

Lake Highlands North Recreation Center Summary

Address	9940 White Rock Trail Dallas, TX 75238
Building Purpose	Recreation Center
Original Year of Construction	1971
Building Area	33,036 SF
Inspection Date	June 14, 2016
Inspection Conditions	91°F, Cloudy

Introduction

The Lake Highlands North Recreation Center is located at 9940 White Rock Trail in Dallas, Texas. This recreation center was established in 1971. This facility is a single, permanent structure whose main use is to provide a wide range of activities for residents of the local community.



System Deficiency Overview

The following table provides a summary of the conditions and deficiencies found by each discipline.

Subsystem	Condition and Deficiency Overview	System Condition Rating
B20 Exterior Enclosure		
Exterior Walls	The exterior walls consist of CMU walls with a brick veneer. Deficiencies noted included instances of spalling on the foundation around the perimeter of the building.	4 - Good
Exterior Windows	The exterior windows on the east and north east facades of the building have metal frames. The gym portion of the building has no windows and the entrance has small glass block windows. Deficiencies noted included minor environmental wear based upon the age of the building. It was reported that the windows had other degradations that could not be confirmed at the time of assessment.	3 - Average
Exterior Doors	There are two main public entryways located at the north-east and south-west side of the building, which are metal framed, glass doors. The remaining service doors are primarily metal and located along the entire perimeter. Deficiencies noted included minor wear and tear based upon frequent use.	4 - Good
B30 Roofing		
Roof	Approximately three quarters of the roof construction is a built-up tar and gravel system. The other approximately one quarter of the roof is a single-ply membrane material. There is one large skylight and several smaller skylights, which are a part of the roof over the gym. A corrugated metal canopy covers the main entrance. There are two small sets of rooftop stairs, which lead to HVAC units. Deficiencies noted included standing water on the single-ply membrane roof covering. There are also several cracks on various parts of the skylights above the gym, which allow for water intrusion. The roof stairs are corroded.	3 - Average
C10 Interior Construction		
Interior Walls	The building consists of brick and painted CMU interior walls. There appears to be an addition where the interior walls are gypsum board. No deficiencies were observed or reported at the time of the assessment.	4 - Good
Interior Doors	The interior doors consist of metal or wood doors with metal frames or glazed doors with metal frames. No deficiencies were observed or reported at the time of the assessment.	4 - Good
Interior Specialties	System not present.	N/A
C20 Stairs		
Exterior Stairs	System not present.	N/A

Subsystem	Condition and Deficiency Overview	System Condition Rating
Interior Stairs	System not present.	N/A
C30 Interior Finishes		
Interior Wall Finishes	Wall finishes include exposed brick and painted CMU. There are painted gypsum board walls in the office and kids area. The gym area is entirely painted CMU block finish. Deficiencies noted included minor discoloration at joints.	4 - Good
Interior Floor Finishes	The main hallway contains finished concrete flooring with linoleum tile. The gym has a wood finish, the fitness center has rubber matting, and the dance room has a wood tile floor. Deficiencies noted included cracking on the finished concrete floor in the main hallway and an uneven floor in the gym with dead spots. It was reported that the gym had suffered flooding and repair was performed insufficiently causing these issues.	3 - Average
Interior Ceiling Finishes	The majority of the building contains acoustical ceiling tile (ACT) with instances of gypsum board. The gym and weight room contain exposed metal ceilings. Deficiencies noted included damaged ceiling tiles in the gym storage areas and missing ceiling tiles in the craft room.	4 - Good
D10 Conveying		
Elevators, Lifts, and Escalators	System not present.	N/A
D20 Plumbing		
Plumbing Fixtures	The building has two sets of public restrooms for men and women, one set in the original section of the building and the second set in an addition that expanded to add a children's play area and small kitchen. The restroom plumbing fixtures are all vitreous china throughout both sets of restrooms. The toilets and urinals are wall-mounted with manual flush controls and the sinks are wall-mounted with automatic controls. The building has a janitorial closet with a single floor-mounted mop sink, and there are wall-mounted ADA water coolers located in the entry lobby and in each of the building corridors. The facility also has a small kitchen/break room with a single stainless steel sink (two basins) with faucet. No deficiencies were observed or reported at the time of the assessment.	4 - Good
Domestic Water Distribution	The plumbing system has a domestic water service feed from two 40-gallon electric water heaters located in the janitorial closet. Deficiencies noted included a water heater WH-1119 that has surpassed the end of its typical design service life.	3 - Average
Other Plumbing	Other plumbing assets include 2-inch diameter floor drains in the restrooms and janitorial closet. The roof has 2 1/2-inch single inlet roof drains for rainwater drainage. No deficiencies were observed or reported at the time of the assessment.	4 - Good

Subsystem	Condition and Deficiency Overview	System Condition Rating
D30 HVAC		
Mechanical / HVAC	<p>The major mechanical equipment consists of seven rooftop package air conditioning units and a mini-split system air conditioning unit. The gymnasium is conditioned by two 15 nominal ton air cooled and gas heat RTU's and two 20 nominal ton air cooled and gas heat RTU's. The rest of the building is serviced by one 12.5 nominal ton, one 8.3 nominal ton, and one 6 nominal ton air cooled and gas heat RTU's. An additional 1 nominal ton mini-split system provides cooling for the guest check in area. The bulk of the rooftop package units are reaching the end of their typical design service life. The AC unit in the office, entrance, restrooms, and playroom was replaced in 2015.</p> <p>Supplemental mechanical equipment for the HVAC system also includes four rooftop mounted exhaust fans.</p> <p>Deficiencies noted included sun damaged and cracking refrigerant insulation on the mini-split system. The RTUs were typically charged with R-22 refrigerant and nearing the end of their typical design service lives. The exhaust fans have all been replaced; however, they appear to be reaching the end of their typical design service life and should be planned for replacement. TEF-1 has a significant vibration in the housing when in operation. It was reported that the gym AC has cooling problems.</p>	3 - Average
D40 Fire Protection		
Fire Alarm	<p>The building has a fire alarm system that consists of detection and notification devices such as combined horn/strobe units, pull stations, and detectors.</p> <p>The fire alarm system control equipment includes a fire alarm control panel (FACP) in the FACP room and multiple fire alarm annunciator panels throughout the building. The FACP and annunciator panels monitor the fire alarm devices throughout the facility.</p> <p>No deficiencies were observed or reported at the time of the assessment.</p>	4 - Good
Fire Protection/ Suppression	<p>The building has a wet pipe fire sprinkler system that provides fire suppression for the addition only. The rest of the facility has portable fire extinguishers throughout. The fire protection system service equipment includes a fire riser that is tied to the domestic water supply line. This fire protection system has an inspection certification within the last year as required.</p> <p>No deficiencies were observed or reported at the time of the assessment.</p>	4 - Good
D50 Electrical		
Electrical Distribution	<p>The electrical service enters the building at the main distribution panelboard (MDP) which is located in the FACP Room and is rated at 480/277-volt, 600-amp. MDP delivers power throughout the building to four local 225-amp panelboards. There are three transformers rated at 480-volt primary that step-down to 120/208-volt secondary, which feeds power to 120/208-volt panelboards. These transformers and distribution panelboards are primarily located in the janitorial closet.</p>	4 - Good

Subsystem	Condition and Deficiency Overview	System Condition Rating
	<p>The building has no emergency, back-up power.</p> <p>Deficiencies noted included panel L and the 45-KVA transformer located in the FACP room appear to be original to the building's construction and are approaching the end of their typical design service life. One of the 45-KVA transformers located in the janitorial closet has corrosion and debris on its enclosure. Facility occupants reported persistent phone line and power line issues.</p>	
Lighting	<p>The exterior lighting at the building consists of recessed compact fluorescent fixtures in the soffits and metal halide wall packs located along the perimeter. The interior lighting is made up of primarily recessed and surface mounted 2-lamp T8 fluorescent fixtures throughout the building. The craft wing uses 3-lamp T8 fluorescent fixtures, while the gymnasium uses 4-lamp T8 fluorescent fixtures. Single lamp compact fluorescent fixtures are also used throughout the building. A majority of the interior lighting is controlled by wall switches with occupancy sensors. Exit lights are seen throughout the facility in appropriate locations. Emergency lighting is supplied through standard light fixtures equipped with battery backups.</p> <p>Deficiencies noted included two blown T8 bulbs in the craft wing.</p>	4 - Good
Communications & Security	<p>The building has a communication system that consists of telephone, LAN, Wi-Fi, and public address. The building has a security system that consists of security cameras throughout the building.</p> <p>Deficiencies noted included building staff reported only seven of the thirteen security cameras are currently functional.</p>	3 - Average

Summary of Recommendations and Deficiency Examples

Exterior Enclosure

1. Repair exposed foundation on the exterior of the building to prevent further spalling.



Roofing

1. Repair or replace the broken stairs that lead to the HVAC units.
2. Repair the cracked skylights above the gym.



Interior Finishes

1. Seal the crack in the finished concrete in the main hallway.
2. Investigate the wood floor and sub-floor of the gym to remove and repair any warped wood that resulted from an earlier flood.
3. Replace the broken and missing acoustic ceiling tiles in the gym storage room and craft room.



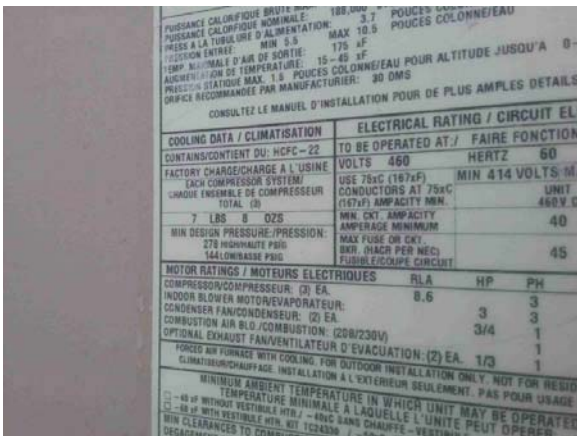
Plumbing

1. Replace the electric hot water heater that has surpassed its typical design service life.



Mechanical/HVAC

1. Replace the damaged sections of insulation on the refrigerant lines for the 1 nominal ton mini-split system, which is sun damaged and cracking.
2. Plan to remove and replace all aged rooftop package units that are nearing the end of their typical design service life. They are charged with R-22 refrigerant, which is being phased out of production. Schedule for replacement the four roof mounted exhaust fans. All show signs of typical wear and tear and appear to be reaching the end of their typical design service life.
3. Ensure that the recommended solutions address the reported gym cooling issue.



Electrical

1. Replace the aged and outdated electrical distribution panelboard as it is approaching the end of its typical design service life.
2. Replace the aged and outdated electrical distribution transformer as it is approaching the end of its typical design service life.
3. Determine the cause of corrosion on the electrical distribution transformer to eliminate future corrosion. Monitor current corrosion on the enclosure to ensure it does not affect the asset's functionality in the future.
4. Replace blown T8 bulbs in the craft wing and continue to service lighting fixtures throughout the facility as needed.
5. Repair or replace the non-functional security cameras.





System Budgetary Estimate

System			Percent of Cost	Replacement Cost	Deficiency Cost
TOTAL			100%	\$ 3,142,952	\$ 227,239
A - SUBSTRUCTURE					
A10 Foundations			6.7%	\$ 210,925	\$ 1,351
	A1010	Standard Foundations		\$ 51,076	\$ 1,351
	A1020	Special Foundations		\$ -	\$ -
	A1030	Slab on Grade		\$ 159,849	\$ -
A20 Basement Construction			2.8%	\$ 87,493	\$ -
	A2010	Basement Excavation		\$ 6,846	\$ -
	A2020	Basement Walls		\$ 80,647	\$ -
B - SHELL					
B10 Superstructure			14.4%	\$ 453,117	\$ 10,717
	B1010	Floor Construction		\$ 19,960	\$ -
	B1020	Roof Construction		\$ 433,157	\$ 10,717
B20 Exterior Enclosure			18.8%	\$ 590,762	\$ -
	B2010	Exterior Walls		\$ 456,111	\$ -
	B2020	Exterior Windows		\$ 103,936	\$ -
	B2030	Exterior Doors		\$ 30,715	\$ -
B30 Roofing			5.2%	\$ 164,724	\$ 25,196
	B3010	Roof Coverings		\$ 163,919	\$ 25,196
	B3020	Roof Openings		\$ 804	\$ -
C - INTERIORS					
C10 Interior Construction			11.3%	\$ 355,897	\$ -
	C1010	Partitions		\$ 100,053	\$ -
	C1020	Interior Doors		\$ 210,365	\$ -
	C1030	Fittings		\$ 45,480	\$ -
C20 Stairs			0.0%	\$ -	\$ -
	C2010	Stair Construction		\$ -	\$ -
	C2020	Stair Finishes		\$ -	\$ -
C30 Interior Finishes			13.9%	\$ 437,695	\$ -
	C3010	Wall Finishes		\$ 75,910	\$ -

System			Percent of Cost	Replacement Cost	Deficiency Cost
	C3020	Floor Finishes		\$ 214,556	\$ -
	C3030	Ceiling Finishes		\$ 147,229	\$ -
D - SERVICES					
D10 Conveying			0.0%	\$ -	\$ -
	D1010	Elevators & Lifts		\$ -	\$ -
	D1020	Escalators & Moving Walks		\$ -	\$ -
	D1090	Other Conveying Systems		\$ -	\$ -
D20 Plumbing			13.0%	\$ 407,631	\$ 7,668
	D2010	Plumbing Fixtures		\$ 136,979	\$ 5,457
	D2020	Domestic Water Distribution		\$ 259,169	\$ 2,211
	D2030	Sanitary Waste		\$ -	\$ -
	D2040	Rain Water Drainage		\$ 11,484	\$ -
	D2090	Other Plumbing Systems		\$ -	\$ -
D30 HVAC			9.7%	\$ 305,744	\$ 168,509
	D3010	Energy Supply		\$ -	\$ -
	D3020	Heat Generating Systems		\$ -	\$ -
	D3030	Cooling Generating Systems		\$ -	\$ -
	D3040	Distribution Systems		\$ 7,360	\$ 3,437
	D3050	Terminal & Package Units		\$ 298,385	\$ 165,072
	D3060	Controls & Instrumentation		\$ -	\$ -
	D3070	Systems Testing & Balancing		\$ -	\$ -
	D3090	Other HVAC Systems & Equipment		\$ -	\$ -
D40 Fire Protection			3.2%	\$ 102,131	\$ -
	D4010	Sprinklers		\$ 102,131	\$ -
	D4020	Standpipes		\$ -	\$ -
	D4030	Fire Protection Specialties		\$ -	\$ -
	D4090	Other Fire Protection Systems		\$ -	\$ -
D50 Electrical			0.9%	\$ 26,832	\$ 13,798
	D5010	Electrical Service & Distribution		\$ 26,832	\$ 13,349
	D5020	Lighting and Branch Wiring		\$ -	\$ 449
	D5030	Communication & Security		\$ -	\$ -
	D5090	Other Electrical Systems		\$ -	\$ -
E - EQUIPMENT & FURNISHINGS					

System			Percent of Cost	Replacement Cost	Deficiency Cost
E10 Equipment			0.0%	\$ -	\$ -
	E1010	Commercial Equipment		\$ -	\$ -
	E1020	Institutional Equipment		\$ -	\$ -
	E1030	Vehicular Equipment		\$ -	\$ -
	E1090	Other Equipment		\$ -	\$ -
E20 Furnishings			0.0%	\$ -	\$ -
	E2010	Fixed Furnishings		\$ -	\$ -
	E2020	Movable Furnishings		\$ -	\$ -

Deficiency Priority Table

System			Priority 1	Priority 2	Priority 3	Priority 4
TOTAL			\$ 10,716.82	\$ 30,560.55	\$ 185,961.73	\$ -
A - SUBSTRUCTURE						
A10 Foundations			\$ -	\$ 1,350.78	\$ -	\$ -
	A1010	Standard Foundations	\$ -	\$ 1,350.78	\$ -	\$ -
	A1020	Special Foundations	\$ -	\$ -	\$ -	\$ -
	A1030	Slab on Grade	\$ -	\$ -	\$ -	\$ -
A20 Basement Construction			\$ -	\$ -	\$ -	\$ -
	A2010	Basement Excavation	\$ -	\$ -	\$ -	\$ -
	A2020	Basement Walls	\$ -	\$ -	\$ -	\$ -
B - SHELL						
B10 Superstructure			\$ 10,716.82	\$ -	\$ -	\$ -
	B1010	Floor Construction	\$ -	\$ -	\$ -	\$ -
	B1020	Roof Construction	\$ 10,716.82	\$ -	\$ -	\$ -
B20 Exterior Enclosure			\$ -	\$ -	\$ -	\$ -
	B2010	Exterior Walls	\$ -	\$ -	\$ -	\$ -
	B2020	Exterior Windows	\$ -	\$ -	\$ -	\$ -
	B2030	Exterior Doors	\$ -	\$ -	\$ -	\$ -
B30 Roofing			\$ -	\$ 25,196.49	\$ -	\$ -
	B3010	Roof Coverings	\$ -	\$ 25,196.49	\$ -	\$ -
	B3020	Roof Openings	\$ -	\$ -	\$ -	\$ -
C - INTERIORS						
C10 Interior Construction			\$ -	\$ -	\$ -	\$ -
	C1010	Partitions	\$ -	\$ -	\$ -	\$ -
	C1020	Interior Doors	\$ -	\$ -	\$ -	\$ -
	C1030	Fittings	\$ -	\$ -	\$ -	\$ -
C20 Stairs			\$ -	\$ -	\$ -	\$ -
	C2010	Stair Construction	\$ -	\$ -	\$ -	\$ -
	C2020	Stair Finishes	\$ -	\$ -	\$ -	\$ -
C30 Interior Finishes			\$ -	\$ -	\$ -	\$ -
	C3010	Wall Finishes	\$ -	\$ -	\$ -	\$ -
	C3020	Floor Finishes	\$ -	\$ -	\$ -	\$ -
	C3030	Ceiling Finishes	\$ -	\$ -	\$ -	\$ -

System			Priority 1	Priority 2	Priority 3	Priority 4
D - SERVICES						
D10 Conveying			\$ -	\$ -	\$ -	\$ -
	D1010	Elevators & Lifts	\$ -	\$ -	\$ -	\$ -
	D1020	Escalators & Moving Walks	\$ -	\$ -	\$ -	\$ -
	D1090	Other Conveying Systems	\$ -	\$ -	\$ -	\$ -
D20 Plumbing			\$ -	\$ 2,211.13	\$ 5,456.99	\$ -
	D2010	Plumbing Fixtures	\$ -	\$ -	\$ 5,456.99	\$ -
	D2020	Domestic Water Distribution	\$ -	\$ 2,211.13	\$ -	\$ -
	D2030	Sanitary Waste	\$ -	\$ -	\$ -	\$ -
	D2040	Rain Water Drainage	\$ -	\$ -	\$ -	\$ -
	D2090	Other Plumbing Systems	\$ -	\$ -	\$ -	\$ -
D30 HVAC			\$ -	\$ 1,097.25	\$ 167,411.42	\$ -
	D3010	Energy Supply	\$ -	\$ -	\$ -	\$ -
	D3020	Heat Generating Systems	\$ -	\$ -	\$ -	\$ -
	D3030	Cooling Generating Systems	\$ -	\$ -	\$ -	\$ -
	D3040	Distribution Systems	\$ -	\$ 1,097.25	\$ 2,339.47	\$ -
	D3050	Terminal & Package Units	\$ -	\$ -	\$ 165,071.95	\$ -
	D3060	Controls & Instrumentation	\$ -	\$ -	\$ -	\$ -
	D3070	Systems Testing & Balancing	\$ -	\$ -	\$ -	\$ -
	D3090	Other HVAC Systems & Equipment	\$ -	\$ -	\$ -	\$ -
D40 Fire Protection			\$ -	\$ -	\$ -	\$ -
	D4010	Sprinklers	\$ -	\$ -	\$ -	\$ -
	D4020	Standpipes	\$ -	\$ -	\$ -	\$ -
	D4030	Fire Protection Specialties	\$ -	\$ -	\$ -	\$ -
	D4090	Other Fire Protection Systems	\$ -	\$ -	\$ -	\$ -
D50 Electrical			\$ -	\$ 704.90	\$ 13,093.32	\$ -
	D5010	Electrical Service & Distribution	\$ -	\$ 704.90	\$ 12,644.44	\$ -
	D5020	Lighting and Branch Wiring	\$ -	\$ -	\$ 448.88	\$ -
	D5030	Communication & Security	\$ -	\$ -	\$ -	\$ -
	D5090	Other Electrical Systems	\$ -	\$ -	\$ -	\$ -
E - EQUIPMENT & FURNISHINGS						
E10 Equipment			\$ -	\$ -	\$ -	\$ -
	E1010	Commercial Equipment	\$ -	\$ -	\$ -	\$ -
	E1020	Institutional Equipment	\$ -	\$ -	\$ -	\$ -

System			Priority 1	Priority 2	Priority 3	Priority 4
	E1030	Vehicular Equipment	\$ -	\$ -	\$ -	\$ -
	E1090	Other Equipment	\$ -	\$ -	\$ -	\$ -
	E20 Furnishings		\$ -	\$ -	\$ -	\$ -
	E2010	Fixed Furnishings	\$ -	\$ -	\$ -	\$ -
	E2020	Movable Furnishings	\$ -	\$ -	\$ -	\$ -