

CHFA Capital Needs Assessment and Replacement Reserve Analysis

Prepared for:

Connecticut Housing Finance Authority
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and

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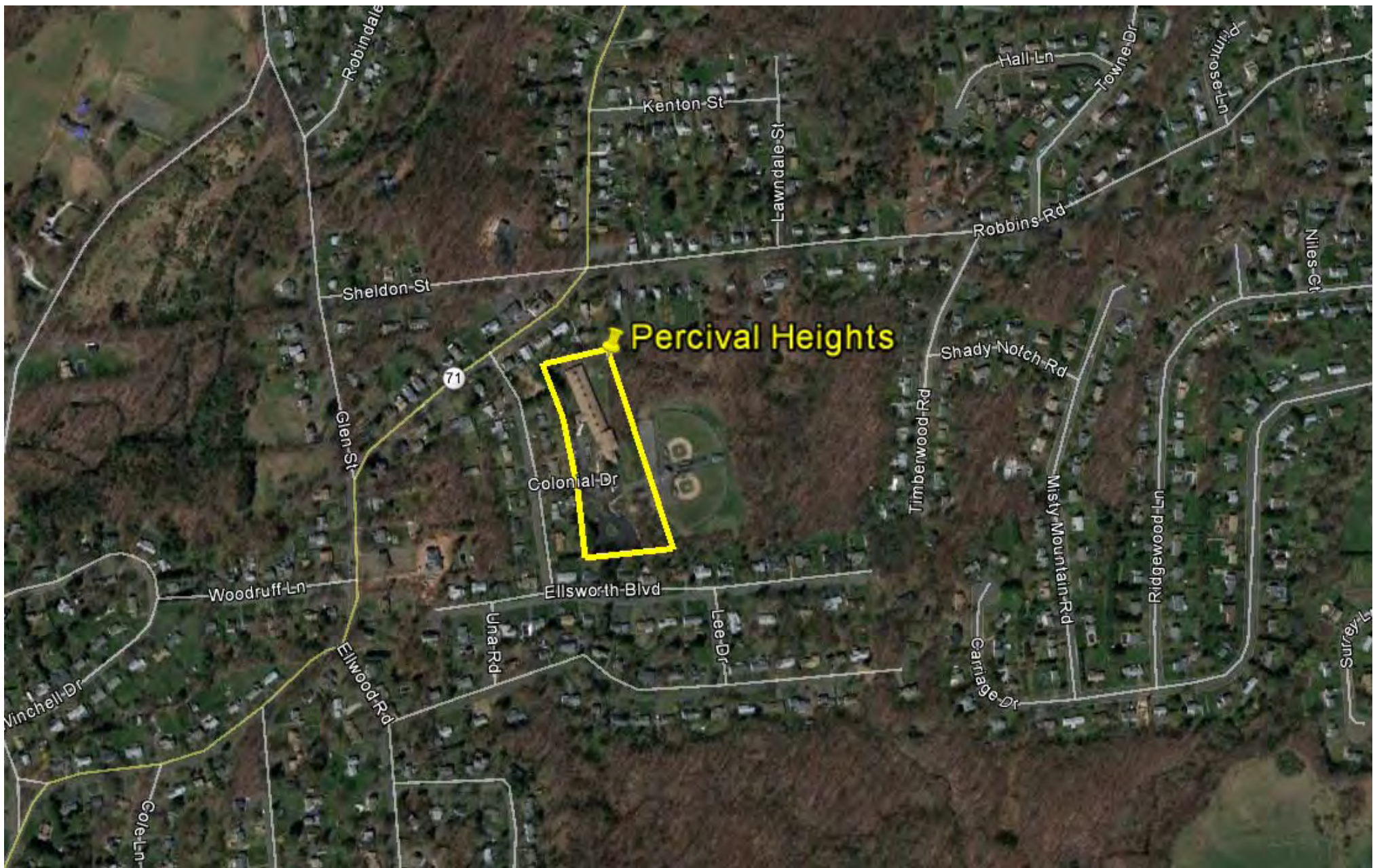
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Percival Heights
CHFA #85003D
Berlin Housing Authority
Berlin, CT

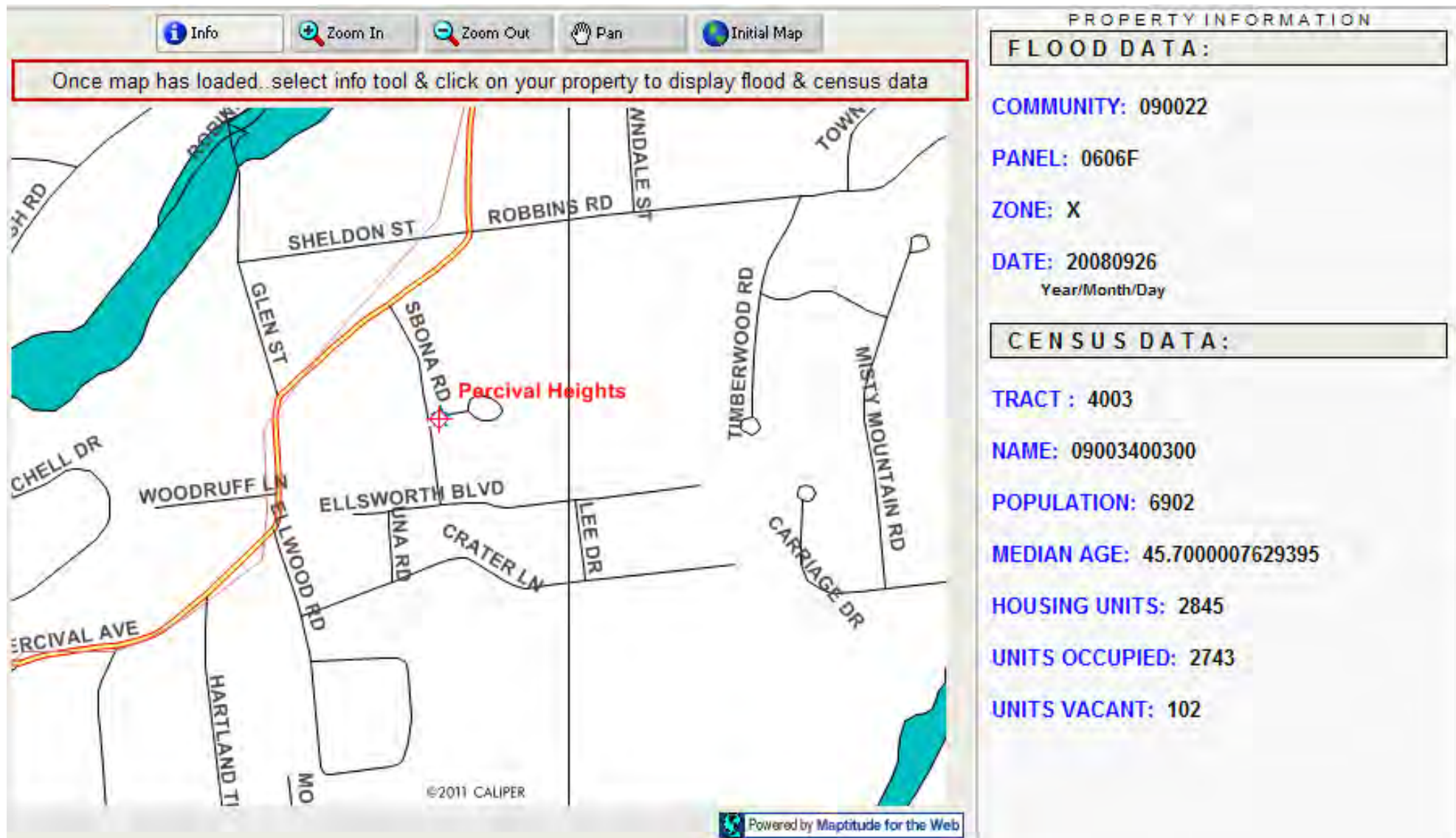
April 8, 2013

Final Report



Percival Heights

31 Colonial Drive
Berlin, CT 06037



Percival Heights

31 Colonial Drive
Berlin, CT 06037

Zone X = Outside the 500-year floodplain and
Outside the 1% and 0.2% annual chance floodplains.

Executive Summary

Percival Heights

Berlin, CT

Percival Heights is a residential development for the elderly that is comprised of a one-story building that is attached at one end to the local senior center. All capital needs related to the senior center are funded separately from the residential portion of the building, and as such, no costs or projections related to that section of the building have been included as part of this assessment. The development includes a total of 30 units – 22 efficiencies and 8 one-bedrooms. Originally developed as a school, the building was reportedly converted to its present use in 1985. A moderate renovation was completed in 2010 that included new parking area and pedestrian walkway surfaces, exterior siding and doors, selective reconfiguration of interior common areas, boiler and domestic hot water system upgrades, refurbishment of common areas finishes, and unit bathroom renovations.

Overall the development is in generally good condition. That being said, and as shown on the attached capital needs worksheets, the development will face significant capital needs in the near term, primarily related to replacement of in-unit kitchen cabinetry. Based on these projections, the development is seen as requiring an adjustment to current replacement reserve funding and/or an infusion of additional capital.

Key findings identified as part of this assessment include the following:

- Most site-related elements were addressed as part of the 2010 renovation scope of work; no near-term needs were identified.
- No problems related to the new siding or doors were noted; no near-term needs are anticipated.
- Windows are original and in serviceable condition; future replacement is shown in Year 9, after thirty-five years of use.

- Conventional three-tab shingles on the roof surface date to 1998 and no problems were noted; future costs to rip and replace the shingles, after a twenty-year useful life, are shown in Year 7.
- Interior common area finishes are in good condition; future painting and floor covering replacement allowances are shown based on current age, condition, and expected useful service life.
- The new hydronic boiler and domestic hot water generation equipment appeared in good condition; future capital needs are seen as occurring in the second half of the plan.
- The building's main fire alarm control panel was upgraded during the 2010 renovation; no near-term needs are anticipated. An allowance to replace the original door buzzer/intercom panel at the entry vestibule is shown in Year 1.
- Annual allowances for replacement of in-unit vinyl tile (VCT) floor coverings are shown from Year 1 forward.
- In-unit bathroom fixtures were upgraded/replaced during the 2010 renovation and they are in good condition at the present time.
- Unit kitchen cabinetry is original and exhibits some age-related wear; replacement allowances are shown in Years 2-4.
- Allowances to replace unit ranges and refrigerators are shown based on current ages and expected useful service lives.
- Replacement allowances for in-unit, thru-wall, air conditioners are shown in Years 9-14.
- Overall, the development's common areas are generally compliant with handicap accessibility standards. Among the elements that are in need of replacement and/or modification is the cabinetry in the community kitchen (no knee clearance space, countertop too high, door handle hardware, etc.), and toilet locations, grab bars, sink heights, and pipe insulation under sinks in the common restrooms.
- The development's unit mix includes three units that are designated as handicap accessible, per review of the architectural plans. Among the elements in need of modification and/or replacement for compliance with accessibility standards in these units is provision of a second grab bar at the toilets and installation of accessible-style cabinetry (knee clearance space under both sink and at a thirty-inch wide work surface, lowered wall cabinets, cabinet door handles, etc.).

Additional Notes:

1. The Physical Assessment of the property was conducted on March 7th, 2013. Additional information was provided to ON-SITE INSIGHT by site staff and others. OSI was represented on this assignment by Bruce Hutchinson. We would like to thank Ms. Mary Cunningham and Mr. Ron Gantick for their assistance.
2. Cost estimates used in this assessment are based on data from *RS Means Facilities and Construction Cost Data*. These cost estimates have been applied uniformly across the entire study portfolio to help ensure consistency of future projections. Actual owner and/or site pricing could vary significantly.
3. Unless required by fire, safety, or accessibility codes, items are typically shown being replaced in kind and do not include any planned upgrades or potential upgrade opportunities.
4. Regular updates of this plan are recommended to ensure careful monitoring of major building systems and to adjust the program to accommodate unanticipated circumstances surrounding the buildings, operations, and/or occupants.
5. This report is delivered subject to the conditions on Appendix A, *Statement of Delivery*.



Asphalt paving at parking area
was recently installed



Concrete walkways leading to main
entry were recently installed



Typical asphalt service drive/walkway/patio
area located along sides of building



Building architecture as seen along side
elevation and portion of end elevation



Typical newer siding and storm doors –
No problems related to original windows noted



Three-tab roof shingles – No evidence
of leaks observed or reported



View of recently refurbished community room



Kitchen area of community room lacks knee
clearance under sink and a thirty-inch wide
work surface with knee clearance underneath



Typical finishes in common hall –
All finishes recently updated



Recently installed boiler heating and domestic
hot water boiler plant features two,
high-efficiency, gas-fired boilers



Mechanical system upgrades also included the
installation of two new base-mounted circulating pumps



Indirect-fired domestic hot water storage tanks
that work in concert with the boiler plant



Fire alarm system serving the building has been upgraded in recent years and includes a fully addressable main control panel



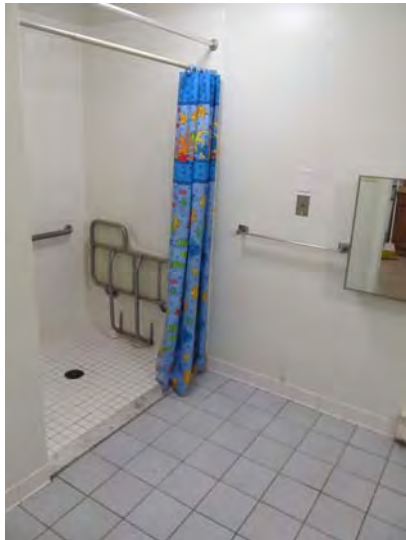
Older door buzzer/intercom panel located at main entry vestibule



Typical finishes in unit living areas



Typical 'standard' unit bathroom



Handicap accessible unit bathrooms include a roll-in shower



Typical finishes and equipment in 'standard' unit kitchens



Handicap accessible unit kitchens include knee clearance under the sink but lack a thirty-inch wide work surface with knee clearance space



Unit heat is via hydronic baseboard radiation and cooling is via thru-wall air conditioners

Comprehensive Capital Needs Assessment Schedule

Summary

Owner Sponsor Name:	Berlin Housing Authority
Project Name:	Percival Heights
Project City / Town:	Berlin

Current Year:	2013
Budget Effective Date:	January 1, 2013
Report Date:	March 12, 2013

Number of Units:	30
Total Square Feet:	17,799
Default Inflation Rate:	3.0%

Beginning Replacement Reserve Balance:	\$69,199
Annual Replacement Reserve Contribution:	\$23,044
Additional Misc. Contribution:	

	Component	Total Planned Expenditures by Year																						
		Emergency	Deferred	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Revitalization
				2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	
1	Site Improvements	0	0	0	0	0	7,267	0	0	0	0	9,428	0	0	0	0	9,766	0	0	0	0	74,511	0	0
2	Building Exterior	0	0	0	0	0	0	0	0	0	0	49,192	0	0	0	7,464	5,419	0	0	0	0	2,695	0	0
3	Roofing	0	0	0	0	0	0	0	0	112,794	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	Lobby - Mail Area	0	0	0	0	0	0	0	0	0	0	2,458	0	0	0	0	0	0	0	0	0	3,303	0	0
5	Community Room	0	1,500	0	0	0	0	0	0	0	0	1,422	0	0	0	0	4,654	0	0	0	0	1,911	0	0
6	Common Hallways	0	0	0	0	0	0	0	0	0	0	10,750	0	0	0	0	0	0	0	0	0	14,447	0	0
7	Common Stairways	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	Common Laundry	0	0	0	0	0	0	0	0	0	0	316	0	0	0	0	741	0	0	0	0	425	0	0
9	Common Area Restrooms	0	4,575	0	0	0	0	0	0	0	0	314	0	0	0	0	559	0	0	0	0	422	0	0
10	Building Boilers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13,511	0	0	0	0	97,890	0	0
11	Building Mechanical	0	0	0	3,064	3,156	3,251	0	0	0	0	0	0	0	0	4,242	0	0	0	4,774	7,554	5,065	0	0
12	Building Electrical	0	0	3,800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25,536	0	0
13	Building Elevator	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	Building Structural	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	Unit Living	0	0	3,276	3,375	3,476	3,580	3,688	3,798	3,912	4,029	4,150	4,275	4,403	4,535	4,671	4,811	4,956	5,104	5,258	5,415	5,578	5,745	0
16	Unit Kitchens	0	7,425	4,334	27,407	28,229	25,070	751	773	797	821	5,938	6,116	6,299	6,488	6,683	980	1,009	1,039	1,071	5,235	5,392	5,554	0
17	Unit Bathrooms	0	525	382	393	405	417	430	442	456	469	483	498	513	528	1,827	1,882	1,939	1,997	2,057	4,776	4,919	5,067	0
18	Unit Electrical	0	0	0	0	0	0	0	0	0	1,589	1,637	1,686	1,736	1,788	1,842	1,897	1,954	2,013	2,073	2,135	2,200	2,266	0
19	Unit Mechanical	0	0	0	0	0	0	0	0	0	0	5,051	5,203	5,359	5,520	5,685	5,856	0	0	0	0	0	0	0
20	Annual Planned Expenditures	0	14,025	11,792	34,239	35,266	39,584	4,868	5,014	117,958	6,908	91,140	17,777	18,310	18,860	32,414	50,076	9,858	10,154	15,232	25,115	244,294	18,631	0
21	Annual Provision (indexed at 3%)			23,044	23,736	24,448	25,181	25,937	26,715	27,516	28,342	29,192	30,068	30,970	31,899	32,856	33,841	34,857	35,902	36,979	38,089	39,232	40,408	
22	Outside Capital			240,000																				
23	Cumulative Reserve Balance	69,199	55,174	306,427	295,923	285,105	270,702	291,770	313,471	223,029	244,462	182,515	194,805	207,465	220,504	220,945	204,711	229,710	255,459	277,206	290,180	85,117	106,894	

Site Improvements

Number of Units:	30
Total Square Feet:	17,799
Default Inflation Rate:	3.0%

Page 10

Comprehensive Capital Needs Assessment Schedule

Building Exterior

Owner Sponsor Name:	Berlin Housing Authority
Project Name:	Percival Heights
Project City / Town:	Berlin

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	Component	Current Total Replacement Cost	Expected Annual Rate of Inflation	Current Age	Total Expected Useful Life	Initial Replacement Year	Planned Expenditures by Year																												
							Code	Emergency	Code	Deferred	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Revitalization				
											2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032					
1	Exterior Doors					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
2	Glass Doors (Sliders)					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
3	Exterior Walls - Masonry					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
4	Exterior Walls - EIFS	1,583		2	10	2021				0	0	0	0	0	0	0	0	2,005	0	0	0	0	0	0	0	0	0	2,695	0						
5	Ext. Walls - Vinyl Siding					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
6	Ext. Walls - Wood Siding					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
7	Windows	37,250		27	35	2021				0	0	0	0	0	0	0	0	47,187	0	0	0	0	0	0	0	0	0	0	0						
8	Exterior Soffits and Fascia					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
9	Caulking					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
10	Unit Balconies / Decks					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
11	Railings					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
12	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
13	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
14	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
15	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
16	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
17	Storm Doors	7,380		2	15	2025				0	0	0	0	0	0	0	0	0	0	0	0	5,261	5,419	0	0	0	0	0	0						
18	Service Doors	1,545		2	15	2025				0	0	0	0	0	0	0	0	0	0	0	0	2,203	0	0	0	0	0	0	0						
19																																			
20																																			
21																																			
22																																			
23																																			
24																																			
25																																			
26																																			
27	Annual Planned Expenditures						0	0	0	0	0	0	0	0	0	0	49,192	0	0	0	7,464	5,419	0	0	0	0	2,695	0	0						
28	Cumulative Reserve Balance						69,199	55,174	306,427	295,923	285,105	270,702	291,770	313,471	223,029	244,462	182,515	194,805	207,465	220,504	220,945	204,711	229,710	255,459	277,206	290,180	85,117	106,894							

Roofing

Number of Units:	30
Total Square Feet:	17,799
Default Inflation Rate:	3.0%

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Comprehensive Capital Needs Assessment Schedule

Lobby / Mail Area

Owner Sponsor Name:	Berlin Housing Authority
Project Name:	Percival Heights
Project City / Town:	Berlin

Current Year:	2013
Budget Effective Date:	January 1, 2013
Report Date:	March 12, 2013

Number of Units:	30
Total Square Feet:	17,799
Default Inflation Rate:	3.0%

	Component	Current Total Replacement Cost	Expected Annual Rate of Inflation	Current Age	Total Expected Useful Life	Initial Replacement Year	Planned Expenditures by Year																												
							Code	Emergency	Code	Deferred	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Revitalization				
											2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032					
1	Walls	720		2	10	2021				0	0	0	0	0	0	0	0	912	0	0	0	0	0	0	0	0	0	0	1,226	0					
2	Ceilings					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
3	Floors	1,220		2	10	2021				0	0	0	0	0	0	0	0	1,546	0	0	0	0	0	0	0	0	0	0	2,078	0					
4	Mail Facilities					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
5	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
6	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
7	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
8	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
9	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
10	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
11	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
12	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
13	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
14	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
15	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
16	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
17																																			
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21																																			
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23																																			
24																																			
25																																			
26																																			
27	Annual Planned Expenditures							0		0	0	0	0	0	0	0	0	2,458	0	0	0	0	0	0	0	0	0	3,303	0	0					
28	Cumulative Reserve Balance							69,199		55,174	306,427	295,923	285,105	270,702	291,770	313,471	223,029	244,462	182,515	194,805	207,465	220,504	220,945	204,711	229,710	255,459	277,206	290,180	85,117	106,894					

Comprehensive Capital Needs Assessment Schedule

Community Room

Owner Sponsor Name:	Berlin Housing Authority
Project Name:	Percival Heights
Project City / Town:	Berlin

Current Year:	2013
Budget Effective Date:	January 1, 2013
Report Date:	March 12, 2013

Number of Units:	30
Total Square Feet:	17,799
Default Inflation Rate:	3.0%

	Component	Current Total Replacement Cost	Expected Annual Rate of Inflation	Current Age	Total Expected Useful Life	Initial Replacement Year	Planned Expenditures by Year																												
							Code	Emergency	Code	Deferred	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Revitalization				
											2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032					
1	Floor	3,169		2	15	2026				0	0	0	0	0	0	0	0	0	0	0	0	0	4,654	0	0	0	0	0	0						
2	Kitchen Cabinets / Sink					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
3	Kitchen Appliances					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
4	Furnishings					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
5	Floor - Office	324		2	10	2021				0	0	0	0	0	0	0	410	0	0	0	0	0	0	0	0	0	552	0							
6	Walls	799		2	10	2021				0	0	0	0	0	0	0	1,012	0	0	0	0	0	0	0	0	0	1,359	0							
7	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
8	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
9	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
10	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
11	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
12	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
13	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
14	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
15	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
16	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
17	Accessibility Improvements	1,500		ADD	20	2013		4	1,500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
18																																			
19																																			
20																																			
21																																			
22																																			
23																																			
24																																			
25																																			
26																																			
27	Annual Planned Expenditures							0	1,500	0	0	0	0	0	0	0	1,422	0	0	0	0	4,654	0	0	0	0	1,911	0	0						
28	Cumulative Reserve Balance							69,199	55,174	306,427	295,923	285,105	270,702	291,770	313,471	223,029	244,462	182,515	194,805	207,465	220,504	220,945	204,711	229,710	255,459	277,206	290,180	85,117	106,894						

Comprehensive Capital Needs Assessment Schedule

Common Hallways

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Total Square Feet:	17,799
Default Inflation Rate:	3.0%

	Component	Current Total Replacement Cost	Expected Annual Rate of Inflation	Current Age	Total Expected Useful Life	Initial Replacement Year	Planned Expenditures by Year																												
							Code	Emergency	Code	Deferred	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Revitalization				
											2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032					
1	Walls 1	3,474		2	10	2021				0	0	0	0	0	0	0	0	4,401	0	0	0	0	0	0	0	0	0	0	5,915	0					
2	Walls 2					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
3	Walls 3					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
4	Ceiling 1					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
5	Ceiling 2					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
6	Ceiling 3					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
7	Floors 1	5,012		2	10	2021				0	0	0	0	0	0	0	6,348	0	0	0	0	0	0	0	0	0	0	8,532	0						
8	Floors 2					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
9	Floors 3					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
10	Unit Doors					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
11	Hand Railings					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
12	Interior Lighting 1					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
13	Interior Lighting 2					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
14	Interior Lighting 3					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
15	Common Doors					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
16	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
17																																			
18																																			
19																																			
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21																																			
22																																			
23																																			
24																																			
25																																			
26																																			
27	Annual Planned Expenditures							0		0	0	0	0	0	0	0	10,750	0	0	0	0	0	0	0	0	0	14,447	0	0						
28	Cumulative Reserve Balance							69,199		55,174	306,427	295,923	285,105	270,702	291,770	313,471	223,029	244,462	182,515	194,805	207,465	220,504	220,945	204,711	229,710	255,459	277,206	290,180	85,117	106,894					

Comprehensive Capital Needs Assessment Schedule

Common Stairways

Owner Sponsor Name:	Berlin Housing Authority
Project Name:	Percival Heights
Project City / Town:	Berlin

Current Year:	2013
Budget Effective Date:	January 1, 2013
Report Date:	March 12, 2013

Number of Units:	30
Total Square Feet:	17,799
Default Inflation Rate:	3.0%

	Component	Current Total Replacement Cost	Expected Annual Rate of Inflation	Current Age	Total Expected Useful Life	Initial Replacement Year	Planned Expenditures by Year																												
							Code	Emergency	Code	Deferred	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Revitalization				
											2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032					
1	Walls					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
2	Ceilings					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
3	Floors					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
4	Doors					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
5	Railings					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
6	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
7	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
8	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
9	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
10	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
11	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
12	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
13	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
14	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
15	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
16	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
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22																																			
23																																			
24																																			
25																																			
26																																			
27	Annual Planned Expenditures						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
28	Cumulative Reserve Balance						69,199	55,174	306,427	295,923	285,105	270,702	291,770	313,471	223,029	244,462	182,515	194,805	207,465	220,504	220,945	204,711	229,710	255,459	277,206	290,180	85,117	106,894							

Comprehensive Capital Needs Assessment Schedule

Common Laundry

Owner Sponsor Name:	Berlin Housing Authority
Project Name:	Percival Heights
Project City / Town:	Berlin

Current Year:	2013
Budget Effective Date:	January 1, 2013
Report Date:	March 12, 2013

Number of Units:	30
Total Square Feet:	17,799
Default Inflation Rate:	3.0%

	Component	Current Total Replacement Cost	Expected Annual Rate of Inflation	Current Age	Total Expected Useful Life	Initial Replacement Year	Planned Expenditures by Year																												
							Code	Emergency	Code	Deferred	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Revitalization				
											2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032					
1	Walls	250		2	10	2021				0	0	0	0	0	0	0	0	316	0	0	0	0	0	0	0	0	0	0	425	0					
2	Ceilings					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
3	Floors	505		2	15	2026				0	0	0	0	0	0	0	0	0	0	0	0	0	741	0	0	0	0	0	0	0					
4	Ventilation					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
5	Lighting Fixtures					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
6	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
9	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
10	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
11	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
12	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
13	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
14	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
15	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
16	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
17																																			
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24																																			
25																																			
26																																			
27	Annual Planned Expenditures							0		0	0	0	0	0	0	0	0	316	0	0	0	0	741	0	0	0	0	425	0		0				
28	Cumulative Reserve Balance							69,199		55,174	306,427	295,923	285,105	270,702	291,770	313,471	223,029	244,462	182,515	194,805	207,465	220,504	220,945	204,711	229,710	255,459	277,206	290,180	85,117	106,894					

Common Area Restrooms

Owner Sponsor Name:	Berlin Housing Authority
Project Name:	Percival Heights
Project City / Town:	Berlin

Current Year:	2013
Budget Effective Date:	January 1, 2013
Report Date:	March 12, 2013

Number of Units:	30
Total Square Feet:	17,799
Default Inflation Rate:	3.0%

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Comprehensive Capital Needs Assessment Schedule

Building Boilers

Owner Sponsor Name:	Berlin Housing Authority
Project Name:	Percival Heights
Project City / Town:	Berlin

Current Year:	2013
Budget Effective Date:	January 1, 2013
Report Date:	March 12, 2013

Number of Units:	30
Total Square Feet:	17,799
Default Inflation Rate:	3.0%

	Component	Current Total Replacement Cost	Expected Annual Rate of Inflation	Current Age	Total Expected Useful Life	Initial Replacement Year	Planned Expenditures by Year																												
							Code	Emergency	Code	Deferred	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Revitalization				
											2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032					
1	Boilers / Warm Air Furnaces	48,000		2	20	2031				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	81,717	0						
2	Boiler Operating Controls	4,500		2	15	2026				0	0	0	0	0	0	0	0	0	0	0	0	0	6,608	0	0	0	0	0	0						
3	Pneumatic Systems Controls					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
4	Condensate & Feed Water					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
5	Fuel Oil Storage					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
6	Fuel Oil Transfer System					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
7	Fuel Exhaust					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
8	Combustion Air					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
9	Heating Water Circulating Pumps	9,500		2	20	2031				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16,173	0						
10	Indirect-Fired DHW Tank	4,700		2	15	2026				0	0	0	0	0	0	0	0	0	0	0	0	0	6,902	0	0	0	0	0	0						
11	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
12	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
13	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
14	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
15	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
16	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
17																																			
18																																			
19																																			
20																																			
21																																			
22																																			
23																																			
24																																			
25																																			
26																																			
27	Annual Planned Expenditures							0		0	0	0	0	0	0	0	0	0	0	0	0	0	13,511	0	0	0	0	97,890	0	0					
28	Cumulative Reserve Balance							69,199		55,174	306,427	295,923	285,105	270,702	291,770	313,471	223,029	244,462	182,515	194,805	207,465	220,504	220,945	204,711	229,710	255,459	277,206	290,180	85,117	106,894					

Comprehensive Capital Needs Assessment Schedule

Building Mechanical

Owner Sponsor Name:	Berlin Housing Authority
Project Name:	Percival Heights
Project City / Town:	Berlin

Current Year:	2013
Budget Effective Date:	January 1, 2013
Report Date:	March 12, 2013

Number of Units:	30
Total Square Feet:	17,799
Default Inflation Rate:	3.0%

	Component	Current Total Replacement Cost	Expected Annual Rate of Inflation	Current Age	Total Expected Useful Life	Initial Replacement Year	Planned Expenditures by Year																												
							Code	Emergency	Code	Deferred	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Revitalization				
											2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032					
1	Building Fire Suppression					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
2	Building Heating Distribution					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
3	Domestic Hot / Cold Water Dist.					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
4	Building Sanitary Waste & Vent.					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
5	Make-Up Air Unit					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
6	Ventilation & Exhaust					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
7	Air Handling Units					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
8	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
9	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
10	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
11	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
12	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
13	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
14	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
15	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
16	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
17	Common Area Air Conditioning	2,975		2	15	2025				0	0	0	0	0	0	0	0	0	0	4,242	0	0	0	0	0	0	0	0	0						
18	Common Area Air Conditioning	8,925		10+	15	2014				0	3,064	3,156	3,251	0	0	0	0	0	0	0	0	0	0	0	0	4,774	4,917	5,065	0						
19	Common Area Air Conditioning	1,595		2	20	2030				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,636	0	0							
20																																			
21																																			
22																																			
23																																			
24																																			
25																																			
26																																			
27	Annual Planned Expenditures						0	0	0	3,064	3,156	3,251	0	0	0	0	0	0	0	4,242	0	0	0	4,774	7,554	5,065	0	0							
28	Cumulative Reserve Balance						69,199	55,174	306,427	295,923	285,105	270,702	291,770	313,471	223,029	244,462	182,515	194,805	207,465	220,504	220,945	204,711	229,710	255,459	277,206	290,180	85,117	106,894							

Comprehensive Capital Needs Assessment Schedule

Building Electrical

Owner Sponsor Name:	Berlin Housing Authority
Project Name:	Percival Heights
Project City / Town:	Berlin

Current Year:	2013
Budget Effective Date:	January 1, 2013
Report Date:	March 12, 2013

Number of Units:	30
Total Square Feet:	17,799
Default Inflation Rate:	3.0%

	Component	Current Total Replacement Cost	Expected Annual Rate of Inflation	Current Age	Total Expected Useful Life	Initial Replacement Year	Planned Expenditures by Year																												
							Code	Emergency	Code	Deferred	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Revitalization				
											2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032					
1	Switch Gear					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
2	Emergency Generator					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
3	Smoke / Fire Detection	15,000		2	20	2031				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25,536	0						
4	Signaling / Communication	3,800		27	20	2013				3,800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
5	Building Wiring					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
6	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
7	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
8	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
9	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
10	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
11	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
12	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
13	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
14	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
15	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
16	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
17																																			
18																																			
19																																			
20																																			
21																																			
22																																			
23																																			
24																																			
25																																			
26																																			
27	Annual Planned Expenditures						0	0	3,800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25,536	0	0						
28	Cumulative Reserve Balance						69,199	55,174	306,427	295,923	285,105	270,702	291,770	313,471	223,029	244,462	182,515	194,805	207,465	220,504	220,945	204,711	229,710	255,459	277,206	290,180	85,117	106,894							

Comprehensive Capital Needs Assessment Schedule

Building Elevator

Owner Sponsor Name:	Berlin Housing Authority
Project Name:	Percival Heights
Project City / Town:	Berlin

Current Year:	2013
Budget Effective Date:	January 1, 2013
Report Date:	March 12, 2013

Number of Units:	30
Total Square Feet:	17,799
Default Inflation Rate:	3.0%

	Component	Current Total Replacement Cost	Expected Annual Rate of Inflation	Current Age	Total Expected Useful Life	Initial Replacement Year	Planned Expenditures by Year																												
							Code	Emergency	Code	Deferred	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Revitalization				
											2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032					
1	Shafts and Doorways					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
2	Cabs					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
3	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
4	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
5	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
6	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
7	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
8	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
9	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
10	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
11	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
12	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
13	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
14	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
15	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
16	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
17																																			
18																																			
19																																			
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21																																			
22																																			
23																																			
24																																			
25																																			
26																																			
27	Annual Planned Expenditures						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
28	Cumulative Reserve Balance						69,199	55,174	306,427	295,923	285,105	270,702	291,770	313,471	223,029	244,462	182,515	194,805	207,465	220,504	220,945	204,711	229,710	255,459	277,206	290,180	85,117	106,894							

Comprehensive Capital Needs Assessment Schedule

Building Structural

Owner Sponsor Name:	Berlin Housing Authority
Project Name:	Percival Heights
Project City / Town:	Berlin

Current Year:	2013
Budget Effective Date:	January 1, 2013
Report Date:	March 12, 2013

Number of Units:	30
Total Square Feet:	17,799
Default Inflation Rate:	3.0%

	Component	Current Total Replacement Cost	Expected Annual Rate of Inflation	Current Age	Total Expected Useful Life	Initial Replacement Year	Planned Expenditures by Year																												
							Code	Emergency	Code	Deferred	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Revitalization				
											2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032					
1	Foundation / Floor Slab					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
2	Framing & Columns					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
3	Steel					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
4	Wood Framing					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
5	Masonry Bearing Walls					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
6	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
7	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
8	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
9	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
10	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
11	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
12	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
13	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
14	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
15	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
16	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
17																																			
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22																																			
23																																			
24																																			
25																																			
26																																			
27	Annual Planned Expenditures						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
28	Cumulative Reserve Balance						69,199	55,174	306,427	295,923	285,105	270,702	291,770	313,471	223,029	244,462	182,515	194,805	207,465	220,504	220,945	204,711	229,710	255,459	277,206	290,180	85,117	106,894							

Comprehensive Capital Needs Assessment Schedule

Unit Living

Owner Sponsor Name:	Berlin Housing Authority
Project Name:	Percival Heights
Project City / Town:	Berlin

Current Year:	2013
Budget Effective Date:	January 1, 2013
Report Date:	March 12, 2013

Number of Units:	30
Total Square Feet:	17,799
Default Inflation Rate:	3.0%

	Component	Current Total Replacement Cost	Expected Annual Rate of Inflation	Current Age	Total Expected Useful Life	Initial Replacement Year	Planned Expenditures by Year																												
							Code	Emergency	Code	Deferred	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Revitalization				
											2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032					
1	Interior Doors					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
2	Walls					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
3	Ceilings					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
4	Interior Stairs					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
5	Floors	3,276		1	1	2013				3,276	3,375	3,476	3,580	3,688	3,798	3,912	4,029	4,150	4,275	4,403	4,535	4,671	4,811	4,956	5,104	5,258	5,415	5,578	5,745						
6	AC Sleeve					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
7	Electrical Outlets					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
8	Lighting Fixtures					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
9	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
10	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
11	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
12	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
13	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
14	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
15	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
16	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
17																																			
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22																																			
23																																			
24																																			
25																																			
26																																			
27	Annual Planned Expenditures						0	0	3,276	3,375	3,476	3,580	3,688	3,798	3,912	4,029	4,150	4,275	4,403	4,535	4,671	4,811	4,956	5,104	5,258	5,415	5,578	5,745	0						
28	Cumulative Reserve Balance						69,199	55,174	306,427	295,923	285,105	270,702	291,770	313,471	223,029	244,462	182,515	194,805	207,465	220,504	220,945	204,711	229,710	255,459	277,206	290,180	85,117	106,894							

Comprehensive Capital Needs Assessment Schedule

Unit Bathrooms

Owner Sponsor Name:	Berlin Housing Authority
Project Name:	Percival Heights
Project City / Town:	Berlin

Current Year:	2013
Budget Effective Date:	January 1, 2013
Report Date:	March 12, 2013

Number of Units:	30
Total Square Feet:	17,799
Default Inflation Rate:	3.0%

	Component	Current Total Replacement Cost	Expected Annual Rate of Inflation	Current Age	Total Expected Useful Life	Initial Replacement Year	Planned Expenditures by Year																												
							Code	Emergency	Code	Deferred	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Revitalization				
											2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032					
1	Walls					2013					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
2	Ceiling					2013					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
3	Lavatory / Vanity					2013					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
4	Toilet					2013					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
5	Tub / Surround					2013					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
6	Floor	382		1	1	2013					382	393	405	417	430	442	456	469	483	498	513	528	544	560	577	595	612	631	650	669					
7	Accessories					2013					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
8	Lighting Features					2013					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
9	Exhaust Fan					2013					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
10	GFI Outlet					2013					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
11	Other					2013					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
12	Other					2013					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
13	Other					2013					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
14	Other					2013					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
15	Other					2013					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
16	Other					2013					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
17	Exhaust Fan	4,500		2	15	2025					0	0	0	0	0	0	0	0	0	0	0	0	1,283	1,322	1,361	1,402	1,444	0	0	0					
18	Accessories	12,540		2	20	2030					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,145	4,270	4,398					
19	Accessibility Improvements	525		ADD	20	2013			4	525	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
20																																			
21																																			
22																																			
23																																			
24																																			
25																																			
26																																			
27	Annual Planned Expenditures							0		525	382	393	405	417	430	442	456	469	483	498	513	528	1,827	1,882	1,939	1,997	2,057	4,776	4,919	5,067	0				
28	Cumulative Reserve Balance							69,199		55,174	306,427	295,923	285,105	270,702	291,770	313,471	223,029	244,462	182,515	194,805	207,465	220,504	220,945	204,711	229,710	255,459	277,206	290,180	85,117	106,894					

Unit Kitchens

Owner Sponsor Name:	Berlin Housing Authority
Project Name:	Percival Heights
Project City / Town:	Berlin

Current Year:	2013
Budget Effective Date:	January 1, 2013
Report Date:	March 12, 2013

Number of Units:	30
Total Square Feet:	17,799
Default Inflation Rate:	3.0%

	Component	Current Total Replacement Cost	Expected Annual Rate of Inflation	Current Age	Total Expected Useful Life	Initial Replacement Year	Planned Expenditures by Year																												
							Code	Emergency	Code	Deferred	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Revitalization				
											2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032					
1	Walls					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
2	Ceilings					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
3	Floors	667		1	1	2013				667	687	708	729	751	773	797	821	845	871	897	924	951	980	1,009	1,039	1,071	1,103	1,136	1,170						
4	Cabinets					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
5	Countertops					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
6	Sink					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
7	Kitchen Exhaust Fan					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
8	GFI Outlet					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
9	Vent Hood					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
10	Refrigerators					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
11	Stove					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
12	Range					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
13	Dishwasher					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
14	Disposal					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
15	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
16	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
17	Cabinets	66,825		27	25	2014				0	22,943	23,632	24,340	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
18	Range	11,000		27	20+	2013				3,667	3,777	3,890	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
19	Range	15,000		<5	20+	2030				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,132	4,256	4,384							
20	Refrigerators	20,100		6	15	2021				0	0	0	0	0	0	0	5,092	5,245	5,403	5,565	5,732	0	0	0	0	0	0	0							
21	Accessibility Improvements	7,425		ADD	20	2013		4	7,425																										
22																																			
23																																			
24																																			
25																																			
26																																			
27	Annual Planned Expenditures						0	7,425	4,334	27,407	28,229	25,070	751	773	797	821	5,938	6,116	6,299	6,488	6,683	980	1,009	1,039	1,071	5,235	5,392	5,554	0						
28	Cumulative Reserve Balance						69,199	55,174	306,427	295,923	285,105	270,702	291,770	313,471	223,029	244,462	182,515	194,805	207,465	220,504	220,945	204,711	229,710	255,459	277,206	290,180	85,117	106,894							

Comprehensive Capital Needs Assessment Schedule

Unit Electrical

Owner Sponsor Name:	Berlin Housing Authority
Project Name:	Percival Heights
Project City / Town:	Berlin

Current Year:	2013
Budget Effective Date:	January 1, 2013
Report Date:	March 12, 2013

Number of Units:	30
Total Square Feet:	17,799
Default Inflation Rate:	3.0%

	Component	Current Total Replacement Cost	Expected Annual Rate of Inflation	Current Age	Total Expected Useful Life	Initial Replacement Year	Planned Expenditures by Year																												
							Code	Emergency	Code	Deferred	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Revitalization				
											2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032					
1	Emergency Call System					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
2	Electrical Panel					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
3	Smoke Detectors					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
4	Intercom					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
5	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
6	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
7	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
8	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
9	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
10	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
11	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
12	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
13	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
14	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
15	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
16	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
17	Smoke Detectors	12,920		2	10	2020				0	0	0	0	0	0	0	1,589	1,637	1,686	1,736	1,788	1,842	1,897	1,954	2,013	2,073	2,135	2,200	2,266						
18																																			
19																																			
20																																			
21																																			
22																																			
23																																			
24																																			
25																																			
26																																			
27	Annual Planned Expenditures							0		0	0	0	0	0	0	0	1,589	1,637	1,686	1,736	1,788	1,842	1,897	1,954	2,013	2,073	2,135	2,200	2,266	0					
28	Cumulative Reserve Balance							69,199		55,174	306,427	295,923	285,105	270,702	291,770	313,471	223,029	244,462	182,515	194,805	207,465	220,504	220,945	204,711	229,710	255,459	277,206	290,180	85,117	106,894					

Comprehensive Capital Needs Assessment Schedule

Unit Mechanical

Owner Sponsor Name:	Berlin Housing Authority
Project Name:	Percival Heights
Project City / Town:	Berlin

Current Year:	2013
Budget Effective Date:	January 1, 2013
Report Date:	March 12, 2013

Number of Units:	30
Total Square Feet:	17,799
Default Inflation Rate:	3.0%

	Component	Current Total Replacement Cost	Expected Annual Rate of Inflation	Current Age	Total Expected Useful Life	Initial Replacement Year	Planned Expenditures by Year																												
							Code	Emergency	Code	Deferred	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Revitalization				
											2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032					
1	Radiators					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
2	Unit Temperature Controls					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
3	Air Conditioning Unit / Sleeve					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
4	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
5	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
6	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
7	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
8	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
9	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
10	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
11	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
12	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
13	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
14	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
15	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
16	Other					2013				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
17	Air Conditioning Unit / Sleeve	23,925		6	15	2021				0	0	0	0	0	0	0	5,051	5,203	5,359	5,520	5,685	5,856	0	0	0	0	0	0	0						
18																																			
19																																			
20																																			
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23																																			
24																																			
25																																			
26																																			
27	Annual Planned Expenditures							0		0	0	0	0	0	0	0	5,051	5,203	5,359	5,520	5,685	5,856	0	0	0	0	0	0	0						
28	Cumulative Reserve Balance							69,199		55,174	306,427	295,923	285,105	270,702	291,770	313,471	223,029	244,462	182,515	194,805	207,465	220,504	220,945	204,711	229,710	255,459	277,206	290,180	85,117	106,894					

Appendix A: Statement of Delivery

Our Capital Needs Assessment (the "CNA" or the "Report") on the subject property is delivered subject to the following terms and conditions:

1. This report and analysis are based upon observations for the visible and apparent condition of the building and its major components on the date of the fieldwork. Although care has been taken in the performance of this assessment, ON-SITE INSIGHT, Inc. (and/or its representatives) makes no representations regarding latent or concealed defects that may exist and no warranty or guarantee is expressed or implied. This report is made only in the best exercise of our ability and judgment.
2. We have undertaken no formal evaluation of environmental concerns, including but not limited to asbestos containing materials (ACMs), lead-based paint, chlorofluorocarbons (CFCs), polychlorinated biphenyls (PCBs), and mildew/mold.
3. Conclusions in this report are based on estimates of the age and normal working life of various items of equipment and/or statistical comparisons. Actual conditions can alter the useful life of any item. When an item needs immediate replacement depends on many factors, including previous use/misuse, irregularity of servicing, faulty manufacture, unfavorable conditions, Acts of God and unforeseen circumstances. Certain components that may be working when we made our inspection might deteriorate or break in the future without notice.
4. To prepare this report, we used historic data on capital activities and costs, blueprints (when available), and current prices for capital actions. We have not independently verified this information, have assumed that it is reliable, but assume no responsibility for its accuracy.
5. Unless otherwise noted in the report, we assume that all building components meet code requirements in force when the property was built.
6. If accessibility issues are referenced in the report, the site elements, common areas, and dwelling units at the development were examined for compliance with the requirements of the Uniform Federal Accessibility Standards (UFAS), and for Massachusetts properties, the Massachusetts Architectural Accessibility Board (AAB). The methodology employed in undertaking this examination is adapted from a Technical Assistance Guide (TAG-88-11) titled "Supplemental Information About the Section 504 Transition Plan Requirements" published by the Coordination and Review section of the U.S. Department of Justice Civil Rights Division, and the AAB Rules and Regulations, 521 CMR effective July 10, 1987. The Guide also incorporates the requirements of UFAS, published April 1, 1988 by the General Services Administration, the Department of Defense, the Department of Housing and Urban Development, and the U.S. Postal Service. Changes in legislation and/or regulations may make some observations moot.
7. Response Actions and estimated costs of responses were developed by ON-SITE INSIGHT, Inc. If additional structural work is necessary, costs for some Response Actions may exceed estimates. Whenever the Response Action is to remove, reposition, or modify walls, a competent structural engineer should be retained before any work is done, because such investigation may disclose that a Response Action is either more costly than estimated, or is not possible.
8. Conclusions reached in this report assume current and continuing responsible ownership and competent property management.
9. Regular updates of this plan are recommended to ensure careful monitoring of major building systems and to adjust the program to accommodate unanticipated circumstances surrounding the buildings, operations, and/or occupants.