Oak Park Police Station Bond Estimate Using Park District Tax Calculator Logic

Purpose

This memo applies the same property-tax calculation logic used in the Park District of Oak Park bond tax calculator to estimate the likely tax impact of a hypothetical **$100 million** **Oak Park police station bond issue**.

The goal is to improve on the rough "divide total debt service by number of households" method more realistic Illinois property-tax framework **equalized assessed value (EAV)** standard Cook County residential exemption treatment.

Source Logic Being Replicated

The Park District calculator appears to use the standard Cook County residential property tax fields request:

1. Property value
2. Homeowner Exemption
3. Disabled Person's Exemption
4. Returning Veteran's Exemption
5. Senior Exemption
6. Tax Year 2024 assumptions
7. State Equalization Multiplier

The Park District calculator is available here:

Park District of Oak Park Mar 26 **Referendum Bond Tax Calculator**
https://ssccust 1 .spreadsheethosting.com/ 1 / 0 8 /b 1 6 8 6 1 7 9 bb 9 2 c 4 0 f/
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Core Cook County Property Tax Assumptions

For residential property in Cook County, the relevant mechanics are:

1. **Residential assessed value = 10 % of market value**
2. **State Equalization Multiplier for Tax Year** 2024 **=** 3.0355
3. Standard exemptions used by the calculator are:
4. **Homeowner Exemption = $** $10,000$
5. **Senior Exemption = $** $8,000$

6. **Disabled Persons Exemption = $2,000**
7. **Returning Veterans Exemption = $5,000**

From that structure, the implied calculation is:

Implied Formula

Adjusted EAV = (Market Value × 10% × 3.0355) − exemptions

Estimated annual referendum tax = Adjusted EAV × referendum tax rate

Validating the Calculator Against the Park District Example

The Park District public materials state that a **$430,000 home** would pay approximately:

1. **$160.30 per year**
2. **$13.36 per month**

for a **$40 million, 20-year referendum bond**.

Step 1: Calculate the $430,000 home's adjusted EAV

1. Market value: **$430,000**
2. Assessed value at 10%: **$43,000**
3. Equalized value using multiplier 3.0355:
   $43,000 × 3.0355 = $130,526.50
4. Less Homeowner Exemption of $10,000:
   Adjusted EAV = $120,526.50

Step 2: Back-solve the implied referendum tax rate

If the annual tax shown is **$160.30**, then:

Implied tax rate = $160.30 ÷ $120,526.50 = 0.0013300

That equals approximately:

1. 0.1330 **% of adjusted EAV**
2. 0.1330 **per $100 of EAV**
3. 1.330 **per $1,000 of EAV**

Step 3: Cross-check against the Park District tax base

The Park District reports a 2023 EAV of:

$2,361,857,488

If the referendum tax rate is approximately `0.1330` **%**, then the implied annual levy is:

$ `2,361,857,488` **×** `0.0013300` **≈ $** `3.14` **million per year**

That is consistent with what would be expected for roughly **$4.6 million** **highly** **over** `20` **years** at a long-term municipal borrowing rate in the mid- `4` % range.

This strongly suggests the calculator is using ordinary referendum tax-rate logic based on adjusted EAV.

Applying the Same Framework to a Hypothetical Oak Park Police Station Bond

Scenario Assumptions

For a hypothetical Oak Park police station project, assume:

`1`. **Principal amount: $** `100,000,000`
`2`. **Repayment term:** `30` **years**
`3`. **Estimated interest rate:** `4.45` **%**
`4`. **Village credit quality: AA**
`5`. **Oak Park tax base proxy: $** `2,361,857,488` **EAV**

The `4.45` % assumption is based on current long-term AA municipal yields and Oak Park's reaffirmed **AA** rating.

Step `1`: Estimate Annual Debt Service on $ `100` Million Over `30` Years

Using a standard level-payment amortization approach:

`1`. Principal: **$** `100,000,000`
`2`. Interest rate: `4.45` **%**
`3`. Term: `30` **years**

Estimated annual debt service:

Approximately $ `6.10` **million per year**

More specifically:

`1`. **Annual debt service: approximately $** `6.10` **million**
`2`. **Total repaid over** `30` **years: approximately $** `183.1` **million**
`3`. **Total interest paid: approximately $** `83.1` **million**

Step 2: Convert Annual Debt Service Into an Implied Tax Rate

If Oak Park had to raise approximately $6 million **annually** against an EAV base of $2,361,857,488, then the implied rate would be:

$6,100,000 ÷ $2,361,857,488 = 0.002584

That equals approximately:

1. 0.2584 **% of EAV**
2. 0.2584 **per $100 of EAV**
3. 2.584 **per $1,000 of EAV**

This is the Oak Park police station equivalent of the Park District referendum tax rate.

Step 3: Apply That Rate to Individual Homes

Using the same adjusted EAV formula:

Adjusted EAV = (Home Value × 10% × 3.0355) − exemptions

Estimated Annual Police Bond Tax = Adjusted EAV × 0.002584

The examples below assume the owner receives the **Homeowner Exemption only**.

Example Calculations by Home Value

Example 1: $300,000 home

1. Market value: **$300,000**
2. Assessed value at 10%: **$30,000**
3. Equalized value:
   $30,000 × 3.0355 = $91,065
4. Less Homeowner Exemption of $10,000:
   Adjusted EAV = $81,065
5. Tax at 0.2584%:
   $81,065 × 0.002584 ≈ $209.47 /year
6. Monthly equivalent:
   $209.47 ÷ 12 ≈ $17.46 /month

Example 2: $430,000 home

1. Market value: **$430,000**
2. Assessed value at 10%: **$43,000**

3. Equalized value:
   $43,000 × 3.0355 = $130,526.50
4. Less Homeowner Exemption of $10,000:
   Adjusted EAV = $120,526.50
5. Tax at 0.2584%:
   $120,526.50 × 0.002584 ≈ $311.44 /year
6. Monthly equivalent:
   $311.44 ÷ 12 ≈ $25.95 /month

Example 3: $465,500 home

1. Market value: **$465,500**
2. Assessed value at 10%: **$46,550**
3. Equalized value:
   $46,550 × 3.0355 = $141,302.53
4. Less Homeowner Exemption of $10,000:
   Adjusted EAV = $131,302.53
5. Tax at 0.2584%:
   $131,302.53 × 0.002584 ≈ $339.29 /year
6. Monthly equivalent:
   $339.29 ÷ 12 ≈ $28.27 /month

Example 4: $500,000 home

1. Market value: **$500,000**
2. Assessed value at 10%: **$50,000**
3. Equalized value:
   $50,000 × 3.0355 = $151,775
4. Less Homeowner Exemption of $10,000:
   Adjusted EAV = $141,775
5. Tax at 0.2584%:
   $141,775 × 0.002584 ≈ $366.35 /year
6. Monthly equivalent:
   $366.35 ÷ 12 ≈ $30.53 /month

Example 5: $750,000 home

1. Market value: **$750,000**
2. Assessed value at 10%: **$75,000**
3. Equalized value:
   $75,000 × 3.0355 = $227,662.50
4. Less Homeowner Exemption of $10,000:
   Adjusted EAV = $217,662.50
5. Tax at 0.2584%:
   $217,662.50 × 0.002584 ≈ $562.44 /year
6. Monthly equivalent:
   $562.44 ÷ 12 ≈ $46.87 /month

Summary Table

Home Value	Assumption	Annual Cost	Monthly Cost
$300,000	Homeowner Exemption	$209.47	$17.46
$430,000	Homeowner Exemption	$311.44	$25.95
$465,500	Homeowner Exemption	$339.29	$28.27
$500,000	Homeowner Exemption	$366.35	$30.53
$750,000	Homeowner Exemption	$562.44	$46.87

Comparison to the Simple Household-Average Method

A prior rough estimate divided annual debt service across all Oak Park households and produced of about **$261 per household per year**.

That method is useful only as a broad average. It does **not** reflect how property taxes are actually allocated.

The Park District-style method is more realistic because it:

1. Ties cost to taxable property value rather than household count
2. Applies Cook County's residential assessment structure
3. Incorporates the equalization factor
4. Reflects the effect of exemptions
5. Produces homeowner-specific estimates rather than abstract averages

Using this more realistic property-tax approach, a median owner-occupied Oak Park home is likely closer to:

1. **$339 per year**
2. **$28 per month**

rather than the prior rough all-household average of about **$261 per year**.

Value of Exemptions Under This Police Station Scenario

Because the implied tax rate is approximately 2.584% **of adjusted EAV**, each exemption reduces annual tax by approximately:

1. **Homeowner Exemption ($10,000): about $25.84/year**
2. **Senior Exemption ($8,000): about $20.67/year**
3. **Disabled Persons Exemption ($2,000): about $5.17/year**
4. **Returning Veterans Exemption ($5,000): about $12.92/year**

These reductions would stack in whatever way the applicable exemptions are allowed to apply to the parcel.

Final Takeaway

Using the same underlying property-tax logic as the Park District of Oak Park bond tax hypothetical **$100 million**, **30-year** Oak Park police station bond at 4.5% roughly would imply:

1. **Annual debt service of about $6.10 million**
2. **An implied tax rate of about 0.2584% of adjusted EAV**
3. **A cost of about $339 per year, or $28 per month, for a median owner-occupied Oak Park home receiving the Homeowner Exemption**

This is a substantially better estimate than dividing annual debt service equally across all h because it mirrors the actual property-tax mechanics used in a local referendum bond tax calculator.

Sources

1. Park District of Oak Park referendum bond tax calculator
2. Park District of Oak Park referendum materials regarding sample tax impact and district EAV
3. Oak Park AA credit rating announcement
4. U.S. Census QuickFacts for Oak Park median owner-occupied home value
5. Standard Cook County residential assessment and exemption structure for Tax Year 2024