# Linking Guide: wxWidgets, Boost.Signals, and **SFML**

**Note**: For wxWidgets linking, please refer to the wxWidgets Installation Manual



# 0. VCPKG Environment Setup

### Locate VCPKG Installation

- 1. Open Command Prompt
- 2. Run:

where vcpkg

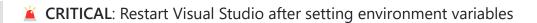
3. Note the path (typically like C:\dev\vcpkg\vcpkg.exe)

### Set VCPKG\_ROOT Environment Variable

- 1. Press Windows + S
- 2. Type "environment variables"
- 3. Click "Edit the system environment variables"
- 4. Click "Environment Variables" button
- 5. Under "System variables", click "New"
- 6. Set:
  - Variable name: vcpкg коот
  - Variable value: Your vcpkg path (e.g., C:\dev\vcpkg) remove \vcpkg.exe
- 7. Click "OK" on all windows

# **Verify Environment Variable**

echo %VCPKG\_ROOT%





# 👲 1. Library Installation

# **Dynamic Library**

```
# Install Boost.Signals2 (part of Boost)
vcpkg install boost-signals2:x64-windows
# Install SFML
vcpkg install sfml:x64-windows
```

### **Static Library**

```
vcpkg install boost-signals2:x64-windows-static
vcpkg install sfml:x64-windows-static
```



# 2. Verify Installation

```
vcpkg list boost-signals2
vcpkg list sfml
```

**Marning**: Ensure all libraries are listed before proceeding



# 3. Project Configuration

### **Include Directories Setup**

- CRITICAL: Make sure to select "All Configurations" and "All Platforms"!
- 1. Right-click project in Solution Explorer → Properties
- 2. At the top of Properties window:
  - Configuration dropdown: Select "All Configurations"
  - Platform dropdown: Select "All Platforms"
- 3. Navigate to:
  - o C/C++ → General → Additional Include Directories
- 4. Click dropdown arrow → Edit
- 5. Add new line:

```
$(VCPKG_ROOT)\installed\x64-windows\include
```

Tip: Verify path by pasting in File Explorer: %VCPKG\_ROOT%\installed\x64-windows\include

# **Library Directories Setup**

#### Debug Configuration (x64)

- 1. Configuration: Debug, Platform: x64
- 2. Linker → General → Additional Library Directories
- 3. Add:

```
D:\vcpkg\installed\x64-windows\debug\lib
```

#### Release Configuration (x64)

- Configuration: Release, Platform: x64
- 2. Linker → General → Additional Library Directories
- 3. Add:

```
$(VCPKG_ROOT)\installed\x64-windows\lib
```

### **Dependencies Configuration**

### Debug Configuration (x64)

Add to Linker → Input → Additional Dependencies:

```
sfml-graphics-d.lib
sfml-window-d.lib
sfml-system-d.lib
```

#### Release Configuration (x64)

Add to Linker → Input → Additional Dependencies:

```
sfml-graphics.lib
sfml-window.lib
sfml-system.lib
```



# 4. Required DLLs

CRITICAL: Copy these files to Project Folder > x64 > debug

Look in these folders (replace D:\vcpkg with your actual VCPKG installation path):

- %VCPKG\_ROOT%\installed\x64-windows\debug\bin
- %VCPKG ROOT%\installed\x64-windows\debug\lib

Important: The path may differ if your VCPKG is not installed in the D drive. Use the path where your VCPKG is actually installed. You can verify your VCPKG path by:

- 1. Opening Command Prompt
- 2. Running: echo %VCPKG\_ROOT%

**Debug Libraries:** (Check both bin and lib folders)

- bz2d.dll
- freetype6d.dll
- libpng16d.dll
- zlibd1.dll
- sfml-audio-d.lib
- sfml-audio-d-2.dll
- sfml-graphics-d.lib
- sfml-graphics-d-2.dll
- sfml-network-d.lib
- sfml-network-d-2.dll
- sfml-system-d.lib
- sfml-system-d-2.dll
- sfml-window-d.lib
- sfml-window-d-2.dll



# 5. Common Issues and Solutions

### Missing DLLs

- Verify all required DLLs are in correct output directory
- Ensure using debug (-d) versions for Debug configuration
- Check VCPKG\_ROOT path setting

#### **Linker Errors**

Confirm all library paths are correct

- Verify correct library versions (debug vs. release)
- Check dependency order in linker settings

# **Build Configuration Mismatches**

- **Use consistent configuration (static/dynamic)**
- Match SFML configuration with project runtime library settings
- Verify platform (x64) matches across all settings