

Supplementary

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Table S1: User Demographic Characteristics			
Type	Characteristic	Count	Percentage
Gender	Male	80	73%
	Female	29	27%
Occupation	Student	51	47%
	Teacher	4	4%
	White Collar	0	0%
	Worker	8	7%
	Farmer	2	2%
	Homemaker	2	2%
	Medical Personnel	12	11%
	Technician	5	4%
	Self-Employed	15	14%
	Retired	3	3%
	Other	7	6%
Education	Middle School or Below	31	29%
	High School/Vocational	19	17%
	Bachelor's/Associate Degree	46	42%
	Graduate or Above	6	6%
	Prefer not to disclose	7	6%
Usage Frequency	Daily	20	18%
	Several Times a Week	41	38%

	Several Times a Month	20	18%
	Infrequent	15	14%
	First Time	13	12%
Usage Duration	Less than 0.5 Hours	2	2%
	0.5-1 Hours	24	22%
	1-3 Hours	73	67%
	More than 3 Hours	10	9%
Transportation	Walking	38	35%
	Cycling	34	31%
	Public Transit	20	18%
	Private Car	17	16%
Residence	Near the Park	53	49%
	Other	44	40%
	Prefer not to disclose	12	13%

Table S2: Demographic Characteristics of Child Users			
Type	Characteristic	Count	Percentage
Gender	Male	32	84.2%
	Female	6	15.8%
Occupation	Student	38	100%
Education	Middle School or Below	24	63.1%
	High School/Vocational	7	18.4%
	Bachelor's/Associate Degree	2	5.2%
	Other/Prefer not to disclose	4	10.5%
Usage Frequency	Daily	1	2.6%
	Several Times a Week	21	55.2%
	Several Times a Month	11	28.9%
	Infrequent	2	5.2%
	First Time	3	7.8%
Usage Duration	0.5-1 Hours	8	21%
	1-3 Hours	25	65.7%
	More than 3 Hours	4	10.5%
Transportation	Walking	14	36.8%
	Cycling	16	42.1%
	Public Transit	4	10.5%

	Private Car	4	10.5%
Residence	Near the Park	14	36.8%
	Other	16	42.1%
	Prefer not to disclose	8	21%

Table S3: Demographic Characteristics of Young Users			
Type	Characteristic	Count	Percentage
Gender	Male	21	56.7%
	Female	16	43.3%
Occupation	Student	16	43.2%
	White Collar	5	13.5%
	Technician	5	13.5%
	Teacher	4	10.8%
	Self-Employed	3	8.1%
	Medical Personnel	1	2.7%
	Prefer not to disclose	3	8.1%
Education	Middle School or Below	1	2.7%
	High School/Vocational	2	5.4%
	Bachelor's/Associate Degree	31	83.7%
	Graduate or Above	3	8.1%
Usage Frequency	Daily	3	8.1%
	Several Times a Week	11	29.7%
	Several Times a Month	4	10.8%
	Infrequent	9	24.3%
	First Time	10	27%
Usage Duration	Less than 0.5 Hours	2	5.4%

	0.5-1 Hours	9	24.3%
	1-3 Hours	26	70.2%
Transportation	Walking	10	27%
	Cycling	9	24.3%
	Public Transit	10	27%
	Private Car	7	18.9%
	Other/Prefer not to disclose	1	2.7%
Residence	Near the Park	17	45.9%
	Other	19	51.3%
	Prefer not to disclose	1	2.7%

Table S4: Demographic Characteristics of Middle-aged Users			
Type	Characteristic	Count	Percentage
Gender	Male	12	70.5%
	Female	5	29.5%
Occupation	White Collar	2	11.7%
	Technician	5	29.4%
	Homemaker	2	11.7%
	Self-Employed	2	11.7%
	Medical Personnel	1	5.8%
	Retired	1	5.8%
	Prefer not to disclose	4	23.5%
Education	Middle School or Below	2	11.7%
	High School/Vocational	2	11.7%
	Bachelor's/Associate Degree	10	58.8%
	Graduate or Above	3	17.6%
Usage Frequency	Daily	2	11.7%
	Several Times a Week	7	41.1%
	Several Times a Month	5	29.4%
	Infrequent	3	17.6%
Usage Duration	0.5-1 Hours	4	23.5%
	1-3 Hours	13	76.4%

Transportation	Walking	6	35.2%
	Cycling	5	29.4%
	Public Transit	1	5.8%
	Private Car	5	29.4%
	Other/Prefer not to disclose	1	2.7%
Residence	Near the Park	9	52.9%
	Other	5	29.4%
	Prefer not to disclose	3	17.6%

Table S5: Demographic Characteristics of Elderly Users			
Type	Characteristic	Count	Percentage
Gender	Male	15	88.2%
	Female	2	11.7%
Occupation	White Collar	1	5.8%
	Technician	1	5.8%
	Retired	14	82.3%
	Prefer not to disclose	1	5.8%
Education	Middle School or Below	4	23.5%
	High School/Vocational	8	47%
	Bachelor's/Associate Degree	3	17.6%
	Prefer not to disclose	2	11.7%
Usage Frequency	Daily	14	82.3%
	Several Times a Week	2	11.7%
	Infrequent	1	5.8%
Usage Duration	0.5-1 Hours	3	17.6%
	1-3 Hours	9	52.9%
	More than 3 Hours	5	29.4%
Transportation	Walking	8	47%
	Cycling	4	23.5%
	Public Transit	5	29.4%

Residence	Near the Park	12	70.5%
	Other	4	23.5%
	Prefer not to disclose	1	5.8%

Table S6: Paired sample T-test of importance and satisfaction of children						
Criterion Level	Indicator Level	S-I	Difference of means (S-I)	Standard deviation	T value	P value
Accessibility	1 Convenience of crossing roads to access the park	S1 - I1	0.162	0.8	1.233	0.225
	2 Convenience of entrance locations	S2 - I2	-0.162	0.866	-1.138	0.262
	3 Number of park entrances	S3 - I3	0.25	0.841	1.784	0.083
	4 Visual recognition of park entrances	S4 - I4	-0.294	0.836	-2.052	0.048
	5 Connectivity between different functional areas within the park	S5 - I5	-0.094	1.058	-0.501	0.62
	6 Number of nearby bus stops	S6 - I6	0.03	0.883	0.197	0.845
	7 Location distribution of nearby bus stops	S7 - I7	-0.029	0.834	-0.206	0.838
Safety	8 Security Management in the Park	S8 - I8	-0.086	0.742	-0.683	0.499
	9 Safety of Surrounding Traffic for Pedestrians and Non-Motorized Vehicles	S9 - I9	-0.2	0.797	-1.484	0.147
	10 Lighting Conditions in the Park	S10 - I10	-0.206	0.641	-1.873	0.07
	11 Condition	S11 - I11	-0.265	0.71	-2.175	0.037

	of Sports Facilities					
	12 Safety of Internal Facilities	S12 - I12	-0.243	0.863	-1.715	0.095
	13 Overall Safety of Internal Park Areas	S13 - I13	-0.378	1.089	-2.113	0.042
Comfort	14 Sound Environment in the Park	S14 - I14	-0.486	1.121	-2.64	0.012
	15 Air Quality in the Park	S15 - I15	-0.306	0.856	-2.142	0.039
	16 Distribution of Activity Areas	S16 - I16	-0.029	0.797	-0.215	0.831
	17 Number of Activity Areas	S17 - I17	-0.371	0.808	-2.721	0.01
	18 Size of Activity Areas	S18 - I18	-0.444	1.027	-2.597	0.014
	19 Accessibility Facilities	S19 - I19	-0.265	0.828	-1.864	0.071
	20 Placement of Garbage Bins and Seating	S20 - I20	-0.278	0.779	-2.14	0.039
	21 Placement of Bookstores and Restrooms	S21 - I21	-0.419	1.232	-1.895	0.068
Aesthetics	22 Aesthetic Quality of Plant Landscape Design	S22 - I22	-0.028	0.878	-0.19	0.851
	23 Aesthetic Quality of Pathway Paving	S23 - I23	0.405	0.762	3.235	0.003
	24 Aesthetic Quality of Color Coordination	S24 - I24	0.167	1	1	0.324

	in the Park					
	25 Aesthetic Quality of Landscape Features and Structures	S25 - I25	0.294	0.836	2.052	0.048
Cultural Relevance	26 Reflection of Jinan's historical and cultural characteristics in the park	S26 - I26	-0.371	0.973	-2.259	0.03

Table S7: Paired sample T-test of importance and satisfaction of Youth						
Criterion Level	Indicator Level	S-I	Difference of means (S-I)	Standard deviation	T value	P value
Accessibility	1 Convenience of crossing roads to access the park	S1 - I1	-0.083	0.906	-0.552	0.585
	2 Convenience of entrance locations	S2 - I2	-0.444	0.843	-3.162	0.003
	3 Number of park entrances	S3 - I3	-0.135	1.11	-0.741	0.464
	4 Visual recognition of park entrances	S4 - I4	-0.324	0.884	-2.233	0.032
	5 Connectivity between different functional areas within the park	S5 - I5	-0.028	1.183	-0.141	0.889
	6 Number of nearby bus stops	S6 - I6	-0.265	0.931	-1.657	0.107
	7 Location distribution of nearby bus stops	S7 - I7	-0.273	0.517	-3.032	0.005
Safety	8 Security Management in the Park	S8 - I8	-0.286	1.017	-1.663	0.106
	9 Safety of Surrounding Traffic for Pedestrians and Non-Motorized Vehicles	S9 - I9	-0.667	0.89	-4.304	0

	10 Lighting Conditions in the Park	S10 - I10	-0.258	0.815	-1.763	0.088
	11 Condition of Sports Facilities	S11 - I11	-0.353	0.812	-2.534	0.016
	12 Safety of Internal Facilities	S12 - I12	-0.353	0.691	-2.978	0.005
	13 Overall Safety of Internal Park Areas	S13 - I13	-0.265	0.71	-2.175	0.037
Comfort	14 Sound Environment in the Park	S14 - I14	-0.086	1.358	-0.373	0.711
	15 Air Quality in the Park	S15 - I15	-0.343	0.938	-2.163	0.038
	16 Distribution of Activity Areas	S16 - I16	-0.147	0.925	-0.927	0.361
	17 Number of Activity Areas	S17 - I17	-0.257	1.01	-1.506	0.141
	18 Size of Activity Areas	S18 - I18	-0.171	1.248	-0.813	0.422
	19 Accessibility Facilities	S19 - I19	-0.485	1.149	-2.424	0.021
	20 Placement of Garbage Bins and Seating	S20 - I20	-0.294	0.938	-1.828	0.077

	21 Placement of Bookstores and Restrooms	S21 - I21	-0.485	1.093	-2.548	0.016
Aesthetics	22 Aesthetic Quality of Plant Landscape Design	S22 - I22	0.206	0.946	1.268	0.214
	23 Aesthetic Quality of Pathway Paving	S23 - I23	0.324	0.806	2.34	0.025
	24 Aesthetic Quality of Color Coordination in the Park	S24 - I24	0.294	0.97	1.768	0.086
	25 Aesthetic Quality of Landscape Features and Structures	S25 - I25	0.212	0.82	1.486	0.147
Cultural Relevance	26 Reflection of Jinan's historical and cultural characteristics in the park	S26 - I26	-0.029	1.014	-0.167	0.869

Table S8: Paired sample T-test of importance and satisfaction of Middle-Aged Adults						
Criterion Level	Indicator Level	S-I	Difference of means (S-I)	Standard deviation	T value	P value
Accessibility	1 Convenience of crossing roads to access the park	S1 - I1	-0.059	0.966	-0.251	0.805
	2 Convenience of entrance locations	S2 - I2	-0.176	0.728	-1	0.332
	3 Number of park entrances	S3 - I3	-0.176	0.728	-1	0.332
	4 Visual recognition of park entrances	S4 - I4	0	0.73	0	1
	5 Connectivity between different functional areas within the park	S5 - I5	0	0.935	0	1
	6 Number of nearby bus stops	S6 - I6	0.412	1.121	1.514	0.15
	7 Location distribution of nearby bus stops	S7 - I7	0.235	0.97	1	0.332
Safety	8 Security Management in the Park	S8 - I8	-0.353	0.606	-2.4	0.029
	9 Safety of Surrounding Traffic for	S9 - I9	-0.647	0.931	-2.864	0.011

	Pedestrians and Non-Motorized Vehicles					
	10 Lighting Conditions in the Park	S10 - I10	-0.667	0.816	-3.162	0.007
	11 Condition of Sports Facilities	S11 - I11	-1.062	1.389	-3.06	0.008
	12 Safety of Internal Facilities	S12 - I12	-0.294	0.92	-1.319	0.206
	13 Overall Safety of Internal Park Areas	S13 - I13	-0.706	0.772	-3.771	0.002
Comfort	14 Sound Environment in the Park	S14 - I14	-0.882	1.409	-2.582	0.02
	15 Air Quality in the Park	S15 - I15	-0.588	0.939	-2.582	0.02
	16 Distribution of Activity Areas	S16 - I16	0.188	0.981	0.764	0.456
	17 Number of Activity Areas	S17 - I17	-0.588	1.543	-1.571	0.136
	18 Size of Activity Areas	S18 - I18	-0.706	1.359	-2.142	0.048
	19 Accessibility Facilities	S19 - I19	-0.071	0.829	-0.322	0.752

	20 Placement of Garbage Bins and Seating	S20 - I20	-0.059	0.659	-0.368	0.718
	21 Placement of Bookstores and Restrooms	S21 - I21	-0.375	1.258	-1.192	0.252
Aesthetics	22 Aesthetic Quality of Plant Landscape Design	S22 - I22	0.313	1.014	1.232	0.237
	23 Aesthetic Quality of Pathway Paving	S23 - I23	0.118	0.781	0.621	0.543
	24 Aesthetic Quality of Color Coordination in the Park	S24 - I24	0.188	0.834	0.899	0.383
	25 Aesthetic Quality of Landscape Features and Structures	S25 - I25	0.231	1.166	0.714	0.489
Cultural Relevance	26 Reflection of Jinan's historical and cultural characteristics in the park	S26 - I26	-0.375	0.806	-1.861	0.083

Table S9: Paired sample T-test of importance and satisfaction of Elderly						
Criterion Level	Indicator Level	S-I	Difference of means (S-I)	Standard deviation	T value	P value
Accessibility	1 Convenience of crossing roads to access the park	S1 - I1	0.188	1.276	0.588	0.566
	2 Convenience of entrance locations	S2 - I2	-0.588	1.176	-2.063	0.056
	3 Number of park entrances	S3 - I3	0.563	1.263	1.781	0.095
	4 Visual recognition of park entrances	S4 - I4	0	1.414	0	1
	5 Connectivity between different functional areas within the park	S5 - I5	0.071	1.385	0.193	0.85
	6 Number of nearby bus stops	S6 - I6	0.733	1.335	2.128	0.052
	7 Location distribution of nearby bus stops	S7 - I7	0.133	1.187	0.435	0.67
Safety	8 Security Management in the Park	S8 - I8	-0.059	1.029	-0.236	0.817
	9 Safety of Surrounding Traffic for	S9 - I9	-0.176	0.951	-0.765	0.455

	Pedestrians and Non-Motorized Vehicles					
	10 Lighting Conditions in the Park	S10 - I10	-0.364	1.027	-1.174	0.267
	11 Condition of Sports Facilities	S11 - I11	-0.267	0.884	-1.169	0.262
	12 Safety of Internal Facilities	S12 - I12	-0.25	0.931	-1.074	0.3
	13 Overall Safety of Internal Park Areas	S13 - I13	0	0.73	0	1
Comfort	14 Sound Environment in the Park	S14 - I14	-0.118	2.027	-0.239	0.814
	15 Air Quality in the Park	S15 - I15	-0.824	1.074	-3.16	0.006
	16 Distribution of Activity Areas	S16 - I16	0.412	0.795	2.135	0.049
	17 Number of Activity Areas	S17 - I17	0	1.369	0	1
	18 Size of Activity Areas	S18 - I18	0.235	1.437	0.675	0.509
	19 Accessibility Facilities	S19 - I19	-0.941	1.638	-2.369	0.031

	20 Placement of Garbage Bins and Seating	S20 - I20	-0.059	0.748	-0.324	0.75
	21 Placement of Bookstores and Restrooms	S21 - I21	-0.5	0.855	-2.188	0.047
Aesthetics	22 Aesthetic Quality of Plant Landscape Design	S22 - I22	0.471	1.007	1.926	0.072
	23 Aesthetic Quality of Pathway Paving	S23 - I23	0.563	1.031	2.183	0.045
	24 Aesthetic Quality of Color Coordination in the Park	S24 - I24	0.176	0.951	0.765	0.455
	25 Aesthetic Quality of Landscape Features and Structures	S25 - I25	0.267	1.1	0.939	0.364
Cultural Relevance	26 Reflection of Jinan's historical and cultural characteristics in the park	S26 - I26	0.063	1.237	0.202	0.843

Table S10:

Post-Use Evaluation Questionnaire for the Lowline Park under Elevated Bridges

Hello! We are the "Urban Elevated Bridge Space Transformation" research group from the School of Civil Engineering and Architecture at Shandong University. We are conducting a post-use evaluation survey of Jinan's Lowline Park to gather your feedback on its usage, which will help us provide valuable suggestions for future improvements to the park in Jinan. Please respond based on your personal experience by selecting the appropriate options with a "✓". This questionnaire will take approximately 15 minutes to complete. Your responses will be kept strictly confidential and are not for any commercial purposes. Your participation is very important to us, and we appreciate your support! If you have any comments or suggestions, please feel free to contact us at 201900201004@mail.sdu.edu.cn.

Part1 Basic Usage of the Park

1. What is your usual mode of transportation to the Lowline Park?
 - A. Walking
 - B. Cycling
 - C. Public transportation
 - D. Private car
 - E. Other

2. Approximate distance from your starting point to the Lowline Park:
 - A. 0-300 meters
 - B. 300-500 meters
 - C. 500-1000 meters
 - D. Over 1000 meters

3. How often do you visit the Lowline Park?
 - A. Daily
 - B. Several times a week
 - C. Several times a month
 - D. Rarely
 - E. First visit

4. What time of day do you usually visit the park? (Select all that apply)
 - A. Morning
 - B. Noon
 - C. Afternoon
 - D. Evening

5. How long do you typically stay at the park each visit?
 - A. Less than 0.5 hours
 - B. 0.5-1 hour
 - C. 1-3 hours
 - D. More than 3 hours

6. What is your main purpose for visiting the Lowline Park?
 - A. Leisure and entertainment
 - B. Exercise and fitness
 - C. Social interaction
 - D. Participation in community service or volunteer activities
 - E. Parking or passing through
 - F. Accompanying others
 - G. Other

7. Which parts of the park do you visit most frequently? (Select 1-4 options)
 - A. Skateboard Park
 - B. Basketball Court
 - C. Badminton Court
 - D. Table Tennis Court
 - E. Reading Room
 - F. Gateball Court
 - G. Performance Square
 - H. Parking Lot
 - I. Soccer Field
 - J. Other

8. What elements of the Lowline Park attract you the most? (Select 1-4 options)
 - A. Variety of activity facilities
 - B. Pleasant environment and atmosphere
 - C. Convenient transportation
 - D. Unique appearance
 - E. Nothing in particular
 - F. Other

9. How satisfied are you with the current overall condition of the Lowline Park?
 - A. Very satisfied
 - B. Satisfied
 - C. Neutral
 - D. Dissatisfied
 - E. Very dissatisfied

Part2 Park Evaluation

Please select the option that best matches your experience:

1. Do you find it convenient to cross the road to reach this park?

- A. Very convenient
- B. Convenient
- C. Average
- D. Inconvenient
- E. Very inconvenient
- F. Don't know

How important is the convenience of crossing the road to reach the park?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Convenience of crossing the road to access the park: Refers to the ease for pedestrians to cross from nearby roads to the park, including whether there are sufficient safe crossing facilities (e.g., pedestrian crosswalks, traffic lights) and whether the design of the crossing path is reasonable (e.g., timing of traffic lights, distance, location, and number of crosswalks).

2. Do you find the location of the entrances convenient?

- A. Very convenient
- B. Convenient
- C. Average
- D. Inconvenient
- E. Very inconvenient
- F. Don't know

How important is the convenience of entrance locations?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Convenience of entrance locations: Refers to the ease for pedestrians crossing from nearby roads to reach the park, including whether there are sufficient safe crossing facilities (e.g., pedestrian crosswalks, traffic lights) and whether the design of the crossing paths is reasonable (e.g., timing of traffic lights, distance, location, and number of crosswalks).

3. Are you satisfied with the number of park entrances?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the number of park entrances?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Number of park entrances: Refers to whether the total number of entrances is sufficient to reduce detouring distances and allow visitors to choose the nearest entrance based on their needs or location.

4. Are you satisfied with the visibility of the park entrances?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the visibility of the park entrances?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Visibility of park entrances: Refers to whether the entrances have clear signage or directional markers, allowing pedestrians to easily identify the entrance locations and ensure smooth access to the park.

5. Are you satisfied with the ease of moving from one area of the park to another?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the ease of moving between areas within the park?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

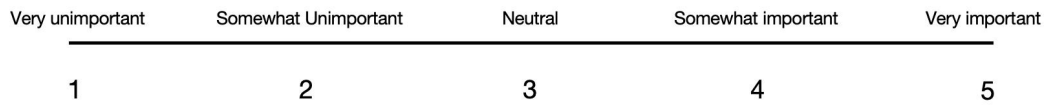
Connectivity between different functional areas within the park: Refers to the ease of moving from one area to another within the park, including the availability of convenient paths and sufficient guidance facilities to allow visitors to move smoothly between different areas.

6. Are you satisfied with the number of nearby bus stops?

- A. Very satisfied
- B. Satisfied
- C. Average
- D. Dissatisfied

- E. Very dissatisfied
- F. Don't know

How important is the number of nearby bus stops?



Number of nearby bus stops: Refers to whether there are enough bus stops near the park to ensure high connectivity with public transportation, making it convenient for visitors without private cars to reach and leave the park by bus.

7. Are you satisfied with the location of nearby bus stops?

- A. Very satisfied
- B. Satisfied
- C. Average
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the location of nearby bus stops?

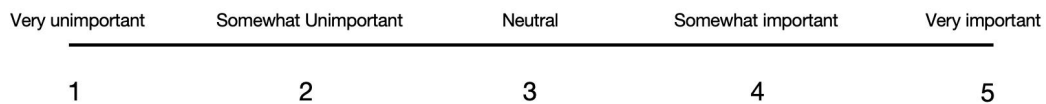


Location of nearby bus stops: Refers to whether the placement and distribution of bus stops relative to park entrances are reasonable. Properly located stops offer convenient access for park visitors, allowing them to quickly walk from the bus stop to the park entrance, thus enhancing accessibility for those using public transportation.

8. Are you satisfied with the park's security management?

- A. Very satisfied
- B. Satisfied
- C. Average
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the park's security management?



Security management of the park: Refers to whether there are adequate security personnel, patrol frequency, and surveillance measures to ensure visitor safety, and whether the existing management system can effectively prevent criminal activities.

9. Do you think the surrounding traffic environment is safe for pedestrians and non-motorized vehicles when crossing, and are you satisfied with this level of safety?

- A. Very satisfied
- B. Satisfied
- C. Average
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the safety of the surrounding traffic environment for crossing pedestrians?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Safety of the surrounding traffic environment for pedestrians and non-motorized vehicles: Refers to the traffic conditions near the park, including vehicle speed, traffic volume, signage, pedestrian protection measures (e.g., traffic lights, crosswalks), and the planning of non-motorized lanes to ensure safety for pedestrians and non-motorized vehicles when crossing roads.

10. Are you satisfied with the lighting in the park?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the lighting in the park?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Lighting in the park: Refers to the placement and brightness of lighting fixtures, especially at night, to ensure visitors can clearly see pathways and avoid safety issues caused by insufficient or overly bright lighting.

11. Are you satisfied with the condition of sports facilities (e.g., tables, courts) in the park?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the condition of sports facilities in the park?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Condition of sports facilities (e.g., tables, courts): Refers to the maintenance and usability of sports facilities within the park, ensuring

safe usage and reducing the risk of accidents.

12. Are you satisfied with the safety of internal facilities in the park?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the safety of internal facilities?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Safety of internal facilities: Refers to the design, structural stability, and regular maintenance of essential infrastructure within the park, such as benches, railings, and playground equipment, including warning signs around damaged or under-repair facilities to prevent injuries.

13. Are you satisfied with the overall safety of different areas within the park?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the overall safety of park areas?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Overall safety of park areas: Refers to the general safety of various areas within the park, including smooth walkways, slip-resistant surfaces, and the absence of hazardous terrain, debris, or obstacles that could cause visitors to trip or fall.

14. Are you satisfied with the sound environment in the park (e.g., lack of noise disturbance)?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the sound environment in the park (e.g., absence of noise disturbance)?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Sound environment in the park: Refers to whether there is any disruptive noise that may interfere with visitors' activities.

15. Are you satisfied with the air quality in the park?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the air quality in the park?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Air quality in the park: Refers to whether the air is of good quality, free of unpleasant odors or pollution, to ensure visitors' health and enhance their experience.

16. Are you satisfied with the distribution of activity areas in the park?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the distribution of activity areas in the park?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Distribution of activity areas in the park: Refers to whether the placement of different activity areas is reasonable. For instance, if quiet areas are adequately separated from lively areas and if the layout allows convenient use without mutual interference.

17. Are you satisfied with the number of activity areas in the park?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the number of activity areas in the park?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Number of activity areas in the park: Refers to whether the quantity of activity areas provided in the park is sufficient to meet the needs of visitors of different ages and interests.

18. Are you satisfied with the size of the activity areas in the park?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the size of the activity areas in the park?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Size of activity areas in the park: Refers to whether the size of activity areas is adequate to accommodate the expected number of users, avoiding overcrowding and ensuring a comfortable experience.

19. Are you satisfied with the accessibility facilities in the park (i.e., friendliness towards individuals with limited mobility)?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the accessibility of the park for individuals with limited mobility?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Accessibility facilities in the park: Refers to whether accessible facilities are reasonably set up, including accessible pathways, ramps, tactile paving, non-slip paths, accessibility signs, accessible seating, handrails, accessible toilets, and activity facilities designed for individuals with limited mobility (e.g., wheelchair users, elderly).

20. Are you satisfied with the placement of garbage bins and seating areas in the park?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied

- E. Very dissatisfied
- F. Don't know

How important is the placement of garbage bins and seating areas in the park?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Placement of garbage bins and seating areas: Refers to whether the number and location of garbage bins and seating areas are reasonable, allowing visitors easy access, maintaining cleanliness, providing resting spots, and not obstructing pathways or activities.

21. Are you satisfied with the placement of bookstores and restrooms in the park?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the reasonable placement of bookstores and restrooms in the park?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Placement of bookstores and restrooms in the park: Refers to whether the layout, location, and quantity of facilities such as bookstores and restrooms are appropriate, well-maintained, and capable of accommodating enough users, easily accessible without interfering with other activity areas.

22. Are you satisfied with the aesthetics of the plant landscape design in the park?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the aesthetics of the plant landscape design in the park?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Aesthetics of the plant landscape design in the park: Refers to whether the arrangement of plants is visually pleasing, including diversity of plant species, seasonal color changes, and the layering and harmony of plant placement.

23. Are you satisfied with the aesthetics of the paving design on park pathways?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the aesthetics of the paving design in the park?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Aesthetics of pathway paving in the park: Refers to whether the materials, patterns, and color combinations used in park pathways are in harmony with the overall environment and visually attractive.

24. Are you satisfied with the aesthetics of color coordination in the park landscape?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the color coordination in the park landscape?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Aesthetics of color coordination in the park landscape: Refers to whether the overall color coordination in the park landscape is harmonious and appealing, including the colors of the ground, walls, fences, bridge pillars, lighting, plants, facilities, and decorations, creating a visually pleasant environment for visitors.

25. Are you satisfied with the aesthetics of landscape features and structures in the park?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is the aesthetics of landscape features and structures in the park?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Aesthetics of landscape features and structures in the park: Refers to the design and aesthetic appeal of landscape features (e.g., sculptures, water features) and structures (e.g., benches, lighting) and how well they coordinate with the surrounding environment.

26. Are you satisfied with how well the park reflects Jinan's historical and cultural characteristics?

- A. Very satisfied
- B. Satisfied
- C. Neutral
- D. Dissatisfied
- E. Very dissatisfied
- F. Don't know

How important is it for the park to reflect Jinan's historical and cultural characteristics?

Very unimportant	Somewhat Unimportant	Neutral	Somewhat important	Very important
1	2	3	4	5

Reflection of Jinan's historical and cultural characteristics in the park: Refers to whether the park design and layout incorporate elements of Jinan's history and culture, such as traditional architectural styles, sculptures of historical figures, cultural symbols, local plants, and whether cultural activities are hosted in the park.

III. Your Basic Information

1. Gender

- A. Male
- B. Female

2. Age

- A. 5-9 years
- B. 10-18 years
- C. 19-35 years
- D. 36-45 years
- E. 46-60 years
- F. Over 60
- G. Prefer not to disclose

3. Education Level

- A. Junior high school or below
- B. High school or vocational school

- C. Bachelor's degree or associate degree
- D. Postgraduate or above
- E. Prefer not to disclose

4. Occupation

- A. Student
- B. Teacher
- C. White-collar worker
- D. Laborer
- E. Farmer
- F. Homemaker
- G. Medical professional
- H. Technician
- I. Self-employed
- J. Retiree
- K. Other
- L. Prefer not to disclose

5. Place of Residence

- A. Near the park
- B. Other area
- C. Prefer not to disclose

Thank you again for your support!

Table S11:

Post-Use Evaluation Structured Interview Guide for the Lowline Park under Elevated Bridges

Part1 Basic Information

1. Gender
2. Age
3. Education Level
4. Occupation
5. Place of Residence

Part2 Basic Usage of the Park

1. What is your usual mode of transportation to the Lowline Park?
2. What is the approximate distance from your starting point to the Lowline Park?
3. How often do you visit the Lowline Park?
4. What time of day do you usually visit the park?
5. How long do you typically stay at the park each visit?
6. What is your main purpose for visiting the Lowline Park?
7. Which parts of the park do you visit most frequently?
8. What elements of the Lowline Park attract you the most?
9. How satisfied are you with the current overall condition of the Lowline Park?

Part3 Park Perception

1. How do you perceive it convenient to cross the road to reach this park?

Convenience of crossing the road to access the park: Refers to the ease for pedestrians to cross from nearby roads to the park, including whether there are sufficient safe crossing facilities (e.g., pedestrian crosswalks, traffic lights) and whether the design of the crossing path is reasonable (e.g., timing of traffic lights, distance, location, and number of crosswalks).

2. How do you perceive the location of the entrances convenient?

Convenience of entrance locations: Refers to the ease for pedestrians crossing from nearby roads to reach the park, including whether there are sufficient safe crossing facilities (e.g., pedestrian crosswalks, traffic lights) and whether the design of the crossing paths is reasonable (e.g., timing of traffic lights, distance, location, and number of crosswalks).

3. How do you perceive the number of park entrances?

Number of park entrances: Refers to whether the total number of entrances is sufficient to reduce detouring distances and allow visitors to choose the nearest entrance based on their needs or location.

4. How do you perceive the visibility of the park entrances?

Visibility of park entrances: Refers to whether the entrances have clear signage or directional markers, allowing pedestrians to easily identify the entrance locations and ensure smooth access to the park.

5.How do you perceive the ease of moving from one area of the park to another?

Connectivity between different functional areas within the park: Refers to the ease of moving from one area to another within the park, including the availability of convenient paths and sufficient guidance facilities to allow visitors to move smoothly between different areas.

6.How do you perceive the number of nearby bus stops?

Number of nearby bus stops: Refers to whether there are enough bus stops near the park to ensure high connectivity with public transportation, making it convenient for visitors without private cars to reach and leave the park by bus.

7.How do you perceive the location of nearby bus stops?

Location of nearby bus stops: Refers to whether the placement and distribution of bus stops relative to park entrances are reasonable. Properly located stops offer convenient access for park visitors, allowing them to quickly walk from the bus stop to the park entrance, thus enhancing accessibility for those using public transportation.

8.How do you perceive the park's security management?

Security management of the park: Refers to whether there are adequate security personnel, patrol frequency, and surveillance measures to ensure visitor safety, and whether the existing management system can effectively prevent criminal activities.

9.How do you perceive the safety of the surrounding traffic environment for pedestrians and non-motorized vehicles when crossing?

Safety of the surrounding traffic environment for pedestrians and non-motorized vehicles: Refers to the traffic conditions near the park, including vehicle speed, traffic volume, signage, pedestrian protection measures (e.g., traffic lights, crosswalks), and the planning of non-motorized lanes to ensure safety for pedestrians and non-motorized vehicles when crossing roads.

10.How do you perceive the lighting in the park?

Lighting in the park: Refers to the placement and brightness of lighting fixtures, especially at night, to ensure visitors can clearly see pathways and avoid safety issues caused by insufficient or overly bright lighting.

11.How do you perceive the condition of sports facilities (e.g., tables, courts) in the park?

Condition of sports facilities (e.g., tables, courts): Refers to the maintenance and usability of sports facilities within the park, ensuring safe usage and reducing the risk of accidents.

12.How do you perceive the safety of internal facilities in the park?

Safety of internal facilities: Refers to the design, structural stability, and regular maintenance of essential infrastructure within the park, such as benches, railings, and playground equipment, including warning signs around damaged or under-repair facilities to prevent injuries.

13.How do you perceive the overall safety of different areas within the park?

Overall safety of park areas: Refers to the general safety of various areas within the park, including smooth walkways, slip-resistant surfaces, and the absence of hazardous terrain, debris, or obstacles that could cause visitors to trip or fall.

14.How do you perceive the sound environment in the park (e.g., lack of noise disturbance)?

Sound environment in the park: Refers to whether there is any disruptive noise that may interfere with visitors' activities.

15.How do you perceive the air quality in the park?

Air quality in the park: Refers to whether the air is of good quality, free of unpleasant odors or pollution, to ensure visitors' health and enhance their experience.

16.How do you perceive the distribution of activity areas in the park?

Distribution of activity areas in the park: Refers to whether the placement of different activity areas is reasonable. For instance, if quiet areas are adequately separated from lively areas and if the layout allows convenient use without mutual interference.

17.How do you perceive the number of activity areas in the park?

Number of activity areas in the park: Refers to whether the quantity of activity areas provided in the park is sufficient to meet the needs of visitors of different ages and interests.

18.How do you perceive the size of the activity areas in the park?

Size of activity areas in the park: Refers to whether the size of activity areas is adequate to accommodate the expected number of users, avoiding overcrowding and ensuring a comfortable experience.

19.How do you perceive the accessibility facilities in the park (i.e., friendliness towards individuals with limited mobility)?

Accessibility facilities in the park: Refers to whether accessible facilities are reasonably set up, including accessible pathways, ramps, tactile paving, non-slip paths, accessibility signs, accessible seating, handrails, accessible toilets, and activity facilities designed for individuals with limited mobility (e.g., wheelchair users, elderly).

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Placement of garbage bins and seating areas: Refers to whether the number and location of garbage bins and seating areas are reasonable, allowing visitors easy access, maintaining cleanliness, providing resting spots, and not obstructing pathways or activities.

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22.How do you perceive the aesthetics of the plant landscape design in the park?

Aesthetics of the plant landscape design in the park: Refers to whether the arrangement of plants is visually pleasing, including diversity of plant species, seasonal color changes, and the layering and harmony of plant placement.

23.How do you perceive the aesthetics of the paving design on park pathways?

Aesthetics of pathway paving in the park: Refers to whether the materials, patterns, and color combinations used in park pathways are in harmony with the overall environment and visually attractive.

24.How do you perceive the aesthetics of color coordination in the park landscape?

Aesthetics of color coordination in the park landscape: Refers to whether the overall color coordination in the park landscape is

harmonious and appealing, including the colors of the ground, walls, fences, bridge pillars, lighting, plants, facilities, and decorations, creating a visually pleasant environment for visitors.

25. How do you perceive the aesthetics of landscape features and structures in the park?

Aesthetics of landscape features and structures in the park: Refers to the design and aesthetic appeal of landscape features (e.g., sculptures, water features) and structures (e.g., benches, lighting) and how well they coordinate with the surrounding environment.

26. How do you perceive how well the park reflects Jinan's historical and cultural characteristics?

Reflection of Jinan's historical and cultural characteristics in the park: Refers to whether the park design and layout incorporate elements of Jinan's history and culture, such as traditional architectural styles, sculptures of historical figures, cultural symbols, local plants, and whether cultural activities are hosted in the park.

27. Do you think the safety, comfort, aesthetics, accessibility, and cultural value of the Lowline Park vary across different seasons? If so, what are the differences?

28. What improvement suggestions do you want to put forward for the low line park?

Express gratitude to the participants!