | EVENING= | 65.1 | Leq | NIGHT= | 63.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.0** |
| | | | **CNEL=** | **71.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **55** | **173** | **548** |
| | **CNEL:** | **59** | **185** | **586** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: 17th Street
Segment: West of Monrovia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 5,250 |
| SPEED (mph) | 35 |
| ROAD NEAR-FAR LN. DIST. | 36 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 343 | 4 | 4 | 120 | 1 | 1 | 74 | 1 | 1 |
| Speed in MPH | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -5.4 | -25.3 | -25.3 | -10.0 | -29.9 | -29.9 | -12.0 | -31.9 | -31.9 |
| Distance | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 59.9 | 49.8 | 55.0 | 55.4 | 45.2 | 50.4 | 53.3 | 43.1 | 48.3 |
| VEHICULAR NOISE | DAY= | 61.5 | Leq | EVENING= | 56.9 | Leq | NIGHT= | 54.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **62.8** |
| | | | **CNEL=** | **63.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **9** | **28** | **88** |
| | **CNEL:** | **9** | **30** | **95** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: 15th Street
Segment: West of Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 4,700 |
| SPEED (mph) | 35 |
| ROAD NEAR-FAR LN. DIST. | 12 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 307 | 3 | 3 | 107 | 1 | 1 | 67 | 1 | 1 |
| Speed in MPH | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -5.9 | -25.8 | -25.8 | -10.4 | -30.3 | -30.3 | -12.5 | -32.4 | -32.4 |
| Distance | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 59.2 | 49.0 | 54.2 | 54.6 | 44.4 | 49.7 | 52.6 | 42.4 | 47.6 |
| VEHICULAR NOISE | DAY= | 60.7 | Leq | EVENING= | 56.1 | Leq | NIGHT= | 54.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **62.0** |
| | | | **CNEL=** | **62.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **8** | **25** | **79** |
| | **CNEL:** | **8** | **27** | **85** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: West Coast Highway
Segment: Brookhurst St to Prospect St
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 39,390 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 2573 | 26 | 26 | 901 | 9 | 9 | 558 | 6 | 6 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 2.3 | -17.6 | -17.6 | -2.3 | -22.2 | -22.2 | -4.4 | -24.3 | -24.3 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.7 | 57.1 | 61.6 | 64.2 | 52.5 | 57.1 | 62.1 | 50.5 | 55.0 |
| VEHICULAR NOISE | DAY= | 69.8 | Leq | EVENING= | 65.2 | Leq | NIGHT= | 63.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.1** |
| | | | **CNEL=** | **71.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **122** | **386** | **1221** |
| | **CNEL:** | **131** | **413** | **1307** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: West Coast Highway
Segment: Prospect St to Superior Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 32,320 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 2112 | 22 | 22 | 739 | 8 | 8 | 458 | 5 | 5 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 1.4 | -18.5 | -18.5 | -3.2 | -23.1 | -23.1 | -5.2 | -25.1 | -25.1 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.9 | 56.2 | 60.8 | 63.3 | 51.7 | 56.2 | 61.2 | 49.6 | 54.1 |
| VEHICULAR NOISE | DAY= | 68.9 | Leq | EVENING= | 64.3 | Leq | NIGHT= | 62.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.2** |
| | | | **CNEL=** | **70.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **100** | **317** | **1002** |
| | **CNEL:** | **107** | **339** | **1072** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: West Coast Highway
Segment: Superior Ave to Newport Blvd
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 40,400 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 2639 | 27 | 27 | 924 | 9 | 9 | 572 | 6 | 6 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 2.4 | -17.5 | -17.5 | -2.2 | -22.1 | -22.1 | -4.3 | -24.2 | -24.2 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.8 | 57.2 | 61.7 | 64.3 | 52.7 | 57.2 | 62.2 | 50.6 | 55.1 |
| VEHICULAR NOISE | DAY= | 69.9 | Leq | EVENING= | 65.3 | Leq | NIGHT= | 63.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.2** |
| | | | **CNEL=** | **71.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **125** | **396** | **1253** |
| | **CNEL:** | **134** | **424** | **1340** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: West Coast Highway
Segment: East of Dover Dr

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 51,510 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 84 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3365 | 34 | 34 | 1178 | 12 | 12 | 729 | 7 | 7 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.4 | -16.5 | -16.5 | -1.1 | -21.0 | -21.0 | -3.2 | -23.1 | -23.1 |
| Distance | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.1 | 58.5 | 63.0 | 65.6 | 53.9 | 58.4 | 63.5 | 51.8 | 56.4 |
| VEHICULAR NOISE | DAY= | 71.1 | Leq | EVENING= | 66.6 | Leq | NIGHT= | 64.5 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.5** |
| | | | **CNEL=** | **72.7** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **160** | **505** | **1597** |
| | **CNEL:** | **171** | **540** | **1709** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: Brookhurst Street
Segment: North of Hamilton

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 24,960 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1631 | 17 | 17 | 571 | 6 | 6 | 353 | 4 | 4 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.3 | -19.6 | -19.6 | -4.3 | -24.2 | -24.2 | -6.4 | -26.3 | -26.3 |
| Distance | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.5 | 58.9 | 63.4 | 66.0 | 54.3 | 58.9 | 63.9 | 52.3 | 56.8 |
| VEHICULAR NOISE | DAY= | 71.5 | Leq | EVENING= | 67.0 | Leq | NIGHT= | 64.9 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.9** |
| | | | **CNEL=** | **73.2** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **77** | **245** | **774** |
| | **CNEL:** | **83** | **262** | **828** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: Brookhurst Street
Segment: Pacific Coast Hwy to Hamilton
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 14,560 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 84 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 951 | 10 | 10 | 333 | 3 | 3 | 206 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.1 | -22.0 | -22.0 | -6.6 | -26.5 | -26.5 | -8.7 | -28.6 | -28.6 |
| Distance | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.9 | 58.2 | 62.8 | 65.3 | 53.7 | 58.2 | 63.2 | 51.6 | 56.1 |
| VEHICULAR NOISE | DAY= | 70.9 | Leq | EVENING= | 66.3 | Leq | NIGHT= | 64.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.2** |
| | | | **CNEL=** | **72.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **45** | **143** | **451** |
| | **CNEL:** | **48** | **153** | **483** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: Placentia Avenue
Segment: North of Victoria St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 13,650 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 892 | 9 | 9 | 312 | 3 | 3 | 193 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.8 | -21.7 | -21.7 | -6.4 | -26.3 | -26.3 | -8.5 | -28.4 | -28.4 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.0 | 55.1 | 59.9 | 61.5 | 50.5 | 55.4 | 59.4 | 48.4 | 53.3 |
| VEHICULAR NOISE | DAY= | 67.3 | Leq | EVENING= | 62.7 | Leq | NIGHT= | 60.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.6** |
| | | | **CNEL=** | **68.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **32** | **100** | **316** |
| | **CNEL:** | **34** | **107** | **338** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: Placentia Avenue
Segment: 19th St to 17th St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 26,250 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1715 | 18 | 18 | 600 | 6 | 6 | 372 | 4 | 4 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 1.0 | -18.9 | -18.9 | -3.5 | -23.5 | -23.5 | -5.6 | -25.5 | -25.5 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.9 | 57.9 | 62.8 | 64.3 | 53.4 | 58.2 | 62.2 | 51.3 | 56.1 |
| VEHICULAR NOISE | DAY= | 70.1 | Leq | EVENING= | 65.5 | Leq | NIGHT= | 63.5 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.4** |
| | | | **CNEL=** | **71.7** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **61** | **192** | **608** |
| | **CNEL:** | **65** | **206** | **651** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: Placentia Avenue
Segment: 17th St to 16th St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 15,000 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 980 | 10 | 10 | 343 | 4 | 4 | 212 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.4 | -21.3 | -21.3 | -6.0 | -25.9 | -25.9 | -8.1 | -28.0 | -28.0 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.4 | 55.5 | 60.3 | 61.9 | 50.9 | 55.8 | 59.8 | 48.8 | 53.7 |
| VEHICULAR NOISE | DAY= | 67.7 | Leq | EVENING= | 63.1 | Leq | NIGHT= | 61.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.0** |
| | | | **CNEL=** | **69.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **35** | **110** | **348** |
| | **CNEL:** | **37** | **118** | **372** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: Superior Avenue
Segment: 16th St to Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 23,000 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1503 | 15 | 15 | 526 | 5 | 5 | 326 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.4 | -19.5 | -19.5 | -4.1 | -24.0 | -24.0 | -6.2 | -26.1 | -26.1 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.3 | 57.3 | 62.2 | 63.7 | 52.8 | 57.6 | 61.7 | 50.7 | 55.5 |
| VEHICULAR NOISE | DAY= | 69.5 | Leq | EVENING= | 65.0 | Leq | NIGHT= | 62.9 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.8** |
| | | | **CNEL=** | **71.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **53** | **169** | **533** |
| | **CNEL:** | **57** | **180** | **570** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: Superior Avenue
Segment: Placentia Av. to West Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 23,000 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1503 | 15 | 15 | 526 | 5 | 5 | 326 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.4 | -19.5 | -19.5 | -4.1 | -24.0 | -24.0 | -6.2 | -26.1 | -26.1 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.3 | 57.3 | 62.2 | 63.7 | 52.8 | 57.6 | 61.7 | 50.7 | 55.5 |
| VEHICULAR NOISE | DAY= | 69.5 | Leq | EVENING= | 65.0 | Leq | NIGHT= | 62.9 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.8** |
| | | | **CNEL=** | **71.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **53** | **169** | **533** |
| | **CNEL:** | **57** | **180** | **570** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: Superior Avenue
Segment: South of West Coast Hwy

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 18,000 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1176 | 12 | 12 | 412 | 4 | 4 | 255 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.6 | -20.5 | -20.5 | -5.2 | -25.1 | -25.1 | -7.3 | -27.2 | -27.2 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.2 | 56.3 | 61.1 | 62.7 | 51.7 | 56.6 | 60.6 | 49.6 | 54.5 |
| VEHICULAR NOISE | DAY= | 68.5 | Leq | EVENING= | 63.9 | Leq | NIGHT= | 61.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.8** |
| | | | **CNEL=** | **70.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **42** | **132** | **417** |
| | **CNEL:** | **45** | **141** | **446** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: Magnolia Street
Segment: North of Victoria St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 13,520 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 883 | 9 | 9 | 309 | 3 | 3 | 191 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.4 | -22.3 | -22.3 | -6.9 | -26.8 | -26.8 | -9.0 | -28.9 | -28.9 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.5 | 55.8 | 60.4 | 62.9 | 51.3 | 55.8 | 60.8 | 49.2 | 53.7 |
| VEHICULAR NOISE | DAY= | 68.5 | Leq | EVENING= | 63.9 | Leq | NIGHT= | 61.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.8** |
| | | | **CNEL=** | **70.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **42** | **133** | **419** |
| | **CNEL:** | **45** | **142** | **448** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: Magnolia Street
Segment: Hamilton Ave to Banning Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 8,320 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 544 | 6 | 6 | 190 | 2 | 2 | 118 | 1 | 1 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -4.5 | -24.4 | -24.4 | -9.0 | -29.0 | -29.0 | -11.1 | -31.0 | -31.0 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 65.4 | 53.7 | 58.2 | 60.8 | 49.2 | 53.7 | 58.7 | 47.1 | 51.6 |
| VEHICULAR NOISE | DAY= | 66.4 | Leq | EVENING= | 61.8 | Leq | NIGHT= | 59.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **67.7** |
| | | | **CNEL=** | **68.0** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **26** | **82** | **258** |
| | **CNEL:** | **28** | **87** | **276** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: Existing
Roadway: Magnolia Street
Segment: Banning Ave to Pacific Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 8,320 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 544 | 6 | 6 | 190 | 2 | 2 | 118 | 1 | 1 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -4.5 | -24.4 | -24.4 | -9.0 | -29.0 | -29.0 | -11.1 | -31.0 | -31.0 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 65.4 | 53.7 | 58.2 | 60.8 | 49.2 | 53.7 | 58.7 | 47.1 | 51.6 |
| VEHICULAR NOISE | DAY= | 66.4 | Leq | EVENING= | 61.8 | Leq | NIGHT= | 59.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **67.7** |
| | | | **CNEL=** | **68.0** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **26** | **82** | **258** |
| | **CNEL:** | **28** | **87** | **276** |

Existing Plus Project Conditions Noise Contours Result Summary Table

| Roadway | Segment | Daily Traffic Volumes | Noise level at 50 feet (dBA CNEL) | Distance to noise contour (feet) | | |
|---|---|---|---|---|---|---|
| | | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL |
| 19th Street | West of Placentia Ave | 16,876 | 69.8 | 42 | 132 | 418 |
| 19th Street | Placentia Ave to Harbor Blvd. | 24,976 | 71.5 | 62 | 196 | 619 |
| Hamilton Avenue | West of Magnolia St | 10,180 | 68.9 | 34 | 107 | 338 |
| Hamilton Avenue | Magnolia St to Bushard Av | 13,110 | 70.0 | 43 | 138 | 435 |
| Hamilton Avenue | Bushard Ave to Brookhurst Street | 18,310 | 71.4 | 61 | 192 | 607 |
| 17th Street | West of Monrovia Ave | 10,794 | 66.2 | 19 | 61 | 194 |
| 15th Street | West of Placentia Ave | 8,346 | 64.8 | 15 | 48 | 150 |
| West Coast Highway | Brookhurst St to Prospect St | 36,200 | 71.0 | 120 | 380 | 1,201 |
| West Coast Highway | Prospect St to Superior Ave | 35,626 | 70.9 | 118 | 374 | 1,182 |
| West Coast Highway | Superior Ave to Newport Blvd | 42,174 | 71.7 | 140 | 442 | 1,399 |
| West Coast Highway | East of Dover Dr | 52,436 | 72.8 | 174 | 550 | 1,739 |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: 19th Street
Segment: West of Placentia Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 16,876 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1103 | 11 | 11 | 386 | 4 | 4 | 239 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.9 | -20.8 | -20.8 | -5.5 | -25.4 | -25.4 | -7.5 | -27.5 | -27.5 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.0 | 56.0 | 60.8 | 62.4 | 51.4 | 56.3 | 60.3 | 49.4 | 54.2 |
| VEHICULAR NOISE | DAY= | 68.2 | Leq | EVENING= | 63.6 | Leq | NIGHT= | 61.5 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.5** |
| | | | **CNEL=** | **69.8** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **39** | **124** | **391** |
| | **CNEL:** | **42** | **132** | **418** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: 19th Street
Segment: Placentia Ave to Harbor Blvd.
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 24,976 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1632 | 17 | 17 | 571 | 6 | 6 | 354 | 4 | 4 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.8 | -19.1 | -19.1 | -3.8 | -23.7 | -23.7 | -5.8 | -25.8 | -25.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.7 | 57.7 | 62.5 | 64.1 | 53.1 | 58.0 | 62.0 | 51.1 | 55.9 |
| VEHICULAR NOISE | DAY= | 69.9 | Leq | EVENING= | 65.3 | Leq | NIGHT= | 63.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.2** |
| | | | **CNEL=** | **71.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **58** | **183** | **579** |
| | **CNEL:** | **62** | **196** | **619** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: Hamilton Avenue
Segment: West of Magnolia St
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 10,180 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 665 | 7 | 7 | 233 | 2 | 2 | 144 | 1 | 1 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -3.6 | -23.5 | -23.5 | -8.2 | -28.1 | -28.1 | -10.3 | -30.2 | -30.2 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.2 | 54.6 | 59.1 | 61.7 | 50.0 | 54.6 | 59.6 | 48.0 | 52.5 |
| VEHICULAR NOISE | DAY= | 67.2 | Leq | EVENING= | 62.7 | Leq | NIGHT= | 60.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.6** |
| | | | **CNEL=** | **68.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **32** | **100** | **316** |
| | **CNEL:** | **34** | **107** | **338** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: Hamilton Avenue
Segment: Magnolia St to Bushard Av
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 13,110 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 857 | 9 | 9 | 300 | 3 | 3 | 186 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.5 | -22.4 | -22.4 | -7.1 | -27.0 | -27.0 | -9.2 | -29.1 | -29.1 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.3 | 55.7 | 60.2 | 62.8 | 51.1 | 55.7 | 60.7 | 49.1 | 53.6 |
| VEHICULAR NOISE | DAY= | 68.3 | Leq | EVENING= | 63.8 | Leq | NIGHT= | 61.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.7** |
| | | | **CNEL=** | **70.0** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **41** | **129** | **407** |
| | **CNEL:** | **43** | **138** | **435** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: Hamilton Avenue
Segment: Bushard Ave to Brookhurst Street
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 18,310 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1196 | 12 | 12 | 419 | 4 | 4 | 259 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.1 | -21.0 | -21.0 | -5.6 | -25.5 | -25.5 | -7.7 | -27.6 | -27.6 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.8 | 57.1 | 61.7 | 64.2 | 52.6 | 57.1 | 62.1 | 50.5 | 55.0 |
| VEHICULAR NOISE | DAY= | 69.8 | Leq | EVENING= | 65.2 | Leq | NIGHT= | 63.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.1** |
| | | | **CNEL=** | **71.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **57** | **180** | **568** |
| | **CNEL:** | **61** | **192** | **607** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: 17th Street
Segment: West of Monrovia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 10,794 |
| SPEED (mph) | 35 |
| ROAD NEAR-FAR LN. DIST. | 36 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 705 | 7 | 7 | 247 | 3 | 3 | 153 | 2 | 2 |
| Speed in MPH | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.3 | -22.2 | -22.2 | -6.8 | -26.7 | -26.7 | -8.9 | -28.8 | -28.8 |
| Distance | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 63.1 | 52.9 | 58.1 | 58.5 | 48.3 | 53.5 | 56.4 | 46.2 | 51.5 |
| VEHICULAR NOISE | DAY= | 64.6 | Leq | EVENING= | 60.0 | Leq | NIGHT= | 57.9 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **65.9** |
| | | | **CNEL=** | **66.2** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **18** | **57** | **182** |
| | **CNEL:** | **19** | **61** | **194** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: 15th Street
Segment: West of Placentia Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 8,346 |
| SPEED (mph) | 35 |
| ROAD NEAR-FAR LN. DIST. | 12 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 545 | 6 | 6 | 191 | 2 | 2 | 118 | 1 | 1 |
| Speed in MPH | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -3.4 | -23.3 | -23.3 | -7.9 | -27.9 | -27.9 | -10.0 | -29.9 | -29.9 |
| Distance | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 61.7 | 51.5 | 56.7 | 57.1 | 46.9 | 52.2 | 55.0 | 44.9 | 50.1 |
| VEHICULAR NOISE | DAY= | 63.2 | Leq | EVENING= | 58.6 | Leq | NIGHT= | 56.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **64.5** |
| | | | **CNEL=** | **64.8** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **14** | **44** | **140** |
| | **CNEL:** | **15** | **48** | **150** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: West Coast Highway
Segment: Brookhurst St to Prospect St
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 36,200 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 2365 | 24 | 24 | 828 | 8 | 8 | 512 | 5 | 5 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 1.9 | -18.0 | -18.0 | -2.7 | -22.6 | -22.6 | -4.7 | -24.7 | -24.7 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.4 | 56.7 | 61.3 | 63.8 | 52.2 | 56.7 | 61.7 | 50.1 | 54.6 |
| VEHICULAR NOISE | DAY= | 69.4 | Leq | EVENING= | 64.8 | Leq | NIGHT= | 62.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.7** |
| | | | **CNEL=** | **71.0** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **112** | **355** | **1123** |
| | **CNEL:** | **120** | **380** | **1201** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: West Coast Highway
Segment: Prospect St to Superior Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 35,626 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 2328 | 24 | 24 | 815 | 8 | 8 | 504 | 5 | 5 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 1.8 | -18.1 | -18.1 | -2.7 | -22.6 | -22.6 | -4.8 | -24.7 | -24.7 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.3 | 56.7 | 61.2 | 63.7 | 52.1 | 56.6 | 61.7 | 50.0 | 54.5 |
| VEHICULAR NOISE | DAY= | 69.3 | Leq | EVENING= | 64.8 | Leq | NIGHT= | 62.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.6** |
| | | | **CNEL=** | **70.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **110** | **349** | **1105** |
| | **CNEL:** | **118** | **374** | **1182** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: West Coast Highway
Segment: Superior Ave to Newport Blvd
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 42,174 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 2755 | 28 | 28 | 964 | 10 | 10 | 597 | 6 | 6 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 2.6 | -17.3 | -17.3 | -2.0 | -21.9 | -21.9 | -4.1 | -24.0 | -24.0 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.0 | 57.4 | 61.9 | 64.5 | 52.8 | 57.4 | 62.4 | 50.8 | 55.3 |
| VEHICULAR NOISE | DAY= | 70.0 | Leq | EVENING= | 65.5 | Leq | NIGHT= | 63.4 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.4** |
| | | | **CNEL=** | **71.7** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **131** | **414** | **1308** |
| | **CNEL:** | **140** | **442** | **1399** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: West Coast Highway
Segment: East of Dover Dr

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 52,436 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 84 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3426 | 35 | 35 | 1199 | 12 | 12 | 742 | 8 | 8 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.5 | -16.4 | -16.4 | -1.0 | -21.0 | -21.0 | -3.1 | -23.0 | -23.0 |
| Distance | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.2 | 58.6 | 63.1 | 65.6 | 54.0 | 58.5 | 63.6 | 51.9 | 56.4 |
| VEHICULAR NOISE | DAY= | 71.2 | Leq | EVENING= | 66.6 | Leq | NIGHT= | 64.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.5** |
| | | | **CNEL=** | **72.8** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **163** | **514** | **1626** |
| | **CNEL:** | **174** | **550** | **1739** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: Brookhurst Street
Segment: North of Hamilton
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 25,778 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1684 | 17 | 17 | 589 | 6 | 6 | 365 | 4 | 4 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.4 | -19.5 | -19.5 | -4.1 | -24.0 | -24.0 | -6.2 | -26.1 | -26.1 |
| Distance | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.7 | 59.0 | 63.6 | 66.1 | 54.5 | 59.0 | 64.0 | 52.4 | 56.9 |
| VEHICULAR NOISE | DAY= | 71.7 | Leq | EVENING= | 67.1 | Leq | NIGHT= | 65.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **73.0** |
| | | | **CNEL=** | **73.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **80** | **253** | **799** |
| | **CNEL:** | **86** | **270** | **855** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: Brookhurst Street
Segment: Pacific Coast Hwy to Hamilton
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 16,008 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 84 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1046 | 11 | 11 | 366 | 4 | 4 | 227 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.6 | -21.6 | -21.6 | -6.2 | -26.1 | -26.1 | -8.3 | -28.2 | -28.2 |
| Distance | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.3 | 58.7 | 63.2 | 65.7 | 54.1 | 58.6 | 63.6 | 52.0 | 56.5 |
| VEHICULAR NOISE | DAY= | 71.3 | Leq | EVENING= | 66.7 | Leq | NIGHT= | 64.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.6** |
| | | | **CNEL=** | **72.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **50** | **157** | **496** |
| | **CNEL:** | **53** | **168** | **531** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: Placentia Avenue
Segment: North of Victoria St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 14,490 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 947 | 10 | 10 | 331 | 3 | 3 | 205 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.6 | -21.5 | -21.5 | -6.1 | -26.0 | -26.0 | -8.2 | -28.1 | -28.1 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.3 | 55.3 | 60.2 | 61.7 | 50.8 | 55.6 | 59.7 | 48.7 | 53.5 |
| VEHICULAR NOISE | DAY= | 67.5 | Leq | EVENING= | 63.0 | Leq | NIGHT= | 60.9 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.8** |
| | | | **CNEL=** | **69.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **34** | **106** | **336** |
| | **CNEL:** | **36** | **114** | **359** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: Placentia Avenue
Segment: 19th St to 17th St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 25,108 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1640 | 17 | 17 | 574 | 6 | 6 | 355 | 4 | 4 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.8 | -19.1 | -19.1 | -3.7 | -23.6 | -23.6 | -5.8 | -25.7 | -25.7 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.7 | 57.7 | 62.6 | 64.1 | 53.2 | 58.0 | 62.0 | 51.1 | 55.9 |
| VEHICULAR NOISE | DAY= | 69.9 | Leq | EVENING= | 65.3 | Leq | NIGHT= | 63.3 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.2** |
| | | | **CNEL=** | **71.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **58** | **184** | **582** |
| | **CNEL:** | **62** | **197** | **622** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: Placentia Avenue
Segment: 17th St to 16th Street
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 12,918 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 844 | 9 | 9 | 295 | 3 | 3 | 183 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.1 | -22.0 | -22.0 | -6.6 | -26.5 | -26.5 | -8.7 | -28.6 | -28.6 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 65.8 | 54.8 | 59.7 | 61.2 | 50.3 | 55.1 | 59.2 | 48.2 | 53.0 |
| VEHICULAR NOISE | DAY= | 67.0 | Leq | EVENING= | 62.5 | Leq | NIGHT= | 60.4 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.3** |
| | | | **CNEL=** | **68.6** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **30** | **95** | **299** |
| | **CNEL:** | **32** | **101** | **320** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: Superior Avenue
Segment: 16th St to Placentia Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 24,244 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1584 | 16 | 16 | 554 | 6 | 6 | 343 | 4 | 4 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.7 | -19.2 | -19.2 | -3.9 | -23.8 | -23.8 | -6.0 | -25.9 | -25.9 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.5 | 57.6 | 62.4 | 64.0 | 53.0 | 57.9 | 61.9 | 50.9 | 55.8 |
| VEHICULAR NOISE | DAY= | 69.8 | Leq | EVENING= | 65.2 | Leq | NIGHT= | 63.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.1** |
| | | | **CNEL=** | **71.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **56** | **178** | **562** |
| | **CNEL:** | **60** | **190** | **601** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: Superior Avenue
Segment: Placentia Av. to West Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 17,058 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1114 | 11 | 11 | 390 | 4 | 4 | 241 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.9 | -20.8 | -20.8 | -5.4 | -25.3 | -25.3 | -7.5 | -27.4 | -27.4 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.0 | 56.0 | 60.9 | 62.4 | 51.5 | 56.3 | 60.4 | 49.4 | 54.2 |
| VEHICULAR NOISE | DAY= | 68.2 | Leq | EVENING= | 63.7 | Leq | NIGHT= | 61.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.5** |
| | | | **CNEL=** | **69.8** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **40** | **125** | **395** |
| | **CNEL:** | **42** | **134** | **423** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: Superior Avenue
Segment: South of West Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 18,872 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1233 | 13 | 13 | 432 | 4 | 4 | 267 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.4 | -20.3 | -20.3 | -5.0 | -24.9 | -24.9 | -7.1 | -27.0 | -27.0 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.4 | 56.5 | 61.3 | 62.9 | 51.9 | 56.8 | 60.8 | 49.8 | 54.7 |
| VEHICULAR NOISE | DAY= | 68.7 | Leq | EVENING= | 64.1 | Leq | NIGHT= | 62.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.0** |
| | | | **CNEL=** | **70.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **44** | **138** | **437** |
| | **CNEL:** | **47** | **148** | **468** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: Magnolia Street
Segment: North of Victoria St
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 14,340 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 937 | 10 | 10 | 328 | 3 | 3 | 203 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.1 | -22.0 | -22.0 | -6.7 | -26.6 | -26.6 | -8.8 | -28.7 | -28.7 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.7 | 56.1 | 60.6 | 63.2 | 51.5 | 56.0 | 61.1 | 49.4 | 54.0 |
| VEHICULAR NOISE | DAY= | 68.7 | Leq | EVENING= | 64.2 | Leq | NIGHT= | 62.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.1** |
| | | | **CNEL=** | **70.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **44** | **141** | **445** |
| | **CNEL:** | **48** | **150** | **476** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: Magnolia Street
Segment: Hamilton Ave to Banning Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 9,328 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 609 | 6 | 6 | 213 | 2 | 2 | 132 | 1 | 1 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -4.0 | -23.9 | -23.9 | -8.5 | -28.5 | -28.5 | -10.6 | -30.5 | -30.5 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 65.9 | 54.2 | 58.7 | 61.3 | 49.7 | 54.2 | 59.2 | 47.6 | 52.1 |
| VEHICULAR NOISE | DAY= | 66.9 | Leq | EVENING= | 62.3 | Leq | NIGHT= | 60.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.2** |
| | | | **CNEL=** | **68.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **29** | **91** | **289** |
| | **CNEL:** | **31** | **98** | **309** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: Magnolia Street
Segment: Banning Ave to Pacific Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 9,326 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 609 | 6 | 6 | 213 | 2 | 2 | 132 | 1 | 1 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -4.0 | -23.9 | -23.9 | -8.5 | -28.5 | -28.5 | -10.6 | -30.5 | -30.5 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 65.9 | 54.2 | 58.7 | 61.3 | 49.7 | 54.2 | 59.2 | 47.6 | 52.1 |
| VEHICULAR NOISE | DAY= | 66.9 | Leq | EVENING= | 62.3 | Leq | NIGHT= | 60.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.2** |
| | | | **CNEL=** | **68.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **29** | **91** | **289** |
| | **CNEL:** | **31** | **98** | **309** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: Placentia Avenue
Segment: 16th St to 15th Street
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 12,174 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 795 | 8 | 8 | 278 | 3 | 3 | 172 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.3 | -22.2 | -22.2 | -6.9 | -26.8 | -26.8 | -9.0 | -28.9 | -28.9 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 65.5 | 54.6 | 59.4 | 61.0 | 50.0 | 54.9 | 58.9 | 47.9 | 52.8 |
| VEHICULAR NOISE | DAY= | 66.8 | Leq | EVENING= | 62.2 | Leq | NIGHT= | 60.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.1** |
| | | | **CNEL=** | **68.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **28** | **89** | **282** |
| | **CNEL:** | **30** | **95** | **302** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: EXISTING PLUS PROJECT
Roadway: Placentia Avenue
Segment: 15th St to Superior Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 14,458 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 945 | 10 | 10 | 331 | 3 | 3 | 205 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.6 | -21.5 | -21.5 | -6.1 | -26.0 | -26.0 | -8.2 | -28.1 | -28.1 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.3 | 55.3 | 60.2 | 61.7 | 50.8 | 55.6 | 59.6 | 48.7 | 53.5 |
| VEHICULAR NOISE | DAY= | 67.5 | Leq | EVENING= | 62.9 | Leq | NIGHT= | 60.9 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.8** |
| | | | **CNEL=** | **69.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **34** | **106** | **335** |
| | **CNEL:** | **36** | **113** | **358** |

2016 Without Project Conditions Noise Contours Result Summary Table

| Roadway | Segment | Daily Traffic Volumes | Noise level at 50 feet (dBA CNEL) | Distance to noise contour (feet) | | |
|---|---|---|---|---|---|---|
| | | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL |
| 19th Street | West of Placentia Ave | 16,223 | 69.6 | 40 | 127 | 402 |
| 19th Street | Placentia Ave to Harbor Blvd. | 25,337 | 71.6 | 63 | 199 | 628 |
| Hamilton Avenue | West of Magnolia St | 11,103 | 69.2 | 37 | 116 | 368 |
| Hamilton Avenue | Magnolia St to Bushard Av | 14,948 | 70.5 | 50 | 157 | 496 |
| Hamilton Avenue | Bushard Ave to Brookhurst Street | 20,512 | 71.9 | 68 | 215 | 680 |
| 17th Street | West of Monrovia Ave | 5,618 | 63.4 | 10 | 32 | 101 |
| 15th Street | West of Placentia Ave | 5,342 | 62.9 | 10 | 30 | 96 |
| West Coast Highway | Brookhurst St to Prospect St | 46,171 | 72.1 | 153 | 484 | 1,532 |
| West Coast Highway | Prospect St to Superior Ave | 38,610 | 71.3 | 128 | 405 | 1,281 |
| West Coast Highway | Superior Ave to Newport Blvd | 46,728 | 72.1 | 155 | 490 | 1,550 |
| West Coast Highway | East of Dover Dr | 60,226 | 73.4 | 200 | 632 | 1,998 |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: 19th Street
Segment: West of Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 16,223 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1060 | 11 | 11 | 371 | 4 | 4 | 230 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.1 | -21.0 | -21.0 | -5.6 | -25.5 | -25.5 | -7.7 | -27.6 | -27.6 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.8 | 55.8 | 60.7 | 62.2 | 51.3 | 56.1 | 60.1 | 49.2 | 54.0 |
| VEHICULAR NOISE | DAY= | 68.0 | Leq | EVENING= | 63.4 | Leq | NIGHT= | 61.4 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.3** |
| | | | **CNEL=** | **69.6** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **38** | **119** | **376** |
| | **CNEL:** | **40** | **127** | **402** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: 19th Street
Segment: Placentia Ave to Harbor Blvd.
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 25,337 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1655 | 17 | 17 | 579 | 6 | 6 | 359 | 4 | 4 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.9 | -19.0 | -19.0 | -3.7 | -23.6 | -23.6 | -5.8 | -25.7 | -25.7 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.7 | 57.8 | 62.6 | 64.2 | 53.2 | 58.0 | 62.1 | 51.1 | 56.0 |
| VEHICULAR NOISE | DAY= | 69.9 | Leq | EVENING= | 65.4 | Leq | NIGHT= | 63.3 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.3** |
| | | | **CNEL=** | **71.6** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **59** | **186** | **587** |
| | **CNEL:** | **63** | **199** | **628** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: Hamilton Avenue
Segment: West of Magnolia St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 11,103 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 725 | 7 | 7 | 254 | 3 | 3 | 157 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -3.2 | -23.1 | -23.1 | -7.8 | -27.7 | -27.7 | -9.9 | -29.8 | -29.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.6 | 55.0 | 59.5 | 62.1 | 50.4 | 54.9 | 60.0 | 48.3 | 52.9 |
| VEHICULAR NOISE | DAY= | 67.6 | Leq | EVENING= | 63.1 | Leq | NIGHT= | 61.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.9** |
| | | | **CNEL=** | **69.2** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **34** | **109** | **344** |
| | **CNEL:** | **37** | **116** | **368** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: Hamilton Avenue
Segment: Magnolia St to Bushard Av
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 14,948 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 977 | 10 | 10 | 342 | 3 | 3 | 212 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.9 | -21.9 | -21.9 | -6.5 | -26.4 | -26.4 | -8.6 | -28.5 | -28.5 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.9 | 56.3 | 60.8 | 63.3 | 51.7 | 56.2 | 61.3 | 49.6 | 54.1 |
| VEHICULAR NOISE | DAY= | 68.9 | Leq | EVENING= | 64.4 | Leq | NIGHT= | 62.3 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.2** |
| | | | **CNEL=** | **70.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **46** | **147** | **464** |
| | **CNEL:** | **50** | **157** | **496** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: Hamilton Avenue
Segment: Bushard Ave to Brookhurst Street
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 20,512 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1340 | 14 | 14 | 469 | 5 | 5 | 290 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.6 | -20.5 | -20.5 | -5.1 | -25.0 | -25.0 | -7.2 | -27.1 | -27.1 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.3 | 57.6 | 62.2 | 64.7 | 53.1 | 57.6 | 62.6 | 51.0 | 55.5 |
| VEHICULAR NOISE | DAY= | 70.3 | Leq | EVENING= | 65.7 | Leq | NIGHT= | 63.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.6** |
| | | | **CNEL=** | **71.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **64** | **201** | **636** |
| | **CNEL:** | **68** | **215** | **680** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: 17th Street
Segment: West of Monrovia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 5,618 |
| SPEED (mph) | 35 |
| ROAD NEAR-FAR LN. DIST. | 36 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 367 | 4 | 4 | 128 | 1 | 1 | 80 | 1 | 1 |
| Speed in MPH | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -5.1 | -25.0 | -25.0 | -9.7 | -29.6 | -29.6 | -11.7 | -31.7 | -31.7 |
| Distance | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 60.2 | 50.0 | 55.3 | 55.7 | 45.5 | 50.7 | 53.6 | 43.4 | 48.6 |
| VEHICULAR NOISE | DAY= | 61.7 | Leq | EVENING= | 57.2 | Leq | NIGHT= | 55.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **63.1** |
| | | | **CNEL=** | **63.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **9** | **30** | **95** |
| | **CNEL:** | **10** | **32** | **101** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: 15th Street
Segment: West of Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 5,342 |
| SPEED (mph) | 35 |
| ROAD NEAR-FAR LN. DIST. | 12 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 349 | 4 | 4 | 122 | 1 | 1 | 76 | 1 | 1 |
| Speed in MPH | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -5.3 | -25.2 | -25.2 | -9.9 | -29.8 | -29.8 | -12.0 | -31.9 | -31.9 |
| Distance | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 59.8 | 49.6 | 54.8 | 55.2 | 45.0 | 50.2 | 53.1 | 42.9 | 48.1 |
| VEHICULAR NOISE | DAY= | 61.3 | Leq | EVENING= | 56.7 | Leq | NIGHT= | 54.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **62.6** |
| | | | **CNEL=** | **62.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **9** | **28** | **90** |
| | **CNEL:** | **10** | **30** | **96** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: West Coast Highway
Segment: Brookhurst St to Prospect St
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 46,171 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3017 | 31 | 31 | 1056 | 11 | 11 | 654 | 7 | 7 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.0 | -17.0 | -17.0 | -1.6 | -21.5 | -21.5 | -3.7 | -23.6 | -23.6 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.4 | 57.8 | 62.3 | 64.9 | 53.2 | 57.8 | 62.8 | 51.1 | 55.7 |
| VEHICULAR NOISE | DAY= | 70.4 | Leq | EVENING= | 65.9 | Leq | NIGHT= | 63.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.8** |
| | | | **CNEL=** | **72.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **143** | **453** | **1432** |
| | **CNEL:** | **153** | **484** | **1532** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: West Coast Highway
Segment: Prospect St to Superior Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 38,610 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 2523 | 26 | 26 | 883 | 9 | 9 | 547 | 6 | 6 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 2.2 | -17.7 | -17.7 | -2.4 | -22.3 | -22.3 | -4.5 | -24.4 | -24.4 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.6 | 57.0 | 61.5 | 64.1 | 52.5 | 57.0 | 62.0 | 50.4 | 54.9 |
| VEHICULAR NOISE | DAY= | 69.7 | Leq | EVENING= | 65.1 | Leq | NIGHT= | 63.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.0** |
| | | | **CNEL=** | **71.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **120** | **379** | **1197** |
| | **CNEL:** | **128** | **405** | **1281** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: West Coast Highway
Segment: Superior Ave to Newport Blvd
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 46,728 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3053 | 31 | 31 | 1069 | 11 | 11 | 661 | 7 | 7 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.0 | -16.9 | -16.9 | -1.6 | -21.5 | -21.5 | -3.6 | -23.5 | -23.5 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.5 | 57.8 | 62.4 | 64.9 | 53.3 | 57.8 | 62.8 | 51.2 | 55.7 |
| VEHICULAR NOISE | DAY= | 70.5 | Leq | EVENING= | 65.9 | Leq | NIGHT= | 63.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.8** |
| | | | **CNEL=** | **72.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **145** | **458** | **1449** |
| | **CNEL:** | **155** | **490** | **1550** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: West Coast Highway
Segment: East of Dover Dr

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 60,226 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 84 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3935 | 40 | 40 | 1377 | 14 | 14 | 853 | 9 | 9 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 4.1 | -15.8 | -15.8 | -0.4 | -20.4 | -20.4 | -2.5 | -22.4 | -22.4 |
| Distance | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.8 | 59.2 | 63.7 | 66.2 | 54.6 | 59.1 | 64.2 | 52.5 | 57.0 |
| VEHICULAR NOISE | DAY= | 71.8 | Leq | EVENING= | 67.3 | Leq | NIGHT= | 65.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **73.1** |
| | | | **CNEL=** | **73.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **187** | **591** | **1868** |
| | **CNEL:** | **200** | **632** | **1998** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: Brookhurst Street
Segment: North of Hamilton

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 28,227 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1844 | 19 | 19 | 645 | 7 | 7 | 400 | 4 | 4 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.8 | -19.1 | -19.1 | -3.7 | -23.7 | -23.7 | -5.8 | -25.7 | -25.7 |
| Distance | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 71.1 | 59.4 | 63.9 | 66.5 | 54.9 | 59.4 | 64.4 | 52.8 | 57.3 |
| VEHICULAR NOISE | DAY= | 72.1 | Leq | EVENING= | 67.5 | Leq | NIGHT= | 65.4 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **73.4** |
| | | | **CNEL=** | **73.7** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **88** | **277** | **875** |
| | **CNEL:** | **94** | **296** | **936** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: Brookhurst Street
Segment: Pacific Coast Hwy to Hamilton
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 15,829 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 84 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1034 | 11 | 11 | 362 | 4 | 4 | 224 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.7 | -21.6 | -21.6 | -6.3 | -26.2 | -26.2 | -8.3 | -28.2 | -28.2 |
| Distance | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.2 | 58.6 | 63.1 | 65.7 | 54.0 | 58.6 | 63.6 | 52.0 | 56.5 |
| VEHICULAR NOISE | DAY= | 71.3 | Leq | EVENING= | 66.7 | Leq | NIGHT= | 64.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.6** |
| | | | **CNEL=** | **72.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **49** | **155** | **491** |
| | **CNEL:** | **53** | **166** | **525** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: Placentia Avenue
Segment: North of Victoria St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 14,890 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 973 | 10 | 10 | 340 | 3 | 3 | 211 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.4 | -21.4 | -21.4 | -6.0 | -25.9 | -25.9 | -8.1 | -28.0 | -28.0 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.4 | 55.5 | 60.3 | 61.9 | 50.9 | 55.7 | 59.8 | 48.8 | 53.7 |
| VEHICULAR NOISE | DAY= | 67.6 | Leq | EVENING= | 63.1 | Leq | NIGHT= | 61.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.0** |
| | | | **CNEL=** | **69.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **35** | **109** | **345** |
| | **CNEL:** | **37** | **117** | **369** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: Placentia Avenue
Segment: 19th St to 17th St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 29,906 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1954 | 20 | 20 | 684 | 7 | 7 | 423 | 4 | 4 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 1.6 | -18.3 | -18.3 | -3.0 | -22.9 | -22.9 | -5.1 | -25.0 | -25.0 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.4 | 58.5 | 63.3 | 64.9 | 53.9 | 58.8 | 62.8 | 51.8 | 56.7 |
| VEHICULAR NOISE | DAY= | 70.7 | Leq | EVENING= | 66.1 | Leq | NIGHT= | 64.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.0** |
| | | | **CNEL=** | **72.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **69** | **219** | **693** |
| | **CNEL:** | **74** | **234** | **741** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: Placentia Avenue
Segment: 17th St to 16th Street

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 16,162 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1056 | 11 | 11 | 370 | 4 | 4 | 229 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.1 | -21.0 | -21.0 | -5.6 | -25.6 | -25.6 | -7.7 | -27.6 | -27.6 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.8 | 55.8 | 60.7 | 62.2 | 51.2 | 56.1 | 60.1 | 49.2 | 54.0 |
| VEHICULAR NOISE | DAY= | 68.0 | Leq | EVENING= | 63.4 | Leq | NIGHT= | 61.3 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.3** |
| | | | **CNEL=** | **69.6** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **37** | **118** | **375** |
| | **CNEL:** | **40** | **127** | **401** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: Superior Avenue
Segment: 16th St to Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 25,818 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1687 | 17 | 17 | 590 | 6 | 6 | 365 | 4 | 4 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.9 | -19.0 | -19.0 | -3.6 | -23.5 | -23.5 | -5.7 | -25.6 | -25.6 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.8 | 57.8 | 62.7 | 64.2 | 53.3 | 58.1 | 62.2 | 51.2 | 56.0 |
| VEHICULAR NOISE | DAY= | 70.0 | Leq | EVENING= | 65.5 | Leq | NIGHT= | 63.4 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.3** |
| | | | **CNEL=** | **71.6** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **60** | **189** | **598** |
| | **CNEL:** | **64** | **202** | **640** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: Superior Avenue
Segment: Placentia Av. to West Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 23,240 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

**CALCULATION AREA**

| | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1518 | 15 | 15 | 531 | 5 | 5 | 329 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.5 | -19.4 | -19.4 | -4.1 | -24.0 | -24.0 | -6.2 | -26.1 | -26.1 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.3 | 57.4 | 62.2 | 63.8 | 52.8 | 57.7 | 61.7 | 50.7 | 55.6 |
| VEHICULAR NOISE | DAY= | 69.6 | Leq | EVENING= | 65.0 | Leq | NIGHT= | 62.9 | Leq |

**RESULTS**

NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): **Ldn= 70.9** **CNEL= 71.2**

| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
|---|---|---|---|---|
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **54** | **170** | **539** |
| | **CNEL:** | **58** | **182** | **576** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: Superior Avenue
Segment: South of West Coast Hwy

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 18,446 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

**CALCULATION AREA**

| | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1205 | 12 | 12 | 422 | 4 | 4 | 261 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.5 | -20.4 | -20.4 | -5.1 | -25.0 | -25.0 | -7.2 | -27.1 | -27.1 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.3 | 56.4 | 61.2 | 62.8 | 51.8 | 56.7 | 60.7 | 49.7 | 54.6 |
| VEHICULAR NOISE | DAY= | 68.6 | Leq | EVENING= | 64.0 | Leq | NIGHT= | 61.9 | Leq |

**RESULTS**

NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): **Ldn= 69.9** **CNEL= 70.2**

| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
|---|---|---|---|---|
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **43** | **135** | **427** |
| | **CNEL:** | **46** | **145** | **457** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: Magnolia Street
Segment: North of Victoria St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 16,420 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1073 | 11 | 11 | 375 | 4 | 4 | 232 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.5 | -21.4 | -21.4 | -6.1 | -26.0 | -26.0 | -8.2 | -28.1 | -28.1 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.3 | 56.7 | 61.2 | 63.8 | 52.1 | 56.6 | 61.7 | 50.0 | 54.6 |
| VEHICULAR NOISE | DAY= | 69.3 | Leq | EVENING= | 64.8 | Leq | NIGHT= | 62.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.6** |
| | | | **CNEL=** | **70.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **51** | **161** | **509** |
| | **CNEL:** | **54** | **172** | **545** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: Magnolia Street
Segment: Hamilton Ave to Banning Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 10,268 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 671 | 7 | 7 | 235 | 2 | 2 | 145 | 1 | 1 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -3.6 | -23.5 | -23.5 | -8.1 | -28.0 | -28.0 | -10.2 | -30.1 | -30.1 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.3 | 54.6 | 59.2 | 61.7 | 50.1 | 54.6 | 59.6 | 48.0 | 52.5 |
| VEHICULAR NOISE | DAY= | 67.3 | Leq | EVENING= | 62.7 | Leq | NIGHT= | 60.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.6** |
| | | | **CNEL=** | **68.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **32** | **101** | **318** |
| | **CNEL:** | **34** | **108** | **341** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: Magnolia Street
Segment: Banning Ave to Pacific Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 10,126 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 662 | 7 | 7 | 232 | 2 | 2 | 143 | 1 | 1 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -3.6 | -23.5 | -23.5 | -8.2 | -28.1 | -28.1 | -10.3 | -30.2 | -30.2 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.2 | 54.6 | 59.1 | 61.7 | 50.0 | 54.5 | 59.6 | 47.9 | 52.5 |
| VEHICULAR NOISE | DAY= | 67.2 | Leq | EVENING= | 62.7 | Leq | NIGHT= | 60.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.5** |
| | | | **CNEL=** | **68.8** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **31** | **99** | **314** |
| | **CNEL:** | **34** | **106** | **336** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: Placentia Avenue
Segment: 16th St to 15th Street

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 15,498 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1013 | 10 | 10 | 354 | 4 | 4 | 219 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.3 | -21.2 | -21.2 | -5.8 | -25.7 | -25.7 | -7.9 | -27.8 | -27.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.6 | 55.6 | 60.5 | 62.0 | 51.1 | 55.9 | 59.9 | 49.0 | 53.8 |
| VEHICULAR NOISE | DAY= | 67.8 | Leq | EVENING= | 63.2 | Leq | NIGHT= | 61.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.1** |
| | | | **CNEL=** | **69.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **36** | **114** | **359** |
| | **CNEL:** | **38** | **121** | **384** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 NP
Roadway: Placentia Avenue
Segment: 15th St to Superior Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 15,924 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1040 | 11 | 11 | 364 | 4 | 4 | 225 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.2 | -21.1 | -21.1 | -5.7 | -25.6 | -25.6 | -7.8 | -27.7 | -27.7 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.7 | 55.7 | 60.6 | 62.1 | 51.2 | 56.0 | 60.1 | 49.1 | 53.9 |
| VEHICULAR NOISE | DAY= | 67.9 | Leq | EVENING= | 63.4 | Leq | NIGHT= | 61.3 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.2** |
| | | | **CNEL=** | **69.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **37** | **117** | **369** |
| | **CNEL:** | **39** | **125** | **395** |

2016 With Project Conditions Noise Contours Result Summary Table

| Roadway | Segment | Daily Traffic Volumes | Noise level at 50 feet (dBA CNEL) | Distance to noise contour (feet) | | |
|---|---|---|---|---|---|---|
| | | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL |
| 19th Street | West of Placentia Ave | 18,119 | 70.1 | 45 | 142 | 449 |
| 19th Street | Placentia Ave to Harbor Blvd. | 27,213 | 71.9 | 67 | 213 | 675 |
| Hamilton Avenue | West of Magnolia St | 11,923 | 69.6 | 40 | 125 | 396 |
| Hamilton Avenue | Magnolia St to Bushard Av | 15,578 | 70.7 | 52 | 163 | 517 |
| Hamilton Avenue | Bushard Ave to Brookhurst Street | 21,142 | 72.0 | 70 | 222 | 701 |
| 17th Street | West of Monrovia Ave | 11,162 | 66.3 | 20 | 64 | 201 |
| 15th Street | West of Placentia Ave | 8,988 | 65.1 | 16 | 51 | 162 |
| West Coast Highway | Brookhurst St to Prospect St | 49,479 | 72.4 | 164 | 519 | 1,641 |
| West Coast Highway | Prospect St to Superior Ave | 41,916 | 71.6 | 139 | 440 | 1,390 |
| West Coast Highway | Superior Ave to Newport Blvd | 48,502 | 72.3 | 161 | 509 | 1,609 |
| West Coast Highway | East of Dover Dr | 61,152 | 73.5 | 203 | 641 | 2,029 |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: 19th Street
Segment: West of Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 18,119 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1184 | 12 | 12 | 414 | 4 | 4 | 256 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.6 | -20.5 | -20.5 | -5.2 | -25.1 | -25.1 | -7.2 | -27.1 | -27.1 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.3 | 56.3 | 61.2 | 62.7 | 51.7 | 56.6 | 60.6 | 49.7 | 54.5 |
| VEHICULAR NOISE | DAY= | 68.5 | Leq | EVENING= | 63.9 | Leq | NIGHT= | 61.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.8** |
| | | | **CNEL=** | **70.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **42** | **133** | **420** |
| | **CNEL:** | **45** | **142** | **449** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: 19th Street
Segment: Placentia Ave to Harbor Blvd.
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 27,213 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1778 | 18 | 18 | 622 | 6 | 6 | 385 | 4 | 4 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 1.2 | -18.7 | -18.7 | -3.4 | -23.3 | -23.3 | -5.5 | -25.4 | -25.4 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.0 | 58.1 | 62.9 | 64.5 | 53.5 | 58.4 | 62.4 | 51.4 | 56.3 |
| VEHICULAR NOISE | DAY= | 70.3 | Leq | EVENING= | 65.7 | Leq | NIGHT= | 63.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.6** |
| | | | **CNEL=** | **71.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **63** | **199** | **631** |
| | **CNEL:** | **67** | **213** | **675** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: Hamilton Avenue
Segment: West of Magnolia St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 11,923 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 779 | 8 | 8 | 273 | 3 | 3 | 169 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.9 | -22.8 | -22.8 | -7.5 | -27.4 | -27.4 | -9.6 | -29.5 | -29.5 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.9 | 55.3 | 59.8 | 62.4 | 50.7 | 55.2 | 60.3 | 48.6 | 53.2 |
| VEHICULAR NOISE | DAY= | 67.9 | Leq | EVENING= | 63.4 | Leq | NIGHT= | 61.3 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.3** |
| | | | **CNEL=** | **69.6** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **37** | **117** | **370** |
| | **CNEL:** | **40** | **125** | **396** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: Hamilton Avenue
Segment: Magnolia St to Bushard Av

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 15,578 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1018 | 10 | 10 | 356 | 4 | 4 | 221 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.8 | -21.7 | -21.7 | -6.3 | -26.2 | -26.2 | -8.4 | -28.3 | -28.3 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.1 | 56.4 | 61.0 | 63.5 | 51.9 | 56.4 | 61.4 | 49.8 | 54.3 |
| VEHICULAR NOISE | DAY= | 69.1 | Leq | EVENING= | 64.5 | Leq | NIGHT= | 62.5 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.4** |
| | | | **CNEL=** | **70.7** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **48** | **153** | **483** |
| | **CNEL:** | **52** | **163** | **517** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: Hamilton Avenue
Segment: Bushard Ave to Brookhurst Street
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 21,142 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1381 | 14 | 14 | 483 | 5 | 5 | 299 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.4 | -20.3 | -20.3 | -5.0 | -24.9 | -24.9 | -7.1 | -27.0 | -27.0 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.4 | 57.8 | 62.3 | 64.8 | 53.2 | 57.7 | 62.8 | 51.1 | 55.7 |
| VEHICULAR NOISE | DAY= | 70.4 | Leq | EVENING= | 65.9 | Leq | NIGHT= | 63.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.7** |
| | | | **CNEL=** | **72.0** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **66** | **207** | **656** |
| | **CNEL:** | **70** | **222** | **701** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: 17th Street
Segment: West of Monrovia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 11,162 |
| SPEED (mph) | 35 |
| ROAD NEAR-FAR LN. DIST. | 36 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 729 | 7 | 7 | 255 | 3 | 3 | 158 | 2 | 2 |
| Speed in MPH | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.1 | -22.0 | -22.0 | -6.7 | -26.6 | -26.6 | -8.8 | -28.7 | -28.7 |
| Distance | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 63.2 | 53.0 | 58.2 | 58.7 | 48.5 | 53.7 | 56.6 | 46.4 | 51.6 |
| VEHICULAR NOISE | DAY= | 64.7 | Leq | EVENING= | 60.2 | Leq | NIGHT= | 58.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **66.1** |
| | | | **CNEL=** | **66.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **19** | **59** | **188** |
| | **CNEL:** | **20** | **64** | **201** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: 15th Street
Segment: West of Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 8,988 |
| SPEED (mph) | 35 |
| ROAD NEAR-FAR LN. DIST. | 12 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 587 | 6 | 6 | 206 | 2 | 2 | 127 | 1 | 1 |
| Speed in MPH | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -3.1 | -23.0 | -23.0 | -7.6 | -27.5 | -27.5 | -9.7 | -29.6 | -29.6 |
| Distance | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 62.0 | 51.8 | 57.0 | 57.5 | 47.3 | 52.5 | 55.4 | 45.2 | 50.4 |
| VEHICULAR NOISE | DAY= | 63.5 | Leq | EVENING= | 59.0 | Leq | NIGHT= | 56.9 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **64.8** |
| | | | **CNEL=** | **65.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **15** | **48** | **151** |
| | **CNEL:** | **16** | **51** | **162** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: West Coast Highway
Segment: Brookhurst St to Prospect St
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 49,479 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3233 | 33 | 33 | 1131 | 12 | 12 | 700 | 7 | 7 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.3 | -16.7 | -16.7 | -1.3 | -21.2 | -21.2 | -3.4 | -23.3 | -23.3 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.7 | 58.1 | 62.6 | 65.2 | 53.5 | 58.1 | 63.1 | 51.4 | 56.0 |
| VEHICULAR NOISE | DAY= | 70.7 | Leq | EVENING= | 66.2 | Leq | NIGHT= | 64.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.1** |
| | | | **CNEL=** | **72.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **153** | **485** | **1534** |
| | **CNEL:** | **164** | **519** | **1641** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: West Coast Highway
Segment: Prospect St to Superior Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 41,916 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 2739 | 28 | 28 | 958 | 10 | 10 | 593 | 6 | 6 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 2.5 | -17.4 | -17.4 | -2.0 | -21.9 | -21.9 | -4.1 | -24.0 | -24.0 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.0 | 57.4 | 61.9 | 64.4 | 52.8 | 57.3 | 62.4 | 50.7 | 55.2 |
| VEHICULAR NOISE | DAY= | 70.0 | Leq | EVENING= | 65.5 | Leq | NIGHT= | 63.4 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.3** |
| | | | **CNEL=** | **71.6** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **130** | **411** | **1300** |
| | **CNEL:** | **139** | **440** | **1390** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: West Coast Highway
Segment: Superior Ave to Newport Blvd
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 48,502 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3169 | 32 | 32 | 1109 | 11 | 11 | 687 | 7 | 7 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.2 | -16.7 | -16.7 | -1.4 | -21.3 | -21.3 | -3.5 | -23.4 | -23.4 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.6 | 58.0 | 62.5 | 65.1 | 53.4 | 58.0 | 63.0 | 51.4 | 55.9 |
| VEHICULAR NOISE | DAY= | 70.7 | Leq | EVENING= | 66.1 | Leq | NIGHT= | 64.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.0** |
| | | | **CNEL=** | **72.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **150** | **476** | **1504** |
| | **CNEL:** | **161** | **509** | **1609** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: West Coast Highway
Segment: East of Dover Dr

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 61,152 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 84 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3995 | 41 | 41 | 1398 | 14 | 14 | 866 | 9 | 9 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 4.2 | -15.7 | -15.7 | -0.4 | -20.3 | -20.3 | -2.5 | -22.4 | -22.4 |
| Distance | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.9 | 59.2 | 63.7 | 66.3 | 54.7 | 59.2 | 64.2 | 52.6 | 57.1 |
| VEHICULAR NOISE | DAY= | 71.9 | Leq | EVENING= | 67.3 | Leq | NIGHT= | 65.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **73.2** |
| | | | **CNEL=** | **73.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **190** | **600** | **1896** |
| | **CNEL:** | **203** | **641** | **2029** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: Brookhurst Street
Segment: North of Hamilton

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 29,045 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1898 | 19 | 19 | 664 | 7 | 7 | 411 | 4 | 4 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.9 | -19.0 | -19.0 | -3.6 | -23.5 | -23.5 | -5.7 | -25.6 | -25.6 |
| Distance | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 71.2 | 59.6 | 64.1 | 66.6 | 55.0 | 59.5 | 64.5 | 52.9 | 57.4 |
| VEHICULAR NOISE | DAY= | 72.2 | Leq | EVENING= | 67.6 | Leq | NIGHT= | 65.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **73.5** |
| | | | **CNEL=** | **73.8** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **90** | **285** | **901** |
| | **CNEL:** | **96** | **305** | **963** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: Brookhurst Street
Segment: Pacific Coast Hwy to Hamilton
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 17,277 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 84 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1129 | 12 | 12 | 395 | 4 | 4 | 245 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.3 | -21.2 | -21.2 | -5.9 | -25.8 | -25.8 | -8.0 | -27.9 | -27.9 |
| Distance | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.6 | 59.0 | 63.5 | 66.1 | 54.4 | 58.9 | 64.0 | 52.3 | 56.9 |
| VEHICULAR NOISE | DAY= | 71.6 | Leq | EVENING= | 67.1 | Leq | NIGHT= | 65.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **73.0** |
| | | | **CNEL=** | **73.2** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **54** | **169** | **536** |
| | **CNEL:** | **57** | **181** | **573** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: Placentia Avenue
Segment: North of Victoria St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 15,730 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1028 | 10 | 10 | 360 | 4 | 4 | 223 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.2 | -21.1 | -21.1 | -5.8 | -25.7 | -25.7 | -7.8 | -27.8 | -27.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.7 | 55.7 | 60.5 | 62.1 | 51.1 | 56.0 | 60.0 | 49.0 | 53.9 |
| VEHICULAR NOISE | DAY= | 67.9 | Leq | EVENING= | 63.3 | Leq | NIGHT= | 61.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.2** |
| | | | **CNEL=** | **69.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **36** | **115** | **365** |
| | **CNEL:** | **39** | **123** | **390** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: Placentia Avenue
Segment: 19th St to 17th St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 28,764 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1879 | 19 | 19 | 658 | 7 | 7 | 407 | 4 | 4 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 1.4 | -18.5 | -18.5 | -3.1 | -23.1 | -23.1 | -5.2 | -25.1 | -25.1 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.3 | 58.3 | 63.2 | 64.7 | 53.8 | 58.6 | 62.6 | 51.7 | 56.5 |
| VEHICULAR NOISE | DAY= | 70.5 | Leq | EVENING= | 65.9 | Leq | NIGHT= | 63.9 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.8** |
| | | | **CNEL=** | **72.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **67** | **211** | **667** |
| | **CNEL:** | **71** | **225** | **713** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: Placentia Avenue
Segment: 17th St to 16th Street

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 14,080 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 920 | 9 | 9 | 322 | 3 | 3 | 199 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.7 | -21.6 | -21.6 | -6.2 | -26.2 | -26.2 | -8.3 | -28.2 | -28.2 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.2 | 55.2 | 60.1 | 61.6 | 50.7 | 55.5 | 59.5 | 48.6 | 53.4 |
| VEHICULAR NOISE | DAY= | 67.4 | Leq | EVENING= | 62.8 | Leq | NIGHT= | 60.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.7** |
| | | | **CNEL=** | **69.0** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **33** | **103** | **326** |
| | **CNEL:** | **35** | **110** | **349** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: Superior Avenue
Segment: 16th St to Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 24,484 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

**CALCULATION AREA**

| | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1600 | 16 | 16 | 560 | 6 | 6 | 347 | 4 | 4 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.7 | -19.2 | -19.2 | -3.8 | -23.8 | -23.8 | -5.9 | -25.8 | -25.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.6 | 57.6 | 62.5 | 64.0 | 53.1 | 57.9 | 61.9 | 51.0 | 55.8 |
| VEHICULAR NOISE | DAY= | 69.8 | Leq | EVENING= | 65.2 | Leq | NIGHT= | 63.2 | Leq |

**RESULTS**

NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): **Ldn= 71.1**, **CNEL= 71.4**

| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
|---|---|---|---|---|
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **57** | **179** | **567** |
| | **CNEL:** | **61** | **192** | **607** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: Superior Avenue
Segment: Placentia Av. to West Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 18,108 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1183 | 12 | 12 | 414 | 4 | 4 | 256 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.6 | -20.5 | -20.5 | -5.2 | -25.1 | -25.1 | -7.2 | -27.2 | -27.2 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.3 | 56.3 | 61.1 | 62.7 | 51.7 | 56.6 | 60.6 | 49.7 | 54.5 |
| VEHICULAR NOISE | DAY= | 68.5 | Leq | EVENING= | 63.9 | Leq | NIGHT= | 61.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.8** |
| | | | **CNEL=** | **70.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **42** | **133** | **420** |
| | **CNEL:** | **45** | **142** | **449** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: Superior Avenue
Segment: South of West Coast Hwy

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 19,318 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1262 | 13 | 13 | 442 | 5 | 5 | 273 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.3 | -20.2 | -20.2 | -4.9 | -24.8 | -24.8 | -7.0 | -26.9 | -26.9 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.5 | 56.6 | 61.4 | 63.0 | 52.0 | 56.9 | 60.9 | 49.9 | 54.8 |
| VEHICULAR NOISE | DAY= | 68.8 | Leq | EVENING= | 64.2 | Leq | NIGHT= | 62.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.1** |
| | | | **CNEL=** | **70.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **45** | **142** | **448** |
| | **CNEL:** | **48** | **151** | **479** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: Magnolia Street
Segment: North of Victoria St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 17,240 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1126 | 11 | 11 | 394 | 4 | 4 | 244 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.3 | -21.2 | -21.2 | -5.9 | -25.8 | -25.8 | -8.0 | -27.9 | -27.9 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.5 | 56.9 | 61.4 | 64.0 | 52.3 | 56.8 | 61.9 | 50.2 | 54.8 |
| VEHICULAR NOISE | DAY= | 69.5 | Leq | EVENING= | 65.0 | Leq | NIGHT= | 62.9 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.9** |
| | | | **CNEL=** | **71.2** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **53** | **169** | **535** |
| | **CNEL:** | **57** | **181** | **572** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: Magnolia Street
Segment: Hamilton Ave to Banning Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 11,276 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 737 | 8 | 8 | 258 | 3 | 3 | 160 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -3.2 | -23.1 | -23.1 | -7.7 | -27.6 | -27.6 | -9.8 | -29.7 | -29.7 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.7 | 55.0 | 59.6 | 62.1 | 50.5 | 55.0 | 60.0 | 48.4 | 52.9 |
| VEHICULAR NOISE | DAY= | 67.7 | Leq | EVENING= | 63.1 | Leq | NIGHT= | 61.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.0** |
| | | | **CNEL=** | **69.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **35** | **111** | **350** |
| | **CNEL:** | **37** | **118** | **374** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: Magnolia Street
Segment: Banning Ave to Pacific Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 11,132 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

**CALCULATION AREA**

| | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 727 | 7 | 7 | 255 | 3 | 3 | 158 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -3.2 | -23.1 | -23.1 | -7.8 | -27.7 | -27.7 | -9.9 | -29.8 | -29.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.6 | 55.0 | 59.5 | 62.1 | 50.4 | 54.9 | 60.0 | 48.3 | 52.9 |
| VEHICULAR NOISE | DAY= | 67.6 | Leq | EVENING= | 63.1 | Leq | NIGHT= | 61.0 | Leq |

**RESULTS**

NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): **Ldn= 69.0** **CNEL= 69.3**

| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
|---|---|---|---|---|
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **35** | **109** | **345** |
| | **CNEL:** | **37** | **117** | **369** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: Placentia Avenue
Segment: 16th St to 15th Street

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 12,672 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 828 | 8 | 8 | 290 | 3 | 3 | 179 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.1 | -22.1 | -22.1 | -6.7 | -26.6 | -26.6 | -8.8 | -28.7 | -28.7 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 65.7 | 54.8 | 59.6 | 61.2 | 50.2 | 55.0 | 59.1 | 48.1 | 53.0 |
| VEHICULAR NOISE | DAY= | 66.9 | Leq | EVENING= | 62.4 | Leq | NIGHT= | 60.3 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.3** |
| | | | **CNEL=** | **68.6** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **29** | **93** | **294** |
| | **CNEL:** | **31** | **99** | **314** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP
Roadway: Placentia Avenue
Segment: 15th St to Superior Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 15,382 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

**CALCULATION AREA**

| | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1005 | 10 | 10 | 352 | 4 | 4 | 218 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.3 | -21.2 | -21.2 | -5.9 | -25.8 | -25.8 | -7.9 | -27.9 | -27.9 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.6 | 55.6 | 60.4 | 62.0 | 51.0 | 55.9 | 59.9 | 49.0 | 53.8 |
| VEHICULAR NOISE | DAY= | 67.8 | Leq | EVENING= | 63.2 | Leq | NIGHT= | 61.1 | Leq |

**RESULTS**

NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): **Ldn= 69.1**, **CNEL= 69.4**

| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
|---|---|---|---|---|
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **36** | **113** | **356** |
| | **CNEL:** | **38** | **121** | **381** |

2016 With Project Alternative Conditions Noise Contours Result Summary Table

| Roadway | Segment | Daily Traffic Volumes | Noise level at 50 feet (dBA CNEL) | Distance to noise contour (feet) | | |
|---|---|---|---|---|---|---|
| | | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL |
| 19th Street | West of Placentia Ave | 16,223 | 69.6 | 40 | 127 | 402 |
| 19th Street | Placentia Ave to Harbor Blvd. | 25,561 | 71.6 | 63 | 200 | 634 |
| Hamilton Avenue | West of Magnolia St | 11,923 | 69.6 | 40 | 125 | 396 |
| Hamilton Avenue | Magnolia St to Bushard Av | 15,630 | 70.7 | 52 | 164 | 518 |
| Hamilton Avenue | Bushard Ave to Brookhurst Street | 21,194 | 72.0 | 70 | 222 | 703 |
| 17th Street | West of Monrovia Ave | 11,658 | 66.5 | 21 | 66 | 210 |
| 15th Street | West of Placentia Ave | 8,998 | 65.1 | 16 | 51 | 162 |
| West Coast Highway | Brookhurst St to Prospect St | 49,469 | 72.4 | 164 | 519 | 1,641 |
| West Coast Highway | Prospect St to Superior Ave | 41,906 | 71.6 | 139 | 440 | 1,390 |
| West Coast Highway | Superior Ave to Newport Blvd | 48,340 | 72.3 | 160 | 507 | 1,604 |
| West Coast Highway | East of Dover Dr | 61,152 | 73.5 | 203 | 641 | 2,029 |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: 19th Street
Segment: West of Placentia Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 16,223 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1060 | 11 | 11 | 371 | 4 | 4 | 230 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.1 | -21.0 | -21.0 | -5.6 | -25.5 | -25.5 | -7.7 | -27.6 | -27.6 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.8 | 55.8 | 60.7 | 62.2 | 51.3 | 56.1 | 60.1 | 49.2 | 54.0 |
| VEHICULAR NOISE | DAY= | 68.0 | Leq | EVENING= | 63.4 | Leq | NIGHT= | 61.4 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.3** |
| | | | **CNEL=** | **69.6** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **38** | **119** | **376** |
| | **CNEL:** | **40** | **127** | **402** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: 19th Street
Segment: Placentia Ave to Harbor Blvd.
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 25,561 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1670 | 17 | 17 | 584 | 6 | 6 | 362 | 4 | 4 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.9 | -19.0 | -19.0 | -3.7 | -23.6 | -23.6 | -5.7 | -25.7 | -25.7 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.8 | 57.8 | 62.6 | 64.2 | 53.2 | 58.1 | 62.1 | 51.2 | 56.0 |
| VEHICULAR NOISE | DAY= | 70.0 | Leq | EVENING= | 65.4 | Leq | NIGHT= | 63.3 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.3** |
| | | | **CNEL=** | **71.6** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **59** | **187** | **592** |
| | **CNEL:** | **63** | **200** | **634** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: Hamilton Avenue
Segment: West of Magnolia St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 11,923 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 779 | 8 | 8 | 273 | 3 | 3 | 169 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.9 | -22.8 | -22.8 | -7.5 | -27.4 | -27.4 | -9.6 | -29.5 | -29.5 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.9 | 55.3 | 59.8 | 62.4 | 50.7 | 55.2 | 60.3 | 48.6 | 53.2 |
| VEHICULAR NOISE | DAY= | 67.9 | Leq | EVENING= | 63.4 | Leq | NIGHT= | 61.3 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.3** |
| | | | **CNEL=** | **69.6** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **37** | **117** | **370** |
| | **CNEL:** | **40** | **125** | **396** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: Hamilton Avenue
Segment: Magnolia St to Bushard Av
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 15,630 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1021 | 10 | 10 | 357 | 4 | 4 | 221 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.7 | -21.7 | -21.7 | -6.3 | -26.2 | -26.2 | -8.4 | -28.3 | -28.3 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.1 | 56.5 | 61.0 | 63.5 | 51.9 | 56.4 | 61.5 | 49.8 | 54.3 |
| VEHICULAR NOISE | DAY= | 69.1 | Leq | EVENING= | 64.6 | Leq | NIGHT= | 62.5 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.4** |
| | | | **CNEL=** | **70.7** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **48** | **153** | **485** |
| | **CNEL:** | **52** | **164** | **518** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: Hamilton Avenue
Segment: Bushard Ave to Brookhurst Street
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 21,194 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

**CALCULATION AREA**

| | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1385 | 14 | 14 | 485 | 5 | 5 | 300 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.4 | -20.3 | -20.3 | -5.0 | -24.9 | -24.9 | -7.1 | -27.0 | -27.0 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.4 | 57.8 | 62.3 | 64.9 | 53.2 | 57.7 | 62.8 | 51.1 | 55.7 |
| VEHICULAR NOISE | DAY= | 70.4 | Leq | EVENING= | 65.9 | Leq | NIGHT= | 63.8 | Leq |

**RESULTS**

NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): **Ldn= 71.8** **CNEL= 72.0**

| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
|---|---|---|---|---|
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **66** | **208** | **657** |
| | **CNEL:** | **70** | **222** | **703** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: 17th Street
Segment: West of Monrovia Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 11,658 |
| SPEED (mph) | 35 |
| ROAD NEAR-FAR LN. DIST. | 36 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 762 | 8 | 8 | 267 | 3 | 3 | 165 | 2 | 2 |
| Speed in MPH | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.9 | -21.8 | -21.8 | -6.5 | -26.4 | -26.4 | -8.6 | -28.5 | -28.5 |
| Distance | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 63.4 | 53.2 | 58.4 | 58.9 | 48.7 | 53.9 | 56.8 | 46.6 | 51.8 |
| VEHICULAR NOISE | DAY= | 64.9 | Leq | EVENING= | 60.4 | Leq | NIGHT= | 58.3 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **66.2** |
| | | | **CNEL=** | **66.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **20** | **62** | **196** |
| | **CNEL:** | **21** | **66** | **210** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: 15th Street
Segment: West of Placentia Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 8,998 |
| SPEED (mph) | 35 |
| ROAD NEAR-FAR LN. DIST. | 12 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 588 | 6 | 6 | 206 | 2 | 2 | 127 | 1 | 1 |
| Speed in MPH | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -3.1 | -23.0 | -23.0 | -7.6 | -27.5 | -27.5 | -9.7 | -29.6 | -29.6 |
| Distance | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 62.0 | 51.8 | 57.0 | 57.5 | 47.3 | 52.5 | 55.4 | 45.2 | 50.4 |
| VEHICULAR NOISE | DAY= | 63.5 | Leq | EVENING= | 59.0 | Leq | NIGHT= | 56.9 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **64.8** |
| | | | **CNEL=** | **65.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **15** | **48** | **151** |
| | **CNEL:** | **16** | **51** | **162** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: West Coast Highway
Segment: Brookhurst St to Prospect St
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 49,469 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3232 | 33 | 33 | 1131 | 12 | 12 | 700 | 7 | 7 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.3 | -16.7 | -16.7 | -1.3 | -21.2 | -21.2 | -3.4 | -23.3 | -23.3 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.7 | 58.1 | 62.6 | 65.2 | 53.5 | 58.1 | 63.1 | 51.4 | 56.0 |
| VEHICULAR NOISE | DAY= | 70.7 | Leq | EVENING= | 66.2 | Leq | NIGHT= | 64.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.1** |
| | | | **CNEL=** | **72.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **153** | **485** | **1534** |
| | **CNEL:** | **164** | **519** | **1641** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: West Coast Highway
Segment: Prospect St to Superior Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 41,906 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 2738 | 28 | 28 | 958 | 10 | 10 | 593 | 6 | 6 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 2.5 | -17.4 | -17.4 | -2.0 | -21.9 | -21.9 | -4.1 | -24.0 | -24.0 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.0 | 57.4 | 61.9 | 64.4 | 52.8 | 57.3 | 62.4 | 50.7 | 55.2 |
| VEHICULAR NOISE | DAY= | 70.0 | Leq | EVENING= | 65.5 | Leq | NIGHT= | 63.4 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.3** |
| | | | **CNEL=** | **71.6** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **130** | **411** | **1299** |
| | **CNEL:** | **139** | **440** | **1390** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: West Coast Highway
Segment: Superior Ave to Newport Blvd
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 48,340 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3158 | 32 | 32 | 1105 | 11 | 11 | 684 | 7 | 7 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.2 | -16.8 | -16.8 | -1.4 | -21.3 | -21.3 | -3.5 | -23.4 | -23.4 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.6 | 58.0 | 62.5 | 65.1 | 53.4 | 58.0 | 63.0 | 51.3 | 55.9 |
| VEHICULAR NOISE | DAY= | 70.6 | Leq | EVENING= | 66.1 | Leq | NIGHT= | 64.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.0** |
| | | | **CNEL=** | **72.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **150** | **474** | **1499** |
| | **CNEL:** | **160** | **507** | **1604** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: West Coast Highway
Segment: East of Dover Dr
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 61,152 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 84 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3995 | 41 | 41 | 1398 | 14 | 14 | 866 | 9 | 9 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 4.2 | -15.7 | -15.7 | -0.4 | -20.3 | -20.3 | -2.5 | -22.4 | -22.4 |
| Distance | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.9 | 59.2 | 63.7 | 66.3 | 54.7 | 59.2 | 64.2 | 52.6 | 57.1 |
| VEHICULAR NOISE | DAY= | 71.9 | Leq | EVENING= | 67.3 | Leq | NIGHT= | 65.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **73.2** |
| | | | **CNEL=** | **73.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **190** | **600** | **1896** |
| | **CNEL:** | **203** | **641** | **2029** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: Brookhurst Street
Segment: North of Hamilton
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 29,045 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1898 | 19 | 19 | 664 | 7 | 7 | 411 | 4 | 4 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.9 | -19.0 | -19.0 | -3.6 | -23.5 | -23.5 | -5.7 | -25.6 | -25.6 |
| Distance | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 71.2 | 59.6 | 64.1 | 66.6 | 55.0 | 59.5 | 64.5 | 52.9 | 57.4 |
| VEHICULAR NOISE | DAY= | 72.2 | Leq | EVENING= | 67.6 | Leq | NIGHT= | 65.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **73.5** |
| | | | **CNEL=** | **73.8** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **90** | **285** | **901** |
| | **CNEL:** | **96** | **305** | **963** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: Brookhurst Street
Segment: Pacific Coast Hwy to Hamilton
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 17,321 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 84 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1132 | 12 | 12 | 396 | 4 | 4 | 245 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.3 | -21.2 | -21.2 | -5.9 | -25.8 | -25.8 | -7.9 | -27.9 | -27.9 |
| Distance | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.6 | 59.0 | 63.5 | 66.1 | 54.4 | 59.0 | 64.0 | 52.4 | 56.9 |
| VEHICULAR NOISE | DAY= | 71.6 | Leq | EVENING= | 67.1 | Leq | NIGHT= | 65.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **73.0** |
| | | | **CNEL=** | **73.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **54** | **170** | **537** |
| | **CNEL:** | **57** | **182** | **575** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: Placentia Avenue
Segment: North of Victoria St
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 15,730 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1028 | 10 | 10 | 360 | 4 | 4 | 223 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.2 | -21.1 | -21.1 | -5.8 | -25.7 | -25.7 | -7.8 | -27.8 | -27.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.7 | 55.7 | 60.5 | 62.1 | 51.1 | 56.0 | 60.0 | 49.0 | 53.9 |
| VEHICULAR NOISE | DAY= | 67.9 | Leq | EVENING= | 63.3 | Leq | NIGHT= | 61.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.2** |
| | | | **CNEL=** | **69.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **36** | **115** | **365** |
| | **CNEL:** | **39** | **123** | **390** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: Placentia Avenue
Segment: 19th St to 17th St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 29,374 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1919 | 20 | 20 | 672 | 7 | 7 | 416 | 4 | 4 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 1.5 | -18.4 | -18.4 | -3.1 | -23.0 | -23.0 | -5.1 | -25.0 | -25.0 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.4 | 58.4 | 63.3 | 64.8 | 53.8 | 58.7 | 62.7 | 51.8 | 56.6 |
| VEHICULAR NOISE | DAY= | 70.6 | Leq | EVENING= | 66.0 | Leq | NIGHT= | 63.9 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.9** |
| | | | **CNEL=** | **72.2** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **68** | **215** | **681** |
| | **CNEL:** | **73** | **230** | **728** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: Placentia Avenue
Segment: 17th St to 16th Street
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 14,334 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 936 | 10 | 10 | 328 | 3 | 3 | 203 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.6 | -21.5 | -21.5 | -6.2 | -26.1 | -26.1 | -8.3 | -28.2 | -28.2 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.2 | 55.3 | 60.1 | 61.7 | 50.7 | 55.6 | 59.6 | 48.6 | 53.5 |
| VEHICULAR NOISE | DAY= | 67.5 | Leq | EVENING= | 62.9 | Leq | NIGHT= | 60.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.8** |
| | | | **CNEL=** | **69.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **33** | **105** | **332** |
| | **CNEL:** | **36** | **112** | **355** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: Superior Avenue
Segment: 16th St to Placentia Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 24,488 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1600 | 16 | 16 | 560 | 6 | 6 | 347 | 4 | 4 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.7 | -19.2 | -19.2 | -3.8 | -23.8 | -23.8 | -5.9 | -25.8 | -25.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.6 | 57.6 | 62.5 | 64.0 | 53.1 | 57.9 | 61.9 | 51.0 | 55.8 |
| VEHICULAR NOISE | DAY= | 69.8 | Leq | EVENING= | 65.2 | Leq | NIGHT= | 63.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.1** |
| | | | **CNEL=** | **71.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **57** | **179** | **567** |
| | **CNEL:** | **61** | **192** | **607** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: Superior Avenue
Segment: Placentia Av. to West Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 18,464 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

**CALCULATION AREA**

| | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1206 | 12 | 12 | 422 | 4 | 4 | 261 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.5 | -20.4 | -20.4 | -5.1 | -25.0 | -25.0 | -7.2 | -27.1 | -27.1 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.3 | 56.4 | 61.2 | 62.8 | 51.8 | 56.7 | 60.7 | 49.7 | 54.6 |
| VEHICULAR NOISE | DAY= | 68.6 | Leq | EVENING= | 64.0 | Leq | NIGHT= | 61.9 | Leq |

**RESULTS**

NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): **Ldn= 69.9** **CNEL= 70.2**

| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
|---|---|---|---|---|
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **43** | **135** | **428** |
| | **CNEL:** | **46** | **145** | **458** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: Superior Avenue
Segment: South of West Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 19,318 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1262 | 13 | 13 | 442 | 5 | 5 | 273 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.3 | -20.2 | -20.2 | -4.9 | -24.8 | -24.8 | -7.0 | -26.9 | -26.9 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.5 | 56.6 | 61.4 | 63.0 | 52.0 | 56.9 | 60.9 | 49.9 | 54.8 |
| VEHICULAR NOISE | DAY= | 68.8 | Leq | EVENING= | 64.2 | Leq | NIGHT= | 62.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.1** |
| | | | **CNEL=** | **70.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **45** | **142** | **448** |
| | **CNEL:** | **48** | **151** | **479** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: Magnolia Street
Segment: North of Victoria St
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 17,240 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1126 | 11 | 11 | 394 | 4 | 4 | 244 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.3 | -21.2 | -21.2 | -5.9 | -25.8 | -25.8 | -8.0 | -27.9 | -27.9 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.5 | 56.9 | 61.4 | 64.0 | 52.3 | 56.8 | 61.9 | 50.2 | 54.8 |
| VEHICULAR NOISE | DAY= | 69.5 | Leq | EVENING= | 65.0 | Leq | NIGHT= | 62.9 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.9** |
| | | | **CNEL=** | **71.2** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **53** | **169** | **535** |
| | **CNEL:** | **57** | **181** | **572** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: Magnolia Street
Segment: Hamilton Ave to Banning Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 11,224 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 733 | 7 | 7 | 257 | 3 | 3 | 159 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -3.2 | -23.1 | -23.1 | -7.7 | -27.7 | -27.7 | -9.8 | -29.7 | -29.7 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.7 | 55.0 | 59.5 | 62.1 | 50.5 | 55.0 | 60.0 | 48.4 | 52.9 |
| VEHICULAR NOISE | DAY= | 67.7 | Leq | EVENING= | 63.1 | Leq | NIGHT= | 61.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.0** |
| | | | **CNEL=** | **69.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **35** | **110** | **348** |
| | **CNEL:** | **37** | **118** | **372** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE Project: Banning Ranch
Roadway: Magnolia Street Analyst FJS
Segment: Banning Ave to Pacific Coast Hwy Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 11,080 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 724 | 7 | 7 | 253 | 3 | 3 | 157 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -3.2 | -23.2 | -23.2 | -7.8 | -27.7 | -27.7 | -9.9 | -29.8 | -29.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.6 | 55.0 | 59.5 | 62.0 | 50.4 | 54.9 | 60.0 | 48.3 | 52.8 |
| VEHICULAR NOISE | DAY= | 67.6 | Leq | EVENING= | 63.1 | Leq | NIGHT= | 61.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.9** |
| | | | **CNEL=** | **69.2** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **34** | **109** | **344** |
| | **CNEL:** | **37** | **116** | **368** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: Placentia Avenue
Segment: 16th St to 15th Street
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 13,034 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 852 | 9 | 9 | 298 | 3 | 3 | 185 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.0 | -21.9 | -21.9 | -6.6 | -26.5 | -26.5 | -8.7 | -28.6 | -28.6 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 65.8 | 54.9 | 59.7 | 61.3 | 50.3 | 55.2 | 59.2 | 48.2 | 53.1 |
| VEHICULAR NOISE | DAY= | 67.1 | Leq | EVENING= | 62.5 | Leq | NIGHT= | 60.4 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.4** |
| | | | **CNEL=** | **68.7** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **30** | **96** | **302** |
| | **CNEL:** | **32** | **102** | **323** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: 2016 WP ALTERNATIVE
Roadway: Placentia Avenue
Segment: 15th St to Superior Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 15,746 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

**CALCULATION AREA**

| | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1029 | 10 | 10 | 360 | 4 | 4 | 223 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.2 | -21.1 | -21.1 | -5.8 | -25.7 | -25.7 | -7.8 | -27.8 | -27.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.7 | 55.7 | 60.5 | 62.1 | 51.1 | 56.0 | 60.0 | 49.1 | 53.9 |
| VEHICULAR NOISE | DAY= | 67.9 | Leq | EVENING= | 63.3 | Leq | NIGHT= | 61.2 | Leq |

**RESULTS**

NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): **Ldn= 69.2** **CNEL= 69.5**

| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
|---|---|---|---|---|
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **36** | **115** | **365** |
| | **CNEL:** | **39** | **123** | **390** |

BO NP Conditions Noise Contours Result Summary Table

| Roadway | Segment | Daily Traffic Volumes | Noise level at 50 feet (dBA CNEL) | Distance to noise contour (feet) | | |
|---|---|---|---|---|---|---|
| | | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL |
| 19th Street | West of Placentia Ave | 21,640 | 70.9 | 54 | 170 | 536 |
| 19th Street | Placentia Ave to Harbor Blvd. | 34,660 | 72.9 | 86 | 272 | 859 |
| Hamilton Avenue | West of Magnolia St | 18,730 | 71.5 | 62 | 196 | 621 |
| Hamilton Avenue | Magnolia St to Bushard Av | 22,250 | 72.3 | 74 | 233 | 738 |
| Hamilton Avenue | Bushard Ave to Brookhurst Street | 26,630 | 73.0 | 88 | 279 | 883 |
| 17th Street | West of Monrovia Ave | 4,380 | 62.3 | 8 | 25 | 79 |
| 15th Street | West of Placentia Ave | 8,630 | 65.0 | 16 | 49 | 155 |
| West Coast Highway | Brookhurst St to Prospect St | 50,310 | 72.4 | 167 | 528 | 1,669 |
| West Coast Highway | Prospect St to Superior Ave | 51,840 | 72.6 | 172 | 544 | 1,720 |
| West Coast Highway | Superior Ave to Newport Blvd | 46,440 | 72.1 | 154 | 487 | 1,541 |
| West Coast Highway | East of Dover Dr | 76,550 | 74.5 | 254 | 803 | 2,539 |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: 19th Street
Segment: West of Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 21,640 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1414 | 14 | 14 | 495 | 5 | 5 | 306 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.2 | -19.7 | -19.7 | -4.4 | -24.3 | -24.3 | -6.5 | -26.4 | -26.4 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.0 | 57.1 | 61.9 | 63.5 | 52.5 | 57.4 | 61.4 | 50.4 | 55.3 |
| VEHICULAR NOISE | DAY= | 69.3 | Leq | EVENING= | 64.7 | Leq | NIGHT= | 62.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.6** |
| | | | **CNEL=** | **70.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **50** | **159** | **501** |
| | **CNEL:** | **54** | **170** | **536** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: 19th Street
Segment: Placentia Ave to Harbor Blvd.
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 34,660 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 2264 | 23 | 23 | 793 | 8 | 8 | 491 | 5 | 5 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 2.2 | -17.7 | -17.7 | -2.3 | -22.2 | -22.2 | -4.4 | -24.3 | -24.3 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.1 | 59.1 | 64.0 | 65.5 | 54.6 | 59.4 | 63.4 | 52.5 | 57.3 |
| VEHICULAR NOISE | DAY= | 71.3 | Leq | EVENING= | 66.7 | Leq | NIGHT= | 64.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.6** |
| | | | **CNEL=** | **72.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **80** | **254** | **803** |
| | **CNEL:** | **86** | **272** | **859** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: Hamilton Avenue
Segment: West of Magnolia St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 18,730 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1224 | 12 | 12 | 428 | 4 | 4 | 265 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.0 | -20.9 | -20.9 | -5.5 | -25.4 | -25.4 | -7.6 | -27.5 | -27.5 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.9 | 57.2 | 61.8 | 64.3 | 52.7 | 57.2 | 62.2 | 50.6 | 55.1 |
| VEHICULAR NOISE | DAY= | 69.9 | Leq | EVENING= | 65.3 | Leq | NIGHT= | 63.3 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.2** |
| | | | **CNEL=** | **71.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **58** | **184** | **581** |
| | **CNEL:** | **62** | **196** | **621** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: Hamilton Avenue
Segment: Magnolia St to Bushard Av

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 22,250 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1454 | 15 | 15 | 509 | 5 | 5 | 315 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.2 | -20.1 | -20.1 | -4.8 | -24.7 | -24.7 | -6.9 | -26.8 | -26.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.6 | 58.0 | 62.5 | 65.1 | 53.4 | 58.0 | 63.0 | 51.4 | 55.9 |
| VEHICULAR NOISE | DAY= | 70.6 | Leq | EVENING= | 66.1 | Leq | NIGHT= | 64.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.0** |
| | | | **CNEL=** | **72.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **69** | **218** | **690** |
| | **CNEL:** | **74** | **233** | **738** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: Hamilton Avenue
Segment: Bushard Ave to Brookhurst Street
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 26,630 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1740 | 18 | 18 | 609 | 6 | 6 | 377 | 4 | 4 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.6 | -19.3 | -19.3 | -4.0 | -23.9 | -23.9 | -6.1 | -26.0 | -26.0 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.4 | 58.8 | 63.3 | 65.9 | 54.2 | 58.7 | 63.8 | 52.1 | 56.7 |
| VEHICULAR NOISE | DAY= | 71.4 | Leq | EVENING= | 66.9 | Leq | NIGHT= | 64.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.7** |
| | | | **CNEL=** | **73.0** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **83** | **261** | **826** |
| | **CNEL:** | **88** | **279** | **883** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: 17th Street
Segment: West of Monrovia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 4,380 |
| SPEED (mph) | 35 |
| ROAD NEAR-FAR LN. DIST. | 36 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 286 | 3 | 3 | 100 | 1 | 1 | 62 | 1 | 1 |
| Speed in MPH | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -6.2 | -26.1 | -26.1 | -10.7 | -30.7 | -30.7 | -12.8 | -32.7 | -32.7 |
| Distance | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 59.2 | 49.0 | 54.2 | 54.6 | 44.4 | 49.6 | 52.5 | 42.3 | 47.5 |
| VEHICULAR NOISE | DAY= | 60.7 | Leq | EVENING= | 56.1 | Leq | NIGHT= | 54.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **62.0** |
| | | | **CNEL=** | **62.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **7** | **23** | **74** |
| | **CNEL:** | **8** | **25** | **79** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: 15th Street
Segment: West of Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 8,630 |
| SPEED (mph) | 35 |
| ROAD NEAR-FAR LN. DIST. | 12 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 564 | 6 | 6 | 197 | 2 | 2 | 122 | 1 | 1 |
| Speed in MPH | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -3.2 | -23.1 | -23.1 | -7.8 | -27.7 | -27.7 | -9.9 | -29.8 | -29.8 |
| Distance | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 61.8 | 51.6 | 56.9 | 57.3 | 47.1 | 52.3 | 55.2 | 45.0 | 50.2 |
| VEHICULAR NOISE | DAY= | 63.3 | Leq | EVENING= | 58.8 | Leq | NIGHT= | 56.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **64.7** |
| | | | **CNEL=** | **65.0** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **15** | **46** | **145** |
| | **CNEL:** | **16** | **49** | **155** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: West Coast Highway
Segment: Brookhurst St to Prospect St
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 50,310 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3287 | 34 | 34 | 1150 | 12 | 12 | 712 | 7 | 7 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.3 | -16.6 | -16.6 | -1.2 | -21.1 | -21.1 | -3.3 | -23.2 | -23.2 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.8 | 58.2 | 62.7 | 65.2 | 53.6 | 58.1 | 63.2 | 51.5 | 56.0 |
| VEHICULAR NOISE | DAY= | 70.8 | Leq | EVENING= | 66.3 | Leq | NIGHT= | 64.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.1** |
| | | | **CNEL=** | **72.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **156** | **493** | **1560** |
| | **CNEL:** | **167** | **528** | **1669** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: West Coast Highway
Segment: Prospect St to Superior Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 51,840 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3387 | 35 | 35 | 1185 | 12 | 12 | 734 | 7 | 7 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.5 | -16.5 | -16.5 | -1.1 | -21.0 | -21.0 | -3.2 | -23.1 | -23.1 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.9 | 58.3 | 62.8 | 65.4 | 53.7 | 58.3 | 63.3 | 51.7 | 56.2 |
| VEHICULAR NOISE | DAY= | 70.9 | Leq | EVENING= | 66.4 | Leq | NIGHT= | 64.3 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.3** |
| | | | **CNEL=** | **72.6** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **161** | **508** | **1608** |
| | **CNEL:** | **172** | **544** | **1720** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: West Coast Highway
Segment: Superior Ave to Newport Blvd
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 46,440 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3034 | 31 | 31 | 1062 | 11 | 11 | 657 | 7 | 7 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.0 | -16.9 | -16.9 | -1.6 | -21.5 | -21.5 | -3.7 | -23.6 | -23.6 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.5 | 57.8 | 62.3 | 64.9 | 53.3 | 57.8 | 62.8 | 51.2 | 55.7 |
| VEHICULAR NOISE | DAY= | 70.5 | Leq | EVENING= | 65.9 | Leq | NIGHT= | 63.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.8** |
| | | | **CNEL=** | **72.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **144** | **455** | **1440** |
| | **CNEL:** | **154** | **487** | **1541** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: West Coast Highway
Segment: East of Dover Dr

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 76,550 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 84 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 5001 | 51 | 51 | 1750 | 18 | 18 | 1084 | 11 | 11 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 5.2 | -14.8 | -14.8 | 0.6 | -19.3 | -19.3 | -1.5 | -21.4 | -21.4 |
| Distance | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 71.8 | 60.2 | 64.7 | 67.3 | 55.6 | 60.2 | 65.2 | 53.6 | 58.1 |
| VEHICULAR NOISE | DAY= | 72.9 | Leq | EVENING= | 68.3 | Leq | NIGHT= | 66.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **74.2** |
| | | | **CNEL=** | **74.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **237** | **751** | **2374** |
| | **CNEL:** | **254** | **803** | **2539** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: Brookhurst Street
Segment: North of Hamilton

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 29,180 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1906 | 19 | 19 | 667 | 7 | 7 | 413 | 4 | 4 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 1.0 | -18.9 | -18.9 | -3.6 | -23.5 | -23.5 | -5.7 | -25.6 | -25.6 |
| Distance | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 71.2 | 59.6 | 64.1 | 66.6 | 55.0 | 59.5 | 64.6 | 52.9 | 57.5 |
| VEHICULAR NOISE | DAY= | 72.2 | Leq | EVENING= | 67.7 | Leq | NIGHT= | 65.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **73.5** |
| | | | **CNEL=** | **73.8** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **90** | **286** | **905** |
| | **CNEL:** | **97** | **306** | **968** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: Brookhurst Street
Segment: Pacific Coast Hwy to Hamilton
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 22,860 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 84 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1494 | 15 | 15 | 523 | 5 | 5 | 324 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.1 | -20.0 | -20.0 | -4.7 | -24.6 | -24.6 | -6.7 | -26.7 | -26.7 |
| Distance | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 71.8 | 60.2 | 64.7 | 67.3 | 55.6 | 60.2 | 65.2 | 53.6 | 58.1 |
| VEHICULAR NOISE | DAY= | 72.8 | Leq | EVENING= | 68.3 | Leq | NIGHT= | 66.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **74.2** |
| | | | **CNEL=** | **74.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **71** | **224** | **709** |
| | **CNEL:** | **76** | **240** | **758** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: Placentia Avenue
Segment: North of Victoria St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 19,700 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1287 | 13 | 13 | 450 | 5 | 5 | 279 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.2 | -20.1 | -20.1 | -4.8 | -24.7 | -24.7 | -6.9 | -26.8 | -26.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.6 | 56.7 | 61.5 | 63.1 | 52.1 | 57.0 | 61.0 | 50.0 | 54.9 |
| VEHICULAR NOISE | DAY= | 68.9 | Leq | EVENING= | 64.3 | Leq | NIGHT= | 62.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.2** |
| | | | **CNEL=** | **70.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **46** | **144** | **457** |
| | **CNEL:** | **49** | **154** | **488** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: Placentia Avenue
Segment: 19th St to 17th St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 21,890 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1430 | 15 | 15 | 501 | 5 | 5 | 310 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.2 | -19.7 | -19.7 | -4.3 | -24.2 | -24.2 | -6.4 | -26.3 | -26.3 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.1 | 57.1 | 62.0 | 63.5 | 52.6 | 57.4 | 61.4 | 50.5 | 55.3 |
| VEHICULAR NOISE | DAY= | 69.3 | Leq | EVENING= | 64.7 | Leq | NIGHT= | 62.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.6** |
| | | | **CNEL=** | **70.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **51** | **160** | **507** |
| | **CNEL:** | **54** | **172** | **543** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: Placentia Avenue
Segment: 17th St to Superior Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 15,080 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 985 | 10 | 10 | 345 | 4 | 4 | 213 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.4 | -21.3 | -21.3 | -6.0 | -25.9 | -25.9 | -8.0 | -27.9 | -27.9 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.5 | 55.5 | 60.4 | 61.9 | 50.9 | 55.8 | 59.8 | 48.9 | 53.7 |
| VEHICULAR NOISE | DAY= | 67.7 | Leq | EVENING= | 63.1 | Leq | NIGHT= | 61.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.0** |
| | | | **CNEL=** | **69.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **35** | **111** | **349** |
| | **CNEL:** | **37** | **118** | **374** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: Superior Avenue
Segment: 16th St to Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 24,080 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1573 | 16 | 16 | 551 | 6 | 6 | 341 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.6 | -19.3 | -19.3 | -3.9 | -23.8 | -23.8 | -6.0 | -25.9 | -25.9 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.5 | 57.5 | 62.4 | 63.9 | 53.0 | 57.8 | 61.9 | 50.9 | 55.7 |
| VEHICULAR NOISE | DAY= | 69.7 | Leq | EVENING= | 65.2 | Leq | NIGHT= | 63.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.0** |
| | | | **CNEL=** | **71.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **56** | **176** | **558** |
| | **CNEL:** | **60** | **189** | **597** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: Superior Avenue
Segment: Placentia Av. to West Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 24,680 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1612 | 16 | 16 | 564 | 6 | 6 | 349 | 4 | 4 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.7 | -19.2 | -19.2 | -3.8 | -23.7 | -23.7 | -5.9 | -25.8 | -25.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.6 | 57.6 | 62.5 | 64.0 | 53.1 | 57.9 | 62.0 | 51.0 | 55.9 |
| VEHICULAR NOISE | DAY= | 69.8 | Leq | EVENING= | 65.3 | Leq | NIGHT= | 63.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.2** |
| | | | **CNEL=** | **71.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **57** | **181** | **572** |
| | **CNEL:** | **61** | **193** | **612** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: Superior Avenue
Segment: South of West Coast Hwy

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 19,820 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1295 | 13 | 13 | 453 | 5 | 5 | 281 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.2 | -20.1 | -20.1 | -4.8 | -24.7 | -24.7 | -6.8 | -26.8 | -26.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.7 | 56.7 | 61.5 | 63.1 | 52.1 | 57.0 | 61.0 | 50.1 | 54.9 |
| VEHICULAR NOISE | DAY= | 68.9 | Leq | EVENING= | 64.3 | Leq | NIGHT= | 62.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.2** |
| | | | **CNEL=** | **70.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **46** | **145** | **459** |
| | **CNEL:** | **49** | **155** | **491** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: Magnolia Street
Segment: North of Victoria St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 14,230 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 930 | 9 | 9 | 325 | 3 | 3 | 201 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.2 | -22.1 | -22.1 | -6.7 | -26.6 | -26.6 | -8.8 | -28.7 | -28.7 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.7 | 56.1 | 60.6 | 63.1 | 51.5 | 56.0 | 61.0 | 49.4 | 53.9 |
| VEHICULAR NOISE | DAY= | 68.7 | Leq | EVENING= | 64.1 | Leq | NIGHT= | 62.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.0** |
| | | | **CNEL=** | **70.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **44** | **140** | **441** |
| | **CNEL:** | **47** | **149** | **472** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: Magnolia Street
Segment: Hamilton Ave to Banning Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 14,840 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 970 | 10 | 10 | 339 | 3 | 3 | 210 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.0 | -21.9 | -21.9 | -6.5 | -26.4 | -26.4 | -8.6 | -28.5 | -28.5 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.9 | 56.2 | 60.8 | 63.3 | 51.7 | 56.2 | 61.2 | 49.6 | 54.1 |
| VEHICULAR NOISE | DAY= | 68.9 | Leq | EVENING= | 64.3 | Leq | NIGHT= | 62.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.2** |
| | | | **CNEL=** | **70.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **46** | **146** | **460** |
| | **CNEL:** | **49** | **156** | **492** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO NP
Roadway: Magnolia Street
Segment: Banning Ave to Pacific Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 20,550 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1343 | 14 | 14 | 470 | 5 | 5 | 291 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.6 | -20.5 | -20.5 | -5.1 | -25.0 | -25.0 | -7.2 | -27.1 | -27.1 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.3 | 57.7 | 62.2 | 64.7 | 53.1 | 57.6 | 62.6 | 51.0 | 55.5 |
| VEHICULAR NOISE | DAY= | 70.3 | Leq | EVENING= | 65.7 | Leq | NIGHT= | 63.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.6** |
| | | | **CNEL=** | **71.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **64** | **202** | **637** |
| | **CNEL:** | **68** | **216** | **682** |

BO OS Conditions Noise Contours Result Summary Table

| Roadway | Segment | Daily Traffic Volumes | Noise level at 50 feet (dBA CNEL) | Distance to noise contour (feet) | | |
|---|---|---|---|---|---|---|
| | | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL |
| 19th Street | West of Placentia Ave | 21,640 | 70.9 | 54 | 170 | 536 |
| 19th Street | Placentia Ave to Harbor Blvd. | 34,660 | 72.9 | 86 | 272 | 859 |
| Hamilton Avenue | West of Magnolia St | 18,730 | 71.5 | 62 | 196 | 621 |
| Hamilton Avenue | Magnolia St to Bushard Av | 22,250 | 72.3 | 74 | 233 | 738 |
| Hamilton Avenue | Bushard Ave to Brookhurst Street | 26,630 | 73.0 | 88 | 279 | 883 |
| 17th Street | West of Monrovia Ave | 4,380 | 62.3 | 8 | 25 | 79 |
| 15th Street | West of Placentia Ave | 8,630 | 65.0 | 16 | 49 | 155 |
| West Coast Highway | Brookhurst St to Prospect St | 50,310 | 72.4 | 167 | 528 | 1,669 |
| West Coast Highway | Prospect St to Superior Ave | 51,840 | 72.6 | 172 | 544 | 1,720 |
| West Coast Highway | Superior Ave to Newport Blvd | 46,440 | 72.1 | 154 | 487 | 1,541 |
| West Coast Highway | East of Dover Dr | 76,550 | 74.5 | 254 | 803 | 2,539 |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: 19th Street
Segment: West of Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 21,640 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1414 | 14 | 14 | 495 | 5 | 5 | 306 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.2 | -19.7 | -19.7 | -4.4 | -24.3 | -24.3 | -6.5 | -26.4 | -26.4 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.0 | 57.1 | 61.9 | 63.5 | 52.5 | 57.4 | 61.4 | 50.4 | 55.3 |
| VEHICULAR NOISE | DAY= | 69.3 | Leq | EVENING= | 64.7 | Leq | NIGHT= | 62.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.6** |
| | | | **CNEL=** | **70.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **50** | **159** | **501** |
| | **CNEL:** | **54** | **170** | **536** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: 19th Street
Segment: Placentia Ave to Harbor Blvd.
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 34,660 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 2264 | 23 | 23 | 793 | 8 | 8 | 491 | 5 | 5 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 2.2 | -17.7 | -17.7 | -2.3 | -22.2 | -22.2 | -4.4 | -24.3 | -24.3 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.1 | 59.1 | 64.0 | 65.5 | 54.6 | 59.4 | 63.4 | 52.5 | 57.3 |
| VEHICULAR NOISE | DAY= | 71.3 | Leq | EVENING= | 66.7 | Leq | NIGHT= | 64.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.6** |
| | | | **CNEL=** | **72.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **80** | **254** | **803** |
| | **CNEL:** | **86** | **272** | **859** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: Hamilton Avenue
Segment: West of Magnolia St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 18,730 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1224 | 12 | 12 | 428 | 4 | 4 | 265 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.0 | -20.9 | -20.9 | -5.5 | -25.4 | -25.4 | -7.6 | -27.5 | -27.5 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.9 | 57.2 | 61.8 | 64.3 | 52.7 | 57.2 | 62.2 | 50.6 | 55.1 |
| VEHICULAR NOISE | DAY= | 69.9 | Leq | EVENING= | 65.3 | Leq | NIGHT= | 63.3 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.2** |
| | | | **CNEL=** | **71.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **58** | **184** | **581** |
| | **CNEL:** | **62** | **196** | **621** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: Hamilton Avenue
Segment: Magnolia St to Bushard Av

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 22,250 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1454 | 15 | 15 | 509 | 5 | 5 | 315 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.2 | -20.1 | -20.1 | -4.8 | -24.7 | -24.7 | -6.9 | -26.8 | -26.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.6 | 58.0 | 62.5 | 65.1 | 53.4 | 58.0 | 63.0 | 51.4 | 55.9 |
| VEHICULAR NOISE | DAY= | 70.6 | Leq | EVENING= | 66.1 | Leq | NIGHT= | 64.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.0** |
| | | | **CNEL=** | **72.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **69** | **218** | **690** |
| | **CNEL:** | **74** | **233** | **738** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: Hamilton Avenue
Segment: Bushard Ave to Brookhurst Street
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 26,630 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1740 | 18 | 18 | 609 | 6 | 6 | 377 | 4 | 4 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.6 | -19.3 | -19.3 | -4.0 | -23.9 | -23.9 | -6.1 | -26.0 | -26.0 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.4 | 58.8 | 63.3 | 65.9 | 54.2 | 58.7 | 63.8 | 52.1 | 56.7 |
| VEHICULAR NOISE | DAY= | 71.4 | Leq | EVENING= | 66.9 | Leq | NIGHT= | 64.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.7** |
| | | | **CNEL=** | **73.0** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **83** | **261** | **826** |
| | **CNEL:** | **88** | **279** | **883** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: 17th Street
Segment: West of Monrovia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 4,380 |
| SPEED (mph) | 35 |
| ROAD NEAR-FAR LN. DIST. | 36 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 286 | 3 | 3 | 100 | 1 | 1 | 62 | 1 | 1 |
| Speed in MPH | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -6.2 | -26.1 | -26.1 | -10.7 | -30.7 | -30.7 | -12.8 | -32.7 | -32.7 |
| Distance | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 59.2 | 49.0 | 54.2 | 54.6 | 44.4 | 49.6 | 52.5 | 42.3 | 47.5 |
| VEHICULAR NOISE | DAY= | 60.7 | Leq | EVENING= | 56.1 | Leq | NIGHT= | 54.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **62.0** |
| | | | **CNEL=** | **62.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **7** | **23** | **74** |
| | **CNEL:** | **8** | **25** | **79** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: 15th Street
Segment: West of Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 8,630 |
| SPEED (mph) | 35 |
| ROAD NEAR-FAR LN. DIST. | 12 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 564 | 6 | 6 | 197 | 2 | 2 | 122 | 1 | 1 |
| Speed in MPH | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -3.2 | -23.1 | -23.1 | -7.8 | -27.7 | -27.7 | -9.9 | -29.8 | -29.8 |
| Distance | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 61.8 | 51.6 | 56.9 | 57.3 | 47.1 | 52.3 | 55.2 | 45.0 | 50.2 |
| VEHICULAR NOISE | DAY= | 63.3 | Leq | EVENING= | 58.8 | Leq | NIGHT= | 56.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **64.7** |
| | | | **CNEL=** | **65.0** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **15** | **46** | **145** |
| | **CNEL:** | **16** | **49** | **155** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: West Coast Highway
Segment: Brookhurst St to Prospect St
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 50,310 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3287 | 34 | 34 | 1150 | 12 | 12 | 712 | 7 | 7 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.3 | -16.6 | -16.6 | -1.2 | -21.1 | -21.1 | -3.3 | -23.2 | -23.2 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.8 | 58.2 | 62.7 | 65.2 | 53.6 | 58.1 | 63.2 | 51.5 | 56.0 |
| VEHICULAR NOISE | DAY= | 70.8 | Leq | EVENING= | 66.3 | Leq | NIGHT= | 64.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.1** |
| | | | **CNEL=** | **72.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **156** | **493** | **1560** |
| | **CNEL:** | **167** | **528** | **1669** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: West Coast Highway
Segment: Prospect St to Superior Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 51,840 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3387 | 35 | 35 | 1185 | 12 | 12 | 734 | 7 | 7 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.5 | -16.5 | -16.5 | -1.1 | -21.0 | -21.0 | -3.2 | -23.1 | -23.1 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.9 | 58.3 | 62.8 | 65.4 | 53.7 | 58.3 | 63.3 | 51.7 | 56.2 |
| VEHICULAR NOISE | DAY= | 70.9 | Leq | EVENING= | 66.4 | Leq | NIGHT= | 64.3 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.3** |
| | | | **CNEL=** | **72.6** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **161** | **508** | **1608** |
| | **CNEL:** | **172** | **544** | **1720** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: West Coast Highway
Segment: Superior Ave to Newport Blvd
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 46,440 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3034 | 31 | 31 | 1062 | 11 | 11 | 657 | 7 | 7 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.0 | -16.9 | -16.9 | -1.6 | -21.5 | -21.5 | -3.7 | -23.6 | -23.6 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.5 | 57.8 | 62.3 | 64.9 | 53.3 | 57.8 | 62.8 | 51.2 | 55.7 |
| VEHICULAR NOISE | DAY= | 70.5 | Leq | EVENING= | 65.9 | Leq | NIGHT= | 63.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.8** |
| | | | **CNEL=** | **72.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **144** | **455** | **1440** |
| | **CNEL:** | **154** | **487** | **1541** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: West Coast Highway
Segment: East of Dover Dr

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 76,550 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 84 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 5001 | 51 | 51 | 1750 | 18 | 18 | 1084 | 11 | 11 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 5.2 | -14.8 | -14.8 | 0.6 | -19.3 | -19.3 | -1.5 | -21.4 | -21.4 |
| Distance | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 71.8 | 60.2 | 64.7 | 67.3 | 55.6 | 60.2 | 65.2 | 53.6 | 58.1 |
| VEHICULAR NOISE | DAY= | 72.9 | Leq | EVENING= | 68.3 | Leq | NIGHT= | 66.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **74.2** |
| | | | **CNEL=** | **74.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **237** | **751** | **2374** |
| | **CNEL:** | **254** | **803** | **2539** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: Brookhurst Street
Segment: North of Hamilton

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 29,180 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1906 | 19 | 19 | 667 | 7 | 7 | 413 | 4 | 4 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 1.0 | -18.9 | -18.9 | -3.6 | -23.5 | -23.5 | -5.7 | -25.6 | -25.6 |
| Distance | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 71.2 | 59.6 | 64.1 | 66.6 | 55.0 | 59.5 | 64.6 | 52.9 | 57.5 |
| VEHICULAR NOISE | DAY= | 72.2 | Leq | EVENING= | 67.7 | Leq | NIGHT= | 65.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **73.5** |
| | | | **CNEL=** | **73.8** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **90** | **286** | **905** |
| | **CNEL:** | **97** | **306** | **968** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: Brookhurst Street
Segment: Pacific Coast Hwy to Hamilton
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 22,860 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 84 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1494 | 15 | 15 | 523 | 5 | 5 | 324 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.1 | -20.0 | -20.0 | -4.7 | -24.6 | -24.6 | -6.7 | -26.7 | -26.7 |
| Distance | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 71.8 | 60.2 | 64.7 | 67.3 | 55.6 | 60.2 | 65.2 | 53.6 | 58.1 |
| VEHICULAR NOISE | DAY= | 72.8 | Leq | EVENING= | 68.3 | Leq | NIGHT= | 66.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **74.2** |
| | | | **CNEL=** | **74.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **71** | **224** | **709** |
| | **CNEL:** | **76** | **240** | **758** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: Placentia Avenue
Segment: North of Victoria St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 19,700 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1287 | 13 | 13 | 450 | 5 | 5 | 279 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.2 | -20.1 | -20.1 | -4.8 | -24.7 | -24.7 | -6.9 | -26.8 | -26.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.6 | 56.7 | 61.5 | 63.1 | 52.1 | 57.0 | 61.0 | 50.0 | 54.9 |
| VEHICULAR NOISE | DAY= | 68.9 | Leq | EVENING= | 64.3 | Leq | NIGHT= | 62.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.2** |
| | | | **CNEL=** | **70.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **46** | **144** | **457** |
| | **CNEL:** | **49** | **154** | **488** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: Placentia Avenue
Segment: 19th St to 17th St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 21,890 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1430 | 15 | 15 | 501 | 5 | 5 | 310 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.2 | -19.7 | -19.7 | -4.3 | -24.2 | -24.2 | -6.4 | -26.3 | -26.3 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.1 | 57.1 | 62.0 | 63.5 | 52.6 | 57.4 | 61.4 | 50.5 | 55.3 |
| VEHICULAR NOISE | DAY= | 69.3 | Leq | EVENING= | 64.7 | Leq | NIGHT= | 62.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.6** |
| | | | **CNEL=** | **70.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **51** | **160** | **507** |
| | **CNEL:** | **54** | **172** | **543** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: Placentia Avenue
Segment: 17th St to Superior Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 15,080 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 985 | 10 | 10 | 345 | 4 | 4 | 213 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.4 | -21.3 | -21.3 | -6.0 | -25.9 | -25.9 | -8.0 | -27.9 | -27.9 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.5 | 55.5 | 60.4 | 61.9 | 50.9 | 55.8 | 59.8 | 48.9 | 53.7 |
| VEHICULAR NOISE | DAY= | 67.7 | Leq | EVENING= | 63.1 | Leq | NIGHT= | 61.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **69.0** |
| | | | **CNEL=** | **69.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **35** | **111** | **349** |
| | **CNEL:** | **37** | **118** | **374** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: Superior Avenue
Segment: 16th St to Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 24,080 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1573 | 16 | 16 | 551 | 6 | 6 | 341 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.6 | -19.3 | -19.3 | -3.9 | -23.8 | -23.8 | -6.0 | -25.9 | -25.9 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.5 | 57.5 | 62.4 | 63.9 | 53.0 | 57.8 | 61.9 | 50.9 | 55.7 |
| VEHICULAR NOISE | DAY= | 69.7 | Leq | EVENING= | 65.2 | Leq | NIGHT= | 63.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.0** |
| | | | **CNEL=** | **71.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **56** | **176** | **558** |
| | **CNEL:** | **60** | **189** | **597** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: Superior Avenue
Segment: Placentia Av. to West Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 24,440 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1597 | 16 | 16 | 559 | 6 | 6 | 346 | 4 | 4 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.7 | -19.2 | -19.2 | -3.9 | -23.8 | -23.8 | -5.9 | -25.8 | -25.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.6 | 57.6 | 62.5 | 64.0 | 53.0 | 57.9 | 61.9 | 51.0 | 55.8 |
| VEHICULAR NOISE | DAY= | 69.8 | Leq | EVENING= | 65.2 | Leq | NIGHT= | 63.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.1** |
| | | | **CNEL=** | **71.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **57** | **179** | **566** |
| | **CNEL:** | **61** | **192** | **606** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: Superior Avenue
Segment: South of West Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 19,820 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1295 | 13 | 13 | 453 | 5 | 5 | 281 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.2 | -20.1 | -20.1 | -4.8 | -24.7 | -24.7 | -6.8 | -26.8 | -26.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.7 | 56.7 | 61.5 | 63.1 | 52.1 | 57.0 | 61.0 | 50.1 | 54.9 |
| VEHICULAR NOISE | DAY= | 68.9 | Leq | EVENING= | 64.3 | Leq | NIGHT= | 62.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.2** |
| | | | **CNEL=** | **70.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **46** | **145** | **459** |
| | **CNEL:** | **49** | **155** | **491** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: Magnolia Street
Segment: North of Victoria St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 14,230 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 930 | 9 | 9 | 325 | 3 | 3 | 201 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.2 | -22.1 | -22.1 | -6.7 | -26.6 | -26.6 | -8.8 | -28.7 | -28.7 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.7 | 56.1 | 60.6 | 63.1 | 51.5 | 56.0 | 61.0 | 49.4 | 53.9 |
| VEHICULAR NOISE | DAY= | 68.7 | Leq | EVENING= | 64.1 | Leq | NIGHT= | 62.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.0** |
| | | | **CNEL=** | **70.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **44** | **140** | **441** |
| | **CNEL:** | **47** | **149** | **472** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: Magnolia Street
Segment: Hamilton Ave to Banning Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 14,840 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 970 | 10 | 10 | 339 | 3 | 3 | 210 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.0 | -21.9 | -21.9 | -6.5 | -26.4 | -26.4 | -8.6 | -28.5 | -28.5 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.9 | 56.2 | 60.8 | 63.3 | 51.7 | 56.2 | 61.2 | 49.6 | 54.1 |
| VEHICULAR NOISE | DAY= | 68.9 | Leq | EVENING= | 64.3 | Leq | NIGHT= | 62.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.2** |
| | | | **CNEL=** | **70.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **46** | **146** | **460** |
| | **CNEL:** | **49** | **156** | **492** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO OS
Roadway: Magnolia Street
Segment: Banning Ave to Pacific Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 20,550 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1343 | 14 | 14 | 470 | 5 | 5 | 291 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.6 | -20.5 | -20.5 | -5.1 | -25.0 | -25.0 | -7.2 | -27.1 | -27.1 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.3 | 57.7 | 62.2 | 64.7 | 53.1 | 57.6 | 62.6 | 51.0 | 55.5 |
| VEHICULAR NOISE | DAY= | 70.3 | Leq | EVENING= | 65.7 | Leq | NIGHT= | 63.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.6** |
| | | | **CNEL=** | **71.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **64** | **202** | **637** |
| | **CNEL:** | **68** | **216** | **682** |

BO WP Conditions Noise Contours Result Summary Table

| Roadway | Segment | Daily Traffic Volumes | Noise level at 50 feet (dBA CNEL) | Distance to noise contour (feet) | | |
|---|---|---|---|---|---|---|
| | | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL |
| 19th Street | West of Placentia Ave | 21,400 | 70.8 | 53 | 168 | 530 |
| 19th Street | Placentia Ave to Harbor Blvd. | 35,140 | 73.0 | 87 | 275 | 871 |
| Hamilton Avenue | West of Magnolia St | 18,730 | 71.5 | 62 | 196 | 621 |
| Hamilton Avenue | Magnolia St to Bushard Av | 22,130 | 72.2 | 73 | 232 | 734 |
| Hamilton Avenue | Bushard Ave to Brookhurst Street | 27,000 | 73.1 | 90 | 283 | 896 |
| 17th Street | West of Monrovia Ave | 11,310 | 66.4 | 20 | 64 | 204 |
| 15th Street | West of Placentia Ave | 9,360 | 65.3 | 17 | 53 | 169 |
| West Coast Highway | Brookhurst St to Prospect St | 49,950 | 72.4 | 166 | 524 | 1,657 |
| West Coast Highway | Prospect St to Superior Ave | 51,120 | 72.5 | 170 | 536 | 1,696 |
| West Coast Highway | Superior Ave to Newport Blvd | 47,520 | 72.2 | 158 | 498 | 1,576 |
| West Coast Highway | East of Dover Dr | 76,760 | 74.5 | 255 | 805 | 2,546 |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: 19th Street
Segment: West of Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 21,400 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1398 | 14 | 14 | 489 | 5 | 5 | 303 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.1 | -19.8 | -19.8 | -4.4 | -24.3 | -24.3 | -6.5 | -26.4 | -26.4 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.0 | 57.0 | 61.9 | 63.4 | 52.5 | 57.3 | 61.3 | 50.4 | 55.2 |
| VEHICULAR NOISE | DAY= | 69.2 | Leq | EVENING= | 64.7 | Leq | NIGHT= | 62.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.5** |
| | | | **CNEL=** | **70.8** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **50** | **157** | **496** |
| | **CNEL:** | **53** | **168** | **530** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: 19th Street
Segment: Placentia Ave to Harbor Blvd.
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 35,140 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 2296 | 23 | 23 | 804 | 8 | 8 | 497 | 5 | 5 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 2.3 | -17.6 | -17.6 | -2.3 | -22.2 | -22.2 | -4.4 | -24.3 | -24.3 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.1 | 59.2 | 64.0 | 65.6 | 54.6 | 59.5 | 63.5 | 52.5 | 57.4 |
| VEHICULAR NOISE | DAY= | 71.4 | Leq | EVENING= | 66.8 | Leq | NIGHT= | 64.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.7** |
| | | | **CNEL=** | **73.0** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **81** | **258** | **814** |
| | **CNEL:** | **87** | **275** | **871** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: Hamilton Avenue
Segment: West of Magnolia St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 18,730 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1224 | 12 | 12 | 428 | 4 | 4 | 265 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.0 | -20.9 | -20.9 | -5.5 | -25.4 | -25.4 | -7.6 | -27.5 | -27.5 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.9 | 57.2 | 61.8 | 64.3 | 52.7 | 57.2 | 62.2 | 50.6 | 55.1 |
| VEHICULAR NOISE | DAY= | 69.9 | Leq | EVENING= | 65.3 | Leq | NIGHT= | 63.3 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.2** |
| | | | **CNEL=** | **71.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **58** | **184** | **581** |
| | **CNEL:** | **62** | **196** | **621** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: Hamilton Avenue
Segment: Magnolia St to Bushard Av

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 22,130 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1446 | 15 | 15 | 506 | 5 | 5 | 313 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.2 | -20.1 | -20.1 | -4.8 | -24.7 | -24.7 | -6.9 | -26.8 | -26.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.6 | 58.0 | 62.5 | 65.0 | 53.4 | 57.9 | 63.0 | 51.3 | 55.8 |
| VEHICULAR NOISE | DAY= | 70.6 | Leq | EVENING= | 66.1 | Leq | NIGHT= | 64.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.9** |
| | | | **CNEL=** | **72.2** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **69** | **217** | **686** |
| | **CNEL:** | **73** | **232** | **734** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: Hamilton Avenue
Segment: Bushard Ave to Brookhurst Street
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 27,000 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1764 | 18 | 18 | 617 | 6 | 6 | 382 | 4 | 4 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.6 | -19.3 | -19.3 | -3.9 | -23.8 | -23.8 | -6.0 | -25.9 | -25.9 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.5 | 58.8 | 63.4 | 65.9 | 54.3 | 58.8 | 63.8 | 52.2 | 56.7 |
| VEHICULAR NOISE | DAY= | 71.5 | Leq | EVENING= | 66.9 | Leq | NIGHT= | 64.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.8** |
| | | | **CNEL=** | **73.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **84** | **265** | **837** |
| | **CNEL:** | **90** | **283** | **896** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: 17th Street
Segment: West of Monrovia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 11,310 |
| SPEED (mph) | 35 |
| ROAD NEAR-FAR LN. DIST. | 36 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 739 | 8 | 8 | 259 | 3 | 3 | 160 | 2 | 2 |
| Speed in MPH | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.1 | -22.0 | -22.0 | -6.6 | -26.5 | -26.5 | -8.7 | -28.6 | -28.6 |
| Distance | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 63.3 | 53.1 | 58.3 | 58.7 | 48.5 | 53.7 | 56.6 | 46.4 | 51.7 |
| VEHICULAR NOISE | DAY= | 64.8 | Leq | EVENING= | 60.2 | Leq | NIGHT= | 58.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **66.1** |
| | | | **CNEL=** | **66.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **19** | **60** | **190** |
| | **CNEL:** | **20** | **64** | **204** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: 15th Street
Segment: West of Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 9,360 |
| SPEED (mph) | 35 |
| ROAD NEAR-FAR LN. DIST. | 12 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 612 | 6 | 6 | 214 | 2 | 2 | 132 | 1 | 1 |
| Speed in MPH | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.9 | -22.8 | -22.8 | -7.4 | -27.4 | -27.4 | -9.5 | -29.4 | -29.4 |
| Distance | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 62.2 | 52.0 | 57.2 | 57.6 | 47.4 | 52.7 | 55.5 | 45.4 | 50.6 |
| VEHICULAR NOISE | DAY= | 63.7 | Leq | EVENING= | 59.1 | Leq | NIGHT= | 57.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **65.0** |
| | | | **CNEL=** | **65.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **16** | **50** | **158** |
| | **CNEL:** | **17** | **53** | **169** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: West Coast Highway
Segment: Brookhurst St to Prospect St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 49,950 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

**CALCULATION AREA**

| | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3263 | 33 | 33 | 1142 | 12 | 12 | 707 | 7 | 7 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.3 | -16.6 | -16.6 | -1.3 | -21.2 | -21.2 | -3.3 | -23.3 | -23.3 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.8 | 58.1 | 62.7 | 65.2 | 53.6 | 58.1 | 63.1 | 51.5 | 56.0 |
| VEHICULAR NOISE | DAY= | 70.8 | Leq | EVENING= | 66.2 | Leq | NIGHT= | 64.1 | Leq |

**RESULTS**

NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): **Ldn= 72.1**, **CNEL= 72.4**

| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
|---|---|---|---|---|
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **155** | **490** | **1549** |
| | **CNEL:** | **166** | **524** | **1657** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: West Coast Highway
Segment: Prospect St to Superior Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 51,120 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3340 | 34 | 34 | 1169 | 12 | 12 | 724 | 7 | 7 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.4 | -16.5 | -16.5 | -1.2 | -21.1 | -21.1 | -3.2 | -23.2 | -23.2 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.9 | 58.2 | 62.8 | 65.3 | 53.7 | 58.2 | 63.2 | 51.6 | 56.1 |
| VEHICULAR NOISE | DAY= | 70.9 | Leq | EVENING= | 66.3 | Leq | NIGHT= | 64.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.2** |
| | | | **CNEL=** | **72.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **159** | **501** | **1585** |
| | **CNEL:** | **170** | **536** | **1696** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: West Coast Highway
Segment: Superior Ave to Newport Blvd
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 47,520 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3105 | 32 | 32 | 1087 | 11 | 11 | 673 | 7 | 7 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.1 | -16.8 | -16.8 | -1.5 | -21.4 | -21.4 | -3.6 | -23.5 | -23.5 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.6 | 57.9 | 62.4 | 65.0 | 53.4 | 57.9 | 62.9 | 51.3 | 55.8 |
| VEHICULAR NOISE | DAY= | 70.6 | Leq | EVENING= | 66.0 | Leq | NIGHT= | 63.9 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.9** |
| | | | **CNEL=** | **72.2** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **147** | **466** | **1474** |
| | **CNEL:** | **158** | **498** | **1576** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: West Coast Highway
Segment: East of Dover Dr

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 76,760 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 84 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 5015 | 51 | 51 | 1755 | 18 | 18 | 1087 | 11 | 11 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 5.2 | -14.7 | -14.7 | 0.6 | -19.3 | -19.3 | -1.5 | -21.4 | -21.4 |
| Distance | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 71.9 | 60.2 | 64.7 | 67.3 | 55.7 | 60.2 | 65.2 | 53.6 | 58.1 |
| VEHICULAR NOISE | DAY= | 72.9 | Leq | EVENING= | 68.3 | Leq | NIGHT= | 66.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **74.2** |
| | | | **CNEL=** | **74.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **238** | **753** | **2380** |
| | **CNEL:** | **255** | **805** | **2546** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: Brookhurst Street
Segment: North of Hamilton

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 30,520 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1994 | 20 | 20 | 698 | 7 | 7 | 432 | 4 | 4 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 1.2 | -18.8 | -18.8 | -3.4 | -23.3 | -23.3 | -5.5 | -25.4 | -25.4 |
| Distance | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 71.4 | 59.8 | 64.3 | 66.8 | 55.2 | 59.7 | 64.8 | 53.1 | 57.6 |
| VEHICULAR NOISE | DAY= | 72.4 | Leq | EVENING= | 67.9 | Leq | NIGHT= | 65.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **73.7** |
| | | | **CNEL=** | **74.0** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **95** | **299** | **946** |
| | **CNEL:** | **101** | **320** | **1012** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: Brookhurst Street
Segment: Pacific Coast Hwy to Hamilton
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 20,920 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 84 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1367 | 14 | 14 | 478 | 5 | 5 | 296 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.5 | -20.4 | -20.4 | -5.0 | -25.0 | -25.0 | -7.1 | -27.0 | -27.0 |
| Distance | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 71.4 | 59.8 | 64.3 | 66.9 | 55.3 | 59.8 | 64.8 | 53.2 | 57.7 |
| VEHICULAR NOISE | DAY= | 72.5 | Leq | EVENING= | 67.9 | Leq | NIGHT= | 65.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **73.8** |
| | | | **CNEL=** | **74.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **65** | **205** | **649** |
| | **CNEL:** | **69** | **219** | **694** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: Placentia Avenue
Segment: North of Victoria St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 19,330 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1263 | 13 | 13 | 442 | 5 | 5 | 274 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.3 | -20.2 | -20.2 | -4.9 | -24.8 | -24.8 | -7.0 | -26.9 | -26.9 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.5 | 56.6 | 61.4 | 63.0 | 52.0 | 56.9 | 60.9 | 49.9 | 54.8 |
| VEHICULAR NOISE | DAY= | 68.8 | Leq | EVENING= | 64.2 | Leq | NIGHT= | 62.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.1** |
| | | | **CNEL=** | **70.4** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **45** | **142** | **448** |
| | **CNEL:** | **48** | **152** | **479** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: Placentia Avenue
Segment: 19th St to 17th St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 19,090 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1247 | 13 | 13 | 437 | 4 | 4 | 270 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.4 | -20.3 | -20.3 | -4.9 | -24.8 | -24.8 | -7.0 | -26.9 | -26.9 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.5 | 56.5 | 61.4 | 62.9 | 52.0 | 56.8 | 60.8 | 49.9 | 54.7 |
| VEHICULAR NOISE | DAY= | 68.7 | Leq | EVENING= | 64.2 | Leq | NIGHT= | 62.1 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.0** |
| | | | **CNEL=** | **70.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **44** | **140** | **442** |
| | **CNEL:** | **47** | **150** | **473** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: Placentia Avenue
Segment: 17th St to Superior Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 13,740 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 898 | 9 | 9 | 314 | 3 | 3 | 194 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.8 | -21.7 | -21.7 | -6.4 | -26.3 | -26.3 | -8.4 | -28.3 | -28.3 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.1 | 55.1 | 60.0 | 61.5 | 50.5 | 55.4 | 59.4 | 48.5 | 53.3 |
| VEHICULAR NOISE | DAY= | 67.3 | Leq | EVENING= | 62.7 | Leq | NIGHT= | 60.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.6** |
| | | | **CNEL=** | **68.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **32** | **101** | **318** |
| | **CNEL:** | **34** | **108** | **341** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: Superior Avenue
Segment: 16th St to Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 26,750 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1748 | 18 | 18 | 612 | 6 | 6 | 379 | 4 | 4 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 1.1 | -18.8 | -18.8 | -3.5 | -23.4 | -23.4 | -5.5 | -25.5 | -25.5 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.0 | 58.0 | 62.8 | 64.4 | 53.4 | 58.3 | 62.3 | 51.4 | 56.2 |
| VEHICULAR NOISE | DAY= | 70.2 | Leq | EVENING= | 65.6 | Leq | NIGHT= | 63.5 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.5** |
| | | | **CNEL=** | **71.8** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **62** | **196** | **620** |
| | **CNEL:** | **66** | **210** | **663** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: Superior Avenue
Segment: Placentia Av. to West Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 21,040 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1375 | 14 | 14 | 481 | 5 | 5 | 298 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.1 | -19.9 | -19.9 | -4.5 | -24.4 | -24.4 | -6.6 | -26.5 | -26.5 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.9 | 57.0 | 61.8 | 63.4 | 52.4 | 57.2 | 61.3 | 50.3 | 55.2 |
| VEHICULAR NOISE | DAY= | 69.1 | Leq | EVENING= | 64.6 | Leq | NIGHT= | 62.5 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.5** |
| | | | **CNEL=** | **70.8** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **49** | **154** | **488** |
| | **CNEL:** | **52** | **165** | **522** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: Superior Avenue
Segment: South of West Coast Hwy

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 20,550 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1343 | 14 | 14 | 470 | 5 | 5 | 291 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.0 | -20.0 | -20.0 | -4.6 | -24.5 | -24.5 | -6.7 | -26.6 | -26.6 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.8 | 56.9 | 61.7 | 63.3 | 52.3 | 57.1 | 61.2 | 50.2 | 55.1 |
| VEHICULAR NOISE | DAY= | 69.0 | Leq | EVENING= | 64.5 | Leq | NIGHT= | 62.4 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.4** |
| | | | **CNEL=** | **70.6** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **48** | **151** | **476** |
| | **CNEL:** | **51** | **161** | **509** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: Magnolia Street
Segment: North of Victoria St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 14,710 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 961 | 10 | 10 | 336 | 3 | 3 | 208 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.0 | -21.9 | -21.9 | -6.6 | -26.5 | -26.5 | -8.7 | -28.6 | -28.6 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.8 | 56.2 | 60.7 | 63.3 | 51.6 | 56.2 | 61.2 | 49.6 | 54.1 |
| VEHICULAR NOISE | DAY= | 68.8 | Leq | EVENING= | 64.3 | Leq | NIGHT= | 62.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.2** |
| | | | **CNEL=** | **70.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **46** | **144** | **456** |
| | **CNEL:** | **49** | **154** | **488** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: Magnolia Street
Segment: Hamilton Ave to Banning Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 15,560 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

**CALCULATION AREA**

| | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1017 | 10 | 10 | 356 | 4 | 4 | 220 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.8 | -21.7 | -21.7 | -6.3 | -26.2 | -26.2 | -8.4 | -28.3 | -28.3 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.1 | 56.4 | 61.0 | 63.5 | 51.9 | 56.4 | 61.4 | 49.8 | 54.3 |
| VEHICULAR NOISE | DAY= | 69.1 | Leq | EVENING= | 64.5 | Leq | NIGHT= | 62.4 | Leq |

**RESULTS**

NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): **Ldn= 70.4** **CNEL= 70.7**

| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
|---|---|---|---|---|
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **48** | **153** | **483** |
| | **CNEL:** | **52** | **163** | **516** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP
Roadway: Magnolia Street
Segment: Banning Ave to Pacific Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 21,040 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1375 | 14 | 14 | 481 | 5 | 5 | 298 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.5 | -20.4 | -20.4 | -5.0 | -24.9 | -24.9 | -7.1 | -27.0 | -27.0 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.4 | 57.8 | 62.3 | 64.8 | 53.2 | 57.7 | 62.7 | 51.1 | 55.6 |
| VEHICULAR NOISE | DAY= | 70.4 | Leq | EVENING= | 65.8 | Leq | NIGHT= | 63.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.7** |
| | | | **CNEL=** | **72.0** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **65** | **206** | **652** |
| | **CNEL:** | **70** | **221** | **698** |

BO WP Bluff Conditions Noise Contours Result Summary Table

| Roadway | Segment | Daily Traffic Volumes | Noise level at 50 feet (dBA CNEL) | Distance to noise contour (feet) | | |
|---|---|---|---|---|---|---|
| | | | | 70 dBA CNEL | 65 dBA CNEL | 60 dBA CNEL |
| 19th Street | West of Placentia Ave | 21,400 | 70.8 | 53 | 168 | 530 |
| 19th Street | Placentia Ave to Harbor Blvd. | 34,900 | 72.9 | 87 | 274 | 865 |
| Hamilton Avenue | West of Magnolia St | 18,600 | 71.5 | 62 | 195 | 617 |
| Hamilton Avenue | Magnolia St to Bushard Av | 22,250 | 72.3 | 74 | 233 | 738 |
| Hamilton Avenue | Bushard Ave to Brookhurst Street | 26,390 | 73.0 | 88 | 277 | 875 |
| 17th Street | West of Monrovia Ave | 6,570 | 64.0 | 12 | 37 | 118 |
| 15th Street | West of Placentia Ave | 8,150 | 64.7 | 15 | 46 | 147 |
| West Coast Highway | Brookhurst St to Prospect St | 52,740 | 72.6 | 175 | 553 | 1,749 |
| West Coast Highway | Prospect St to Superior Ave | 51,840 | 72.6 | 172 | 544 | 1,720 |
| West Coast Highway | Superior Ave to Newport Blvd | 47,340 | 72.2 | 157 | 497 | 1,570 |
| West Coast Highway | East of Dover Dr | 76,440 | 74.5 | 254 | 802 | 2,536 |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: 19th Street
Segment: West of Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 21,400 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1398 | 14 | 14 | 489 | 5 | 5 | 303 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.1 | -19.8 | -19.8 | -4.4 | -24.3 | -24.3 | -6.5 | -26.4 | -26.4 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.0 | 57.0 | 61.9 | 63.4 | 52.5 | 57.3 | 61.3 | 50.4 | 55.2 |
| VEHICULAR NOISE | DAY= | 69.2 | Leq | EVENING= | 64.7 | Leq | NIGHT= | 62.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.5** |
| | | | **CNEL=** | **70.8** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **50** | **157** | **496** |
| | **CNEL:** | **53** | **168** | **530** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: 19th Street
Segment: Placentia Ave to Harbor Blvd.
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 34,900 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

**CALCULATION AREA**

| | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 2280 | 23 | 23 | 798 | 8 | 8 | 494 | 5 | 5 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 2.3 | -17.7 | -17.7 | -2.3 | -22.2 | -22.2 | -4.4 | -24.3 | -24.3 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.1 | 59.2 | 64.0 | 65.6 | 54.6 | 59.4 | 63.5 | 52.5 | 57.4 |
| VEHICULAR NOISE | DAY= | 71.3 | Leq | EVENING= | 66.8 | Leq | NIGHT= | 64.7 | Leq |

**RESULTS**

NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): **Ldn= 72.7**, **CNEL= 72.9**

| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
|---|---|---|---|---|
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **81** | **256** | **809** |
| | **CNEL:** | **87** | **274** | **865** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: Hamilton Avenue
Segment: West of Magnolia St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 18,600 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1215 | 12 | 12 | 425 | 4 | 4 | 263 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.0 | -20.9 | -20.9 | -5.6 | -25.5 | -25.5 | -7.6 | -27.5 | -27.5 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.9 | 57.2 | 61.7 | 64.3 | 52.7 | 57.2 | 62.2 | 50.6 | 55.1 |
| VEHICULAR NOISE | DAY= | 69.9 | Leq | EVENING= | 65.3 | Leq | NIGHT= | 63.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.2** |
| | | | **CNEL=** | **71.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **58** | **182** | **577** |
| | **CNEL:** | **62** | **195** | **617** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: Hamilton Avenue
Segment: Magnolia St to Bushard Av

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 22,250 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1454 | 15 | 15 | 509 | 5 | 5 | 315 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.2 | -20.1 | -20.1 | -4.8 | -24.7 | -24.7 | -6.9 | -26.8 | -26.8 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.6 | 58.0 | 62.5 | 65.1 | 53.4 | 58.0 | 63.0 | 51.4 | 55.9 |
| VEHICULAR NOISE | DAY= | 70.6 | Leq | EVENING= | 66.1 | Leq | NIGHT= | 64.0 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.0** |
| | | | **CNEL=** | **72.3** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **69** | **218** | **690** |
| | **CNEL:** | **74** | **233** | **738** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: Hamilton Avenue
Segment: Bushard Ave to Brookhurst Street
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 26,390 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1724 | 18 | 18 | 603 | 6 | 6 | 374 | 4 | 4 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.5 | -19.4 | -19.4 | -4.0 | -23.9 | -23.9 | -6.1 | -26.0 | -26.0 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.4 | 58.7 | 63.3 | 65.8 | 54.2 | 58.7 | 63.7 | 52.1 | 56.6 |
| VEHICULAR NOISE | DAY= | 71.4 | Leq | EVENING= | 66.8 | Leq | NIGHT= | 64.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.7** |
| | | | **CNEL=** | **73.0** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **82** | **259** | **818** |
| | **CNEL:** | **88** | **277** | **875** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: 17th Street
Segment: West of Monrovia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 6,570 |
| SPEED (mph) | 35 |
| ROAD NEAR-FAR LN. DIST. | 36 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 429 | 4 | 4 | 150 | 2 | 2 | 93 | 1 | 1 |
| Speed in MPH | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -4.4 | -24.3 | -24.3 | -9.0 | -28.9 | -28.9 | -11.1 | -31.0 | -31.0 |
| Distance | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 60.9 | 50.7 | 55.9 | 56.4 | 46.2 | 51.4 | 54.3 | 44.1 | 49.3 |
| VEHICULAR NOISE | DAY= | 62.4 | Leq | EVENING= | 57.9 | Leq | NIGHT= | 55.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **63.7** |
| | | | **CNEL=** | **64.0** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **11** | **35** | **111** |
| | **CNEL:** | **12** | **37** | **118** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: 15th Street
Segment: West of Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 8,150 |
| SPEED (mph) | 35 |
| ROAD NEAR-FAR LN. DIST. | 12 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 532 | 5 | 5 | 186 | 2 | 2 | 115 | 1 | 1 |
| Speed in MPH | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 | 65.1 | 74.8 | 80.0 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -3.5 | -23.4 | -23.4 | -8.0 | -28.0 | -28.0 | -10.1 | -30.0 | -30.0 |
| Distance | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 61.6 | 51.4 | 56.6 | 57.0 | 46.8 | 52.1 | 54.9 | 44.8 | 50.0 |
| VEHICULAR NOISE | DAY= | 63.1 | Leq | EVENING= | 58.5 | Leq | NIGHT= | 56.4 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **64.4** |
| | | | **CNEL=** | **64.7** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **14** | **43** | **137** |
| | **CNEL:** | **15** | **46** | **147** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: West Coast Highway
Segment: Brookhurst St to Prospect St
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 52,740 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3446 | 35 | 35 | 1206 | 12 | 12 | 747 | 8 | 8 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.5 | -16.4 | -16.4 | -1.0 | -20.9 | -20.9 | -3.1 | -23.0 | -23.0 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 70.0 | 58.4 | 62.9 | 65.4 | 53.8 | 58.3 | 63.4 | 51.7 | 56.2 |
| VEHICULAR NOISE | DAY= | 71.0 | Leq | EVENING= | 66.5 | Leq | NIGHT= | 64.4 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **72.3** |
| | | | **CNEL=** | **72.6** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **164** | **517** | **1635** |
| | **CNEL:** | **175** | **553** | **1749** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: West Coast Highway
Segment: Prospect St to Superior Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 51,840 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

**CALCULATION AREA**

| | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3387 | 35 | 35 | 1185 | 12 | 12 | 734 | 7 | 7 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.5 | -16.5 | -16.5 | -1.1 | -21.0 | -21.0 | -3.2 | -23.1 | -23.1 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.9 | 58.3 | 62.8 | 65.4 | 53.7 | 58.3 | 63.3 | 51.7 | 56.2 |
| VEHICULAR NOISE | DAY= | 70.9 | Leq | EVENING= | 66.4 | Leq | NIGHT= | 64.3 | Leq |

**RESULTS**

NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): **Ldn= 72.3**, **CNEL= 72.6**

| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
|---|---|---|---|---|
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **161** | **508** | **1608** |
| | **CNEL:** | **172** | **544** | **1720** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: West Coast Highway
Segment: Superior Ave to Newport Blvd
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 47,340 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 3093 | 32 | 32 | 1083 | 11 | 11 | 670 | 7 | 7 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 3.1 | -16.8 | -16.8 | -1.5 | -21.4 | -21.4 | -3.6 | -23.5 | -23.5 |
| Distance | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 | -2.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.5 | 57.9 | 62.4 | 65.0 | 53.3 | 57.9 | 62.9 | 51.3 | 55.8 |
| VEHICULAR NOISE | DAY= | 70.5 | Leq | EVENING= | 66.0 | Leq | NIGHT= | 63.9 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.9** |
| | | | **CNEL=** | **72.2** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **147** | **464** | **1468** |
| | **CNEL:** | **157** | **497** | **1570** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: West Coast Highway
Segment: East of Dover Dr

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 76,440 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 84 |
| DISTANCE ROAD CL (ft) | 100 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 4994 | 51 | 51 | 1748 | 18 | 18 | 1082 | 11 | 11 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 5.1 | -14.8 | -14.8 | 0.6 | -19.3 | -19.3 | -1.5 | -21.4 | -21.4 |
| Distance | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 | -2.7 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 71.8 | 60.2 | 64.7 | 67.3 | 55.6 | 60.2 | 65.2 | 53.6 | 58.1 |
| VEHICULAR NOISE | DAY= | 72.8 | Leq | EVENING= | 68.3 | Leq | NIGHT= | 66.2 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 100 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **74.2** |
| | | | **CNEL=** | **74.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **237** | **750** | **2370** |
| | **CNEL:** | **254** | **802** | **2536** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: Brookhurst Street
Segment: North of Hamilton

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 29,670 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 60 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1938 | 20 | 20 | 678 | 7 | 7 | 420 | 4 | 4 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 1.0 | -18.9 | -18.9 | -3.5 | -23.4 | -23.4 | -5.6 | -25.5 | -25.5 |
| Distance | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 71.3 | 59.6 | 64.2 | 66.7 | 55.1 | 59.6 | 64.6 | 53.0 | 57.5 |
| VEHICULAR NOISE | DAY= | 72.3 | Leq | EVENING= | 67.7 | Leq | NIGHT= | 65.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **73.6** |
| | | | **CNEL=** | **73.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **92** | **291** | **920** |
| | **CNEL:** | **98** | **311** | **984** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: Brookhurst Street
Segment: Pacific Coast Hwy to Hamilton
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 21,280 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 84 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1390 | 14 | 14 | 487 | 5 | 5 | 301 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.4 | -20.3 | -20.3 | -5.0 | -24.9 | -24.9 | -7.0 | -27.0 | -27.0 |
| Distance | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 71.5 | 59.9 | 64.4 | 67.0 | 55.3 | 59.8 | 64.9 | 53.2 | 57.8 |
| VEHICULAR NOISE | DAY= | 72.5 | Leq | EVENING= | 68.0 | Leq | NIGHT= | 65.9 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **73.9** |
| | | | **CNEL=** | **74.2** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **66** | **209** | **660** |
| | **CNEL:** | **71** | **223** | **706** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: Placentia Avenue
Segment: North of Victoria St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 20,060 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1311 | 13 | 13 | 459 | 5 | 5 | 284 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.2 | -20.1 | -20.1 | -4.7 | -24.6 | -24.6 | -6.8 | -26.7 | -26.7 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.7 | 56.7 | 61.6 | 63.1 | 52.2 | 57.0 | 61.1 | 50.1 | 55.0 |
| VEHICULAR NOISE | DAY= | 68.9 | Leq | EVENING= | 64.4 | Leq | NIGHT= | 62.3 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.3** |
| | | | **CNEL=** | **70.5** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **46** | **147** | **465** |
| | **CNEL:** | **50** | **157** | **497** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: Placentia Avenue
Segment: 19th St to 17th St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 22,620 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1478 | 15 | 15 | 517 | 5 | 5 | 320 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.4 | -19.5 | -19.5 | -4.2 | -24.1 | -24.1 | -6.3 | -26.2 | -26.2 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.2 | 57.3 | 62.1 | 63.7 | 52.7 | 57.6 | 61.6 | 50.6 | 55.5 |
| VEHICULAR NOISE | DAY= | 69.5 | Leq | EVENING= | 64.9 | Leq | NIGHT= | 62.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.8** |
| | | | **CNEL=** | **71.1** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **52** | **166** | **524** |
| | **CNEL:** | **56** | **177** | **561** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: Placentia Avenue
Segment: 17th St to Superior Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 13,980 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 913 | 9 | 9 | 320 | 3 | 3 | 198 | 2 | 2 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.7 | -21.6 | -21.6 | -6.3 | -26.2 | -26.2 | -8.4 | -28.3 | -28.3 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 66.1 | 55.2 | 60.0 | 61.6 | 50.6 | 55.5 | 59.5 | 48.5 | 53.4 |
| VEHICULAR NOISE | DAY= | 67.4 | Leq | EVENING= | 62.8 | Leq | NIGHT= | 60.7 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **68.7** |
| | | | **CNEL=** | **69.0** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **32** | **102** | **324** |
| | **CNEL:** | **35** | **110** | **347** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: Superior Avenue
Segment: 16th St to Placentia Ave

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 27,360 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1788 | 18 | 18 | 626 | 6 | 6 | 387 | 4 | 4 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 1.2 | -18.7 | -18.7 | -3.4 | -23.3 | -23.3 | -5.4 | -25.4 | -25.4 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.1 | 58.1 | 62.9 | 64.5 | 53.5 | 58.4 | 62.4 | 51.5 | 56.3 |
| VEHICULAR NOISE | DAY= | 70.3 | Leq | EVENING= | 65.7 | Leq | NIGHT= | 63.6 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.6** |
| | | | **CNEL=** | **71.9** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **63** | **200** | **634** |
| | **CNEL:** | **68** | **214** | **678** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: Superior Avenue
Segment: Placentia Av. to West Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 22,500 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1470 | 15 | 15 | 515 | 5 | 5 | 319 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.3 | -19.6 | -19.6 | -4.2 | -24.1 | -24.1 | -6.3 | -26.2 | -26.2 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 68.2 | 57.2 | 62.1 | 63.6 | 52.7 | 57.5 | 61.6 | 50.6 | 55.5 |
| VEHICULAR NOISE | DAY= | 69.4 | Leq | EVENING= | 64.9 | Leq | NIGHT= | 62.8 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.8** |
| | | | **CNEL=** | **71.0** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **52** | **165** | **521** |
| | **CNEL:** | **56** | **176** | **558** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: Superior Avenue
Segment: South of West Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 20,550 |
| SPEED (mph) | 40 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1343 | 14 | 14 | 470 | 5 | 5 | 291 | 3 | 3 |
| Speed in MPH | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 | 67.4 | 76.3 | 81.2 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | 0.0 | -20.0 | -20.0 | -4.6 | -24.5 | -24.5 | -6.7 | -26.6 | -26.6 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.8 | 56.9 | 61.7 | 63.3 | 52.3 | 57.1 | 61.2 | 50.2 | 55.1 |
| VEHICULAR NOISE | DAY= | 69.0 | Leq | EVENING= | 64.5 | Leq | NIGHT= | 62.4 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **70.4** |
| | | | **CNEL=** | **70.6** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **48** | **151** | **476** |
| | **CNEL:** | **51** | **161** | **509** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: Magnolia Street
Segment: North of Victoria St

Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 14,590 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

**CALCULATION AREA**

| | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 953 | 10 | 10 | 334 | 3 | 3 | 207 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -2.0 | -22.0 | -22.0 | -6.6 | -26.5 | -26.5 | -8.7 | -28.6 | -28.6 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.8 | 56.2 | 60.7 | 63.2 | 51.6 | 56.1 | 61.2 | 49.5 | 54.0 |
| VEHICULAR NOISE | DAY= | 68.8 | Leq | EVENING= | 64.3 | Leq | NIGHT= | 62.2 | Leq |

**RESULTS**

NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): **Ldn= 70.1** **CNEL= 70.4**

| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
|---|---|---|---|---|
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **45** | **143** | **452** |
| | **CNEL:** | **48** | **153** | **484** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: Magnolia Street
Segment: Hamilton Ave to Banning Ave
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 15,080 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

**CALCULATION AREA**

| | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 985 | 10 | 10 | 345 | 4 | 4 | 213 | 2 | 2 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -1.9 | -21.8 | -21.8 | -6.5 | -26.4 | -26.4 | -8.5 | -28.5 | -28.5 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 67.9 | 56.3 | 60.8 | 63.4 | 51.7 | 56.3 | 61.3 | 49.7 | 54.2 |
| VEHICULAR NOISE | DAY= | 69.0 | Leq | EVENING= | 64.4 | Leq | NIGHT= | 62.3 | Leq |

**RESULTS**

NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): **Ldn= 70.3** **CNEL= 70.6**

| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
|---|---|---|---|---|
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **47** | **148** | **468** |
| | **CNEL:** | **50** | **158** | **500** |

FHWA RD-77-108 NOISE PREDICTION MODEL

Scenario: BO WP Bluff
Roadway: Magnolia Street
Segment: Banning Ave to Pacific Coast Hwy
Project: Banning Ranch
Analyst FJS
Date: 23-Aug-11

| ROADWAY INPUTS | |
|---|---|
| ADT | 19,820 |
| SPEED (mph) | 45 |
| ROAD NEAR-FAR LN. DIST. | 48 |
| DISTANCE ROAD CL (ft) | 50 |
| SOFT/HARD CONDITIONS | Hard |
| GRADE (%) | 0% |
| LEFT VIEW | -90 |
| RIGHT VIEW | 90 |

| VEHICLE MIX INPUTS | | | |
|---|---|---|---|
| DAILY | | HOURLY | |
| % A | 98.0% | DAY | 80.0% |
| % MT | 1.0% | EVENING | 7.0% |
| % HT | 1.0% | NIGHT | 13.0% |

| CALCULATION AREA | DAYTIME | | | EVENING | | | NIGHT | | |
|---|---|---|---|---|---|---|---|---|---|
| | AUTOS | MT | HT | AUTOS | MT | HT | AUTOS | MT | HT |
| Vehicles per hour | 1295 | 13 | 13 | 453 | 5 | 5 | 281 | 3 | 3 |
| Speed in MPH | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| Left angle | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 | -90 |
| Right angle | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| Reference levels (dBA) | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 | 69.3 | 77.6 | 82.1 |
| ADJUSTMENTS | | | | | | | | | |
| Flow | -0.7 | -20.6 | -20.6 | -5.3 | -25.2 | -25.2 | -7.4 | -27.3 | -27.3 |
| Distance | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Finite Roadway | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Barrier | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grade | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LEQ | 69.1 | 57.5 | 62.0 | 64.6 | 52.9 | 57.5 | 62.5 | 50.9 | 55.4 |
| VEHICULAR NOISE | DAY= | 70.1 | Leq | EVENING= | 65.6 | Leq | NIGHT= | 63.5 | Leq |

| RESULTS | | | | |
|---|---|---|---|---|
| NOISE LEVELS AT 50 FEET FROM CENTERLINE (dBA): | | | **Ldn=** | **71.5** |
| | | | **CNEL=** | **71.8** |
| NOISE CONTOUR: | | *70 dBA* | *65 dBA* | *60 dBA* |
| ROAD CENTERLINE DISTANCE TO NOISE CONTOUR (FEET): | **Ldn:** | **61** | **194** | **615** |
| | **CNEL:** | **66** | **208** | **657** |