



THE MALL-*of*-SAN JUAN

**CONSTRUCTION
CRITERIA**

MSJ-Construction Criteria

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Yellow Highlights = clarifications

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Introduction

Information contained in this section has been assembled to assist the architect and the architect's consultants in preparation of Construction Documents and Specifications. The architect is responsible for adhering to the requirements outlined in the **Lease Criteria** as well as the following criteria.

The Mall of San Juan will provide an opportunity for Tenant's to express their individual identity & branding through the use of high end, sophisticated and sustainable materials.

The following Construction Document Criteria and the Design Criteria, which are available on our website at <http://Tenantcoordination.taubman.com>, were created to help define the Design Philosophy.

We encourage the use of sustainable design and construction practices for all aspects of Tenant Improvements. Please reference the U.S. Green Building Council's website at usgbc.org for more information.

Architecture and Finishes

Storefront Work – *TENANT WORK*

1. Materials: All materials employed in Tenant's storefront shall be hard surface, durable, materials that require minimum maintenance. Wood employed decoratively within or at the storefront, or anywhere within the leased premises, must comply with code requirements.
 - a. Storefront tile to have matching face and cut edge color so exposed-butt edge of cut tile is a finished detail (same color as the tile face).
 - i. Suggested materials are natural stone (granite, marble), quartz, solid surface (Corian or equal) or thru-body (not full-body) porcelain tiles. Fry Reglet or equal architectural flush trim would be required with storefront materials having dissimilar colors on face and exposed edge.
2. Material Samples: **Tenant must provide an 11" x 17" material sample board** with their plan submittal (labels must be consistent with the plan submittal legend). In addition, Tenant must provide **either photos of finishes from a comparable existing store or renderings** of the finishes for the proposed store with their plan submittal.
3. Structural Support: Tenant's storefront construction must be floor supported at the base and shall be laterally braced at their head section to Landlord's structural framing or tenant's supplemental steel secured to the structural framing. No attachments to the Landlord's mall finished bulkhead, ceiling system or steel roof deck shall be permitted.
4. Security: Identify and specify any security system to be used. Door frame mounted or in floor systems are acceptable provided they are incorporated into the Tenant's storefront design and

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subject to Landlord Approval. **No free standing-exposed pedestal systems are permitted.**

a. Trenching.....Trench 1/2" deep – no deeper or wider than 5/16", and should be carefully scored by sawcutting concrete and removed to avoid any damage beyond the required 1/2" x 5/16" slot. The area should be repaired / filled with an appropriate cementitious material.

5. Mechanical Devices: Any mechanical device (time clocks, grille locks, grille controls, etc.) shall be concealed within Tenant's storefront construction.
6. Overhead Grills: Overhead Grills shall be concealed in an overhead or side storage pocket during shopping center hours.
7. Demising Wall-U Channel Transition: Tenant to provide 1" U-Channel transition at the leaseline of demising walls at the storefront. ***There are no Landlord provided neutral piers, only U-Channel Transitions to the adjacent Tenant.***

a. Scribe tenant storefront material to mall bulkhead where possible.

8. Mirrors: No mirrors shall be visible from the common area facing the storefront.
9. Egress Path: A clear egress path of 10 ft. is required in front of the storefronts. Tables/Chairs, signage and other obstructions must not be located in this space.
10. Door Swing: All entry doors that swing outward must be setback into recessed openings and not impede the egress path.
11. Television, LCD's and Security Equipment: Television, LCD screens and security equipment, and all conduits, wiring, and related items in the sales area are subject to Landlord review and approval.
 - a. Television & LCD Screens: The installation of Televisions & LCD screens in Tenant sales area for marketing and advertising is subject to Landlord review and approval.
 - i. If approved, Television & LCD screens must be a minimum of five (5) feet from the storefront leaseline.
 - ii. No flashing or strobing images.
 - iii. Content must adhere to decency standards in Lease and is subject to Landlord review and approval.
 - b. Antennas & Satellite Dishes: The installation of any roof mounted antenna/satellite must be approved, in writing, by Landlord and coordinated with Mall Facilities prior to install.

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12. Exit/Emergency Lighting System: Tenant shall provide exit/emergency lighting system functioning on a normal source or battery operated source for loss of power conditions (as required by governing codes).
- a. Emergency lighting shall be provided by Tenant to illuminate stock, food preparation area or sales area and rear exit way during power outages. Said lighting shall be battery operated, recessed lights or twin-head light pack(s).
 - b. **In areas visible to customers, battery assembly for emergency and exit lights shall be concealed and remote type light fixtures used.**
13. Exterior Storefronts and Glazing: All exterior storefront systems must comply with Hurricane Design Criteria per Building Codes. Window Openings must utilize **large missile impact resistant glass** or glazing systems that are tested in accordance with Florida Building Code Testing Application Standards (TAS) 201, 202, and 203, or ASTM Standards E1886 and E1996. In addition, systems must be designed to **withstand wind speeds of 175 mph.**
- a. U Value and Shading Coefficients:
 - i. Restaurant Storefront Glass: $U = .83$, $SC = .55$
 - ii. Terrace Restaurant Glass: $U = .83$, $SC = .55$
 - iii. Load calculations are based on Restaurant Tenants having approximately 50% Glass for the Tenant's open storefront. 50% is for the entire exterior wall surface of the Tenant. ALL Tenants can infill 100% glazing into the openings provided in the base building, assuming that their glass performance values meets or exceeds ($SC =$ lower number is better) the values used in the calculations.

Floor - General Requirements

1. Floor Material: All materials employed in Tenant's space shall be hard surface, durable, materials that require minimum maintenance. Wood employed anywhere within the leased premises, must comply with code requirements.

a) Tenant's storefront – hard surface floor finish must extend to the leaseline

- i) Floor material must withstand regular contact with mall cleaning equipment
- ii) Vinyl floor products are not acceptable in the sales area
- iii) No vinyl or rubber base permitted in the sales area. Provide a hard surface-durable base material.

b) Polished Concrete: Polished Concrete floors are allowed on a case by case basis, if consistent with tenant prototype design

(1) Prototype: Submit prototype design package as part of the approval process

(2) Pattern/Texture: Provide score, diamond grind and/or bead blast pattern

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- (3) Finish: Sealing the surface with clear acrylic, epoxy, or urethane sealer adds varied levels of sheen and depth, and protects the concrete from damage and staining.
 - a. Concrete floors must be sealed with a high quality, low-VOC clear acrylic, epoxy, or urethane sealer, level 2 (minimum) sheen finish.
 - (4) Color: artistic designs using pigments, paints, epoxy are acceptable if wear resistant and consistent with prototype
 - c) **Wood Flooring-** Solid wood or Engineered wood flooring with veneers of 2mm thickness or more and commercial grade (10 year warranty) finish are acceptable. **No laminate or vinyl wood** products are allowed in the sales area.
 - d) **Restrooms-** all tenant public restrooms (see Plumbing Criteria) must have hard surface, durable flooring with waterproof membrane.
2. **Transitions:** **All floor finishes at the storefront lease line shall be the same finish floor elevation (flush- grout line) as the Landlord's mall floor.** Provide recessed/flush Schluter Type or equivalent transition strips in all other floor transition areas of Tenant space as needed based on floor material.
- a. All toilet rooms are to have an ADA compliant marble threshold (or equivalent) to contain water in the event of a leak
3. **Seismic or Expansion Joints:** Expansion joints in storefront or sales areas must be detailed and illustrated in the Construction Documents. Seismic or Expansion joint materials must be compatible with the storefront and floor finish materials.
4. **Anti-Fracture Membrane - Floor Isolation:** It is recommended to install an Anti-Fracture Membrane at the column lines, transitions between the structural slab and any shrinkage cracks that are evident.

Walls, Partitions and Separations

LANDLORD WORK

1. **Demising Walls:** Landlord will erect 2" x 6" metal stud partitions dividing the Tenant's premises from the adjacent Tenant spaces or common areas at the Tenant's expense. **Tenant shall verify Landlord's placement of wall studs prior to space acceptance and advise Landlord in writing of any discrepancies immediately.** Failure to notify Landlord of discrepancies shall be regarded as acceptance by the Tenant.
 - a. **Demising walls are not designed to accommodate loading. All fixtures must be supported by the floor or new wall construction.**

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TENANT WORK

Wall Construction

1. Wall Construction: Tenant's interior partitions shall be constructed of metal stud framing with gypsum board finish on all sides with taped and spackled joints.
 - a. Tenant Demising walls and steel columns shall receive a minimum of one layer of 5/8" fire Type 'X' code gypsum wallboard with taped and spackled joints from floor to underside of structure above.
 - b. Tenant shall provide and install non-combustible fire stops as may be required at separations from the adjacent leased premises and ceiling above mall areas.

Exit/Access/Doors and Corridors

1. Exit/access doors: shall be minimum 3'-0" x 7'-0" x 1-3/4" - 1 hour fire door or code permitted equivalent and frame with hardware in accordance with governing codes. Hardware must be self-closing and match existing building standards and keyways.
2. Finishes: After installation of Tenant exit/access door, Tenant shall restore base building service corridor to original condition.
 - a. Corridor Vestibules: Where vestibules are constructed, extend adjacent corridor finishes into the vestibule and provide corner guards as per the Landlord's specifications.
 - i. Vestibule Ceiling: provide gypsum ceiling with a minimum height of 8'-0".
 - b. Projections: Tenant door may project a maximum of 7 inches when fully open into the exit passageway per Code.
 - c. Exit/access door: Exit/access door shall be painted per color specified by Landlord and labeled with store name and number as specified by center management.
3. Wall Construction: Exit/access corridor walls shall receive one layer of 5/8" fire code Type 'X' gypsum wallboard on both sides from floor to underside of structure above. All joints must be taped and spackled.

Ceiling Work

1. Ceiling Heights: Tenant is responsible for field verification of the existing conditions. **Ceiling heights above the height shown on the Space Layout Drawing and listed below may be possible but Landlord does not guarantee clearances for such ceilings.** In some cases, existing utilities may be relocated by Tenant at Tenant's expense. Written approval from Landlord is required before proceeding with such work.
 - a. First to Second Level: +/- 18'-0", Height to underside of structure: +/- 15'-1 1/2"

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- i. First Level Allowable Ceiling Height is +/- 12'-0". Tenant is responsible for field verification of the existing conditions.
 - ii. Storefront Height: 13'-4"
 - b. Second Level to Roof: Varies between 20'-3" and 17'-4", Height to underside of structure: +/- 15'-3"
 - i. Second Level Allowable Ceiling Height is +/- 12'-0". Tenant is responsible for field verification of the existing conditions.
 - ii. Storefront Height: 14'-0"
 - c. Third Level: +/- 15'- 7 1/2". Height to underside of structure: 15'-3" minimum.
 - i. Third Level Allowable Ceiling Height is +/- 12'-0". Tenant is responsible for field verification of the existing conditions.
 - ii. Storefront Height: 12'-0"
2. **Ceiling Metal Suspension Systems**: Tenant's suspended ceilings shall be secured to Landlord's structural framing or Tenant's supplemental support system (uni-strut or equivalent).
 - a. Design for seismic loading and vibration isolation.
 - b. No attachments to the Landlord's mall finished bulkhead, ceiling system or steel roof deck shall be permitted
 - c. **First Floor Tenants only** - Attachment to the concrete filled steel floor deck may be permitted in unique and extenuating circumstances where tenant's supplemental support system may not work and must be approved by the tenant coordinator or facility management prior to start of work
 - i. Ceiling loads must be 4 lbs/sqft or less, connection shall be made into the side of the deck flute, and vertical load shall not exceed 75 pounds (provide written verification of the loads)
 - d. **All other ductwork, pipes, conduits, etc. must be secured to Landlord's structural framing or Tenant's supplemental support system**
3. Sales Area Ceilings: Gypsum ceilings and soffits are required in the sales display area at the storefront (typically +/- 5'-0" from the lease line back into the store).
 - a. Open Ceilings- may be allowed on a case by case basis, if consistent with tenant prototype design
 - i. Submit prototype design package as part of the approval process
 - ii. Conduits, ductwork, etc. must be installed in an organized fashion and finished in accordance with tenant prototype
 - b. **When using an acoustical lay-in tile ceiling in the sales area, tiles must be 2' x 2' with an exposed tegular edge.**
 - c. Provide a change in ceiling height for interest, so the entire ceiling is not completely flat.

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- d. Combustible materials of any sort may not be used or stored above the Tenant's ceilings.
 - e. All diffusers, grilles, tracks, speakers, etc., must be painted to match finish ceiling.
 - f. **Hanging Marketing Displays:** Tenant hanging marketing displays must provide a recessed track or equivalent discreet hanging method. Hanging grids or other surface mounted hanging methods are prohibited.
4. **Access Panels:** Provide access panels to permit servicing of all Tenant and Landlord Equipment located above the ceiling. **Access panels in hard surface ceilings must be a flush panel door with a tape-in drywall bead flange.** Access panels should be located as inconspicuously as possible.

Interiors - General

1. **Toilet Rooms:** All Toilet Room floors above grade level shall have a Landlord approved **waterproof membrane** between the structural sub-floor and Tenant's finish floor across entire floor area and 6" up all walls. All Toilet Rooms shall have ceramic tile sanitary floors and base that extend a minimum of 4" above finish floor.
 - a. All bathrooms are to have an ADA complaint marble threshold (or equivalent) to help contain water in the event of a leak
2. **Plumbing Fixture Travel Distance:**
 - a. Retail Tenants complying with the 300' travel distance to central facilities:
 - i. Tenants with GLA 1,000 S.F. or less:
 1. No facilities to be provided for public/customer or use.
 2. No drinking fountains to be provided.
 - ii. Tenants with GLA greater than 1,000 S.F.:
 1. A single unisex toilet facility will be provided for employee use only (required by developer).
 2. No drinking fountains to be provided.
 - b. Retail Tenants NOT complying with the 300' travel distance to central facilities:
 - i. Tenants with GLA 1,000 SF or less:
 1. No facilities to be provided for public/customer or employee use.
 2. No drinking fountains to be provided.
 - ii. Tenants with GLA greater than 1,000 SF up to 2,000 SF:

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1. A single unisex toilet facility will be provided for public/customer and employee use.
 2. No drinking fountains will be provided.
 - iii. Tenants with GLA greater than 2,000 SF:
 1. Public/customer and employee toilet facilities will be provided within the Tenant space as required by code (based on the number of occupants and use of the space).
 2. Drinking fountains/water coolers will be provided for public/customer and employee use as required by code.
 - c. Restaurant Tenants (regardless of travel distance and size):
 - i. Public/customer and employee facilities will be provided within the Tenant space as required by code (based on the number of occupants and use of the space).
 - ii. Drinking fountains will be provided for public/customer and employee use as required by code.
 - d. **Public Facilities Signage: The Tenant spaces which provide public facilities will indicate such on their storefront window to ensure that occupants in the mall concourse are aware of the nearest facility (see the LOD for public facilities decal). Also, within the Tenant spaces which provide facilities, signage will be provided indicating that the facilities are available within the space for public use.**
3. **Mop Sink: tenant is to provide a mop sink in their space for general cleaning purposes.**
- a. Mop Sink is to be located in a discreet niche or concealed location. No fully exposed mop sinks in tenant bathrooms.**
4. Stock Rooms: Tenants may exit through Stock Rooms if:
 - a. The stock room is of the same hazard classification as that found in the main retail area.
 - b. Not more than 50% of the exit access is through the stockrooms
 - c. Stock Room is not subject to locking from egress side
 - d. 44 inch clear aisle defined by full or partial height fixed walls and leads directly to the exit without obstructions.
 5. Rubbish Storage Rooms: Provide a storage area for rubbish in all food or beverage service operations. All storage area floors above grade level shall have a Landlord approved **waterproof membrane** between Landlord's structural sub-floor and Tenant's finish floor across entire floor area and 6" up all walls.

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6. **Cooking Oil Disposal:** Landlord has installed a **cooking oil disposal system extended to designated Restaurant Tenant spaces**. Landlord will provide an 18" x 20" x 42" (approximate) cooking oil disposal basin with strainer(s) **at tenant expense**. Tenant to incorporate basin into their kitchen design. Tenant to attach cooking oil disposal drain line from the disposal basin to the mall provided main grease line and make final connections. Further specifications of basin and strainers are forthcoming.
7. Food Preparation and Service Areas: All food preparation and service area floors above grade level shall have a Landlord approved **waterproof membrane** between the structural sub-floor and Tenant's finish floor across entire floor area and 6" up all walls. They also must have an adequate number of floor drains.
8. Health Code: All finishes shall be in compliance with Health Code Requirements (or approved by local health authority).

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Storefront Signage

Dimensional and Location Requirements (INTERIOR)

1. Number of Signs: Tenant shall identify the premises by installing **one primary identification sign** on the storefront elevation.
2. Store Name/Trade Name: Store identification signs shall be limited to the store name (d.b.a.). Wording of signs shall not include the product sold except as part of Tenant's trade name. The use of a crest, shield, logo, or other established corporate insignia which has been customarily displayed or associated with the store name may be approved on an individual basis by the Landlord at Landlord's sole discretion.
3. Height: The average height of sign letters or components shall **not exceed twelve inches (12")**. **Letters are limited to sixteen inch (16") maximum height**.
4. Projection: Signs shall not project beyond the storefront more than two inches (2") if less than eight feet (8 ft.) above finished floor line, nor more than four inches (4") above eight feet (8 ft.).
5. Limits: The extreme outer limits of the sign letters and components shall fall within a rectangular area that can be defined as follows:
 - a. The sides shall not fall closer than twenty-four inches (24") to the side lease lines of the premises; and
 - b. The top side of which shall fall no closer than twelve inches (12") to the soffit of the mall fascia.
6. Review and Approval: All signage, identification, and graphics are subject to the approval of the landlord. The landlord maintains all authority to reject any sign or sign component, whether specifically addressed in this manual, or not.
 - a. All signage shall be submitted to landlord for approval with scaled shop drawings. All signage must meet approval of local code authority.
 - b. All signs and sign installation shall comply with all local building and electrical codes.
7. Sign company names, UL Labels or stamps shall be concealed and not be visible to public view.
8. No sign, advertisement, notice or other temporary lettering shall be exhibited, inscribed, painted or affixed on any part of the storefront(s) except store identification signs.
9. Decals: In addition to the primary identification sign, graphics on the storefront glass doors are permissible, Subject to landlord approval. These may not be illuminated, and must adhere to:

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- a. Install on second surface, 3-4" MAX letter height, 36-42" AAF MAX
- b. Charge card decals shall not be affixed to any part of the storefront, nor shall any charge card identification be immediately visible from the public space.

Prohibited Sign Types

1. Signs with exposed neon or other lamps or signs using flashing lights.
2. Sign manufacturer's name, stamps or decals, or registered trademarks.
3. Charge card decals shall not be affixed to any part of the storefront, nor shall any charge card identification be immediately visible from the public space
4. Sign company names or stamps and UL Labels shall be concealed and not be visible to public view
5. Signs with exposed raceways, ballast boxes or transformers.
6. Signs with painted letters.
7. Signs employing luminous, vacuum-formed plastic letters.
8. Signs of exposed box or cabinet-type design that employ transparent, translucent or luminous plastic background panels.
9. Shadow box type signs.
10. Signs employing un-edged or uncapped plastic letters with no returns.
11. Paper, plastic or cardboard signs. In addition, stickers or decals of any kind are not permitted on the storefront glass or in entry area, unless approved by Landlord.
12. Signs with exposed fasteners, vents or weep holes.
13. Signs with an orientation other than horizontal, that is, no vertical, perpendicular or diagonal signage, etc., unless approved by Landlord.
14. Light Box Displays or equivalent illuminated displays boxes/images.
15. No Blade signs allowed.

Storefront Design and Sign Criteria (EXTERIOR)

***** (Spaces 131, 135, 231, 235, FC310-305)**
See Restaurant Criteria

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Structural

Modifications and alterations: Modifications and alterations to Landlord's framing structure and floors will not be permitted without Landlord's prior written approval. In the event that Landlord approves Tenant's request, Tenant shall leave Landlord's structure as strong or stronger than original design with finishes unimpaired. Conditions vary by location. Refer to Base Building Structural drawings for more information and Field verify all structural conditions:

1. Floors on Grade: Tenant shall provide a 4 inch concrete slab with a minimum strength of 3,000 PSI on a reinforced with 6"x6" – W1.4 x W1.4 WWF on a vapor barrier (10 mil minimum). **Tenant shall provide additional compacted and fine grade sand fill and remove excess as required.**
 - a. Termite: Treat soil for termite protection prior to pouring the slabs as needed per code.
 - b. Structural Design Loads- First Level: 100 lbs./sq. ft. subject to Landlord review and approval.
2. Upper Level Floors: Landlord provided Concrete slab on composite metal deck. Approximate 2 1/2" depression occurs within concrete slab in designated areas adjacent to the Tenant's storefront lease line.
 - a. Structural Design Loads -Second Level: 100 psf (reducible)
3. Mezzanines: Upper Level floor framing has not been designed to support mezzanines. In the event an upper level Tenant is approved for a mezzanine, all structural enhancements of the floor framing and associated structure are the sole responsibility of the Tenant. Tenant shall submit structural mezzanine framing drawings and structural calculations verifying capacity of the base building structure, prepared by a structural engineer registered in the Commonwealth of Puerto Rico for Landlord's review and approval.
4. Roof: Structural Design Loads subject to Landlord Review and Approval. Tenant shall submit loading, roof framing analysis and support details - prepared by a structural engineer registered in the Commonwealth of Puerto Rico for Landlord's review and approval.
5. Coring of floor slabs: Floor slabs can have single cores not exceeding 6" diameter placed through the composite concrete slabs in any location except within the 5 foot wide zones centered on the collector element and 3 foot wide zone from slab edge at boundary element slab reinforcing denoted on the attached drawings. Cores cannot be placed closer than 4 feet from another core without engineers approval. Field verify the location of the slab reinforcing and structural steel framing below prior to coring.
 - a. All Tenant floor penetrations shall be coordinate with Landlord's Field Representative structural consultant and shall be engineered to fit existing conditions and installed according to the Standard Floor Penetrations details in the base building drawings on the website.
 - b. All floor penetrations in food service/preparation areas and toilet rooms shall have

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Water tight sleeves extending a minimum of 4" above finish floor.

c. Second Level Trenching: Trench 1/2" deep – no deeper or wider than 5/16", and should be carefully scored by sawcutting concrete and removed to avoid any damage beyond the required 1/2" x 5/16" slot. The area should be repaired / filled with an appropriate cementitious material. Subject to Landlord review and approval.

6. **Seismic Restraint, Vibration Isolation and Sound Attenuation:** vibration isolation and seismic restraint requirements must be provided for all equipment (floor mounted and suspended).
 - a. Pollution Control Devices/Scubbers & exhaust fans often create excessive noise both in the kitchen and outside and may require additional sound attenuation.
 - b. Speaker systems must provide sound attenuation materials and installation methods so as not to infringe on adjacent Tenants quiet enjoyment.
7. **Special Steel Moment Frame and Special Steel Concentrically Braced Frame (SSMF & SSCBF) Attachment:** the following are guidelines regarding attachments to the Core Braces. It is acceptable to attach light, non-rigid finishes such as stud tracks or drywall. Typically such items could be attached via tack welds, small powder actuated fasteners or self-tapping screws and must be approved by Tenant Coordination.

The following attachments are prohibited:

- The protected zones should be off limits as shown on 7/S-602M and 1/S-605M and described in section 7.4 of AISC 341-05
 - Anything regarding life safety issues should not be attached to the SSMF's & SSCBF's, i.e. stairs, elevator guard rails, etc.
 - Anything that would cause the SSMF's & SSCBF's to carry additional loads, i.e. beams that would transfer gravity, or girts at the perimeter of the structure that would transfer lateral loads.
 - Mechanical, electrical and plumbing, fire sprinkler, etc.
 - In general, anything so rigid that it would prohibit the SSMF's or SSCBF's from properly functioning during a seismic event.
8. **Fireproofing:** Fireproofing is covering and finishing columns, beams and the upper level deck(s).
 - a. Columns and floor beams are provided with spray-applied fireproofing by the Landlord to achieve a two-hour fire resistance rating.
 - b. Roof beams and steel roof deck have been provided with spray-applied fireproofing by the Landlord to achieve a one-hour fire resistance rating.
 - c. The tenant shall repair the fireproofing with approved methods as necessary to meet the required rating wherever tenant work has caused it to be scraped or removed.

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9. **Seismic Joint:** A Seismic joint exists in close proximity to column line 20. The Seismic Joint must be detailed and illustrated in the Tenant Construction Documents for the storefront or floor areas. Seismic joint materials must be compatible with the storefront and floor finish materials.
10. **Support of Fan Coil Units from the Floor Deck:** Fan coil units weighing less than 1,000 lbs may be supported from the second floor and from the slab portion of the third floor. The units shall be supported only from the steel beams and must be attached to meet current Building Code seismic tie requirements. Repair all damaged fireproofing. Ensure that no connections are made to the "No Attachment Zones" denoted on the steel framing. Units shall be located at least 10 feet from any other supported units.
 - a. Provide weight of unit with construction drawings submittal
11. **Support of Fan Coil Units from the Roof:** Fan coil units weighing less than 600 lbs may be supported from the roof structure. The units shall be supported only from the steel beams and must be attached to meet current Building Code seismic tie requirements. Under no circumstances shall the unit or associated piping or ductwork be supported from the metal roof decking. Repair all damaged fireproofing. Ensure that no connections are made to the "No Attachment Zones" denoted on the steel framing. Units shall be located at least 10 feet from any other supported units unless reviewed by our office.
 - a. Provide weight of unit with construction drawings submittal
12. **Safes:** provide structural information on safes load and path of travel for Landlord review and approval.

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Heating, Ventilation and Air-Conditioning

***** All Tenants Shall Connect to the Central Centralized Chilled Water Plant System (U.N.O) *****

LANDLORD WORK

1. Centralized Chilled Water Plant: The Leased Premises are served from a Centralized Chilled Water Plant installed by Landlord which will deliver, during regular Shopping Center business hours, filtered, Chilled Water at a fixed temperature and variable volume. The system is designed to maintain the Leased Premises at 75°F. \pm 2°F. DB and 60% RH, when outdoor temperature is 90°F. DB and 73°F. WB, and Tenant's total internal sensible.
2. Chilled Water Loop: The Chilled Water Loop will provide Chilled Water Supply (CWS) at a temperature of 44 degrees Fahrenheit, and Chilled Water Return (CWR) at 56 degrees Fahrenheit (12 degree Fahrenheit delta t), for connection to Tenant's Fan Coil Unit(s). Tenants are allowed 2 GPM/Ton, based on the following Criteria:
 - a. Level 1 Retail Tenants@ 290 s.f./ton
 - b. Level 2 Retail Tenants @ 270 s.f./ton
 - c. Restaurant Tenants @ 100 s.f./ton (levels 1 & 2)
3. Outside Air: Outside air provided to the space will be unconditioned and must be accounted for in Tenant's load calculations for cooling requirements.
 - a. The Outside Air Duct System is sized for low pressure, roughly between 0.08" and 0.10"/100 feet friction loss and under 1,500 fpm velocity.
4. Outside Air Duct Main: Landlord will provide an OSA Main for Tenant's connection.
5. BAS System: A control communications loop will be provided by Landlord in close proximity to the Tenant's premises. One junction box is provided for each Chilled Water Tap and shall be located within the Tenant space.
6. Toilet Exhaust: Toilet exhaust ducts stubbed into or in close proximity to each Tenant space.

TENANT WORK

Tenant, at its sole cost and expense, shall prepare Construction Drawings and Specifications for and shall initially construct or provide all heating, ventilation, exhaust Equipment, including controls, ducts, insulation and all structural, plumbing and electrical for the leased premises. Each Tenant shall provide an individual system(s) as outlined below. All equipment shall bear UL labels. ***Please refer to the Tenant Interface Diagrams.***

Upon completion of Tenant build out, Tenant must provide one (1) pdf plan with as-built information for Mechanical, Electrical and Plumbing.

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HVAC

1. **Chilled Water System:** The tenant shall design the piping system from the Landlord's connection point (supply and return) to not exceed a maximum of 25 feet of head in pressure drop. Included in this calculation and design shall be the pressure drop associated with all tenant piping, valves, fittings, coil pressure drop and flow regulating valves.
2. **Cooling Equipment-Chilled Water Fan Coil Units:** The **Landlord shall furnish the Fan Coil Unit at tenant's expense.** Tenant shall install the Fan Coil Unit within its Leased Premises, Chilled Water Fan Coil Units that can be interfaced with the Landlord's Centralized BAS System. Tenant shall design and install the air distribution system for its Leased Premises in accordance with BAS Interface Diagrams. The chilled water fan coil unit shall include the cabinet / casing, supply fan, fan contactor, condensate drain pan, filter rack & filters, terminal block for power and disconnect switch.
 - a. The Landlord shall furnish the temperature / humidity / CO2 sensor (at tenants expense) for installation by tenant which shall also include an over-ride button for afterhours cooling operation. The programming features and requirements are to be coordinated with the Landlord.
 - b. The tenant shall provide shut-off valves, strainer, B&G circuit setter for flow regulation and chilled water control valve and each chilled water fan coil unit.
3. **Variable Air Volume (VAV's):** The **Landlord shall furnish the VAV boxes at tenant's expense.** Tenant shall install the VAV Box between the Landlord's outside air duct and the Tenant's fan coil unit for regulating the amount of outside air delivered to the space. There shall be a separate VAV box for each chilled water fan coil unit.
 - a. **VAV Controls:** The **Landlord shall furnish the unitary controller for the VAV boxes at tenant's expense.** This unitary controller shall regulate the damper position for proper outside air volume, shall regulate the chilled water valve at the fan coil unit, shall start / stop the fan coil unit supply fan, shall receive the input from the water sensor in the secondary drain pan, shall integrate the input from the tenants domestic water meter and shall integrate the connection of the space temperature & CO2 sensor.
 - b. **Tenant Furnished VAV Box:** The tenant furnished VAV box shall include a 120 V to 24 V transformer with a 75 VA rating, flow ring sensor with tubing extended to control cabinet, control cabinet and damper with shaft. The VAV box shall be internally insulated.
4. **Chilled Water Control Valve:** The tenant shall provide a modulating chilled water valve to regulate the proper amount of chilled water delivered to each chilled water fan coil unit. The chilled water valve shall be 24 VAC driven and shall accept a 0-10 V DC control signal.
5. **BAS System Temperature and Monitoring Controls:** Final temperature, CO2, VAV and Fan Coil control wiring connections to the central BAS control communications loop and junction box will be made by Landlord's BAS contractor at Tenant's expense.

MSJ-Construction Criteria

6. The Landlord's BAS system will monitor Tenant's space temperature, space CO2 levels and regulate outside air volume (CFM quantity).
7. Control Wiring, Controls, Sensors: The Landlord shall furnish the following for Tenant installation (at Tenant's expense):
 - a. all code complying temperature control wiring including the communication wiring between the junction box within the Tenant's premise;
 - b. the Unitary controller located on the OA VAV box; and
 - c. the space temperature / CO2 sensor.
8. Final Terminations of BAS Wiring: The Landlord shall terminate the communication wiring at the BAS junction box and at the unitary controller on the OA VAV box at Tenant's expense. All other terminations shall be provided by the Tenant in accordance with manufacturers requirements. All control wiring shall be in conduit.
9. Insulation: All ductwork and Chilled Water Piping shall be insulated. All ductwork and Chilled Water Piping on all levels shall be installed in concealed space above ceilings.
10. Supplemental Systems: Those Tenants affected by external heat losses (exterior walls, doors, windows, floors, etc.) may install independent electric heat from Tenant's power source **upon Landlord approval** and consisting of the following:
 - a. Roof: By self-contained, thermostatically controlled electric unit heaters installed in the space between ceiling and roof. Unit heaters shall be designed to maintain a minimum inside dry bulb temperature of 55°F in this plenum. Thermostat shall be set and locked at 55°F.
 - b. Exterior Walls, Doors, and Windows: By self-contained, thermostatically controlled electric heaters or electric baseboard type radiant heaters. Heaters shall be designed to maintain a minimum inside dry bulb temperature of 70°F in affected spaces.

Ventilation

1. Outside Air: Tenant will connect to Landlord OSA duct stub. Retail Tenant is to design the OSA system for 7.5 CFM/Person and .12 CFM/S.F.; Restaurant Tenant shall be 7.5 CFM/Person and 0.18 CFM/S.F. (per ASHRAE Standard 62.1, 2010)
2. Toilet Rooms-Exhaust: **Tenant shall provide exhaust fans** to satisfy exhaust requirements for toilet rooms and for removal of heat or odors generated within the Leased Premises. Exhaust fans shall be located within the Leased Premises. Exhaust air discharge shall be restricted to exhaust duct locations designated by Landlord. Exhaust equipment shall be of ceiling or in-line type complete with backdraft damper and minimum 26 gauge sheet metal duct connection to Landlord's toilet exhaust system. Tenant's exhaust fan shall be controlled by a local switch provided by Tenant.

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General Requirements (Applies to Each System)

1. Air Distribution System: Tenant shall furnish and install a standard distribution system to sales or dining areas of the leased premises. Tenant may elect to supply air to other than sales or dining areas with the understanding that temperature, as stated above, may not be maintained.
2. Ductwork: Design, fabricate and construct all ductwork from minimum 26 gauge sheet metal in accordance with the latest ASHRAE and SMACNA standards.
 - a. Fiberboard ductwork and flexible ductwork is not permitted.
 - b. Tenant's supply-air ductwork shall be insulated and all ductwork shall be installed in concealed space above ceilings. Space between Tenant's ceiling and structure shall be used as Tenant's return-air plenum as needed.
3. Points of Connection: Verify points of connection to existing ducts, waste, vent and water stubs with Landlord's Field Representative.
4. Odors: Tenant shall not permit odors from within the leased premises to enter other areas of the center. If any Tenant or occupant of the center objects to odors from the leased premises, the Landlord may, at Landlord's discretion, instruct the Tenant to control such odors. Failure to correct the situation would be a material breach of the lease. If Tenant's mechanical system is unable to function in a manner to prevent odors from leaving the premises, Tenant shall make the necessary adjustments or additions to its present system to the satisfaction of the Landlord's Field Representative.
5. Access: Equipment must be installed allowing clear access for servicing. Access must also be provided to Landlord Equipment as well (see access panel requirements).
6. Exhaust Ductwork Path of Travel (Restaurant Spaces 131,135, 231,235): For **First and Second Level Restaurant Tenants, ductwork shall be located in special shafts built by the Landlord** at Tenant Expense at locations and of construction designated by the Landlord and code.
 - a. Non-grease laden ductwork that passes through service corridor or adjacent Tenant walls or Upper Level floors shall have UL approved fire dampers located in ductwork at wall and floor. Provide approved access doors for service to fire dampers.
 - b. All grease laden ducts that pass through fire-rated partitions are to be encased in suitable material and fire rating approved for use by the code authorities.

MSJ-Construction Criteria

7. Kitchen Exhaust and MUA Systems (Restaurant Spaces 131,135, 231, 235): For Lease Spaces designated for Food and Beverage Services, Tenant shall provide all process requirements, hood exhausts, equipment vents and MUA units as needed.
 - a. Kitchen Exhaust: Tenant shall furnish and install, if applicable, a complete **kitchen exhaust and make-up air duct system**. Ductwork shall be fabricated of metal in type and gauges specified by NFPA 96 for the use intended and shall be designed and constructed according to all codes and the latest ASHRAE and SMACNA standards.
 - i. All process exhausts, hood exhaust, equipment vents, and other contaminated exhaust, when permitted by Landlord, shall discharge vertically to the atmosphere twenty feet (20ft) minimum horizontally away from any fresh-air intakes, properly dispersing odors or fumes away from same. All grease hood exhaust fans must be equipped with internal grease collection receptors. Additionally, all grease hood exhaust fans must be surrounded by a self-contained grease retention system to protect the adjacent roof surfaces.
 - b. Pollution Control Devices: **Kitchen equipment will be required to use pollution control devices within the Tenant space for the kitchen exhaust systems**.
 - i. Exhaust Types: Exhaust hoods on roof shall be up-blast type. Provide exhaust to remove all hot food odors.
 - ii. UV Lights: Tenants will be required to use UV lights for grease mitigation in the kitchen hoods.
 - iii. Scrubbers: Odor and smoke removal devices (scrubbers) are required on the exhaust fans and located **within the Tenant space**. Charcoal or wood burning cooking equipment may require a 4 stage system.
 - iv. Access: Provide approved access doors to ductwork and/or equipment in accordance with local codes. All grease laden ducts that pass through fire-rated partitions are to be encased in suitable material approved for use by the code authorities.
8. Roof Work/Equipment: All Tenants' roof equipment shall be located in areas designated by the Landlord to specified heights and according to Landlord's approval. Exception: Should weight or location of equipment by Tenant require supports, screens, catwalks or roof hatch and ladder, they shall be provided by Tenant according to Standard Project Details. Landlord will determine when and where the above shall be required.
 - a. Structural Design Loads: subject to Landlord Review and Approval. Tenant shall submit loading, roof framing analysis and support details - prepared by a structural engineer registered in the Commonwealth of Puerto Rico for Landlord's review and approval.

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- b. Finish: All such equipment shall be factory-finish painted according to the Landlord's paint schedule and specifications.
 - c. Identification: Tenant's roof equipment shall be clearly identified with Tenant's name.
 - d. Support: All equipment rails and curbs shall be positively anchored to the supporting structure and all equipment secured to the rails/curbs to resist the effects of **175 mph winds** (based on ultimate loads using ASCE7-10). Anchorage requirements shall be included on the Tenant's Mechanical plans.
 - e. Cutting and Patching: Cutting and patching of roof openings, when approved by the Landlord, shall be done by the Landlord's roofing contractor at Tenant's expense.
 - f. Roof Walkway Pads and Grease Pads: tenant shall provide walkway and grease pads per landlord roofing contractor's specs.
9. Air Balancing: Tenant shall engage a separate temperature control contractor for final set-up of system(s) operations and a separate Testing & Balancing contractor for all air balancing. ***Tenant will provide the Air Balance report to the facility upon completion of the Tenant HVAC system (Tenants required to use Landlord's BAS contractor).***
10. Registers: All Tenants shall provide ceiling return-air registers or grilles.

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Tenants designated to install Individual Heating, Ventilating and Air Conditioning Systems (Spaces FC301-FC305):

Upon completion of Tenant build out, Tenant must provide one (1) plan with as-built information for Mechanical, Electrical and Plumbing.

TENANT WORK

1. Individual System: Each Tenant shall provide its own individual system (i.e. heating, ventilation and air-conditioning equipment and controls, ducts, insulation, water supply, venting and drainage, fresh air supply and return, exhaust and make-up air, dehumidification and humidification equipment, water saving equipment and all structural, plumbing and electrical work related thereto). All equipment shall bear UL label.
 - c. All equipment shall be contained within Tenant's premises or within areas designated by Landlord.
 - d. All ductwork shall be insulated and all ductwork on all levels shall be installed in concealed space above ceilings.
 - e. Standards of design and construction shall be in accordance with latest ASHRAE and SMACNA Guides.

General Requirements (Applies to Each System)

1. Air Distribution System: Tenant shall furnish and install a standard distribution system to sales or dining areas of the leased premises. Tenant may elect to supply air to other than sales or dining areas with the understanding that temperature, as stated above, may not be maintained.
2. Ductwork: Design, fabricate and construct all ductwork from minimum 26 gauge sheet metal in accordance with the latest ASHRAE and SMACNA standards. Caution that fiberboard ductwork and flexible ductwork is not permitted.
3. Points of Connection: Verify points of connection to existing ducts, waste, vent and water stubs with Landlord's Field Representative.
4. Odors: Tenant shall not permit odors from within the leased premises to enter other areas of the center. If any Tenant or occupant of the center objects to odors from the leased premises, the Landlord may, at Landlord's discretion, instruct the Tenant to control such odors. Failure to correct the situation would be a material breach of the lease. If Tenant's mechanical system is unable to function in a manner to prevent odors from leaving the premises, Tenant shall make the necessary adjustments or additions to its present system to the satisfaction of the Landlord's Field Representative.
5. Access: Equipment must be installed allowing clear access for servicing.

MSJ-Construction Criteria

6. Kitchen Exhaust and MUA Systems: For Lease Spaces designated for Food and Beverage Services Tenant shall provide all process requirements, hood exhausts, equipment vents and MUA units as needed. When permitted by the Landlord, they shall extend the ductwork through the roof via special shafts built by the Tenant at locations and of construction designated by the Landlord.
 - a. Tenant shall furnish and install, if applicable, a complete **kitchen exhaust and make-up air duct system**. Ductwork shall be fabricated of metal in type and gauges specified by NFPA 96 for the use intended and shall be designed and constructed according to all codes and the latest ASHRAE and SMACNA standards.
 - b. All process exhausts, hood exhaust, equipment vents, and other contaminated exhaust, when permitted by Landlord, shall discharge vertically to the atmosphere twenty feet (20ft) minimum horizontally away from any fresh-air intakes, properly dispersing odors or fumes away from same. All grease hood exhaust fans must be equipped with internal grease collection receptors. Additionally, all grease hood exhaust fans must be surrounded by a self-contained grease retention system to protect the adjacent roof surfaces.
 - i. Pollution Control Devices: **Kitchen equipment will be required to use pollution control devices within the Tenant space for the kitchen exhaust systems.**
 - ii. Exhaust Types: Exhaust hoods on roof shall be up-blast type. Provide exhaust to remove all hot food odors.
 - iii. UV Lights: Tenants will be required to use UV lights for grease mitigation in the kitchen hoods.
 - iv. Scrubbers: Odor and smoke removal devices (scrubbers) are required on the exhaust fans and located **within the Tenant space**. Charcoal or wood burning cooking equipment may require a 4 stage system.
 - v. Access: Provide approved access doors to ductwork and/or equipment in accordance with local codes. All grease laden ducts that pass through fire-rated partitions are to be encased in suitable material approved for use by the code authorities.
7. Roof Work/Equipment: Tenant's roof equipment shall be located in areas designated by the Landlord to specified heights and according to Landlord's approval. Exception: Should weight or location of equipment by Tenant require supports, screens, catwalks or roof hatch and ladder, they shall be provided by Tenant according to Standard Project Details. Landlord will determine when and where the above shall be required.
 - a. Finish: All such equipment shall be factory-finish painted according to the Landlord's paint schedule and specifications.
 - b. Identification: Tenant's roof equipment shall be clearly identified with Tenant's name.

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- c. Support: All equipment rails and curbs shall be positively anchored to the supporting structure and all equipment secured to the rails/curbs to resist the effects of **175 mph winds** (based on ultimate loads using ASCE7-10). Anchorage requirements shall be included on the Tenant's Mechanical plans.
 - d. Cutting and Patching: Cutting and patching of roof openings, when approved by the Landlord, shall be done by the Landlord's roofing contractor at Tenant's expense.
 - e. Roof Walkway Pads and Grease Pads: tenant shall provide walkway and grease pads per landlord roofing contractor's specs.
8. Air Balancing: Tenant shall engage a separate temperature control contractor for final set-up of system(s) operations and a separate Testing & Balancing contractor for all air balancing. ***Tenant will provide the Air Balance report to the facility upon completion of the Tenant HVAC system (The Tenant is required to use Landlord's BAS contractor).***
9. Registers: All Tenants shall provide ceiling return-air registers or grilles (maximum velocity 400 FPM net).
10. Control Wiring: Tenant shall furnish and install all code complying temperature control wiring and conduit as required per manufacturer's recommendations or the Landlord's review comments. All control wiring shall be in conduit or Plenum rated wire.

MSJ-Construction Criteria

Plumbing

LANDLORD WORK

1. Points of Connection: On-site water supply mains for domestic and fire protection, shut-off valves, and fire hydrants.
 - a. Water: 3/4" interior domestic water branch line stubbed into Retail Tenant's premises. 2" interior domestic water branch line stubbed into Restaurant Tenant's premises.
 - b. Sanitary: 4" sanitary waste line and plumbing vent branch lines stubbed below and above Tenant's premises for Retail Tenants. 6" Sanitary Waste Line and plumbing vent branch lines stubbed below and above Tenant's premises for Restaurant Tenants.
 - c. Gas: Gas Utility Company meter manifolds will be located in an area designated by Landlord.
 - d. Grease Waste: 6" grease waste line and plumbing vent branch lines stubbed below and above Tenant's premises for designated food and beverage service Tenant spaces.
 - i. Grease Interceptor: A grease interceptor has been provided by Landlord for each designated food and beverage Tenant space.

TENANT WORK

1. **Upon completion of Tenant build out, Tenant must provide one (1) pdf plan with as-built information for Mechanical, Electrical and Plumbing.**
2. System: Plumbing fixtures and piping system including all rough-in and final connections for same. Installation of all hot and insulated cold water lines, drains, and vents, electrical water heaters, water meter, and final connections to Tenant's specialty equipment. All installed per governing codes.
3. Plumbing Fixture Travel Distance:
 - e. Retail Tenants complying with the 300' travel distance to central facilities:
 - i. Tenants with GLA 1,000 S.F. or less:
 1. No facilities to be provided for public/customer or use.
 2. No drinking fountains to be provided.

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- ii. Tenants with GLA greater than 1,000 S.F.:
 - 1. A single unisex toilet facility will be provided for employee use only (required by developer).
 - 2. No drinking fountains to be provided.

- f. Retail Tenants NOT complying with the 300' travel distance to central facilities:
 - i. Tenants with GLA 1,000 SF or less:
 - 1. No facilities to be provided for public/customer or employee use.
 - 2. No drinking fountains to be provided.
 - ii. Tenants with GLA greater than 1,000 SF up to 2,000 SF:
 - 1. A single unisex toilet facility will be provided for public/customer and employee use.
 - 2. No drinking fountains will be provided.
 - iii. Tenants with GLA greater than 2,000 SF:
 - 1. Public/customer and employee toilet facilities will be provided within the Tenant space as required by code (based on the number of occupants and use of the space).
 - 2. Drinking fountains/water coolers will be provided for public/customer and employee use as required by code.

- g. Restaurant Tenants (regardless of travel distance and size):
 - i. Public/customer and employee facilities will be provided within the Tenant space as required by code (based on the number of occupants and use of the space).
 - ii. Drinking fountains will be provided for public/customer and employee use as required by code.

- h. **Public Facilities Signage: The Tenant spaces which provide public facilities will indicate such on their storefront window to ensure that occupants in the mall concourse are aware of the nearest facility (see the LOD for public facilities decal). Also, within the Tenant spaces which provide facilities, signage will be provided indicating that the facilities are available within the space for public use.**

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4. Plumbing fixtures and accessories: shall be of commercial quality and shall be of water conserving type. Tenant tank type water closets to be equipped with Sloan "flushmate," or equal, pressure assisted flushing device.
 - a. Water closets shall be limited to a maximum flow rate of 1.6 GPF.
 - b. Urinals shall be limited to a maximum flow rate of 1.0 GPF.
 - c. Lavatories shall be limited to a maximum flow rate of 0.5 GPM.
5. Drains and Waterproofing: Floor drains (4") and elastomeric **waterproof membranes** shall be provided in toilet rooms and kitchens, and/or other rooms with water supply or drainage across entire floor area and **6" up all walls**. Food and beverage service Tenants on the second level shall be required to provide a Waterproof membrane in all wet areas at Tenant's expense.
6. Hammer Arrestors: Provide water hammer arrestor behind access panel in Tenant restrooms.
7. Grease Waste: Food and Beverage Service Tenants shall connect all grease laden waste to the common grease waste system designated for their space. Landlord is responsible for coordinating regularly scheduled servicing of the grease interceptor system at Tenants expense.
 - a. In addition to connecting to the common grease waste system, each Food and Beverage Service Tenant will be required to connect their 3-compartment sinks to a **floor mounted grease trap** within their space. Cleaning/maintenance of the Grease Trap are the Tenant's responsibility.
9. Mop Sink: tenant is to provide a mop sink in their space for general cleaning purposes.
 - a. **Mop Sink is to be located in a discreet niche or concealed location. No fully exposed mop sinks in tenant bathrooms.**
10. Cooking Oil Disposal: Landlord has installed a **cooking oil disposal system extended to designated Restaurant Tenant spaces**. Landlord will provide a 18" x 20" x 42" (approximate) cooking oil disposal basin with strainer(s) at tenant expense. Tenant to incorporate basin into their kitchen design. Tenant to attach cooking oil disposal drain line from the disposal basin to the mall provided main grease line and make final connections. Further specifications of basin and strainers are forthcoming.
11. Floor Penetrations: Pipe sleeves shall be installed in penetrations through floor slabs.
12. Domestic Water Meter-Integration: The landlord shall furnish at Tenant's expense the domestic water meter and register for installation by tenant. The output from the domestic water meter shall be integrated to the unitary controller at the OA VAV box.
 - a. Water Meter Wiring: The wiring between the meter register and the unitary controller shall be furnished by the Landlord at tenant's expense for installation by the tenant.

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- b. **Water Meter Specs:** The Tenant water meters shall be Neptune model T-10 and shall include a Tricon S register which is set up to provide a pulse output for each 10 gallons consumed.
 - c. **Installation: Install meter near floor (preferably in Toilet Room and +/- 5 ft. AFF) in an easily accessible location.**
13. **Gas:** Food and beverage service **Tenants** shall make gas service arrangements with the gas utility company. Routing of gas line shall be approved by Landlord prior to construction.
- a. **Empire/San Juan Gas Product**
 - i. The Gas product is a Propane mixture of 60% LPG and 40% Air. It has the properties of NG but with more BTU Values.
 - b. **Heating Value Characteristics**
 - i. 1,506 BTU/Cu. Feet.
 - c. **Gas Product Pressure**
 - i. 30 psi delivered to the Landlord Manifold/Regulator.
 - ii. 14" to 18" Water Column (0.5 to 0.65 psi) after the Landlord Manifold/Regulator.
 - d. **Gas Line Sizing**
 - i. Tenant Gas Line size from Landlord Manifold/Regulator to Tenant's space shall be 2".
2. **Drain Pans:** Tenants located above any base building or Tenant mechanical/electrical rooms shall install drain pans below all piping installed by Tenant (running through the rooms), properly drain and comply with all local and AHJ codes.

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Fire Protection – Sprinkler System

LANDLORD WORK

1. Tenant Fire Service Main: Interior Tenant Fire Service Main (TFSM) routed to each Tenant space at a point to be determined by Landlord. TFSM's have been hydraulically calculated to provide a minimum of 750 gpm to the most remote Tenant on each level.
2. Monitoring: The TFSM's are monitored by the Landlord's fire alarm system.

TENANT WORK

1. Design and Approval: Tenant fire sprinkler contractor shall provide a hydraulically calculated fire protection sprinkler system, fire extinguishers, and other equipment within Tenant's premises shall be in accordance with the **Landlord's Insurance Underwriters' Fire Rating Inspection Bureau (FM Global), NFPA 13, all applicable state/local code requirements**. Since the entire fire protection system for the project is required to be an inter-related, centrally controlled installation, Tenant shall cause to be designed and installed, by a qualified sprinkler contractor acceptable to Landlord, said system within Tenant's premises according to the Landlord's requirements; and shall submit for Landlord's review, **Specifications Seismic Calculations Materials Cut Sheets** – Specifications (manufacture, model, size, etc.) for sprinkler heads, sprinkler pipe, and fittings and All Components (sprinklers, pipe, fittings, etc.) hydraulic calculations for the sprinkler system that have been approved by the Fire Rating Inspection Bureau (FM Global). Landlord's approval of this shall not constitute the assumption of any responsibilities by Landlord for the accuracy or sufficiency of the sprinkler system. Tenant shall be solely responsible for the system within the leased premises.

a. **Detailed Fire Suppression drawings are required as part of the tenant permit submittal (shop drawings are not required for permit)**

b. **FM Global approval is needed prior to Tenant's start of construction.**

2. Tap: Tenant fire sprinkler contractor's work shall begin at the 6 in. Tenant Fire Service Main (TFSM) provided by the Landlord within the Tenant space. Tap into the TFSM shall be by the Landlord's sprinkler contractor at the Tenant's expense. The TFSM serving the Tenant space is not to be used as a cross main for the Tenant provided system. **Only one tap into the TFSM is allowed.**
 - a. Individual Tenant control valves are not allowed in the sprinkler system. Valving and alarm system is accomplished at source to building by Landlord.

Fire Protection Design Criteria

1. Fire Sprinkler system design criteria as follows.
 - a. Tenant Lease Spaces: Density – 0.20 gpm / sq. ft.

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- b. Operating Area – Hydraulically most remote 2,500 sq. ft. (locations of partitions shall be ignored when choosing remote area).
 - c. Temperature Rating / Response Type – Ordinary / Quick Response or Standard Response.
 - d. **K-Factor – 8.0 Minimum**
 - e. Sprinkler Spacing – 130 sq. ft. maximum, with a maximum of 12 ft between sprinklers.
 - f. Hose Stream Allowance – hose stream allowances are not required within the Tenant calculations. A 250 gpm hose stream allowance has already been included in the calculations for the TFSM.
 - g. Where storage/merchandise is high piled and or hazard commodities are stored coordinate design criteria with NFPA 13 and FM Global.
 - h. TFSM's have been sized based on hydraulic calculations, to provide the above described water supply. Tenant sprinkler calculations need only to be taken back to the connection on the TFSM.
 - i. All sprinkler systems components shall be UL Listed and FM Global approved for fire protection.
 - j. Provide dry chemical fire protection for range hoods, etc.
 - k. **Provide Seismic calculations and bracing** in accordance with FM Global Loss Prevention Data Sheet 2-8: Earthquake Protection for Water Based Fire Protection Systems
2. Lease Space Level 1– available water supply
- a. 110 psi static, 86 psi residual, while flowing 750 gpm to the hydraulically most remote point of the Tenant Fire Service Main.
3. Lease Space Level 2 – available water supply
- a. 103 psi static, 80 psi residual, while flowing 750 gpm to the most remote point of the Tenant Fire Service Main.
4. Lease Space Level 3 – available water supply
- a. 96 psi static, 74 psi residual, while flowing 750 gpm to the most remote point of the Tenant Fire Service Main.

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5. Upon completion of Tenant build out, Tenant must provide one (1) pdf plan with as-built information for Mechanical, Electrical, Plumbing and Fire Sprinkler System.

Fire Sprinklers

Sprinklers in finished ceilings may be fully pendent with flat, recessed or fully concealed escutcheons. Fully pendent type sprinkler heads are permitted only in stock/storage areas. **All sprinklers may be Standard or Quick Response (all sprinklers in the same compartment shall be the same response type) with a minimum K-Factor of 8.0.**

MSJ-Construction Criteria

Fire Alarm System

LANDLORD WORK

1. General Features: Landlord will provide a fire alarm addressable Signaling Line Circuit (SLC), emergency voice evacuation system speaker circuit, and visual notification appliance synchronization circuit at the Tenant interface junction box location within each Tenant space. Base building Tenant interface junction boxes will be provided and installed by the Landlord.
2. Modules: Landlord will provide and install one (1) fire alarm interface module, one (1) restaurant Tenant kitchen hood suppression system interface module (as necessary), one (1) emergency voice evacuation system signal module, and one (1) visual notification appliance activation and synchronization signal module.

TENANT WORK

1. General Features: Tenant will provide and install all initiating devices, notification appliances, and auxiliary power supplies as required by all applicable codes and standards and installed in accordance with NFPA 72 within the Tenant's premises. Tenant shall provide and install all necessary cabling and conduit within the Tenant's premises starting at the Landlord provided Tenant interface junction boxes.
2. Modules, Devices, Appliances, etc.: There shall be a minimum of one (1) combination speaker / visual notification appliance per Tenant premises. Tenant shall provide adequate audible and visual coverage within their premises in accordance with NFPA 72.
 - a. Visual Notification Appliances: Tenant shall provide and install visual notification appliances within each stock room, toilet room, office, and central fitting room areas in accordance with NFPA 72.
 - b. Auxiliary Power: Tenant shall provide and install auxiliary power supplies as necessary for Tenant visual notification appliances. Tenant shall coordinate connection to a dedicated 120 VAC circuit and shall provide twenty four (24) hour battery backup in each APS.
 - c. Duct Smoke Detection: Tenant shall provide and install duct type smoke detection within each individual air handling unit as required. Duct type smoke detection shall be addressable and connected to the Landlord's base building fire alarm system, at the Tenant's expense.
 - d. Hood Suppression Systems: Restaurant Tenant kitchen hood suppression systems shall be provided and installed by the Tenant. The kitchen hood suppression system shall be monitored by the base building fire alarm system, at the Tenant's expense.

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3. Connections: Final connection of the Tenant's fire alarm system to the Landlord provided base building fire alarm system shall be provided by the Landlord's base building contractor, at the Tenant's expense.
4. Acceptance: Final acceptance testing of the Tenant's premises fire alarm system shall be performed by the Landlord's base building contractor concurrent with the base building's fire alarm system final acceptance test, at the Tenant's expense.
 - a. Entire installation shall confirm with the Standard Project Details.

5. Detailed Fire Alarm drawings are required as part of the tenant permit submittal (shop drawings are not required for permit)

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Electrical

General Requirements

1. Tenant Electric Design Loads:

a. **Retail (dry goods): 14 watts/sq. ft.**

b. **Restaurant (sit down style): 25 watts/sq. ft.**

2. Lighting Control: Utilize daylight sensors and dimmable ballasts to control light levels in day-lit zones of your space where appropriate and occupancy sensors for lighting in auxiliary spaces (non-sales areas).

a. Select high quality, energy efficient fixtures considering aesthetics and the visual comfort of occupants.

3. Access: Equipment must be installed allowing clear access for servicing.

LANDLORD WORK

1. Electric Service Conduits: Landlord has provided 2.5" or 4" empty electric service conduits with pull cords from Tenant's leased premise to nearest Tenant Electrical Closet. Refer to Base Building Tenant Conduit Provision Plans.

2. Electric Service Characteristics: Power for the leased premises is available at 480/277 volts, 3 phase, 4 wire, 60 hertz. Maximum electric service size for Tenants receiving 2.5" conduits shall be 200 amps. Where Tenant services are anticipated to be in excess of 200 amps, one or more 4" conduits have been provided as specified in the Base Building Tenant Conduit Provision Plans.

3. Meter Compartment and Circuit Breaker: Landlord has provided a Tenant Distribution Switchboard located in a Tenant Electrical Closet in the general vicinity of the Tenant. **All Tenant circuit breakers in the Tenant Distribution Switchboards are to be furnished by Tenant and installed by Landlord contractor at Tenant expense.**

4. Electric Meter: Landlord will provide a Shark 200S electronic submeter with WIFI Ethernet capability at tenant expense. **Tenant will install the meter in their space.** WIFI connectivity shall be inspected and approved by Landlord in the field.

5. Telecommunications Service Conduits: Landlord has provided 1" or 1.5" empty telecommunications service conduits with pull cords from Tenant's leased premise to nearest Center Telecommunications Closet. Refer to Base Building Tenant Conduit Provision Plans.

6. Telecommunications Service Backbone: Landlord has provided the Telecommunications Service Backbone from the "Main Point of Entry (MPOE)" to the Telecommunications Closets distributed throughout the Center. Telecommunications service cabling from the Telecommunications

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Closet to the Tenant's leased premise shall be the responsibility of the Tenant in conjunction with the Telecommunications Service Provider.

TENANT WORK

1. **Upon completion of Tenant build out, Tenant must provide one (1) pdf plan with as-built information for Mechanical, Electrical and Plumbing.**
2. Electrical Service Feeders and Other Equipment: Tenant shall provide electrical service feeders in existing conduit from Landlord's metering switchboard to Tenant's premises. Tenant shall coordinate metering and power requirements with Utility Company and Landlord. All conductors shall be insulated copper wire, type THHN/THWN.
3. Tenant Service Circuit Breakers: All Tenant service circuit breakers in the Landlord provided Tenant Distribution Switchboards are to be furnished by Tenant and installed by Landlord's contractor at Tenant expense.
 - i. For breaker up to 225A we would recommend using an Eaton - HFD breaker
 - ii. For breakers above 225A to 400A we would recommend using Eaton - HKD breakers
 - iii. For breakers above 400A to 600A we would recommend using Eaton - LGH Breakers
- b. Other Equipment: Tenant shall provide all panelboards, transformers, conduits, wiring, and final connections to all electrical devices, equipment, and appurtenances within the Tenant's leased premises.
- c. Fixtures- Misc.: Tenant shall provide all lighting fixtures, lamps, signs, controls, and all associated conduits and wiring within the Tenant's leased premises.
- d. Lighting Fixtures: All lighting fixtures in Tenant's sales areas, other than decorative fixtures, shall be high quality-commercial grade fixtures.
 - i. All Lighting in the Design Control Area (+/- 6'-0" from leaseline into tenant space) shall be **recessed or concealed behind a soffit** unless otherwise approved by Landlord. Lighting outside the storefront display area may be surface mounted.
 - ii. Lighting shall not spill outside premises and no direct glare shall be visible to public view.
 - iii. Fluorescent fixtures shall be 2' x 2' direct/indirect type with perforated center basket diffusers. Bare lamp fluorescent or incandescent fixtures may not be used except in stockrooms or areas inaccessible to customers.
4. Panelboard Design: Panelboards shall be designed for 20% minimum spare ampacity (based on connected load) and 20% spare breaker space.
5. Telecommunications Service Cabling: Tenant shall provide telecommunications service

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cabling in existing conduit from the Telecommunications Closet to the Tenant's leased premise.

6. Television, LCD's and Security Equipment: Television, LCD screens and security equipment, and all conduits, wiring, and related items in the sales area are subject to Landlord review and approval.
 - i. Television & LCD Screens: The installation of Televisions & LCD screens in Tenant sales area for marketing and advertising is subject to Landlord review and approval.
 1. If approved, Television & LCD screens must be a minimum of five (5) feet from the storefront leaseline.
 2. No flashing or strobing images.
 3. Content must adhere to decency standards in Lease and is subject to Landlord review and approval.
 - b. Antennas & Satellite Dishes: The installation of any roof mounted antenna/satellite must be approved, in writing, by Landlord and coordinated with Mall Facilities prior to install.
7. Exit/Emergency Lighting System: Tenant shall provide exit/emergency lighting system functioning on a normal source or battery operated source for loss of power conditions (as required by governing codes).
 - a. Emergency lighting shall be provided by Tenant to illuminate stock, food preparation area or sales area and rear exit way during power outages. Said lighting shall be battery operated, recessed lights or twin-head light pack(s).
 - b. In areas visible to customers, battery assembly for emergency and exit lights shall be concealed and remote type light fixtures used.**
8. Signage: Tenant shall provide transformers, ballasts, conduit, wiring, and related items for signs. Circuits serving sign(s) shall be connected by a time switch.
- 9. Transformers: Transformers are to be mounted on the floor, structural wall or platform supported by the floor, not from the building structure or demising wall. Suspension of transformer not allowed. Provide details and structural drawing if floor mounted with raised platform.**
 - a. Three phase transformers (dry-type), for all Tenants, shall have six standard full capacity tap arrangements. Entire installation within Tenant's premises shall be balanced to within 10% across all three phases.
10. Service Call System: Tenant shall provide and install a buzzer call system and all related

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conduit and wire located at back service corridor and must not be audible in sales area

11. Codes and UL: Entire installation shall meet all requirements of national or local electrical codes. All equipment shall bear UL labels.
12. Conduit: All electrical wiring systems shall be in conduit. The use of "Bx" or "Romex" is not permitted. Speaker, security, or other low voltage wiring within the Tenant's leased premise must be plenum rated or in conduit.
13. Roof Access: Unless approved otherwise in the Tenant's lease, a Roof Access Agreement is required prior to the installation of any roof mounted antenna or satellite dish.