Table S1. Links to Street Panoramic Roaming Scenes.

(1) Taiping North Road

- Control group-Low GVI+Original sound: https://www.720yun.com/vr/75ejOptwzu8
- Sound group-Low GVI+Birdsong: https://www.720yun.com/vr/c8bjOptwzv9
- Vision group-High GVI+Original sound: https://www.720yun.com/vr/799jOptwza0
- Combination group-High GVI+Birdsong: https://www.720yun.com/vr/c91jOptwzf5

(2) Zhujiang Road

- Control group-Low GVI+Original sound: https://www.720yun.com/vr/277jOpuuru4
- Sound group-Low GVI+Birdsong: https://www.720yun.com/vr/276jOpuurv2
- Vision group-High GVI+Original sound: https://www.720yun.com/vr/84djOpuurv7
- Combination group-High GVI+Birdsong: https://www.720yun.com/vr/c30jOpuurn2

(3) Changjiang Road

- Control group-Low GVI+Original sound: https://www.720yun.com/vr/20djOptw5u1
- Sound group-Low GVI+Birdsong: https://www.720yun.com/vr/86djOptw5u2
- Vision group-High GVI+Original sound: https://www.720yun.com/vr/e68jOptw5u3
- Combination group-High GVI+Birdsong: https://www.720yun.com/vr/497jOptw5u6

(4) Beiting Lane

- Control group-Low GVI+Original sound: https://www.720yun.com/vr/f78jOpuuru7
- Sound group-Low GVI+Birdsong: https://www.720yun.com/vr/d23jOpuvku2
- Vision group-High GVI+Original sound: https://www.720yun.com/vr/1f6jOpuvku7
- Combination group-High GVI+Birdsong: https://www.720yun.com/vr/686jOpuvkk3

Table S2. Taiping North Road Statistical Analysis

	Control Group ($\bar{M} \pm SD$)	Sound Group ($\bar{M} \pm SD$)	P	Control Group ($\bar{M} \pm SD$)	Vision Group ($\bar{M} \pm SD$)	P	Control Group ($\bar{M} \pm SD$)	Combination group ($\bar{M} \pm SD$)	P
Visual comfort assessment									
Green space	4.07±0.83	4.40±0.62	0.023*	4.03±0.67	4.07±0.64	0.787	3.90±0.61	4.47±0.57	0.001**
Sidewalk	4.00±0.91	4.20±0.66	0.281	4.10±0.85	4.10±0.71	1.000	3.87±0.82	4.27±0.64	0.008**
vignette facilities (seating benches, scenic walls, etc.)	3.87±0.90	4.20±0.85	0.115	3.60±0.89	3.83±0.91	0.199	3.63±0.72	3.93±0.74	0.107
Acoustic environment assessment									
Pleasantness	2.90±1.42	4.47±0.82	0.000**	3.33±1.12	3.63±1.25	0.163	3.43±1.14	4.73±0.45	0.000**
Quietness	2.33±1.37	3.80±1.00	0.000**	2.73±1.29	3.03±1.47	0.286	2.70±1.34	4.13±0.94	0.000**
Appropriateness	3.13±1.25	4.37±0.76	0.000**	3.73±1.31	3.67±1.16	0.712	3.30±1.15	4.37±0.81	0.001**
Perceived Restorativeness Scale									
Fascination	8.67±3.62	12.73±1.48	0.000**	10.87±2.91	11.10±2.88	0.607	9.67±3.37	12.87±1.41	0.000**
Being-away	8.30±3.75	13.30±1.02	0.000**	10.20±3.46	11.27±3.11	0.072	9.70±3.57	13.03±1.75	0.000**
Compatibility	8.67±3.85	13.00±1.51	0.000**	10.30±2.87	10.73±2.72	0.421	9.70±3.43	12.83±1.84	0.000**
Extent	8.33±3.93	13.17±1.02	0.000**	10.80±2.73	11.17±2.63	0.392	9.40±3.20	12.80±1.35	0.000**

Note: *$P<0.05$，**$P<0.01$

Table S3. Zhujiang Road Statistical Analysis

	Control Group ($\bar{M} \pm SD$)	Sound Group ($\bar{M} \pm SD$)	P	Control Group ($\bar{M} \pm SD$)	Vision Group ($\bar{M} \pm SD$)	P	Control Group ($\bar{M} \pm SD$)	Combination group ($\bar{M} \pm SD$)	P
Visual comfort assessment									
Green space	3.43±0.86	3.60±0.89	0.17	3.47±1.11	3.87±0.94	0.005**	3.20±1.24	3.93±0.74	0.002**
Sidewalk	3.57±0.94	3.80±1.00	0.15	3.60±1.10	3.83±0.91	0.28	3.50±1.28	3.97±0.89	0.028*
Stores along the street	3.33±1.06	3.50±1.040	0.33	3.43±0.97	3.57±0.97	0.40	3.37±1.25	3.77±0.94	0.07*
Acoustic environment assessment									
Pleasantness	3.13±1.25	4.27±0.87	<0.001**	3.43±1.28	3.50±1.41	0.73	2.87±1.31	4.33±0.92	<0.001**
Quietness	2.40±1.30	3.50±1.14	<0.001**	2.70±1.24	2.87±1.40	0.50	2.30±1.24	3.83±1.15	0.000**
Appropriateness	3.33±1.37	3.73±1.34	0.25	3.67±1.03	3.63±1.27	0.87	3.43±1.17	4.13±1.17	0.04*
Perceived Restorativeness Scale									
Fascination	9.97±3.45	11.7±2.77	0.001*	9.70±3.70	10.47±3.67	0.04*	7.87±3.37	11.43±2.8	<0.001**
Being-away	8.67±3.77	11.33±3.19	<0.001**	9.27±3.90	9.27±4.11	1.00	8.00±4.03	11.50±3.13	0.001**
Compatibility	9.9±3.13	11.77±2.97	0.002**	10.07±3.91	10.23±3.67	0.69	9.03±3.81	11.73±2.84	0.002**
Extent	10.2±3.64	11.63±2.71	0.011*	9.57±3.41	10.00±3.39	0.38	8.40±3.62	11.97±2.76	<0.001**

Note: *$P<0.05$，**$P<0.01$

Table S4. Changjiang Road Statistical Analysis

	Control Group ($\bar{M} \pm SD$)	Sound Group ($\bar{M} \pm SD$)	P	Control Group ($\bar{M} \pm SD$)	Vision Group ($\bar{M} \pm SD$)	P	Control Group ($\bar{M} \pm SD$)	Combination Group ($\bar{M} \pm SD$)	P
Visual comfort assessment									
Green space	3.70±0.99	4.17±0.75	0.006**	3.97±0.89	3.97±0.72	1.000	4.03±0.85	4.30±0.65	0.103
Sidewalk	3.90±1.19	4.20±0.89	0.204	4.20±0.66	4.07±0.74	0.459	4.20±0.96	4.37±0.67	0.231
Auxiliary facilities (guardrails, road stakes, etc.)	3.60±1.07	4.03±0.89	0.017*	3.70±0.70	3.73±0.74	0.769	4.03±1.07	4.20±0.89	0.258
Acoustic environment assessment									
Pleasantness	3.00±1.39	4.50±0.78	0.000**	3.63±1.13	3.63±1.16	1.000	2.73±1.39	4.50±0.57	0.000**
Quietness	2.37±1.40	3.77±1.28	0.000**	2.73±1.29	2.93±1.46	0.227	1.90±1.16	4.07±0.91	0.000**
Appropriateness	3.20±1.52	4.23±1.01	0.009**	3.90±1.09	3.80±1.30	0.630	3.10±1.35	4.50±0.63	0.000**
Perceived Restorativeness Scale									
Fascination	8.90±3.59	12.73±1.82	0.000**	11.00±2.72	10.70±3.10	0.359	7.97±3.71	12.80±2.07	0.000**
Being-away	8.20±3.98	12.67±2.07	0.000**	10.50±3.22	10.53±3.58	0.929	7.23±3.79	12.77±1.87	0.000**
Compatibility	9.13±3.82	13.00±1.51	0.000**	10.83±3.15	11.13±3.25	0.389	8.33±3.82	12.60±1.59	0.000**
Extent	8.90±3.63	12.63±1.38	0.000**	10.83±3.08	10.87±3.10	0.926	8.20±3.76	12.83±1.70	0.000**

Note: *$P<0.05$，**$P<0.01$

Table S5. Beiting Lane Statistical Analysis.

	Control Group ($\bar{M} \pm SD$)	Sound Group ($\bar{M} \pm SD$)	P	Control Group ($\bar{M} \pm SD$)	Vision Group ($\bar{M} \pm SD$)	P	Control Group ($\bar{M} \pm SD$)	Combination group ($\bar{M} \pm SD$)	P
Visual comfort assessment									
Green space	3.43±0.90	3.77±0.77	0.010*	3.53±0.97	3.83±0.79	0.048*	3.57±0.97	4.23±0.68	0.000**
Sidewalk	3.57±0.94	3.90±0.85	0.077*	3.80±0.96	3.83±0.95	0.845	3.37±1.03	3.83±0.83	0.004**
Vignette facilities (scenic walls, etc.)	3.80±0.89	4.07±0.79	0.043*	4.03±1.07	4.1±0.96	0.690	3.80±0.81	4.07±0.94	0.030*
Acoustic environment assessment									
Pleasantness	3.00±1.29	4.43±0.57	0.000**	3.43±1.01	3.73±1.14	0.059	3.00±1.02	4.33±0.80	0.000**
Quietness	2.20±1.32	3.80±1.06	0.000**	2.17±1.21	2.63±1.27	0.024*	2.30±1.24	3.70±1.24	0.000**
Appropriateness	3.13±1.28	4.23±0.63	0.000**	3.87±1.25	3.67±1.06	0.246	3.10±1.24	4.30±0.92	0.000**
Perceived Restorativeness Scale									
Fascination	8.93±3.78	12.57±1.50	0.000**	10.13±3.60	11.13±3.17	0.036*	8.77±3.26	12.37±1.59	0.000**
Being-away	8.43±3.97	12.93±1.14	0.000**	9.10±3.81	10.17±3.67	0.013*	8.30±3.34	12.33±1.83	0.000**
Compatibility	9.33±3.32	12.80±1.35	0.000**	9.87±3.24	11.07±3.37	0.020*	8.83±3.29	12.77±1.52	0.000**
Extent	9.43±3.60	12.77±1.50	0.000**	10.07±3.68	11.13±2.97	0.038*	9.27±3.18	12.87±1.43	0.000**

Note: *$P<0.05$，**$P<0.01$.

Table S6. Post-hoc analysis of different restorativeness measurements between sound, vision and combination groups.

Dependent Variable	Group	Group	Taiping North Road			Zhujiang Road			Changjiang Road			Beiting Lane		
			ΔM	SD	Sig.	ΔM	SD	Sig.	ΔM	SD	Sig.	ΔM	SD	Sig.
Visual comfort assessment														
Green space	Sound	Vision	0.30	0.19	0.376	-0.23	0.23	0.920	0.47	0.21	0.086	0.03	0.18	1.000
		Combination	-0.23	0.19	0.695	-0.57	0.23	0.043*	0.20	0.21	1.000	-0.33	0.18	0.215
	Vision	Sound	-0.30	0.19	0.376	0.23	0.23	0.920	-0.47	0.21	0.086	-0.03	0.18	1.000
		Combination	-0.53	0.19	0.022*	-0.33	0.23	0.437	-0.27	0.21	0.620	-0.37	0.18	0.144
	Combination	Sound	0.23	0.19	0.695	0.57	0.23	0.043*	-0.20	0.21	1.000	0.33	0.18	0.215
		Vision	0.53	0.19	0.022*	0.33	0.23	0.437	0.27	0.21	0.620	0.37	0.18	0.144
Sidewalk	Sound	Vision	0.20	0.23	1.000	0.00	0.27	1.000	0.43	0.26	0.307	0.30	0.24	0.625
		Combination	-0.20	0.23	1.000	-0.23	0.27	1.000	0.13	0.26	1.000	-0.13	0.24	1.000
	Vision	Sound	-0.20	0.23	1.000	0.00	0.27	1.000	-0.43	0.26	0.307	-0.30	0.24	0.625
		Combination	-0.40	0.23	0.250	-0.23	0.27	1.000	-0.30	0.26	0.769	-0.43	0.24	0.212
	Combination	Sound	0.20	0.23	1.000	0.23	0.27	1.000	-0.13	0.26	1.000	0.13	0.24	1.000
		Vision	0.40	0.23	0.250	0.23	0.27	1.000	0.30	0.26	0.769	0.43	0.24	0.212
Vignette facilities	Sound	Vision	0.10	0.27	1.000	0.03	0.25	1.000	0.40	0.20	0.161	0.20	0.19	0.923
		Combination	0.03	0.27	1.000	-0.23	0.25	1.000	0.27	0.20	0.586	0.00	0.19	1.000
	Vision	Sound	-0.10	0.27	1.000	-0.03	0.25	1.000	-0.40	0.20	0.161	-0.20	0.19	0.923
		Combination	-0.07	0.27	1.000	-0.27	0.25	0.896	-0.13	0.20	1.000	-0.20	0.19	0.923
	Combination	Sound	-0.03	0.27	1.000	0.23	0.25	1.000	-0.27	0.20	0.586	0.00	0.19	1.000
		Vision	0.07	0.27	1.000	0.27	0.25	0.896	0.13	0.20	1.000	0.20	0.19	0.923

Acoustic environment assessment													
Pleasantness	Sound	Vision	1.27	0.37	0.002**	1.07	0.32	0.004**	1.50	0.36	<0.001**	1.13	0.29	0.001**
		Combination	0.27	0.37	1.000	-0.33	0.32	0.897	-0.27	0.36	1.000	0.10	0.29	1.000
	Vision	Sound	-1.27	0.37	0.002**	-1.07	0.32	0.004**	-1.50	0.36	<0.001**	-1.13	0.29	0.001**
		Combination	-1.00	0.37	0.022*	-1.40	0.32	<0.001**	-1.77	0.36	<0.001**	-1.03	0.29	0.002**
	Combination	Sound	-0.27	0.37	1.000	0.33	0.32	0.897	0.27	0.36	1.000	-0.10	0.29	1.000
		Vision	1.00	0.37	0.022*	1.40	0.32	<0.001*	1.77	0.36	<0.001**	1.03	0.29	0.002**
Quietness	Sound	Vision	1.17	0.39	0.011*	0.93	0.37	0.043*	1.20	0.38	0.007**	1.13	0.35	0.005**
		Combination	0.03	0.39	1.000	-0.43	0.37	0.749	-0.77	0.38	0.140	0.20	0.35	1.000
	Vision	Sound	-1.17	0.39	0.011*	-0.93	0.37	0.043*	-1.20	0.38	0.007**	-1.13	0.35	0.005
		Combination	-1.13	0.39	0.014*	-1.37	0.37	0.001*	-1.97	0.38	<0.001**	-0.93	0.35	0.026*
	Combination	Sound	-0.03	0.39	1.000	0.43	0.37	0.749	0.77	0.38	0.140	-0.20	0.35	1.000
		Vision	1.13	0.39	0.014*	1.37	0.37	0.001**	1.97	0.38	<0.001**	0.93	0.35	0.026*
Appropriateness	Sound	Vision	1.30	0.35	0.001**	0.43	0.41	0.891	1.13	0.41	0.021*	1.30	0.35	0.001**
		Combination	0.17	0.35	1.000	-0.30	0.41	1.000	-0.37	0.41	1.000	-0.10	0.35	1.000
	Vision	Sound	-1.30	0.35	0.001**	-0.43	0.41	0.891	-1.13	0.41	0.021*	-1.30	0.35	0.001*
		Combination	-1.13	0.35	0.006**	-0.73	0.41	0.238	-1.50	0.41	0.001**	-1.40	0.35	<0.001**
	Combination	Sound	-0.17	0.35	1.000	0.30	0.41	1.000	0.37	0.41	1.000	0.10	0.35	1.000
		Vision	1.13	0.35	0.006**	0.73	0.41	0.238	1.50	0.41	0.001**	1.40	0.35	<0.001**

Perceived Restorativeness Scale														
Fascination	Sound	Vision	3.83	0.81	<0.001*	0.97	0.76	0.612	4.13	0.84	<0.001*	2.63	0.80	0.004*
		Combination	0.87	0.81	0.861	-1.83	0.76	0.052	-1.00	0.84	0.710	0.03	0.80	1.000
	Vision	Sound	-3.83	0.81	<0.001*	-0.97	0.76	0.612	-4.13	0.84	<0.001*	-2.63	0.80	0.004*
		Combination	-2.97	0.81	<0.001*	-2.80	0.76	0.001*	-5.13	0.84	<0.001*	-2.60	0.80	0.005*
	Combination	Sound	-0.87	0.81	0.861	1.83	0.76	0.052	1.00	0.84	0.710	-0.03	0.80	1.000
		Vision	2.97	0.81	<0.001*	2.80	0.76	0.001*	5.13	0.84	<0.001*	2.60	0.80	0.005*
Being-away	Sound	Vision	3.93	0.87	<0.001*	2.67	0.94	0.017*	4.43	0.93	<0.001*	3.43	0.86	<0.001*
		Combination	1.67	0.87	0.179	-0.83	0.94	1.000	-1.07	0.93	0.764	0.47	0.86	1.000
	Vision	Sound	-3.93	0.87	<0.001*	-2.67	0.94	0.017*	-4.43	0.93	<0.001*	-3.43	0.86	<0.001*
		Combination	-2.27	0.87	0.033	-3.50	0.94	0.001*	-5.50	0.93	<0.001*	-2.97	0.86	0.003*
	Combination	Sound	-1.67	0.87	0.179	0.83	0.94	1.000	1.07	0.93	0.764	-0.47	0.86	1.000
		Vision	2.27	0.87	0.033*	3.50	0.94	0.001*	5.50	0.93	<0.001*	2.97	0.86	0.003*
Compatibility	Sound	Vision	3.90	0.87	<0.001*	1.70	0.85	0.147	3.57	0.90	<0.001*	2.27	0.79	0.016*
		Combination	1.20	0.87	0.516	-0.83	0.85	0.991	-0.40	0.90	1.000	-0.47	0.79	1.000
	Vision	Sound	-3.90	0.87	<0.001*	-1.70	0.85	0.147	-3.57	0.90	<0.001*	-2.27	0.79	0.016*
		Combination	-2.70	0.87	0.008*	-2.53	0.85	0.011*	-3.97	0.90	<0.001*	-2.73	0.79	0.003*
	Combination	Sound	-1.20	0.87	0.516	0.83	0.85	0.991	0.40	0.90	1.000	0.47	0.79	1.000
		Vision	2.70	0.87	0.008*	2.53	0.85	0.011*	3.97	0.90	<0.001*	2.73	0.79	0.003*
Extent	Sound	Vision	4.47	0.86	<0.001*	1.00	0.85	0.724	3.70	0.85	<0.001*	2.27	0.83	0.023*
		Combination	1.43	0.86	0.294	-2.13	0.85	0.041*	-0.90	0.85	0.883	-0.27	0.83	1.000
	Vision	Sound	-4.47	0.86	<0.001*	-1.00	0.85	0.724	-3.70	0.85	<0.001*	-2.27	0.83	0.023*
		Combination	-3.03	0.86	<0.001*	-3.13	0.85	0.001*	-4.60	0.85	<0.001*	-2.53	0.83	0.009*
	Combination	Sound	-1.43	0.86	0.294	2.13	0.85	0.041*	0.90	0.85	0.883	0.27	0.83	1.000
		Vision	3.03	0.86	<0.001*	3.13	0.85	0.001*	4.60	0.85	<0.001*	2.53	0.83	0.009*

Note: *P＜0.05，**P＜0.01.