Measures began March 13

April 1 transitioned to Level 3 (Safer at Home)
- Customer Service Centers closed
- Over 300 employees working from home
- Adjustments made to protect the health of employees and customers

May 11 returned to Level 4 (Social Distancing)
## Pandemic Demobilization Plan

**MAY - JULY 2020**

More at news.kub.org

### May

#### Phase 1
- May 4
  - "Working on Campus" screening app deployed

#### Phase 2
- May 11
  - Campuses will be equipped with PPE & cleaning kits
  - Operational & construction groups end rotations
  - Laboratory staff ends rotations
  - Operational groups & operational support groups begin their return; Gradually return through May, into June

#### Phase 3
- May 18
  - Resume some field work with customer interaction

### June

#### Phase 2
- June 1
  - SOS & plant operators return to normal operations
  - PTO restrictions lifted for travel except international & cruise travel
  - KUB vehicles returned to campus & "truck-to-field" ends
  - Most in-person customer interactions resume

### July

#### Phase 3
- July 6
  - Remaining "Work from home" groups return to campus except individuals directed by Occ Health
  - Customer Service Centers open
  - Normal visitor processes resume
  - Community events resume
  - Corporate travel resumes

The ICS team is following local, state, and federal guidance to safely return KUB to normal operations. The situation remains fluid, and items are subject to change as more data is analyzed.

Bold items are listed with high-confidence in timing and execution, while other items will remain more likely to change based on guidance and data.
FY 2021 Appropriations and Funding Recommendations

May 21, 2020

KUB

Resolutions 1411, 1412, and 1413
Proposed FY 21 Budget Focused on Maintaining Safe, Reliable, and Affordable Services

- Proposed budget $962M
- Down slightly from FY 20
- New investments for home weatherization and energy/water efficiency
- Capital budget includes $94M for Century II
- $47M new bonds help fund capital budget
- No rate increases in FY 21
## Proposed FY 21 Budget: $962M

<table>
<thead>
<tr>
<th></th>
<th>Electric</th>
<th>Gas</th>
<th>Water</th>
<th>WW Water</th>
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<td>$55.1</td>
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<td><strong>O&amp;M</strong></td>
<td>$66.9</td>
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<td>$10.5</td>
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<td>$94.3</td>
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$ in Millions
## Proposed FY 21 Budget Down Slightly

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<th>FY 21</th>
<th>FY 20</th>
<th>Increase</th>
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<tr>
<td></td>
<td>Proposed</td>
<td>Budget</td>
<td>(Decrease)</td>
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<tr>
<td>Energy Cost</td>
<td>$467.8</td>
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<td></td>
<td>Lower wholesale energy prices</td>
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<tr>
<td>O&amp;M</td>
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<tr>
<td></td>
<td>Energy/water efficiency initiatives</td>
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<td></td>
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<tr>
<td></td>
<td>$211.2</td>
<td>$210.9</td>
<td>$0.3</td>
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<tr>
<td></td>
<td>Vegetation management; Pension/OPEB</td>
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<tr>
<td>Debt Service</td>
<td>$85.9</td>
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<td>($0.3)</td>
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<td></td>
<td>Lower interest rates</td>
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<tr>
<td>Taxes &amp; Equivalents</td>
<td>$39.1</td>
<td>$39.8</td>
<td>($0.7)</td>
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<tr>
<td></td>
<td>Knox County property tax equalization rate</td>
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<tr>
<td></td>
<td>$962.1</td>
<td>$964.3</td>
<td>($2.2)</td>
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</table>

$ in Millions
Wholesale Energy Budget Driven by Customer Demand

FY 21 Wholesale Energy = $468M

- Electric power
  - 5.5 billion kWh
  - 211,000 electric customers
- Natural gas
  - 11.7 million dekatherms
  - 105,000 natural gas customers

Electric power = 88%  Natural gas = 12%
O&M Budget Supports Reliability

FY 21 O&M = $158M

- Labor-related costs
  - Payroll $57M
  - Benefits and training $11M
  - Post-employment benefits $7M
- Outside services
  - Vegetation management $11M
  - Facilities maintenance $4M
  - Weatherization $1M
  - Energy/water efficiency $0.75M
- Materials/other costs
  - Utilities $9M
  - Stock materials $5M
  - Chemicals $3M

Labor-related = 48%
Outside services = 29%
Materials/other = 23%

$ in Millions
Capital Budget Continues
Century II Programs

FY 21 Capital = $211M

- Distribution system improvements: $94M
  - Electric substation upgrades: $10M
  - 13 miles of electric transmission line improvements: $10M
  - 1,400 poles: $6M
  - 14 miles of natural gas main: $11M
  - 17 miles of water main: $12M
  - 16 miles of wastewater main: $16M

- Plant improvements: $47M
  - Biologically Enhanced High-Rate Clarification Project (CD): $17M
  - MBW Filters: $20M
  - Loves Creek Electrical upgrades: $4M

- Customer growth: $26M

Information technology = 5%
Facilities/equipment = 12%
System infrastructure = 83%
System improve/replace = 45%
Plant improvements = 22%
Growth = 12%
Relocations = 4%

$ in Millions
Debt Budget Reflects Investments in Infrastructure

- FY 21 principal: $45M
- FY 21 interest: $41M
- Outstanding bonds: $1.1B
- New bonds proposed for FY 21: $47M

FY 21 Debt Service = $86M

- Electric = 29%
- Natural gas = 12%
- Water = 17%
- Wastewater = 42%
KUB Payments In Lieu of Taxes (PILOTs) Support Local Governments

FY 21 Taxes and PILOTs = $39M

- PILOTs $33.2M
  - City $21.5M
  - Knox County $10.6M
  - Other counties $1.1M
- Payroll tax expense $5.9M

- Electric = 45%
- Natural Gas = 19%
- Water = 9%
- Wastewater = 13%
- FICA = 15%

$ in Millions
Funding FY 21 Budget

Revenue = $857M

- Wholesale Energy = 55%
- O&M = 18%
- Capital = 12%
- Debt Service = 10%
- Taxes and Equivalents = 5%

System Revenues = 50%
Bond Proceeds = 22%
General Fund Cash = 28%

Capital = $211M

- System Revenues = 50%
- Bond Proceeds = 22%
- General Fund Cash = 28%
New Bonds Will Help Fund System Capital Budgets

- Up to $47M
- Mature over 30 years
- Budgeted interest rate 3.25%
- Secured by system revenues
- City Council authorization required
- Comply with KUB Debt Management Policy
- Competitive public sale summer 2020
Proposed Water Bonds: $17M

- Interest cost: $9.7M
- Mature March 2050
- Water debt ratio: 50%
- Weighted average interest rate: 3.37%
- 40% of total principal repaid in 10 years
- Outstanding bonds rated AAA/Aa1
Proposed Wastewater Bonds: $30M

- Interest cost: $17.2M
- Mature April 2050
- Wastewater debt ratio: 59%
- Weighted average interest rate: 3.47%
- 33% of total principal repaid in 10 years
- Outstanding bonds rated AA+/Aa2
## Estimated Issuance Costs for Bonds

<table>
<thead>
<tr>
<th>Cost</th>
<th>Professional Firm</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Advisor</td>
<td>Cumberland Securities</td>
<td>$75,000</td>
</tr>
<tr>
<td>Bond Counsel</td>
<td>Bass, Berry &amp; Sims</td>
<td>$55,500</td>
</tr>
<tr>
<td>Rating Agency</td>
<td>Moody's</td>
<td>$62,500</td>
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<tr>
<td>Rating Agency</td>
<td>Standard &amp; Poor's</td>
<td>$58,500</td>
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<tr>
<td>Paying Agent</td>
<td>Regions Bank</td>
<td>$3,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$254,500</td>
</tr>
<tr>
<td>Other Costs (Escrow, POS, OS, Advertising)</td>
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<td>$20,300</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$274,800</td>
</tr>
</tbody>
</table>
Authorizes commitment of expenditures subsequent to June 30, 2021, for commitments entered into on or before June 30, 2021

FY 21 total: $120.7M

- Electric $25.4M
- Natural Gas $ 9.0M
- Water $50.7M
- Wastewater $35.6M
Projects Supporting Need for Commitment Appropriations

- Electric transmission line improvements
- Electric infeed substation
- MBW water plant filters
- Gas distribution steel main replacement
- Wastewater system main replacement
- Utility relocations for highway improvements
- Vehicles and equipment
Resolution 1411

- Requests City Council authorization of bond issues for the Water and Wastewater Divisions
  - Water up to $17M
  - Wastewater up to $30M

- Board adopts all provisions of City Council bond resolutions
Adopts FY 21 budget appropriations

- Electric $600.7M
- Natural Gas $128.6M
- Water $94.3M
- Wastewater $138.5M
Adopts FY 21 commitment appropriations

- Electric $25.4M
- Natural Gas $9.0M
- Water $50.7M
- Wastewater $35.6M
Proposed Rate Actions

May 21, 2020

Resolution 1414
Proposed Rate Action Items

- Pilot time of use (TOU) electric rates for residential and business customers
- Amend Purchased Power Adjustment mechanism
- Housekeeping changes
  - Amend residential rate schedules to change “Customer Charge” to “Basic Service Charge”
  - Several minor word changes in electric rate schedules
Pilot TOU Electric Rates

- Optional pilot programs for residential and business customers less than 1000 kW
- Opportunities for savings on monthly bills
- Participation limited during pilot phase
- Customers can revert to standard schedule
- Power supply cost recovery not at risk
- Effective November 2020
How Do Customers Save With TOU?

- 83% of hours are off-peak
- Some customers would save automatically
  - Usage is already occurring off-peak
- Some customers would need to shift load to save
  - Choose the weekend
  - Install programmable thermostats and other devices
Residential TOU Rates

- Basic service charge: $20.50 (unchanged)
- Energy charge
  - On-peak energy: $0.19838 per kWh
  - Off-peak energy: $0.06662 per kWh

Indicative rates based on October 2019 variables; subject to purchased power adjustment.


## Residential TOU Rates Compared to Existing Rates

<table>
<thead>
<tr>
<th></th>
<th>Current Rate</th>
<th>Proposed TOU Rates</th>
<th>Difference</th>
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</thead>
<tbody>
<tr>
<td>Basic Service</td>
<td>$20.50</td>
<td>$20.50</td>
<td>$ -</td>
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<tr>
<td>Summer On-Peak Energy</td>
<td>$0.09159</td>
<td>$0.19838</td>
<td>$0.10679</td>
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<tr>
<td>Summer Off-Peak Energy</td>
<td>$0.09159</td>
<td>$0.06662</td>
<td>($0.02497)</td>
</tr>
<tr>
<td>Winter On-Peak Energy</td>
<td>$0.09118</td>
<td>$0.19838</td>
<td>$0.10720</td>
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<tr>
<td>Winter Off-Peak Energy</td>
<td>$0.09118</td>
<td>$0.06662</td>
<td>($0.02456)</td>
</tr>
</tbody>
</table>

*Indicative rates based on October 2019 variables; subject to purchased power adjustment.*
Business TOU Rates – GSA1

GSA1: <50 kW

- Customer charge: $29.00 (unchanged)
- Demand charge: $2.00 per kW

Energy charge
- On-peak energy: $0.20611 per kWh
- Off-peak energy: $0.07435 per kWh

Proforma rates based on October 2019 variables; subject to purchased power adjustment.
Proposed Business TOU Rates – GSA2

GSA2: <1,000 kW

- Non-homogeneous class
- Large bill impacts for TOU
- Recommend sub-classes
  - GSA2 small up to 100kW
  - GSA2 large 100kW to 1,000kW
## Proposed Business TOU Rates – GSA2

<table>
<thead>
<tr>
<th></th>
<th>TOU GSA2 Small</th>
<th>TOU GSA2 Large</th>
</tr>
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<tbody>
<tr>
<td>Customer Charge</td>
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<tr>
<td>Max Peak Demand (per kW)</td>
<td>$4.45</td>
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<tr>
<td>On-Peak Energy (per kWh)</td>
<td>$0.21794</td>
<td>$0.19509</td>
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<tr>
<td>Off-Peak Energy (per kWh)</td>
<td>$0.08618</td>
<td>$0.06333</td>
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</tbody>
</table>

*Indicative rates based on October 2019 variables; subject to purchased power adjustment.*
Purchased Power Adjustment (PPA) Amendments

- PPA automatically flows through changes in purchased power costs from TVA

- Proposed amendments
  - Reflect TOU rates
  - Reset base rates for current wholesale power costs
  - Reflect wholesale power cost credit from TVA long-term partnership agreement

- Effective July 2020
Resolution 1414

- Amends Electric Division rate schedules for new pilot TOU rates
- Amends Purchased Power Adjustment
- Amends various rate schedules for housekeeping changes
TVA Back to Business Credit Program

May 20, 2020

Resolution 1415
Program Details

- Provides financial relief to large commercial and industrial electric customers partially or fully shut down due to the pandemic
- Credit applied to customer’s on-peak demand
- Supports faster return to normal operations
- Credits available April through September 2020
- Funded by TVA revenues
Customer Eligibility

- 17 customers meet eligibility criteria
- One customer has experienced significant changes in operations due to the pandemic
- Bill credit pending for this customer
- Continue to monitor large customers’ operations and power usage
Resolution 1415

- Authorizes KUB participation in Back to Business Credit Program
- Authorizes the President and CEO to take actions necessary for KUB to participate in the program
$77M in Bonds Refinanced
Saves Customers $27M

- Bonds sold competitively on April 29
- Replace bonds originally sold in 2010 and 2011
- Maturities are the same or sooner
- Good bids and a variety of bidders
- $27M in total savings net of fees
- High-quality bond ratings affirmed by Standard & Poor’s and Moody’s
## Bids on $14.4M Electric Bonds

<table>
<thead>
<tr>
<th>Bidder</th>
<th>True Interest Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Huntington Securities, Inc.</td>
<td>1.498</td>
</tr>
<tr>
<td>Raymond James &amp; Associates, Inc.</td>
<td>1.596</td>
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<tr>
<td>Hilltop Securities, Inc.</td>
<td>1.597</td>
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<tr>
<td>J.P. Morgan Securities LLC</td>
<td>1.719</td>
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<tr>
<td>Robert W. Baird &amp; Co., Inc.</td>
<td>1.790</td>
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<tr>
<td>FHN Financial Capital Markets</td>
<td>1.882</td>
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Electric Bonds Refinancing Saves $2.4M

<table>
<thead>
<tr>
<th></th>
<th>Original Debt Service</th>
<th>$21,059,000</th>
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<tbody>
<tr>
<td>New Debt Service</td>
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<td>$18,683,000</td>
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<tr>
<td>Savings</td>
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<td>$2,376,000</td>
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</table>

- Bonds fully mature in July 2031
- Weighted average life of bonds 6.2 years
# Bids on $6.8M Gas Bonds

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<th>Bidder</th>
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<td>Hilltop Securities, Inc.</td>
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<td>Huntington Securities, Inc.</td>
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<tr>
<td>J.P. Morgan Securities LLC</td>
<td>1.838</td>
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</tbody>
</table>
Gas Bonds Refinancing Saves $1.8M

- $2M principal pay down
- Bonds fully mature in March 2030
- Weighted average life of bonds 5.8 years

<table>
<thead>
<tr>
<th></th>
<th>Original Debt Service</th>
<th>New Debt Service</th>
<th>Savings</th>
<th>Cash Contribution</th>
<th>Net Savings</th>
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<tbody>
<tr>
<td></td>
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<td>3,799,000</td>
<td>2,000,000</td>
<td>$1,799,000</td>
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</tbody>
</table>

![Bar chart showing cash contributions and savings over time from 2021 to 2030.]

- **Millions ($)**
  - Principal
  - Interest
# Bids on $19.5M Water Bonds

<table>
<thead>
<tr>
<th>Bidder</th>
<th>True Interest Cost</th>
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<tbody>
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<td>FHN Financial Capital Markets</td>
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<td>Piper Sandler &amp; Co</td>
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<td>Raymond James &amp; Associates, Inc.</td>
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<td>Huntington Securities, Inc.</td>
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<td>Citigroup Global Markets, Inc.</td>
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<tr>
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<td>Bank of America Merrill Lynch</td>
<td>2.756</td>
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<tr>
<td>J.P. Morgan Securities LLC</td>
<td>2.839</td>
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</tbody>
</table>
Water Bonds Refinancing Saves $3.9M

- Original Debt Service $31,790,000
- New Debt Service $27,883,000
- Savings $3,907,000

- Bonds fully mature in March 2040
- Weighted average life of bonds 13.3 years
## Bids on $28.2M Wastewater Bonds

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<td>Fifth Third Securities, Inc.</td>
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<td>Raymond James &amp; Associates, Inc.</td>
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<td>Robert W. Baird &amp; Co., Inc.</td>
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<td>J.P. Morgan Securities LLC</td>
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<td>Bank of America Merrill Lynch</td>
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Wastewater Bonds Refinancing Saves $18.9M

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<table>
<thead>
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<tbody>
<tr>
<td>Original Debt Service</td>
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<tr>
<td>New Debt Service</td>
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<tr>
<td>Savings</td>
<td>$18,879,000</td>
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</table>

- Bonds fully mature in April 2045
- Weighted average life of bonds 14.3 years
# Professional Fees

<table>
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<tr>
<th>Cost</th>
<th>Professional Firm</th>
<th>Fee</th>
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<tbody>
<tr>
<td>Financial Advisor</td>
<td>Cumberland Securities</td>
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<tr>
<td>Bond Counsel</td>
<td>Bass, Berry &amp; Sims</td>
<td>$86,600</td>
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<td>Rating Agency</td>
<td>Moody's</td>
<td>$107,500</td>
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<td>Standard &amp; Poor's</td>
<td>$82,400</td>
</tr>
<tr>
<td>Paying Agent</td>
<td>Regions Bank</td>
<td>$3,300</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>$402,800</strong></td>
</tr>
<tr>
<td></td>
<td>Other Costs (Escrow, POS, OS, Advertising)</td>
<td><strong>$47,300</strong></td>
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<td><strong>$450,100</strong></td>
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