Kinsley Energy Systems
14 Connecticut South Drive
East Granby, CT 06026

Griffin Hospital
130 Division St.
Derby, CT 06418

Attn: Patrick Charmel

CC: Alexander Balko, Nancy Marini, Andrew Moon

RE: Planning & Zoning Submittal

Dear Mr. Charmel,

Kinsley Energy Systems (KES) submits the following documentation in support of the City of Derby Planning & Zoning Commission approval process.

- General Arrangement
- Street View Renderings
- Noise Considerations

The purpose of the Project is to provide economic value, energy resiliency, and environmental benefit to Griffin Health Hospital, located at 130 Division St, Derby, CT. A 999kW natural gas-powered combined heat and power generator (CHP) will provide a baseload of onsite electrical generation and utilize heat recovery systems to supplement the facilities domestic heating needs. This system will provide for 70-80% of the Hospital's base electrical needs independent of utility grid power. In doing so, Griffin Health Hospital significantly increases the reliability of patient care by ensuring quality of life functions can operate in full capacity regardless of impacts to utility service fluctuations. This CHP systems achieve a 95% energy efficiency and Griffin Health Hospital will participate in Utility programs to reduce the cost of natural gas consumption used for the onsite generation. The Project provides Griffin Hospital with a 41.1% annual cost reduction, resulting in a payback period of 2 years. Additionally, the CHP system will provide an 18.4% emissions savings annually. This distributed generation project also benefits the utility and electrical grid resiliency within the City of Derby by reducing the load on the grid during peak usage.

KES is ready to assist and clarify where needed to ensure the planned design is communicated effectively. Please don't hesitate to reach out for any questions at (959) 236-7790 or jrheaume@kinsleyenergy.com.

Sincerely,

Jonathan Rheaume

Jonathan Rheaume
Project Manager, Kinsley Energy Systems

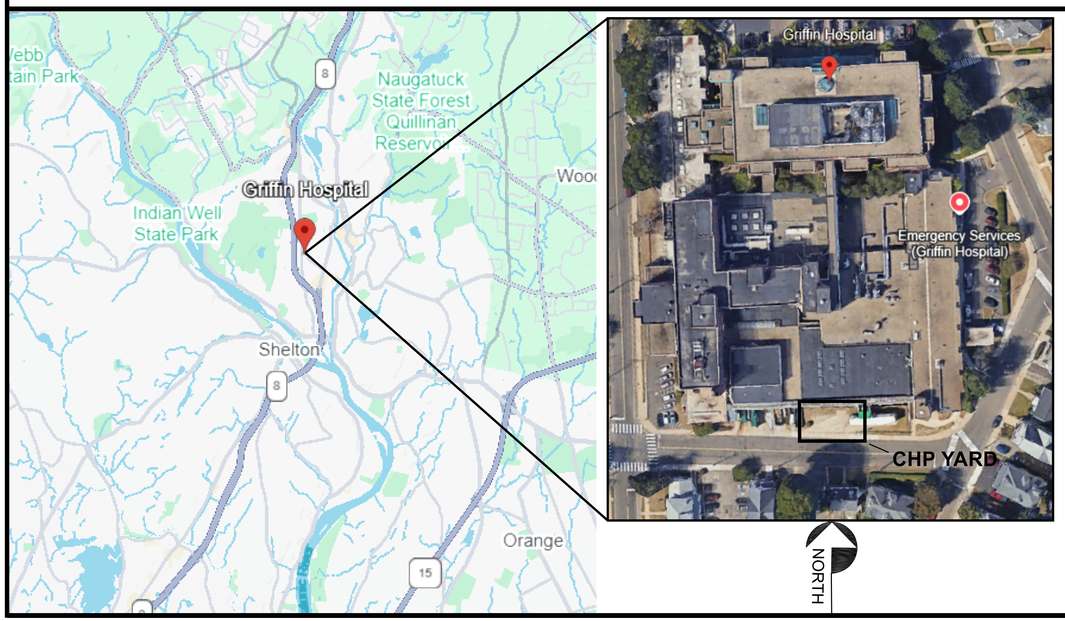
GRIFFIN HOSPITAL DERBY, CONNECTICUT

KINSLEY POWER SYSTEMS

CHP INSTALLATION

SITE:	GRIFFIN HOSPITAL 130 DIVISION ST DERBY, CT 06418
ENGINEER:	INNOVATIVE CONSTRUCTION & DESIGN SOLUTIONS, LLC 10 WHITE WOOD LANE NORTH BRANFORD, CT 06471 (203) 453-8596
PROJECT CONTACT:	KINSLEY - PROJECT MANAGER JONATHAN RHEAUME JRHEAUME@KINSLEYENERGY.COM (959) 236 7790

PROJECT SITE MAP



DRAWING INDEX

CS1.0	COVER SHEET
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GA1.1	GENERAL ARRANGEMENT PARTIAL PLAN
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S3.0	STRUCTURAL DETAILS
M0.0	MECHANICAL NOTES & SCHEDULES
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M4.0	PIPING & INSTRUMENTATION DIAGRAM
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E3.0	ELECTRICAL THREE-LINE DIAGRAM
E3.1	ELECTRICAL GROUNDING PLAN
E4.0	ELECTRICAL SPECIFICATIONS

REFERENCE DOCUMENTS

TIGHE&BOND	GRIFFIN HOSPITAL- CIVIL SHEETS
POWERUP	TECHNICAL SPECIFICATION-PUPGEN_2V20- NG_60HZ
UI COMPANY	EXISTING ONE-LINE DIAGRAM
AS100-BSMT	BASEMENT OF EAST WING DRAWING
POWERUP	PID

DESIGN CODES

2022 CONNECTICUT STATE BUILDING CODE
2020 NATIONAL ELECTRICAL CODE (NFPA 70)
2021 INTERNATIONAL BUILDING CODE
2021 INTERNATIONAL MECHANICAL CODE
2021 INTERNATIONAL PLUMBING CODE
2015 NATIONAL FUEL GAS CODE (NFPA 54)

NOT FOR CONSTRUCTION

Rev.	Date	Description
B	05/30/2025	60% DESIGN DEVELOPMENT
A	03/07/2025	PRELIMINARY ISSUE

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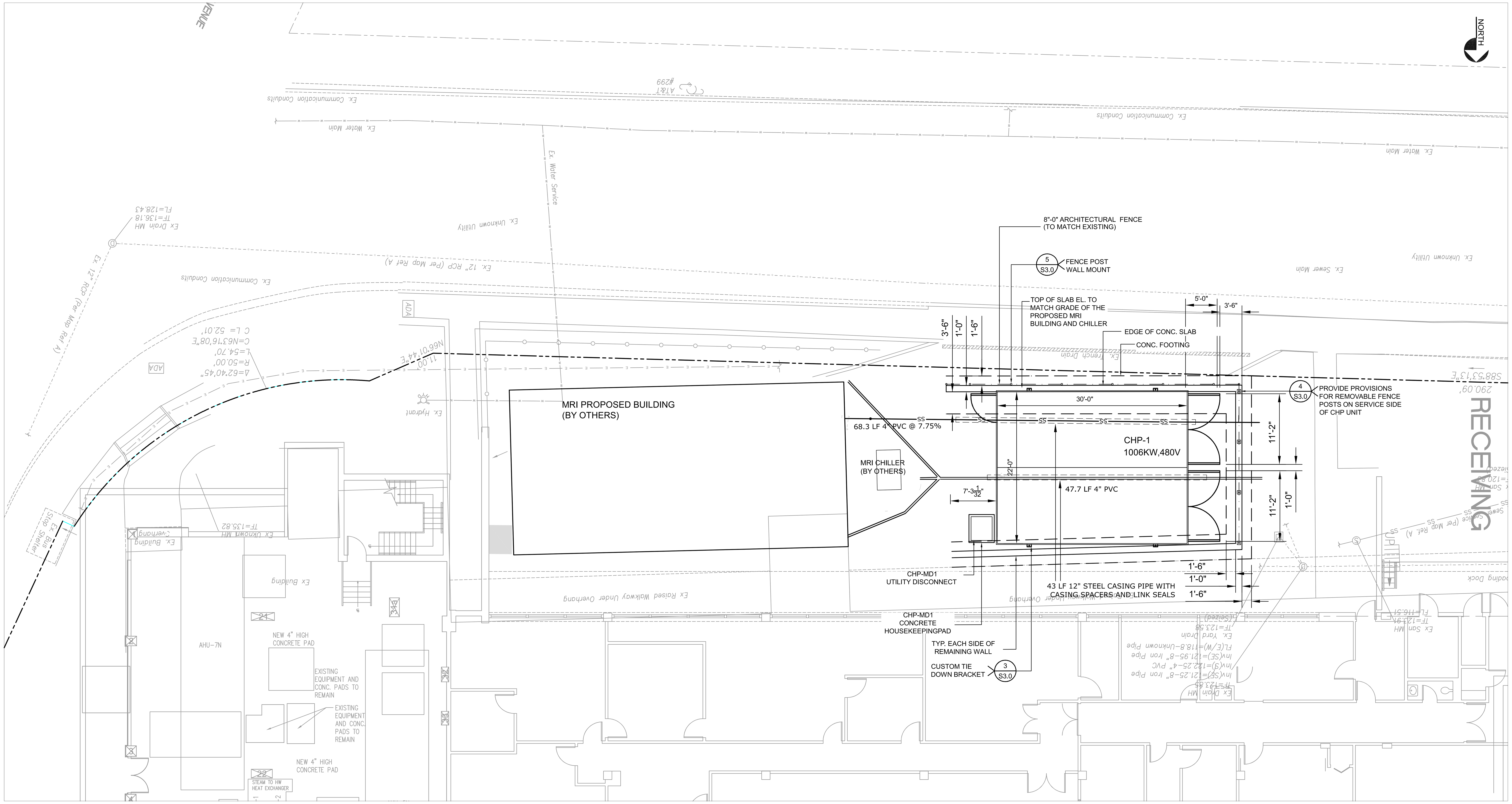
GRIFFIN HOSPITAL
130 DIVISION ST, DERBY, CT

COVER SHEET

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Date: 03/07/2025	Design By: BC
Scale: NTS	Check By: DFS

Drawing No.:
CS1.0

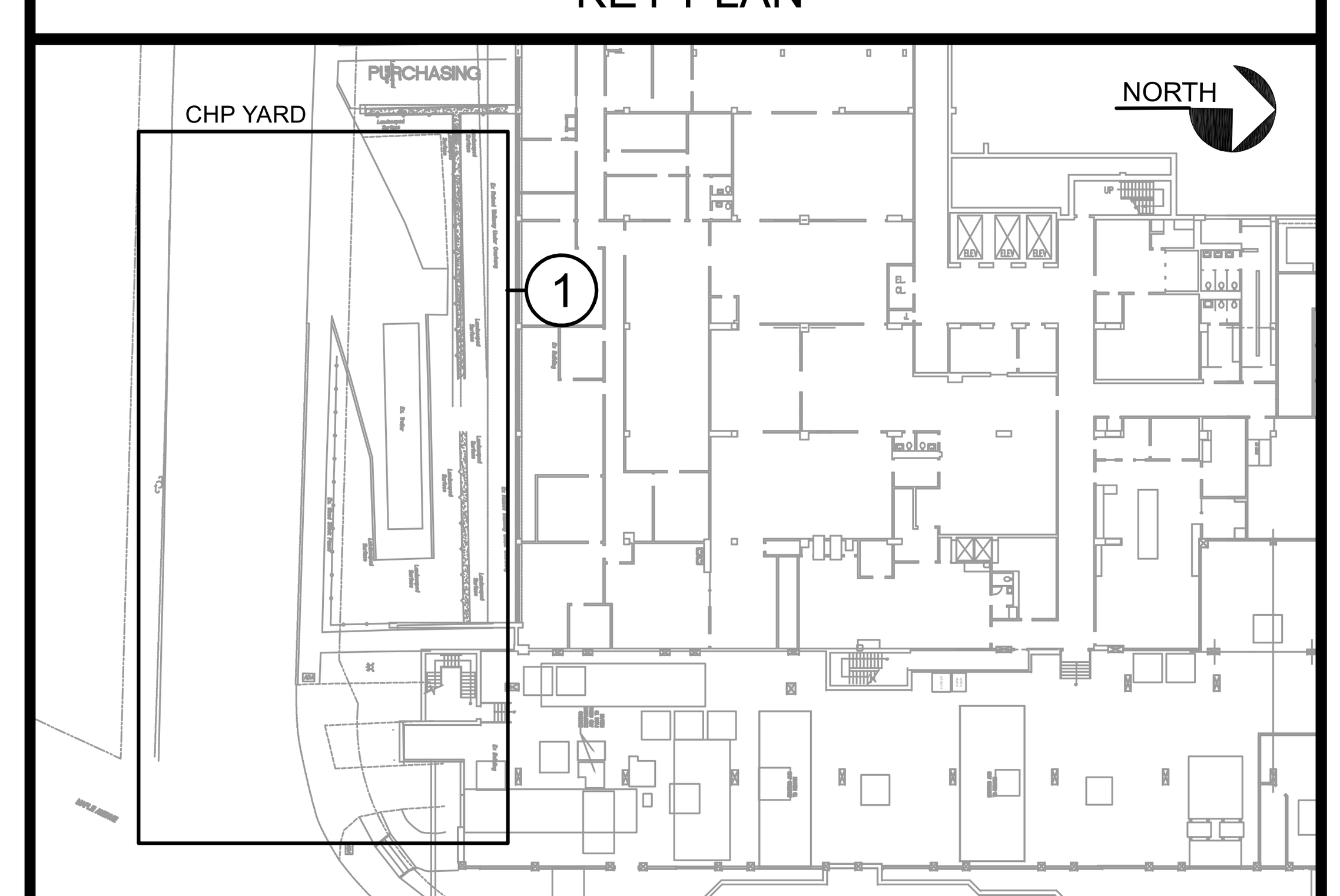
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1 GENERAL ARRANGEMENT CHP YARD

Scale: 1/8" = 1'-0"

KEY PLAN



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GRIFFIN HOSPITAL
130 DIVISION ST, DERBY, CT

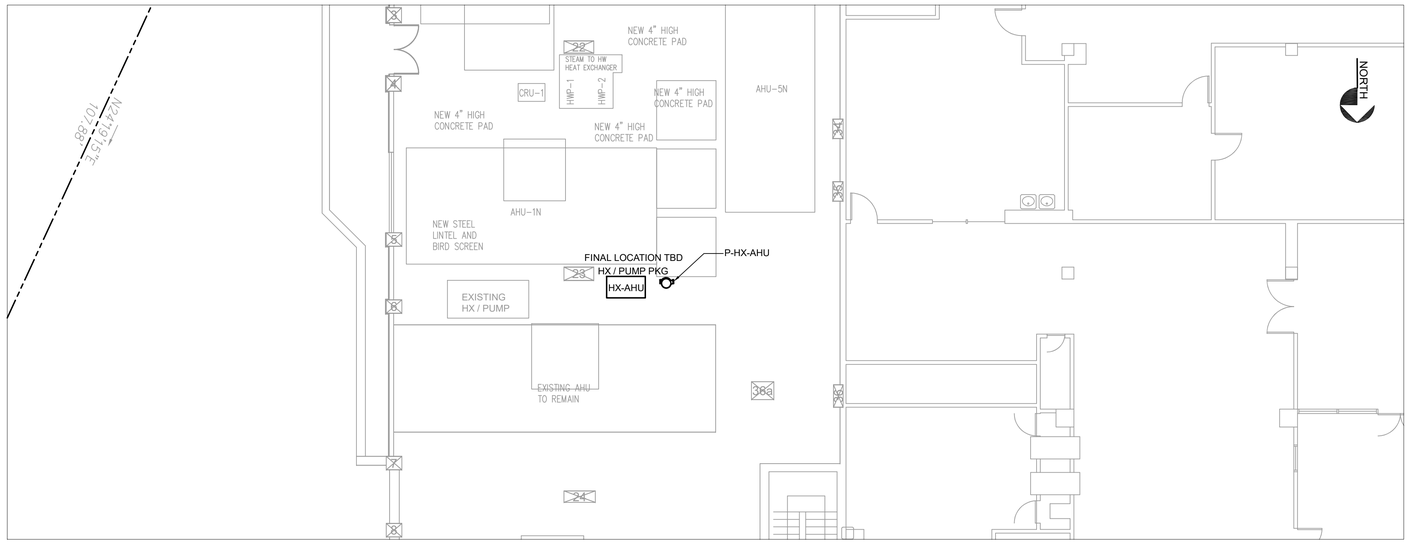
GENERAL ARRANGEMENT CHP YARD

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Scale: AS NOTED	Check By: DSF

Drawing No.:

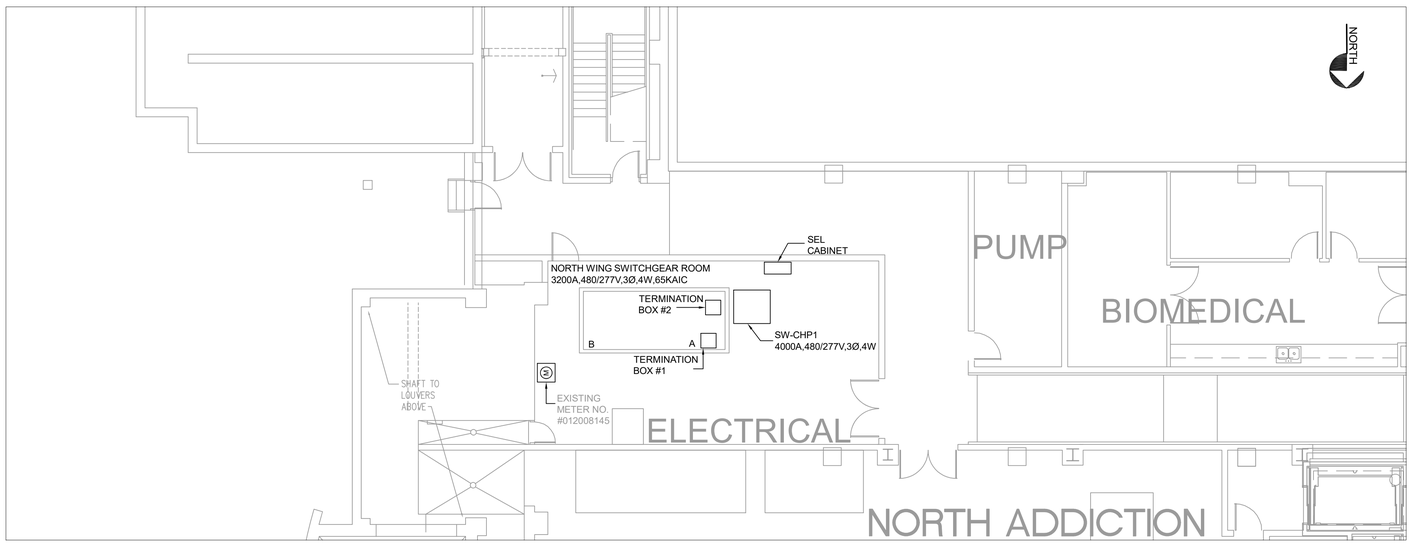
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1 GENERAL ARRANGEMENT MECHANICAL PARTIAL PLAN

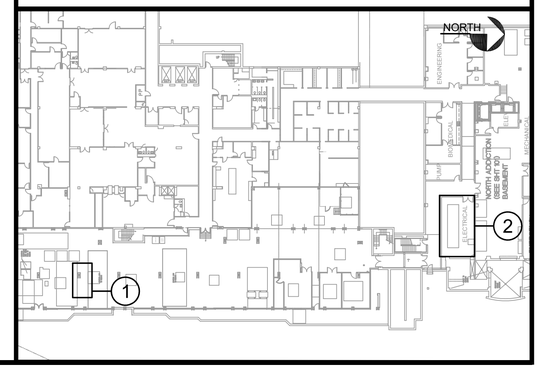
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2 GENERAL ARRANGEMENT ELECTRICAL PARTIAL PLAN

Scale: 1/8" = 1'-0"

KEY PLAN



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C	07/21/2025	100% DESIGN DEVELOPMENT
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GRIFFIN HOSPITAL
130 DIVISION ST, DERBY, CT

GENERAL ARRANGEMENT
PARTIAL L PLAN

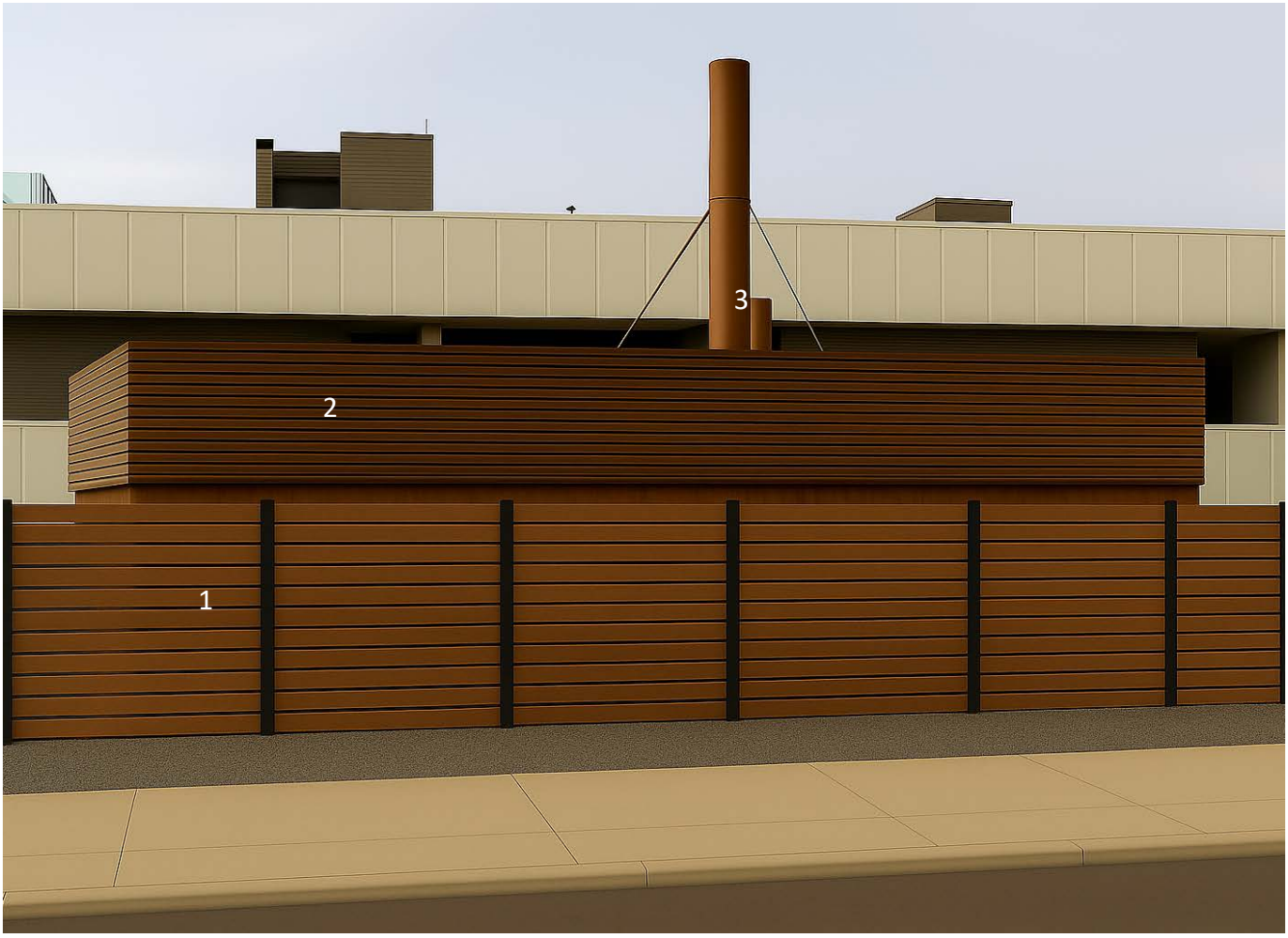
Project No.:	Drawn By: BC
Date: 03/07/2025	Design By: BC
Scale: AS NOTED	Check By: DSF

Drawing No.:

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Proposed Griffin Hospital CHP



Exterior Finish Schedule

1	MTL. PRIVACY FENCING SYSTEM W/ INFILL SLATS BY FENCE TRAC OR EQUAL - (4" SQ. POSTS X 11 GA. W/ BOT./ TOP & POST MOUNT TRAC) - MTL. COMPONENTS TO BE STD. 'DARK BRONZE' FINISH - INFILL SLAT TO BE PVC ULTRA-TECH 'TROPICAL TEAK'
2	3 SIDED SCREEN FOR ROOF TOP MECH. UNIT - W/ POSTS & COMPOSITE WOOD SLATS 'PERUVIAN TEAK' BY TECHWOOD OR EQUAL - FASTENED TO FRAMING AT 24" OC
3	DUCT WORK FINISHED WITH KRYLON HIGH HEAT METALLIC BROWN

Note: The architectural fencing (1) and roof screening (2) are selected to match the model and finish of that utilized on the newly constructed MRI building annex adjacent to the CHP installation.

Street View



Noise Considerations

The Combined Heat and Power (CHP) generator will be emplaced in a sound dampened container. The table coolers and selective catalytic reducer (SCR) mounted to the roof of the container have been selected to meet City requirements for noise pollution. Additionally, acoustic barrier panels will be mounted on the equipment facing side of the fence and container screening to minimize the acoustic impact at ground level along Spring Street. The table below relates the rated sound levels of the equipment to every-day activities.

The acoustic impact is assessed in the following way. The System operating airborne noise levels are measured at the site. Using this data, the noise levels are compared to the allowable noise levels in the State of Connecticut and City of Derby Noise Ordinances. With the System operating at full power, this approach then follows the traditional "What is the airborne noise level at the neighbor's property line?". Is the airborne noise below the allowable airborne noise levels? This measured site data can also be used to estimate noise levels at other neighbor's property lines. The effect of background noise can also be considered.

@ 10ft	**Outer building face**	**Comparable to:**
CHP Engine	65 dB	Conversation
Exhaust & Ventilation	75 dB	Vacuum Cleaner

@ 45ft	**Nearest property line**	**Comparable to:**
CHP Engine	43.5 dB	Urban Residence
Exhaust & Ventilation	53.5 dB	Bathroom Fan

@ 130ft	**Bus stop**	**Comparable to:**
CHP Engine	32 dB	Whisper
Exhaust & Ventilation	42 dB	Urban Residence