



**CHAMPAIGN COUNTY BOARD
FACILITIES COMMITTEE AGENDA
County of Champaign, Urbana, Illinois
Tuesday, September 8, 2026 - 6:30 p.m.**

Shields-Carter Meeting Room

Bennett Administrative Center, 102 E. Main Street, Urbana, IL 61801

Committee Members: Jenny Lokshin, Chair, Dennise Arres, Ben Crane, Stephanie Fortado, Elly Hanauer-Friedman, Bethany Vanichtheeranont and Daniel Wiggs

Agenda

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- V. Communications
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 - A. Update on Procedures to Close the Downtown Jail
 - B. ILEAS AHU project update
 - C. Courthouse Chiller Replacement Options 4 - 47
 - D. Bennett Upper Deck Parking Lot Coating Issue
 - E. Updates from Maintenance Manager
- VII. Other Business
- VIII. Presiding Officer's Report
 - A. Future Meeting – **October 6, 2026 @ 6:30 pm**
- IX. Designation of Items to be Placed on the Consent Agenda
- X. Adjournment

All meetings are at the Bennett Administrative Center – 102 E Main Street in Urbana – unless otherwise noted. Champaign County will generally, upon request, provide appropriate aids and services leading to effective communication for qualified persons with disabilities. Please contact Administrative Services, 217-384-3776, as soon as possible but no later than 48 hours before the scheduled meeting.



CHAMPAIGN COUNTY BOARD

FACILITIES COMMITTEE MINUTES

County of Champaign, Urbana, Illinois

Tuesday, April 7, 2026, at 6:30 p.m.

Shields-Carter Meeting Room

Bennett Administrative Center

102 E. Main St., Urbana, IL 61801

MINUTES – Subject to Approval

Committee Members

Present: Dennise Arres, Elly Hanauer-Friedman, Jenny Lokshin, Bethany Vanichtheeranont, Daniel Wiggs, and Jeff Wilson

Absent: Ben Crane and Stephanie Fortado

County Staff: Michelle Jett (Acting Facilities Director), Steve Summers (County Executive), Jarod Tinsley (Maintenance Manager) and Mary Ward (Recording Secretary)

Others Present: Jennifer Locke (Board Chair) and Judge Rosenbaum

I. Call to Order and Roll Call

Chair Lokshin called the meeting to order at 6:30 p.m. Roll call was taken, and a quorum was declared present.

II. Approval of Agenda/Addenda

MOTION by Mr. Wilson to approve the agenda; seconded by Ms. Hanauer-Friedman. Upon voice vote, the **MOTION CARRIED** unanimously.

III. Approval of Minutes – February 3, 2026

MOTION by Mr. Wilson to approve the minutes of the February 3, 2026 meeting; seconded by Mr. Wiggs. Upon voice vote, the **MOTION CARRIED** unanimously.

IV. Public Input

Jason Benda spoke about recycling at Bennett and how that is currently being handled.

V. Communications

Mr. Wilson spoke about NASA and the Artemis II space mission to the moon and how exciting it was.

Mx. Arres thanked Chris Smith for his years of service to Champaign County and wished him the best in his future endeavors.

46 VI. New Business

47 A. Discussion and Request for Approval of Invitation to Bid on ITB#2026-004, a Photovoltaic
48 System Installation at Champaign County Pope Jail and Juvenile Detention Center
49

50 Ms. Jett stated we would like to put this out for bid to see if the project is feasible and if the
51 costs match our estimates. Ms. Vanichtheeranont said that costs are not going to go down.
52 Mr. Wilson asked what our target price was. It is \$1.4 million. We have \$800,000 from the
53 geothermal rebates available to help pay for the project. We will need to determine where the
54 other funds come from.
55

56 **MOTION** by Ms. Vanichtheeranont to approve the release of ITB 2026-004, a Photovoltaic
57 System Installation at Champaign County Pope Jail and Juvenile Detention Center; seconded by
58 Mx. Arres. Upon voice vote, the **MOTION CARRIED** unanimously.
59

60 B. Courthouse Projects – Courtroom F Splitting and Chillers
61

62 Ms. Jett started the discussion on splitting Courtroom F. This can be done if we swap out CARF
63 list projects. If we do not replace the carpet and wallpaper for the Courtrooms, we can use
64 those funds to split Courtroom F. Judge Rosenbaum was present and said he understood that.
65 He would like those projects to go back on the CARF list as a future project.
66

67 Mr. Wilson asked if we have an anticipated start date and end date. Ms. Jett said it will start
68 this fall. An end date will depend on scheduling as we will have to work around the Court's
69 schedule. Ms. Locke added that summertime is when a lot of school projects are done so it
70 wouldn't start until fall. There will have to be contingencies with respect to scheduling. We
71 anticipate that problems are going to happen. There will probably be some evening and
72 weekend work required depending on the Court's schedule. Mr. Wilson reminded the
73 committee to be aware as that could open the door for lots of extra charges.
74

75 The consensus of the committee is to move ahead with the next steps for splitting the
76 Courtroom.
77

78 Courthouse Chillers, there was a handout from GHR discussing installing two chillers of the
79 same capacity as the existing chillers. This would be in lieu of installing new larger chillers sized
80 for the projected expansion as discussed at a previous meeting. The sheet gave information for
81 the committee to consider.
82

83 Ms. Hanauer-Friedman asked if this would be a project for 2027. Yes, it would be for 2027.
84 Mx. Arres asked if there was an estimate for the future expansion, just so the committee could
85 have for comparison. Mr. Wilson said that with either the same or increased capacity, the
86 project will need a larger footprint to sit on.
87

88 Mr. Wiggs asked if the option of 225 was looked at without adding electrical scope to the
89 project. We will need to check on that.
90

91 C. Maintenance Job Changes
92

93 Jarod Tinsley, Maintenance Manager, introduced himself to the committee. We are looking at
94 moving to a tiered maintenance structure that would be based on skills. We would also be

developing skills through various training, certifications and formal education. We will work with HR to update and standardize job descriptions. One goal is to save money by completing advanced tasks in-house.

Mr. Wilson asked about the skill set that is required and if they do a lot of repairs or preventive maintenance. HVAC is the biggest need along with minor electrical and minor plumbing. A lot of the work is preventive maintenance along with repairs. The 24/7 buildings require more repairs, especially the Pope Jail. There are a vast array of duties.

Ms. Jett added that there are currently set positions with set numbers at each and it is hard to move up. With this system it would be possible to test to move up the ladder.

Ms. Hanauer-Friedman asked how this fits into the recent re-structure. This would fall under the Maintenance Manager. It gives more flexibility. We will not start everyone at level 1.

Mr. Wiggs asked if these would be union positions. They are union now. Mr. Wiggs suggested that since there is a lot of very diverse equipment and a lot to know that maybe the local trades could work with us on training.

Mx. Arres asked about the funding for the training. It will be paid for by the County. We currently have someone signed up for HVAC training. He will attend that in the mornings and then come into work for the rest of the day.

D. ARPA Spending Update

Ms. Jett said she did not get an update from Kathy. She knows the invoices are coming in. She will have something at the next meeting.

VII. Other Business

There was no other business.

VIII. Presiding Officer's Report

There was no presiding officer's report.

A. Future Meeting – **May 5, 2026 @ 6:30 pm**

Ms. Lokshin announced that the next meeting will be on May 5, 2026 at 6:30 pm.

IX. Designation of Items to be Placed on the Consent Agenda

There are no items for the Consent Agenda.

X. Adjournment

Chair Lokshin adjourned the meeting at 7:09 p.m.

August 4, 2026

GHR No. 7702

Chiller Replacement Options
Champaign County Courthouse

Summary

The two chillers that cool the Courthouse have exceeded their expected service life and are experiencing progressive failures. Replacement options were developed. The two viable replacement Options - Option 2 and Option 3 - vary in terms of sizing for current building area or sizing for an anticipated increase in the area of the Courthouse.

August 4, 2026

GHR No. 7702

Chiller Replacement Options
Champaign County Courthouse

Cost Summary

Project Cost (2026 Dollars)

Option 1	Do nothing.	\$0
Option 2	Two new chillers of same capacity.	\$1,387,500
Option 3	Two new chillers sized for future.	\$2,178,754
Option 4	Two new chillers same physical size. (Not Recommended)	\$1,010,993

Chiller Replacement Options
Champaign County Courthouse

Background Information

There are two existing chillers on the west end of the 2001 Courthouse Addition. These are Trane RTAC packaged air-cooled machines with listed shop drawing of capacity of 200 tons (a “ton” is a capacity measurement related to how much heat can be removed by the machine). These chillers were sized for the area of the Courthouse in 2001. They were installed on the roof to conserve space on the ground.

The existing chillers are partially shielded from view by a mansard-style screen. The chillers are close enough to each other to fit between the screening. The existing configuration, however, allows for re-ingestion of hot condenser air which diminishes their effective capacity.

The existing roof structure in the vicinity of the chillers is a concrete slab on steel. It was designed to minimize vibration and noise issues. The existing chillers are installed on curbs installed on the concrete slab. They are not located above any current courtrooms.

The two chillers are piped in a loop configuration that provides high operating efficiency and system reliability.

The Designers worked with the chiller manufacturer (Trane Company) to locate and space the chillers for listed performance. Their current location adjacent to the mansard roof proved problematic. The chillers are too close to each other and too close to the mansard roof sections.

The existing chillers met efficiency standards of 2001. They employ a refrigerant (R-134a) that was standard in 2001.

Chiller Replacement Options
Champaign County Courthouse

Current Status

After 25 years, the chillers have significantly exceeded their 20-year service life.

They were damaged in the 2021 hailstorm and repaired.

They are experiencing compressor failures and condenser fan failures. The number of failures can be expected to increase as time moves forward.

The refrigerant (R134a) employed in these machines has been outlawed. This complicates procurement of replacement parts and refrigerant while significantly raising the cost of repairs and maintenance.

Recent code-mandated increases in efficiency have driven design changes in new chillers that make them considerably larger and considerably heavier. (Those increases in efficiency translate to recognizable reductions in energy consumption and operating cost.) The existing chillers can not be replaced with identical machines due to the difference in physical size.

The proximity of the chillers to each other and to the mansard roofs acts to reduce their efficiency and complicate maintenance.

Solutions to the decreasing reliability of the 25 year old chillers need to be identified.

Chiller Replacement Options
Champaign County Courthouse

Option One - Do Nothing

This option waits for equipment failures to happen. Once a failure is experienced, the problem would be diagnosed and new parts ordered. Lead times on replacement parts can vary widely. The obsolescence of these machines will increasingly complicate this process.

Equipment failures during the cooling season will have an effect on conditions in the building. A total chiller failure will have a major effect. Effects would likely include loss of temperature and humidity control in the building coupled with the inability to introduce outside air for ventilation.

This option is familiar to anyone who has owned an old vehicle that slowly starts to fail. Repairs cost more and more as one debates the wisdom of continuing to invest in a vehicle that needs to be replaced.

Chiller Replacement Options
Champaign County Courthouse

Option Two - New Chillers of Approximately Same Tonnage (207 Tons Each, Scroll Compressors)

The Facility Committee discussed the option of installing two new chillers of the same capacity as the existing chillers. This assumes no increase in the area of the Courthouse. This would be in lieu of installing new larger chillers sized for the projected future addition. This option allows re-use of existing electrical feeders as well as re-use of existing chiller pumps.

New machines are regulated by the current energy code and are required to be of higher efficiency than those manufactured in 2001.

The actual tonnage available from such machines should be based on:

- Glycol anti-freeze in the chilled water system (30% EG).
- Elevated condensing air temperature (105°F).
- Reduced chiller water discharge temperature (44°F).

In a somewhat related vein, the type of refrigerant (R-134a) employed in the 2001 chillers is no longer allowable due to its ozone depletion potential.

The effects of higher efficiency and environmentally friendly refrigerants (R-32 or R-513A) makes new chillers physically larger than those manufactured in 2001.

Such machines would not fit on the existing supporting curbs.

Because of the larger size of new chillers, phasing of this work requires the orientation of the chillers to be revised.

Even if new machines would fit on the existing curbs, they would be too close to each other and to the mansard roof structure. Addressing those limitations requires the same structural work as for larger chillers sized for the future. Details of that required structural work are outlined under Option 3 and are identical to this option.

So, these estimates allow for a reduction of project cost in comparison with Option 3. This is primarily due to:

- Reduced cost of the chillers themselves.
- Negating the need to upsize electrical to the chillers.
- Negating the need to upsize the chiller pumps.

If the future addition was never going to happen this revised scope is what would be recommended.

August 4, 2026

GHR No. 7702

Chiller Replacement Options
Champaign County Courthouse

Similarly, if the future addition wasn't going to happen for twenty years (the service life of a chiller) then this revised scope would be recommended.

If and when the addition project materializes then larger chillers will be needed.

DRAFT

Chiller Replacement Options
Champaign County Courthouse

Option Three - New Larger Chillers (310 Tons Each, Screw Compressors)

This assumes an increase in Courthouse area of 43,000 square feet. Existing occupiable area is 131,556 sq ft. This is roughly a 32% increase.

These machines would be in compliance with current energy codes and would employ currently-acceptable refrigerants. That, coupled with the increase in capacity, requires new structural supports and partial removal of some sections of the mansard roof.

Phasing of the work requires the existing orientation of the chillers to be revised.

A vertical screen is proposed on the south side of the chillers to provide visual and acoustic screening. This matter of visual and acoustic screening must be thoroughly discussed in the design stage to achieve consensus.

Additional measures to mitigate chiller noise would include sound-deadening wraps on the compressors and short discharge tubes on the condenser fans. Note the chillers would not be located over the current third floor courtroom.

Replacement of the chillers must be done in a phased manner to avoid leaving the building without mechanical cooling. The use of curbs to support the new chillers is not feasible for this reason.

The proposed structural supports will allow phasing of the work. One chiller would be removed and replaced with a new machine. Then the second chiller would be removed and replaced.

Phasing requires the work to be accomplished when cooling loads are manageable and when roof work can be properly executed. This suggests windows of March – April – May or September – October – November.

Multiple crane rentals would be needed to remove the existing chillers, erect new structural steel and install new chillers. The crane will be quite large and will involve shutdowns of Elm Street. Crane lifts are envisioned as weekend work.

The pumping scheme for the chillers would be revised to accommodate higher flows and to implement variable chiller water flow. This will increase chilled water system efficiency.

The chilled water system pumps currently employ variable flow technology and will continue to do so. Revisions to system flow would be part of the future building expansion.

Adequate power is available to drive the proposed chillers. This work will be phased and will involve new feeders installed from the basement to the roof.

The new chillers would be integrated into the Building Automation System.

Chiller Replacement Options
Champaign County Courthouse

This option requires additional electrical work to power the machines and it requires replacement of the chiller pumps.

As a necessary investment in infrastructure, this work has to be performed either before an addition project or as part of that addition project. That would drive up the cost of the addition project and / or reduce the size of the addition.

These machines would employ screw compressors due to the size of the chillers. Machines smaller than 215 tons employ lower-cost scroll compressors. The screw compressors cost about a third more than scroll compressors. Latest price quotes note that machines employing screw compressors are in demand for data centers.

This option is recommended if a building addition is planned.

Chiller Replacement Options
Champaign County Courthouse

Option Four - Not Recommended. New Chillers of the Same Physical Footprint (But Reduced Capacity) (177 Tons Each, Scroll Compressors)

This assumes no increase in Courthouse area.

The concept is to work backwards from the footprint of the existing chillers.

A review of comparable air-cooled package chillers confirms the general increase in chiller dimensions between 2001 and 2026. A Daikin scroll compressor machine of similar dimension to existing tons provides a capacity of 159 tons which is 20% less than what's current in place.

To put this in perspective, two chillers of this size would result in coverage of 413 square feet per ton. This should be compared with current coverage of 329 square feet per ton. Facility Staff report the existing chillers currently labor to keep up in hot / humid weather. Specifically, staff has reported three of the four existing compressors have to run to satisfy the load and those three compressors will not keep up with the load on hot humid days. This suggests a reduction in capacity is undesirable.

This building exhibits virtually no load diversity and can be expected to be more heavily occupied in the future. If anything, the cooling load in the Courthouse will go up in the future, not down.

While this option allows the existing chiller supports to be re-used, it does nothing to prepare for the future. When an addition is constructed there is no part of this option that can remain.

This option does not re-space the chillers to improve airflow nor does it modify / remove any of the mansard roof. It preserves the less-than-optimal geometry of the existing situation which reduces the efficiency of the chillers.

This option is not in the best interests of the County. Deliberately installing undersized chillers will result in significant un-met load hours (failure to meet thermostat settings) that very likely will result in unhappy occupants.

August 4, 2026

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Chiller Replacement Options
Champaign County Courthouse

Schedule

Lead times on scroll chillers are currently running at 16 weeks. Screw chillers are currently running at 24 weeks (due to data center demand). Phasing requires the work to be accomplished when cooling loads are manageable and when roof work can be properly executed.

This suggests windows of March - April - May or September - October - November for chiller work.

JNG/smh

2026.07.06 Courthouse Chiller Options.JNG.wpd

Option 2 - Two New Chillers with Same Capacity
Champaign County Courthouse

Option 2 Project Cost Estimate (Same Capacity Chillers)		
Estimated Construction Cost		\$997,840
Design Contingency 10%		\$99,784
Subtotal		\$1,097,624
Bid Contingency 5%		\$54,881
Subtotal "A"		\$1,152,505
Construction Contingency 10%		\$115,251
Subtotal		\$1,267,756
A/E Fee (8.16%) CDB Group 2R Applied to "A"		\$94,044
Reimbursables		
Site Observation, Hourly	\$5,500	
Structural Design, Est	\$9,000	
Architectural Design, Est	\$10,000	
Advertising	\$1,200	
Printing, Not Required	\$-0-	
Total Reimbursables		\$25,700
Project Cost Estimate		\$1,387,500

Option 2 - Two New Chillers with Same Capacity
Champaign County Courthouse

Option 2 Construction Cost Estimate Summary (Same Capacity Chillers)		
<u>Prime Contract</u>		
• General		\$241,000
<u>Subcontracts</u>		
• HVAC	\$641,000	
• Electrical	\$34,000	
• Ventilating	\$9,000	
• Plumbing	\$1,000	
• Fire Protection	\$0	
• Insulation	\$15,000	
• Test and Balance	\$9,000	
• Temperature Controls	\$33,000	
Total Subs	\$742,000	
2% Mark-Up	\$14,840	
Total Subcontracts		<u>\$756,840</u>
Total Construction Cost Estimate		<u><u>\$997,840</u></u>

OPINION OF PROBABLE COST - General

GHR Engineers & Associates, Inc.

RE: 7702
Two New Chillers with Same Capacity
Champaign County Courthouse
Prime Contract - Option 2

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
time printed: 10:59 AM
prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 crane rentals in heating estimate, it may make better sense to have the General handle them				-\$0-
2.0 protect roof	1	ls	\$1,300.00	\$1,300
3.0 first chiller removed by heating				-\$0-
4.0 remove portions of the mansard, this is politically sensitive and needs discussion, WAG	1	ls	\$40,000.00	\$40,000
5.0 remove existing chiller curb and patch roof	1	ls	\$6,000.00	\$6,000
6.0 cut roof to allow install of new column tubes	4	ea	\$2,000.00	\$8,000
7.0 install new curb structural steel, WAG	1	ls	\$55,000.00	\$55,000
8.0 roof repairs (weather sensitive)	1	ls	\$3,000.00	\$3,000
9.0 first chiller set by Heating				-\$0-
10.0 second chiller removed by Heating				-\$0-
11.0 removed remaining chiller curb and patch roof	1	ls	\$6,000.00	\$6,000
12.0 cut roof to allow install of new column tubes	2	ea	\$2,000.00	\$4,000
13.0 install new structural steel, WAG	1	ls	\$40,000.00	\$40,000
14.0 roof repairs (weather sensitive)	1	ls	\$3,000.00	\$3,000
15.0 second chiller set by Heating				-\$0-
16.0 painting of any new / relocated steel, WAG	1	ls	\$10,000.00	\$10,000
17.0 pipe portals for power and control conduits	2	ea	\$1,000.00	\$2,000
18.0 cut and repair roof for portals	2	ea	\$1,200.00	\$2,400
19.0 allow for installation of screen on south of the building (where mansard currently exists, may need an acoustic consultant) total WAG	1	ls	\$20,000.00	\$20,000
20.0 remove roof protection	1	ls	\$1,200.00	\$1,200
21.0 allow for new conduit chases from basement to roof (try to go through small offices), WAG				-\$0-
22.0 core drills				-\$0-
23.0 drywall and patching				-\$0-
24.0 painting of chases				-\$0-
25.0 ceiling removal / replacement, allow				-\$0-
26.0 remove roof hood curb and patch roof	1	ls	\$1,800.00	\$1,800
27.0 cut roof (concrete) and install new roof hood curb	1	ls	\$2,900.00	\$2,900
28.0 patch roof	1	ls	\$1,200.00	\$1,200
29.0 difficulty factor	1	ls	\$5,000.00	\$5,000

30.0 Miscellaneous	10.00%	\$21,280
31.0 Bond	1.50%	\$3,511
32.0 Insurance	1.50%	\$3,511

General Subcontract (actual) \$241,102
General Subcontract (rounded) **\$241,000**

OPINION OF PROBABLE COST - Heating

GHR Engineers & Associates, Inc.

RE: 7702
Two New Chillers with Same Capacity
Champaign County Courthouse
Subcontract - Option 2

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
time printed: 11:03 AM
prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 mobilize	1	ls	\$9,000.00	\$9,000
2.0 drain one chiller, save glycol	1	ls	\$1,400.00	\$1,400
3.0 disconnect and remove chiller piping to suit new machine	1	ls	\$4,000.00	\$4,000
4.0 crane rental two day (to bring up steel and to remove one existing chiller) allow \$29,150 for Saturday and Sunday - per Uhlarik e-mail	1	ls	\$29,200.00	\$29,200
5.0 protect roof (by General)				-\$0-
6.0 remove one chiller	1	ls	\$3,500.00	\$3,500
7.0 this allows general work to proceed on half the roof				-\$0-
8.0 after new steel work is done the first new chiller can be installed				-\$0-
9.0 crane rental, one day	1	ls	\$16,000.00	\$16,000
10.0 set one new chiller on neoprene isolators on steel	1	ls	\$4,000.00	\$4,000
11.0 208 ton chiller material quote <u>\$165,000</u> with 5% mark-up (8.1.2026)	1	ls	\$173,900.00	\$173,900
12.0 extend 6" chiller piping, add air vents and neoprene bulb-type flex connectors	1	ls	\$15,000.00	\$15,000
13.0 chiller valves and connections	1	ls	\$5,000.00	\$5,000
14.0 chiller gages and thermometers, install differential pressure transmitter provided by TC	1	ls	\$1,200.00	\$1,200
15.0 allow for new chiller piping roof supports (may not need)	2	ea	\$3,000.00	\$6,000
16.0 remove one chiller pump (15 HP) retain valves	1	ls	\$1,200.00	\$1,200
17.0 retain chiller pump and trim				-\$0-
18.0 install differential pressure transmitter provided by TC				-\$0-
19.0 top off glycol, WAG (stay with Nu-Calgon EG for now)	1	ls	\$4,000.00	\$4,000
20.0 put new chiller into operation	1	ls	\$1,200.00	\$1,200
21.0 once new chiller is in operation the other existing chiller can be removed				-\$0-
22.0 crane rental, one day	1	ls	\$16,000.00	\$16,000
23.0 remove the other existing chiller	1	ls	\$3,500.00	\$3,500
24.0 this allows general work to proceed on the other half of the structure				-\$0-
25.0 after structural work is done the second chiller can be installed				-\$0-
26.0 crane rental, one day	1	ls	\$16,000.00	\$16,000
27.0 set second new chiller on neoprene isolators	1	ls	\$4,000.00	\$4,000
28.0 208 ton chiller material quote <u>\$165,000</u> with 5% mark-up (8.1.2026)	1	ls	\$173,000.00	\$173,000
29.0 extend 6" chiller piping, add air vents and neoprene bulb-type flex connectors	1	ls	\$15,000.00	\$15,000
30.0 chiller valves and connections	1	ls	\$5,000.00	\$5,000
31.0 chiller gages and thermometers, install differential pressure transmitter provided by TC	1	ls	\$1,200.00	\$1,200
32.0 allow for new chiller piping roof supports (may not need)	2	ea	\$3,000.00	\$6,000
33.0 remove remaining chiller pump (15 HP), retain valves	1	ls	\$1,200.00	\$1,200
34.0 retain chiller pump and trim				-\$0-
35.0 install differential pressure transmitter provided by TC				-\$0-
36.0 top off glycol (stay with Nu-Calgon EG for now)	1	ls	\$4,000.00	\$4,000
37.0 put second chiller into operation	1	ls	\$1,200.00	\$1,200
38.0 allow for sound deadening blankets on compressors (this is apparently aftermarket)	4	ea	\$2,000.00	\$8,000
39.0 allow for sound tubes on condenser fans (this is apparently aftermarket), watch the esp limitation	40	ea	\$800.00	\$32,000
40.0 rotate engine exhaust discharge pipe to blow away from the chillers	1	ls	\$1,200.00	\$1,200
41.0 difficulty factor related to working in Courthouse	1	ls	\$4,000.00	\$4,000
42.0 Miscellaneous			10.00%	\$56,590
43.0 Bond			1.50%	\$9,337
44.0 Insurance			1.50%	\$9,337

Heating Contract (actual) \$641,165
Heating Contract (rounded) **\$641,000**

OPINION OF PROBABLE COST - Electrical

GHR Engineers & Associates, Inc.

RE: 7702
Two New Chillers with Same Capacity
Champaign County Courthouse
Subcontract - Option 2

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
time printed: 11:03 AM
prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 retain existing 3,000 amp Square D Main Distribution Switchboard				-\$0-
2.0 disconnect one existing chiller (remove parallel feeder 3#4/0 in 2" C)				-\$0-
remove existing 500 amp chiller switch and 400 amp spare, turn				
3.0 over to Owner				-\$0-
4.0 new 700 amp switch, modify switchboard blank-offs, allow				-\$0-
5.0 new chiller feeder, two sets parallel 350 MCM plus #1/0 ground				-\$0-
6.0 new chases by General Contractor				-\$0-
7.0 portals by General Contractor (move to Electrical)				-\$0-
8.0 final connection to chiller, dual point connection				-\$0-
9.0 re-use conduit for controls, allow conduit to new machine	1	ls	\$1,000.00	\$1,000
10.0 run separate circuit to chiller evap heater	1	ls	\$4,000.00	\$4,000
11.0 provide new convenience outlets at chillers, may not need	2	ea	\$900.00	\$1,800
12.0 disconnect existing chiller pump (15 HP)				-\$0-
13.0 allow for new switch and starter in existing MCC, may not need				-\$0-
14.0 new circuit for new chiller pump (assume 20 HP)				-\$0-
15.0 install VFD provided by TC Sub	1	ls	\$1,000.00	\$1,000
16.0 final connection to chiller pump (MCC is within sight)				-\$0-
disconnect remaining chiller (remove parallel feeders 3#4/0 in 2" C)	1	ls	\$3,000.00	\$3,000
18.0 remove 500 amp chiller switch, turn over to Owner				-\$0-
19.0 new 700 amp switch, modify switchboard blank-offs, allow				-\$0-
20.0 new chiller feeder, two sets parallel 350 MCM plus #1/0 ground				-\$0-
21.0 new chase by General Contractor				-\$0-
22.0 portals by General Contractor (move to Electrical)				-\$0-
23.0 final connection to chiller, dual point connection				-\$0-
24.0 re-use conduit for controls, allow conduit to new machine	1	ls	\$1,000.00	\$1,000
25.0 run separate circuit to chiller evap heater	1	ls	\$4,000.00	\$4,000
26.0 disconnect existing chiller pump (15 HP)				-\$0-
27.0 allow for new switch and starter in existing MCC, may not need				-\$0-
28.0 new circuit for new chiller pump (assume 20 HP)				-\$0-
29.0 install VFD provided by TC Sub	1	ls	\$1,000.00	\$1,000
30.0 final connection to chiller pump (MCC is within sight)				-\$0-
31.0 allow for miscellaneous work related to new chases				-\$0-
32.0 surge protection at chillers, WAG	2	ea	\$3,000.00	\$6,000
33.0 grounding and bonding, bond chillers to structural steel	1	ls	\$3,000.00	\$3,000
34.0 difficulty factor	1	ls	\$4,000.00	\$4,000

35.0 Miscellaneous	10.00%	\$2,980
36.0 Bond	1.50%	\$492
37.0 Insurance	1.50%	\$492

Electrical Subcontract (actual) \$33,763
Electrical Subcontract (rounded) **\$34,000**

OPINION OF PROBABLE COST - Ventilating

GHR Engineers & Associates, Inc.

RE: 7702
Two New Chillers with Same Capacity
Champaign County Courthouse
Subcontract - Option 2

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
time printed: 11:03 AM
prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 allow for relocating existing elev smoke vent (RH-5)	1	ls	\$3,800.00	\$3,800
2.0 extend boiler flue to two feet higher than chiller	1	ls	\$4,000.00	\$4,000

3.0 Miscellaneous	10.00%	\$780
4.0 Bond	1.50%	\$129
5.0 Insurance	1.50%	\$129

Ventilating Subcontract (actual)	\$8,837
Ventilating Subcontract (rounded)	\$9,000

OPINION OF PROBABLE COST - Plumbing

GHR Engineers & Associates, Inc.

RE: 7702
Two New Chillers with Same Capacity
Champaign County Courthouse
Subcontract - Option 2

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
time printed: 11:03 AM
prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 assume hose bibb available in upper floor old building				-\$0-
2.0 allow for relocating existing 4" vent (may not need)	1	ls	\$1,000.00	\$1,000

3.0 Miscellaneous	10.00%	\$100
4.0 Bond	1.50%	\$17
5.0 Insurance	1.50%	\$17

Plumbing Subcontract (actual) \$1,133
Plumbing Subcontract (rounded) **\$1,000**

OPINION OF PROBABLE COST - Fire Protection

GHR Engineers & Associates, Inc.

RE: 7702
Two New Chillers with Same Capacity
Champaign County Courthouse
Subcontract - Option 2

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
time printed: 11:03 AM
prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 No Work				-\$0-

2.0 Miscellaneous	10.00%
3.0 Bond	1.50%
4.0 Insurance not included	1.50%

Fire Protection Subcontract (actual)
Fire Protection Subcontract (rounded)

OPINION OF PROBABLE COST - Insulation

GHR Engineers & Associates, Inc.

RE: 7702
Two New Chillers with Same Capacity
Champaign County Courthouse
Subcontract - Option 2

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
time printed: 11:03 AM
prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 insulate chiller piping (on roof)	1	ls	\$6,000.00	\$6,000
2.0 insulate chiller piping (on roof)	1	ls	\$6,000.00	\$6,000
3.0 insulate chiller pump and piping (in basement)				-\$0-
4.0 insulate chiller pump and piping (in basement)				-\$0-
5.0 difficulty factor	1	ls	\$1,500.00	\$1,500

6.0 Miscellaneous	10.00%	\$1,350
7.0 Bond	1.50%	\$223
8.0 Insurance	1.50%	\$223

Insulation Subcontract (actual) \$15,296
Insulation Subcontract (rounded) **\$15,000**

OPINION OF PROBABLE COST - Test and Balance

GHR Engineers & Associates, Inc.

RE: 7702
Two New Chillers with Same Capacity
Champaign County Courthouse
Subcontract - Option 2

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
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prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 balance - chiller and chiller pump	1	ls	\$4,000.00	\$4,000
2.0 balance - chiller and chiller pump	1	ls	\$4,000.00	\$4,000

3.0 Miscellaneous	10.00%	\$800
4.0 Bond	1.50%	\$132
5.0 Insurance	1.50%	\$132

Test and Balance Subcontract (actual)	\$9,064
Test and Balance Subcontract (rounded)	\$9,000

OPINION OF PROBABLE COST - Temp Controls

GHR Engineers & Associates, Inc.

RE: 7702
Two New Chillers with Same Capacity
Champaign County Courthouse
Proprietary Alpha - Option 2

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
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prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 removals				
2.0 integrate one new chiller				
3.0 integrate chiller pump and VFD				
4.0 commission one new chiller and chiller pump				
5.0 integrate remaining new chiller				
6.0 integrate remaining new chiller pump and VFD				
7.0 commission remaining new chiller and chiller pump				
8.0 graphics				
9.0 new VFD's (turn over to Electrical Subcontractor)				
10.0 new communication wiring (extend unclear due to lack of answers from ACS)				
11.0 vendor quote Nathan Seymour 12.19.2025 (\$27,700 with 5% markup), looks low	1	ls	\$28,875.00	\$28,875

12.0 Miscellaneous	10.00%	\$2,888
13.0 Bond	1.50%	\$476
14.0 Insurance	1.50%	\$476

Temperature Control Subcontract (actual) \$32,715
Temperature Control Subcontract (rounded) **\$33,000**

Option 3 - Two New Chillers Sized for Future Expansion of Courthouse
Champaign County Courthouse

Option 3 Project Cost Estimate		
Estimated Construction Cost		\$1,577,620
Design Contingency 10%		\$157,762
Subtotal		\$1,735,382
Bid Contingency 5%		\$86,769
Subtotal "A"		\$1,822,151
Construction Contingency 10%		\$182,215
Subtotal		\$2,004,366
A/E Fee (8.16%) CDB Group 2R Applied to "A"		\$148,688
Reimbursables		
Site Observation, Hourly	\$5,500	
Structural Design, Est	\$9,000	
Architectural Design, Est	\$10,000	
Advertising	\$1,200	
Printing, Not Required	\$-0-	
Total Reimbursables		\$25,700
Project Cost Estimate		\$2,178,754

Option 3 - Two New Chillers Sized for Future Expansion of Courthouse
Champaign County Courthouse

Option 3 Construction Cost Estimate Summary		
<u>Prime Contract</u>		
• General		\$271,000
<u>Subcontracts</u>		
• HVAC	\$1,038,000	
• Electrical	\$171,000	
• Ventilating	\$9,000	
• Plumbing	\$1,000	
• Fire Protection	\$0	
• Insulation	\$20,000	
• Test and Balance	\$9,000	
• Temperature Controls	\$33,000	
Total Subs	\$1,281,000	
2% Mark-Up	\$25,620	
Total Subcontracts		<u>\$1,306,620</u>
Total Construction Cost Estimate		<u><u>\$1,577,620</u></u>

OPINION OF PROBABLE COST - General

GHR Engineers & Associates, Inc.

RE: 7702
Two New Chillers Sized for Future Expansion of Courthouse
Champaign County Courthouse
Prime Contract - Option 3

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
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prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 crane rentals in heating estimate, it may make better sense to have the General handle them				-\$0-
2.0 protect roof	1	ls	\$1,300.00	\$1,300
3.0 first chiller removed by heating				-\$0-
4.0 remove portions of the mansard, this is politically sensitive and needs discussion, WAG	1	ls	\$40,000.00	\$40,000
5.0 remove existing chiller curb and patch roof	1	ls	\$6,000.00	\$6,000
6.0 cut roof to allow install of new column tubes	4	ea	\$2,000.00	\$8,000
7.0 install new curb structural steel, WAG	1	ls	\$55,000.00	\$55,000
8.0 roof repairs (weather sensitive)	1	ls	\$3,000.00	\$3,000
9.0 first chiller set by Heating				-\$0-
10.0 second chiller removed by Heating				-\$0-
11.0 removed remaining chiller curb and patch roof	1	ls	\$6,000.00	\$6,000
12.0 cut roof to allow install of new column tubes	2	ea	\$2,000.00	\$4,000
13.0 install new structural steel, WAG	1	ls	\$40,000.00	\$40,000
14.0 roof repairs (weather sensitive)	1	ls	\$3,000.00	\$3,000
15.0 second chiller set by Heating				-\$0-
16.0 painting of any new / relocated steel, WAG	1	ls	\$10,000.00	\$10,000
17.0 pipe portals for power and control conduits	2	ea	\$1,000.00	\$2,000
18.0 cut and repair roof for portals	2	ea	\$1,200.00	\$2,400
19.0 allow for installation of screen on south of the building (where mansard currently exists, may need an acoustic consultant) total WAG	1	ls	\$20,000.00	\$20,000
20.0 remove roof protection	1	ls	\$1,200.00	\$1,200
21.0 allow for new conduit chases from basement to roof (try to go through small offices), WAG	3	ea	\$2,000.00	\$6,000
22.0 core drills	12	ea	\$200.00	\$2,400
23.0 drywall and patching	3	ea	\$4,000.00	\$12,000
24.0 painting of chases	3	ea	\$1,500.00	\$4,500
25.0 ceiling removal / replacement, allow	1	ls	\$1,500.00	\$1,500
26.0 remove roof hood curb and patch roof	1	ls	\$1,800.00	\$1,800
27.0 cut roof (concrete) and install new roof hood curb	1	ls	\$2,900.00	\$2,900
28.0 patch roof	1	ls	\$1,200.00	\$1,200
29.0 difficulty factor	1	ls	\$5,000.00	\$5,000

30.0 Miscellaneous	10.00%	\$23,920
31.0 Bond	1.50%	\$3,947
32.0 Insurance	1.50%	\$3,947

General Subcontract (actual) \$271,014
General Subcontract (rounded) **\$271,000**

OPINION OF PROBABLE COST - Heating

GHR Engineers & Associates, Inc.

RE: 7702
Two New Chillers Sized for Future Expansion of Courthouse
Champaign County Courthouse
Subcontract - Option 3

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
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prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 mobilize	1	ls	\$9,000.00	\$9,000
2.0 drain one chiller, save glycol	1	ls	\$1,400.00	\$1,400
3.0 disconnect and remove chiller piping to suit new machine	1	ls	\$4,000.00	\$4,000
4.0 crane rental two day (to bring up steel and to remove one existing chiller) allow \$29,150 for Saturday and Sunday - per Uhlarik e-mail	1	ls	\$29,200.00	\$29,200
5.0 protect roof (by General)				-\$0-
6.0 remove one chiller	1	ls	\$3,500.00	\$3,500
7.0 this allows general work to proceed on half the roof				-\$0-
8.0 after new steel work is done the first new chiller can be installed				-\$0-
9.0 crane rental, one day	1	ls	\$16,000.00	\$16,000
10.0 set one new chiller on neoprene isolators on steel	1	ls	\$4,000.00	\$4,000
11.0 310 ton chiller material quote \$325,000 with 5% mark-up (8.1.2026)	1	ls	\$341,000.00	\$341,000
12.0 extend 6" chiller piping, add air vents and neoprene bulb-type flex connectors	1	ls	\$15,000.00	\$15,000
13.0 chiller valves and connections	1	ls	\$5,000.00	\$5,000
14.0 chiller gages and thermometers, install differential pressure transmitter provided by TC	1	ls	\$1,200.00	\$1,200
15.0 allow for new chiller piping roof supports (may not need)	2	ea	\$3,000.00	\$6,000
16.0 remove one chiller pump (15 HP) retain valves	1	ls	\$1,200.00	\$1,200
17.0 new chiller pump and trim, assume 20 HP	1	ls	\$7,000.00	\$7,000
18.0 install differential pressure transmitter provided by TC	1	ls	\$500.00	\$500
19.0 top off glycol, WAG (stay with Nu-Calgon EG for now)	1	ls	\$4,000.00	\$4,000
20.0 put new chiller into operation	1	ls	\$1,200.00	\$1,200
21.0 once new chiller is in operation the other existing chiller can be removed				-\$0-
22.0 crane rental, one day	1	ls	\$16,000.00	\$16,000
23.0 remove the other existing chiller	1	ls	\$3,500.00	\$3,500
24.0 this allows general work to proceed on the other half of the structure				-\$0-
25.0 after structural work is done the second chiller can be installed				-\$0-
26.0 crane rental, one day	1	ls	\$16,000.00	\$16,000
27.0 set second new chiller on neoprene isolators	1	ls	\$4,000.00	\$4,000
28.0 310 ton chiller material quote \$325,000 with 5% mark-up (8.1.2026)	1	ls	\$341,000.00	\$341,000
29.0 extend 6" chiller piping, add air vents and neoprene bulb-type flex connectors	1	ls	\$15,000.00	\$15,000
30.0 chiller valves and connections	1	ls	\$5,000.00	\$5,000
31.0 chiller gages and thermometers, install differential pressure transmitter provided by TC	1	ls	\$1,200.00	\$1,200
32.0 allow for new chiller piping roof supports (may not need)	2	ea	\$3,000.00	\$6,000
33.0 remove remaining chiller pump (15 HP), retain valves	1	ls	\$1,200.00	\$1,200
34.0 new chiller pump and trim, assume 20 HP	1	ls	\$7,000.00	\$7,000
35.0 install differential pressure transmitter provided by TC	1	ls	\$500.00	\$500
36.0 top off glycol (stay with Nu-Calgon EG for now)	1	ls	\$4,000.00	\$4,000
37.0 put second chiller into operation	1	ls	\$1,200.00	\$1,200
38.0 allow for sound deadening blankets on compressors (this is apparently aftermarket)	4	ea	\$2,000.00	\$8,000
39.0 allow for sound tubes on condenser fans (this is apparently aftermarket), watch the esp limitation	40	ea	\$800.00	\$32,000
40.0 rotate engine exhaust discharge pipe to blow away from the chillers	1	ls	\$1,200.00	\$1,200
41.0 difficulty factor related to working in Courthouse	1	ls	\$4,000.00	\$4,000
42.0 Miscellaneous			10.00%	\$91,600
43.0 Bond			1.50%	\$15,114
44.0 Insurance			1.50%	\$15,114

Heating Contract (actual) \$1,037,828
Heating Contract (rounded) **\$1,038,000**

OPINION OF PROBABLE COST - Electrical

GHR Engineers & Associates, Inc.

RE: 7702
Two New Chillers Sized for Future Expansion of Courthouse
Champaign County Courthouse
Subcontract - Option 3

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
time printed: 11:32 AM
prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 retain existing 3,000 amp Square D Main Distribution Switchboard				-\$0-
disconnect one existing chiller (remove parallel feeder 3#4/0 in 2"				
2.0 C)	1	ls	\$3,000.00	\$3,000
remove existing 500 amp chiller switch and 400 amp spare, turn				
3.0 over to Owner	1	ls	\$1,000.00	\$1,000
4.0 new 700 amp switch, modify switchboard blank-offs, allow	1	ls	\$10,000.00	\$10,000
5.0 new chiller feeder, two sets parallel 350 MCM plus #1/0 ground	280	ft	\$122.00	\$34,160
6.0 new chases by General Contractor				-\$0-
7.0 portals by General Contractor (move to Electrical)				-\$0-
8.0 final connection to chiller, single point connection	1	ls	\$2,800.00	\$2,800
9.0 re-use conduit for controls, allow conduit to new machine	1	ls	\$1,000.00	\$1,000
10.0 run separate circuit to chiller evap heater	1	ls	\$4,000.00	\$4,000
11.0 provide new convenience outlets at chillers, may not need	2	ea	\$900.00	\$1,800
12.0 disconnect existing chiller pump (15 HP)	1	ls	\$900.00	\$900
13.0 allow for new switch and starter in existing MCC, may not need	1	ls	\$5,000.00	\$5,000
14.0 new circuit for new chiller pump (assume 20 HP)	1	ls	\$2,800.00	\$2,800
15.0 install VFD provided by TC Sub	1	ls	\$1,000.00	\$1,000
16.0 final connection to chiller pump (MCC is within sight)	1	ls	\$800.00	\$800
disconnect remaining chiller (remove parallel feeders 3#4/0 in 2"				
17.0 C)	1	ls	\$3,000.00	\$3,000
18.0 remove 500 amp chiller switch, turn over to Owner	1	ls	\$900.00	\$900
19.0 new 700 amp switch, modify switchboard blank-offs, allow	1	ls	\$10,000.00	\$10,000
20.0 new chiller feeder, two sets parallel 350 MCM plus #1/0 ground	1	ls	\$34,160.00	\$34,160
21.0 new chase by General Contractor				-\$0-
22.0 portals by General Contractor (move to Electrical)				-\$0-
23.0 final connection to chiller, single point connection	1	ls	\$2,800.00	\$2,800
24.0 re-use conduit for controls, allow conduit to new machine	1	ls	\$1,000.00	\$1,000
25.0 run separate circuit to chiller evap heater	1	ls	\$4,000.00	\$4,000
26.0 disconnect existing chiller pump (15 HP)	1	ls	\$900.00	\$900
27.0 allow for new switch and starter in existing MCC, may not need	1	ls	\$5,000.00	\$5,000
28.0 new circuit for new chiller pump (assume 20 HP)	1	ls	\$2,800.00	\$2,800
29.0 install VFD provided by TC Sub	1	ls	\$1,000.00	\$1,000
30.0 final connection to chiller pump (MCC is within sight)	1	ls	\$800.00	\$800
31.0 allow for miscellaneous work related to new chases	3	ea	\$1,100.00	\$3,300
32.0 surge protection at chillers, WAG	2	ea	\$3,000.00	\$6,000
33.0 grounding and bonding, bond chillers to structural steel	1	ls	\$3,000.00	\$3,000
34.0 difficulty factor	1	ls	\$4,000.00	\$4,000

35.0 Miscellaneous	10.00%	\$15,092
36.0 Bond	1.50%	\$2,490
37.0 Insurance	1.50%	\$2,490

Electrical Subcontract (actual) \$170,992
Electrical Subcontract (rounded) **\$171,000**

OPINION OF PROBABLE COST - Ventilating

GHR Engineers & Associates, Inc.

RE: 7702
Two New Chillers Sized for Future Expansion of Courthouse
Champaign County Courthouse
Subcontract - Option 3

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
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prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 allow for relocating existing elev smoke vent (RH-5)	1	ls	\$3,800.00	\$3,800
2.0 extend boiler flue to two feet higher than chiller	1	ls	\$4,000.00	\$4,000

3.0 Miscellaneous	10.00%	\$780
4.0 Bond	1.50%	\$129
5.0 Insurance	1.50%	\$129

Ventilating Subcontract (actual)	\$8,837
Ventilating Subcontract (rounded)	\$9,000

OPINION OF PROBABLE COST - Plumbing

GHR Engineers & Associates, Inc.

RE: 7702
Two New Chillers Sized for Future Expansion of Courthouse
Champaign County Courthouse
Subcontract - Option 3

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
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prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 assume hose bibb available in upper floor old building				-\$0-
2.0 allow for relocating existing 4" vent (may not need)	1	ls	\$1,000.00	\$1,000

3.0 Miscellaneous	10.00%	\$100
4.0 Bond	1.50%	\$17
5.0 Insurance	1.50%	\$17

Plumbing Subcontract (actual) \$1,133
Plumbing Subcontract (rounded) **\$1,000**

OPINION OF PROBABLE COST - Fire Protection

GHR Engineers & Associates, Inc.

RE: 7702
Two New Chillers Sized for Future Expansion of Courthouse
Champaign County Courthouse
Subcontract - Option 3

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
time printed: 11:32 AM
prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 assume sprinkler layouts unaffected by new conduit chases, verify!				-\$0-

2.0 Miscellaneous	10.00%
3.0 Bond	1.50%
4.0 Insurance not included	1.50%

Fire Protection Subcontract (actual)
Fire Protection Subcontract (rounded)

OPINION OF PROBABLE COST - Insulation

GHR Engineers & Associates, Inc.

RE: 7702
Two New Chillers Sized for Future Expansion of Courthouse
Champaign County Courthouse
Subcontract - Option 3

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
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prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 insulate chiller piping (on roof)	1	ls	\$6,000.00	\$6,000
2.0 insulate chiller piping (on roof)	1	ls	\$6,000.00	\$6,000
3.0 insulate chiller pump and piping (in basement)	1	ls	\$2,000.00	\$2,000
4.0 insulate chiller pump and piping (in basement)	1	ls	\$2,000.00	\$2,000
5.0 difficulty factor	1	ls	\$1,500.00	\$1,500

6.0 Miscellaneous	10.00%	\$1,750
7.0 Bond	1.50%	\$289
8.0 Insurance	1.50%	\$289

Insulation Subcontract (actual) \$19,828
Insulation Subcontract (rounded) **\$20,000**

OPINION OF PROBABLE COST - Test and Balance

GHR Engineers & Associates, Inc.

RE: 7702
Two New Chillers Sized for Future Expansion of Courthouse
Champaign County Courthouse
Subcontract - Option 3

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
time printed: 11:32 AM
prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 balance - chiller and chiller pump	1	ls	\$4,000.00	\$4,000
2.0 balance - chiller and chiller pump	1	ls	\$4,000.00	\$4,000

3.0 Miscellaneous	10.00%	\$800
4.0 Bond	1.50%	\$132
5.0 Insurance	1.50%	\$132

Test and Balance Subcontract (actual)	\$9,064
Test and Balance Subcontract (rounded)	\$9,000

OPINION OF PROBABLE COST - Temp Controls

GHR Engineers & Associates, Inc.

RE: 7702
Two New Chillers Sized for Future Expansion of Courthouse
Champaign County Courthouse
Proprietary Alpha - Option 3

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
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prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 removals				
2.0 integrate one new chiller				
3.0 integrate chiller pump and VFD				
4.0 commission one new chiller and chiller pump				
5.0 integrate remaining new chiller				
6.0 integrate remaining new chiller pump and VFD				
7.0 commission remaining new chiller and chiller pump				
8.0 graphics				
9.0 new VFD's (turn over to Electrical Subcontractor)				
10.0 new communication wiring (extend unclear due to lack of answers from ACS)				
11.0 vendor quote Nathan Seymour 12.19.2025 (\$27,700 with 5% markup), looks low	1	ls	\$28,875.00	\$28,875

12.0 Miscellaneous	10.00%	\$2,888
13.0 Bond	1.50%	\$476
14.0 Insurance	1.50%	\$476

Temperature Control Subcontract (actual) \$32,715
Temperature Control Subcontract (rounded) **\$33,000**

Chiller Replacement
Champaign County Courthouse

Option 4 (NOT RECOMMENDED) Project Cost Estimate		
Estimated Construction Cost		\$721,960
Design Contingency 10%		\$72,196
Subtotal		\$794,156
Bid Contingency 5%		\$39,708
Subtotal "A"		\$833,864
Construction Contingency 10%		\$83,386
Subtotal		\$917,250
A/E Fee (8.16%) CDB Group 2R Applied to "A"		\$68,043
Reimbursables		
Site Observation, Hourly	\$5,500	
Structural Design, Est	\$9,000	
Architectural Design, Est	\$10,000	
Advertising	\$1,200	
Printing, Not Required	\$-0-	
Total Reimbursables		\$25,700
Project Cost Estimate		\$1,010,993

Chiller Replacement
Champaign County Courthouse

Option 4 (NOT RECOMMENDED) Construction Cost Estimate Summary		
<u>Prime Contract</u>		
• General		\$61,000
<u>Subcontracts</u>		
• HVAC	\$560,000	
• Electrical	\$30,000	
• Ventilating	\$5,000	
• Plumbing	\$0	
• Fire Protection	\$0	
• Insulation	\$11,000	
• Test and Balance	\$9,000	
• Temperature Controls	\$33,000	
Total Subs	\$648,000	
2% Mark-Up	\$12,960	
Total Subcontracts		<u>\$660,960</u>
Total Construction Cost Estimate		<u><u>\$721,960</u></u>

OPINION OF PROBABLE COST - General

GHR Engineers & Associates, Inc.

RE: 7702
Chiller Replacement
Champaign County Courthouse
Prime Contract - OPTION 4 (NOT RECOMMENDED)

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
time printed: 11:37 AM
prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 crane rentals in heating estimate, it may make better sense to have the General handle them				-\$0-
2.0 protect roof	1	ls	\$1,300.00	\$1,300
3.0 first chiller removed by heating				-\$0-
4.0 remove portions of the mansard, this is politically sensitive and needs discussion, WAG	1	ls	\$40,000.00	\$40,000
5.0 remove existing chiller curb and patch roof				-\$0-
6.0 cut roof to allow install of new column tubes				-\$0-
7.0 install new curb structural steel, WAG				-\$0-
8.0 roof repairs (weather sensitive)	1	ls	\$3,000.00	\$3,000
9.0 first chiller set by Heating				-\$0-
10.0 second chiller removed by Heating				-\$0-
11.0 removed remaining chiller curb and patch roof				-\$0-
12.0 cut roof to allow install of new column tubes				-\$0-
13.0 install new structural steel, WAG				-\$0-
14.0 roof repairs (weather sensitive)	1	ls	\$3,000.00	\$3,000
15.0 second chiller set by Heating				-\$0-
16.0 painting of any new / relocated steel, WAG				-\$0-
17.0 pipe portals for power and control conduits				-\$0-
18.0 cut and repair roof for portals				-\$0-
19.0 allow for installation of screen on south of the building (where mansard currently exists, may need an acoustic consultant) total WAG				-\$0-
20.0 remove roof protection	1	ls	\$1,200.00	\$1,200
21.0 allow for new conduit chases from basement to roof (try to go through small offices), WAG				-\$0-
22.0 core drills				-\$0-
23.0 drywall and patching				-\$0-
24.0 painting of chases				-\$0-
25.0 ceiling removal / replacement, allow				-\$0-
26.0 remove roof hood curb and patch roof				-\$0-
27.0 cut roof (concrete) and install new roof hood curb				-\$0-
28.0 patch roof				-\$0-
29.0 difficulty factor	1	ls	\$5,000.00	\$5,000

30.0 Miscellaneous	10.00%	\$5,350
31.0 Bond	1.50%	\$883
32.0 Insurance	1.50%	\$883

General Subcontract (actual) \$60,616
General Subcontract (rounded) **\$61,000**

OPINION OF PROBABLE COST - Heating

GHR Engineers & Associates, Inc.

RE: 7702
Chiller Replacement
Champaign County Courthouse

X	Original 07/06/26
X	Revision 08/04/26

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time printed: 11:39 AM
prepared by: JNG

Subcontract - OPTION 4 (NOT RECOMMENDED)

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 mobilize	1	ls	\$9,000.00	\$9,000
2.0 drain one chiller, save glycol	1	ls	\$1,400.00	\$1,400
3.0 disconnect and remove chiller piping to suit new machine	1	ls	\$4,000.00	\$4,000
4.0 crane rental two day allow \$29,150 for Saturday and Sunday - per Uhlarik e-mail	1	ls	\$29,200.00	\$29,200
5.0 protect roof (by General)				-\$0-
6.0 remove one chiller and install new chiller	1	ls	\$3,500.00	\$3,500
7.0 this allows general work to proceed on half the roof				-\$0-
8.0 after new steel work is done the first new chiller can be installed				-\$0-
9.0 crane rental, one day				-\$0-
10.0 set one new chiller on neoprene isolators on steel	1	ls	\$4,000.00	\$4,000
11.0 159 ton chiller material quote \$147,500 with 5% mark-up (8.1.2026)	1	ls	\$155,000.00	\$155,000
12.0 extend 6" chiller piping, add air vents and neoprene bulb-type flex connectors	1	ls	\$15,000.00	\$15,000
13.0 chiller valves and connections	1	ls	\$5,000.00	\$5,000
14.0 chiller gages and thermometers, install differential pressure transmitter provided by TC	1	ls	\$1,200.00	\$1,200
15.0 allow for new chiller piping roof supports (may not need)	2	ea	\$3,000.00	\$6,000
16.0 remove one chiller pump (15 HP) retain valves				-\$0-
17.0 new chiller pump and trim, assume 20 HP				-\$0-
18.0 install differential pressure transmitter provided by TC	1	ls	\$500.00	\$500
19.0 top off glycol, WAG (stay with Nu-Calgon EG for now)	1	ls	\$4,000.00	\$4,000
20.0 put new chiller into operation	1	ls	\$1,200.00	\$1,200
21.0 once new chiller is in operation the other existing chiller can be removed				-\$0-
22.0 crane rental, one day	1	ls	\$16,000.00	\$16,000
23.0 remove the other existing chiller and install new chiller	1	ls	\$3,500.00	\$3,500
24.0 this allows general work to proceed on the other half of the structure				-\$0-
25.0 after structural work is done the second chiller can be installed				-\$0-
26.0 crane rental, one day				-\$0-
27.0 set second new chiller on neoprene isolators	1	ls	\$4,000.00	\$4,000
28.0 159 ton chiller material quote \$147,500 with 5% mark-up (8.1.2026)	1	ls	\$155,000.00	\$155,000
29.0 extend 6" chiller piping, add air vents and neoprene bulb-type flex connectors	1	ls	\$15,000.00	\$15,000
30.0 chiller valves and connections	1	ls	\$5,000.00	\$5,000
31.0 chiller gages and thermometers, install differential pressure transmitter provided by TC	1	ls	\$1,200.00	\$1,200
32.0 allow for new chiller piping roof supports (may not need)	2	ea	\$3,000.00	\$6,000
33.0 remove remaining chiller pump (15 HP), retain valves				-\$0-
34.0 new chiller pump and trim, assume 20 HP				-\$0-
35.0 install differential pressure transmitter provided by TC	1	ls	\$500.00	\$500
36.0 top off glycol (stay with Nu-Calgon EG for now)	1	ls	\$4,000.00	\$4,000
37.0 put second chiller into operation	1	ls	\$1,200.00	\$1,200
38.0 allow for sound deadening blankets on compressors (this is apparently aftermarket)	4	ea	\$2,000.00	\$8,000
39.0 allow for sound tubes on condenser fans (this is apparently aftermarket), watch the esp limitation	40	ea	\$800.00	\$32,000
40.0 rotate engine exhaust discharge pipe to blow away from the chillers				-\$0-
41.0 difficulty factor related to working in Courthouse	1	ls	\$4,000.00	\$4,000
42.0 Miscellaneous			10.00%	\$49,440
43.0 Bond			1.50%	\$8,158
44.0 Insurance			1.50%	\$8,158

Heating Contract (actual)	\$560,155
Heating Contract (rounded)	\$560,000

OPINION OF PROBABLE COST - Electrical

GHR Engineers & Associates, Inc.

RE: 7702
Chiller Replacement
Champaign County Courthouse
Subcontract - OPTION 4 (NOT RECOMMENDED)

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
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prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 retain existing 3,000 amp Square D Main Distribution Switchboard				-\$0-
disconnect one existing chiller (remove parallel feeder 3#4/0 in 2"				
2.0 C)				-\$0-
remove existing 500 amp chiller switch and 400 amp spare, turn				
3.0 over to Owner				-\$0-
4.0 new 700 amp switch, modify switchboard blank-offs, allow				-\$0-
5.0 new chiller feeder, two sets parallel 350 MCM plus #1/0 ground				-\$0-
6.0 new chases by General Contractor				-\$0-
7.0 portals by General Contractor (move to Electrical)				-\$0-
8.0 final connection to chiller, single point connection	1	ls	\$2,800.00	\$2,800
9.0 re-use conduit for controls, allow conduit to new machine	1	ls	\$1,000.00	\$1,000
10.0 run separate circuit to chiller evap heater				-\$0-
11.0 provide new convenience outlets at chillers, may not need	2	ea	\$900.00	\$1,800
12.0 disconnect existing chiller pump (15 HP)				-\$0-
13.0 allow for new switch and starter in existing MCC, may not need				-\$0-
14.0 new circuit for new chiller pump (assume 20 HP)				-\$0-
15.0 install VFD provided by TC Sub, tie into existing circuit	1	ls	\$2,000.00	\$2,000
16.0 final connection to chiller pump (MCC is within sight)				-\$0-
disconnect remaining chiller (remove parallel feeders 3#4/0 in 2"				
17.0 C)				-\$0-
18.0 remove 500 amp chiller switch, turn over to Owner				-\$0-
19.0 new 700 amp switch, modify switchboard blank-offs, allow				-\$0-
20.0 new chiller feeder, two sets parallel 350 MCM plus #1/0 ground				-\$0-
21.0 new chase by General Contractor				-\$0-
22.0 portals by General Contractor (move to Electrical)				-\$0-
23.0 final connection to chiller, single point connection	1	ls	\$2,800.00	\$2,800
24.0 re-use conduit for controls, allow conduit to new machine	1	ls	\$1,000.00	\$1,000
25.0 run separate circuit to chiller evap heater				-\$0-
26.0 disconnect existing chiller pump (15 HP)				-\$0-
27.0 allow for new switch and starter in existing MCC, may not need				-\$0-
28.0 new circuit for new chiller pump (assume 20 HP)				-\$0-
29.0 install VFD provided by TC Sub, tie into existing circuit	1	ls	\$2,000.00	\$2,000
30.0 final connection to chiller pump (MCC is within sight)				-\$0-
31.0 allow for miscellaneous work related to new chases				-\$0-
32.0 surge protection at chillers, WAG	2	ea	\$3,000.00	\$6,000
33.0 grounding and bonding, bond chillers to structural steel	1	ls	\$3,000.00	\$3,000
34.0 difficulty factor	1	ls	\$4,000.00	\$4,000

35.0 Miscellaneous	10.00%	\$2,640
36.0 Bond	1.50%	\$436
37.0 Insurance	1.50%	\$436

Electrical Subcontract (actual) \$29,911
Electrical Subcontract (rounded) **\$30,000**

OPINION OF PROBABLE COST - Ventilating

GHR Engineers & Associates, Inc.

RE: 7702
Chiller Replacement
Champaign County Courthouse
Subcontract - OPTION 4 (NOT RECOMMENDED)

X	Original 07/06/26
X	Revision 08/04/26

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prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 allow for relocating existing elev smoke vent (RH-5)				-\$0-
2.0 extend boiler flue to two feet higher than chiller	1	ls	\$4,000.00	\$4,000

3.0 Miscellaneous	10.00%	\$400
4.0 Bond	1.50%	\$66
5.0 Insurance	1.50%	\$66

Ventilating Subcontract (actual) \$4,532
Ventilating Subcontract (rounded) **\$5,000**

OPINION OF PROBABLE COST - Plumbing

GHR Engineers & Associates, Inc.

RE: 7702
Chiller Replacement
Champaign County Courthouse
Subcontract - OPTION 4 (NOT RECOMMENDED)

X	Original 07/06/26
X	Revision 08/04/26

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prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 assume hose bibb available in upper floor old building				-\$0-
2.0 allow for relocating existing 4" vent (may not need)				-\$0-

3.0 Miscellaneous	10.00%
4.0 Bond	1.50%
5.0 Insurance	1.50%

Plumbing Subcontract (actual)
Plumbing Subcontract (rounded)

OPINION OF PROBABLE COST - Fire Protection

GHR Engineers & Associates, Inc.

RE: 7702
Chiller Replacement
Champaign County Courthouse
Subcontract - OPTION 4 (NOT RECOMMENDED)

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
time printed: 11:39 AM
prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 assume sprinkler layouts unaffected by new conduit chases, verify!				-\$0-

2.0 Miscellaneous	10.00%
3.0 Bond	1.50%
4.0 Insurance not included	1.50%

Fire Protection Subcontract (actual)
Fire Protection Subcontract (rounded)

OPINION OF PROBABLE COST - Insulation

GHR Engineers & Associates, Inc.

RE: 7702
Chiller Replacement
Champaign County Courthouse
Subcontract - OPTION 4 (NOT RECOMMENDED)

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
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prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 insulate chiller piping (on roof)	1	ls	\$4,000.00	\$4,000
2.0 insulate chiller piping (on roof)	1	ls	\$4,000.00	\$4,000
3.0 insulate chiller pump and piping (in basement)				-\$0-
4.0 insulate chiller pump and piping (in basement)				-\$0-
5.0 difficulty factor	1	ls	\$1,500.00	\$1,500

6.0 Miscellaneous	10.00%	\$950
7.0 Bond	1.50%	\$157
8.0 Insurance	1.50%	\$157

Insulation Subcontract (actual) \$10,764
Insulation Subcontract (rounded) **\$11,000**

OPINION OF PROBABLE COST - Test and Balance

GHR Engineers & Associates, Inc.

RE: 7702
Chiller Replacement
Champaign County Courthouse
Test and Balance Subcontract

X	Original 07/06/26
X	Revision 08/04/26

date printed: 08/04/26
time printed: 11:39 AM
prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 balance - chiller and chiller pump	1	ls	\$4,000.00	\$4,000
2.0 balance - chiller and chiller pump	1	ls	\$4,000.00	\$4,000

3.0 Miscellaneous	10.00%	\$800
4.0 Bond	1.50%	\$132
5.0 Insurance	1.50%	\$132

Test and Balance Subcontract (actual)	\$9,064
Test and Balance Subcontract (rounded)	\$9,000

OPINION OF PROBABLE COST - Temp Controls

GHR Engineers & Associates, Inc.

RE: 7702
Chiller Replacement
Champaign County Courthouse
Subcontract - OPTION 4 (NOT RECOMMENDED)

X	Original 07/06/26
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prepared by: JNG

LINE ITEM NO. AND DESCRIPTION	QTY	UNIT	COST/UNIT	AMOUNT
1.0 removals				
2.0 integrate one new chiller				
3.0 integrate existing chiller pump and VFD				
4.0 commission one new chiller and existing chiller pump				
5.0 integrate remaining new chiller				
6.0 integrate remaining existing chiller pump and VFD				
7.0 commission remaining new chiller and existing chiller pump				
8.0 graphics				
9.0 new VFD's (turn over to Electrical Subcontractor)				
10.0 new communication wiring (extend unclear due to lack of answers from ACS)				
11.0 vendor quote Nathan Seymour 12.19.2025 (\$27,700 with 5% markup), looks low	1	ls	\$28,875.00	\$28,875

12.0 Miscellaneous	10.00%	\$2,888
13.0 Bond	1.50%	\$476
14.0 Insurance	1.50%	\$476

Temperature Control Subcontract (actual) \$32,715
Temperature Control Subcontract (rounded) **\$33,000**