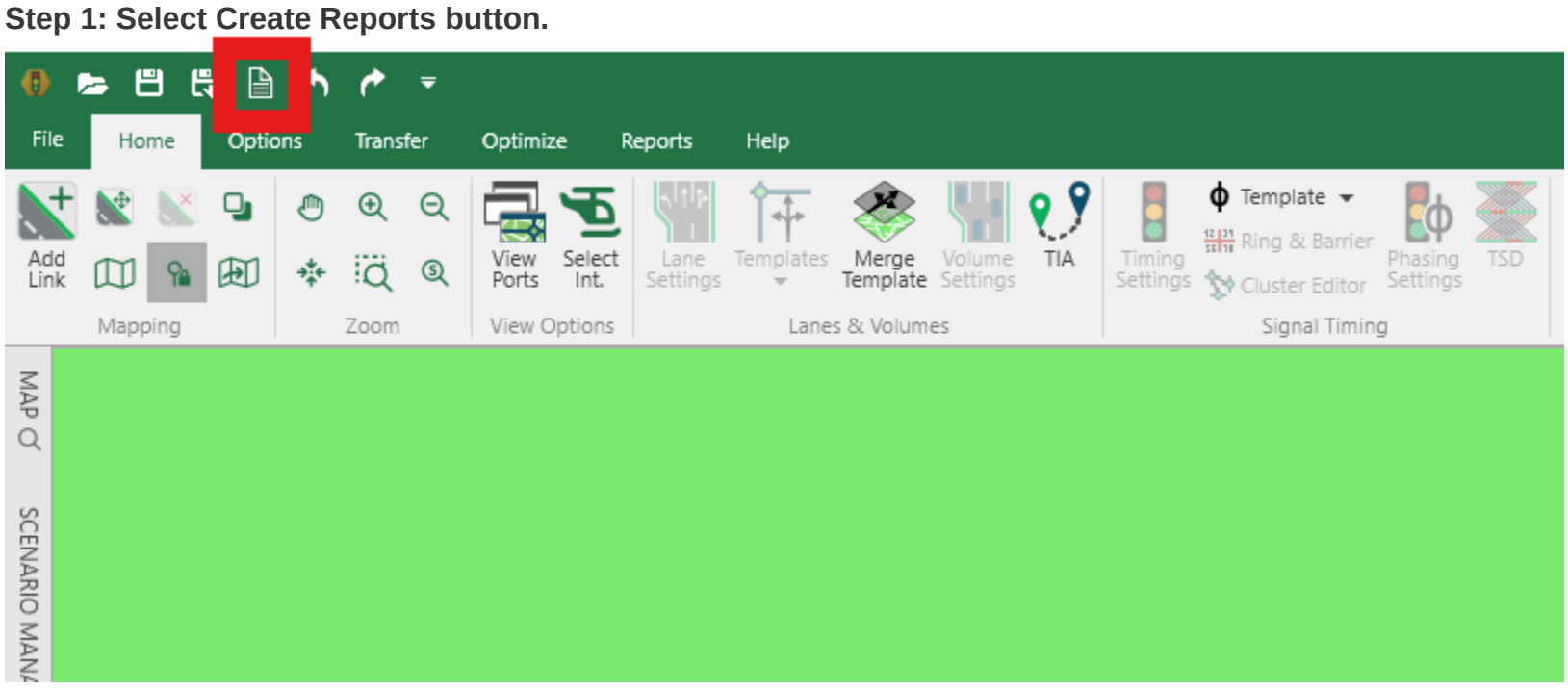
# SYNCHRO INSTRUCTIONS

## Steps for Uncontrolled, Side-Street Stop, All-Way Stop and Signalized Intersections

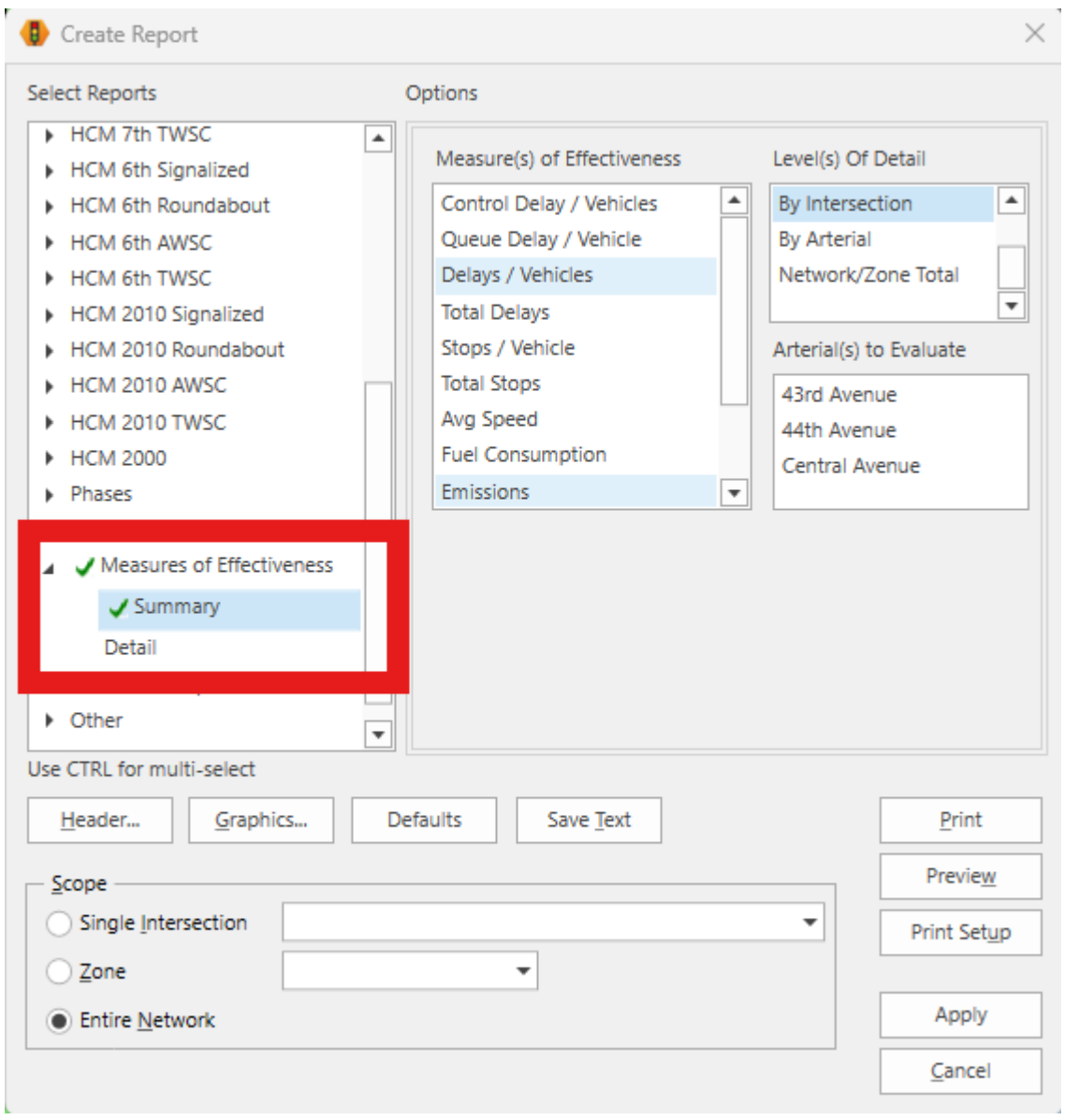
There are four (4) steps necessary to create Synchro output reports for funding applications:

1. Select Create Reports button.
2. Click on the ‘Measures of Effectiveness’ report button and select ‘Summary’ report.
3. The Options side of the Create Report window select the ‘Delays / Vehicle’ and ‘Emissions’ options under Measure(s) of Effectiveness. On the Level(s) of Detail side select ‘By Intersection’.
4. Click the ‘Print’ button to create your report. This report displays your vehicle volume, Total Delay / Vehicle (in s/veh) and the Emissions in kilograms. In order to get your Total Delay, just simply multiply the number of vehicles by the Total Delay/Vehicle. For total emission, add the CO, Nox and VOC numbers together.

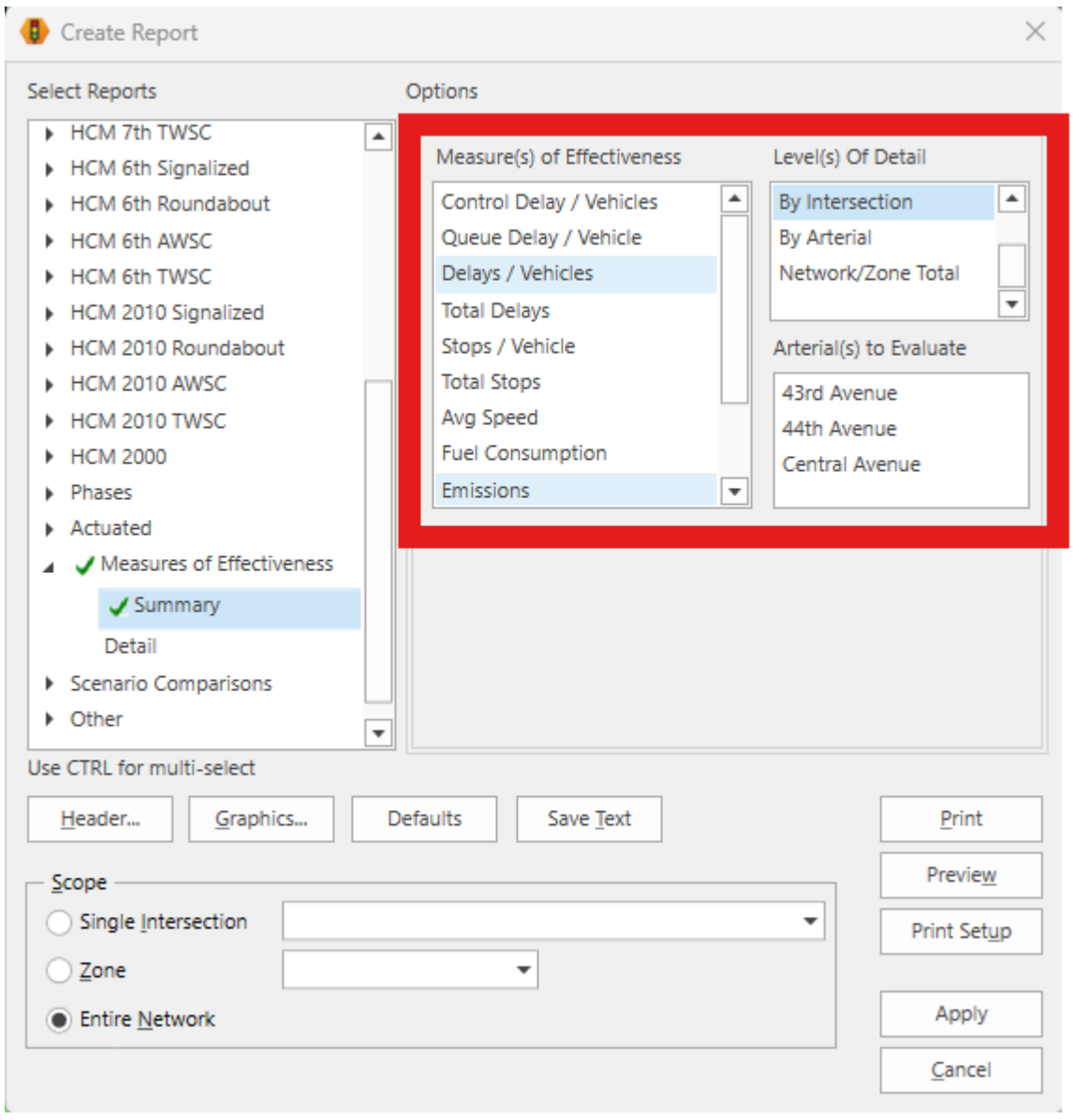
**Step 1: Select Create Reports button.**




**Step 2: Click on the ‘Measures of Effectiveness’ Report button and select Summary report.**



**Step 3: In the Options side of the Create Report window select the 'Delays / Vehicle' and 'Emissions' options under Measure(s) of Effectiveness. On the Level(s) of Detail side select 'By Intersection'.**




**Step 4: Click the 'Print' button to create your report. This report displays your vehicle volume, Total Delay/Vehicle (in s/veh) and the Emissions in kilograms. In order to get your Total Delay, just simply multiply the number of vehicles by the Total Delay/Vehicle. For total emission, add the CO, Nox and VOC numbers together.**

## 30: 44th Avenue & Van Buren Street

| Direction | All |
|---|---|
| Future Volume (vph) | 441 |
| Total Delay / Veh (s/v) | 1 |
| CO Emissions (kg) | 0.12 |
| NOx Emissions (kg) | 0.02 |
| VOC Emissions (kg) | 0.03 |

## 40: Central Avenue & 44th Avenue

| Direction | All |
|---|---|
| Future Volume (vph) | 2251 |
| Total Delay / Veh (s/v) | 19 |
| CO Emissions (kg) | 2.26 |
| NOx Emissions (kg) | 0.44 |
| VOC Emissions (kg) | 0.52 |

## 50: Quincy Street & 43rd Avenue

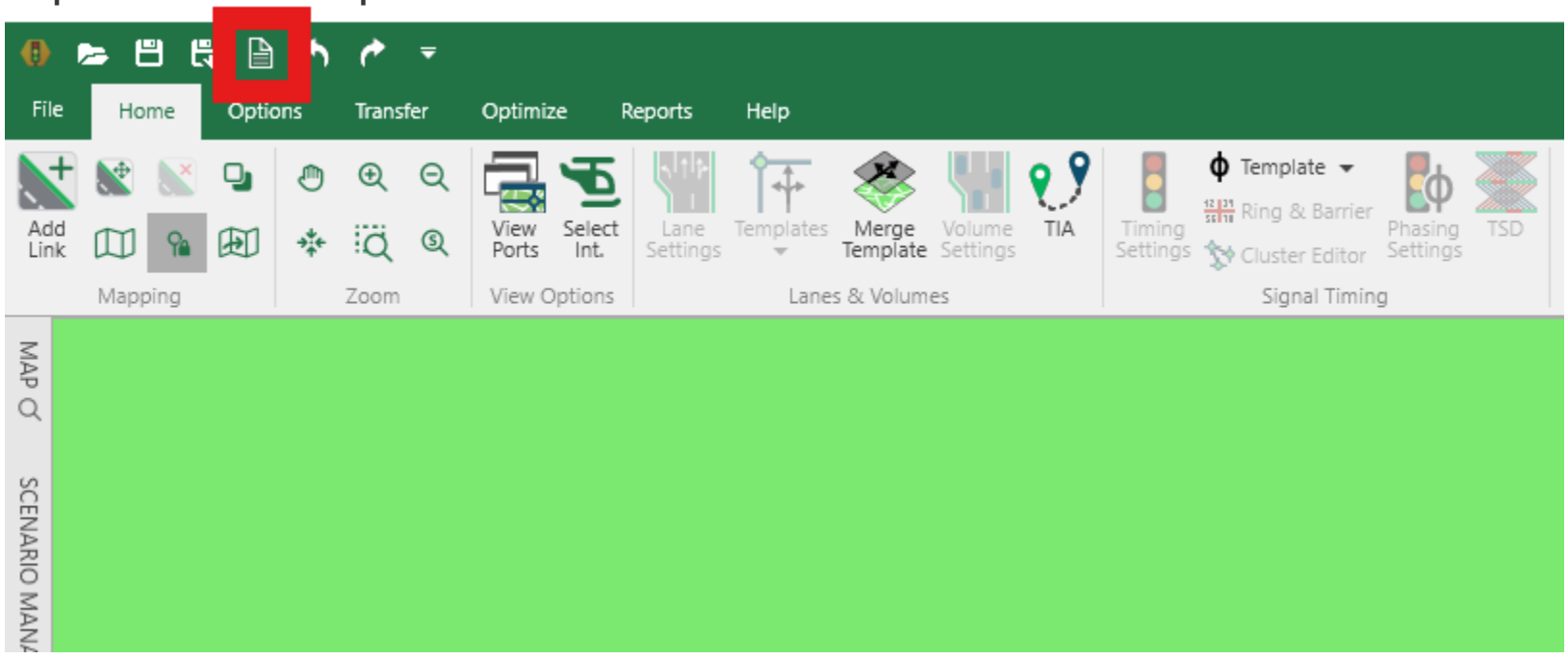
| Direction | All |
|---|---|
| Future Volume (vph) | 74 |
| Total Delay / Veh (s/v) | 5 |
| CO Emissions (kg) | 0.04 |
| NOx Emissions (kg) | 0.01 |
| VOC Emissions (kg) | 0.01 |

## Steps for Roundabout Intersections

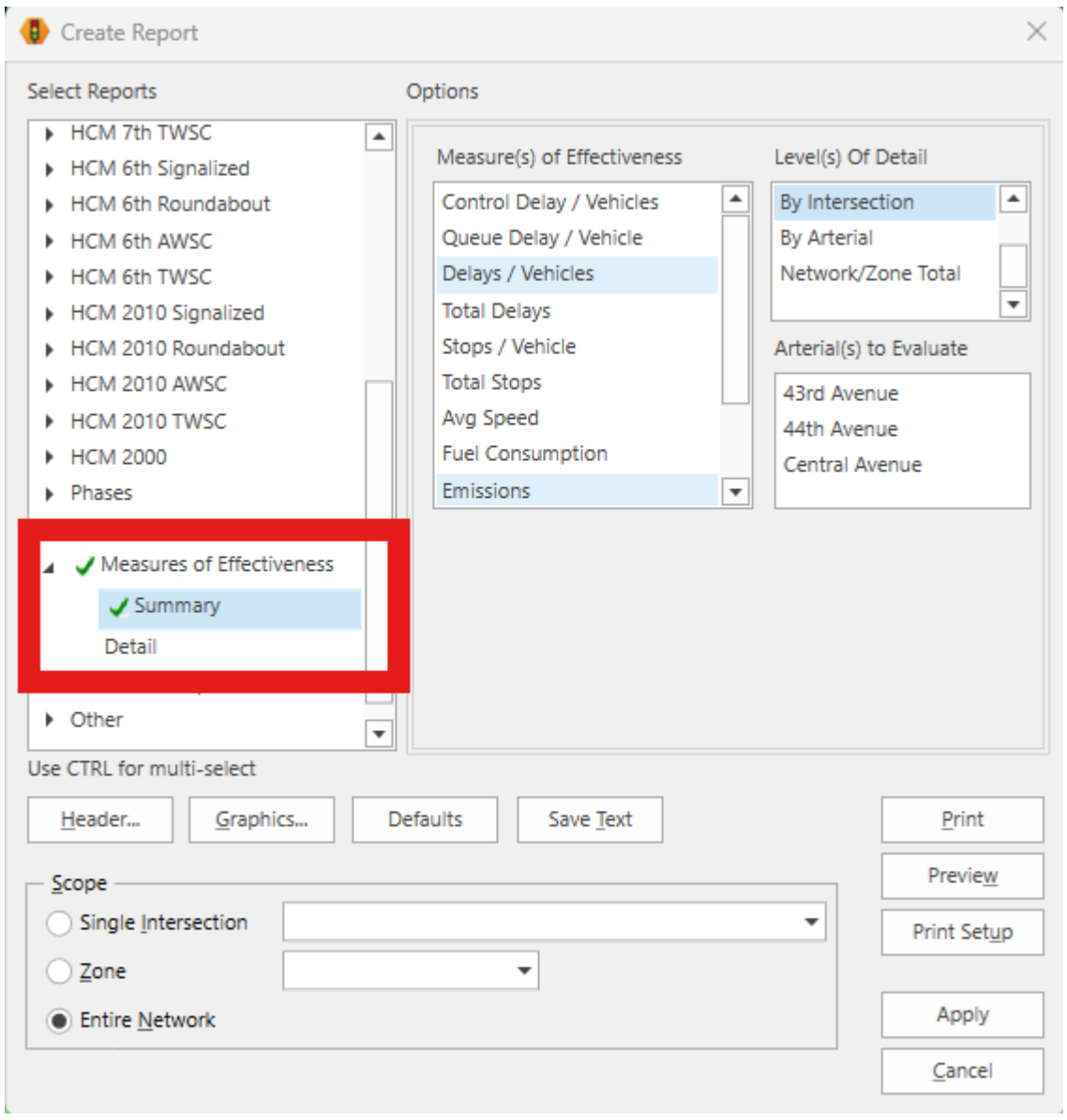
There are five (5) steps necessary to create Synchro output reports for funding applications:

1. Select Create Reports button.
2. Click on the Measures of Effectiveness Report button and select Summary Report.
3. In the Options side of the Create Report window select the ‘Delays / Vehicle’ and ‘Emissions’ options under Measure(s) of Effectiveness. On the Level(s) of Detail side select ‘By Intersection’. Click the ‘Print’ button to create your report.
4. Select Create Reports Button again. Click on ‘HCM 7th Roundabout’ and select the ‘Detail’ report. Click the ‘Print’ button to create your report.
5. The ‘HCM 7th Roundabout’ report displays Intersection Delay (in s/veh) and the ‘Measures of Effectiveness’ report displays Emissions in kilograms. In order to get your Total Delay, just simply multiply the number of vehicles by the Total Delay/Vehicle. For total emission, add the CO, Nox and VOC numbers together.

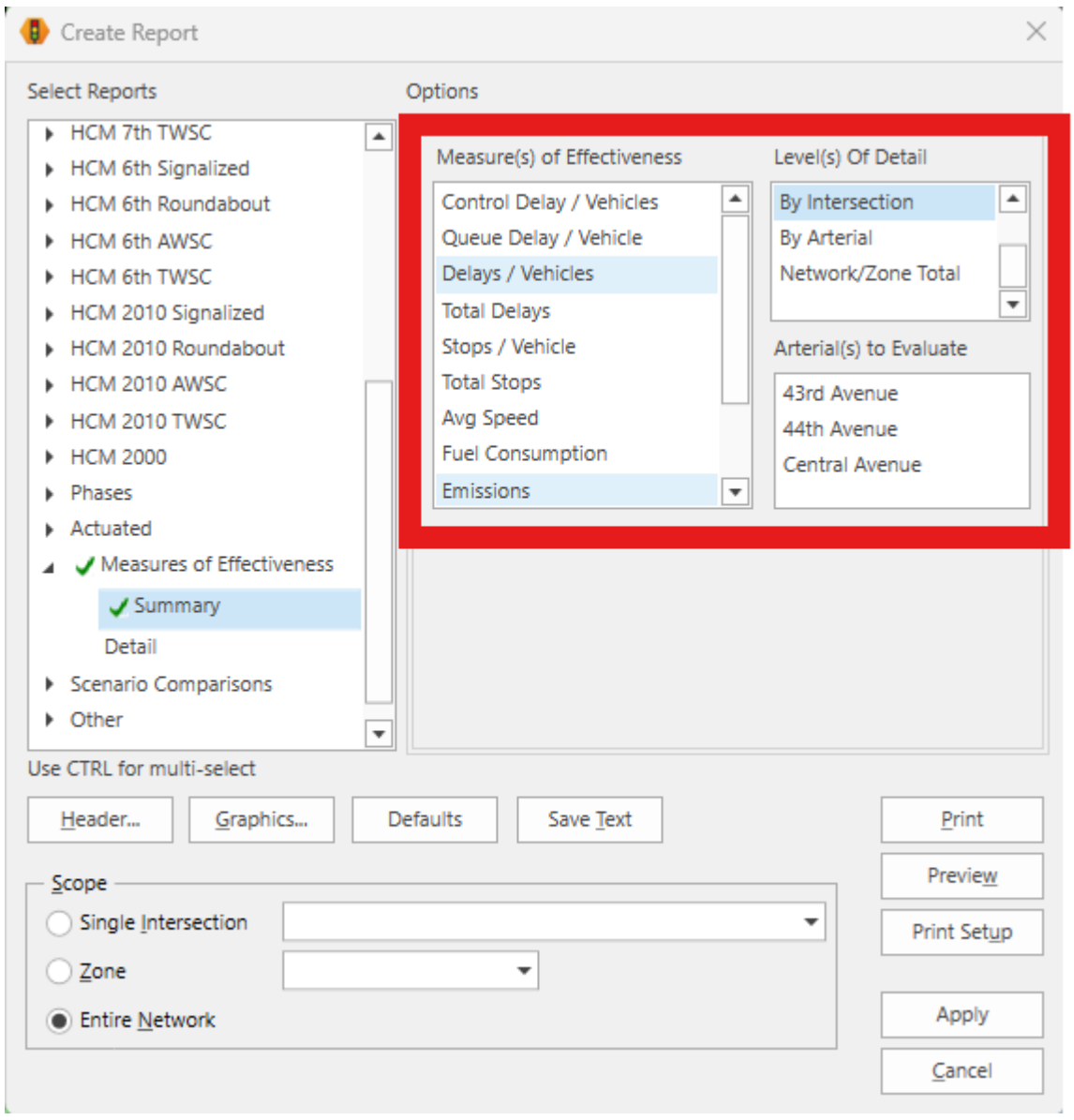
**Step 1: Select Create Reports button.**



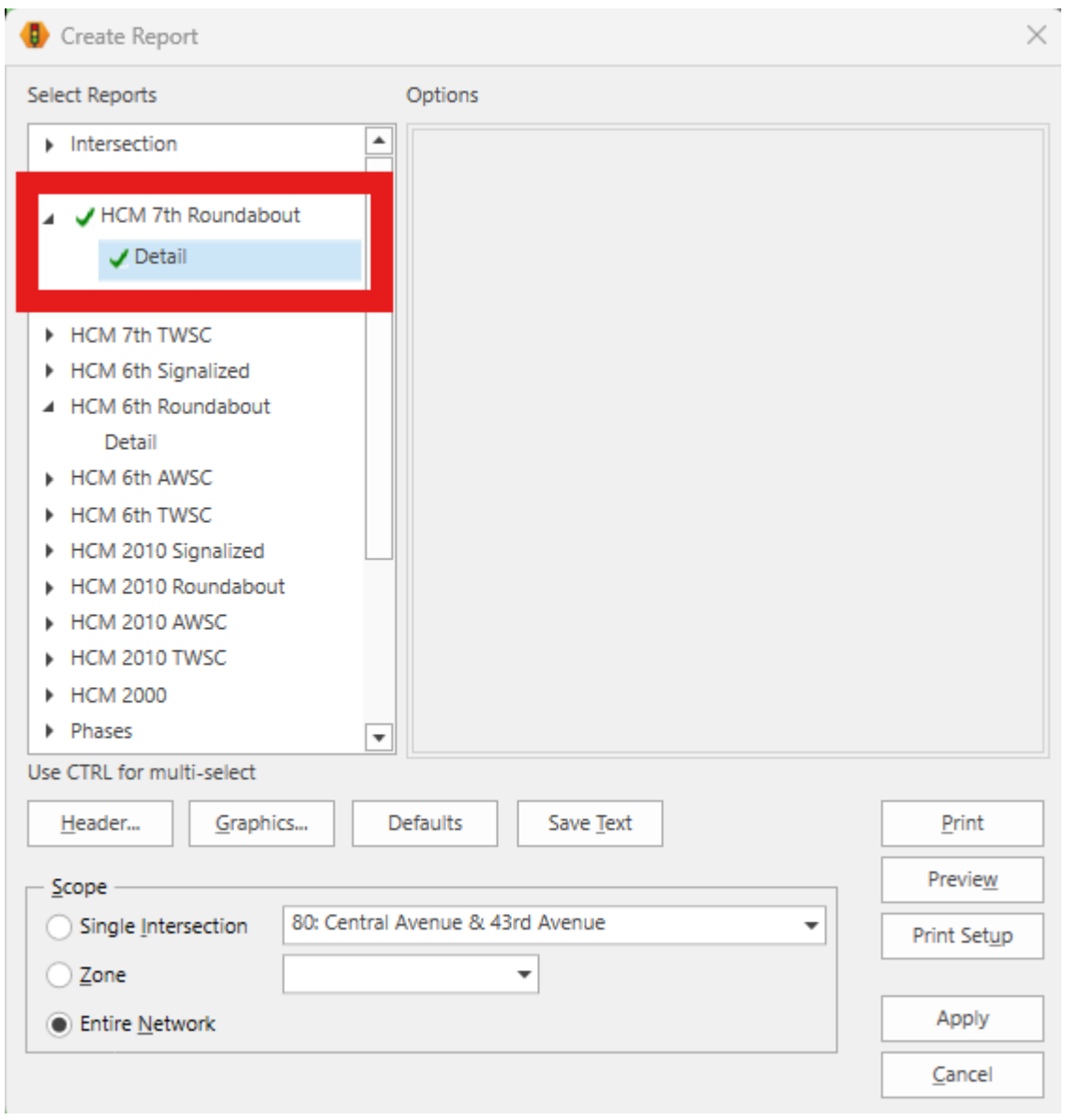

**Step 2: Click on the ‘Measures of Effectiveness’ and select Summary report.**



**Step 3: In the Options side of the Create Report window select the 'Delays / Vehicle' and 'Emissions' options under Measure(s) of Effectiveness. On the Level(s) of Detail side select 'By Intersection'. Click the 'Print' button to create your report.**




**Step 4: Select Create Reports Button again. Click on 'HCM 7th Roundabout' and select the 'Detail' report. Click the 'Print' button to create your report.**



**Step 5: The 'HCM 7th Roundabout' report displays Intersection Delay (in s/veh) and the 'Measures of Effectiveness' report displays Emissions in kilograms. In order to get your Total Delay, just simply multiply the number of vehicles by the Total Delay/Vehicle. For total emission, add the CO, Nox and VOC numbers together.**

## 60: Jackson Street & 43rd Avenue 10/22/2025

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 2.8 |
| Intersection LOS | A |

| Approach | EB | WB | NB |
|---|---|---|---|
| Entry Lanes | 1 | 1 | 1 |
| Conflicting Circle Lanes | 1 | 1 | 1 |
| Adj Approach Flow, veh/h | 25 | 16 | 4 |
| Demand Flow Rate, veh/h | 25 | 16 | 4 |
| Vehicles Circulating, veh/h | 0 | 2 | 23 |
| Vehicles Exiting, veh/h | 18 | 25 | 2 |
| Ped Vol Crossing Leg, #/h | 0 | 0 | 0 |
| Ped Cap Adj | 1.000 | 1.000 | 1.000 |
| Approach Delay, s/veh | 2.8 | 2.8 | 2.7 |
| Approach LOS | A | A | A |

| Lane | Left | Left | Left |
|---|---|---|---|
| Designated Moves | TR | LT | LR |
| Assumed Moves | TR | LT | LR |
| RT Channelized | | | |
| Lane Util | 1.000 | 1.000 | 1.000 |
| Follow-Up Headway, s | 2.609 | 2.609 | 2.609 |
| Critical Headway, s | 4.976 | 4.976 | 4.976 |
| A (Intercept) | 1380 | 1380 | 1380 |
| B (Slope) | 1.02e-3 | 1.02e-3 | 1.02e-3 |
| Entry Flow, veh/h | 25 | 16 | 4 |
| Cap Entry Lane, veh/h | 1380 | 1377 | 1348 |
| Entry HV Adj Factor | 0.982 | 0.980 | 1.000 |
| Flow Entry, veh/h | 25 | 16 | 4 |
| Cap Entry, veh/h | 1355 | 1350 | 1348 |
| V/C Ratio | 0.018 | 0.012 | 0.003 |
| Control Delay, s/veh | 2.8 | 2.8 | 2.7 |
| LOS | A | A | A |
| 95th %tile Queue, veh | 0 | 0 | 0 |

## 60: Jackson Street & 43rd Avenue

| Direction | All |
|---|---|
| Future Volume (vph) | 42 |
| Total Delay / Veh (s/v) | 0 |
| CO Emissions (kg) | 0.02 |
| NOx Emissions (kg) | 0.00 |
| VOC Emissions (kg) | 0.01 |

## 70: Van Buren Street & 43rd Avenue

| Direction | All |
|---|---|
| Future Volume (vph) | 40 |
| Total Delay / Veh (s/v) | 0 |
| CO Emissions (kg) | 0.02 |
| NOx Emissions (kg) | 0.00 |
| VOC Emissions (kg) | 0.01 |