

TECHNICAL CRITERIA

QUEENS CENTER



MACERICH® THE PLACE TO SHOP

ADDENDUM LOG

October, 2009

Updated to current layout

November, 2009

Revised per TC AVP Comments

September, 2011

Waterproof membrane requirement updated

March, 2014

Distribution of utilities through exit corridors is prohibited with exception (t11)

October, 2014

At grade level electrical conduit is not allowed to be installed in the slab (t5)

December, 2014

Wiring language updated (t5, #9)

January, 2015

Language regarding the waterproofing membrane on page t9 revised. (t9)

March, 2015

Updated Plumbing content to list specific location for main water shut off valve to be at eye level. (t9)

April, 2016

Added Water Efficiency language (t9)

February, 2018

Updated to new layout

September, 2018

Technical Details updated

QUEENS CENTER

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TABLE OF CONTENTS

Electric / Water Sub-meter Requirements	t3	Plumbing Criteria	t14-t15
New York City Energy Efficiency Code		General Design/Construction Coordination,	
Requirements	t3	Water Efficiency	t14
		Gas Service	t15
Electrical Criteria	t4-t7		
General Design/Construction Coordination,		Structural Criteria & Exit Corridors	t16
Power Source, Communications Services	t4		
Lighting, Material/Equipment Specifications,		Technical Details	t17-t31
Fire Alarm System - Life Safety	t7		
Mechanical Criteria	t8-t13		
General Design/Construction Coordination,			
Restriction Area for Solar Panels, General			
Requirement	t8		
Tenant Structural Requirements, Landlord			
Hydronic Provisions, Landlord Duct			
Provisions	t9		
Tenant System Design Parameters, Tenant			
Bathroom Exhaust, Requirements for Odor			
Producing Tenants	t10		
Grease Exhaust and Make-Up Air for			
Food Court Tenants, Tenant Metering,			
Reuse of Existing Equipment			
HVAC Design Criteria	t11		
Testing and Balancing	t12		
Natural Gas, Closeout Requirements	t13		

ELECTRICAL CRITERIA

QUEENS CENTER

As applicable for property, if there is an existing electric or water sub-meter in the Tenant's space, then the Tenant must have the meter recommissioned to ensure proper installation and functionality. Alternatively, the Tenant can choose to install a new meter that meets Macerich's meter specifications. Either option must be performed by a Landlord-approved electrician and verified by Macerich, and will be at the Tenant's sole cost.

METER SPECS

Tenant may install the meter specified by Macerich or the like. Meter must meet the following criteria:

Electric:

- Meters must be revenue grade.
- There must be at least a 6-digit display.
- Meter must be able to read demand (kW) and usage (kWh).
- The meter must capture the electric usage of the entire Tenant space, including HVAC units. If this is not possible, then it must be noted.
- If using a meter with CTs, note if a multiplier is required and what the multiplier is on the face of the meter.

Water:

- Meter must be properly sized for the water flow in the space. Generally this means the size of the meter

should match the size of the water line, or the meter can be 1/4" smaller than the line. This means that if there is a 1" water line servicing the space, a properly sized meter would be 3/4" or 1".

Installation Requirements:

- Meters must be installed by a Landlord approved electrician.
- Installation must be verified and approved by the Operations Manager, or a member of the Operations staff, at the property.
- Proof of inspection must be sent to the Energy Management Department (Alaine Marx, alaine.marx@macerich.com) and should include the following:
 - » Date of installation or recommissioning
 - » Picture of the meter at time of installation or recommissioning.
 - » Picture should be clear and should display kWh and kW legibly.
 - » Confirmation that the meter covers whole tenant space.
 - » Meter make and model
 - » Units that the meter reads in Multiplier, if applicable

New York City Energy Efficiency Code Requirements

Electrical Sub-Metering

Tenants 5000 gross square feet and above are required to provide and install Electrical Sub-Meters, per New York City Council File Number Int 1160-2016. Electrical Plans showing meter location and installation shall be submitted and approved prior to tenant build-out. Tenant is required to coordinate with local utility and Ownership for any shutdowns as a result of meter installation. Ownership reserves the right to back charge installation fees to Tenant found not to have required sub-meter.

Lighting Efficiency

Tenants are required to upgrade their lighting system to meet or exceed New York City Energy Conservation code in accordance with New York City Council Fire Number Int 1165-2016. Lighting designs shall be submitted and approved by Ownership and local authority prior to tenant build-out. Ownership reserve the right to back charge installation fees to Tenant found not to be in compliance with New York City Energy Conservation code.

ELECTRICAL CRITERIA

QUEENS CENTER

CONTINUED

The electrical criteria is provided for the purpose of designing the Tenant's electrical system. This criteria is provided as a guideline for Tenant's Engineer. It is the Tenant's responsibility to verify existing conditions and comply with all applicable codes and standards.

Conduit and raceway hangers, clamps, light fixtures, junction boxes, supports, etc. must be fastened to joists and/or beams. Do not attach directly to the slab, roof deck, ductwork, piping or conduit above.

Tenant's equipment in the Mall electric room must be clearly identified with Tenant's name and space number.

Provide access panels at all junction box locations and at smoke detectors above the ceiling.

All outlet boxes, floor boxes, wire raceways, power/telephone poles, plug-in molding, wiring devices, hanger supports and other items required for a complete distribution must be furnished and installed by Tenant.

Furnish and install power to water heater, store fixtures, signage, music systems and any other fixtures or equipment provided by Tenant. All cutting and patching must be provided by Tenant.

Complete Engineered drawings must be submitted to the Landlord's Tenant Coordinator for review and approval. Landlord will review the plans for conformance to basic

Mall requirements. The Landlord does not review for electrical design, nor does the Landlord accept responsibility for the Tenant's adherence to governing codes.

The documents to be submitted for Landlord approval must include the following:

Complete plans and specifications for all electrical work, including lighting, power and one line riser diagram. Documents must be signed and sealed by a Licensed Engineer in the state where the Shopping Center is located.

Drawings must include panel schedules, load calculations and meter information.

Structural drawings must be submitted for all equipment that will be suspended from the steel structure.

Power Source

All work required to connect Tenant to the main power source must be performed by Landlord's designated electrician, at Tenant's expense. Exceptions to this requirement may be granted by the Tenant Coordinator.

Service size and feeders vary with respect to the size of the demised Leased Premises.

Electrical service shall be 480/277 volts or 208/120 volts, 3 phase, 4 wire, at the Landlord's discretion. The Tenant shall provide an over current protective device in Land-

lord's switchboard, and an electric meter (Cutler Hammer IQ 200, Catalog Number IQ 220, with a base metering module, display module, and 14" of Cat 5 cable at time of installation). Tenant shall also provide appropriate Cutler Hammer solid core metering class C/T's sized for their designed service. There shall be no meter or C/T substitutions.

The Landlord has installed a data transmission system within the center, with connection nodes located throughout. This system allows the Tenant to import and export data from the leased premises, including music, sales reports, stock inventory, etc. Locations of the node points are available from Center Management.

All wiring, including low voltage, must be installed in conduit. Branch circuits concealed within walls or above finished ceilings may be MC cable with an insulated ground.

All equipment to be re-used from a previous Tenant shall be brought into first class working order and shall be upgraded to comply with all current code requirements, and to the satisfaction of the City Building Inspectors.

ELECTRICAL CRITERIA

QUEENS CENTER

CONTINUED

Communications Services

1. Landlord has installed a high-speed fiber infrastructure at the Center for purposes of providing voice and data access throughout the Center. All access for Tenant's voice and data services must be sourced through Landlord's designated provider which is currently Granite Telecommunications or such alternative provider as designated by Landlord. The vendor contact for voice and data services can be found in the Tenant Criteria Package under General Information.
2. For all wiring needs in common electrical rooms, a required vendor must be used to maintain the integrity of the electrical room. The vendor contact for low voltage wiring needs can be found in the Tenant Criteria Package under General Information.

Lighting

Provide a lighting schedule for review in conjunction with a reflected ceiling plan. Lighting must conform to the following guidelines:

1. Display window lighting must be controlled by a time clock and be on during the hours the Shopping Center is open. Display window lighting at the ceiling must be glare-free and at approved levels at the storefront glass line.
2. Recessed incandescent down lights may be used.

3. Exit, emergency and night lights must be provided throughout, as determined by governing codes.
4. Fluorescent lighting in the sales area must be recessed and must use metal parabolic louver type lenses with a minimum of 18 cell configuration for a standard 2' x 2' fixture. Bare lamp fluorescent or fluorescent fixtures with acrylic prismatic lenses may be used only in concealed areas or stock rooms.
5. Track lighting may be used if the track is painted to match the ceiling color. At the storefront area, all track lighting must be hidden from view, as seen from the mall common area.

Tenant is responsible for connection to the Fire Alarm system. All emergency lighting, exit signs, horns and strobes must be provided by Tenant as required by code.

Material/Equipment Specifications

1. Drawings must include complete material specifications, including manufacturer's name and product number and complete schedules of all equipment and fixtures to be installed.
2. All material and equipment must be new and of a commercial grade and must bear Underwriter's labels where such labeling applies.
3. At grade level electrical conduit may be installed at least 4" under the slab and must be in Schedule 40

PVC conduit. But never allowed to be installed in the slab or less than 4" below slab.

4. Floor boxes must be watertight.
5. Pull boxes or junction boxes must be a minimum of 12 gauge galvanized steel outlets. Boxes in walls must be galvanized pressed steel or case metal. Caulk around boxes to eliminate noise transmission.
6. All main and branch feeders and circuitry wiring must be copper. All conductors to have 600 volt insulation type THW, THWN or THHN.
7. Convenience receptacles must be specification grade, 120 volt, 20 amps and be grounding type per NEC.
8. Manual or magnetic starters, switches, contactors, relays, time switches, safety devices, dimmers and other controls must be commercial type with heavy duty ratings and must be installed in strict conformance with the manufacturer's recommendation and applicable codes.
9. Any exposed low voltage wiring must be plenum graded.

Fire Alarm System - Life Safety

1. Tenant must provide a complete fire alarm detection system within the Tenant space as an extension of the Landlord's building-wide addressable fire alarm system.
2. Tenant is required to use Landlord's designated contractor for installation of the necessary smoke detectors and connection to the main fire alarm system. System must comply with the requirements of the governing authority.
3. All emergency lighting, exit signs, horns and strobes must be provided by Tenant as required by code.
4. Tenants are required to contract directly with Siemens Building Technologies (see "Mall Required Contractors" in the General Information Section of the Queens Center Mall Criteria Manual) for the programming and inspection of the Tenant to Landlord Fire Alarm and Smoke System connection.

MECHANICAL CRITERIA

QUEENS CENTER

The mechanical criteria is provided for the purpose of designing the Tenant’s heating, ventilating and air conditioning system. This criteria is provided for Tenant’s Engineer. It is the Tenant’s responsibility to verify existing conditions and comply with all applicable codes and standards.

Complete Engineered drawings must be submitted to Landlord’s Tenant Coordinator for review and approval. Landlord will review the plans for conformance to basic Mall requirements. The Landlord does not review for mechanical design, nor does the Landlord accept responsibility for the Tenant’s adherence to governing codes.

Restriction Area for Solar Panels

Equipment or other obstacles placed in the vicinity of existing solar panels shall follow the guidelines outlined below:

- No equipment shall be placed within 10 feet of any solar inverter or AC junction box
- To avoid interfering with solar panel production, objects shall be placed no closer than the distance defined as 2 times their height. For example, if a 4 foot HVAC unit is installed, it must be located at least 8 feet away from a solar panel.
- In no cases, regardless of the height shall an obstacle be placed within 3 feet of solar equipment

- No conduits, pipes or other devices shall be added to existing conduit carrying devices
- No wires, pipes or other devices will be routed across or over existing solar equipment
- All modifications within 20’ of solar equipment shall require review and approval from Macerich personnel

The documents to be submitted for Landlord approval must include the following:

1. Complete plans and specifications covering the heating, ventilating and air conditioning system. Show make, type and performance of all equipment. Documents must be signed and sealed by a Licensed Engineer in the state of New York.
2. Calculations showing the heating and cooling required, including transmission and ventilation losses in the space and heat and cooling provided for the ventilation supply and exhaust required for the space. Calculations shall be as described in “Load Calculations” included below.
3. Temperature control system data showing make, control and energy management systems.
4. Chilled and Hot water piping diagrams.
5. Exhaust system layout, including CFM and equipment specifications.

6. Structural details for support of all roof top equipment and equipment suspended from the steel structure.

General Requirement

1. The Tenant is responsible for providing a Carrier single-zone air handler unit and all subordinate components to provide a complete system with enough capacity to adequately air condition the premises.
2. Tenant will provide the Landlord with engineering calculations which assure the adequacy and Code compliance of the HVAC system the Tenant is installing.
3. Tenant will provide Landlord with shop drawings, installation guidelines and product samples (where requested) detailing all equipment to be installed. Landlord will have final right of approval for all materials and equipment.
4. Interior Design Conditions For All Tenants: 72°F heating, 50% RH 78°F cooling, 50% RH.
5. Outdoor Design Conditions: As per 1991 ASHRAE 2½% design (where outside air is not pre-conditioned).

MECHANICAL CRITERIA

QUEENS CENTER

CONTINUED

Tenant Structural Requirements

1. Currently, the Center is defined as being located in a Seismic Zone 2 with a local Seismic Zone Factor (Z) of 0.15. All equipment installed shall meet the current requirements of the Building Code or appropriate Referenced Standard.
2. The Tenant must retain a structural engineer, registered in the state in which the work is being performed to design any hangers or supports required.
3. The Tenant's structural engineer must examine the existing structure to determine field condition prior to submission of design, fabrication or Installation drawings.

Landlord Hydronic Provisions

1. The Landlord shall provide valved and capped chilled and heating hot water to the premises in accordance with the provision contained In the Lease.
2. Chilled water supply and return piping connections shall be 2". Heating hot water supply and return piping connection shall be 1¼". Tenant requirements beyond these pipe sizes shall be reviewed by Landlord at Tenant's expense.
3. Landlord shall deliver chilled water based on: 46°F entering chilled water temperature and a 62°F leaving chilled water temperature to Tenants that are

provided chilled water from the main central plant. The Landlord reserves the right to reset chilled water temperatures as load and ambient conditions vary to maximize central plant energy efficiency.

4. Landlord shall deliver chilled water based on: 45°F entering chilled water temperature and a 57°F leaving chilled water temperature to Tenants that are provided chilled water from the new packaged chiller. The Landlord reserves the right to reset chilled water temperatures as load and ambient conditions vary to maximize central plant energy efficiency.
5. In the existing Mall area all Tenant supplied AHU must be provided with cooling coils having the following minimum characteristics: 8 rows, 12 fins per inch, coil face velocity less than or equal to 400 ACFM, 10 feet water pressure drop maximum at design conditions.
6. In the expansion Mall area all Tenant supplied AHU must be provided with cooling coils having the following minimum characteristics: 6 rows, 12 fins per inch, coil face velocity less than or equal 400 ACFM, 10 feet water pressure drop maximum at design conditions.
7. Landlord shall deliver heating hot water based on: 200°F entering hot water temperature and a 160°F leaving hot water temperature to Tenants that receive hot water from the central plant. Tenants not provided with Landlord supplied heating hot water may

choose to provide electric heating coils in their AHU's.

Landlord Duct Provisions

1. Within certain areas of the new and existing Center, the outside air ductwork will also serve as the smoke evacuation/purge ductwork. All remaining areas will utilize separate outside air and smoke evacuation/purge ducts. Refer to plans in this manual to determine the limits of each space.
2. In areas of the plans defined as 'New Building Area', all required outside air shall be supplied at "neutral" conditions by Landlord supplied rooftop equipment.
3. In areas of the leasing plan defined as 'Existing Retail Center', all required outside air shall be conditioned by the Tenant's air handling system.
4. In either case, access will be given to outdoor air shafts or ductwork. Tenant HVAC documentation must show a table detailing compliance with the Building Code Index for Ventilation.
5. In the new building area of the Center, Landlord shall extend combination outside air/smoke evacuation ductwork approximately 3'-0" into the Tenant space and provide a capped branch takeoff. The Tenant shall provide smoke dampers or combination fire/smoke dampers and electrical wiring as appropriate. The Tenant may extend and arrange the outside air duc-

MECHANICAL CRITERIA

QUEENS CENTER

CONTINUED

work from this point within their space as required. The Tenant shall contract with the Landlord's FMS vendor for final connection of the FACP control wiring to the Landlord FA panel.

- 6. In the existing retail area of the Center, Tenant shall provide ductwork from existing outdoor air shafts and directly connect to their air handler. The outside air ductwork will not be used for smoke evacuation.
- 7. The Tenant at Tenant's sole cost and expense, shall ascertain and comply fully with the requirements of the fire marshal and others having jurisdiction concerning all aspects of the smoke purge and evacuation system.

Tenant System Design Parameters

- 1. Tenant shall provide fan coil/air handling units with chilled and hot water coils to supply space conditioning needs within the Leased Premises.
- 2. Tenant chilled and hot water coils must be selected based on temperatures defined.
- 3. All fan coil/air handling units shall be provided with 2-way control valves only for chilled and hot water coil control.
- 4. Local control of all Tenant air handling systems shall be by electronic, programmable thermostat with setback capability.

- 5. All Tenant HVAC systems shall utilize a ducted supply and plenum return. Ducted returns (above an acoustic or hard) ceiling will not be allowed. This requirement for plenum returns is to satisfy the Building Code mandate for smoke removal.
- 6. Relief air (excess air), may be relieved directly into (or out of) the Tenant premises if the Tenant premises are not odor producing. The Tenant will provide mechanical exhaust as required by code.

Tenant Bathroom Exhaust

- 1. The Landlord shall provide negatively pressurized exhaust air ductwork to or across a part of the Leased Premises.
- 2. Tenant shall provide exhaust fan(s) which will discharge into Landlord provided duct.
- 3. Tenant toilet exhaust fan(s) shall operate continuously during occupied hours.
- 4. Tenant toilet exhaust fan(s) shall exhaust a minimum of one complete air change every 5 minutes or as described by applicable code, whichever is greater.

Requirements for Odor Producing Tenants

The following special requirements apply to odor producing Tenants (including but not limited to hairstyle shops, pet shops, restaurants, fast food use shops or any other premise at the Landlords discretion).

- 1. Odor Producing Area - Tenant is required to furnish and install the necessary equipment to remove or neutralize any odors. This work will be approved in wiring by the Landlord and at the sole expense of the Tenant.
- 2. The Tenant, as required by special conditions such as grills, restaurant exhaust systems, etc. will request that the Landlord provide special routing for make-up air. This may come in the form of additional ductwork, increased tempered air supply or a combination of both. All costs incurred by the request for additional make-up air will be the responsibility of the Tenant.
- 3. Tenants shall operate HVAC system between 5% and 10% negative pressure (when referenced to Center common areas) and shall provide a certified air balance report prior to opening and on a yearly basis as requested by Center Management.
- 4. All installations shall comply with governing codes and shall be approved by the Fire Marshal.

MECHANICAL CRITERIA

QUEENS CENTER

CONTINUED

Grease Exhaust and Make-Up Air for Food Court or Restaurant Tenants

1. All exhaust hoods shall be supplied with integral make-up air. All hoods shall be commercial grade.
2. All exhaust ductwork must be installed in conformance with NFPA Bulletin 96, and the NYC Building Code. Location of exhaust ductwork and penetrations must be approved by the Landlord prior to installation.
3. A grease containment system is required for food service installations. The Tenant will provide the Landlord with a copy of the maintenance agreement for the grease containment system.
4. Exhaust systems will be designed in accordance with these criteria, governing codes and the Tenant's use requirements.
5. All exhaust must be ducted to discharge directly in to the Landlord's negatively pressurized grease exhaust duct.
6. All exhaust ductwork shall conform to the NYC Building Code. All connections to the Landlord's exhaust system must be reviewed and approved by the Landlord. Prior to final connection to Landlord's system, a Halton Model KBD exhaust hood balancing damper shall be installed so that exhaust air quantities may be accurately obtained.
7. Access to untempered make-up air will be provided by Landlord for Food Court Tenants only.

Tenant Metering

1. Tenant shall be metered for actual chilled or hot water usage by a BTU metering system. Each system shall be comprised of temperature elements, a flow element and BTU computer to totalize utility and report to Landlord's FMS system.
2. Tenant to provide one BTU meter each for chilled and hot water supply connection to premise. Meters to be Onicon Inc., System-10, Model P1 with totalizing meter on the front and output contacts for connection to the (FMS), System-10, Model P1 BTU meter to be provided with Optional Outputs for supply and return temperatures as well as liquid flow rate, in addition to the standard BTU Energy total output. Output signal conductors from BTU meter shall be terminated in Tenant provided junction box above ceiling on rear demising wall.
3. Chilled and hot water flow elements and temperature sensors will be provided and installed by Tenant based on pipe size. For hot or chilled water piping 1¼" or larger use: Onicon Model P-IIOD single turbine insertion type flow meter with frequency output. For hot or chilled water piping 1½" or smaller use: Onicon Model F-1300 single turbine inline with frequency

output.

4. Tenant shall provide calibration, testing and certification for meter (if existing) prior to occupancy to ensure accuracy. Tenant shall also provide the same for any new meter installed if so requested by the Landlord, all at the Tenant's sole cost and expense.
5. Tenant to hire Landlord certified FMS Contractor to connect output signal conductors from Tenant provided junction box to Landlord provided FMS interface panel in service corridor. Landlord certified FMS Contractor shall also provide all required programming to acquire and process output signals from Tenant BTU meter. All costs for connecting conductors, conduit, programming and commissioning the BTU totalizer system shall be at the sole cost and expense of the Tenant.

Reuse of Existing Equipment

If the Lease expressly permits the Tenant to reuse existing HVAC equipment located in the Leased Premises, then the Tenant will proceed as follows:

1. The Tenant must establish that the existing equipment and installation conforms to the Landlord's criteria and a request be made to the Landlord for the reuse of said equipment. In all cases, the equipment to be reused shall be brought into first class working

MECHANICAL CRITERIA

QUEENS CENTER

CONTINUED

order and shall conform to all current and applicable code requirements. All systems must be installed and operational to the complete satisfaction of those having jurisdiction.

- 2. Should the Tenant reuse existing equipment and the Landlord determines that new equipment is required for any reason at any time during the term of the lease, the Tenant must install new equipment conforming to the Landlord's criteria within 30 days of Landlord providing written notification to Tenant.
- 3. The Tenant will submit plans and approvals showing clearly those pieces of equipment planned for reuse and how they will be brought into first class working order.
- 4. Tenant may not reuse any equipment deemed to be 10 years old or older.
- 5. When reusing existing equipment, the Tenant is not in any way relieved of the responsibility to conform to the Landlord's criteria governing the HVAC system.
- 6. Prior to opening, the Tenant will submit the following documentation to the Landlord, (1) a letter from the HVAC Contractor asserting that the HVAC system is operating in a "like new" condition, (2) a copy of the maintenance agreement for the Tenant HVAC equipment, (3) the Tenant's HVAC maintenance contractor must provide photographs of the existing unit(s).

All existing air handling units more than 10 years old must be replaced during construction. Any air handler less than 10 years old may be reused at the sole discretion of the Landlord and must be refurbished according to the following specifications. A written report of the same must be provided to the owner's representative prior to store opening.

- a. New high efficiency motor to match new requirements.
- b. New shielded fan bearing.
- c. Chemically clean or replace hot and cold water coils.
- d. Hydronically test hot and chilled water coil and hold 1½ times pressure for 24 hours.
- e. Install Cohesive Automation, Co. specified energy management controls.
- f. Install new control actuators on hot and chilled water valves as specified by Cohesive Automation, Co. control specs.
- g. New temperature gauges on hot (0-240) and chilled (0-100) water supply and return lines.
- h. New pressure gauges on hot and chilled water supply and return lines. (0-100)
- i. Install new belts - type A-B, and replace sheaves if needed.

- j. Install 2" pleated air filters - America Air or equivalent.
- k. Install access panels for primary condensate pans and clean pan.
- l. Install secondary condensate pan.
- m. Install separate drain lines for condensate pans with "p" trap and cleanout.
- n. Clean squirrel cage with pressure washer or equivalent.
- o. Install Bell and Gossett circuit setters and hot and chilled water return lines.
- p. Install access and work platform for maintenance of air handler if required.

Testing and Balancing

Tenant must provide for balancing of all hydronic and air systems. Balancing will be performed by an independent certified test and balancing agency at the sole cost and expense of the Tenant. The hydronic and air balance report is to be provided to the Center's office prior to the store opening. The Tenant's mechanical contractor shall cooperate with the selected balance agency in the following manner:

- a. Provide sufficient time before final completion date so that testing and balancing can be accomplished.

MECHANICAL CRITERIA

QUEENS CENTER

CONTINUED

- b. Provide immediate labor and tools to make corrections required without undue delay. Install balancing dampers as required by test and balance agency.
- c. Mechanical contractor and balancing agency shall not alter or disable the smoke control dampers or any other equipment associated with the smoke control or evacuation systems.
- d. The contractor shall put all heating, ventilating and air conditioning systems and equipment into full operation and shall continue the operation during each working day of testing and balancing.
- e. Testing and balancing agency shall be kept informed on any major changes made to system during construction and shall be provided with a complete set of 'as-built' drawings.

Natural Gas

The Landlord, at Landlord's sole discretion may provide gas piping to Tenant's located in the designated Food Court, for which the Landlord shall be entitled to receive from the Tenant payment on demand.

Closeout Requirements

1. Tenant must submit as-built drawings and certified air balance reports prior to construction close out showing the exact location of all equipment and ductwork.
2. A copy of the maintenance agreement for the HVAC equipment must be provided to the Landlord.

PLUMBING CRITERIA

QUEENS CENTER

1. Waterproofing must be installed in all “wet areas” such as kitchens, restrooms, mop sinks, drinking fountains, etc. The waterproof membrane must extend 4” vertically on all demising walls. This membrane will be water tested by the General Contractor and inspected and signed off by Mall Personnel. If the membrane fails the water test, it must be replaced.
2. **Water Efficiency**
 - The Tenant is required to install waterless urinals in tenant restrooms when urinals are used.
 - Low-Flow water closets using 1.6 GPF or less gallons per flush will be installed in all tenant spaces.
 - Operation sensors and low-flow heads using 0.5 GPM or less in lavatories.
3. The Landlord shall provide a capped water service to or near each Leased Premises. The service shall generally be a ¾” service for retail Tenants, 1” service for food court Tenants and 2” service for restaurant Tenants.
4. Each Tenant shall be responsible for the coordination, supply and installation of a water meter at the point of connection to the Landlord provided service. Water meters with remote reading capabilities shall be installed in the Tenant space. The Tenant is responsible for all work associated with the meter and remote reading hardware installation. All water meters and remote reading hardware shall be as manufactured by Hersey Products and size as follows:
 - Retail Tenants: ¾” size, Model# 442IIS, with ER-1 Encoder.
 - Food Court Tenants: 1” size, Model# 452IIS, with ER-1 Encoder.
 - Restaurant Tenants: 2” size, Model# 572IIS, with ER-1 Encoder.
5. Output conductor on ER-1 Encoder shall connect to Landlord’s Building Management System (FMS). Output conductor from water meter shall terminate in Tenant provided junction box above the ceiling on rear demising wall. The exact location must be agreed with Center management prior to any work taking place.
6. The Tenant shall provide all calibration, testing and certification for meter (if existing) prior to occupancy to ensure accuracy. Tenant shall also provide the same for any new meter installed if so requested by the Landlord, all at the Tenants sole cost and expense.
7. The Tenant shall hire a Landlord certified FMS Contractor to connect the output signal conductors from Tenant provided junction box to Landlord provided FMS interface panel in service corridor. Landlord certified FMS Contractor shall also provide all required programming to acquire and process output signals from Tenant’s water meter. All costs for connecting conductors, conduit, programming and commissioning the system shall be at Tenant’s sole cost and expense.
8. A sanitary connection will be made available in the ceiling of the floor below at vertical risers generally located at one row of alternate columns. Sanitary connections will be minimum 3”. Vent connections will also be made available in a similar manner. The Tenant must verify the locations and confirm the suitability of all sanitary and vent lines.
9. Tile plumbing system shall be installed in accordance with governing building codes and all Landlord requirements. Water closets within retail or food court Tenant areas shall be 1100r or wall mounted lank style pressure assisted siphon Jet type (1.6 GPF Maximum). Urinals within retail or food court Tenant areas shall be washout flush type with 314spud (1.0 GPF Maximum). Lavatory faucets in all Tenant spaces shall be of the metering (self closing) type (2.5 GPM Maximum).
10. Low water consumption fixtures and controls shall be required for water conservation.
11. The Tenant shall install floor drains with trap primers in each Tenant toilet room.
12. Domestic water piping material shall be Type “L”

PLUMBING CRITERIA

QUEENS CENTER

CONTINUED

copper with sweat type fittings.

13. Sanitary and vent piping material shall be service weight cast iron with mechanical fittings.
14. Any plumbing fixtures that receive hair, as in pet shops and hair styling shops etc., are required to install lint and hair traps beneath each trapped fixture.
15. A reduced pressure backflow preventer must be used on all Tenant water connections to systems or equipment that may be hazardous. This will include photo processing equipment, brine systems, etc. Backflow preventer assembly to be installed downstream of meter and within the Leased Premise. Cross connection control permits, applications, fees and documentation shall be provided solely as responsibility of the Tenant.
16. Tenant shall provide a main water shut off valve located at eye level in a wall behind a labelled access door. Locate in or near employee restroom as designated by Landlord.
17. Domestic water heaters shall be supplied by Tenant using tank type electric.
18. Tenants located in the designated Food Court Area or Food Service Tenant's located elsewhere in the Center shall discharge waste from kitchen equipment through a grease interceptor prior to connection to the Landlord's sanitary system. Dishwasher

machines are exempt from this requirements. Grease interceptors shall be contained completely within the demised premise and above the floor slab or in other Landlord approved locations. All food court and food service (restaurant) Tenant's grease interceptors shall be above floor type complete with flow control filtering and sized as follows:

- Food Court Tenants: Jay R. Smith Model# 8050 or equal.
 - Food Service Tenants: Sized using manufacturers procedure for sizing grease interceptors. Grease interceptors over 100 pound grease capacity must be approved by the Landlord prior to installation.
19. At the Tenant's expense, designated Food Court, Restaurant or Food Preparation Tenants must employ an independent service contractor to clean and maintain the grease interceptor within their premises. Tenant must provide Landlord with the name of the contractor and their plumbing/grease disposal license number, as well as a contract identifying the work scheduling.

Tenants on the upper level must coordinate with lower level Tenants and the Landlord for floor penetrations and any plumbing under the upper level floor/deck. Tenant will be responsible for all cost associated with this work.

Gas Service

Gas may be available at the Center. Tenant, at its sole cost and expense and in compliance with local code, must procure gas service to and within the demised premises and will make all necessary arrangements with the local Gas Company for such service. Tenant is responsible for installation of a gas meter at the gas meter header.

Pressure regulators and piping required for connection to Tenant's equipment is the responsibility of the Tenant. Coordinate with Landlord for regulator vent routing.

All sanitary sewer and plumbing vent piping shall attach to Landlord supplied ventilation ductwork and shall comply with all local codes.

STRUCTURAL CRITERIA

QUEENS CENTER

The following criteria is provided for the purpose of designing the Tenant's structural drawings. This criteria is provided as a guideline for Tenant's Engineer. It is the Tenant's responsibility to verify existing conditions and comply with all applicable codes and standards.

Complete Engineered drawings must be submitted to the Landlord's Tenant Coordinator for review and approval. Landlord will review the plans for conformance to basic Mall requirements. The Landlord does not review for design, nor does the Landlord accept responsibility for the Tenant's adherence to governing codes.

The documents to be submitted for Landlord approval must include the following:

- Complete plans and specifications for all structural work. Documents must be signed and sealed by a Licensed Engineer in the state of New York.

General Requirements

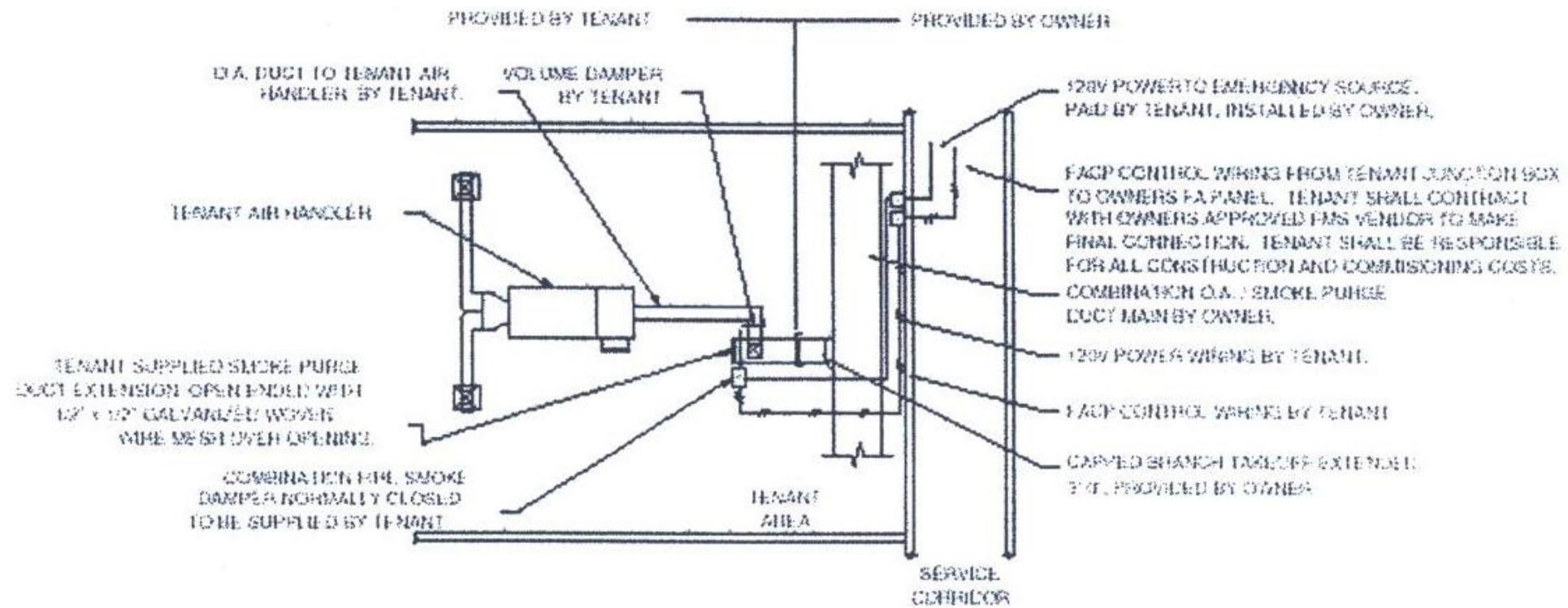
1. The Tenant's storefront must be structurally self-supported. Tenant may not support the storefront from the bulkhead or fascia. Structural support for Tenant storefronts must be from the roof joists for lateral bracing.
2. Fixtures and equipment may not be attached to or supported from the floor or roof deck.
3. Structural drawings are required for all items that require support from the steel structure weighing 300 lbs. or more.
4. Upper level Tenants must review base building structural drawings prior to installing a security safe, ovens or any equipment weighing 300 lbs. or more.

Exit Corridors

Distribution of utilities through a newly constructed or an altered exit passageway is prohibited except for equipment and ductwork specifically serving the exit passageway, sprinkler piping, standpipes, electrical raceway for fire department communication and electrical raceway serving the exit passageway.

TECHNICAL DETAILS

QUEENS CENTER

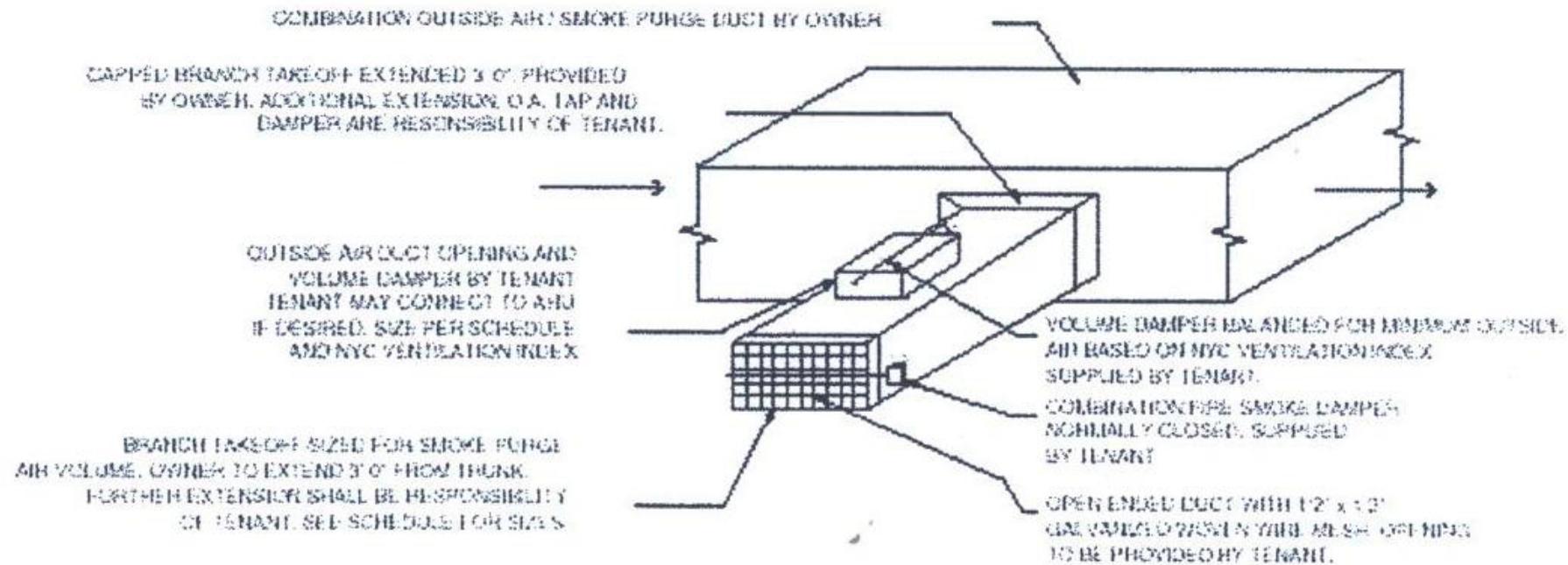


OSA / SMOKE PURGE TAP DESCRIPTION

TECHNICAL DETAILS

QUEENS CENTER

CONTINUED

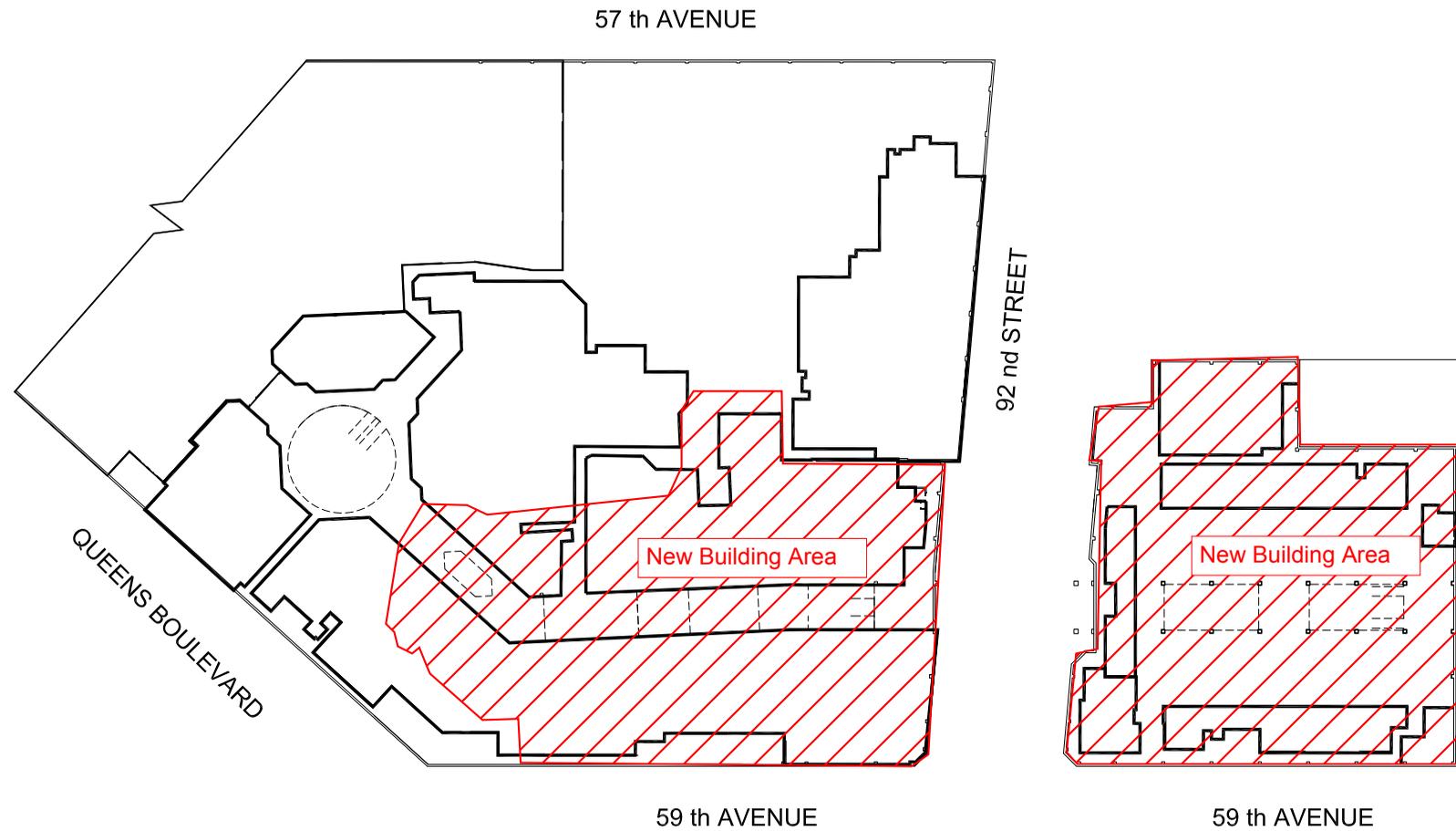


OSA / SMOKE PURGE TAP DETAIL

TECHNICAL DETAILS

QUEENS CENTER

CONTINUED

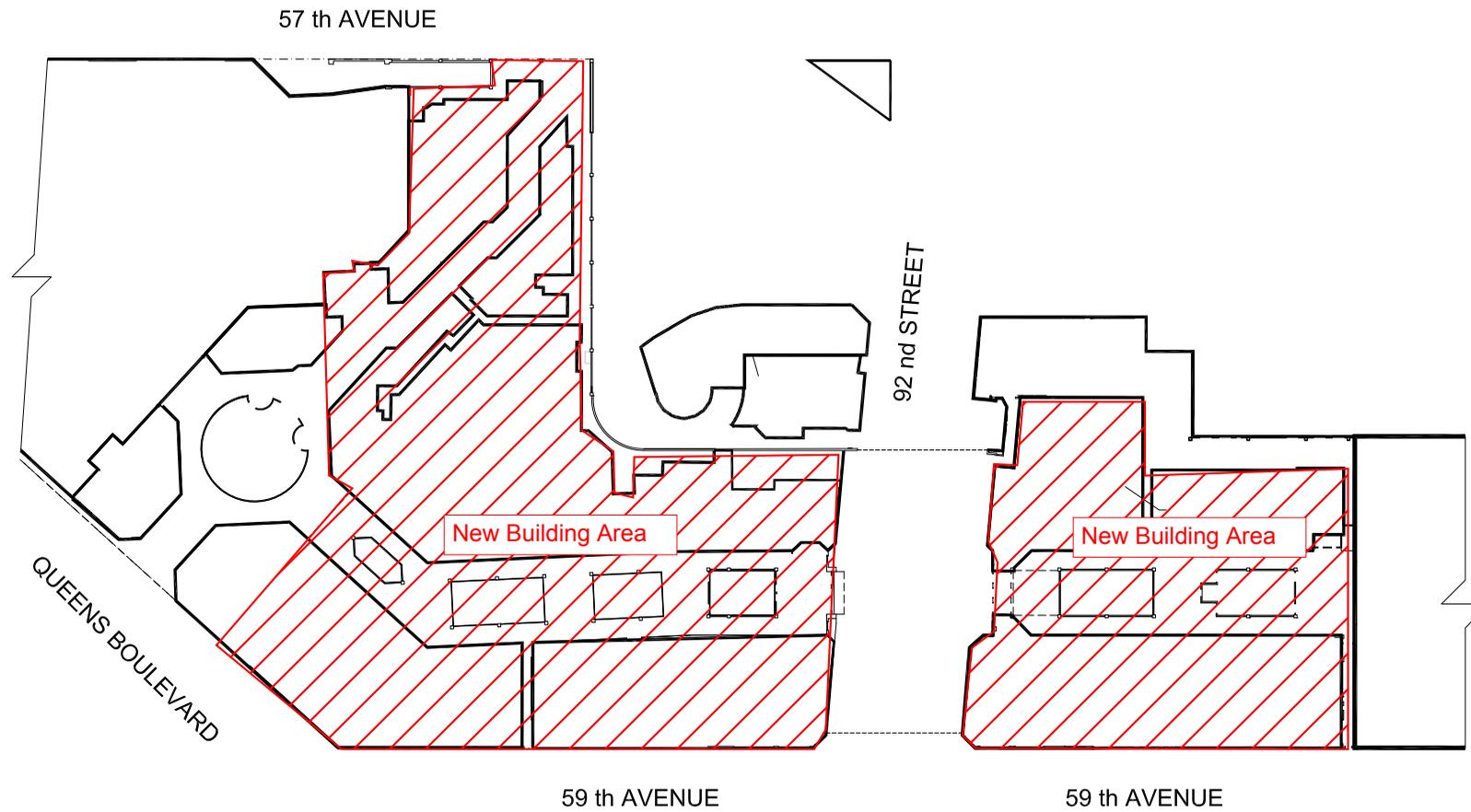


 QUEENS CENTER
CONCOURSE LEVEL

TECHNICAL DETAILS

QUEENS CENTER

CONTINUED

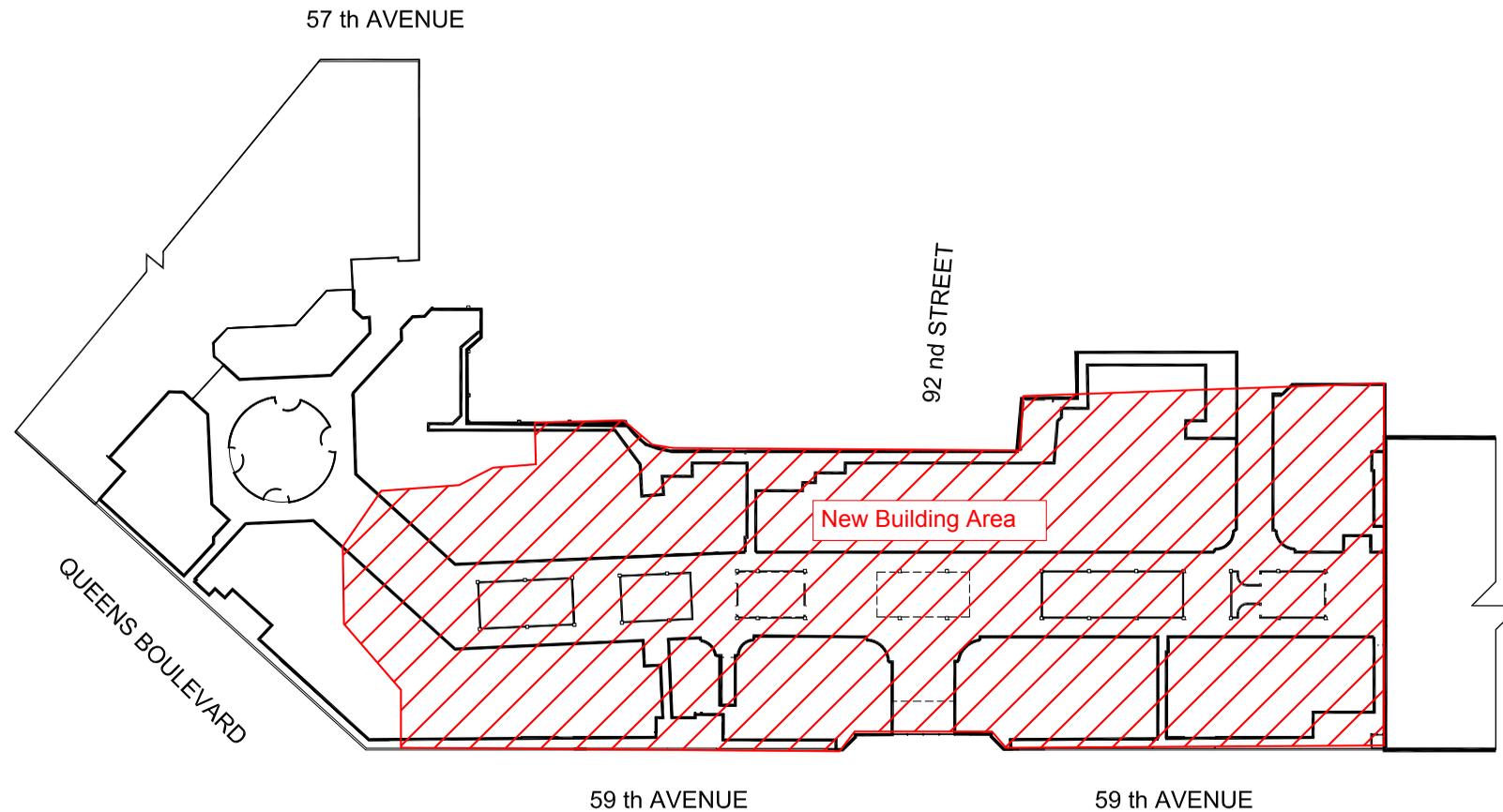


 QUEENS CENTER
FIRST LEVEL

TECHNICAL DETAILS

QUEENS CENTER

CONTINUED

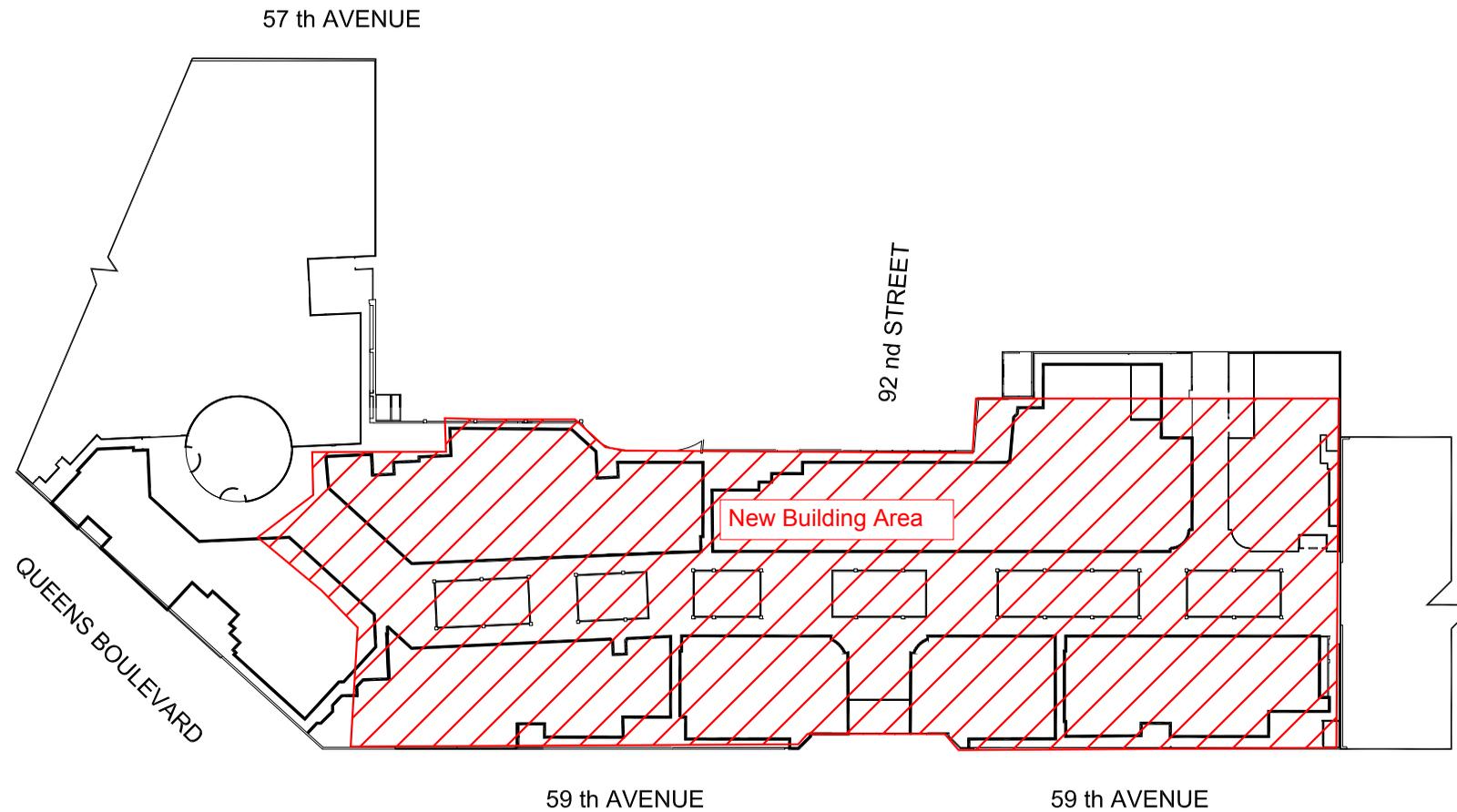


 QUEENS CENTER
SECOND LEVEL

TECHNICAL DETAILS

QUEENS CENTER

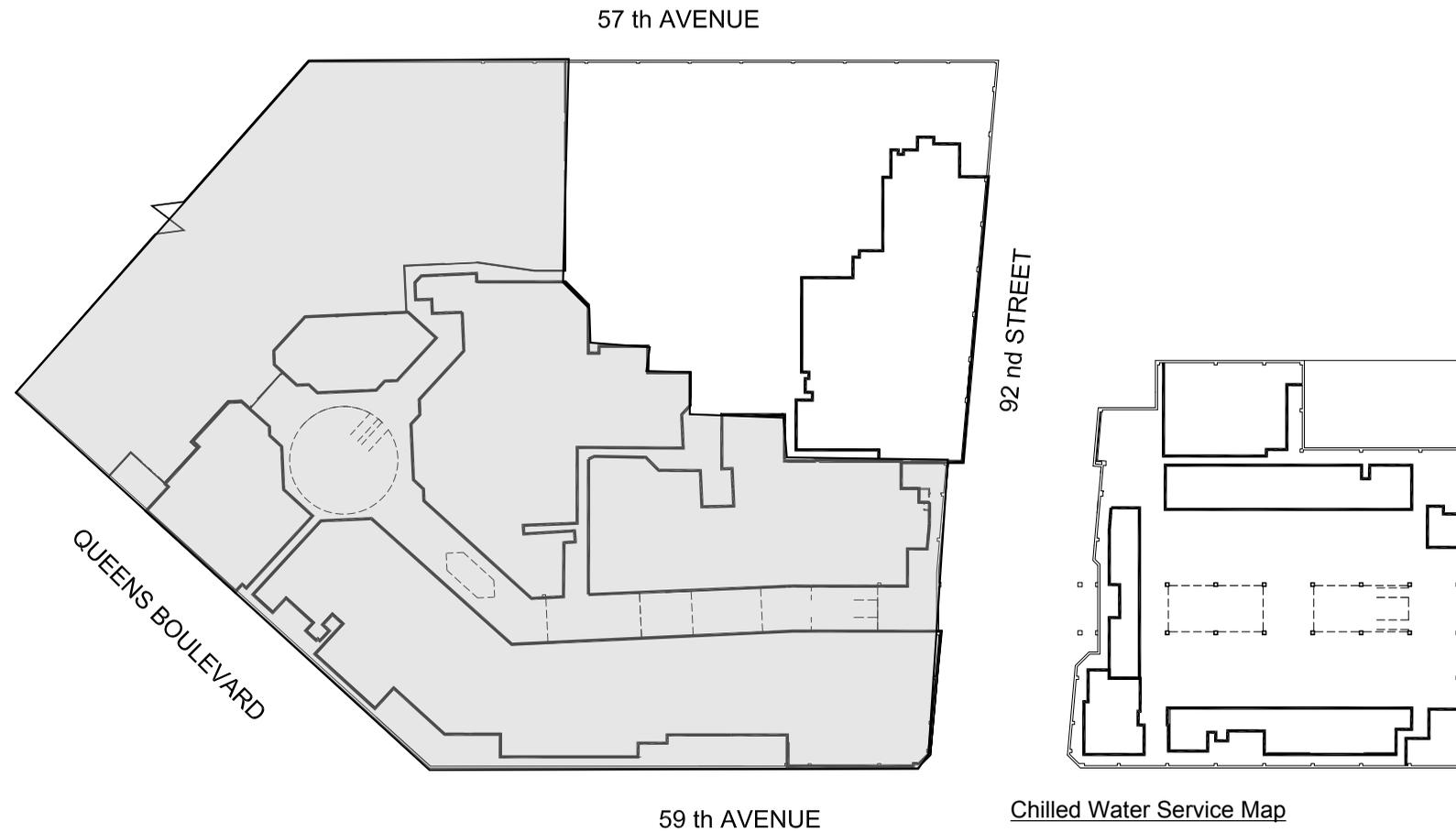
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TECHNICAL DETAILS

QUEENS CENTER

CONTINUED



Chilled Water Service Map

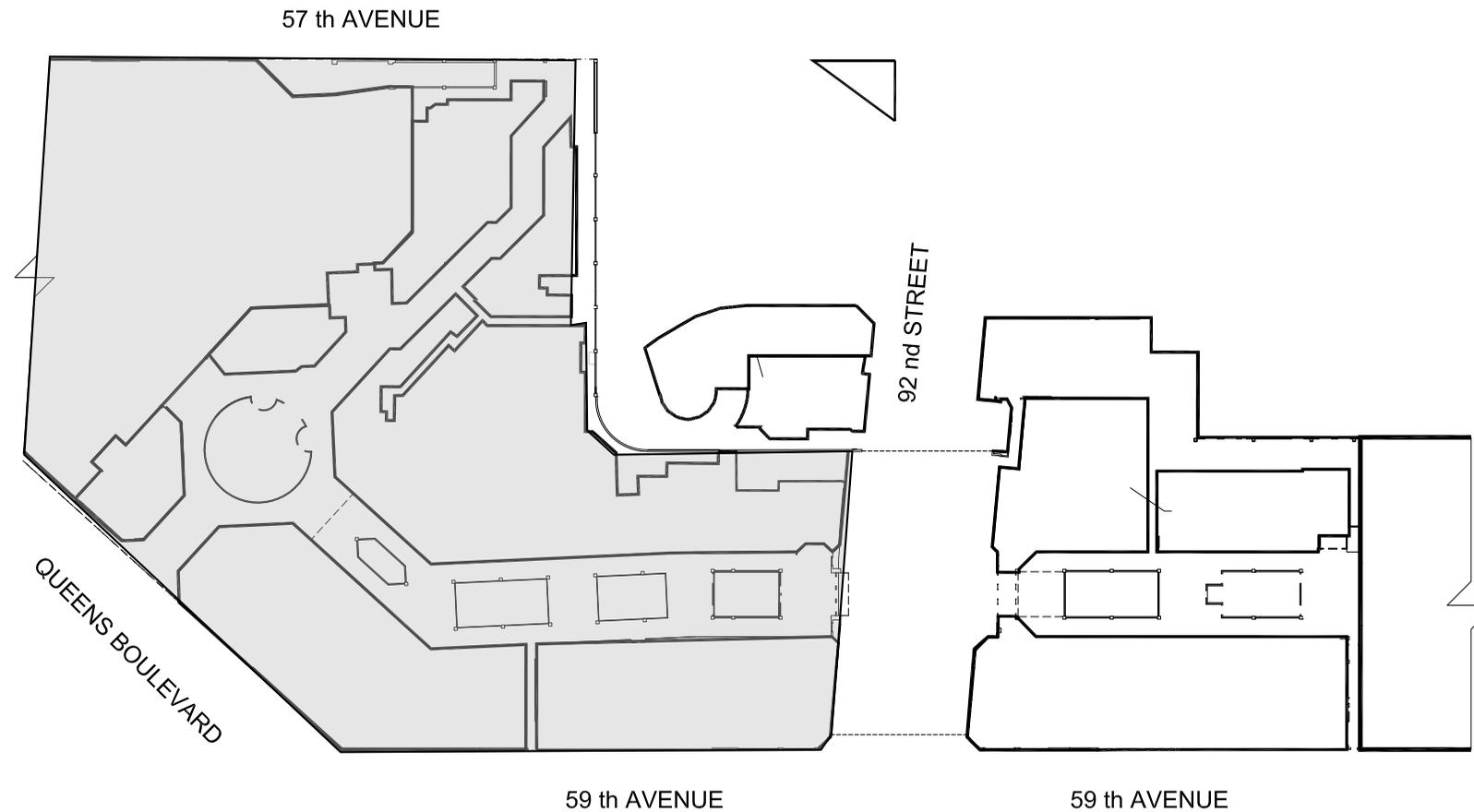
-  Chilled water from main Central Plant
-  Chilled Water from packaged chiller

 QUEENS CENTER
CONCOURSE LEVEL

TECHNICAL DETAILS

QUEENS CENTER

CONTINUED



Chilled Water Service Map

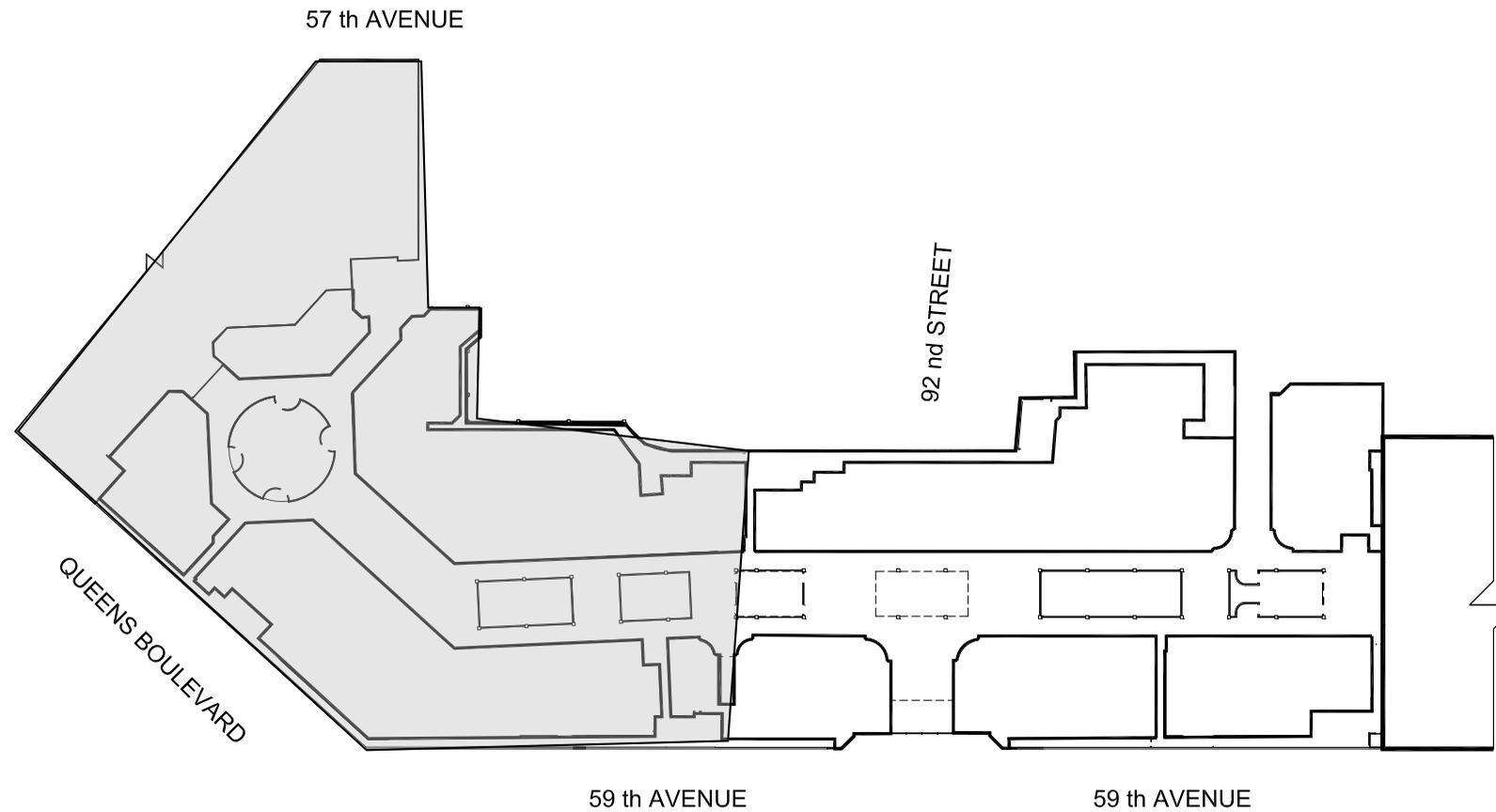
-  Chilled water from main Central Plant
-  Chilled Water from packaged chiller

 **QUEENS CENTER
FIRST LEVEL**

TECHNICAL DETAILS

QUEENS CENTER

CONTINUED



Chilled Water Service Map

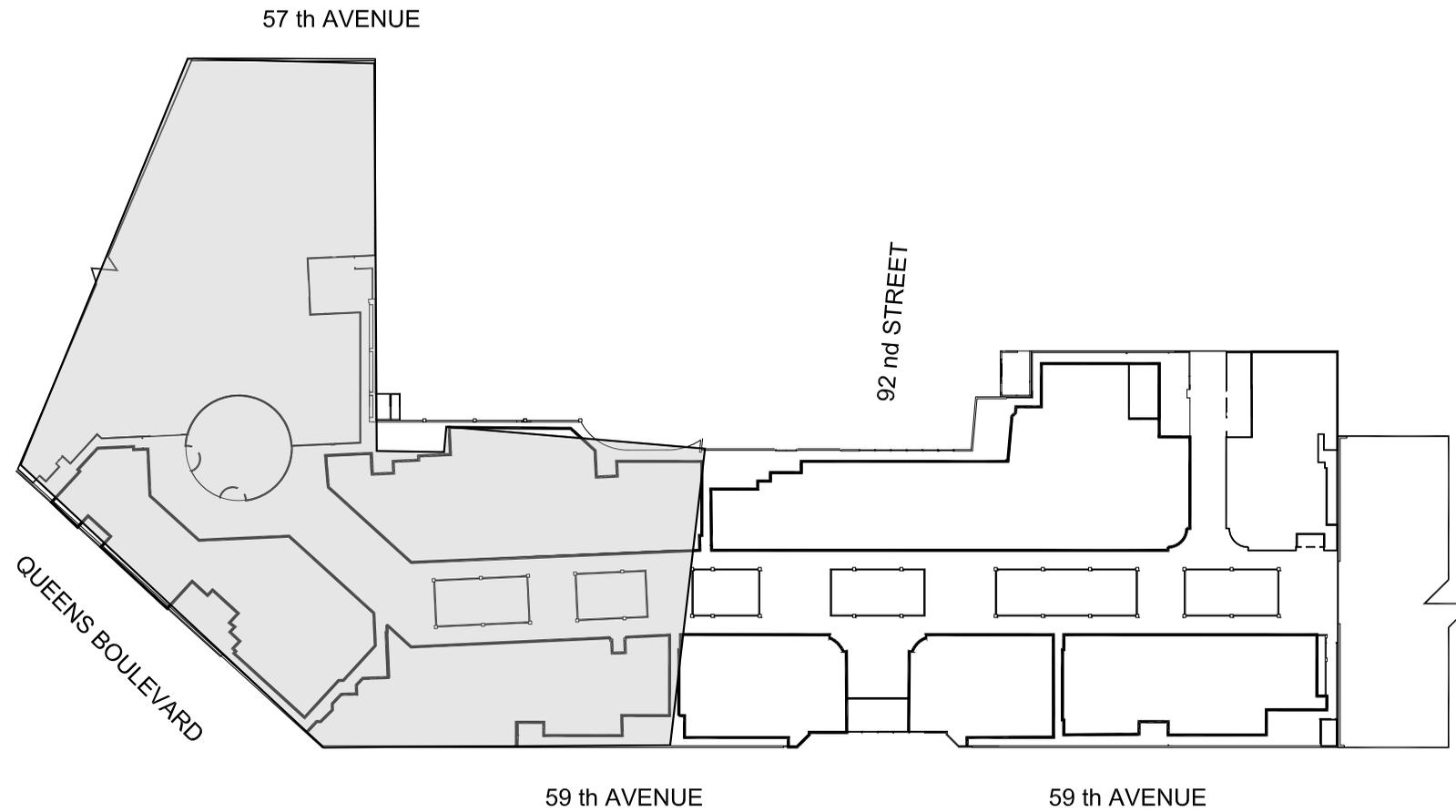
-  Chilled water from main Central Plant
-  Chilled Water from packaged chiller

 QUEENS CENTER
SECOND LEVEL

TECHNICAL DETAILS

QUEENS CENTER

CONTINUED



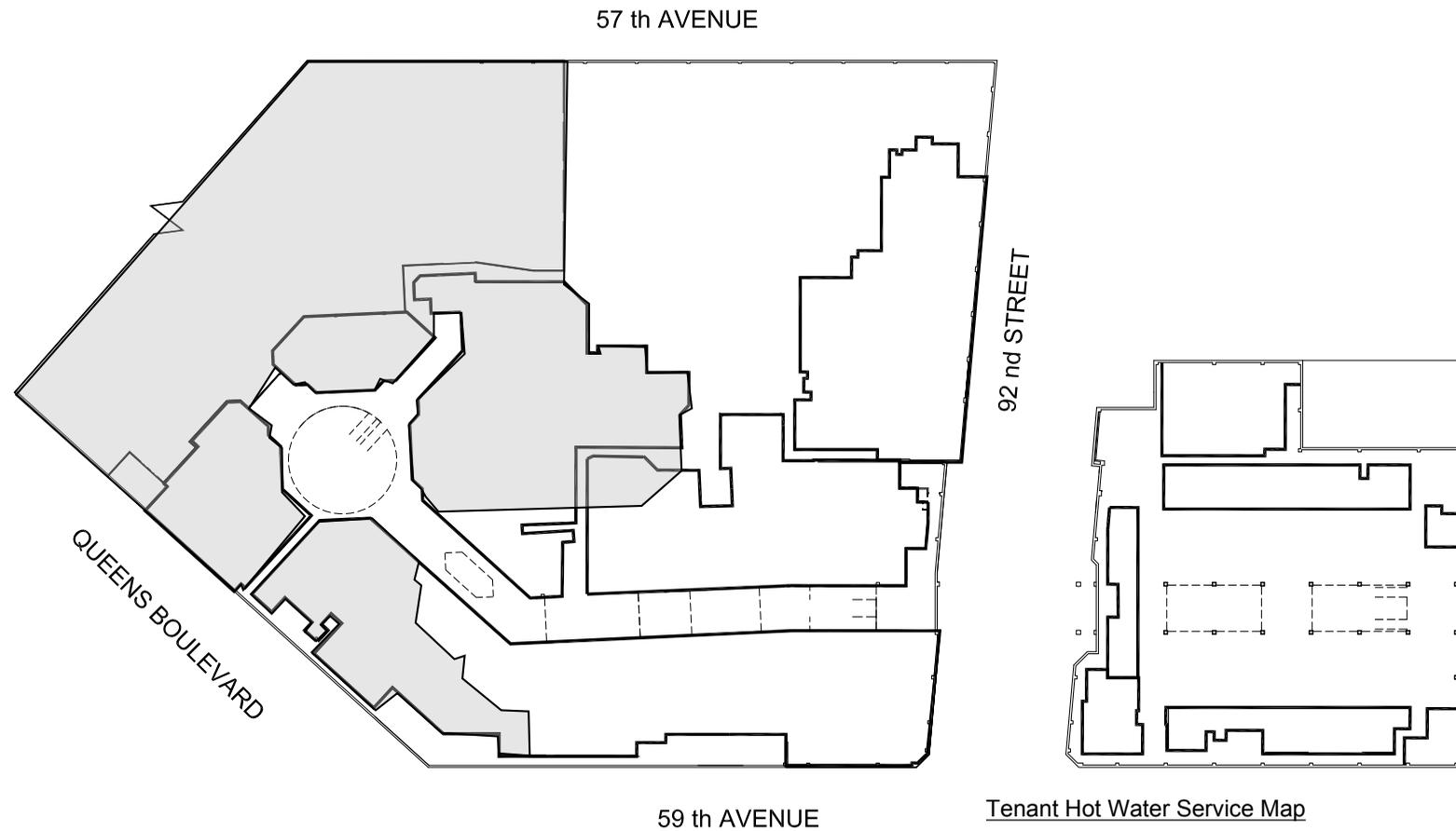
Chilled Water Service Map

-  Chilled water from main Central Plant
-  Chilled Water from packaged chiller

TECHNICAL DETAILS

QUEENS CENTER

CONTINUED



 **QUEENS CENTER
CONCOURSE LEVEL**

Tenant Hot Water Service Map

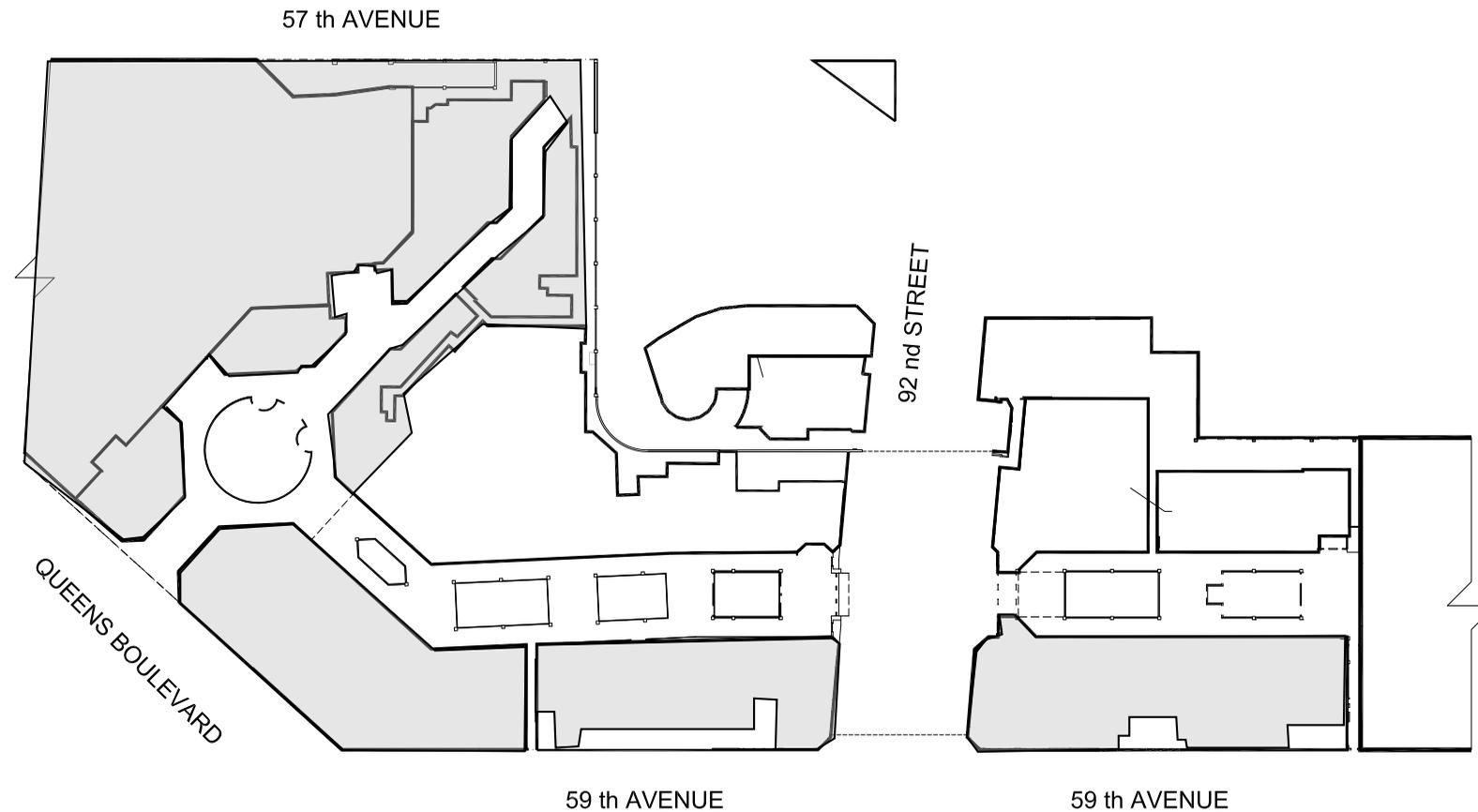
-  Tenant Areas Receiving Hot Water from Central Plant
-  Tenant Areas NOT Receiving Hot Water from Central Plant

NOTE: This service map is based on ePlan dated 2/8/18

TECHNICAL DETAILS

QUEENS CENTER

CONTINUED



Tenant Hot Water Service Map

-  Tenant Areas Receiving Hot Water from Central Plant
-  Tenant Areas NOT Receiving Hot Water from Central Plant

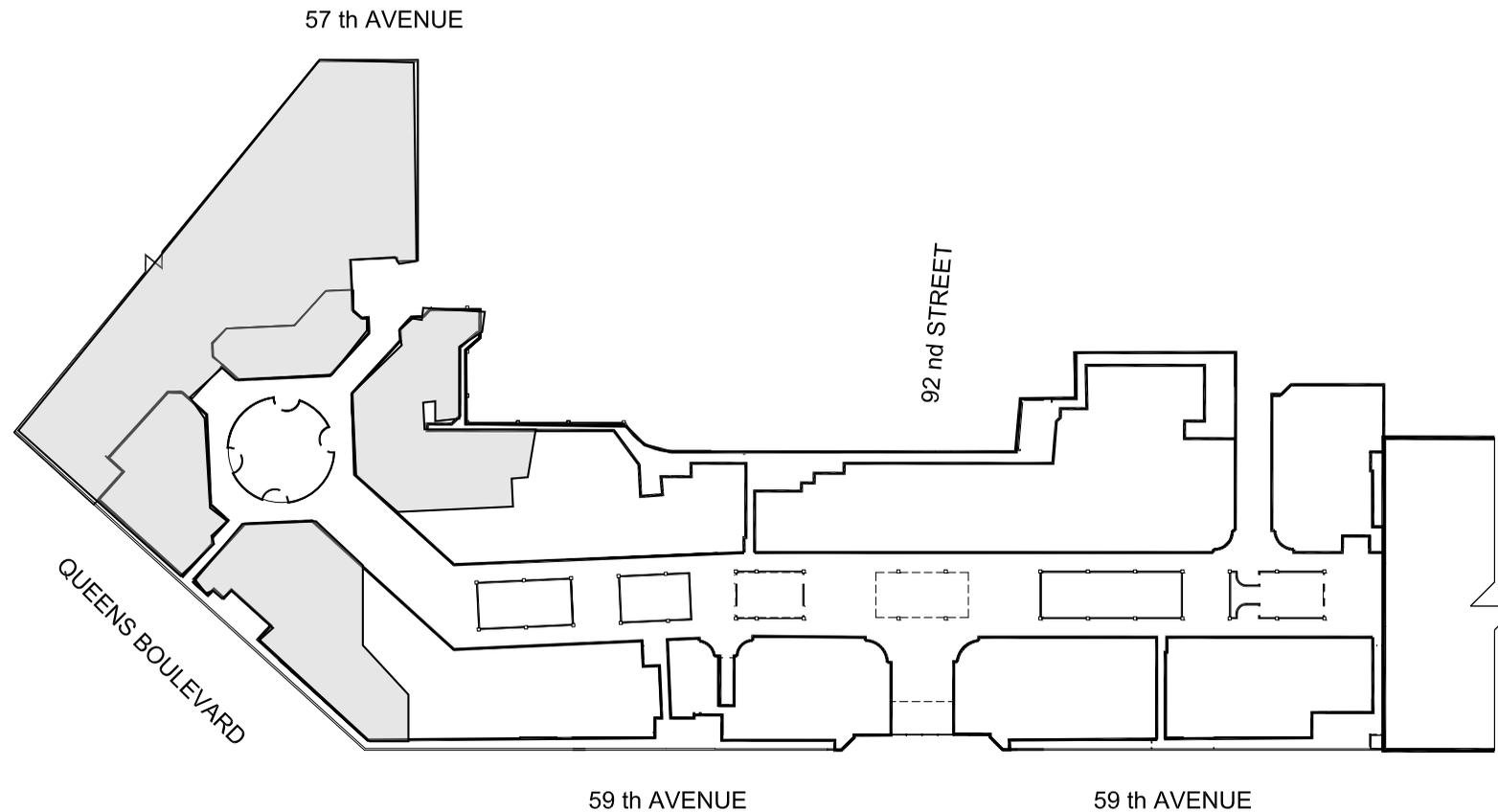
NOTE: This service map is based on ePlan dated 2/8/18



TECHNICAL DETAILS

QUEENS CENTER

CONTINUED



Tenant Hot Water Service Map



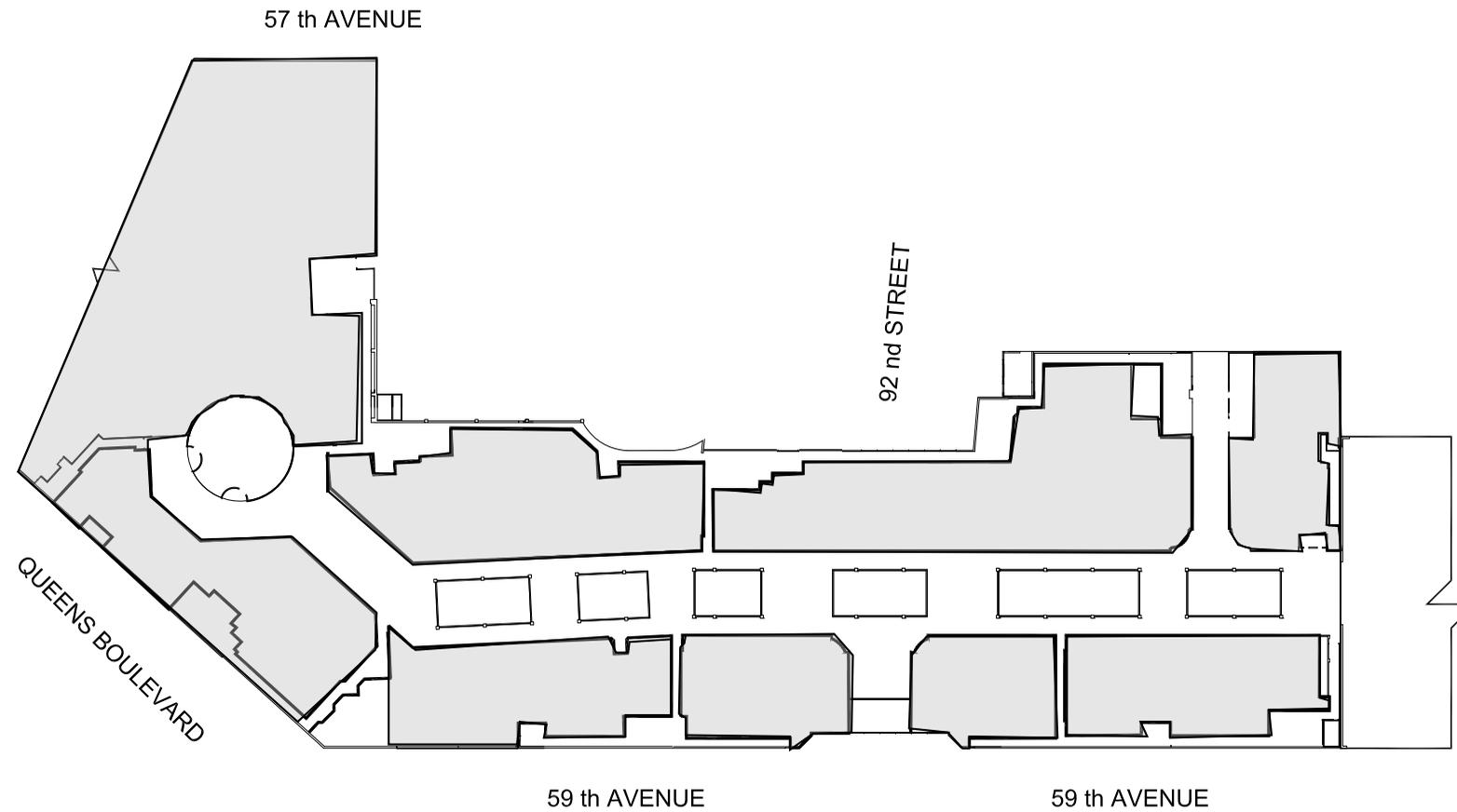
- Tenant Areas Receiving Hot Water from Central Plant
- Tenant Areas NOT Receiving Hot Water from Central Plant

NOTE: This service map is based on ePlan dated 2/8/18

TECHNICAL DETAILS

QUEENS CENTER

CONTINUED



Tenant Hot Water Service Map



QUEENS CENTER
THIRD LEVEL

-  Tenant Areas Receiving Hot Water from Central Plant
-  Tenant Areas NOT Receiving Hot Water from Central Plant

NOTE: This service map is based on a Plan dated 2/6/16.

TECHNICAL DETAILS

QUEENS CENTER

CONTINUED

