# AllWest Environmental

## PROPERTY CONDITION ASSESSMENT

### Firecreek Crossing Shopping Center
### 4823 Kietzke Lane, Reno, Nevada 89509




**PREPARED FOR:**

**Elevation Acquisition Corp.**
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**La Jolla, California 92037**

**ALLWEST PROJECT 22074.60**
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# PROPERTY CONDITION ASSESSMENT

## Firecreek Crossing Shopping Center
## 4823 Kietzke Lane, Reno, Nevada 89509

# I. EXECUTIVE SUMMARY

AllWest has completed a Property Condition Assessment of the above referenced site in accordance with ASTM E2018-15. On May 5, 11, and 12, 2022, AllWest visited the property and observed the condition of the structures, interior areas, and tenant spaces. Interior and roof access were facilitated by Jasmin Alfaro, the shopping center's assistant property manager, and Leslie Simmons, the property manager.

The Reno Building, Planning, and Fire Departments were contacted for information concerning building permits, inspections, reports, and current violations. Copies of some original architectural and structural construction drawings for some buildings were provided to AllWest in .pdf format. Some civil, mechanical, electrical, and plumbing drawings were also made available, though complete sets were not provided for any building, and drawings were not provided for every building.

**This Executive Summary is provided solely for the purpose of overview. Any party who relies on this report must read the full report. The Executive Summary may have omitted important details, any one of which could be crucial to the proper understanding and subject matter risk assessment.**

The purpose of this report is to inform the reader of the existing condition of the civil, architectural, and landscape components, as well as the mechanical, electrical, plumbing (MEP), and fire and life safety (FLS) equipment that comprise the property and to identify what conditions, if any, should be corrected to improve building systems, appearance, and performance over the next five years.

## A. PROPERTY DESCRIPTION

The subject property is a community/regional retail shopping center developed with—for the purposes of this report—eight buildings; four buildings at the shopping center are excluded from this evaluation. The tenants in the four excluded buildings are Sam's Club, Walmart, Scandinavian Designs, and Business Travel & Tours.

The building naming convention adopted for this report is based on the lowest numerical address at a building. The eight buildings are referred to as shown below; the principal tenant in each building, in terms of floor area, is also listed:

Bldg 4801: Boston Market*
Bldg 4805: Applebee's*
Bldg 4809: Toys N More
Bldg 4811: Vacant
Bldg 4819: Floor & Decor
Bldg 4871: Michael's*
Bldg 4875: UFC Gym
Bldg 4891: ULTA Beauty

* Single-tenant facility.

Bldg 4819 has five tenants housed in what appear to be five structurally independent buildings or segments; these will be referred to as Spaces 4819, 4821, 4823, 4825, and 4827. This building gives the appearance of being one contiguous, unified structure. Bldg 4811 has two tenant spaces housed in what appear to be two structurally independent buildings or segments; these will be referred to as Spaces 4811 and 4813.

Constructed on four legal parcels, all buildings are single-story. A mezzanine was observed in Bldg 4871. Per the rent roll provided to AllWest, total rentable floor area is 347,979 square feet (sq ft). Unless otherwise noted, all dimensions in this report are approximate,

Most buildings are either rectangular or generally rectangular in plan—Bldgs 4805 and 4811 are irregularly shaped in plan. The buildings have the following rentable floor areas per the rent roll:

Bldg 4801: 3,200 sq ft
Bldg 4805: 5,500 sq ft
Bldg 4809: 11,409 sq ft

Bldg 4811: 89,024 sq ft
Bldg 4819: 180,510 sq ft
Bldg 4871: 24,295 sq ft
Bldg 4875: 20,000 sq ft
Bldg 4891: 14,041 sq ft

The eight buildings occupy 23.55% of the site. The buildings are currently configured for 19 tenants. The number of tenants in each building is listed below; the likely year of completion of initial construction is in parentheses:

Bldg 4801: 1 (1997)
Bldg 4805: 1 (1997)
Bldg 4809: 3 (1997)
Bldg 4811: 2 (1997)
Bldg 4819: 5 (1997)
Bldg 4871: 1 (2005)
Bldg 4875: 4 (2003)
Bldg 4891: 2 (1997)

Those elevations which are closest to and roughly parallel to Kietzke Lane, which bounds a portion of the shopping center along its eastern property line, are considered the east elevations.

Per the Washoe County Assessor's Parcel Map and Assessor's property information documents, the subject property consists of four parcels with a combined area of 34.29 acres. All parcels are irregularly shaped and carry the following assessor's parcel numbers with their areas listed:

024-055-33: 17.649 acres
024-055-37: 12.121 acres
024-055-44: 2.040 acres
024-055-45: 2.480 acres

The site is located within a mixed-use district with retail, commercial, and single- and multi-family residential buildings in the vicinity of the shopping center. Redfield Parkway forms an approximate C-shape and bounds the shopping center on its north, west, and south sides; Kietzke Lane and an adjacent vacant parcel bound the shopping center to the east. Kietzke Lane runs predominantly NNE-SSW in the vicinity of the subject property, 10° east of north.

Another shopping center is located across Kietzke Lane to the east. Across Redfield Parkway to the south, southwest, west, and north-northeast multi-family residences are located; single-family residences are found to the north and northwest. The site is less than one-quarter mile west of I-580.

The general topography in the vicinity of the site has a descending slope from southwest to northeast with a change in elevation of 44 feet. Street frontage along Kietzke Lane is 892 feet. The buildings occupy the site generally at approximate street grade, on level, graded pads.

The site is located in the City of Reno Zoning District Mixed Use (MU) Urban. The occupancy classifications are likely Group A-2 (Assembly – restaurants), Group M (Mercantile – retail stores), and Group B (clinic, outpatient). The subject property is located within FEMA Flood Zone X (unshaded) and Zone X (shaded).

Building structural systems appeared in generally "Good" condition. The architectural plans indicate all buildings are Type V-B, non-fire resistive rated construction; all but Bldg 4801 is fully fire sprinklered. The typical structural frame systems include concrete masonry unit (CMU) load bearing perimeter walls and interior steel columns supporting glulam beams or open web steel joists and wood framed roof diaphragms with plywood decking. Some smaller buildings have conventional Type V wood framed perimeter walls and roof framing. The reinforced concrete slab-on-grade foundations at each building are presumably provided with continuous perimeter footings to support the exterior walls and isolated spread footings to support the interior columns.

Significant expenses for asphalt paving repairs, resealing, and restriping; new roofing systems; exterior repainting; and HVAC equipment replacements can be anticipated during the reserve term.

The landscaping and irrigation system and site improvements appeared in generally "Good" condition. Mature trees, shrubs, and ground cover are planted in various landscaped areas; typically, around the site perimeter, adjacent to some buildings, and in planters within the parking lot. The site has an automatic irrigation system with programmable controllers.

Per the ALTA survey, off-street parking for 1,932 cars is provided in the asphalt-paved parking lots. Parking is provided at a ratio of 5.55 stalls per 1,000 sq ft of total building floor area. Parking appears compliant with the requirements of the Reno Municipal Code. Vehicular access into the parking lot is via six curb cuts located along Redfield Parkway and one along Kietzke Lane.

Municipal bus service is provided by the Regional Transpiration Commission of Washoe County (RTC) with routes on Kietzke Lane and South Virginia Street. A transit stop is located on the subject property along Kietzke Lane. At all buildings, primary pedestrian entrances—those intended for use by the public—are oriented

towards the customer areas of the parking lot, along one elevation only.

Building envelopes appeared in generally “Good” condition. Flat roofs, with minimum slopes are installed on all buildings; Bldgs 4819 and 4871 have pitched roof sections as decorative elements with concrete barrel tile roofing systems. The majority of buildings have single-ply thermoplastic polyolefin (TPO) roofing systems. Multi-ply built up roofing (BUR) systems are also installed. On Bldg 4811 (Space 4811) a modified bitumen (MB) roofing system with small river stone ballast is installed. The older roofing systems that date to original construction appeared in generally “Fair” condition. Newer TPO systems date to 2017 and 2018 and appeared in “Good” condition. Roof ages are as follows; the year of installation is in parentheses followed by type of roofing system:

| | |
|---|---|
| Bldg 4801: | 25 (1997), BUR |
| Bldg 4805: | 25 (1997), TPO |
| Bldg 4809: | 25 (1997), BUR |
| Bldg 4811 (Space 4811): | 25 (1997), MB/Ballast |
| Bldg 4811 (Space 4813): | 25 (1997), BUR |
| Bldg 4819 (all spaces): | 5 (2017), TPO overlay |
| Bldg 4871: | 4 (2018), TPO overlay |
| Bldg 4875: | 5 (2017), TPO overlay |
| Bldg 4891: | 5 (2017), TPO overlay |

Atrium grated roof and overflow drain combinations in sumps are typically provided. The grated overflow drains provide overflow protection and discharge onto hardscape via internal downpipes and through-wall scuppers.

Though the buildings do not share an identical design aesthetic, the basic designs, finishes, decorative elements, colors, and details are somewhat similar. Elastomeric paint finishes are provided at all buildings, though not all exterior elements are fully painted. Several buildings have unpainted CMU perimeter walls. Anodized aluminum storefront window systems are fitted with single- or dual-pane glazing.

Triple net leases are in effect; interior finishes are installed and maintained by the individual tenants, and appeared in generally “Good” condition with the exception of the two vacant spaces in Bldg 4811, which appeared in “Fair” condition. Interior common areas—in the sense of shared use areas open to multiple tenants—are not provided.

All tenant spaces are occupied by a single tenant. In Bldg 4891, Mattress Land sub-leases space from ULTA Beauty; their spaces are separated by a demising wall, as are the tenants in Bldgs 4809 and 4875. Five of the buildings are developed as multi-tenant facilities. At Bldgs 4811 and 4819, each tenant space is a discrete unit separated from adjacent spaces by structural—not simply non-structural demising—walls. Wear and tear commensurate with age and use was observed on interior floor, wall, and ceiling finishes. Wear and tear is most pronounced in the two vacant spaces in Bldg 4811.

HVAC systems appeared in “Good” to “Fair” condition. The core HVAC systems consist of roof-mounted, direct expansion (DX) packaged cooling units with integral natural gas-fired furnaces. Rooftop exhaust fans serve conventional exhaust air requirements for restrooms and kitchen hoods.

Site electrical systems appeared in “Good” condition. Pad-mounted, utility-owned transformers provide 120/208Y-volt or 277/480-volt, three-phase, four-wire service to the main electrical rooms or to exterior electrical enclosures. Individual utility meters for each tenant space are installed. Copper wire-in-conduit systems feed smaller circuit breaker panels within each tenant space.

The plumbing and natural gas systems appeared in “Good” condition. Each building is typically provided with a domestic water service with backflow preventer and pit meter. Municipal water pressure appears adequate. Interior water distribution piping, where observable, is copper. NV Energy provides natural gas to the buildings through numerous metering stations with one at each building. Each tenant is provided with an individual utility meter. Services range from 3/4” to 4”. Natural gas is consumed by rooftop packaged unit furnaces, domestic water heaters, and kitchen cooking equipment.

The fire protection systems appeared in “Good” condition. There is a site fire sprinkler water loop with multiple 6” fire sprinkler water services. All buildings are provided with wet-pipe sprinkler systems and are fully sprinklered, with the exception of Bldg 4801. Buildings have one or more risers sized between 4” and 8”. Municipal water pressure appears adequate to satisfy design requirements. Where observed, interior fire sprinkler piping is black steel with *Victaulic* couplings.

The physical condition of the security systems appeared “Good.” Site security is provided and includes roving services. Some tenants have installed and maintain intrusion security systems at their own expense; some of these systems include interior area monitoring cameras. Vertical conveyance systems are not installed.

The subject property typically demonstrates a “Good” level of compliance with current Accessibility requirements of the Nevada Building Code (NBC) for parking, interior and exterior paths of travel, and restrooms and plumbing fixtures.

Typically, minor deficiencies were observed, for which remedial correction measures should be readily achievable, with the possible exception of some exterior path of travel issues owing to the slopes at the site. Forty-nine Accessible parking stalls are provided; seven of which are Van Accessible.

## B. SUMMARY OF FINDINGS

AllWest found the buildings in generally “Good” condition. We recommend the following remedial measures to correct deficiencies, summarized as follows:

### Code/Life Safety & Immediate Repairs

- Provide concrete repairs to eliminate tripping hazards;
- Bldgs/Spaces 4809, 4821, 4823, and 4875: Perform ground fault interrupter services on main electrical switchgear every three years;
- All buildings: Install approximately 19 seismic safety shut-off valves on every tenant natural gas service;
- Provide visually contrasting stripes on each tread on all exterior stairs.

### Capital Expenditure

- Replace degraded landscape elements to return landscaping to "Good" condition;
- Provide concrete repairs unrelated to tripping hazards;
- Provide replacement of degraded concrete expansion joint sealants in sidewalks and walkways;
- Perform minor and full depth repairs to address degraded surface condition of asphalt paving to return all paving to "Good" condition;
- Reseal all asphalt paved parking areas and drive aisles;
- Restripe all non-Accessible parking stalls;
- Allowance to address loading area deficiencies to return them to "Good" condition;
- Bldgs 4801, 4805, 4809, and 4811 (Space 4813): Provide new overlay TPO roofing systems;
- Bldg 4811 (Space 4811): Provide new overlay modified bitumen roofing system (reuse existing ballast);
- Bldg 4819: Provide remedial measures to address deficiencies with parapet molding caps;
- Bldgs 4809, 4811 (both spaces), 4819 (all 5 spaces), 4871, 4875, and 4891: Repaint all exterior elements provided with a paint finish;
- Provide repairs to exterior walls and decorative elements in a degraded condition. This work should be performed in conjunction with the recommended exterior repaintings at each building listed above, as needed;
- Provide repairs to CMU walls, where damaged;
- Provide replacement of degraded control joint sealants in CMU perimeter walls;
- Bldg 4805: Replace 5 packaged air conditioners, totaling approximately 40 tons;
- Bldgs 4801 and 4805: Replace 1 make-up air unit (one per building);
- Bldg 4809: Replace 3 packaged air conditioners, totaling approximately 26 tons;
- Space 4811: Replace 6 packaged air conditioners, totaling approximately 118 tons;
- Space 4811: Replace 2 natural gas fired makeup air units;
- Space 4813: Replace 5 packaged air conditioners, totaling approximately 105 tons;
- Space 4821: Replace 3 packaged air conditioners, totaling approximately 15 tons;
- Space 4825: Replace 7 packaged air conditioners, totaling approximately 76 tons;
- Bldg 4871: Replace 6 packaged air conditioners, totaling approximately 73 tons;
- Bldg 4875: Replace 12 packaged air conditioners, totaling approximately 60 tons;
- Bldg 4891: Replace one 10 ton packaged air conditioner;

- All buildings: Install approximately 17 flexible natural gas connections on existing rooftop packaged air conditions, as a safety measure;
- All buildings: Perform infrared scans on electrical panels every three years;
- Restripe regular Accessible parking stalls;
- Restripe Van Accessible parking stalls;
- Restripe Accessible paths of travel;
- Install truncated domes in all required locations where not already provided;
- Allowance to provide compliant door threshold plates at primary tenant space entrances, where not installed.

### Modernization/Improvement

Items in this category are not mandatory or essential, but are recommendations for general improvements and modernization to bring the property up to current standards or best practices.

- Where needed, provide re-contouring of roof slopes in conjunction with above re-roofing work to address ponded water;
- Bldg 4811 (both spaces): If damaged exterior insulation finishing systems (EIFS) are present, provide repairs to EIFS wall panels as an Immediate Need;
- Allowance to provide upgrades to improve overall site Accessibility.

## C. IMMEDIATE REPAIRS & REPLACEMENT RESERVES

### Immediate Repairs

Immediate Repairs are defined as physical deficiencies that require immediate action to correct: (1) existing or potentially unsafe conditions; (2) significant negative conditions impacting marketability or habitability; (3) material building code violations; (4) poor or deteriorated condition of critical element or system; or (5) a condition that if left "as is" would cause or contribute to critical element or system failure within one year or a significant escalation in repair costs.

Immediate repair needs as indicated in the Immediate Repairs & Replacement Reserves Analysis are estimated at **$64,500**. Expenditures include repairs to address tripping hazards in concrete site work, ground fault testing of high amperage main circuit breakers, and installation of seismic shut-off valves on gas service lines.

### Replacement Reserves

Replacement Reserves are funds allocated for: (1) priority-based repairs of physical deficiencies resulting from poor design, faulty installation, or substandard quality of original systems or materials; (2) deferred maintenance; and (3) replacement of components or systems that have realized or exceeded their Expected Useful Life (EUL).

EUL is defined as the average amount of time in years that an item, component, or system is estimated to function when installed new, assuming routine maintenance is practiced. AllWest applies EUL standards established by such organizations as the American Society of Heating, Refrigeration and Air-conditioning Engineering, Inc. (ASHRAE) and the U.S. Department of Housing and Urban Development (HUD), but may modify them following a subjective evaluation of an item, component, or system by experienced, licensed professionals.

The five-year Replacement Reserves are estimated at **$4,363,276,** which includes a 2.5 % per year inflation factor. Expenditures include parking lot repairs, resealing, and restriping; new roofing systems; and HVAC equipment replacement.

### Modernization

Items in this category are not mandatory or essential but are recommendations for general improvements and modernization to bring the property up to current standards or best practices. The spreadsheet includes Modernization items as a separate section from the main body of the spreadsheet so that the costs for this work are totaled separately.

Optional Modernization expenses are estimated at **$195,000**. The suggested work calls for re-contouring roof slopes in conjunction with re-roofing projects (where required), EIFS wall panel repairs (if warranted), and upgrades for site Accessibility.

# II. REGULATORY REVIEW

Evidence from a variety of sources—including historic aerial and satellite photos, Washoe County Assessor records, and construction document dates—leads AllWest to presume the years of initial construction are as listed on page 2. It is likely all buildings, except Bldgs 4871 and 4875, were designed and constructed in accordance with the

| | |
|---|---|
| Project No: | **22074.60** |
| Bldg Age in Years: | **Various** |
| No. of Floors: | **1 (Bldg 4871 has a mezzanine.)** |
| Approximate Rentable Floor Area: | **347,979** |

# IMMEDIATE REPAIRS & REPLACEMENT RESERVE ANALYSIS
## Firecreek Crossing Shopping Center, 4823 Kietzke Lane
## Reno, Nevada

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| No | Sec | Photos | ITEM | Avg EUL (yr) | EFF AGE (yr) | RUL (yr) | Quantity | Unit | Cost Estimate Source | Unit Cost | Immediate Needs | Replacement Reserves 2022 Year 1 | 2023 Year 2 | 2024 Year 3 | 2025 Year 4 | 2026 Year 5 | Years 1-5 Cumulative | Modernization Costs (Optional) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SITE WORK** | | | | | | | | | | | | | | | | | | |
| 1 | B.01 | 47-54 | Provide remedial measures to return all landscaping elements to "Good" condition. | N/A | N/A | N/A | 1 | LS | Allowance | $20,000.00 | | $20,000 | | | | | $20,000 | |
| 2 | B.02 | 57 | Provide repairs to address deficiencies in concrete site work to eliminate tripping hazards. | N/A | N/A | N/A | 1 | LS | Allowance | $25,000.00 | $25,000 | | | | | | | |
| 3 | B.02 | 58 | Provide concrete repairs unrelated to tripping hazards. | N/A | N/A | N/A | 1 | LS | Allowance | $20,000.00 | | $20,000 | | | | | $20,000 | |
| 4 | B.02 | 59 | Provide ongoing replacement of degraded concrete expansion joint sealants in sidewalks and walkways. | N/A | N/A | N/A | 1 | LS | Allowance | $50,000.00 | | $10,000 | $10,000 | $10,000 | $10,000 | $10,000 | $50,000 | |
| 5 | B.02 | 37-42 | Perform minor and full-depth repairs to address degraded surface condition of asphalt paving to return it to "Good" condition. | N/A | N/A | N/A | 1 | LS | Allowance | $600,000.00 | | $480,000 | | | $120,000 | | $600,000 | |
| 6 | B.02 | 37-42 | Reseal all asphalt paved parking areas and drive aisles. | 3 | Var | Var | 900,000 | SF | Estimate | $0.21 | | $189,000 | | | $189,000 | | $378,000 | |
| 7 | B.02 | 37-42 | Restripe all non-Accessible parking stalls. | 3 | Var | Var | 1,883 | EA | Estimate | $13.00 | | $24,479 | | | $24,479 | | $48,958 | |
| 8 | B.08 | 193 | Allowance to address loading area deficiencies to return them to "Good" condition. | N/A | N/A | N/A | 1 | LS | Allowance | $7,500.00 | | $7,500 | | | | | $7,500 | |
| **EXTERIOR ENVELOPE** | | | | | | | | | | | | | | | | | | |
| 9 | C.01 | 61-64 | Bldg 4801: Provide new overlay TPO roofing system. | 20 | 25 | 0 | 3,400 | SF | Estimate | $11.00 | | $37,400 | | | | | $37,400 | |
| 10 | C.01 | 65-68 | Bldg 4805: Provide new overlay TPO roofing system. | 20 | 25 | 0 | 5,700 | SF | Estimate | $11.00 | | $62,700 | | | | | $62,700 | |
| 11 | C.01 | 69-72 | Bldg 4809: Provide new overlay TPO roofing system. | 20 | 25 | 0 | 11,700 | SF | Estimate | $11.00 | | $128,700 | | | | | $128,700 | |
| 12 | C.01 | 73-76 | Bldg 4811 (Space 4811): Provide new overlay modified bitumen roofing system (reuse existing ballast). | 20 | 25 | 0 | 46,500 | SF | Estimate | $12.00 | | $558,000 | | | | | $558,000 | |
| 13 | C.01 | 77-80 | Bldg 4811 (Space 4813): Provide new overlay TPO roofing system. | 20 | 25 | 0 | 45,500 | SF | Estimate | $11.00 | | $500,500 | | | | | $500,500 | |
| 14 | C.01 | 61-80 | **MODERNIZATION:** Where needed, provide re-contouring of roof slopes in conjunction with above re-roofing work to address ponded water. | N/A | N/A | N/A | 1 | LS | Allowance | $30,000.00 | | | | | | | | $30,000 |
| 15 | C.01 | 86,92,100 | Bldg 4819: Provide remedial measures to address deficiencies with parapet molding caps. | N/A | N/A | N/A | 1 | LS | Allowance | $3,750.00 | | $3,750 | | | | | $3,750 | |
| 16 | C.02 | 7,8 | Bldg 4809: Repaint all exterior elements provided with a paint finish. | 8 | 6 | 2 | 1 | LS | Allowance | $22,500.00 | | | | $22,500 | | | $22,500 | |
| 17 | C.02 | 9-12 | Bldg 4811 (Space 4811): Repaint all exterior elements provided with a paint finish. | 8 | 6 | 0 | 1 | LS | Allowance | $27,500.00 | | $27,500 | | | | | $27,500 | |
| 18 | C.02 | 13-16 | Bldg 4811 (Space 4813): Repaint all exterior elements provided with a paint finish. | 8 | 6 | 0 | 1 | LS | Allowance | $27,500.00 | | $27,500 | | | | | $27,500 | |
| 19 | C.02 | 17,18 | Bldg 4819 (Space 4819): Repaint all exterior elements provided with a paint finish. | 8 | 6 | 2 | 1 | LS | Allowance | $27,500.00 | | | | $27,500 | | | $27,500 | |
| 20 | C.02 | 19,20 | Bldg 4819 (Space 4821): Repaint all exterior elements provided with a paint finish. | 8 | 6 | 2 | 1 | LS | Allowance | $35,000.00 | | | | $35,000 | | | $35,000 | |
| 21 | C.02 | 21,22 | Bldg 4819 (Space 4823): Repaint all exterior elements provided with a paint finish. | 8 | 6 | 2 | 1 | LS | Allowance | $27,500.00 | | | | $27,500 | | | $27,500 | |
| 22 | C.02 | 23,24 | Bldg 4819 (Space 4825): Repaint all exterior elements provided with a paint finish. | 8 | 6 | 2 | 1 | LS | Allowance | $27,500.00 | | | | $27,500 | | | $27,500 | |
| 23 | C.02 | 25,26 | Bldg 4819 (Space 4827): Repaint all exterior elements provided with a paint finish. | 8 | 6 | 2 | 1 | LS | Allowance | $22,500.00 | | | | $22,500 | | | $22,500 | |
| 24 | C.02 | 27,28 | Bldg 4871: Repaint all exterior elements provided with a paint finish. | 8 | 6 | 2 | 1 | LS | Allowance | $27,500.00 | | | | $27,500 | | | $27,500 | |
| 25 | C.02 | 29-32 | Bldg 4875: Repaint all exterior elements provided with a paint finish. | 8 | 6 | 2 | 1 | LS | Allowance | $27,500.00 | | | | $27,500 | | | $27,500 | |
| 26 | C.02 | 33-36 | Bldg 4891: Repaint all exterior elements provided with a paint finish. | 8 | 6 | 2 | 1 | LS | Allowance | $27,500.00 | | | | $27,500 | | | $27,500 | |
| 27 | C.02 | 201,202 | Provide repairs to exterior walls and decorative elements in a degraded condition. This work should be performed in conjunction with the recommended exterior repaintings at each building listed above, as needed. | N/A | N/A | N/A | 1 | LS | Allowance | $8,500.00 | | $8,500 | | | | | $8,500 | |
| 28 | C.02 | 203,204 | **MODERNIZATION:** Bldg 4811 (both spaces): If damaged EIFS panels are present, provide repairs to EIFS wall panels as an Immediate Need. | N/A | N/A | N/A | 1 | LS | Allowance | $15,000.00 | | | | | | | | $15,000 |
| **STRUCTURAL** | | | | | | | | | | | | | | | | | | |
| 29 | D.02 | 194-197 | Provide repairs to CMU walls, where damaged. | N/A | N/A | N/A | 1 | LS | Allowance | $20,000.00 | | $20,000 | | | | | $20,000 | |
| 30 | D.02 | 60 | Provide ongoing replacement of degraded control joint sealants in CMU perimeter walls. | N/A | N/A | N/A | 1 | LS | Allowance | $50,000.00 | | $10,000 | $10,000 | $10,000 | $10,000 | $10,000 | $50,000 | |
| **INTERIOR FINISHES** | | | | | | | | | | | | | | | | | | |
| **EQUIPMENT & SYSTEMS** | | | | | | | | | | | | | | | | | | |
| 31 | F.02 | M-21 | Building 4801: Replace 1 make-up air unit, based upon EUL and existing condition. | 20 | 26 | 0 | 1 | EA | Estimate | $10,000.00 | | $10,000 | | | | | $10,000 | |
| 32 | F.02 | M-2,3 | Bldg 4805: Replace 5 packaged air conditioners, totaling approximately 40 tons, based upon EUL and existing condition. | 20 | 26 | 0 | 40 | ton | Estimate | $2,500.00 | | $100,000 | | | | | $100,000 | |
| 33 | F.02 | M-23 | Building 4805: Replace 1 make-up air unit, based upon EUL and existing condition. | 25 | 26 | 0 | 1 | EA | Estimate | $10,000.00 | | $10,000 | | | | | $10,000 | |
| 34 | F.03 | - | Building 4809: Replace 3 packaged air conditioners, totaling approximately 26 tons. | 20 | 26 | 0 | 26 | ton | Estimate | $2,500.00 | | $65,000 | | | | | $65,000 | |
| 34 | F.02 | M-2,3 | Space 4811: Replace 6 packaged air conditioners, totaling approximately 118 tons, based upon EUL and existing condition. | 20 | 26 | 0 | 118 | ton | Estimate | $2,500.00 | | $295,000 | | | | | $295,000 | |
| 35 | F.02 | M-2,3 | Space 4811: Replace 2 natural gas fired make-up air units, based upon EUL and existing condition. | 25 | 26 | 0 | 2 | EA | Estimate | $10,000.00 | | $20,000 | | | | | $20,000 | |
| 36 | F.02 | M-2,3 | Space 4813: Replace 5 packaged air conditioners, totaling approximately 105 tons, based upon EUL and existing condition. | 20 | 25 | 0 | 105 | ton | Estimate | $2,500.00 | | $262,500 | | | | | $262,500 | |
| 37 | F.02 | M-2,3 | Space 4821: Replace 3 packaged air conditioners, totaling approximately 15 tons, based upon EUL and existing condition. | 20 | 19 | 1 | 15 | ton | Estimate | $2,500.00 | | $37,500 | | | | | $37,500 | |
| 38 | F.02 | M-2,3 | Space 4825: Replace 7 packaged air conditioners, totaling approximately 76 tons, based upon EUL and existing condition. | 20 | 26 | 0 | 76 | ton | Estimate | $2,500.00 | | $190,000 | | | | | $190,000 | |
| 39 | F.02 | M-2,3 | Bldg 4871: Replace 6 packaged air conditioners, totaling approximately 73 tons, based upon EUL and existing condition. | 20 | 18 | 2 | 73 | ton | Estimate | $2,500.00 | | | $182,500 | | | | $182,500 | |
| 40 | F.02 | M-2,3 | Bldg 4875: Replace 12 packaged air conditioners, totaling approximately 60 tons, based upon EUL and existing condition. | 20 | 20 | 0 | 60 | ton | Estimate | $2,500.00 | | $150,000 | | | | | $150,000 | |
| 41 | F.02 | M-2,3 | Bldg 4891: Replace one 10 ton packaged air conditioner, based upon EUL and existing condition. | 20 | 25 | 0 | 10 | ton | Estimate | $2,500.00 | | $25,000 | | | | | $25,000 | |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 42 | F.02 | M-22 | All Buildings: Install approximately 17 flexible natural gas connections on existing rooftop packaged air conditions, as a safety measure. | N/A | N/A | N/A | 17 | EA | Estimate | $500.00 | | $8,500 | | | | | $8,500 | |
| 43 | F.03 | M-8,9,11 | All Buildings: Perform infrared scans on electrical panels every three years. | N/A | N/A | N/A | 1 | EA | Estimate | $3,000.00 | | $3,000 | | | $3,000 | | $6,000 | |
| 44 | F.03 | M-9 | Bldgs/Spaces 4809, 4821, 4823, and 4875: Perform ground fault interrupter services on main electrical switchgear every three years. | N/A | N/A | N/A | 4 | EA | Estimate | $1,500.00 | $6,000 | | | | | | | |
| 45 | F.04 | M-17 | All Buildings: Install approximately 19 seismic safety shut-off valves on every tenant natural gas service, as a safety measure. | N/A | N/A | N/A | 19 | EA | Estimate | $1,500.00 | $28,500 | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| **ACCESSIBILITY** | | | | | | | | | | | | | | | | | | |
| 46 | G.01 | 2,6,32 | Restripe regular Accessible parking stalls and access aisles. | 3 | Var | Var | 42 | EA | Estimate | $100.00 | | $4,200 | | | $4,200 | | $8,400 | |
| 47 | G.01 | 2,6,32 | Restripe Van Accessible parking stalls and access aisles. | 3 | Var | Var | 7 | EA | Estimate | $130.00 | | $910 | | | $910 | | $1,820 | |
| 48 | G.02 | 198 | Restripe Accessible paths of travel. | 3 | Var | Var | 1 | EA | Allowance | $3,500.00 | | $3,500 | | | $3,500 | | $7,000 | |
| 49 | G.02 | 55,58,198 | Install truncated domes in all required locations where not already provided. | N/A | N/A | N/A | 1 | LS | Allowance | $25,000.00 | | $25,000 | | | | | $25,000 | |
| 50 | G.02 | 205 | Allowance to provide compliant door threshold plates at primary tenant space entrances, where not installed. | N/A | N/A | N/A | 1 | LS | Allowance | $10,000.00 | | $10,000 | | | | | $10,000 | |
| 51 | G.02 | 3,206 | **MODERNIZATION:** Allowance to provide upgrades to improve overall site Accessibility. | N/A | N/A | N/A | 1 | LS | Allowance | $150,000.00 | | | | | | | | $150,000 |
| 52 | G.02 | 35,36,199,200 | Provide visually contrasting stripes on each tread on all exterior stairs. | N/A | N/A | N/A | 1 | LS | Allowance | $5,000.00 | $5,000 | | | | | | | |

ABBREVIATIONS:

LS = Lump Sum Allowance

EA = Each

SF = Square Foot

RUL = Remaining Useful Life

EFF AGE = Effective Age

UNK = Unknown

V = Various

EUL = Expected Useful Life

N/A = Not Applicable or Not Assessable

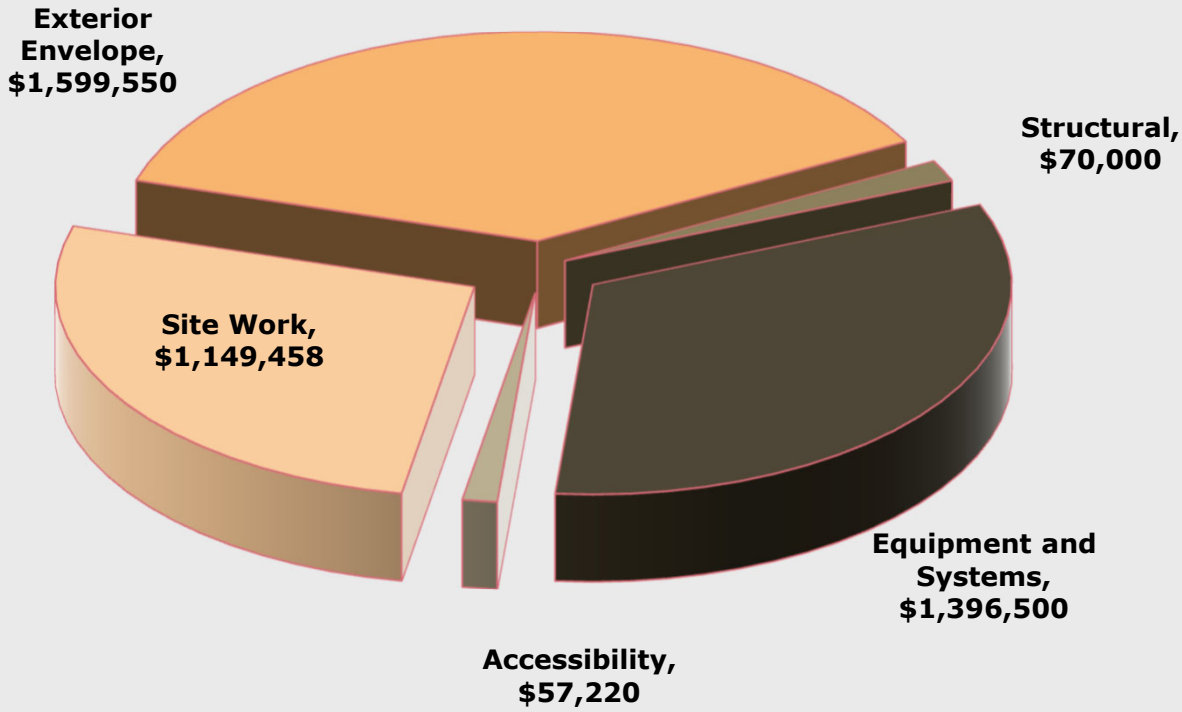
COST ESTIMATE SOURCES:

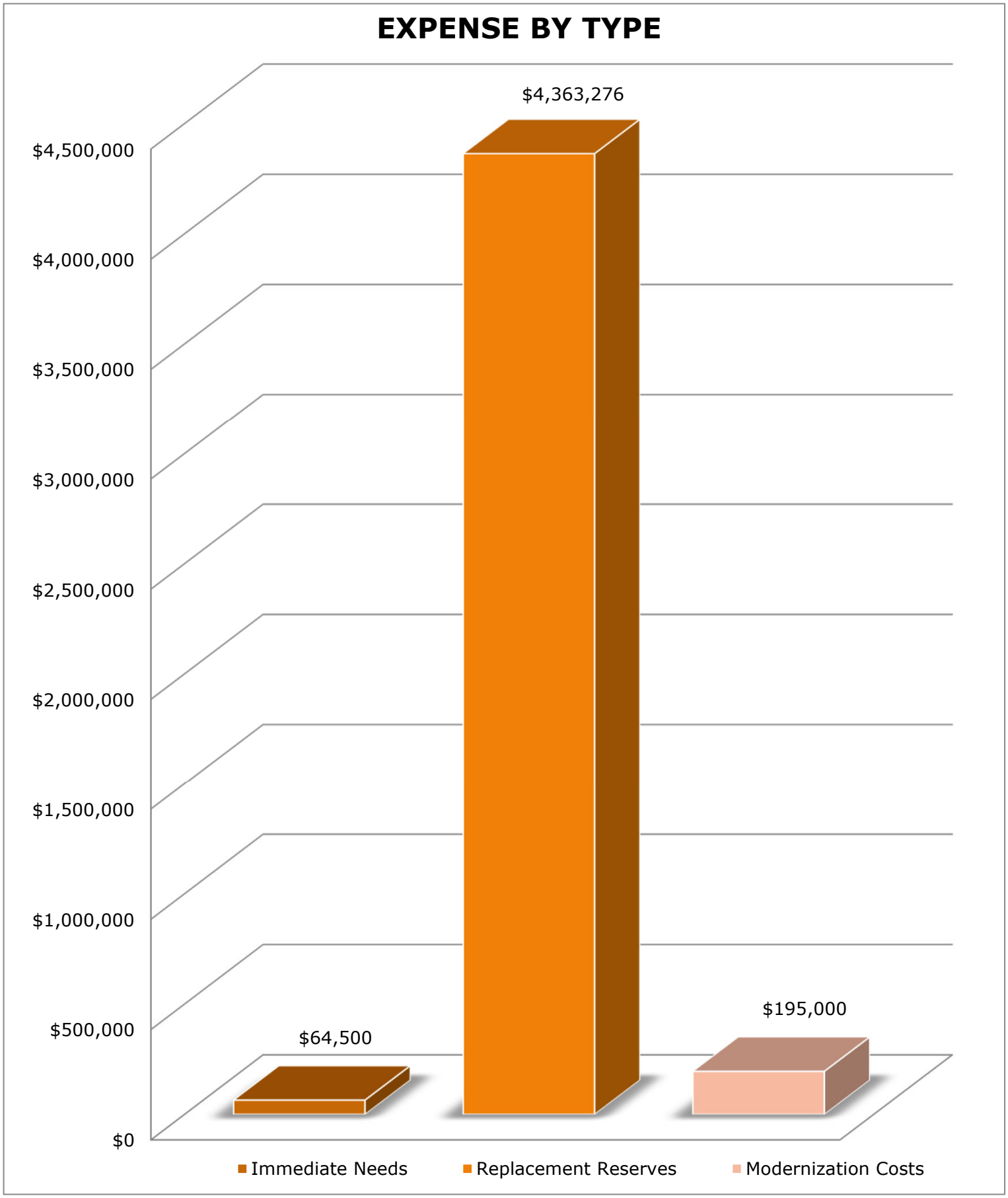
Estimate: Based on presumed or calculated quantities and unit costs based on research or previously documented amounts.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **TOTAL IMMEDIATE NEEDS COSTS** | **$64,500** | | | | | | |
| **Sub-Total** | $3,355,639 | $202,500 | $265,000 | $365,089 | $20,000 | **$4,208,228** | |
| **2.5% Inflation Factor per Year** | 1.025 | 1.051 | 1.077 | 1.104 | 1.131 | | |
| **Inflation Amount** | $83,891 | $10,252 | $20,376 | $37,901 | $2,628 | **$155,048** | |
| **Total with Inflation** | $3,439,530 | $212,752 | $285,376 | $402,990 | $22,628 | | |
| **TOTAL ANNUAL RESERVES** | | | | | | **$4,363,276** | |
| **Total Annual Reserves ($ Per SF)** | | | | | | $12.54 | |
| **Total Annual Reserves ($ Per SF Per Year)** | | | | | | $2.51 | |
| **TOTAL MODERNIZATION COSTS (Optional)** | | | | | | | **$195,000** |

# TOTAL EXPENSES BY CATEGORY

**(Immediate Needs and Replacement Reserves)**




EXPENSE BY TYPE
$4,363,276
$4,500,000
$4,000,000
$3,500,000
$3,000,000
$2,500,000
$2,000,000
$1,500,000
$1,000,000
$500,000
$0
$64,500
$195,000
Immediate Needs
Replacement Reserves
Modernization Costs

1994 edition of the Uniform Building Code (UBC). Bldg 4871 was likely constructed in accordance with the 2003 edition of the International Building Code (IBC); Bldg 4875 was likely constructed under the 2000 edition of the IBC.

The 2000 and 2003 editions of the IBC are post-Northridge earthquake editions of the building code. Following that earthquake, the seismic structural requirements set forth in the building code were significantly more stringent than in previous editions.

Public records requests were filed with the Reno Building, Planning, and Fire Departments for information concerning building permits, inspections, reports, and current violations. Copies of the original shell construction building permits and shell Certificates of Occupancy, if issued, were also requested. These documents were not provided and AllWest presumes that copies of the original shell permits are not available and that Certificates of Occupancy for shell construction were not issued, as is a common practice. No derogatory information concerning violations, complaints, or actions was reported by the Building and Planning Departments. A response from the Fire Department had not been received at time of publication.

The Reno Building Department maintains a publicly accessible online archive of building permit information, yet permits for the subject property only went as far back as 2017. Some, though not all, of the original architectural and structural construction documents—in addition to some civil, landscaping, mechanical, electrical, and plumbing systems drawings—were made available by the property owner in .pdf format and were reviewed during the preparation of this report.

The zoning designation is Mixed Use (MU) Urban, which is defined in §18.02.307 of the City of Reno Municipal Code. The purpose of the MU Urban district is to promote an urban pattern of mixed-use development. The MU Urban district is located adjacent to existing/planned high-frequency transit corridors, or where higher pedestrian activity is desired. The district accommodates an integrated mix of higher-density residential, commercial, retail, employment, and other service-oriented uses. Higher-intensity uses are located adjacent to designated Urban Corridors (Virginia Street, Fourth Street, Mill Street, and Plumb Lane), with lower intensities near the adjacent residential districts.

Documents and websites reviewed during the preparation of this report include the following:

1. Washoe County Assessor's Parcel Map;
2. Washoe County GIS Map;
3. Washoe County Assessor's Parcel Information Summaries;
4. Reno Municipal Code;
5. Reno GIS Map;
6. Reno Zoning Map;
7. Reno Building Department online building permit archive;
8. Various original architectural construction documents for some buildings prepared by James S. Bickel Architects, with various dates in 1995 and 1996;
9. Various original architectural construction documents for some buildings prepared by McFarland & Associates Architects, with various dates in 1995 and 1996;
10. Various original structural construction documents for some buildings prepared by Ajit Randhava & Associates, Structural Engineers, with various dates in 1995 and 1996;
11. ALTA Land Title Survey, prepared by AEI Consultants, dated April 5, 2016.

Copies of pertinent documents are included in the Appendix.

The buildings appear in general compliance with the various editions of the UBC and IBC—as adopted by the State of Nevada as the Nevada Building Code—under which design and initial construction are presumed to have occurred. Minor deficiencies concerning current code requirements for Disabled Accessibility were observed.

# III. PROPERTY CONDITION ASSESSMENT

**The attached Figures and Photos supplement the site descriptions and building conditions.**

## A. GENERAL

### A.01 INTRODUCTION

A rent roll, dated December 2021, indicates that there are two vacant suites at the shopping center with a combined floor area of 89,024 sq ft. The shopping center is 74.42% occupied. Five of the buildings are

developed for multiple tenants; three are single-tenant facilities. In terms of floor area, the three largest tenants (with tenant space addresses in parentheses) are:

Floor & Decor (4823): Bldg 4819: 55,268 sq ft
TJ Maxx (4821): Bldg 4819: 45,500 sq ft
Natural Grocers (4819): Bldg 4819: 31,850 sq ft

The two vacant suites in Bldg 4811 contain significant floor area. Space 4811 contains 45,524 sq ft; Space 4813 contains 43,500 sq ft.

Vehicular access into the parking lot is via six curb cuts along Redfield Parkway and one along Kietzke Lane. Accessible paths of travel from the public sidewalks along Kietzke Lane and Redfield Parkway to some shopping center buildings are provided; though the slopes at the site make provision of Accessible paths of travel from the sidewalks to all buildings problematic. Delineated Accessible paths of travel within the boundaries of the property are not provided to serve all buildings at the shopping center.

As evidenced by materials, finishes, and equipment, the design and construction quality of the subject property is "Good." The deficiencies which we have identified in this report are typically minor, though the aggregate total of recommended remedial measures may appear significant owing to the scale of the property.

## A.02 PROPERTY SUMMARY DATA

Assessor Parcel Numbers (with areas):

| | | |
|---|---|---|
| 024-055-33: | 17.649 acres | (768,790.44 sq ft) |
| 024-055-37: | 12.121 acres | (527,990.76 sq ft) |
| 024-055-44: | 2.040 acres | (88,862.40 sq ft) |
| 024-055-45: | 2.480 acres | (108,020.80 sq ft) |
| Total: | 34.290 acres | (1,493,664.40 sq ft) |

Master Address:
4823 Kietzke Lane
Reno, NV 89509

Tenant Addresses:
4801 Kietzke Lane
4805 Kietzke Lane
4809 A Kietzke Lane
4809 B Kietzke Lane
4809 D Kietzke Lane
4811 Kietzke Lane
4813 Kietzke Lane
4819 Kietzke Lane
4821 Kietzke Lane
4823 Kietzke Lane
4825 Kietzke Lane
4827 Kietzke Lane
4871 Kietzke Lane
4875 A Kietzke Lane
4875 B Kietzke Lane
4875 C Kietzke Lane
4875 D Kietzke Lane
4891 Kietzke Lane
4891 A Kietzke Lane
Reno, NV 89509

Zoning:
Mixed Use (MU) Urban

Occupancy Type:
Group A-2 (Assembly – restaurants)
Group B (clinic, outpatient)
Group M (Mercantile – retail stores)

Construction System:
The structural frame systems include CMU load bearing perimeter walls and interior steel columns supporting glulam beams or open web steel roof trusses and wood framed or corrugated metal deck roof diaphragms. Some smaller buildings have conventional Type V wood framed perimeter walls and roof framing.

At all buildings, the reinforced concrete slab-on-grade foundations are presumably provided with continuous perimeter footings to support the exterior walls and isolated spread footings to support the interior columns.

Construction Type:
Type V-B, non-fire resistive rated. All but Bldg 4801 is fully fire sprinklered.

Year of Likely Initial Construction Completion:
Bldg 4801: 1997
Bldg 4805: 1997
Bldg 4809: 1997
Bldg 4811: 1997
Bldg 4819: 1997
Bldg 4871: 2005
Bldg 4875: 2003
Bldg 4891: 1997

Flood Zone:
FEMA Flood Zone X (unshaded) and
FEMA Flood Zone X (shaded)

Seismic Retrofit:
Status unknown on 1997 buildings;
Not applicable on 2003 and 2005 buildings.

Rentable Floor Areas (per Rent Roll):

| | |
|---|---|
| Bldg 4801: | 3,200 sq ft |
| Bldg 4805: | 5,500 sq ft |
| Bldg 4809: | 11,409 sq ft |
| Bldg 4811: | 89,024 sq ft |
| Bldg 4819: | 180,510 sq ft |
| Bldg 4871: | 24,295 sq ft |
| Bldg 4875: | 20,000 sq ft |
| Bldg 4891: | 14,041 sq ft |
| Total: | 347,979 sq ft |

No. of Stories:
One story. Bldg 4871 also has a mezzanine.

Approximate Height:
23'-0" max.

Number of Buildings:
Eight (visually)
Thirteen (structurally independent)

Parking (per ALTA survey):
1,932 stalls

Accessible Parking:
Forty-nine Accessible parking stalls provided, seven of which are Van Accessible. Accessible parking is not compliant for the total number and type of Accessible parking stalls required. For a parking lot with 49 Accessible stalls, nine of them shall be Van Accessible.

Interior Path of Travel:
Generally compliant

Exterior Path of Travel:
Moderately compliant, with typically minor deficiencies

Restroom Accessibility:
Generally compliant, with minor deficiencies

## A.03 PROPERTY DIRECTORY

Owner:
SCGIF II Firecreek Owner, LLC
20 Park Plaza, Suite 700
Irvine, CA 92614

Property Manager:
Colliers Reno
Leslie Simmons
5520 Kietzke Lane, Suite 300
Walnut Creek, CA 94596

Architect (Original Development):
James S. Bickel Architects
3600 Birch Street
Newport Beach, California 92660

Architect (Original Development):
McFarland & Associates, Architects
Pier 9
San Francisco, California 94111

Structural Engineer (Original Development):
Ajit Randhava & Associates
Structural Engineers
16706 Valley View Avenue
La Mirada, California 90636

Soil Engineer (Original Development):
Kleinfelder
3189 Mille Street
Reno, NV 89502

Civil Engineer (Original Development):
CFA
1150 Corporate Boulevard
Reno, NV 89502

Landscape Design:
CFA
1150 Corporate Boulevard
Reno, NV 89502

MEP Engineering (Original Development):
Lima & Associates, Inc.
8682 Beach Boulevard, Suite 200
Buena Park, California 90602

Roofing Maintenance:
D & D Roofing
1000 Glendale Avenue
Sparks, NV 89431

Fire Sprinkler Testing:
State Fire
1380 Greg Street, Suite 203
Sparks, NV 89431

Fire Alarm Monitoring and Testing:
Mountain Alarm
50 Snider Way
Sparks, NV 89431

## A.04 UTILITY SERVICES

Water:
Truckee Meadows Water Authority

Sewer:
City of Reno Sewer Service

Electricity:
NV Energy

Gas:
NV Energy

# B. SITE DEVELOPMENT & LANDSCAPING

The site is developed with eight buildings on four legal parcels. Delineated off-street parking for a reported 1,932 cars is provided in the at-grade asphalt paved lot. Generally good drainage characteristics should prevail.

## B.01 LANDSCAPING & IRRIGATION

The physical condition of the landscaping appeared "Good," with deficiencies noted.

Mature trees, shrubs, and ground cover—which are typically drought tolerant—are planted in various landscaped areas; around the site perimeter, adjacent to some buildings, and in planters within the parking lot. A grass lawn is installed along the east elevation of Bldg 4811. Missing and dead or dying vegetation was observed in various locations. Replacement of dead, degraded, and missing vegetation is recommended.

An automatic irrigation system with programmable controllers is installed. This system includes a PVC and plastic pipe distribution system with end devices to match exterior watering needs. Domestic water is used for irrigation.

An estimate to address landscape deficiencies is included in the Immediate Repairs & Replacement Reserves Analysis.

## B.02 PARKING, DRIVEWAYS AND CONCRETE SITEWORK

The physical condition of the parking, driveways, and concrete sitework is "Good" to "Fair," with deficiencies noted.

Concrete public sidewalks are located along the frontages of the two streets which bound the site. Vehicular access into the parking lot is via six curb cuts along Redfield Parkway and one along Kietzke Lane. Per the ALTA survey, the at-grade asphalt paved parking areas have a reported 1,932 parking stalls. The most recent resealing and restriping of the parking lot was reportedly done in 2019. Satellite photos indicate that the parking area shared by Bldgs 4805, 4809, and 4811 at the northeast portion of the site was not resealed and restriped at that time. AllWest requested the invoice for the 2019 asphalt work, but it had not been provided at time of publication.

The City of Reno has a public works management program for street and sidewalk maintenance. Information about this program can be found at this website:

https://www.reno.gov/government/departments/public-works/capital-projects/special-assessment-districts

There are numerous locations where concrete walkway and sidewalk panels have changes in elevation exceeding one-quarter inch; these present tripping hazards. Evidence of past concrete grinding was observed. We observed concrete site elements where the concrete has meandering cracks and also where it has cracked and pieces of concrete are missing. AllWest recommends concrete grinding and concrete site element repair or replacement to address tripping hazards; we also recommend minor repairs to address cracking and missing concrete at deficiencies unrelated to tripping hazards.

Flexible sealants are installed in sidewalk and walkway concrete control joints in numerous locations. Sealants were observed in a degraded condition in multiple instances; replacement is recommended.

The more recently resealed asphalt paving appeared in generally "Good" condition, though these areas are not without deficiencies. The parking area that was not resealed in 2019 appeared in "Fair" condition. Minor depressions; small upheavals; and meandering, linear, and alligator cracking were observed in numerous locations. More egregious degradation of the asphalt surface was also observed where separation of the aggregate has occurred and where the asphalt surface has a particularly rough appearance and texture. These deficiencies are far more prevalent in the parking lot at the northeast portion of the site.

AllWest typically recommends asphalt resealing on a five-year schedule. The subject property is located in a cold climate that includes ice and snow during the winter; at which time snow plows and scrapers are used to clear the parking areas. Therefore, accelerated wear of the asphalt paving can be anticipated. Evidence of past minor repairs was observed in numerous locations. Based on the accelerated rate of wear, we recommend that the asphalt paving be repaired, resealed, and restriped at more frequent intervals in order to preserve its useful life. For this property, AllWest recommends a three-year schedule.

Parking stall re-striping will be required following asphalt resealing. We also recommend that full-depth and minor repairs to address surface degradation of the asphalt paving be performed in conjunction with resealing to return the asphalt paving to overall "Good" condition.

Costs to address deficiencies with concrete sitework and with the asphalt paved parking areas are included in the Immediate Repairs & Replacement Reserves Analysis.

## B.03 SITE DRAINAGE

The physical condition of site drainage appeared "Good," with deficiencies noted.

The site was observed in generally dry weather, though a light snow fell around midday on May 11. The snowfall did not produce any accumulations, and the snow melted and evaporated quickly after landing.

The general topography in the vicinity of the site has a descending slope from southwest to northeast with a

change in elevation of 44 feet. Surface drainage is by sheet flow to numerous area drains in the parking lot, trench drains in depressed loading bays, and by street curbs to drain inlets. Surface drains connect to the municipal storm water system beneath the two streets that bound the property.

Some minor accumulations of dead vegetation, stones, and other debris were observed near some area drain inlets; clearing the debris is recommended. This is a matter of routine maintenance and a cost estimate is not included in the spreadsheet.

The subject property is located in FEMA Flood Zone X (unshaded) and Zone X (shaded) per FIRM Panel No. 32031C3231G, dated March 16, 2009. FEMA describes Flood Zone X (shaded) as an area with a 0.2% annual chance flood hazard or as an area of 1% annual chance flood hazard with average depths less than one foot with drainage areas of less than one square mile. Flood Zone X (unshaded) is an area of minimal flood hazard that is determined to be outside the Special Flood Hazard Area and higher than the elevation of the 0.2-percent-annual-chance (or 500-year) flood.

## B.04 MISCELLANEOUS ITEMS AND SUPPORT STRUCTURES

The physical condition of miscellaneous items and support structures appeared “Good,” with deficiencies noted.

CMU dumpster enclosures—some painted, most not—are found in multiple locations. Painted, corrugated steel sheet and tube steel gates are installed. Degradation of the paint on the gates was observed, along with damage to CMU’s and gates, likely from vehicular and dumpster contact; CMU repairs are recommended. Small amounts of efflorescence were observed on some CMU enclosures; cleaning is recommended. Concrete filled steel tube bollards are installed in numerous locations around the property as protection against vehicular contact for exterior site and building elements, such as gas meters, transformers, and at depressed loading bays. Several of the bollards are out-of-plumb; straightening is recommended.

The above recommendations are minor repairs or matters of routine maintenance and cost estimates are not included in the spreadsheet.

AllWest recommends that repainting the painted dumpster enclosures and all gates be performed as part of the general exterior repaintings recommended in Section C.02.

## B.05 FENCING AND SCREENING

The physical condition of fencing and screening appeared “Good.”

Perimeter fencing is not provided at the shopping center. In various areas, small fenced enclosures are located adjacent to building exteriors; this fencing is galvanized chain-link.

## B.06 SIGNS & IDENTIFICATION

The physical condition of signage appeared “Good.”.

Two monument signs for the shopping center are provided in landscaped areas along Kietzke Lane near Bldg 4805 and along Redfield Parkway near Bldg 4891. The signs are 33’ tall and presumably of steel frame construction and founded on small concrete pads. They have painted stucco finish facings. The signs carry the name of the shopping center and the names of several of the larger tenants.

Tenant signage of various types and styles is installed on the exterior elevations of the buildings; these signs are installed and maintained at tenant expense.

## B.07 STAIRS, LANDINGS, AND RAILINGS

The physical condition of exterior stairs, landings, and railings appeared “Good,” with deficiencies noted.

Cast-in-place concrete exterior stairs are found along the main elevations of Bldg 4891 (two sets) and at Bldg 4809 (one set); a concrete ramp is also located at Bldg 4809. Concrete stairs and ramps are also found along the rear elevations of Bldg 4811 and 4871 serving back-of-house areas. The stairs and ramps at all buildings are provided with painted steel tube railings.

Galvanized steel tube railings are also installed at temporary shopping cart storage locations in the parking lot to the west of Bldg 4819. Minor deficiencies, such as cracked concrete creating small voids were observed in some exterior stairs and ramps. Repairs are recommended and the cost is contained within the estimate for non-tripping hazard concrete repairs recommended in Section B.02.

AllWest recommends that repainting the stair and ramp railings be performed as part of the general exterior repainting recommended in Section C.02.

## B.08 SUPPORT AND DOCK AREAS

The physical condition of the support and dock areas appeared “Good,” with deficiencies noted.

Five depressed concrete loading docks are provided at Bldg 4819 along its west side; they serve each tenant space in that building. Two depressed loading docks serve Bldg 4811, one for each tenant. Additionally, Space 4811 is served by an at-grade loading area with three bays with overhead coiling doors. One depressed loading bay serves Bldg 4871. The depressed loading areas are approximately 42" below the interior floor level. The depressed bays are fitted with overhead coiling doors, levelers, weather seals, and laminated rubber bumpers.

Accumulations of dead vegetation, trash, and other debris were observed at the trench drains serving the depressed docks. Cleaning is recommended; this is a matter of routine maintenance and a cost estimate is not included in the spreadsheet.

Various deficiencies, such as a damaged weather seal and damaged steel supports at Space 4819, degraded rubber bumpers, and displaced drain grates were observed. Remedial measures to return loading area degraded elements to "Good" condition are recommended.

A cost estimate to address deficiencies with loading areas is included in the Immediate Repairs & Replacement Reserves Analysis.

## C. EXTERIOR ENVELOPE

Flat roofs are installed on all buildings. Elastomeric paint finishes are provided at all buildings, though at some buildings painted areas are used as accents only. CMU walls are typically unpainted. Anodized aluminum window/door systems are fitted with both single- and dual-pane glazing.

## C.01 ROOF AND ACCESSORIES

The physical condition of the roofing systems and accessories appeared "Good" to "Fair," with deficiencies noted.

We directly accessed the flat roof areas on all buildings. Pitched roof areas were not directly accessed, but were observed from adjacent flat roof areas and from grade. All BUR systems give evidence that mineral granule separation has occurred; the magnitude of separation varies from building to building.

Concrete barrel tiles are installed on the decorative pitched roof elements on each of the five spaces at Bldg 4819 and at Bldg 4871. A small number of broken barrel tiles were observed; replacement is recommended. This is a matter of routine maintenance and a cost estimate is not included in the spreadsheet.

A synopsis of the roofing systems and their overall condition follows:

Bldg 4801:

A multi-ply BUR roofing system with a white mineral granule top sheet is installed and appeared in "Fair" condition. Mineral granule separation has occurred to the point where the underlying membrane of the top sheet is visible in places. This is the original roofing system and it dates to 1997.

Bldg 4805:

A single–ply, TPO roofing system is installed and appeared in generally "Fair" condition; grease contamination near exhaust fans was observed. This is the original roofing system and it dates to 1997.

Bldg 4809:

A multi-ply BUR roofing system with a white mineral granule top sheet is installed and appeared in "Fair" condition. Mineral granule separation has occurred. Evidence of numerous repairs was observed. This is the original roofing system and it dates to 1997.

Bldg 4811 (Space 4811):

The MB roofing system with small river stone ballast is evaluated in "Fair" condition, based on the age of the system. Generally, the MB roofing membrane is not visible because of the ballast. Instances of leaks through the roofing system into the interior were observed, though these are reported to have been repaired. This is the original roofing system and it dates to 1997. Re-use of the stone ballast is recommended when the MB roofing system is replaced. Damaged roof path concrete pavers were observed in several locations; replacement is recommended as part of the re-roofing project. A separate line item for paver replacement is not included in the spreadsheet; the cost is contained within the line item for a new overlay roofing system.

Bldg 4811 (Space 4813):

A multi-ply BUR roofing system with a white mineral granule top sheet is installed and appeared in "Fair" condition. Mineral granule separation has occurred to the point where the underlying membrane of the top sheet is visible in places. Evidence of several past repairs was also observed. This is the original roofing system and it dates to 1997.

Bldg 4819 (all spaces) and Bldgs 4875 and 4891:

At all five tenant spaces, a single–ply, TPO roofing systems was installed as an overlay in 2017 on top of the original BUR systems. The TPO overlays appeared in generally "Good" condition.

Bldg 4871:

A single–ply, TPO roofing system was installed as an overlay in 2018 on top of the original BUR system, and appeared in generally “Good” condition.

AllWest generally applies a 20-year EUL for BUR, MB, and TPO roofing systems. The concrete tile roofing systems have an EUL of 50 years and should not require replacement during the reserve term. Repairs to damaged barrel tiles should be undertaken promptly when discovered. The older BUR, MB, and TPO roofing systems have exceeded their nominal EUL’s. Installation of new overlay roofing systems on Bldgs 4801, 4805, 4809, and 4811 (both spaces) is recommended.

It was reported by property management that all past known leaks through the roofing systems have been reported and repaired. No current, known leaks were reported.

On Bldg 4819, the decorative Styrofoam moldings at the parapets are supposed to have galvanized sheet metal caps. Several of these caps have become displaced or are missing. Remedial measures to address this deficiency are recommended.

Along the east parapet of Bldg 4875, there is a short length (1.5”) on a seam between TPO sheets at a past repair where an adhesive failure has occurred, resulting in a small pucker in the TPO membrane. Repair is recommended; this is a minor repair and a cost estimate is not included in the spreadsheet.

Roof warranties for older roofing systems installed at the time of original construction have expired. Newer TPO overlays installed in 2017 and 2018 likely have ten-year materials warranties, at a minimum.

### Roof Drainage

On all buildings, roof drainage is typically handled with atrium grated roof and overflow drain combinations. The combinations are located in shallow sumps at low points in the roofs on all but Bldgs 4801, 4805, and Bldg 4811 (Space 4811) where depressed sumps are not provided.

Evidence of past ponding and accumulations of dead vegetation, separated mineral granules, and other debris were observed on buildings with BUR roofing systems. Evidence of past ponding and accumulations of dead vegetation and other debris were observed on buildings with TPO roofing systems. Accumulations of past microbial growth are commonplace in drain sumps and adjacent to non-sump drain combinations.

On flat roofs, roof drainage sheet flows to roof drains and overflow drains. Roof drains with interior downspouts are presumably connected directly to the municipal storm water system. Overflow drains convey water via interior downspouts that exit with through-wall pipes that discharge water slightly above adjacent grade, typically onto hardscape. Pitched roof gutters and downspouts drain directly onto adjacent flat roof areas where water is conveyed to drain combinations via sheet flow.

On all buildings, some roof and overflow drains are partially or wholly blocked with dead vegetation and other debris. Cleaning of these accumulations is recommended. Some drain grates were observed to be displaced or missing; repair/replacement of grates is recommended. To facilitate these cleanings and grate repairs and to help maintain roofs so that they achieve their EUL’s, AllWest recommends that the annual roofing service contract be maintained to provide yearly visits for maintenance, inspections, cleanings, and minor repairs on the roofs of all buildings. Management reported that D & D Roofing of Sparks, NV, provides roof maintenance on an annual basis.

Since a roof service contract is currently in effect, the cost of this contract is considered a matter of routine maintenance; no estimate for such a contract is included in the spreadsheet.

Ponded water was observed on several buildings and in some locations it appears that depressions have developed in the roofing system; these depressions create drainage problems where ponded water forms. As an optional Modernization expense, AllWest is including a line item to provide roof slope re-contouring, where needed.

Estimates for parapet molding repairs and for new overlay roofing systems are included in the Immediate Repairs & Replacement Reserves Analysis. The allowance for roof slope re-contouring is included in the optional Modernization category of the spreadsheet.

## C.02 Exterior Finishes

The physical condition of exterior finishes appeared “Good,” with deficiencies noted.

Though the buildings do not share an identical design aesthetic, the basic designs, finishes, decorative elements, and details are somewhat similar on all but Bldgs 4801 and 4805. The resemblance on Bldgs 4809 and 4891 is less strong than the shared characteristics of Bldgs 4811, 4819, 4871, and 4875.

Elastomeric paint finishes are provided at all buildings in varying degrees of coverage. Bldgs 4801 and 4805 have the highest percentage of complete coverage by exterior paint finishes. Exterior colors vary with the palette dominated by tans and brown-grays, with ochre-yellow used as

an accent. On most buildings, exposed split-face CMU walls and wall portions are found; generally the CMU's are unpainted, though some CMU's are painted as accents.

The last exterior repaintings occurred in 2016 for Bldgs 4809, 4811 (both spaces), 4871, and 4875. Bldg 4819 (all five tenant spaces) was reported to have last been repainted in 2017. Exterior painting at Bldgs 4801 and 4805 is the responsibility of the tenants; the date of the last repainting is unknown. The date of the last repainting and responsibility for the maintenance of exterior finishes at Bldg 4891 are unknown.

AllWest typically recommends exterior repainting on a 10-year schedule. However, due to the harsh climate in Reno, we are modifying that to an 8-year schedule to maintain the exterior finishes in "Good" condition. Exterior repainting during the reserve term is recommended.

Efflorescence was observed on the CMU's of dumpster enclosures, building perimeter walls, and exterior walls. Small amounts of graffiti were observed around the property. Cleaning both the efflorescence and graffiti is recommended; this is a matter of routine maintenance and a cost estimate is not included in the spreadsheet.

Damage to stucco finish exterior walls and decorative elements was observed on some buildings; repair is recommended and should be undertaken in conjunction with the recommended exterior repaintings.

AllWest's observations lead us to presume that the stucco finish walls at Bldg 4811 (both spaces) are of exterior insulation finishing systems (EIFS) construction. Construction documents for Bldg 4811 (both spaces) were not provided, so the presence of EIFS cannot be confirmed from the drawings or by a non-invasive visual examination.

Construction defect related claims involving EIFS have proliferated over the past several years and have been a subject for class action suits. EIFS claims generally involve the intrusion of water behind exterior walls resulting in rotting of wood framing, rusting of steel stud framing or water damage to interior elements. Sometimes called "synthetic stucco," EIFS is a multi-layered, barrier-type exterior wall system designed to prevent moisture intrusion into the interior. Since its traditional installation methods do not incorporate means to drain water or ventilate moisture, problems arise when moisture works its way behind the EIFS coat through any fracture in the system. Typical moisture entry points are improperly installed flashing around doors, windows, or roof elements, as well as perforations or cracks in the coating itself.

Should the tan-painted portions of the exterior elevations at Bldg 4811 (both spaces) indeed be EIFS, AllWest recommends that repairs to damaged EIFS wall panels be performed as an Immediate Need. However, since the presence of EIFS is only a conjecture, this recommendation is made as an optional Modernization expense.

Cost estimates to repaint buildings and exterior elements provided with a paint finish—Bldgs 4801 and 4805 are excluded—and to address decorative exterior element repairs are included in the Immediate Repairs & Replacement Reserves Analysis. Possible EIFS repairs are included in the optional Modernization category of the spreadsheet.

## C.03 Doors, Windows, and Skylights

The physical condition of doors and windows appeared "Good," with deficiencies noted.

Skylights are not provided.

At all buildings aluminum storefront window and door systems are typically fitted. Both single- and dual-pane glazing are provided; secondary exits have painted hollow steel doors in steel frames.

A synopsis of the window and exterior door systems and their overall condition follows:

Bldg 4801:
Black anodized aluminum storefront window and door systems are fitted with dual-pane glazing and appeared in generally "Good" condition.

Bldg 4805:
Dark gray anodized storefront aluminum window systems are fitted with dual-pane glazing and appeared in generally "Good" condition. The primary entrance is provided with painted multi-pane wood doors, with sidelites.

Bldg 4809:
Clear anodized aluminum storefront window and door systems are fitted with single-pane glazing and appeared in generally "Good" condition.

Bldg 4811 (Space 4811):
Red *Kynar* coated storefront aluminum window and door systems are fitted with single- and dual-pane glazing and appeared in generally "Good" condition. Some of the window framing above the main entrance doors has a run-down appearance; closure panels are missing or displaced. Repair is recommended. This is a minor repair and a cost estimate is not included in the spreadsheet.

Bldg 4811 (Space 4813):

Clear (door) and black (window) anodized aluminum storefront systems are fitted with single-pane glazing and appeared in generally “Good” condition.

Bldg 4819 (Spaces 4819, 4821, 4823, and 4827):

Clear anodized storefront aluminum window and door systems are fitted with single-pane glazing and appeared in generally “Good” condition. Secondary exits have painted hollow steel doors in steel frames.

At Space 4821, two drooping rubber window seals were observed. Replacement is recommended. Also at this building, we observed two horizontal rails in the storefront window systems that were slightly bowed. Repair is recommended. These are minor repairs and cost estimates are not included in the spreadsheet.

Bldg 4819 (Space 4825):

Clear (door) and black (window) anodized aluminum storefront systems are fitted with single-pane glazing and appeared in generally “Good” condition

Bldg 4871:

Black anodized storefront aluminum window and door systems are fitted with dual-pane glazing and appeared in generally “Good” condition.

Bldg 4875:

Clear anodized storefront aluminum window and door systems are fitted with single-pane glazing and appeared in generally “Good” condition.

Bldg 4891:

Clear anodized storefront aluminum window and door systems are fitted with dual-pane glazing and appeared in generally “Good” condition.

Painted sectional metal overhead coiling doors are installed at all depressed and grade-level loading bays at Bldgs 4811 (both spaces), 4819 (all spaces), and Bldg 4871.

No known, active leaks were reported at any window/door systems and wall systems.

Exterior steel man doors are generally in “Good” condition, with some exceptions. Rust, typically minor, was observed on several steel doors and frames. Some doors are also dented. The dents are primarily an aesthetic concern and do not affect the operation of the doors. The paint on many man doors is faded or oxidized.

All painted steel man doors and overhead coiling doors should be repainted as part of the general exterior repainting recommended in Section C.02. Where rust is present on steel doors and frames, measures should be undertaken to remove the rust and prime with a rust-inhibitive primer prior to repainting.

## C.04 Patios, Terraces, and Balconies

There are no patios, balconies, or terraces at the subject property.

## D. Structural Elements

At all buildings, a reinforced concrete slab-on-grade foundation is provided. Foundations and roof and wall framing are typically covered with architectural finishes, although the undersides of the flat roof framing were observable or partially observable in some buildings. Pitched roof framing was also observable in some buildings. The concrete slabs were often—though not always—observable in limited portions only in service rooms and in some tenant spaces. Exceptions to this are in Bldg 4819 (Spaces 4819 and 4823) where the concrete floor slab is exposed.

## D.01 Foundations

The physical condition of the foundation systems appeared “Good,” with deficiencies noted.

At each building, the first floor system presumably consists of a reinforced concrete slab-on-grade foundation with continuous perimeter footings to support the exterior walls and isolated spread footings to support the interior columns.

Where observable, we generally found no anomalies with the foundation systems. Minor meandering cracks in the concrete slab were observed, when visible; cracks are a natural occurrence in concrete as it ages. The cracks we observed are typically not significant and do not warrant a recommendation for remedial measures. No signs of significant building settlement, distress, or overloading were noted or reported at any of the building elements that we observed.

## D.02 Wall Construction

The physical condition of the wall construction appeared “Good,” with deficiencies noted.

Perimeter CMU walls are typical. Some smaller buildings have conventional Type V wood framed perimeter walls. Interior partition walls are typically wood or steel stud construction with painted gypsum board finishes. All walls observed during the site visit appeared plumb.

A damaged exterior face of a CMU at Bldg 4819 (Space 4821) was observed at the northeast corner of the building at walkway level. Minor damage—often from vehicular contact—was observed on CMU perimeter building walls, CMU pony walls adjacent to depressed loading areas, taller CMU screen walls along the rear of Bldg 4819, and at dumpster enclosures. CMU repairs are recommended.

Flexible sealants at control joints in perimeter CMU walls are provided; some degradation of the sealants was observed; replacement of degraded sealants is recommended.

A cost estimate for CMU wall repairs is included in the Immediate Repairs & Replacement Reserves Analysis.

## D.03 Roof/Floor Framing

The physical condition of roof and floor framing appeared "Good."

The buildings primarily have CMU perimeter walls, which are load-bearing supporting glulam beams or open web steel roof joists with flexible wood-framed roof diaphragms; steel columns provide additional support at interior points. The roof framing typically consists of a panelized roof system, with plywood sheathing supported by wood sub-purlins spanning to and supported by open web steel truss purlins. The purlins span to and are supported by the larger open web steel girder trusses and the exterior CMU bearing walls. The ledgers consist of nominal lumber mechanically attached to the CMU walls. One of the buildings (4811, both spaces) has a light gage metal sheathed roof which is supported by open web steel trusses. Some smaller buildings have conventional Type V wood framed perimeter walls and roof framing.

In Bldg 4871, the mezzanine floor framing presumably consists of plywood sheathing on wood joists supported by interior beams or walls and the perimeter CMU bearing walls.

# E. Interior Finishes

Installation and maintenance of interior floor, wall, and ceiling finishes are tenant responsibilities under the terms of typical triple net commercial leases. Since new tenant interior TI projects are typically subject to construction allowances to the new tenant for interior finish installation—and the allowances are paid back by the tenant over the term of the lease agreement—no estimates for repair or replacement costs for interior finishes are included in the Immediate Repairs & Replacement Reserve Analysis.

Wear and tear commensurate with age and use was observed on interior floor, wall, and ceiling finishes. The buildings have no common areas in the sense of areas to be shared with equal access by multiple tenants.

In the occupied tenant spaces, interior finishes appeared in generally "Good" condition. In the two vacant tenant spaces in Bldg 4811, interior finishes are evaluated in overall "Fair" condition, with some observed isolated interior elements in "Poor" condition.

## E.01 Floor & Base Finishes

The physical condition of floor finishes appeared "Good" to "Fair."

### Retail, Restaurant, and Office Areas

Floor finishes in these tenant areas vary widely. Vinyl composite tile (VCT), laminate wood flooring, ceramic tile, commercial carpet and carpet squares, and the polished and sealed concrete slab were observed. The base moldings vary with the flooring provided with 4" top set rubber bases predominating.

### Natural Grocers (Space 4819)

The polished and sealed concrete slab is the finished floor. No base molding was observed.

### Gymnasium (Bldg 4875)

Black rubber resilient flooring with a four-inch top set rubber base is provided.

### Storage and Secondary Areas

These areas have the exposed, sealed or unsealed concrete slab as the most common floor finish. No base molding is typical.

### Restrooms

Ceramic tile is the overwhelmingly predominant floor finish with sheet vinyl flooring installed in a small number of restrooms. Where ceramic tile flooring is provided, matching ceramic tile bases are also installed. A four-inch top set rubber base is provided at the vinyl flooring.

## E.02 Wall Finishes and Doors

The physical condition of wall finishes and doors appeared "appeared "Good" to "Fair."

Painted or stained solid-core wood interior doors in metal frames are typical; a small number of interior

doors have glass lites. Painted hollow steel doors are also installed in service areas. The condition of the doors correlates to that of the surrounding interior finishes.

### Retail, Restaurant, and Office Areas

Wall finishes are typically painted gypsum board and the painted interior side of the perimeter CMU walls. In the back-of-house area, CMU walls are typically unpainted. Unpainted and painted gypsum board was also observed in some retail store back-of-house areas.

### Natural Grocers (Space 4819)

Wall finishes are painted gypsum board and painted interior side of the perimeter CMU walls. In the back-of-house area, painted gypsum board and CMU walls are provided.

### Gymnasium (Bldg 4875)

Wall finishes are painted gypsum board and the unpainted interior side of the perimeter CMU walls.

### Storage and Secondary Areas

Wall finishes are painted or unpainted gypsum board and the unpainted interior side of the perimeter CMU walls.

### Restrooms

Ceramic tile, plastic wall sheeting, and painted gypsum board are provided.

## E.03 Ceiling Finishes

The physical condition of ceiling finishes appeared “Good” to “Fair,” with deficiencies noted.

In the occupied tenant suites, a small number of water stained acoustic ceiling tiles was observed; replacement is recommended. This is a tenant responsibility and a cost estimate is not included in the spreadsheet. More extensive water damage was observed in Bldg 4811 (Suite 4811). Roof repairs were reported to have been performed to address the leaks.

### Retail, Restaurant, and Office Areas

The predominant ceiling finish is suspended acoustical tiles. Some retail spaces have unpainted or painted roof structure, with batt insulation visible in the overwhelming majority of tenant spaces where the exposed roof structure is the celling finish.

### Natural Grocers (Space 4819)

The painted exposed roof structure is the celling finish; batt insulation is not provided on the underside of the roof deck.

### Gymnasium (Bldg 4875)

The painted exposed roof structure is the celling finish; batt insulation with a metallic reflective lower sheet is provided on the underside of the roof deck.

### Storage and Secondary Areas

The exposed structure above is the dominant ceiling finish, typically without insulation. Painted and unpainted gypsum board was also observed.

### Restrooms

Ceiling finishes are typically painted gypsum board. Suspended acoustical tile systems are also provided.

## E.04 Interior Stairs

The physical condition of the interior stairs appeared “Good.”

One set of painted steel-framed interior stairs were observed in Bldg 4871 at the mezzanine. These stairs have open metal grid treads and closed risers, and are fitted with square steel tube railings. Since these stairs are not generality accessible to the public, they do not need to meet Accessibility requirements.

One small set of interior stairs is provided in the Toys N More tenant space in Bldg 4809. These carpeted stairs are likely concrete framed and have closed risers and painted, round steel tube railings. These stairs communicate between the upper and lower levels of the retail sales area and have only three risers.

# F. Equipment and Systems

The core HVAC systems consist of roof-mounted, DX packaged cooling units with integral natural gas-fired furnaces. Rooftop exhaust fans serve conventional exhaust air requirements for restrooms and kitchen hoods.

Pad-mounted transformers provide 120/208Y-volt or 277/480-volt, three-phase, four-wire service to the main electrical rooms or to exterior electrical enclosures. Wire-in-conduit systems with copper conductors feed electrical distribution panels within each tenant space.

Natural gas is consumed by rooftop furnaces, water heaters, and kitchen equipment. The City of Reno

typically provides individual tenant domestic water services with backflow preventer and pit meter. Where observed, domestic water piping is copper; sanitary waste and vent piping is cast iron pipe. All buildings, except Bldg 4801, appear to be fully fire sprinklered.

## F.01 Meters/Vaults/Vent Pipes

The physical condition of the utility meters appeared "Good."

The electrical meters are typically located inside the main electrical rooms or enclosures. Separate electrical meters are provided for each tenant. Each tenant is provided with individual water service, with backflow preventer and pit meter. No significant issues with the water services were reported or observed. Each tenant is provided with an individual natural gas service with meter.

## F.02 Heating, Ventilation & Air Conditioning

The physical condition of the HVAC systems appeared "Good" to "Fair," with deficiencies noted.

Cooling equipment typically uses both R-22 and R-410A refrigerant. R-22, also known as chlorodifluoroethane, is a hydrochlorofluorocarbon (HCFC). HCFCs are less damaging to the ozone layer than chlorofluorocarbons (CFCs), but still contain ozone-depleting chlorine. A 1992 amendment to the Montreal Protocol established a schedule for the phase-out of HCFCs such as R-22. According to the Montreal Protocol, refrigerant R-22 should be readily available until approximately 2020. Current plans are to completely phase out the production of R-22 by 2030. Production of new R-22 refrigerant has stopped, as has production of new units using R-22. Replacement refrigerant will be available past the serviceable lives of the existing equipment. No refrigerant related issues are anticipated during the evaluation period. As R-22 is phased out of service, costs of remaining supplies are expected to rise.

R-410A is an environmentally friendly refrigerant that should be in abundant supply through the serviceable lives of the units that use it.

Other than rising costs of R-22, no refrigerant issues are anticipated during the evaluation period. All units that use R-22 are recommended for replacement during the reserve term.

### Space Cooling and Heating

The core HVAC systems typically consist of roof-mounted DX packaged cooling units with integral natural gas-fired furnaces. Some tenants have installed split system air conditioners for spot cooling, evaporative coolers for kitchen makeup air and natural gas-fired makeup air units for kitchen spaces. Some tenants use natural gas-fired, suspended unit heaters to heat back-of-house areas.

### Control System

Wall-mounted digital thermostats provide temperature control for rooftop air conditioners.

### Ventilation

Rooftop packaged air conditioners use outside air dampers to provide ventilation air. Numerous rooftop vertical exhaust fans serve conventional exhaust air requirements for restrooms, service rooms, and kitchens. Overall ventilation appears to be adequate for current tenant needs.

### Equipment

Packaged units are manufactured by *Trane, Carrier, York*, and *Lennox*. The attached mechanical equipment list provides a brief description of the primary HVAC equipment and indicates the age and the estimated remaining useful life expectancy. The list also indicates which units are recommended for replacement.

Roof-mounted equipment ranges in age from two to approximately 26 years. Some rooftop units do not have a legible ID plaque providing model and serial number information; heating and cooling capacities for those units have been presumed. Natural gas-fired furnaces are also installed in most packaged units.

The estimated total cooling capacity installed in each building follows:

| | |
|---|---|
| Bldg 4801: | 24 tons |
| Bldg 4805: | 40 tons |
| Bldg 4809: | 49 tons |
| Space 4811: | 118 tons |
| Space 4813: | 105 tons |
| Space 4819: | 46 tons |
| Space 4821: | 128 tons |
| Space 4823: | 79 tons |
| Space 4825: | 76 tons |
| Space 4827: | 48 tons |
| Bldg 4871: | 73 tons |
| Bldg 4875: | 77 tons |
| Bldg 4891: | 51 tons |

### Service

HVAC equipment maintenance is provided by the tenants using a number of service companies to maintain their individual rooftop units.

Packaged air conditioners have an EUL of 20 years. A total of 48 units (523 tons) and three makeup air units will reach—or have already exceeded—their nominal EUL's during the reserve term and replacement should be anticipated.

A total of 70 packaged units were observed with hard piped natural gas connections. It is recommended to install flexible connections, as a safety measure. 53 of the units are recommended for replacement and flexible connections should be installed as part of replacement.

Cost estimates for HVAC system component replacement and flexible gas line connections at furnaces are included in the Immediate Repairs and Replacement Reserves Analysis.

## F.03 Electrical

The physical condition of the electrical system appeared "Good," with deficiencies noted.

### Power Supply

Pad-mounted NV Energy transformers provide 277/480-volt, three-phase, four-wire service to main switchgear at each of the buildings, except Bldg 4801 where 120/208Y-volt three-phase, four-wire service is provided. Main circuit breakers are located within exterior cabinets and within tenant main electrical rooms. Main circuit breakers range in size between 400 and 1,600 amps, and serve between one and three tenants. Switchgear has individually metered services for each individual tenant.

Copper wire-in-conduit systems feed electrical distribution panels within each tenant space. Tenant space electrical distribution panels range in size between 125 amps and 400 amps. Panels serve tenant lighting and power loads, including the rooftop HVAC equipment. Ground Fault Circuit Interrupter (GFCI) receptacles were observed within six feet of water sources.

There is a tenant-owned *Generac* model QT022 natural gas-fired generator on the roof of Space 4819 (Natural Grocers). The generator has a 22 kW capacity.

In some tenant spaces, stored materials were found too close to electrical enclosures; clean-up is recommended to maintain minimum clear spaces at electrical equipment. This is a matter of routine maintenance and a cost estimate is not included in the spreadsheet.

It does not appear that recent ground fault interrupter testing has been performed on switchgear rated at 1,000 amps and above, as required by the electrical code. This includes four main circuit breakers at Bldgs/Spaces 4809, 4821, 4823, and 4875. AllWest recommends that ground fault testing be performed on a triennial schedule.

It did not appear that infrared scanning of electrical panels has been performed at any building. AllWest recommends that infrared scanning be conducted on a triennial basis as recommended by NFPA 70B (Recommended Practice for Electrical Equipment Maintenance).

### Lighting

Interior lighting is provided by a variety of fixtures including: recessed can downlights with compact fluorescent and LED lamps; suspended single-lamp industrial-style fixtures with white reflective shades; ceiling-mounted two-lamp fluorescent strip fixtures; suspended two-lamp fluorescent strip fixtures with reflectors; and acoustic ceiling grid-mounted fluorescent fixtures with acrylic diffusers. T-8 fluorescent tubes are typically installed in strip and lay-in fixtures.

Restroom lighting consists of recessed can fixtures with compact fluorescent lamps, ceiling-mounted fluorescent fixtures with acrylic diffusers, and wall-mounted fluorescent fixtures.

Exterior site lighting consists of soffit-mounted fluorescent fixtures with acrylic diffusers; exterior wall-mounted LED fixtures; wall-mounted downlights with compact fluorescent lamps; and single-, double-, and triple-head pole-mounted High-Intensity-Discharge (HID) fixtures for parking lot area lighting. Exterior lighting is controlled by time clocks or photoelectric sensors.

### Energy Management System

No central energy management system was observed. All control systems are tenant owned and operated.

Cost estimates for infrared scan services and ground fault testing and maintenance of high amperage main switchgear are included in the Immediate Repairs and Replacement Reserves Analysis.

## F.04 Gas

The physical condition of the gas equipment and distribution systems appeared "Good," with deficiencies noted.

NV Energy provides natural gas to the buildings through numerous metering stations with one at each building. Each tenant is provided with an individual utility meter. Services range from 3/4" to 4".

Automatic seismic safety shut-off valves were not observed on the natural gas service lines. It is

recommended to install valves on the 19 existing natural gas services, as a safety measure.

Natural gas is consumed by rooftop furnaces used for space heating. Natural gas is also used for domestic water heating and in the kitchen areas for cooking. All observed natural gas-fired water heaters had flexible gas line connections and seismic strapping.

A total of 70 existing rooftop packaged air conditioners were observed with hard piped natural gas connections. 53 of the units will have flexible connections installed as part of replacement. The remaining 17 units should have flexible connections installed, as a safety measure. The spreadsheet line item for this in covered under Section F.02.

An estimate for seismic safety shut-off valves is included in the Immediate Repairs and Replacement Reserves Analysis.

## F.05 Plumbing

The physical condition of the plumbing appeared "Good."

### Supply Piping

Domestic water to each tenant is provided by the City of Reno through both above-ground and below-ground services with backflow preventers and pit meters. Where observed, domestic water piping is copper. Municipal water pressure is adequate to serve the subject property.

### Waste Piping

Where observed, sanitary waste and vent piping is cast iron. Other vent piping materials were observed including galvanized steel pipe, copper tubing, and PVC. Adequate cleanouts were observed at both interior and exterior locations.

Underground grease interceptors protect sanitary drainage and were observed at restaurant tenant spaces.

### Fixtures

Plumbing fixtures within the tenant spaces are installed and maintained by the individual tenants.
Floor-mounted toilets with manual flush valves are typical for individual tenant restrooms. Larger buildings use wall-mounted toilets and urinals. Proximity sensor flush actuation is provided on some toilets and urinals. Fixtures observed were low-flush volume models.

Sinks are counter-mounted vitreous china units with single lever faucet controls; wall-mounted vitreous china sinks are typical in the smaller tenant spaces. Stainless steel sinks and counters are typically installed in restaurant kitchens.

### Domestic Hot Water

Water heaters were not observed in all tenant spaces that AllWest entered owing to a combination of factors, including: installation in inaccessible or unobservable locations (such as installation above a ceiling system); ongoing tenant operations; and customer service requirements. When observed, conventional tank type water heaters, both electric and natural gas-fired, were installed. All observed gas water heaters were provided with seismic strapping.

It was reported that water heaters are installed and maintained by the tenants. Some units can be expected to reach their 15-year EUL during the reserve term; replacement of these units is recommended. This is a tenant responsibility and cost estimates are not included in the spreadsheet.

## F.06 Fire Protection

The physical condition of the fire protection systems appeared "Good," with deficiencies noted.

### Firewater Distribution and Suppression Devices

All buildings, except Bldg 4801, are protected with wet-pipe sprinkler systems and are fully sprinklered. There is a site fire sprinkler loop with individual 4" and 6" fire sprinkler water services for each building. Services include a backflow preventer and supply one or two 4" or 6" risers. Municipal water pressure appears adequate for design requirements.

Fire suppression system inspections are conducted by tenant supplied fire sprinkler contractors. Valid stickers on fire sprinkler risers for annual and five-year inspections were observed.

ABC-type dry chemical fire extinguishers are typically installed in the tenant spaces we entered; they are typically wall-mounted and have 5 lb. capacities. Various dates were observed on inspection tags. The most recent observed inspection occurred in March 2022. Some tags had expired; inspections are recommended. It was reported that extinguisher maintenance is a tenant responsibility; as such, a cost estimate for extinguisher inspection is not included in the spreadsheet.

### Fire Alarm

The buildings—except for Bldg 4801—are protected by fire alarm systems that typically include smoke detectors

and riser tamper switches for initiation and horn/strobes and the building fire bell for notification. Fire alarm panels include; *Honeywell, Fire Lite, Edwards*, and *Bosch*. Fire alarm systems are a tenant responsibility and panels observed are still supported by the manufacturers.

## F.07 Other Systems

Kitchen hoods are protected with tenant-installed and maintained Ansul fire suppression systems. Inspection of Ansul systems is a tenant responsibility.

## F.08 Security System

Site security is provided and includes roving services. Some tenants have installed and maintain intrusion security systems at their own expense; some of these systems include interior area monitoring cameras.

## F.09 Vertical Transportation and Conveying Systems

Vertical conveyance systems are not installed.

# G. Accessibility Compliance

The Americans with Disabilities Act (ADA) is a civil rights law intended to provide persons with disabilities access to public accommodations in a manner similar to that available to the general public. The Act requires that places of public accommodation remove access barriers that are considered readily achievable. Public facilities are defined as a privately owned facility that serves the public, including office spaces, service establishments of any type, theaters, stores, schools, and recreational facilities. The design guidelines outlined in the ADA are codified as legal requirements in the NBC, which is based on the International Building Code, as adopted by the Reno Building Department.

The determination as to whether removal of a barrier is readily achievable is based on a project's valuation and financial and structural impediments to achieving full Accessibility compliance. These impediments and their financial burdens are open to interpretation by jurisdictional authorities.

Public-accessible facilities completed and occupied after January 26, 1992 are required to comply fully with the Americans with Disabilities Act Guidelines (ADAAG). In Nevada, all new construction, as well as substantial renovations and upgrades to existing facilities, are required to meet the current Accessibility requirements of the NBC for public, quasi-public, and multi-residential environments.

Where NBC or local Accessibility requirements differ from those found in the ADA and are equal to or more stringent than those found in the ADA, the NBC or local requirements shall govern.

Older facilities are often held to a lesser standard of compliance to the extent allowed by structural feasibility, design logistics, historical status, or economics. Yet, regardless of age, areas accessible by the public must be maintained and operated to comply with the federal mandates of the ADA.

During the Property Condition Survey, a limited visual observation for Accessibility compliance was conducted. The visual observation scope was limited to areas of common use, such as the exterior site, entry areas, restrooms, doors, and hardware directly related to common areas. Off-site areas are typically not evaluated. The limited observation described herein is not a full Accessibility Compliance Survey.

When Accessibility deficiencies were observed within the tenant spaces, the tenants are primarily responsible for compliance within these spaces; cost estimates for correcting these deficiencies are not normally included in this report.
A supplemental assessment may be required to satisfy the risk tolerance and the level of due diligence of some users.

Though local jurisdictions do not typically require barrier removal in the absence of any permitted work, property owners are still responsible to comply with the law. Failure to comply with barrier removal is considered discrimination and can result in the filing of discrimination complaints and/or lawsuits.

Due to the variable nature of Accessibility compliance required of existing buildings and the variable nature of enforcement and interpretation of Accessibility requirements from community to community, analysis of what may be required in any future building permit application is outside the scope of this report, as is an analysis of the possible ramifications of legal and financial liability for any deficiencies in site and building Accessibility which are not remedied. It also bears mentioning that a set of plans that have been approved for a building permit by the Reno Building Department will not necessarily meet the requirements of the ADA.

## G.01 Parking

The physical condition of parking Accessibility appeared "Good," with deficiencies noted.

The ALTA survey indicates that 49 Accessible parking stalls are provided, seven of which appear to be Van Accessible. AllWest observed that several Accessible stalls are marked as Van Accessible, but they are not dimensionally compliant as Van Accessible stalls.

Thirty Accessible stalls are required, five of which shall be Van Accessible. AllWest recommends that when the parking lots are resealed and restriped, Accessible stall striping and signage should be corrected, so that only actual, compliant Van Accessible stalls are marked as such.

Required signage is installed at all Accessible parking stalls, though as noted above, some stalls are incorrectly designated as being Van Accessible. The signage required at parking lot entrances is not installed at any vehicular entrance to the shopping center; installation of required signage is recommended.

All Accessible parking stalls are located in close proximity to the primary tenant space entrances in numerous locations around the site. All Accessible parking stalls appeared generally compliant for location, pavement markings, and signage, though some pavement markings are badly degraded—some to the point of almost being absent altogether—and two at Bldg 4875 lack fully compliant pavement markings.

The Accessible stalls that serve the five tenants of Bldg 4819 are provided with delineated Accessible paths of travel leading to building entrances, though the pavement marking are in a degraded condition.

Truncated domes are not installed in all required locations near Accessible stalls. Our recommendation and cost estimate for installation of truncated domes are made in Section G.02.

Restriping of the Accessible parking stalls, access aisles, and paths of travel will be required during the reserve term. Restriping should be performed at the same time that overall parking lot restriping discussed in Section B.02 is performed.

Cost estimates for parking related Accessibility restriping are included in the Immediate Repairs and Replacement Reserves Analysis.

## G.02 Path of Travel

The physical condition of the Path of Travel appeared “Good,” with deficiencies noted.

Truncated domes are installed in only a few required locations at the shopping center. They are typically not installed where a pedestrian path crosses a vehicular way and in locations adjacent to Accessible parking stalls. Installation of truncated domes in all required locations is recommended; this would be best accomplished after the asphalt repairs and resealing.

Delineated Accessible paths of travel from the public sidewalk are not provided to all buildings, and, indeed, provision of such is somewhat problematical because of the slopes at the site. AllWest is including as an optional Modernization expense an allowance for general upgrades to improve site Accessibility at the property.

Though not measured, door widths and hardware, as well as interior floor clearances and corridor widths in customer areas, appear generally compliant with current Accessibility requirements.

International Symbol of Accessibility (ISA) signage is not installed at a majority of tenant entrances. Installation of compliant ISA signage is recommended, where absent. This is a minor repair and a cost estimate is not included in the spreadsheet.

At all exterior stairs, visually contrasting stripes on each tread are not provided as required; installation is recommended.

At the interior stairs in Bldg 4809 (Toys N More), the top and bottom treads lack visually contrasting stripes. Installation is recommended. This is a tenant responsibility and a cost estimate is not included in the spreadsheet.

Though not measured, door threshold plates at some tenant spaces appear to be too tall and therefore non-compliant with Accessibility codes; replacement is recommended.

Cost estimates for remedial measures for path of travel deficiencies are included in the Immediate Repairs and Replacement Reserves Analysis. The allowance for general site upgrades to improve exterior path of travel for Accessibility is included in the separate Modernization category of the spreadsheet.

## G.03 Toilets/Plumbing Fixtures

The physical condition of the toilet rooms and plumbing fixtures for Accessibility appeared “Good,” with deficiencies noted.

Some of the tenant spaces that AllWest entered do not provide a restroom which is normally accessible to the general public. However, Accessible public restrooms are provided in a number of larger tenant spaces, such as Ross and TJ Maxx, as well as in the two restaurant spaces. These restrooms appeared generally compliant with current Accessibility requirements for dimensions, hardware, and mounting heights.

We observed minor deficiencies such as: flush handle on the wrong side of the toilet; sink drain pipe insulation absent or degraded; coat hooks mounted too high; and sink faucets requiring twisting or turning of the wrist to actuate. A non-compliant single-height water fountain is installed in Bldg 4809 (Toys N More). All other observed water fountains were high-low combinations. Water fountains are not installed in all observed tenant spaces.

Since these restrooms and the single-height water fountain are part of the tenant installed and maintained interior finishes and fixtures, no cost estimates for remedial measures to address restroom and plumbing Accessibility issues are included in the spreadsheet.

Nonetheless, it bears mentioning that both the tenant and the building owner may be held responsible and financially liable for penalties and for correcting any deficiencies with interior and toilet room Accessibility in the event that a complaint or lawsuit is filed.

Horns and strobes are not installed in a majority of the restrooms and in other portions of the tenant spaces that AllWest entered, though we did not enter every restroom and every tenant space in each building. The provision of horns and strobes are considered a tenant expense and are not included in the spreadsheet.

### G.04 Elevators

Vertical conveyance systems are not installed.

# IV. CONSULTANT'S QUALIFIERS

## A. Scope of Work

AllWest was retained to assess the existing site physical condition, improvements, and buildings at the subject property; research available records; and interview individuals familiar with facility operations. AllWest was tasked to identify construction and/or code deficiencies and to prepare a five-year spreadsheet for immediate and Replacement Reserves expenditures.

## B. Methodology

AllWest used industry standard cost estimating guides such as R. S. Means and Current Costs by Saylor Publications as well as our experience and judgment. AllWest conducts spot-check pricing and uses prices provided by local general contractors.

In preparing the report, AllWest utilized industry standard guidelines as a basis for our inquiry including the “Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process,” outlined in ASTM E2018-15.

## C. Assessment Criteria

In evaluating the property, “Excellent” is the best maintained property condition or new construction, with all the building equipment operational and no repairs necessary. A “Good” rating is for a condition that demonstrates consistent building and grounds maintenance, and all building equipment in sound operating condition, with only a few minor repairs needed. A “Fair” rating is for a condition that demonstrates some wear or damage present in the building and/or grounds elements, requiring repair or replacement work. A “Poor” rating is for a condition that is clearly the worst, with a uniform run-down appearance, damaged building elements or inoperable building systems present.

## D. Limiting Conditions

AllWest accessed the interiors and flat roof portions of all buildings. We did not directly access pitched roof areas, though we were able to observe them from adjacent flat roof areas and from grade.

We entered tenant spaces in all buildings, though—owing to time limitations—we did not enter every tenant space. We did not enter the Great Clips space in Bldg 4808, the Sola Salon space in Bldg 4875, and the Mattress Land space in Bldg 4891, though we did observe their interiors though windows.

Direct observation and photography were limited in Bldg 4811 (both vacant spaces) owing to the fact that only emergency lighting was available in Space 4811 and circuit breakers for several lights were turned off in Space 4813. We were unable to observe the restrooms in Space 4811 because there was no light.

We accessed back-of-house areas in all spaces entered. Ongoing tenant operations and customer privacy requirements limited our access and photography within most tenant spaces. Women’s restrooms were typically not entered because of ongoing customer operations and occupancy at the time of our site visit.

During the preparation of this report:

- An ALTA survey was provided;
- ADA surveys were not provided;
- A rent roll, dated December, 2021, was provided;
- Certificates of occupancy for original shell construction if issued, were not provided, nor

were they available in the Reno Building Department online archive;

- MEP and FLS construction documents were not provided;
- Equipment lists and maintenance documents for the HVAC equipment and roof were not provided;
- Some FLS inspection information was observed on site;
- Vendor documents for asphalt maintenance and exterior painting were requested but not provided;
- Current service contract documents were not provided;
- Some historical repair or improvement information was provided;
- Vendor invoices were not provided;
- Documents for proposed repairs were not provided;
- The AllWest PCA client questionnaire was returned, and a list of project-specific questions submitted to the property manager was also returned;
- The MEP questionnaire was not returned.

An appraisal was not provided. Quantities were arrived at with input from the property management company, construction documents, and by our own count. AllWest relied upon field observations and measurements. AllWest recommends that, if feasible and permissible, all building materials or finishes be replaced in kind. AllWest did not operate any building systems or equipment and did not perform any tests. This report does not confirm the presence or absence of hazardous materials.

This evaluation represents AllWest's opinion based on our site observations. It should be recognized that items, other than those specifically identified in this report, might require repair or replacement. Furthermore, this review is not intended to preempt in any way the technical or professional responsibility of the original design consultants.

The inspection procedures do not address termite or environmental inspection. The investigation scope was limited to accessible building areas, structure, and its components. Physical removal of wall panels or similar items was not performed to determine structural soundness or equipment reliability.

AllWest has visually assessed the subject property, both the land and the improvements thereon, where applicable. It is impossible to personally observe conditions that may exist below the surface of that may be hidden within the structure of the improvements. Therefore, it cannot be guaranteed that hidden or unexpected problems with the facility's structural integrity or soil conditions do not exist.

The inspection findings contained in this report are based upon quantitative and qualitative factors that existed on the inspection date. There can be no assurance that intervening factors will not affect the report's conclusions.

Sketches, floor plans, and maps used in this report are included to aid the reader's visual understanding and should not be considered surveys or engineering studies. All dimensions and estimates of building size, net or gross, are approximations.

The report is intended only for the internal use of the addressee or their authorized representative and possession does not imply the right of publication or the use for any other purpose without the written consent of AllWest Environmental, Incorporated.

Neither all nor part of this report shall be conveyed to the public through advertising, public relations, news, sales, or other media without the prior written consent of AllWest Environmental, Incorporated.

This report is not intended, in any manner, to include any critique or evaluation of the design concept, or the structural, mechanical, or electrical systems, which may be incorporated into the subject property. It is not intended as an opinion with respect to any legal relationship or responsibilities between the architect, the engineers, the contractor, or the subject property owner. While AllWest Environmental, Inc. has reviewed some documents, our statements are not intentional legal opinions. In making this review and preceding on-site inspection, AllWest Environmental, Inc. does not assume any legal responsibilities for the design architects or engineers, or contractors for the subject property, nor is any other warranty or representation expressed or implied, included or intended.

## E. Previous Reports

A previous Property Condition Assessment prepared by AEI Consultants, dated March 24, 2016, was provided to AllWest and reviewed during the preparation of this report.

## F. Consultant Qualification

Ryan Miller is a California Licensed Architect with more than 35 years of related experience.

Ronald Brown is a licensed Mechanical Engineer with more than 8 years of related experience.

Charles Bucher is a California Licensed Architect with more than 23 years of related experience.

## G. Reliance Language

This report was prepared for the sole and exclusive use of Elevation Acquisition Corp., the only intended beneficiary of this work. No excerpts may be taken as representative of the findings of this assessment. The scope of services performed in the execution of this investigation may not be appropriate to satisfy other users, and any use or reuse of this document or its findings, conclusions, and recommendations is at the user's sole risk.

The information contained in this report has received appropriate technical review and approval. The conclusions represent professional judgments and are founded upon the investigation findings identified in the report and the interpretation of such data based on our experience and expertise according to the existing standard of care. No other warranty or limitation exists, either expressed or implied.

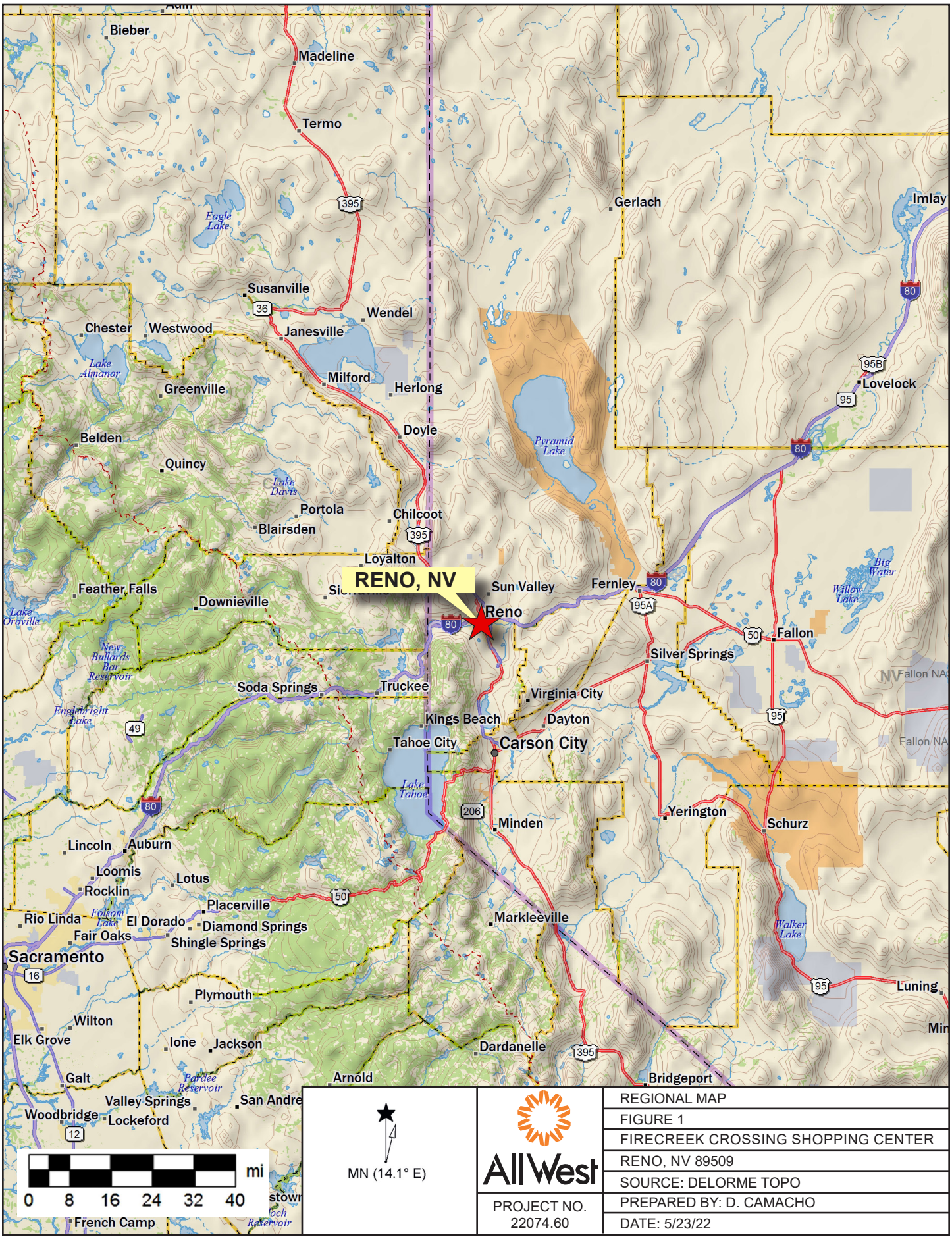
AllWest's opinion of probable costs has been prepared solely as a general reference document for the use of client Elevation Acquisition Corp. Our estimates have not been prepared by a cost estimator or contractor and as such should not be considered a guaranteed maximum of costs. AllWest estimates are based on presumed or calculated quantities and unit costs based on AllWest's research or previously documented amounts. AllWest's allowances are an amount established to cover the cost of a recommended remedial measure, the parameters of which are not specified in detail. Our estimate has been prepared to meet the unique needs of client Elevation Acquisition Corp. No other parties may rely on the estimate without AllWest's consent. This report is not a specification for further work, and is not intended as a construction budget nor should be used to gain construction financing. All area, unit costs, and line-item estimates are order-of-magnitude only.

Neither AllWest nor any staff member assigned to this investigation has any interest or contemplated interest, financial or otherwise, in the subject or surrounding properties, or in any entity which owns, leases, or occupies the subject or surrounding properties, or which may be responsible for issues identified during the course of this investigation, and has no personal bias with respect to the parties involved.

# FIGURES

DELORME

Topo USA® 8




MN (14.1° E)

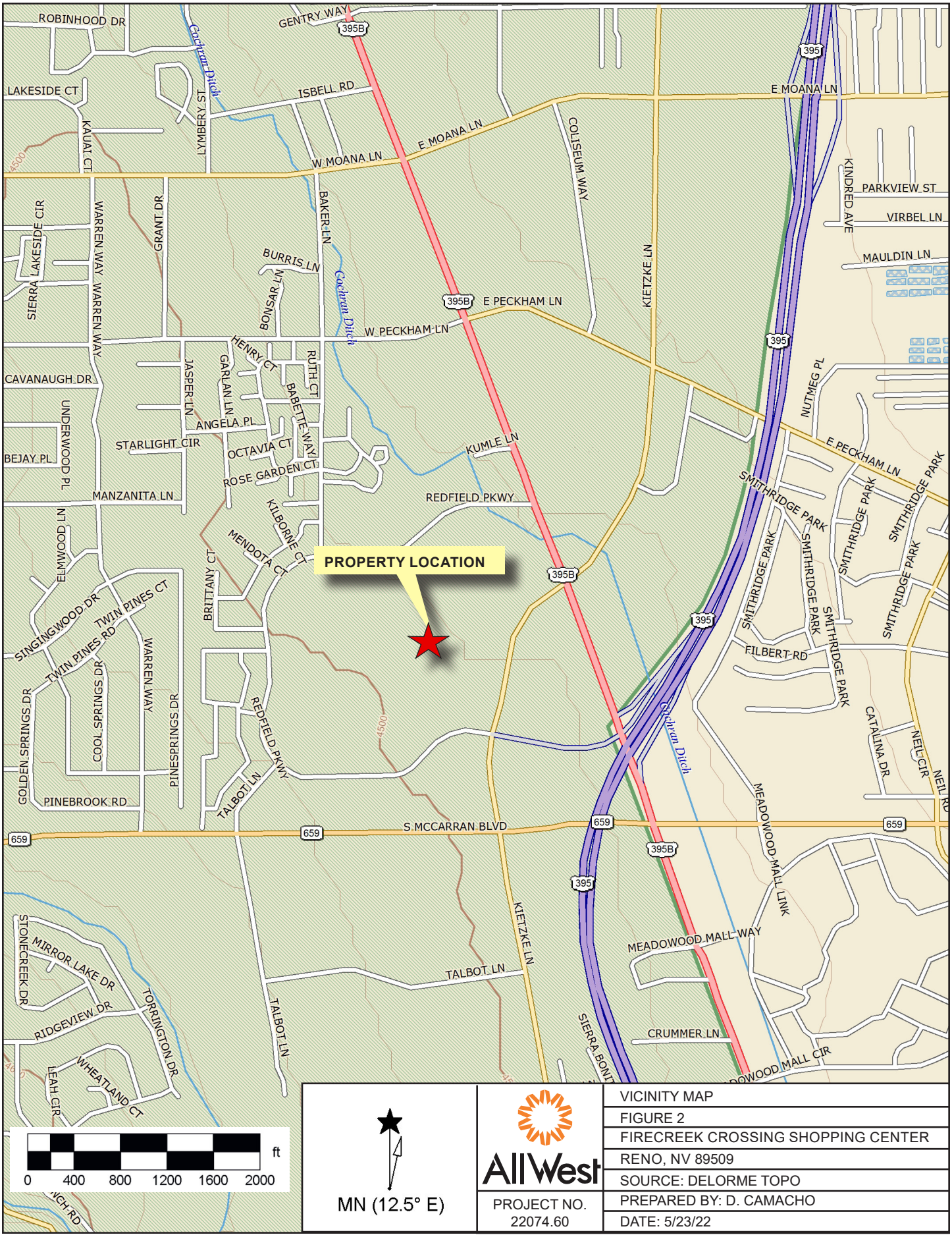
AllWest

PROJECT NO. 22074.60

| |
|---|
| REGIONAL MAP |
| FIGURE 1 |
| FIRECREEK CROSSING SHOPPING CENTER |
| RENO, NV 89509 |
| SOURCE: DELORME TOPO |
| PREPARED BY: D. CAMACHO |
| DATE: 5/23/22 |

DELORME

Topo USA® 8




AllWest

| | |
|---|---|
| PROJECT NO. 22074.60 | VICINITY MAP |
| | FIGURE 2 |
| | FIRECREEK CROSSING SHOPPING CENTER |
| | RENO, NV 89509 |
| | SOURCE: DELORME TOPO |
| | PREPARED BY: D. CAMACHO |
| | DATE: 5/23/22 |




NIC: Not in contract. These buildings and their parking lots are not evaluated in this report.

N

NOT TO SCALE

| | |
|---|---|
| AllWest | AERIAL PHOTO 1 |
| | FIGURE 3 |
| | FIRECREEK CROSSING SHOPPING CENTER |
| | RENO, NV 89509 |
| | SOURCE: GOOGLE |
| PROJECT NO. 22074.60 | PREPARED BY: D. CAMACHO |
| | DATE: 5/23/22 |




NIC: Not in contract. These buildings and their parking lots are not evaluated in this report.

N

NOT TO SCALE

AllWest

PROJECT NO. 22074.60

| |
|---|
| AERIAL PHOTO 2 |
| FIGURE 4 |
| FIRECREEK CROSSING SHOPPING CENTER |
| RENO, NV 89509 |
| SOURCE: GOOGLE |
| PREPARED BY: D. CAMACHO |
| DATE: 5/23/22 |

# PHOTOGRAPHS




1. Two monument signs are installed. Sign along Redfield Parkway shown.




2. Bldg 4801: Primary (south) elevation.




3. Bldg 4801: North elevation. Portion of west elevation at right. An Accessible path of travel from the public sidewalk is not provided to this—and other—buildings.




4. Bldg 4805: Primary (north) elevation. Degraded condition of parking lot also shown.




5. Bldg 4805: South elevation. Portion of east elevation at right.




6. Bldg 4805: Parking stall is incorrectly marked as Van Accessible; it lacks dimensionality to be Van Accessible compliant. This mislabeling occurs at several Accessible parking stalls at the shopping center.




7. Bldg 4809: Primary (north) elevation.




8. Bldg 4809: East elevation.



9. Bldg 4811 (Space 4811): Primary (south) elevation.



10. Space 4811: East elevation.



11. Space 4811: Depressed loading area along east elevation.



12. Space 4811: At-grade loading area along north elevation. Efflorescence on CMU wall also shown.



13. Bldg 4811 (Space 4813): Primary (west) elevation.



14. Space 4813: West elevation.



15. Space 4813: Depressed loading area along north side of building.



16. Space 4813: Cast-in-place concrete ramp and stairs (at right, out of shot) are provided along the north elevation.



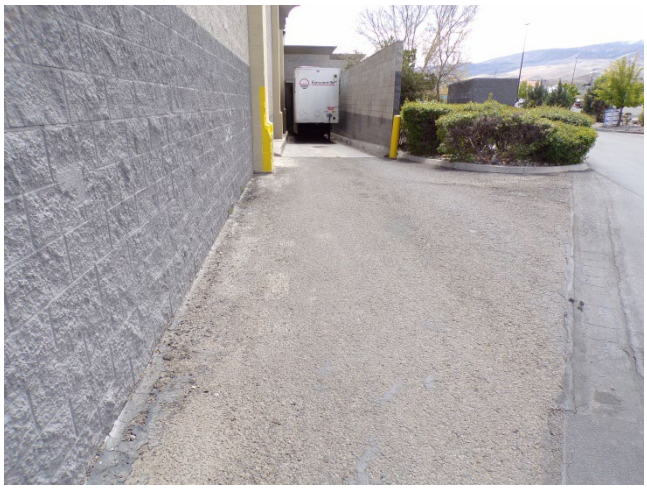

17. Bldg 4819 (Space 4819): Primary (east) elevation.



18. Space 4819: Depressed loading area along west side of building.



19. Bldg 4819 (Space 4821): Primary (east) elevation.



20. Space 4821: Depressed loading area along the west side of the building.




21. Bldg 4819 (Space 4823): Primary (east) elevation.




22. Space 4823: Depressed loading area along the west side of the building.




23. Bldg 4819 (Space 4825): Primary (east) elevation.




24. Space 4825: Depressed loading area along the west side of the building.




25. Bldg 4819 (Space 4827): Primary (east) elevation.




26. Space 4827: Depressed loading area along the west side of the building.




27. Bldg 4871: East elevation.



28. Bldg 4871: Depressed loading area along the west side of the building.




29. Bldg 4875: Primary (north) elevation.



30. Bldg 4875: A concrete walkway is located along the rear (south) elevation and provides access to service rooms.




31. Bldg 4875: East elevation.




32. Bldg 4875: Accessible stall pavement markings lack the ISA wheelchair symbol.




33. Bldg 4891: Primary (west) elevation.




34. Bldg 4891: North elevation.

4891




35. Bldg 4891: Two sets of cast-in-place concrete stairs are provided at this building.



36. Bldg 4891: Two sets of cast-in-place concrete stairs are provided at this building.



37. The asphalt-paved parking lot and drive aisles near Bldgs 4805, 4809, and 4811 were not repaired and resealed in 2019, as were the other parking areas at the property.



38. Degraded condition of the parking area near Bldgs 4805, 4809, and 4811.



39. Degraded condition of the parking area near Bldgs 4805, 4809, and 4811.



40. Degraded condition of the parking area near Bldgs 4805, 4809, and 4811.



41. The parkings areas repaired and resealed in 2019 will also require resealing and repairs during the reserve term.



42. Meandering cracks in asphalt paving were observed in numerous locations throughout the site.



43. Alligator cracking was observed in numerous locations.



44. Minor and full-depth asphalt repairs are recommneded.



45. Repair and resealing of asphalt paving in back-of-house service areas are also recommneded.



46. The parking areas of the subject property border adjacent properties. Newer reseal on subject property can be seen at right. This parking area is near Bldgs 4871 and 4875.



47. Landscaping is attractive and generally well maintained.



48. Landscaping is also installed adjacent to buildings. Bldg 4875 shown.



49. Landscaping is installed adjacent to buildings. Space 4813 shown.



50. Some trees appeared to be dead. Space 4813 at right.



51. Landscaping is installed in islands thoughout the parking areas.




52. Some shrubs appeared to be dead.



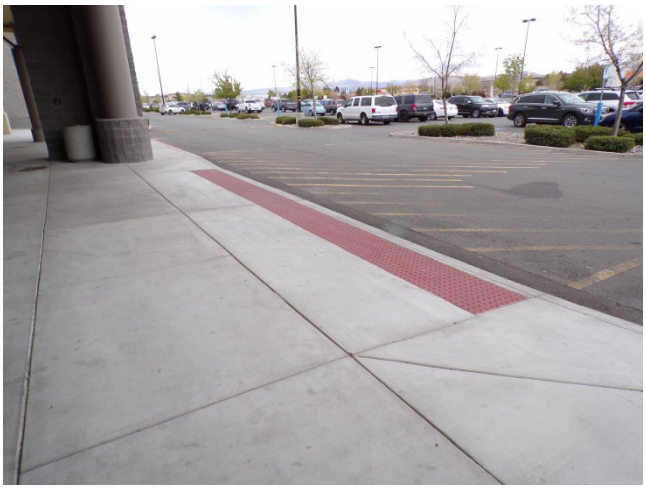
53. Landscaping along Kietzke Lane, looking north.



54. Degraded and presumed dead plants were observed in several locations.



55. Truncated domes are not installed in the overwhelming majority of required locations.



56. Truncated domes are installed in only a small number of required locations.



57. Changes in elevation in excess of ¼" in concrete site work were observed in numerous locations.



58. Degraded concrete site work unrelated to tripping hazards was also observed.



59. AllWest recommends replacement of degraded sealant in concrete control joints.



60. We also recommend replacement of degraded sealant in CMU perimeter wall control joints.



61. Bldg 4801: A multi-ply BUR roofing system was installed in 1997.



62. Bldg 4801: The roof is in generally “Fair” condition, and we recommned that a TPO ovelay system be installed during the reserve term.



63. Bldg 4801: Mineral granule separation of the top sheet has occurred.



64. Bldg 4801: Roof and overflow drain combinations are provided. Accumulations of debris near drains is common.



65. Bldg 4805: A single-ply TPO roofing system was installed in 1997.



66. Bldg 4805: The roof is in generally “Fair” condition, and we recommned that a TPO ovelray system be installed during the reserve term.



67. Bldg 4805: Grease contamination was observed near the exhaust fans.



68. Bldg 4805: Roof and overflow drain combinations are provided. Accumulations of dead vegetation and other debris shown.



69. Bldg 4809: A multi-ply BUR roofing system was installed in 1997.



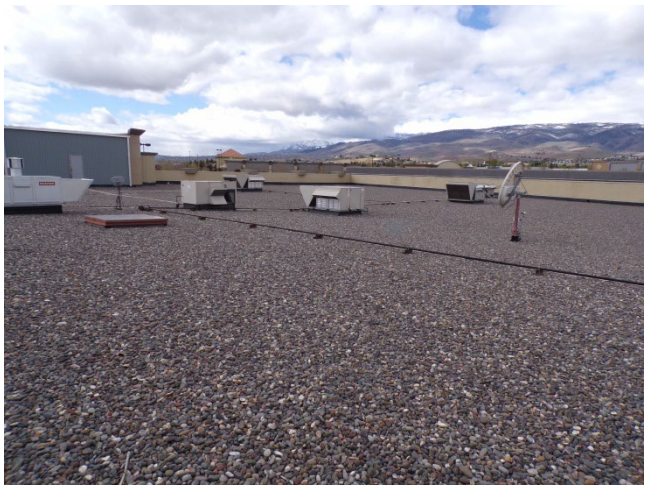
70. Bldg 4809: The roof is in generally “Fair” condition, and we recommned that a TPO ovelay system be installed during the reserve term.



71. Bldg 4809: Evidence of numerous repairs was observed.



72. Bldg 4809: Roof and overflow drain combinations are provided in shallow sumps. A small amount of water is in the sump.



73. Bldg 4811 (Space 4811): A modified bitumen roofing system with small river stone ballast was installed in 1997.



74. Space 4811: The roof is in generally “Fair” condition, and we recommned that a modified bitumen ovelay system be installed during the reserve term.



75. Space 4811: Damaged roof path pavers should be replaced when the new overlay system is installed.



76. Space 4811: Roof and overflow drain combinations are provided.



77. Bldg 4811 (Space 4813): A multi-ply BUR roofing system was installed in 1997.



78. Space 4813: The roof is in generally “Fair” condition, and we recommned that a TPO ovelay system be installed during the reserve term.



79. Space 4813: Mineral granule separation of the top sheet has occurred.



80. Space 4813: Ponded water adjacent to roof and overflow drain combination. Egregious depressions in roofing systems should be re-contoured during re-roofing work.



81. Bldg 4819 (Space 4819): A single-ply TPO roofing overlay system was installed in 2017.



82. Space 4819: The TPO overlay was installed over the original BUR system. All TPO overlays installed in 2017 appeared in generallly “Good” condition.



83. Space 4819: Roof and overflow drain combinations are provided in shallow sumps. A very small amount of water and debris is in the sump.



84. Space 4819: Concrete barrel tiles are provided on the pitched roof elements.



85. Bldg 4819 (Space 4821): A single-ply TPO roofing overlay system was installed in 2017.



86. Space 4821: The TPO overlay was installed over the original BUR system. Displaced galvanized sheet metal parapet molding cap shown on roof surface (lower left).



87. Space 4821: Roof and overflow drain combinations are provided in shallow sumps. Some atrium grates were observed to be displaced or missing.



88. Space 4821: Concrete barrel tiles are provided on the pitched roof elements.



89. Bldg 4819 (Space 4823): A single-ply TPO roofing overlay system was installed in 2017.



90. Space 4823: The TPO overlay was installed over the original BUR system.



91. Space 4823: Typically, overflow drains are provided adjacent to roof drains. However, there are exceptions where an overflow drain is not provided.



92. Space 4823: The TPO overlay was installed over the original BUR system. Parapet molding cap is missing on leftmost molding in photo.



93. Bldg 4819 (Space 4825): A single-ply TPO roofing overlay system was installed in 2017.



94. Space 4825: The TPO overlay was installed over the original BUR system.



95. Space 4825: Roof and overflow drain combinations are provided in shallow sumps. A small amount of water and debris is in the sump.



96. Space 4825: A small number of damaged barrel tiles was observed.



97. Bldg 4819 (Space 4827): A single-ply TPO roofing overlay system was installed in 2017.



98. Space 4827: The TPO overlay was installed over the original BUR system.



99. Space 4827: Roof and overflow drain combinations are provided in shallow sumps.



100. Space 4827: Displaced sheet metal parapet cap shown on roof surface.



101. Bldg 4871: A single-ply TPO roofing overlay system was installed in 2018.



102. Bldg 4871: The TPO overlay was installed over the original BUR system.



103. Bldg 4871: Roof and overflow drain combinations are provided in shallow sumps.



104. Bldg 4871: Roof scuttles served by interior wall-mounted ladders provide roof access at all tenant spaces in all buildings.



105. Bldg 4875: A single-ply TPO roofing overlay system was installed in 2017.



106. Bldg 4875: The TPO overlay was installed over the original BUR system.



107. Bldg 4875: Accumulated dead vegetation and debris in roof drain sump.



108. Bldg 4875: Adhesive failure (pucker) at TPO roofing repair.



109. Bldg 4891: A single-ply TPO roofing overlay system was installed in 2017.



110. Bldg 4891: The TPO overlay was installed over the original BUR system.



111. Bldg 4891: Evidence of minor repairs was observed.



112. Bldg 4891: Roof and overflow drain combinations are provided in shallow sumps. A small amount of water and debris is in the sump.



113. Bldg 4801: Interior finishes and fixtures in dining area.



114. Bldg 4801: Interior finishes and fixtures in kitchen.



115. Bldg 4801: Interior finishes and fixtures in restrooms.



116. Bldg 4801: Interior finishes and fixtures in restrooms. Flush handle is on the wrong side of the toilet.



117. Bldg 4805: Interior finishes and fixtures in dining area.



118. Bldg 4805: Interior finishes and fixtures in kitchen.



119. Bldg 4805: Interior finishes and fixtures in restrooms.



120. Bldg 4805: Interior finishes and fixtures in restrooms.



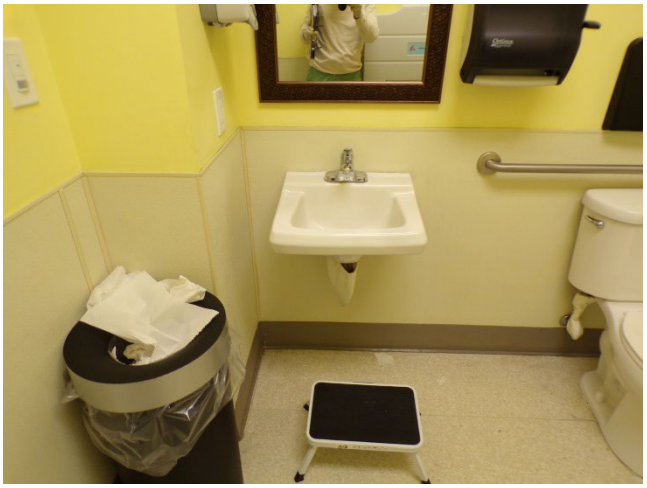

121. Bldg 4809 (Toys N More): Interior finishes and fixtures in sales area.



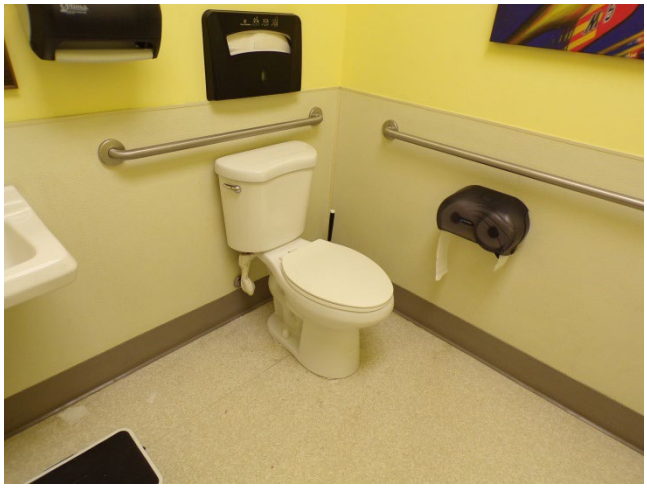
122. Bldg 4809 (Toys N More): Interior finishes and fixtures in sales area.



123. Bldg 4809 (Toys N More): Interior finishes and fixtures in sales area. A single height water fountain is installed in this tenant space.



124. Bldg 4809 (Toys N More): Interior finishes and fixtures in restrooms.



125. Bldg 4809 (Toys N More): Interior finishes and fixtures in restrooms.



126. Bldg 4809 (Toys N More): Interior finishes and fixtures in restrooms. Water stained ceiling tiles shown.



127. Bldg 4809 (Starbucks): Interior finishes and fixtures.



128. Bldg 4809 (Starbucks): Interior finishes and fixtures in kitchen.



129. Bldg 4809 (Starbucks): Interior finishes and fixtures in restrooms. Flush handle is on the wrong side of the toilet.



130. Bldg 4809 (Starbucks): Interior finishes and fixtures in restrooms.



131. Bldg 4811 (Space 4811): Interior finishes and fixtures.



132. Space 4811: Interior finishes and fixtures.



133. Space 4811: Interior finishes and fixtures.



134. Space 4811: Interior finishes and fixtures.



135. Bldg 4811 (Space 4813): Interior finishes and fixtures.



136. Space 4813: Interior finishes and fixtures.



137. Space 4813: Interior finishes and fixtures in restrooms.



138. Space 4813: Interior finishes and fixtures in restrooms.



139. Bldg 4819 (Space 4819): Interior finishes and fixtures in customer area.



140. Space 4819: Interior finishes and fixtures in demonstration kitchen area.



141. Space 4819: Interior finishes and fixtures in back-of-house area.



142. Space 4819: Interior finishes and fixtures in restrooms.



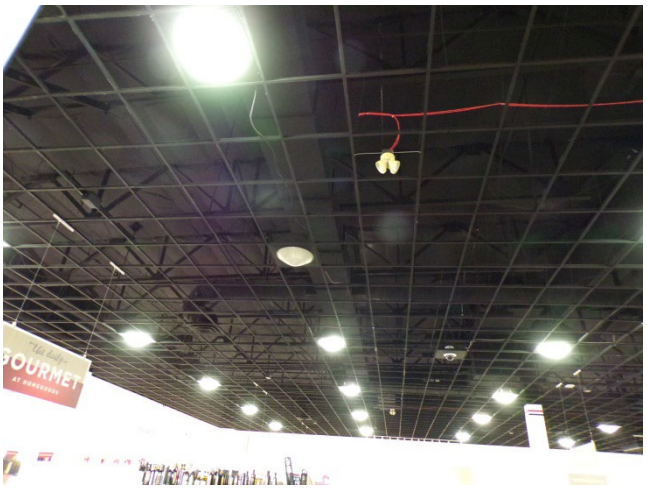
143. Space 4819: Interior finishes and fixtures in restrooms.



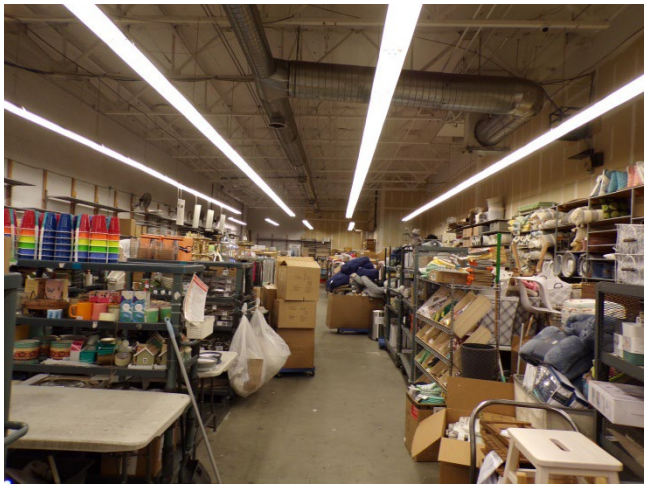
144. Space 4819: Interior finishes and fixtures in restrooms.



145. Bldg 4819 (Space 4821): Interior finishes and fixtures in customer area.



146. Space 4821: Interior finishes and fixtures in customer area.



147. Space 4821: Interior finishes and fixtures in back-of-house area.



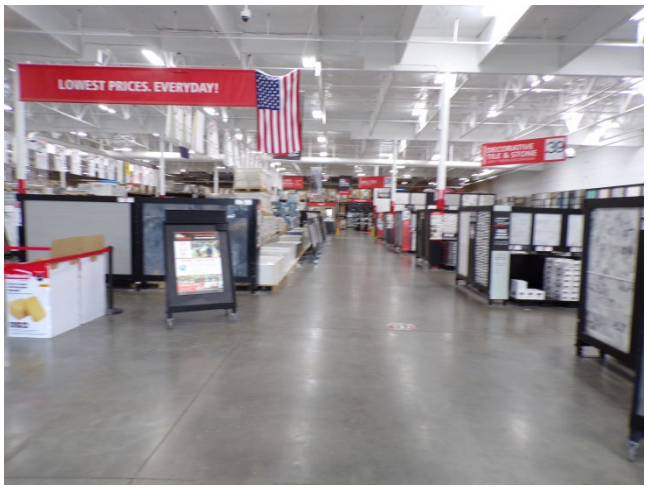
148. Space 4821: Interior finishes and fixtures in restrooms.



149. Space 4821: Interior finishes and fixtures in restrooms.



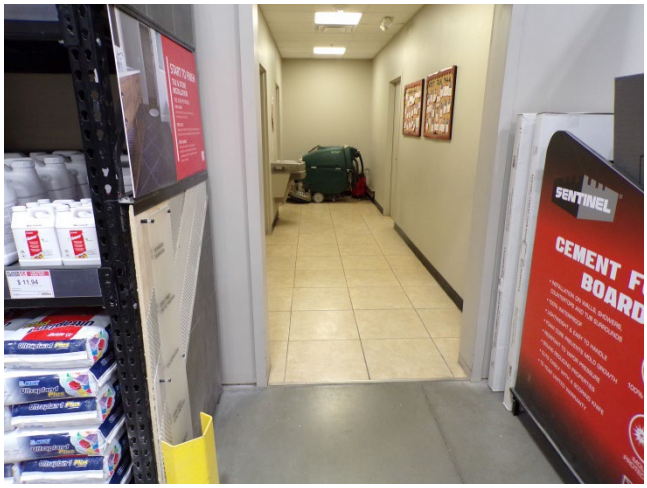
150. Space 4821: Interior finishes and fixtures in restrooms.




151. Bldg 4819 (Space 4823): Interior finishes and fixtures in customer area.




152. Space 4823: Interior finishes and fixtures in customer area.




153. Space 4823: Interior finishes and fixtures in back-of-house area.



154. Space 4823: Interior finishes and fixtures in restrooms.



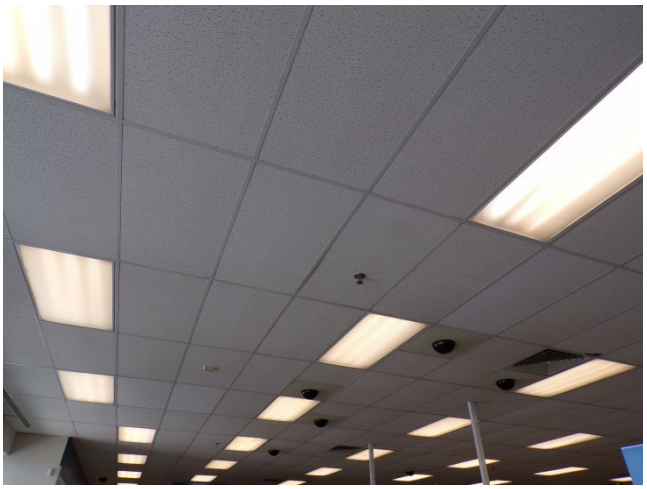
155. Space 4823: Interior finishes and fixtures in restrooms.



156. Space 4823: Interior finishes and fixtures in restrooms.




157. Bldg 4819 (Space 4825): Interior finishes and fixtures in customer area.



158. Space 4825: Interior finishes and fixtures in customer area.



159. Space 4825: Interior finishes and fixtures in break room.



160. Space 4825: Interior finishes and fixtures in restrooms.



161. Space 4825: Interior finishes and fixtures in restrooms.



162. Space 4825: Interior finishes and fixtures in restrooms.



163. Bldg 4819 (Space 4827): Interior finishes and fixtures in customer area.




164. Space 4827: Interior finishes and fixtures in customer area.



165. Space 4827: Interior finishes and fixtures in back-of-house area.



166. Space 4827: Interior finishes and fixtures in restrooms.



167. Space 4827: Interior finishes and fixtures in restrooms.




168. Space 4827: Interior finishes and fixtures in restrooms.



169. Bldg 4871: Interior finishes and fixtures in customer area.



170. Bldg 4871: Interior finishes and fixtures in customer area.



171. Bldg 4871: Interior finishes and fixtures in back-of-house area. A mezzanine is provided in this building.



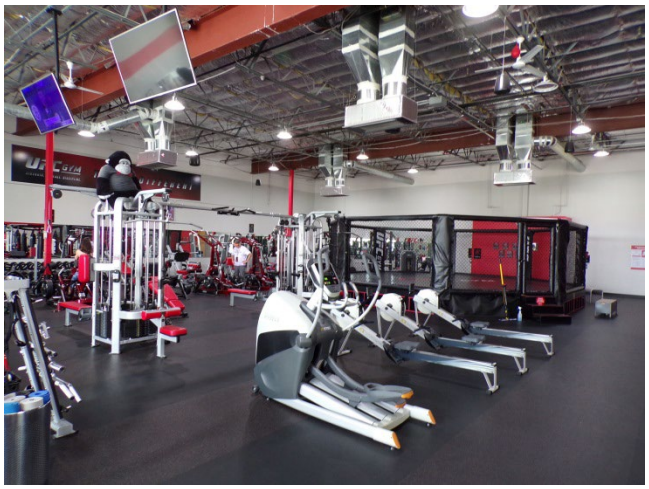

172. Bldg 4871: Interior finishes and fixtures in back-of-house area on mezzanine.



173. Bldg 4871: Interior finishes and fixtures in restrooms.



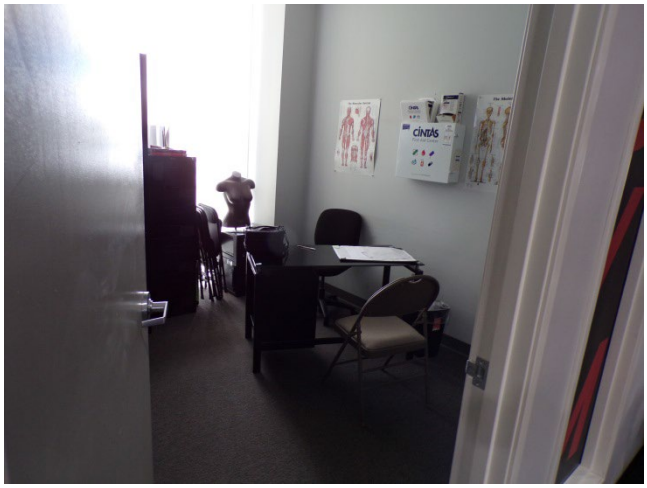
174. Bldg 4871: Interior finishes and fixtures in restrooms.



175. Bldg 4875 (UFC Gym): Interior finishes and fixtures in workout area.



176. Bldg 4875 (UFC Gym): Interior finishes and fixtures in workout area.



177. Bldg 4875 (UFC Gym): Interior finishes and fixtures in private office.



178. Bldg 4875 (UFC Gym): Interior finishes and fixtures in restrooms. Flush handle is on the wrong side of the toilet.



179. Bldg 4875 (UFC Gym): Interior finishes and fixtures in restrooms.



180. Bldg 4875 (UFC Gym): Interior finishes and fixtures in shower.



181. Bldg 4875 (Affordable Dentures): Interior finishes and fixtures in waiting room.



182. Bldg 4875 (Affordable Dentures): Interior finishes and fixtures in examination room area.



183. Bldg 4875 (Affordable Dentures): Interior finishes and fixtures in examination room.



184. Bldg 4875 (Affordable Dentures): Interior finishes and fixtures in break room.



185. Bldg 4875 (Affordable Dentures): Interior finishes and fixtures in restrooms.



186. Bldg 4875 (Affordable Dentures): Interior finishes and fixtures in restrooms.



187. Bldg 4891 (ULTA): Interior finishes and fixtures in customer area.



188. Bldg 4891 (ULTA): Interior finishes and fixtures in customer area.




189. Bldg 4891 (ULTA): Interior finishes and fixtures in customer area.



190. Bldg 4891 (ULTA): Interior finishes and fixtures in back-of-house area.



191. Bldg 4891 (ULTA): Interior finishes and fixtures in restrooms.



192. Bldg 4891 (ULTA): Interior finishes and fixtures in restrooms.



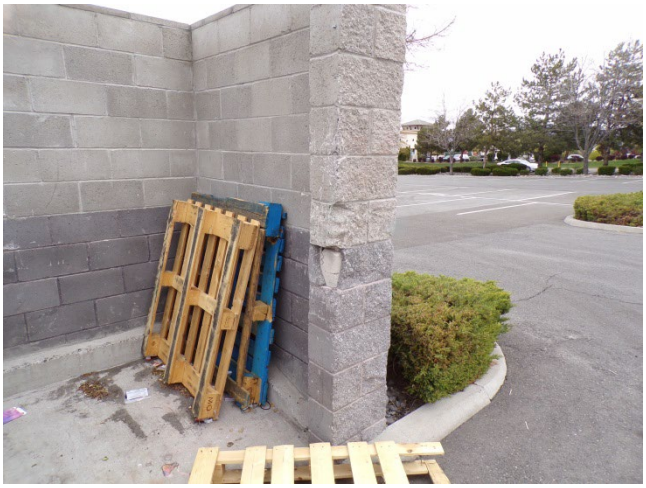
193. AllWest recommneds that loading dock deficiencies be addressed during the reserve term. Space 4819 shown.



194. Space 4821: Damage to CMU walls at dumpster enclosures was observed in several locations.



195. Space 4821: Damaged CMU at northeast corner of building.



196. Space 4821: Damaged CMU wall along west elevation of building at loading dock area.



197. Space 4819: Damaged CMU wall along west elevation of of building at loading dock area.



198. We recommend that delineated Accessible paths of travel be re-striped druring the reserve term.



199. Bldg 4809: Exterior stairs—wherever installed—are not provided with visually contrasting stripes on each tread, as required.



200. Space 4813: Exterior stairs—wherever installed—are not provided with visually contrasting stripes on each tread, as required.



201. Space 4813: Damage to exterior decorative elements should be repaired in conjuction with recommended exterior repaintings, as needed.



202. Bldg 4809: AllWest recommends that holes in exterior stucco finishes be repaired.




203. Bldg 4811 (Space 4811): AllWest presumes the tan-painted stucco areas of the elevations of this building are EIFS.



204. Bldg 4811 (Space 4813): AllWest presumes the tan-painted stucco areas of the elevations of this building are EIFS.




205. Door threshold plates at some tenant entrances appear to be too tall for Accessibility. Bldg 4875 (UFC Gym) shown.



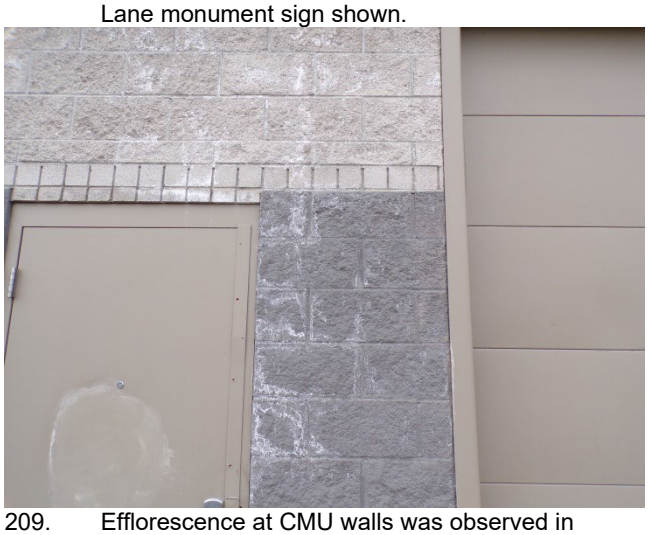

206. Bldg 4891: An Accessible path of travel from the public sidewalk is not provided to this—and other—buildings.




207. Bldg 4805: An Accessible path of travel from the public sidewalk is provided to this building. Truncated domes are absent at crosswalk. Kietzke Lane monument sign shown.



208. Bldg 4871: An Accessible path of travel from the public sidewalk is provided to this building.



209. Efflorescence at CMU walls was observed in several locations. Space 4811 shown.



210. Grafitti removal at the shopping center will likely be a matter of ongoing, routine maintenance. Bldg 4891 shown.



M-1. Bldg 4819 (Space 4823): 75-ton packaged air conditioner.



M-2. Bldg 4819 (Space 4825): Packaged air conditioner with hard-piped natural gas connection.



M-3. Bldg 4891: Packaged air conditioner with flexible natural gas connection.




M-4. Bldg 4811 (Space 4811): Natural gas fired makeup air unit.




M-5. Bldg 4821: Suspended natural gas-fired furnace.



M-6. Bldg 4811 (Space 4813): Rooftop exhaust fan.



M-7. Bldg 4805: Kitchen hood exhaust fans.



M-8. Bldg 4805: Main electrical switchgear enclosure.



M-9. Bldg 4875: Main electrical switchgear.




M-10. Bldg 4819 (Space 4819): Tenant natural gas-fired generator.



M-11. Bldg 4819 (Space 4821): Electrical distribution panels and step-down transformer.



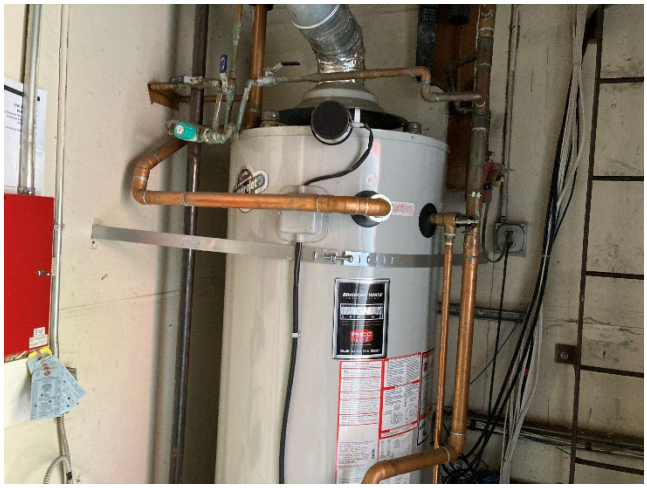
M-12. Bldg 4875: Tenant ceiling light fixtures.



M-13. Bldg 4891: Tenant suspended light fixtures.



M-14. Bldg 4805: Incoming domestic water service.



M-15. Bldg 4805: Natural gas fired domestic water heater.



M-16. Bldg 4875: Natural gas domestic water heater with flexible connection.



M-17. Typical natural gas service without seismic safety shutoff valves.



M-18. Bldg 4811 (Space 4811): Fire sprinkler water service with backflow preventer.




M-19. Bldg 4809: Fire alarm panel.



M-20. Bldg 4805: Kitchen hood with fire suppression system.



M-21. Bldg 4801: A natural gas-fired make-up air unit is installed on this building.



M-22. Bldg 4801: The rooftop furnaces all have rigid gas line connections, with one exception.



M-23. Bldg 4805: A make-up air unit is installed on this building (galvanized enclosure at left). Grease contamination on roofing system also shown.

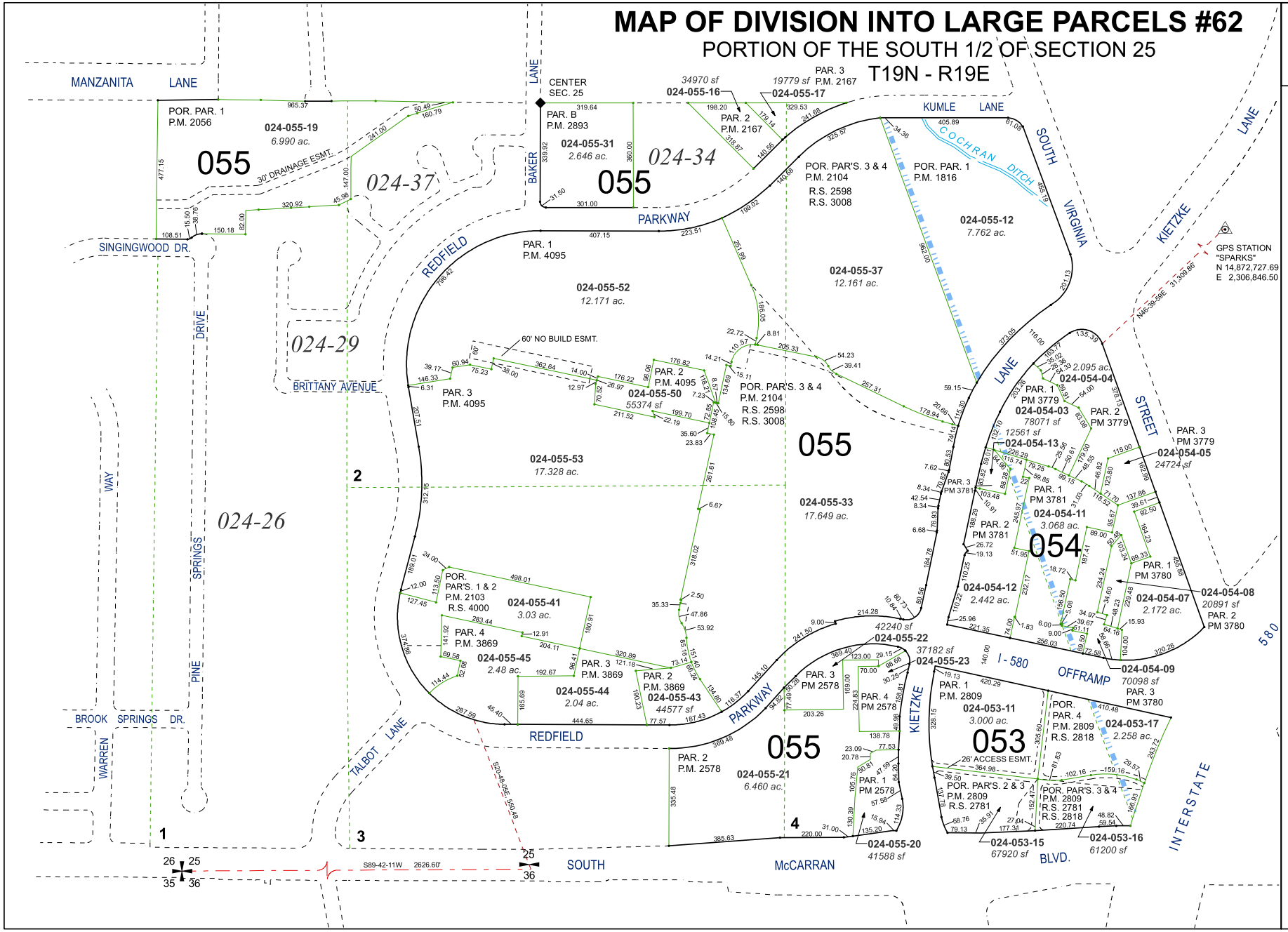


M-24. Bldg 4819 (Space 4821): This rooftop furnace (RTU-8) is the only one with a flexible gas line connection at any building.

# APPENDIX A

# MAP OF DIVISION INTO LARGE PARCELS #62

## PORTION OF THE SOUTH 1/2 OF SECTION 25 T19N - R19E




Assessor's Map Number

**024-05**

STATE OF NEVADA

**WASHOE COUNTY**

**ASSESSOR'S OFFICE**

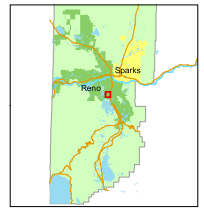
Michael E. Clark, Assessor

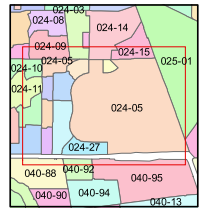
1001 East Ninth Street
Building D
Reno, Nevada 89512
(775) 328-2231



Feet
0 100 200 300

1 inch = 300 feet




created by: TWT 6/15/2015

last updated:

area previously shown on map(s)

NOTE: This map was prepared for the use of the Washoe County Assessor for assessment and illustrative purposes only. It does not represent a survey of the premises. No liability is assumed as to the sufficiency or accuracy of the data delineated hereon.



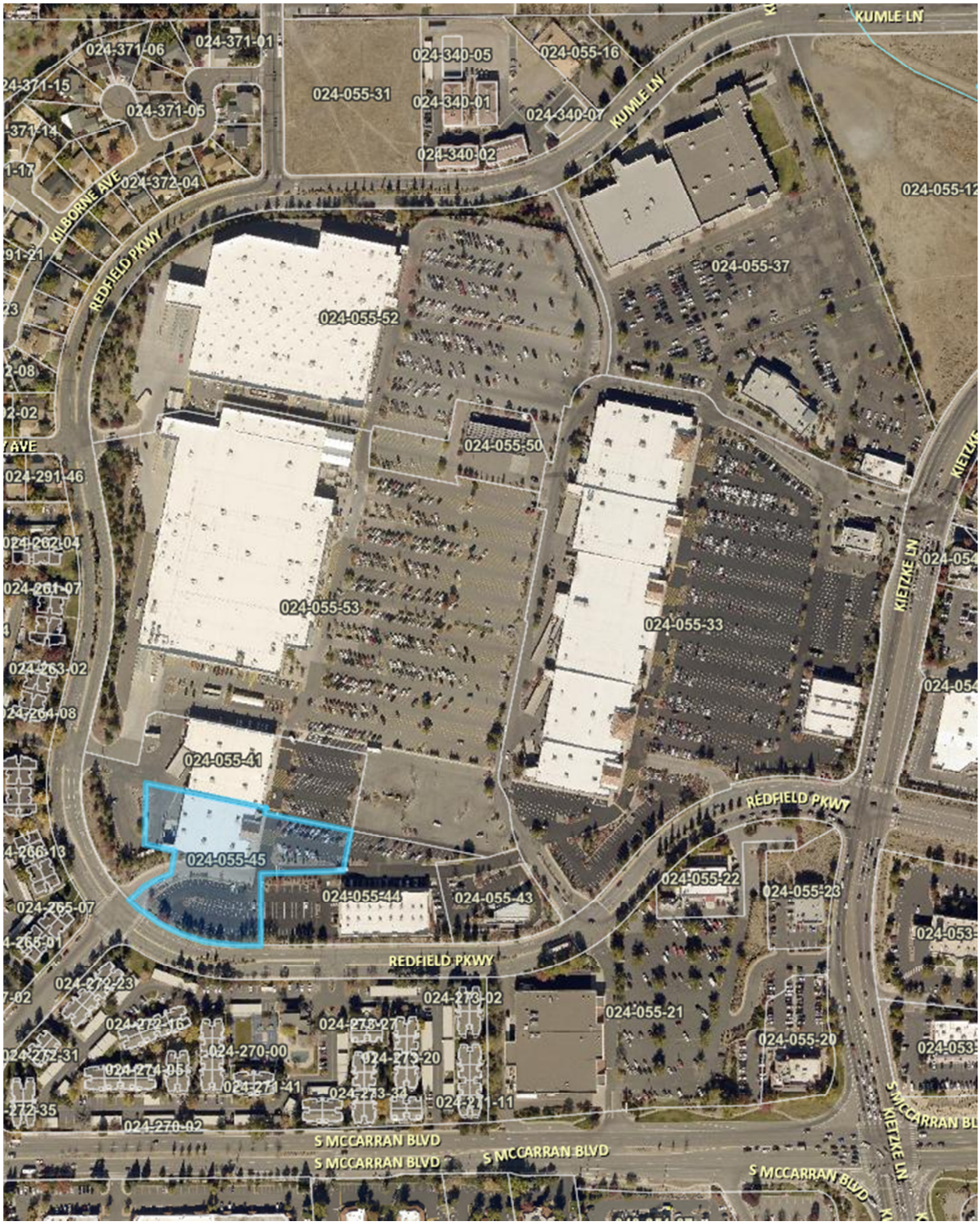

The subject property evaluated in this report is comprised of four irregularly shaped legal parcels. AP No. 024-055-33 shown shaded in red.




The subject property evaluated in this report is comprised of four irregularly shaped legal parcels. AP No. 024-055-37 shown shaded in blue.




The subject property evaluated in this report is comprised of four irregularly shaped legal parcels. AP No. 024-055-44 shown shaded in blue.




The subject property evaluated in this report is comprised of four irregularly shaped legal parcels. AP No. 024-055-45 shown shaded in blue.



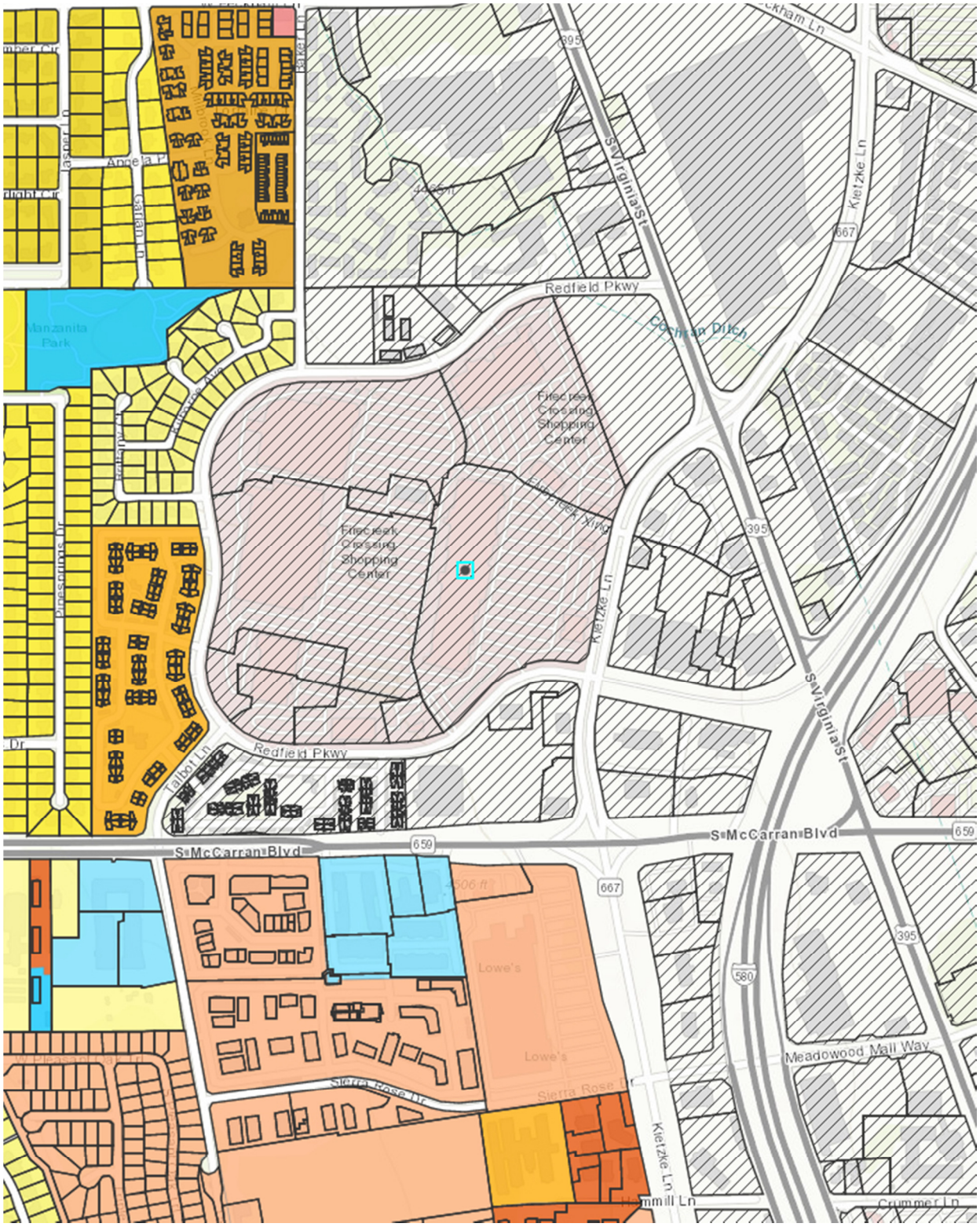

The subject property at 4823 Kietzke Lane, Reno, NV, is located in FEMA Flood Zone X (shaded [tan areas]) and Flood Zone X (unshaded) per FIRM Panel No. 32031C3231G, dated March 16, 2009.

## Flood Zone X (shaded)

FEMA describes Flood Zone X (shaded) as an area with a 0.2% annual chance flood hazard or as an area of 1% annual chance flood hazard with average depths less than one foot with drainage areas of less than one square mile.

## Flood Zone X (unshaded)

FEMA describes Flood Zone X (unshaded) as an area of minimal flood hazard that is determined to be outside the Special Flood Hazard Area and higher than the elevation of the 0.2-percent-annual-chance (or 500-year) flood.




The subject property at 4823 Kietzke Lane, Reno, NV, is located in City of Reno Zoning District MU (Mixed Use) Urban.

June 14, 2016

# AMERICAN LAND TITLE ASSOCIATION LAND SURVEY

**Property Identification:**
Firecreek Crossing
4823 Kietzke Lane
Reno, Nevada 89509

AEI Project No. 355146

**Prepared for:**
Shopoff Realty Investments, L.P.
2 Park Plaza, Suite 700
Irvine, California 92614

**Prepared by:**
AEI Consultants
2500 Camino Diablo
Walnut Creek, California 94597
(925) 746-6000

San Francisco HQ
Atlanta
Chicago
Costa Mesa
Dallas
Denver
Los Angeles
Miami
New York
Phoenix
Portland
San Jose

AEI Consultants

Environmental & Engineering Services

June 14, 2016

Shopoff Realty Investments, L.P.
2 Park Plaza, Suite 700
Irvine, California 92614

**SUBJECT:** **AMERICAN LAND TITLE ASSOCIATION (ALTA) LAND SURVEY**
Firecreek Crossing
4823 Kietzke Lane
Reno, Nevada 89509

AEI Project No. 355146

Pursuant to your request, AEI obtained an ALTA Survey for the above referenced property. The survey was performed per the standard detail land title survey requirements as adopted by the American Land Title Association, American Congress on Surveying and Mapping, and the National Society of Professional Surveyors.

Please call me at (773) 693-1111 you have any questions.

Sincerely,

Gina Cramer
ALTA Service Manager

## SCHEDULE "B" ITEMS

7 — EASEMENTS SHOWN OR DEDICATED ON THE PARCEL MAPS RECORDED NOVEMBER 14, 1986 AS PARCEL MAP 2053 UNDER FILE NO. 1116875 AND PARCEL MAP 2054 UNDER FILE NO. 1116876. FOR: PUBLIC UTILITIES, CABLE TELEVISION FACILITIES AND INCIDENTAL PURPOSES. (AFFECTS ALL PARCELS) (AFFECTS, NOTHING TO PLOT)

8 — EASEMENTS SHOWN OR DEDICATED ON THE PARCEL MAPS FILED FEBRUARY 26, 1987 AS PARCEL MAP 2103 UNDER FILE NO. 1143090 AND PARCEL MAP 2104 UNDER FILE NO. 1143091. FOR: PUBLIC UTILITIES, CABLE TELEVISION FACILITIES AND INCIDENTAL PURPOSES. (AFFECTS ALL PARCELS) (AFFECTS, AS SHOWN)

9 — AN EASEMENT IN FAVOR OF THE CITY OF RENO, ET AL FOR SANITARY SEWER AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED JANUARY 10, 1992 IN BOOK 3395, PAGE 739 AS INSTRUMENT NO. 1536594 OF OFFICIAL RECORDS. AFFECTS PARCEL 2 (AFFECTS, AS SHOWN)

10 — THIS ITEM HAS BEEN INTENTIONALLY DELETED.

11 — A DOCUMENT ENTITLED "TRAFFIC MITIGATION AGREEMENT" RECORDED MAY 27, 1993 IN BOOK 3750, PAGE 100 AS INSTRUMENT NO. 1677428 OF OFFICIAL RECORDS. (AFFECTS ALL PARCELS) (AFFECTS, NOTHING TO PLOT)

12 — AN EASEMENT SHOWN OR DEDICATED ON THE RECORD OF SURVEY FILED JUNE 29, 1993 AS SURVEY MAP 2598 UNDER FILE NO. 1687057. FOR: DRAINAGE AND INCIDENTAL PURPOSES. (AFFECTS ALL PARCELS) (AFFECTS, AS SHOWN)

13 — COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS IN THE DOCUMENT RECORDED AUGUST 10, 1995 IN BOOK 4361, PAGE 3 AS INSTRUMENT NO. 1915550 OF OFFICIAL RECORDS, BUT DELETING ANY COVENANT, CONDITION OR RESTRICTION INDICATING A PREFERENCE, LIMITATION OR DISCRIMINATION BASED ON RACE, COLOR, RELIGION, SEX, HANDICAP, FAMILIAL STATUS, NATIONAL ORIGIN, SEXUAL ORIENTATION, MARITAL STATUS, ANCESTRY, SOURCE OF INCOME OR DISABILITY, TO THE EXTENT SUCH COVENANTS, CONDITIONS OR RESTRICTIONS VIOLATE TITLE 42, SECTION 3604(C), OF THE UNITED STATES CODES. LAWFUL RESTRICTIONS UNDER STATE AND FEDERAL LAW ON THE AGE OF OCCUPANTS IN SENIOR HOUSING OR HOUSING FOR OLDER PERSONS SHALL NOT BE CONSTRUED AS RESTRICTIONS BASED ON FAMILIAL STATUS. (AFFECTS ALL PARCELS) DOCUMENT(S) DECLARING MODIFICATIONS THEREOF RECORDED SEPTEMBER 19, 1995 IN BOOK 4389, PAGE 289 AS INSTRUMENT NO. 1926737 OF OFFICIAL RECORDS. DOCUMENT(S) DECLARING MODIFICATIONS THEREOF RECORDED JULY 1, 2002 AS INSTRUMENT NO. 2705864 OF OFFICIAL RECORDS. (AFFECTS, BLANKET IN NATURE, NOTHING TO PLOT)

14 — AN EASEMENT IN FAVOR OF SIERRA PACIFIC POWER COMPANY, NEVADA BELL AND TCI CABLEVISION, INC. FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED OCTOBER 14, 1993 IN BOOK 3870, PAGE 183 AS INSTRUMENT NO. 1721939 OF OFFICIAL RECORDS. (AFFECTS ALL PARCELS) (AFFECTS, AS SHOWN)

15 — AN EASEMENT IN FAVOR OF THE CITY OF RENO FOR CONSTRUCTION, MAINTENANCE, AND USE OF PUBLIC SIDEWALKS, CROSSWALKS AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED APRIL 21, 1994 IN BOOK 4042, PAGE 418 AS INSTRUMENT NO. 1789160 OF OFFICIAL RECORDS. AFFECTS PARCEL 1 (AFFECTS, AS SHOWN)

16 — AN EASEMENT IN FAVOR OF THE CITY OF RENO FOR CONSTRUCTION, MAINTENANCE, AND USE OF PUBLIC SIDEWALKS, CROSSWALKS AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED APRIL 21, 1994 IN BOOK 4042, PAGE 426 AS INSTRUMENT NO. 1789162 OF OFFICIAL RECORDS. AFFECTS PARCELS 2 AND 3 (AFFECTS, AS SHOWN)

17 — AN EASEMENT IN FAVOR OF THE CITY OF RENO FOR SANITARY SEWER, STORM DRAIN LINES AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED APRIL 21, 1994 IN BOOK 4042, PAGE 434 AS INSTRUMENT NO. 1789164 OF OFFICIAL RECORDS. AFFECTS PARCEL 3 (AFFECTS, AS SHOWN)

18 — AN EASEMENT IN FAVOR OF SIERRA PACIFIC POWER COMPANY, NEVADA BELL AND TCI CABLEVISION, INC. FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED OCTOBER 19, 1994 IN BOOK 4175, PAGE 91 AS INSTRUMENT NO. 1842120 OF OFFICIAL RECORDS. (AFFECTS ALL PARCELS) (AFFECTS, BLANKET IN NATURE, NOTHING TO PLOT)

23 — AN EASEMENT IN FAVOR OF SIERRA PACIFIC POWER COMPANY AND NEVADA BELL FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED NOVEMBER 13, 1995 IN BOOK 4429, PAGE 851 AS INSTRUMENT NO. 1941475 OF OFFICIAL RECORDS. (AFFECTS ALL PARCELS) (AFFECTS, BLANKET IN NATURE, NOTHING TO PLOT)

24 — AN EASEMENT IN FAVOR OF THE CITY OF RENO FOR UNDERGROUND STORM DRAIN LINES AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED DECEMBER 11, 1995 IN BOOK 4449, PAGE 860 AS INSTRUMENT NO. 1948950 OF OFFICIAL RECORDS. AFFECTS PARCELS 1 AND 2 (AFFECTS, AS SHOWN)

25 — AN EASEMENT IN FAVOR OF THE CITY OF RENO FOR CONSTRUCTION, MAINTENANCE, AND USE OF PUBLIC SIDEWALKS, CROSSWALKS AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED DECEMBER 11, 1995 IN BOOK 4449, PAGE 864 AS INSTRUMENT NO. 1948951 OF OFFICIAL RECORDS. AFFECTS PARCELS 1 AND 3 (AFFECTS, AS SHOWN)

27 — AN EASEMENT IN FAVOR OF THE CITY OF RENO FOR CONSTRUCTION, MAINTENANCE, AND USE OF PUBLIC SIDEWALKS, CROSSWALKS AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED MARCH 15, 1996 IN BOOK 4522, PAGE 53 AS INSTRUMENT NO. 1976487 OF OFFICIAL RECORDS. AFFECTS PARCELS 1 AND 3 (AFFECTS, AS SHOWN)

29 — COVENANTS, CONDITIONS, AND RESTRICTIONS IN A AGREEMENT REGARDING USE RESTRICTIONS RECORDED MARCH 6, 1997, IN BOOK 4803, PAGE 545 AS INSTRUMENT NO. 2077731 OF OFFICIAL RECORDS. (AFFECTS ALL PARCELS) (AFFECTS, NOTHING TO PLOT)

33 — AN EASEMENT IN FAVOR OF SIERRA PACIFIC POWER COMPANY AND NEVADA BELL FOR PUBLIC UTILITIES AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED JUNE 3, 1998 IN BOOK 5261, PAGE 217 AS INSTRUMENT NO. 2217249 OF OFFICIAL RECORDS. (AFFECTS ALL PARCELS) (AFFECTS, 10' BLANKET IN NATURE EASEMENT LYING 5' ON EACH SIDE OF UNDERGROUND UTILITY FACILITES AS INSTALLED, UNDERGROUNG UTILITIES NOT LOCATED AS PART OF THIS SURVEY)

34 — COVENANTS, CONDITIONS, AND RESTRICTIONS IN A DECLARATION OF COMMON AREA MAINTENANCE AND USE RESTRICTIONS RECORDED DECEMBER 21, 2001 AS INSTRUMENT NO. 2631496 OF OFFICIAL RECORDS. (AFFECTS ALL PARCELS) (AFFECTS, NOTHING TO PLOT)

35 — EASEMENTS SHOWN OR DEDICATED ON THE PARCEL MAP RECORDED MAY 17, 2002 AS PARCEL MAP 3869 UNDER FILE NO. 2689047. FOR: PUBLIC UTILITIES, CABLE TELEVISION FACILITIES, DRAINAGE AND INCIDENTAL PURPOSES. AFFECTS PARCEL 3 (AFFECTS, AS SHOWN)

36 — COVENANTS, CONDITIONS, AND RESTRICTIONS IN A DECLARATION OF SPECIAL LAND USES RECORDED OCTOBER 31, 2002 AS INSTRUMENT NO. 2756679 OF OFFICIAL RECORDS. (AFFECTS ALL PARCELS) AN ASSIGNMENT OF DECLARANT'S RIGHTS UNDER DECLARATION OF SPECIAL LAND USE RESTRICTIONS, DATED NOVEMBER 12, 2003, BY AND BETWEEN FIRECREEK, LLC, A DELAWARE LIMITED LIABILITY COMPANY, AS ASSIGNOR, TO PACIFIC FIRECREEK HOLDINGS, LLC, A DELAWARE LIMITED LIABILITY COMPANY, UNDER THE TERMS AND PROVISIONS AS CONTAINED THEREIN, RECORDED JULY 20, 2005 AS DOCUMENT NO. 3248340 OF OFFICIAL RECORDS. AN ASSIGNMENT OF DECLARANT'S RIGHTS UNDER DECLARATION OF SPECIAL LAND USE RESTRICTIONS, DATED OCTOBER 11, 2005, BY AND BETWEEN FIRECREEK CROSSING OF RENO, LLC, A DELAWARE LIMITED LIABILITY COMPANY, AS ASSIGNEE, AND PACIFIC FIRECREEK HOLDINGS, LLC, A DELAWARE LIMITED LIABILITY COMPANY, AS ASSIGNOR, UNDER THE TERMS AND PROVISIONS AS CONTAINED THEREIN, RECORDED OCTOBER 20, 2005 AS DOCUMENT NO. 3295114 OF OFFICIAL RECORDS. (AFFECTS, NOTHING TO PLOT)

38 — COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS IN AN ABANDONMENT OF EASEMENT AND GRANT OF RECIPROCAL ACCESS EASEMENT RECORDED MARCH 15, 2005 AS INSTRUMENT NO. 3183262 OF OFFICIAL RECORDS. AFFECTS PARCEL 1 (AFFECTS, AS SHOWN, LOCATION APPROXIMATE, NO DIMENSIONS GIVEN IN DOCUMENT)

39 — THIS ITEM HAS BEEN INTENTIONALLY DELETED.

## STATEMENT OF ENCROACHMENTS

A BUILDING FALLS WITHIN EASEMENT AREA.
B BUILDING FALLS WITHIN EASEMENT AREA.

## FLOOD NOTE

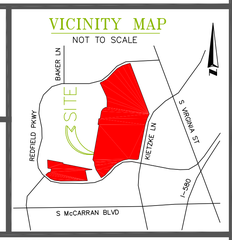
FLOOD NOTE: BASED ON MAPS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) AVAILABLE ONLINE AT WWW.MSC.FEMA.GOV, AND BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS LOCATED IN ZONE "SHADED X" AND "X" ON FLOOD INSURANCE RATE MAP NUMBER 32031C3231G, WHICH BEARS AN EFFECTIVE DATE OF 03/16/2009 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA. BY REVIEWING FLOOD MAPS PROVIDED BY THE NATIONAL FLOOD INSURANCE PROGRAM WE HAVE LEARNED THIS COMMUNITY DOES PARTICIPATE IN THE PROGRAM. NO FIELD SURVEYING WAS PERFORMED TO DETERMINE THIS ZONE AND AN ELEVATION CERTIFICATE MAY BE NEEDED TO VERIFY THE ACCURACY OF THE MAPS AND/OR TO APPLY FOR A VARIANCE FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

## LAND AREA

1,495,567± SQUARE FEET
34.33± ACRES

## VICINITY MAP

NOT TO SCALE




## PARKING STALLS

REGULAR=1883 HANDICAP=49
TOTAL=1932

## LEGEND

| | | | |
|---|---|---|---|
| SQ.FT. | SQUARE FEET | UV | UTILITY VAULT |
| | CONCRETE SURFACE | DA | DUMPSTER AREA |
| | NO PARKING AREA | TSP | TRAFFIC SIGNAL POLE |
| & | HANDICAP PARKING SPACE | TSB | TRAFFIC SIGANL BOX |
| PS | PARKING SPACE(S) | DI | DRAINAGE INLET |
| TF | TRANSFORMER | Ⓜ | MANHOLE |
| CA | COVERED AREA | ☼ | LIGHT POLE |
| WM | WATER METER | | FIRE HYDRANT |
| EB | ELECTRIC BOX | | SIGN |
| TR | UTILITY RISER | ● | BOLLARD |
| CO | CLEAN OUT | BFP | BACKFLOW PREVENTOR |
| Δ | CENTRAL ANGLE | GV | GAS VALVE |
| L | ARC LENGTH | CR | CABLE RISER |
| R | RADIUS | SV | SEWER VALVE |
| CB | CHORD BEARING | TB | TELEPHONE BOX |
| C | CHORD LENGTH | BS | BUS SHELTER |
| ◉ | CORNER TO BE SET | TRD | TRENCH DRAIN |
| (R) | RECORD | CC | CONCRETE CURB |
| | | CC&G | CONCRETE CURB & GUTTER |

## SITE PICTURE




| CURVE TABLE | | | |
|---|---|---|---|
| CURVE | DELTA | LENGTH | RADIUS |
| C1 | 10°38'07" | 178.94' | 964.00' |
| C2 | 37°38'13" | 39.41' | 60.00' |
| C3 | 51°47'17" | 54.23' | 60.00' |
| C4 | 6°38'21" | 8.81' | 76.00' |

| LINE TABLE | | |
|---|---|---|
| LINE | LENGTH | BEARING |
| L1 | 20.66' | S74°59'12"E N74°59'12"W |

## LEGAL DESCRIPTION

THE LAND REFERRED TO IN THIS COMMITMENT IS SITUATED IN THE CITY OF RENO, COUNTY OF WASHOE, STATE OF NEVADA, AND IS DESCRIBED AS FOLLOWS:

PARCEL 1:

BEGINNING AT A POINT FROM WHICH THE SOUTH QUARTER CORNER OF SAID SECTION 25 BEARS SOUTH 43°29'50" WEST, A DISTANCE OF 2,117.81 FEET;THENCE NORTH 74°59'12" WEST, 20.66 FEET, THENCE ON A CURVE TO THE RIGHT HAVING A CENTRAL ANGLE OF 10°38'07", A RADIUS OF 964.00 FEET, FOR AN ARC DISTANCE OF 178.94 FEET; THENCE NORTH 64°21'06" WEST, 257.31 FEET; THENCE ON A CURVE TO THE RIGHT HAVING A CENTRAL ANGLE OF 37°38'13", A RADIUS OF 60.00 FEET FOR AN ARC DISTANCE OF 39.41 FEET; THENCE ON A CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 51°47'17", A RADIUS OF 60.00 FEET FOR AN ARC DISTANCE OF 54.23 FEET; THENCE NORTH 78°30'10" WEST, 205.33 FEET; THENCE ON A CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 06°38'21", A RADIUS OF 76.00 FEET, FOR AN ARC DISTANCE OF 8.81 FEET; THENCE NORTH 11°23'40" EAST 22.72 FEET; THENCE ON A CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 35°31'58", A RADIUS OF 300.00 FEET, FOR AN ARC DISTANCE OF 186.05 FEET; THENCE NORTH 24°08'18" WEST, 251.99 FEET; THENCE FROM A TANGENT BEARING OF NORTH 65°51'42" EAST, ON A CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 21°07'00", A RADIUS OF 540.00 FEET, FOR AN ARC DISTANCE OF 199.02 FEET; THENCE NORTH 44°44'42" EAST, 140.68 FEET; THENCE ON A CURVE TO THE RIGHT HAVING A CENTRAL ANGLE OF 40°33'05", A RADIUS OF 460.00 FEET, FOR AN ARC DISTANCE OF 325.57 FEET; THENCE SOUTH 20°25'39" EAST, 962.00 FEET; THENCE FROM A TANGENT BEARING OF SOUTH 29°56'45" WEST, ON A CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 04°11'41", A RADIUS OF 808.00 FEET, FOR AN ARC DISTANCE OF 59.15 FEET; THENCE ON A CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 09°26'07", A RADIUS OF 700.22 FEET, FOR AN ARC DISTANCE OF 115.31 FEET TO THE POINT OF BEGINNING.

NOTE: THE ABOVE METES AND BOUNDS DESCRIPTION APPEARED PREVIOUSLY IN THAT CERTAIN DOCUMENT RECORDED OCTOBER 20, 2005 AS INSTRUMENT NO. 3295113 OF OFFICIAL RECORDS, WASHOE COUNTY, NEVADA.

PARCEL 2:

BEGINNING AT A POINT FROM WHICH THE SOUTH QUARTER CORNER OF SAID SECTION 25 BEARS SOUTH 50°00'02" WEST, A DISTANCE OF 857.27 FEET;THENCE NORTH 34°11'02" WEST, 134.80 FEET; THENCE ON A CURVE TO THE RIGHT HAVING A CENTRAL ANGLE OF 30°52'14", A RADIUS OF 281.00 FEET, FOR AN ARC DISTANCE OF 151.40 FEET; THENCE ON A CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 30°53'45", A RADIUS OF 100.00 FEET, FOR AN ARC DISTANCE OF 53.92 FEET; THENCE ON A CURVE TO THE RIGHT HAVING A CENTRAL ANGLE OF 45°42'22", A RADIUS OF 60.00 FEET, FOR AN ARC DISTANCE OF 47.86 FEET; THENCE NORTH 11°29'50" EAST, 35.33 FEET; THENCE NORTH 78°30'10" WEST, 2.50 FEET; THENCE NORTH 11°29'50" EAST, 318.02 FEET; THENCE NORTH 78°30'10" WEST, 6.67 FEET; THENCE NORTH 11°29'50" EAST, 261.61 FEET; THENCE NORTH 78°30'10" EAST, 23.83 FEET; THENCE NORTH 11°29'50" EAST, 108.45 FEET; THENCE SOUTH 78°30'10" EAST, 15.80 FEET; THENCE NORTH 11°23'40" EAST, 134.69 FEET; THENCE SOUTH 78°36'20" EAST, 15.11 FEET; THENCE NORTH 11°29'50" EAST, 14.21 FEET; THENCE ON A CURVE TO THE RIGHT HAVING A CENTRAL ANGLE OF 90°00'00", A RADIUS OF 76.00 FEET, FOR AN ARC DISTANCE OF 119.38 FEET; THENCE SOUTH 78°30'10" EAST, 205.33 FEET; THENCE ON A CURVE TO THE RIGHT HAVING A CENTRAL ANGLE OF 51°47'17", A RADIUS OF 60.00 FEET FOR AN ARC DISTANCE OF 54.23 FEET; THENCE ON A CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 37°38'13", A RADIUS OF 60.00 FEET, FOR AN ARC DISTANCE OF 39.41 FEET; THENCE SOUTH 64°21'06" EAST, 257.31 FEET; THENCE ON A CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 10°38'07", A RADIUS OF 964.00 FEET, FOR AN ARC DISTANCE OF 178.94 FEET; THENCE SOUTH 74°59'12" EAST, 20.66 FEET; THENCE FROM A TANGENT BEARING OF SOUTH 16°18'50.66 FEET??ÍÂÉÅ?7" WEST ON A CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 06°03'59", A RADIUS OF 700.22 FEET, FOR AN ARC DISTANCE OF 74.14 FEET; THENCE SOUTH 10°14'58" WEST, 80.53 FEET; THENCE ON A CURVE TO THE RIGHT HAVING A CENTRAL ANGLE OF 09°40'33", A RADIUS OF 45.00 FEET, FOR AN ARC DISTANCE OF 7.60 FEET; THENCE SOUTH 19°55'31" WEST, 70.83 FEET; THENCE ON A CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 08°31'51", A RADIUS OF 56.00 FEET, FOR AN ARC DISTANCE OF 8.34 FEET; THENCE SOUTH 11°23'40" WEST, 42.54 FEET; THENCE ON A CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 08°31'51", A RADIUS OF 56.00 FEET, FOR AN ARC DISTANCE OF 8.34 FEET; THENCE SOUTH 02°53'02" WEST, 76.93 FEET; THENCE ON A CURVE TO THE RIGHT HAVING A CENTRAL ANGLE OF 08°30'38", A RADIUS OF 45.00 FEET, FOR AN ARC DISTANCE OF 6.68 FEET; THENCE SOUTH 11°23'40" WEST, 184.78 FEET; THENCE SOUTH 12°26'29" WEST, 80.56 FEET; THENCE ON A CURVE TO THE RIGHT HAVING A CENTRAL ANGLE OF 88°57'11", A RADIUS OF 52.00 FEET, FOR AN ARC DISTANCE OF 80.73 FEET; THENCE NORTH 78°36'20" WEST, 10.84 FEET; THENCE ON A CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 27°20'39", A RADIUS OF 449.00 FEET, FOR AN ARC DISTANCE OF 214.28 FEET; THENCE SOUTH 15°57'01" EAST, 9.00 FEET; THENCE FROM A TANGENT BEARING OF SOUTH 74°02'59" WEST, ON A CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 31°26'50", A RADIUS OF 440.00 FEET, FOR AN ARC DISTANCE OF 241.50 FEET; THENCE SOUTH 42°36'09" WEST, 145.10 FEET; THENCE ON A CURVE TO THE RIGHT HAVING A CENTRAL ANGLE OF 18°01'12", A RADIUS OF 370.00 FEET, FOR AN ARC DISTANCE OF 116.37 FEET TO THE POINT OF BEGINNING.

NOTE: THE ABOVE METES AND BOUNDS DESCRIPTION APPEARED PREVIOUSLY IN THAT CERTAIN DOCUMENT RECORDED OCTOBER 20, 2005 AS INSTRUMENT NO. 3295113 OF OFFICIAL RECORDS, WASHOE COUNTY, NEVADA.

PARCEL 3:

PARCEL 3 AND 4 OF PARCEL MAP NO. 3869 FOR FIRECREEK, LLC, ACCORDING TO THE MAP THEREOF, FILED IN THE OFFICE OF THE COUNTY RECORDER OF WASHOE COUNTY, STATE OF NEVADA, ON MAY 17, 2002, AS FILE NO. 2689047, OFFICIAL RECORDS.

PARCEL 4:

NON-EXCLUSIVE EASEMENTS AS DESCRIBED AND DELINEATED IN THAT CERTAIN DOCUMENT RECORDED AUGUST 10, 1995 IN BOOK 4361, PAGE 3, DOCUMENT NO. 1915550 AS MODIFIED BY THAT CERTAIN DOCUMENT RECORDED JULY 1, 2002, DOCUMENT NO. 2705864, BOTH OF OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA, AND IN THOSE CERTAIN DOCUMENTS RECORDED MAY 17, 2002, DOCUMENT NO. 2689047, OCTOBER 31, 2002, DOCUMENT NO. 2756679, AND DECEMBER 21, 2001, DOCUMENT NO. 2631496, ALL OF OFFICIAL RECORDS OF SAID COUNTY.

PARCEL 5:

A NONEXCLUSIVE EASEMENT FOR INGRESS AND EGRESS BY VEHICULAR AND PEDESTRIAN TRAFFIC UPON, OVER AND ACROSS THE "MAIN DRIVE" AS CONVEYED, SET FORTH AND DESCRIBED IN THAT CERTAIN DOCUMENT ENTITLED "ABANDONMENT OF EASEMENT AND GRANT OF RECIPROCAL ACCESS EASEMENT" RECORDED MARCH 16, 2005 AS DOCUMENT NO. 3183262 OF OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA.

SEE SHEETS 2, 3, 4 OF 4 FOR SURVEY

## TITLE COMMITMENT INFORMATION

THE PROPERTY HEREON DESCRIBED IS THE SAME AS THE PERTINENT PROPERTY AS DESCRIBED IN FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT FILE NO.: NCS-781068-CC WITH AN EFFECTIVE DATE OF MAY 25, 2016.

## BEARING BASIS

BEARINGS SHOWN HEREON ARE BASED ON THE WEST BOUNDARY LINE OF PARCEL TWO BEING N11°29'30"E PER TITLE DESCRIPTION.

## ALTA/NSPS LAND TITLE SURVEY

PROJECT NAME
FIRECREEK CROSSING
4823 KIETZKE LANE
WASHOE COUNTY RENO, NV

## GENERAL NOTES

1. NO UNDERGROUND UTILITIES ARE SHOWN ON THIS SURVEY, ONLY ABOVE GROUND VISIBLE EVIDENCE OF UTILITIES ARE SHOWN.
2. ALL STATEMENTS WITHIN THE CERTIFICATION, AND OTHER REFERENCES LOCATED ELSEWHERE HEREON, RELATED TO: UTILITIES, IMPROVEMENTS, STRUCTURES, BUILDINGS, PARTY WALLS, PARKING, EASEMENTS, SERVITUDES, AND ENCROACHMENTS ARE BASED SOLELY ON ABOVE GROUND, VISIBLE EVIDENCE, UNLESS ANOTHER SOURCE OF INFORMATION IS SPECIFICALLY REFERENCED HEREON.
3. THIS SURVEY MEETS OR EXCEEDS THE SURVEY STANDARDS/STANDARDS OF CARE AS SET FORTH IN SECTION 3 OF THE 2016 ALTA/NSPS SURVEY REQUIREMENTS.
4. THE SUBJECT PROPERTY HAS DIRECT PHYSICAL AND INDIRECT ACCESS TO REDFIELD PARKWAY ABD KIETZKE LANE, BEING DEDICATED PUBLIC STREETS OR HIGHWAYS.
5. THERE IS NO VISIBLE EVIDENCE OF CEMETERIES ON SUBJECT PROPERTY.
6. THERE IS OBSERVABLE EVIDENCE OF EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS WITHIN RECENT MONTHS.
7. THE PARCELS CONTAINED IN THE LEGAL DESCRIPTION ARE CONTIGUOUS WITHOUT ANY GAPS, GORES OR OVERLAPS.
8. BUILDING AREAS SHOWN HEREON ARE FOR THE FOOTPRINT OF THE BUILDING ONLY.
9. NO APPARENT CHANGES IN STREET RIGHT OF WAY LINES EITHER COMPLETED OR PROPOSED, AND AVAILABLE FROM THE CONTROLLING JURISDICTION. NO OBSERVABLE EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS.
10. NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL SEAL OF A LICENSED SURVEYOR AND MAPPER. ADDITIONS AND DELETIONS TO SURVEY MAPS, SKETCHES, OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
11. NO ATTEMPT WAS MADE TO DETERMINE WETLANDS OR OTHER ENVIRONMENTAL ISSUES, UNLESS OTHERWISE NOTED.
12. THIS PLAT COMPLIES WITH APPLICABLE STATUTES OF THIS STATE AND ANY LOCAL ORDINANCES IN EFFECT ON THE DATE THAT THE SURVEY WAS COMPLETED, AND SURVEY WAS CONDUCTED IN ACCORDANCE WITH CHAPTER 625 OF NEVADA ADMINISTRATIVE CODE.
13. THE MONUMENTS DEPICTED ON THE PLAT ARE OF THE CHAPTER SHOWN, OCCUPY THE POSITIONS INDICATED AND ARE OF SUFFICIENT DURABILITY.

## SURVEYOR'S CERTIFICATE

TO: FIRST AMERICAN TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 7(a), 7(b)(1), 7(c), 8, 9, 13, 14, 16, AND 17 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON 03/18/16. DATE OF PLAT OR MAP: 04/05/16.




6/14/16
REGISTERED SURVEYOR: MICHAEL W. SOLITRO — DATE
PROFESSIONAL LAND SURVEYOR NO.: 023308
CERTIFICATE OF AUTHORIZATION: 21065
STATE OF NEVADA

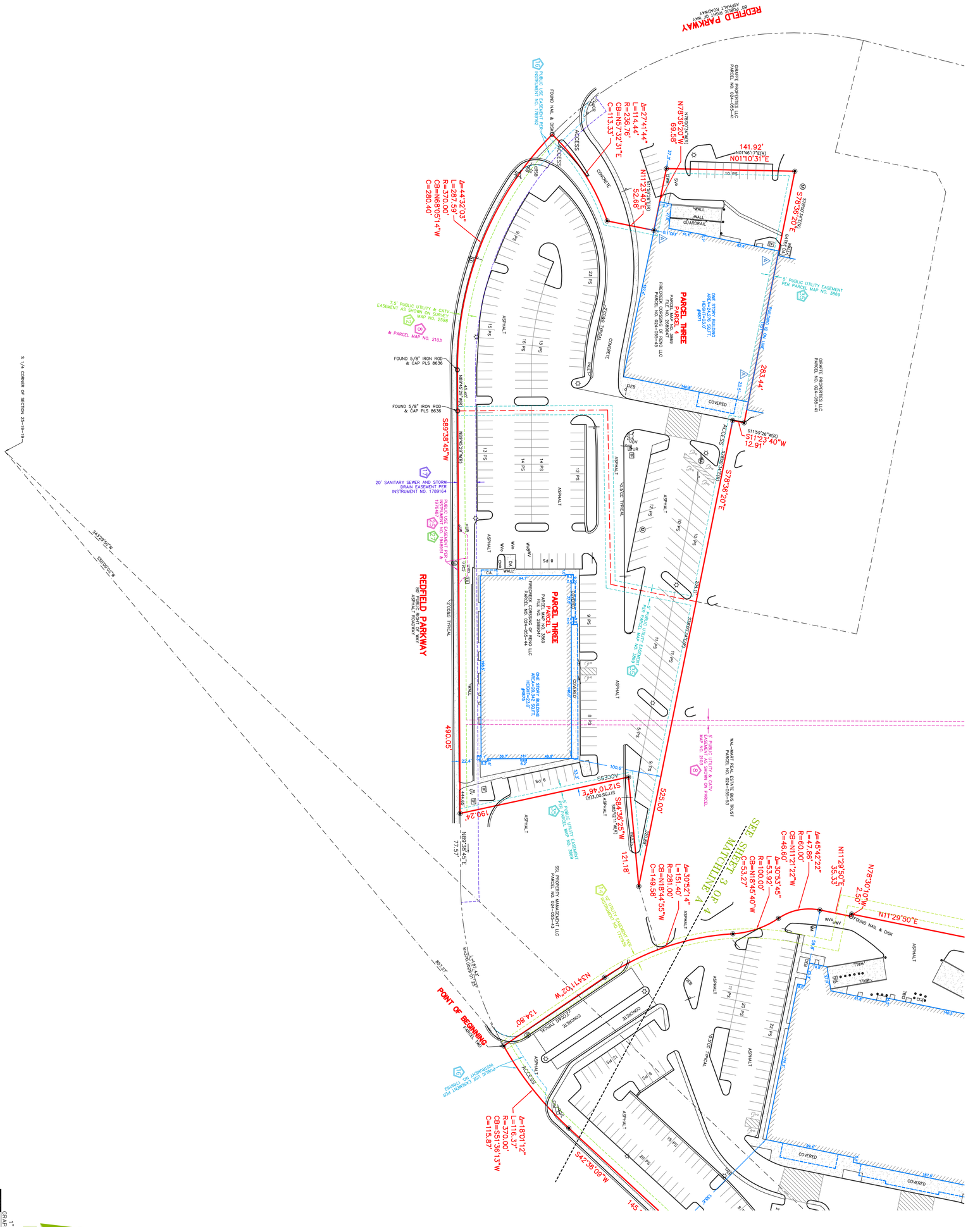
REPUBLIC NATIONAL
480 NEEDLES TRAIL
LONGWOOD, FLORIDA 32779
PHONE: (407) 862-4200 ● RNSURVEYS@REPUBLICNATIONAL.NET ● FAX: (407) 862-6229

| JOB NUMBER: | SCALE: | DRAWN BY: | APPROVED BY: |
|---|---|---|---|
| 160328 | N/A | UB | MWS |

| DATE | REVISION HISTORY | BY |
|---|---|---|
| 04/05/16 | UPDATE TITLE | DMD |

SURVEY PREPARED FOR:

AEI Consultants
Environmental & Engineering Services
Corporate Headquarters - San Francisco, California
Tel. 925.746.6000 Email. info@aeiconsultants.com




SURVEY PREPARED FOR:

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| DATE | REVISION HISTORY | BY |
|---|---|---|
| 04/05/16 | UPDATE TITLE | DMD |

JOB NUMBER: 160328
SCALE: 1" = 50'
DRAWN BY: UB
APPROVED BY: MWS

SEE SHEET 4 OF 4
MATCHLINE B

SAMS REAL ESTATE BUSINESS TRUST
PARCEL NO. 024-055-50

WAL-MART REAL ESTATE BUS TRUST
PARCEL NO. 024-055-53

**PARCEL TWO**
FIRECREEK CORSSING OF RENO LLC
PARCEL NO. 024-055-33

WAL-MART REAL ESTATE BUS TRUST
PARCEL NO. 024-055-53

SSL PROPERTY MANAGEMENT, LLC
PARCEL NO. 024-055-43

MATCHLINE A
SEE SHEET 2 OF 4

ONE STORY BUILDING
AREA=184,147 SQ.FT.
HEIGHT=23.0'
#4819, 4821, 4823,
4825 & 4827

ONE STORY BUILDING
AREA=14,117 SQ.FT.
HEIGHT=21.0'
(UNDER CONSTRUCTION)

ONE STORY BUILDING
AREA=5,148 SQ.FT.
HEIGHT=23.0'

ONE STORY BUILDING
AREA=3,178 SQ.FT.
HEIGHT=23.0'

ONE STORY BUILDING
AREA=20,342 SQ.FT.
HEIGHT=23.0'
#4875

**POINT OF BEGINNING**
PARCEL ONE

**REDFIELD PARKWAY**
80' PUBLIC RIGHT OF WAY
ASPHALT ROADWAY

**KIETZKE LANE**
PUBLIC RIGHT OF WAY VARIES
ASPHALT ROADWAY

N11°29'50"E 15.80'
N11°29'50"E 108.45'
N11°29'50"E 261.61'
N78°30'10"W 23.83'
N11°29'30"E BASIS OF BEARING
N78°30'10"W 6.67'
N11°29'50"E 318.02'
N78°30'10"W 2.50'
N11°29'50"E 35.33'
N34°11'02"W 134.80'
S42°36'09"W 145.10'
S10°14'58"W 80.33'
S19°55'31"W 70.83'
S11°23'40"W 42.54'
S02°53'02"W 76.93'
S11°23'40"W 184.78'
S12°26'29"W 80.56'
S15°57'01"E 9.00'
N78°36'20"W 10.84'
S10°16'46"E 100.00'
S84°36'25"W 121.18'
S84°21'11"W(R)

R=808.00'
CB=S27°50'55"W
C=59.14'

Δ=9°26'07"
L=115.31'
R=700.22'
CB=S21°02'00"W
C=115.18'

Δ=15°30'07"
L=189.45'
R=700.22'
CB=S18°00'01"W
C=188.87'

Δ=6°03'59"
L=74.14'
R=700.22'
CB=S13°16'58"W
C=74.10'

Δ=9°40'33"
L=7.60'
R=45.00'
CB=S15°05'15"W
C=7.59'

Δ=8°31'51"
L=8.34'
R=56.00'
CB=S15°39'17"W
C=8.32'

Δ=8°31'51"
L=8.34'
R=56.00'
CB=S07°07'45"W
C=8.33'

Δ=8°30'38"
L=6.68'
R=45.00'
CB=S07°08'21"W
C=6.68'

Δ=88°57'11"
L=80.73'
R=52.00'
CB=S56°55'05"W
C=72.86'

Δ=27°20'39"
L=214.28'
R=449.00'
CB=S87°43'20"W
C=212.26'

Δ=31°26'50"
L=241.50'
R=440.00'
CB=S58°19'34"W
C=238.48'

Δ=45°42'22"
L=47.86'
R=60.00'
CB=N11°21'22"W
C=46.60'

Δ=30°53'45"
L=53.92'
R=100.00'
CB=N18°45'40"W
C=53.27'

Δ=30°52'14"
L=151.40'
R=281.00'
CB=N18°44'55"W
C=149.58'

Δ=18°01'12"
L=116.37'

- 24 STORM DRAIN EASEMENT PER INSTRUMENT NO. 1948950
- 16 PUBLIC USE EASEMENT PER INSTRUMENT NO. 1789162
- 9 SANITARY SEWER EASEMENT PER INSTRUMENT NO. 1536594
- 12 10' UTILITY EASEMENT PER INSTRUMENT NO. 1724249
- 13 5' PUBLIC UTILITY & CATV EASEMENT PER PCB PARCEL MAP NO. 3869
- 15 5' PUBLIC UTILITY & CATV EASEMENT AS SHOWN ON PARCEL MAP NO. 2103
- 35 5' PUBLIC UTILITY EASEMENT PER PCB PARCEL MAP NO. 3869

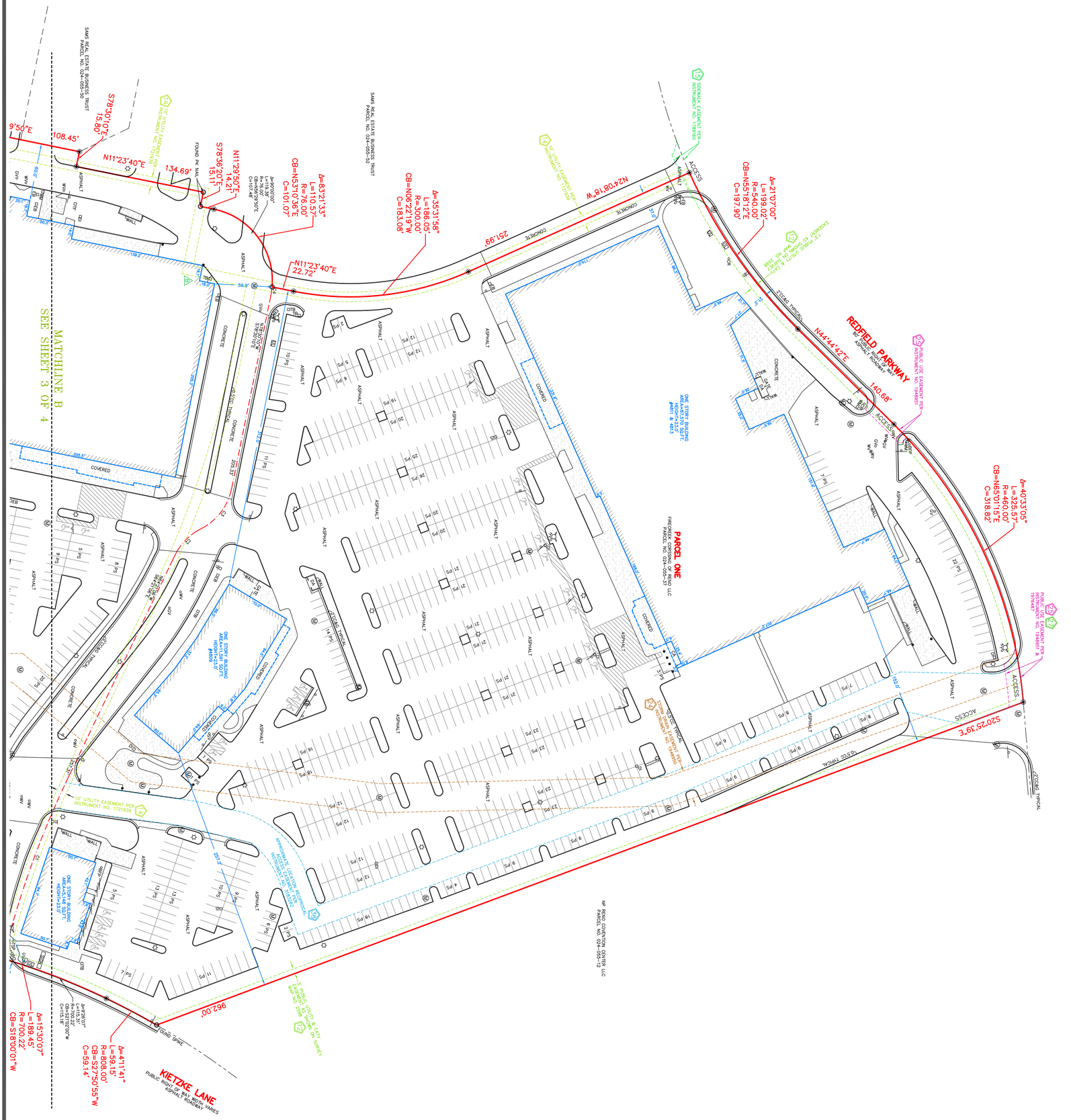
1" = 50'
GRAPHIC SCALE
0 25 50 100

| JOB NUMBER: 160328 | SCALE: 1" = 50' | DRAWN BY: UB | APPROVED BY: MWS |
|---|---|---|---|

| DATE | REVISION HISTORY | BY |
|---|---|---|
| 04/05/16 | UPDATE TITLE | DMD |

SURVEY PREPARED FOR:
AEI Consultants
Environmental & Engineering Services
Corporate Headquarters – San Francisco, California
Tel. 925.746.6000 Email. info@aeiconsultants.com

REPUBLIC NATIONAL
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LONGWOOD, FLORIDA 32779
PHONE: (407) 862-4200 • RNSURVEYS@REPUBLICNATIONAL.NET • FAX: (407) 862-6229


MATCHLINE B
SEE SHEET 3 OF 4
REDFIELD PARKWAY
PUBLIC ACCESS EASEMENT PER INSTRUMENT NO. 1949851
PARCEL ONE
KIETZKE LANE
PUBLIC RIGHT OF WAY WIDTH VARIES
SAMS REAL ESTATE BUSINESS TRUST PARCEL NO. 024-050-50
SAMS REAL ESTATE BUSINESS TRUST PARCEL NO. 024-050-52
AP RENO DOWNTOWN CENTER, LLC PARCEL NO. 024-050-12
PARCEL NO. 024-050-37
ACCESS
ACCESS TYPICAL
CONCRETE TYPICAL
ASPHALT
CONCRETE
COVERED
WALL
N24°08'18"W
251.99'
N11°23'40"E
22.72'
108.45'
134.69'
S78°36'20"E
15.61'
S78°36'20"E
14.21'
S78°36'20"E
15.11'
N11°23'40"E
15.60'
9'50"E
Δ=83°21'33"
L=110.57'
R=76.00'
CB=N53°10'36"E
C=101.07
Δ=35°31'58"
L=186.05'
R=300.00'
CB=N06°22'19"W
C=183.08
Δ=21°07'00"
L=199.00'
R=540.00'
CB=N55°18'12"E
C=197.90'
N44°44'42"E
140.88'
Δ=40°33'06"
L=325.57'
R=460.00'
CB=N65°01'15"E
C=318.82'
S20°25'39"E
962.00'
Δ=15°30'07"
L=189.13'
R=700.22'
CB=S18°00'01"W
Δ=4°11'41"
L=59.73'
R=800.00'
CB=S27°50'55"W
C=59.14'
ONE STORY BUILDING ABC=±11,281 SQ.FT. HEIGHT=±21.0' #4800
ONE STORY BUILDING ABC=±7,107 SQ.FT. HEIGHT=±21.0' #4811 & #4813
ONE STORY BUILDING ABC=±3,000 SQ.FT. HEIGHT=±21.0' #4900
APPROXIMATE LOCATION PEDESTRIAN GATE PER INSTRUMENT NO. 1949851
UE UTILITY EASEMENT PER INSTRUMENT NO. 1721939
UE UTILITY EASEMENT PER INSTRUMENT NO. 1949851
UE UTILITY EASEMENT PER INSTRUMENT NO. 1949851 & 1959849
EASEMENT FOR PUBLIC UTILITY & ROAD PURPOSES PER BOOK 1265, PAGE 288, AS DOC. NO. 1288
EASEMENT FOR PUBLIC UTILITY & ROAD PURPOSES PER BOOK 1265, PAGE 288, AS DOC. NO. 1288
FOUND PK NAIL
SET PK NAIL W/ WASHER PER INSTRUMENT NO. 1721939
SET PK NAIL W/ WASHER PER INSTRUMENT NO. 1949851

Serving Reno, Sparks, Washoe & Douglas County

Announcements Register for an Account Login

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Search Applications

# Building BLD17-08203: Commercial Roofing Permit Status: Closed

Record Info Payments

## Work Location

4891 KIETZKE LN, RENO, NV 89509

## Building Details

### Licensed Contractor:

D & D ROOFING AND SHEET METAL INC
1000 GLENDALE AVE
SPARKS, NV, 89431
Phone:775-685-5555
Contractor 0013598A

### Owner:

SCGIF II FIRECREEK OWNER LLC et al
SMYTHE FIRECREEK OWNER LLC

### Project Information

RE-ROOF. OVERLAY THE EXISTING BUILT UP ROOFING WITH A 60 ML TPO SINGLE PLY ROOF SYSTEM.

C/O SHOPOFF REALTY INVESTMENTS

RENO CA 92614

## More Details

### Related Contacts

#### Occupant/Tenant information

Organization
ULTA

### Additional Information

#### Job Value($):

$53,250.00

### Parcel Information

#### Parcel Number:

024-055-33

#### City:

RENO

#### Tax District:

1000

**Application Status Report**

Serving Reno, Sparks, Washoe & Douglas County

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# Building BLD17-08205: Commercial Roofing Permit Status: Closed

Record Info Payments

## Work Location

4827 KIETZKE LN, RENO, NV 89509

## Building Details

### Licensed Contractor:

D & D ROOFING AND SHEET METAL INC
1000 GLENDALE AVE
SPARKS, NV, 89431
Phone:775-685-5555
Contractor 0013598A

### Owner:

SCGIF II FIRECREEK OWNER LLC et al
SMYTHE FIRECREEK OWNER LLC

### Project Information

RE-ROOF. OVERLAY THE EXISTING BUILT UP ROOFING WITH A 60 ML TPO SINGLE PLY ROOF SYSTEM.THIS IS ONE BUILDING ADDRESSED FROM 4821 TO 4827 KIETZKE.

C/O SHOPOFF REALTY INVESTMENTS
RENO CA 92614

## More Details

### Related Contacts

#### Occupant/Tenant information

Organization
FIRECREEK CROSSING

### Additional Information

#### Job Value($):

$523,390.00

### Parcel Information

#### Parcel Number:

024-055-33

#### City:

RENO

#### Tax District:

1000

**Application Status Report**

Serving Reno, Sparks, Washoe & Douglas County

Announcements Register for an Account Login

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Search Applications

# Building BLD18-00811: Commercial Roofing Permit Status: Closed

Record Info Payments

## Work Location

4875 KIETZKE LN, RENO, NV 89509

## Building Details

### Licensed Contractor:

D & D ROOFING AND SHEET METAL INC
1000 GLENDALE AVE
SPARKS, NV, 89431
Phone:775-685-5555
Contractor 0013598A

### Owner:

SCGIF II FIRECREEK OWNER LLC et al
SMYTHE FIRECREEK OWNER LLC

### Project Information

RE-ROOF. RECOVER EXISTING BUILT UP ROOFING WITH 60 MIL TPO SINGLE PLY

C/O SHOPOFF REALTY INVESTMENTS

IRVINE CA 92614

## More Details

### Additional Information

**Job Value($):**

$69,587.00

### Parcel Information

**Parcel Number:**

024-055-33

**City:**

RENO

**Tax District:**

1000

Application Status Report

Serving Reno, Sparks, Washoe & Douglas County

Announcements Register for an Account Login

Search...

Home Building Business Licensing Enforcement Engineering Fire Health District Planning Short Term Rentals more

Search Applications

# Building BLD19-01949: Commercial Roofing Permit Status: Closed

Record Info Payments

## Work Location

4871 KIETZKE LN, RENO, NV 89509

## Building Details

### Licensed Contractor:

D & D ROOFING AND SHEET METAL INC
1000 GLENDALE AVE
SPARKS, NV, 89431
Phone:775-685-5555
Contractor 0013598A

### Owner:

SCGIF II FIRECREEK OWNER LLC et al
SMYTHE FIRECREEK OWNER LLC

### Project Information

REROOF. RECOVER EXISTING ROOF SYSTEM WITH 60 MIL TPO.

C/O SHOPOFF REALTY INVESTMENTS

IRVINE CA 92614

## More Details

### Additional Information

**Job Value($):**

$106,250.00

### Parcel Information

**Parcel Number:**

024-055-45

**City:**

RENO

**Tax District:**

1000

**Application Status Report**

# City of Reno
# Building Permit

**Permit Number: BLD13-02230**

**Total Fees Due:** $272.00

**Total VMTs:**

**Address:** 4801 KIETZKE LN

**Owner Information:**
FIRECREEK CROSSING OF RENO LL
C/O EPROPERTY TAX-DEPT 207
PO BOX 4900 ,
SCOTTSDALE, AZ 85261

**Job Type:** Building/Residential/Furnace & AC/NA
**Parcel No:** 024-055-37
**Zoning:** MU
**Type:**
**Dwelling Units:** 0
**Height:**
**Area(Sq.Ft.):**
**Subdivision:** undefined
**Lot:**

**Valuation:** $ 20,871.00
**Occupancy:**
**Group:**
**Fire Sprinklers:**
**Fire Alarm:**
**Stories:**

**Tenant Information:**

**Description of Work to Be Done**
HVAC..
ROOFTOP PACKAGE UNIT CHANGEOUT; GAS TO GAS 240,000 WITH 15 TON AC

**Builder / General Contractor:**
LINCOLN HEATING & AIR CONDITIONING
715 WRIGHT WAY
SPARKS, NV 89431
775-359-1985
**NV Lic.:** 0035711B

The undersigned hereby agrees to defend, indemnify and hold harmless the City of Reno, its officers, employees and agents from and against all demands, claims or liabilities that are asserted against the City of Reno arising from the undersigned's construction activities performed pursuant to the issuance of this permit (including but not limited to the undersigned's failure to perform in accordance with the approved permit and plans), save and except such demands, claims or liability that arise from the City of Reno's sole negligence or willful misconduct.

The undersigned agrees to obtain/maintain commercial liability insurance covering it during the term of the construction authorized by this permit, in an amount no less that the total construction cost of the work to be performed, and warrants that such liability policy shall include completed operations coverage as well as an additional insured endorsement naming the City of Reno as an additional insured with respect to operations performed by or for the undersigned for which the City of Reno has issued a building permit, without exclusion for bodily injury or property damage within the completed operations of hazard.

By _____ Date 11/16/12
Builder/General Contractor or the Authorized Agent

**Building Permit**
Permission is hereby granted to execute the work described in this application in accordance with the Rules, Regulations, and Ordinances of the City of Reno.

_____ 11/14/12
Building and Safety Division

PAID
NOV 14 2012
CITY OF RENO
PERMIT PLACE

**ALL INSPECTIONS MUST BE COMPLETED**

## 4801 KIETZKE LN LOT:

### Inspection Record

Inspector Signature Date

**Plumbing Inspections**

B528 Manometer

**Final Inspections**

B576 Mechanical Final

B603 A/C Final

**PERMIT NUMBER: BLD13-02230**

## POST THIS PERMIT IN A CONSPICUOUS PLACE

Permit Inspection Record
City of Reno Building Permit

**GENERAL NOTES:**

It is unlawful to remove this record from the job site until all final inspections have been made.

For inspections, please call the Building Div. automated phone line at (775) 334-2396 at any time, 24 hours a day. Contractors may also schedule inspections on-line at anytime once a registered account is established at the Virtual Permit Place at http://applications.cityofreno.com/accela/. Inspections may be set until 5:00 am of the day the inspection is to be performed. On the day of the inspection, you may call the Building Inspector directly or through an operator at (775) 334-2060 from 7:30 a.m. to 8:00 a.m. to request an inspection time.

Fire Department Inspections:
After the Fire Department inspections are scheduled, the Fire Inspector will telephone the contact number provided on the automated inspection dispatch within 48 hours to schedule an inspection time.

Please refer to the Fire Department comments posted on the back front page of the approved plans for additional information and requirements.

NOTICE:

This Form shall be a permanent part of approved plans attached hereto. Approved plans must be on the job site at all times and the inspection card posted for inspection purposes. Plans are approved in accordance the IBC except that noted structural details shall be provided before construction is initiated in noted areas. The Reno Building Division shall receive a copy of all testing and field reports. Any changes in the approved drawings shall be submitted in writing for approval. Provide or repair, as required, sidewalks, curbs and gutters in accordance with RMC. Excavation, fill, compaction and drainage shall comply with the IBC 90% minimum compaction under all concrete slabs.

Corrections and modifications as noted on plans and provisions of building codes and ordinances as adopted by the City of Reno whether specified on plans or not, shall be complied with.

**PERMIT EXPIRATION:**

**In accordance with the IBC, this permit shall expire if work is not commenced within 180 days from the issue date or if work is suspended or abandoned at any time after the work is commenced for a period of 180 days.**

**On-line inspection scheduling now available on the City of Reno's website www.reno.gov > Online Services Menu > Community Development Permits > Virtual Permit Place. Contractors may create an account and schedule inspections or check plan status.**

VIEW UNDER PAGE 10 USE FOR SIMPLE DRAWINGS

# BUILDING PERMIT APPLICATION

EZ permit

Permit # BLD13-02230

City of Reno
Community Development Department
450 Sinclair Street – P.O. Box 1900,
Reno, NV 89505

Rec'd By _____

(775) 334-2063
FAX (775) 334-2043

Commercial ☐ Residential ☒

This application is to be used for minor electrical, mechanical and plumbing (without plans), and roofing permits only. INCOMPLETE applications cannot be processed. Completed applications may be faxed to (775) 334-2043 or emailed to permits@reno.gov

**Parcel Number:** 024-055-37 **Address:** 4801 Kietzke Ln 89509

**Description of Work:**

Change out Rooftop Pkg unit, gas to gas

**Owner Information:**

Name: Fire Creek Crossing of Reno Phone No: 826-8700
Address: 4891 Kietzke Ln 89509

**Contractor Information:**

Contractor: Robert Quirt Contact Name: Karen Fife
Address: 715 Wright Way Sparks NV 89431
Phone No.: 359-1985 Fax No.: 359-3202
Nevada License No.: 0035711 A/B City License No.:
Email address: Lincolnheatingair@yahoo.com

**Project Information:**

Contract Amount $ 20,871.00 (valuation per IBC 108.3)

| HVAC Installations | Water Heater | Electrical & Plumbing | ReRoof |
|---|---|---|---|
| 240K output BTU's | _____ gallons | | |
| ☒ Change out | ☐ Gas | ☐ Elec Service Change ____ # of Amps | ☐ Tear off |
| ☐ New | ☐ Electric | ☐ Water Line Replacement | ☐ Composition |
| ☐ Electric unit to gas | ☐ Gas to Electric | ☐ Sewer line Replacement (Private Property only) | ☐ Recover – MAX 2 layers allowed |
| ☐ Oil to Gas | ☐ Electric to Gas | ☐ Gas line Add/Replace _____ feet | ☐ Add sheathing |
| ☐ Furnace only | ☐ Relocate | ☐ Lawn Sprinklers (Residential) | ☐ Indicate other: _____ |
| ☐ A/C ( 15 tons) | | | |

I understand that this application does not guarantee permit issuance nor allow work to commence. I certify that I have the authority and authorization of the property owner and above listed contractor to obtain this permit.

Karen Fife — Karen Fife — 11/14/12

Print Applicant Name: Applicant Signature: Date:

Rev. Dec 2011

# City of Reno

## *Certificate of Occupancy*

***City of Reno***
***Community Development Department***

*This certificate is hereby issued by the City of Reno and indicates that at the time of issuance this structure was inspected and found to be in compliance with the adopted codes and ordinances of the City regarding building construction or the use for the following:*

| | | | | | |
|---|---|---|---|---|---|
| Building Address | 4819 KIETZKE LN RENO NV 89509 | | | Building Permit Number | BLD14-07033 |
| Edition of Code | 2012 | Building Code | International Building Code | Zoning | MU |
| Type of Construction | V-B | Fire Sprinklers | Yes | Fire Alarms | Yes |
| Occupancy Group | M | Occupancy Use | SPECIALTY RETAILER | | |
| Owner of Building | FIRECREEK CROSSING OF RENO LL | | | | |
| Address | C/O EPROPERTY TAX-DEPT 207 PO BOX 4900 , SCOTTSDALE, AZ 85261 | | | | |
| Current Tenant | NATURAL GROCERS VITAMIN COTTAGE | Contractor | MCPHERSON CONTRACTORS, INC | | |

Patricia Silvestre
Community Development Department
Eric Simonson, Building Official

By Patricia Silvestre

Date 10/17/2014

**PLEASE POST IN A CONSPICUOUS LOCATION**

*This certificate of occupancy does not create an express or implied warranty or guarantee*

## 4819 KIETZKE LN LOT:

### Inspection Record

| | Inspector Signature | Date |
|---|---|---|
| **Building Inspections** | | |
| B436 Frame | W. Kennedy | 09/09/14 |
| B463 Sheetrock | W. Kennedy | 9/09/14 |
| **Electrical Inspections** | | |
| B543 Electrical Meter Set | | |
| * B552 Electrical Rough | W. Kennedy | 9/09/14 |
| **Mechanical Inspections** | | |
| B540 Mechanical Top Out | D. Sey | 10-7-14 |
| **Plumbing Inspections** | | |
| B504 Plumbing Rough | W. Kennedy | 9/19/14 |
| B507 Plumbing Top Out | | |
| B516 Gas Piping/Pressure Test | W. Kennedy | 9/22/14 |
| B528 Manometer | D. Sey | 10-9-14 |
| B531 Grease Interceptor Plumbing | | 9.24.14 |
| **Fire Inspections** | V847 Env. final | |
| F769 Fire Final | M. Iler | 10/9/14 |
| **WC Health Inspections** | | |
| H785 Health Food Rough | D. OROZCO | 10/10/14 |
| H788 Health Equipment Final | D. OROZCO | 10/16/14 |
| H790 Health Final | D. OROZCO | 10/16/14 |
| **Final Inspections** | | |
| B573 Plumbing Final | D. Sey | 10.9.14 |
| B576 Mechanical Final | D. Sey | 10-7-14 |
| B579 Electrical Final | D. Sey | 10-9-14 |
| B582 Commercial Building Final | D. Sey | 10-9-14 |
| B637 1704 Special Insp Final Report | D. Sey | 10-9-14 |
| B687 1704 Epoxy Anchorage | D. Sey | 10-9-14 |

* 504 ADDING WK 08/15/14

552

THE PERMIT PLACE
1 E. 1ST ST /CITY HALL
RENO, NV 89501

TERMINAL ID: 004113478
MERCHANT #: 313162558883

VISA
#xxxxxxxxxxxx9156
SALE
BATCH: 001090 INVOICE: 090868
DATE: AUG 08, 14 TIME: 09:41
SQ: 002 AUTH NO: 04192C

TOTAL $7610.00

**On-line inspection scheduling now available on the City of Reno's website www.reno.gov > Online Services Menu > Community Development Permits > Virtual Permit Place. Contractors may create an account and schedule inspections or check plan status.**

**PERMIT NUMBER: BLD14-07033**

## POST THIS PERMIT IN A CONSPICUOUS PLACE

Permit Inspection Record
City of Reno Building Permit

**GENERAL NOTES:**

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Please refer to the Fire Department comments posted on the back front page of the approved plans for additional information and requirements.

NOTICE:

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Corrections and modifications as noted on plans and provisions of building codes and ordinances as adopted by the City of Reno whether specified on plans or not, shall be complied with.

**PERMIT EXPIRATION:**

**In accordance with the IBC, this permit shall expire if work is not commenced within 180 days from the issue date or if work is suspended or abandoned at any time after the work is commenced for a period of 180 days.**

C OF O REQUIRED

BLD 14-07033

# Converse Consultants

**Geotechnical Engineering, Environmental & Groundwater Science, Inspection & Testing Services**

October 10, 2014

14-25125-30

City of Reno
Department of Community Development
City Hall
One East First Street
Second Floor
Sparks, NV 89501

Subject: Special Inspection Final Report
Natural Grocer
4819 Kietzke Lane
Reno, Nevada
Permit # BLD14-07033

RECEIVED
OCT 14 2014
CITY OF RENO
PERMIT PLACE

To Whom it May Concern:

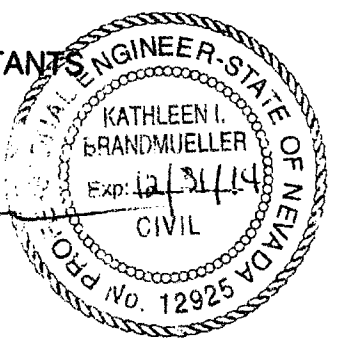
This Letter is to certify that Converse Consultants conducted the special inspections for the improvements done for the above referenced project. The inspections included:

- Epoxy

Based upon observation and written reports of the work by the Converse Consultant's Inspectors, the work was performed in accordance with approved plans and specifications and the modification approved by Jon Eldridge, PE, McGlamery Engineering Group, the design engineer.

Respectfully Submitted,

CONVERSE CONSULTANTS




Kathi Brandmueller, PE
Senior Engineer

Attachment Final Report

4840 Mill Street, Suite 5
Reno, Nevada 89502
Telephone (775) 856-3833 ◆ Fax (775) 856-3513

4708 Roseville Road, Suite 114
North Highlands, California 95660
Telephone (916) 331-5444 ◆ Fax (916) 331-6444

www.ConverseConsultants.com

**Converse Consultants**
Geotechnical Engineering, Environmental & Groundwater Science, Inspection & Testing Services

August 28, 2014

Jeff Heit
McPherson General Contractors
3501 SW Fairlawn Road
Topeka, KS 66614

Re: Final Report
Natural Grocer
4819 Kietzke Lane
Reno, Nevada
Permit # BLD14-07033
Converse Project No. 14-25125-30

Dear Ms. Heit:

During the above mentioned project Converse Consultants provided material testing and Special Inspection. Please find attached the field and laboratory reports generated during the project.

The opportunity to be of service to you is sincerely appreciated. If you have any questions, please call.

Respectfully submitted,

CONVERSE CONSULTANTS

Kathi Brandmueller, PE
Senior Engineer

Attachments: Field Report
Concrete Reports

Dist: Electron Mail PDF format to Rick Wantland, McPherson, General Contractors

4840 Mill Street, Suite 5
Reno, Nevada 89502
Telephone (775) 856-3833 ◆ Fax (775) 856-3513

4708 Roseville Road, Suite 114
North Highlands, California 95660
Telephone (916) 331-5444 ◆ Fax (916) 331-6444

www.ConverseConsultants.com

# FIELD REPORTS

Converse Consultants

4840 Mill Street, #5
Reno, Nevada 89502
(775) 856-3833
Fax (775) 856-3513

# JOB INSPECTION REPORT

Sheet 1 of _____

CC PROJECT NO. 14-25125-30

DATE 9/4/14 TIME ARRIVED 10:45

CLIENT McPHERSON

PROJECT NAME NATURAL ROCKERS

PROJECT ADDRESS _____

REMARKS: ARRIVED ON SITE AS PER CLIENT CONTACT. SET UP AND WAITED FOR CONCRETE TO ARRIVE. TRUCK ARRIVED AT 11:27. SAMPLED CONCRETE @ 12:05 WITH THE FOLLOWING RESULTS.

| SLUMP | A° | M° | AIR % |
|---|---|---|---|
| 3.5" | 72 | 76 | 5.6 |

CAST 1 SET OF CYLINDERS

2.5 HOURS MD

FIELD TECHNICIAN/SPECIAL INSPECTOR

SIGNATURE

MICHAEL DELOSTA

FULL NAME PRINTED

Converse Consultants

4840 Mill Street, #5
Reno, Nevada 89502
(775) 856-3833
Fax (775) 856-3513

# JOB INSPECTION REPORT

**Sheet** 1 **of** 1

**CC PROJECT NO.** 14-25125-30

**DATE** 9/3/14 **TIME ARRIVED** 3:15-5:15

**CLIENT** McPHERSON

**PROJECT NAME** NATURAL GROCERS (2)

**PROJECT ADDRESS**

**REMARKS:**

ON SITE TO INSPECT PLACEMENT OF #4 EPOXY REBAR DOWELS @ NEW FREEZER SLAB TO EXISTING SLAB CONNECTIONS. CONTRACTOR HAS DRILLED HOLES TO PROPER EMBED DEPTH AND HAS CLEANED HOLES THOROUGHLY. I OBSERVED PLACEMENT OF APPROXIMATELY 72 #4 DOWELS AND SIMPSON SET-XP EPOXY. PROFIT WAS COMPLETED IN ACCORDANCE WITH DETAILS 301 & 302 ON APPROVED PLANS.

#4's @ 12" O.C. - 72 TOTAL

FIELD TECHNICIAN/SPECIAL INSPECTOR

SIGNATURE

MARK VESSELS 563697-92

FULL NAME PRINTED

Converse Consultants

4840 Mill Street, #5
Reno, Nevada 89502
(775) 856-3833
Fax (775) 856-3513

# JOB INSPECTION REPORT

**Sheet** 1 **of** 1

**CC PROJECT NO.** 14-25125-30

**DATE** 8/22/14 **TIME ARRIVED** 7:30

**CLIENT** McPHERSON CONST.

**PROJECT NAME** NATURAL GROCERS

**PROJECT ADDRESS** 4819 KIETZKE LN.

**REMARKS:**

PROCEED TO SITE AND ACCESS SAMPLES FROM 8/21
DRAIN WATER FROM CURE BOX AND RECORD HI-LOW TEMPERATURES.

PICK-UP AND DELIVER 1 SET OF 4 CYLINDERS TO LAB FOR COMPRESSION TESTING.

**FIELD TECHNICIAN/SPECIAL INSPECTOR**

**SIGNATURE**

Sean Marsden

**FULL NAME PRINTED**

Converse Consultants

4840 Mill Street, #5
Reno, Nevada 89502
(775) 856-3833
Fax (775) 856-3513

# JOB INSPECTION REPORT

Sheet 1 of 1

CC PROJECT NO. 14-25125-30

DATE 8/21/14 TIME ARRIVED 9:00 / 11:00

CLIENT Mr Pendleton Const.

PROJECT NAME Natural Grocer

PROJECT ADDRESS 4819 Kietzke

REMARKS:

Arrived on site as requested by client for concrete inspection and oversite of placement.

3.D Concrete truck on site with approx 1 cy placed in S/G area.

Collected @ approx 3:11 and performed preliminary testing, with acceptable results

Air Temp 78° Slump 3.5" Mix Temp 81°

Fiber Mesh Added.
Approx 2 gal of water added after sample. Pour is real slow.

Observed approx 9.5 yds poured into trenches with approx 244 sq ft surface area.

FIELD TECHNICIAN/SPECIAL INSPECTOR

SIGNATURE

FULL NAME PRINTED

Converse Consultants

4840 Mill Street, #5
Reno, Nevada 89502
(775) 856-3833
Fax (775) 856-3513

# JOB INSPECTION REPORT

**Sheet** 1 **of** 1

**CC PROJECT NO.** 14-25125-30

**DATE** 8/20/14 **TIME ARRIVED** 3:00 - 5:00

**CLIENT** McPherson

**PROJECT NAME** NATURAL GROCER (2)

**PROJECT ADDRESS** 489 Kiefer Lane

**REMARKS:**

INSPECTED PLACEMENT OF APPROXIMATELY 125 EPOXY SET #3 REBAR DOWELS @ SOUTHEAST PLUMBING/ELECTRICAL TRENCH AND SOUTHWEST PLUMBING/ELECTRICAL TRENCH NEAR THE CAFETERIA TIE-INS TO EXISTING SLABS. CONTRACTOR HAS DRILLED HOLES TO PROPER DEPTHS AND HAS CLEANED HOLES THOROUGHLY. I WITNESSED PLACEMENT OF DOWELS AND EPOXY SET EPOXY. PROJECT WAS COMPLETED IN ACCORDANCE WITH DETAILS FROM SHEET S3.0 AND APPROVED PLANS.

#3'S @ 24" o.c.

FIELD TECHNICIAN/SPECIAL INSPECTOR

SIGNATURE

TRAVIS VERNAE 503609-92

FULL NAME PRINTED

Converse Consultants

4840 Mill Street, #5
Reno, Nevada 89502
(775) 856-3833
Fax (775) 856-3513

# JOB INSPECTION REPORT

Sheet 1 of 1

CC PROJECT NO. 14-25125-30

DATE 8/19/14 TIME ARRIVED 9:00

CLIENT McPherson Construction

PROJECT NAME Natural Groceries

PROJECT ADDRESS 4819 Kietzke Ln.

REMARKS:

Arrived on site as requested by client for concrete inspection and oversite of placement. First truck on site, and pour at N/W end of trenchwork with approx 1 yd. placed at N/W end of trenchwork. Collected sample @ approx 4.5 yd and performed preliminary field testing with acceptable results.

Temp 79° Slump 4"

Sample location: D+16 x 4+B

Cast and set of four cylinders for compression testing.

Short fiber was added and water was added twice 3 gal @ 4yd and 2 gal @ 5.5 yds.

Length of time in truck was 2 hr 45 min.

Temp stayed below 80° and slump was consistent

Second truck began pour @ 11:00 @ 90 minuts from batch time. Temp check shows 83°

* Morgan Concrete discontinued use of vibrator after approx 25' of pour ("because crew was short 1 man")
* Also noted that compacted soil in trench was not sprayed or wetted with water in any way after recommending this twice.

3.5 hr.

FIELD TECHNICIAN/SPECIAL INSPECTOR

SIGNATURE

Lydia Minoden

FULL NAME PRINTED

Converse Consultants

4840 Mill Street, #5
Reno, Nevada 89502
(775) 856-3833
Fax (775) 856-3513

# JOB INSPECTION REPORT

**Sheet** 1 **of** 1

**CC PROJECT NO.** 14-25125-30

**DATE** 8/18/14 **TIME ARRIVED** 10:00 - 11:00, 1:30 - 3:30

**CLIENT** McPHERSON CONST.

**PROJECT NAME** NATURES GROCERS (3)

**PROJECT ADDRESS** 4819 KIETZKE LANE

**REMARKS:**

INSPECTED PLACEMENT OF APPROXIMATELY 140 EPOXY SET #3 REBAR DOWELS @ TRENCH SLAB TO EXISTING SLAB CONNECTIONS @ PLUMBING / ELECTRIC NORTH SIDE + PLUMBING / ELECTRIC SOUTH SIDE, COLUMN LINE 6-1 TRENCHES. PLANS CALL FOR A 6" EMBEDMENT INTO EXISTING SLAB, HOWEVER THE STRUCTURAL ENGINEER HAS APPROVED DOWELING TO 3" EMBEDMENT. CONTRACTOR HAS DRILLED HOLES TO PROPER EMBED DEPTHS AND HAS CLEANED HOLES THOROUGHLY WITH AN AIR COMPRESSOR AND WIRE BRUSH. I OBSERVED PLACEMENT OF REBAR DOWELS AND SIMPSON XP EPOXY. DOWELS WERE PLACED IN ACCORDANCE WITH DETAILS FROM SHEET S3.0 ON APPROVED PLANS.

NOTE: THE PLANS ALSO CALLED FOR WWF REINFORCEMENT IN NEW SLAB AREAS, HOWEVER THE STRUCTURAL ENGINEER AGREED TO OMIT THAT DETAIL AS THE DOWELING WILL BE SUFFICIENT. THE ENGINEER HAS PROVIDED AN EMAIL REGARDING THE WWF REINFORCEMENT AND I HAVE ATTACHED IT TO THIS REPORT.

FIELD TECHNICIAN/SPECIAL INSPECTOR

SIGNATURE

JACK VESTBIE 5036097-92

FULL NAME PRINTED

14-25125-30

**Rick Wantland**

**From:** Jon Eldridge--McGlamery <jeldridge@vertexeng.com>
**Sent:** Monday, August 18, 2014 1:02 PM
**To:** Rick Wantland
**Subject:** RE: Emailing: P8170003 photo N.G Reno

Rick,

Since the slab is 6" thick, I will allow the slab trench infill to be reinforced only with the epoxied dowels currently in place (#3 dowels spaced at 48" along each side of the trench, staggered). The wire mesh reinforcing specified within detail 302 can be eliminated for these trench infills.

Jon Eldridge, PE, LEED AP
McGlamery Engineering Group
OFFICE 720.428.2106 | MOBILE 330.281.1648

-----Original Message-----
From: Rick Wantland [mailto:RWantland@McPhersongc.com]
Sent: Monday, August 18, 2014 12:52 PM
To: Jon Eldridge--McGlamery
Cc: Rick Wantland
Subject: Emailing: P8170003 photo N.G Reno

John, this is the photo of the area to be poured back.

Rick Wantland |Project Superintendent
785-431-8443 Mobile| 785-273-3880 Office | 785-273-1037 Fax
3501 SW Fairlawn Road
Topeka, KS 66614
Email |Website
Follow us on Twitter and LinkedIn

Converse Consultants

4840 Mill Street, #5
Reno, Nevada 89502
(775) 856-3833
Fax (775) 856-3513

# JOB INSPECTION REPORT

Sheet 1 of 1

CC PROJECT NO. 14-25125-30

DATE 8/18/14 TIME ARRIVED 8:30 1:00

CLIENT McPherson Construction

PROJECT NAME Natural Grocery

PROJECT ADDRESS 4819 Kietzke Lane Reno. NV.

REMARKS:

Arrivaon Site as Requested By Client.
Find Survisor of Site (Rick) McPherson Const. For Scope and Detail of Concrete Pour. Was Told that Concrete Pour was Changed From 5yds @ 9:00 to 10yds @ 12:00. Proceeded with Rebar and Compaction Testing.
I asked if there are any Specs/Plans on Site, I was shown a set of Prints and Directed to Detail #302 For Concrete Slab to Existing Slab Connection.
I observed that work was not done as per. And Contacted My Office and other experience for insight. I observed that #3 Rebar was not imbedded to proper 6" depth and 6x6 welded wire mesh was not in place and Rebar was not epoxied to existing slab.
Contacted John of McClamory Engineering in Calo. To see if this detail is to be used for 24" trench cap concrete also.
Engineer (John) informed me of his recommendation is to use epoxy and also place 6x6 mesh. Okayed a 3" imbeddment of dowels instead of 6".
Informed Rick of McPherson that Concrete should be poured Tomorrow After Inspection that Steel is in place to Specs and that epoxy is cured.

Mark Vesbic also on Site for Certified Guidance.

4.5

FIELD TECHNICIAN/SPECIAL INSPECTOR

SIGNATURE

Ryan Meadow

FULL NAME PRINTED

# CONCRETE REPORTS

**Converse Consultants**
4840 Mill Street, Ste. 5
Reno, Nevada 89502
(702) 856-3833

## CONCRETE DATA AND TEST REPORT

Client: McPherson Construction
Contract No:

Project No: 142512530
Set No.: CC001

Project: Natural Grocers
Contractor:

## PLACEMENT IDENTIFICATION

Structure: Slab on Grade - Trench Caps
Location: SW Area of Building

Sample Location: 3+10 X A+10
Total Cubic Yards Placed: N/A Yards at Time of Sampling: 3

## CONCRETE MIX DATA

Supplier: 3-D
Truck/Ticket Number: NA/93229 Time Batched: 8:30
Concrete Mix Design: 1115DDN Type of Cement:
Cement Content: Aggregate Size:
Admixtures: Fiber Mesh Added Water Added: U.W.=N/A

Design Strength: 3000 PSI at 28 Days

## TEST RESULTS

Sample Date: 08/21/14 Sample Time: 9:35
Sampled By: LDM
Slump: 3.5 Inches (AASHTO T 119) Air Content: N/A % (AASHTO T 152)
Temperature> Air: 78 F Concrete: 81 F (ASTM C1064)
Field Curing: 1 Days Field Cure Temp.: Max 98 F, Min 72 F

## COMPRESSIVE STRENGTH (ASTM C 39)

| Specimen No. | Test Date | Age Days | Load Lbs | Diameter, Inches | Area Sq.In. | Strength PSI | Type of Failure |
|---|---|---|---|---|---|---|---|
| 5522 | 08/28/14 | 7 | 38910 | 4.02 | 12.69 | 3070 | 3 |
| 5522 | 09/18/14 | 28 | 53040 | 4.02 | 12.69 | 4180 | 1 |
| 5522 | 09/18/14 | 28 | 53400 | 4.02 | 12.69 | 4210 | 1 |
| 5522 | | H | | | | | |

Defects in Specimens:
Remarks: Clear, Calm

Reported by: Kathi Brandmueller
Kathi Brandmueller, PE
Senior Engineer

Dist:

[X] Conforms to Specifications [ ] Does Not Conform to Specifications

**Converse Consultants**
4840 Mill Street, Ste. 5
Reno, Nevada 89502
(702) 856-3833

## CONCRETE DATA AND TEST REPORT

Client: McPherson Construction
Contract No:

Project No: 142512530
Set No.: CC002

Project: Natural Grocers
Contractor:

### PLACEMENT IDENTIFICATION

Structure: Trench Cap on Utilities Trench
Location: North Side of Store Area

Sample Location: D+16'N X 4+8'W
Total Cubic Yards Placed: 14 Yards at Time of Sampling: 4.5

### CONCRETE MIX DATA

Supplier: ARM
Truck/Ticket Number: N502/0500 Time Batched: 8:30
Concrete Mix Design: 67LF4560 Type of Cement:
Cement Content: Aggregate Size:
Admixtures: Short Fiber Added On Site Water Added: Water: 3 Gal. 2 Gal.

Design Strength: 3000 PSI at 28 Days

### TEST RESULTS

Sample Date: 08/19/14 Sample Time: 9:45
Sampled By: LDM
Slump: 4.0 Inches (AASHTO T 119) Air Content: N/A % (AASHTO T 141) (AASHTO T 152)
Temperature> Air: 80 F Concrete: 79 F (ASTM C1064)
Field Curing: 1 Days Field Cure Temp.: Max 106 F, Min 76 F

### COMPRESSIVE STRENGTH (ASTM C 39)

| Specimen No. | Test Date | Age Days | Load Lbs | Diameter, Inches | Area Sq.In. | Strength PSI | Type of Failure |
|---|---|---|---|---|---|---|---|
| 5521 | 08/26/14 | 7 | 26590 | 4.02 | 12.69 | 2090 | 3 |
| 5521 | 09/16/14 | 28 | 42030 | 4.02 | 12.69 | 3310 | 3 |
| 5521 | 09/16/14 | 28 | 42910 | 4.02 | 12.69 | 3380 | 3 |
| 5521 | | H | | | | | |

Defects in Specimens:
Remarks: Clear, Calm
Water Requested @ Intervals By Morgan

Reported by: Kathi Brandmueller
Kathi Brandmueller, PE
Senior Engineer

Dist:

[X] Conforms to Specifications [ ] Does Not Conform to Specifications

**Converse Consultants**
4840 Mill Street, Ste. 5
Reno, Nevada 89502
(702) 856-3833

## CONCRETE DATA AND TEST REPORT

Client: McPherson Construction
Contract No:

Project No: 142512530
Set No.: CC003

Project: Natural Grocers
Contractor:

## PLACEMENT IDENTIFICATION

Structure: Freezer Pad
Location: N/A

Sample Location: Sampled at Truck
Total Cubic Yards Placed: 7 Yards at Time of Sampling: 3.5

## CONCRETE MIX DATA

Supplier: Cemex
Truck/Ticket Number: 5888/25454819 Time Batched: 11:10
Concrete Mix Design: 1529054 Type of Cement:
Cement Content: Aggregate Size:
Admixtures: Water Added: U.W.=140.6

Design Strength: 3000 PSI at 28 Days

## TEST RESULTS

Sample Date: 09/04/14 Sample Time: 12:05
Sampled By: MJD (AASHTO T 141)
Slump: 3.5 Inches (AASHTO T 119) Air Content: 5.6 % (AASHTO T 152)
Temperature> Air: 73 F Concrete: 76 F (ASTM C1064)
Field Curing: 1 Days Field Cure Temp.: Max F, Min F

## COMPRESSIVE STRENGTH (ASTM C 39)

| Specimen No. | Test Date | Age Days | Load Lbs | Diameter, Inches | Area Sq.In. | Strength PSI | Type of Failure |
|---|---|---|---|---|---|---|---|
| 5525 | 09/11/14 | 7 | 39990 | 4.02 | 12.69 | 3150 | 1 |
| 5525 | 10/02/14 | 28 | 54710 | 4.02 | 12.69 | 4310 | 1 |
| 5525 | 10/02/14 | 28 | 55250 | 4.02 | 12.69 | 4350 | 3 |
| 5525 | | H | | | | | |

Defects in Specimens:
Remarks: Clear, Light Breeze

Reported by: Kathi Brandmueller
Kathi Brandmueller, PE
Senior Engineer

Dist:

[X] Conforms to Specifications [ ] Does Not Conform to Specifications

BLD14-07033
REV/PERMIT
2 SET

CHANGED Grease Interceptor From 750 Gallon
TO 1,000 Gallon. See REVISED PLANS.

Thank You

Rick Wantland
Rick Wantland 785-431-8443

RECEIVED
AUG 21 2014
CITY OF RENO
PERMIT PLACE

BLD 14-07033
REV / PERMIT

GIVEN
& ASSOCIATES INC
MECHANICAL & ELECTRICAL ENGINEERS

August 19, 2014

Rob Forslund
Vega Architecture
1335 Elati St Unit A
Denver, CO 80204

Re: VNVRN – Specialty Retailer Reno
4819 Kietzke Lane
BUILD NUMBERL BLD14-07033
Grease Trap Site Plan

RECEIVED
AUG 21 2014
CITY OF RENO
PERMIT PLACE

Dear Rob,

We are adding a plumbing site plan sheet P-8 to reflect the location, size and calculations for the required demonstration kitchen grease trap.

PROFESSIONAL ENGINEER STATE OF NEVADA
JEFFREY A. GIVEN
Exp: 6/30/15
MECHANICAL
No. 016302

APPROVED
8-21-14
CITY OF RENO
BUILDING DEPT.

Sincerely

Jeff Given, P.E.
Given and Associates

735 South Xenon Court Suite 201 • Lakewood, CO 80228
Phone: (303) 716-1270 • Fax: (303) 716-1272 • www.givenandassociates.com

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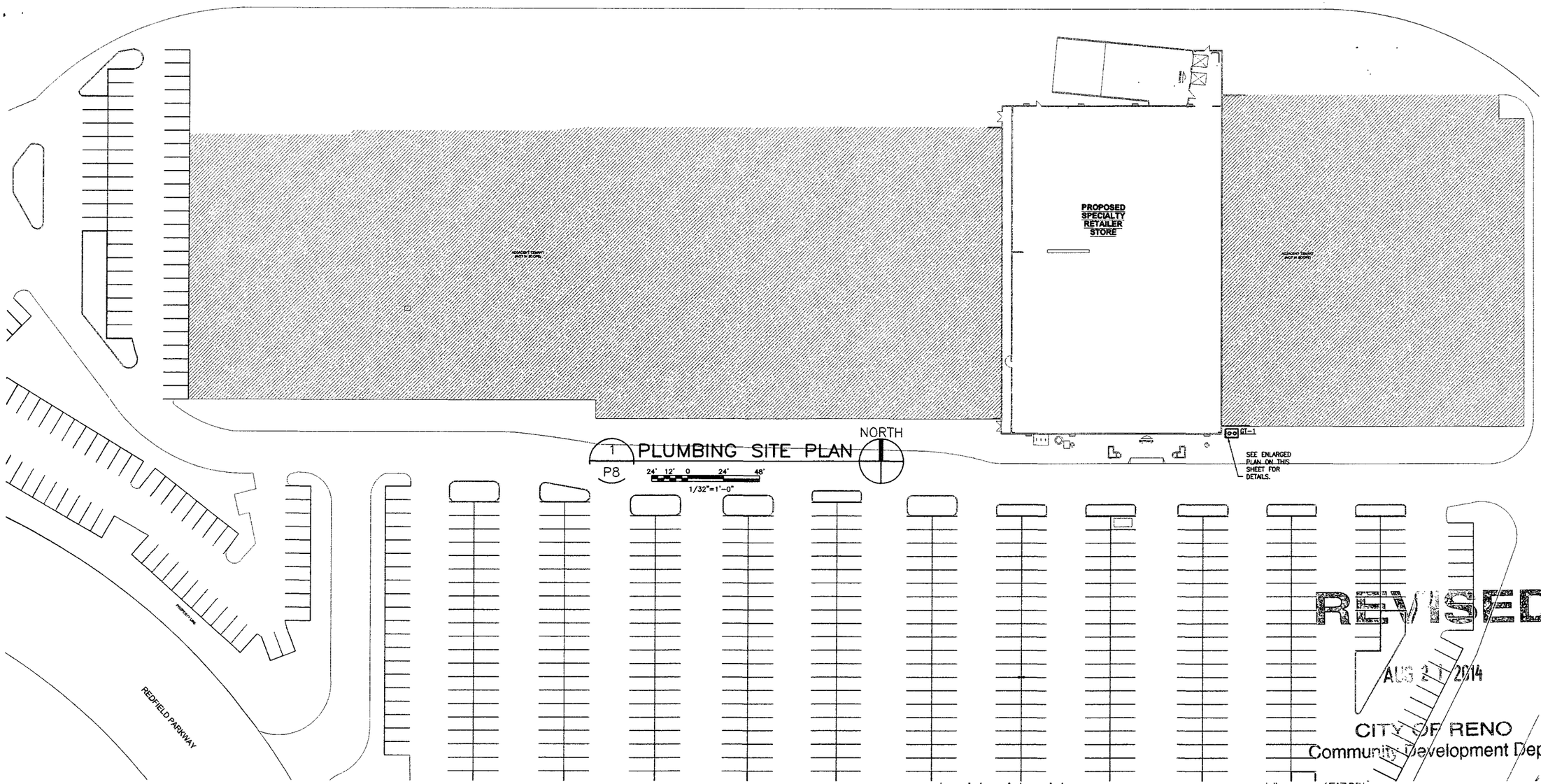
GIVEN & ASSOCIATES INC
MECHANICAL & ELECTRICAL ENGINEERS
735 S. Xenon Ct. #201
Lakewood, Colorado 80228
Ph: 303.716.1270
Fax: 303.716.1272
www.givenandassociates.com
Project # 14071

vega
architecture llc
1335 elati st, unit a
denver, co 80204
t: 303.872.0487
c: 720.841.7301
f: 480.275.3797

# SPECIALTY RETAILER

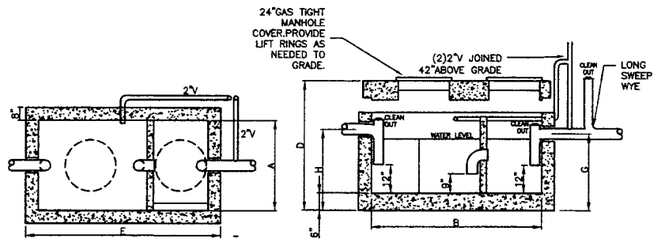
VNVRN

4819 KIETZKE LANE
RENO, NEVADA 89509




1 PLUMBING SITE PLAN
P8
24' 12' 0 24' 48'
1/32"=1'-0"

REVISED
AUG 27 2014
CITY OF RENO
Community Development Dep

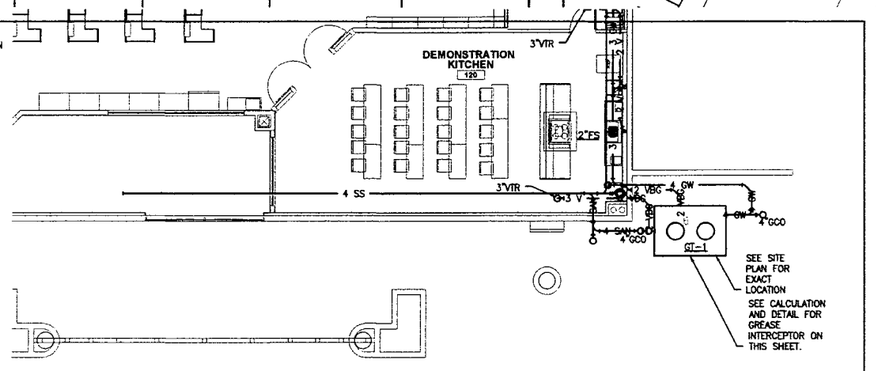



| INTERCEPTOR SIZE SCHEDULE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| TYPE | VOLUME IN GALLONS | DIMENSIONS | | | | | | | |
| | | A | B | C | D | E | F | G | H |
| GW | 800 | 3'- 9" | 7'- 9" | 3'- 6" | 5'- 6" | 8'-10" | 2'- 8" | 4'-2" | 4'- 4" |

NOTE:
1. SECONDARY COMPARTMENT HAS VOLUME EQUAL TO 1/3 OF TOTAL CAPACITY. BAFFLE HIEGHT AND OPENING BETWEEN COMPARTMENTS ARE PER LOCAL CODE.
2. ALL PIPE AND FITTINGS MINIMUM 4" IN DIAMETER.
3. INTERCEPTOR TO COMPARTMENT CONSTRUCTION TO BE REINFORCED THROUGHOUT WITH 6X6 10/10 WIRE MESH.
4. COVERS TO BE REINFORCED LONGITUDINALLY TO MAINTAIN STRUCTURAL INTEGRITY AND COMPRESSIVE STRENGTH .
5. CLEANOUT SHALL BE AN IRON BODY FERRULE WITH BRASS PLUG. PROVIDE TWO WAY CLEANOUT AS REQUIRED BY LOCAL CODE.
6. VENT PIPE SHALL BE . 2-INCHES IN DIAMETER MINIMUM.
7. MANHOLE RING AND COVER SHALL BE NEENAH R-1706 OR EQUAL.
8. VERIFY ALL DIMENSIONS WITH SUPPLIER (COPLEND ENTERPRISE INC.).

| RMC GREASE INTERCEPTOR SIZING | | | |
|---|---|---|---|
| PROJECT: VC Reno | DATE: 09/15/14 | PROJ. ENG. | |
| PROJ. #: | BY: Mike Tamburro | APPROVED | |
| PEAK MEALS PER HOUR: | | 20 | |
| WASTE FLOW RATE: | | 2 | |
| RETENTION TIME: | | 1.5 | |
| STORAGE FACTOR: | | 1.5 | |
| TOTAL GALLONS REQUIRED: | | 90 | |

8 GT-1 GREASE INTERSEPTOR DETAIL & CALCULATION
P8 N.T.S.




2 GREASE INTERCEPOR ENLARGED PLAN
P8 N.T.S.

| Issue / date |
|---|
| 06.17.2014 PERMIT AND CONSTRUCTION |
| 08.11.2014 ASI 1 |
| 08.18.2014 ASI 3 |

PROFESSIONAL ENGINEER - STATE OF NEVADA - No. 016902 - MECHANICAL
AUGUST 19, 2014

sheet title: PLUMBING SITE PLAN

by: BAB

app: JAG

sheet no.: P8 of 8

# City of Reno
# Building Permit

## Permit Number: BLD14-07033

**Total Fees Due:** $7,610.00

**Total VMTs:**

**Address:** 4819 KIETZKE LN

**Job Type:** Building/Commercial/Remodel & Addition/NA

**Parcel No:** 024-055-33
**Zoning:** MU
**Type:**V-B
**Dwelling Units:** 0
**Height:** 44
**Area(Sq.Ft.):** 31948
**Subdivision:**
**Lot:**

**Valuation:** $ 640,000.00
**Occupancy:** SPECIALTY RETA
**Group:** M
**Fire Sprinklers:** Yes
**Fire Alarm:** Yes
**Stories:** 1

**Owner Information:**
FIRECREEK CROSSING OF RENO LL
C/O EPROPERTY TAX-DEPT 207
PO BOX 4900 ,
SCOTTSDALE, AZ 85261

**Tenant Information:**
NATURAL GROCERS VITAMIN COTTAGE
C/O EPROPERTY TAX-DEPT 207
PO BOX 4900
SCOTTSDALE, AZ 85261

**Description of Work to Be Done**
TENANT IMPROVEMENT..
EXTERIOR MODIFICATIONS TO EXISTING BUILDING, INCLUDES PAINTING, STRUCTURAL MODIFICATIONS TO ROOF JOISTS AND EXISTING BEARING WALL; PLUMBING, ELECTRICAL, MECH ,ROOFTOP UNITS

**Builder / General Contractor:**
MCPHERSON CONTRACTORS, INC
3501 SW FAIRLAWN RD, STE 100
TOPEKA, KS 66614
785-273-3880
**NV Lic.:** 128805

The undersigned hereby agrees to defend, indemnify and hold harmless the City of Reno, its officers, employees and agents from and against all demands, claims or liabilities that are asserted against the City of Reno arising from the undersigned's construction activities performed pursuant to the issuance of this permit (including but not limited to the undersigned's failure to perform in accordance with the approved permit and plans), save and except such demands, claims or liability that arise from the City of Reno's sole negligence or willful misconduct.

The undersigned agrees to obtain/maintain commercial liability insurance covering it during the term of the construction authorized by this permit, in an amount no less that the total construction cost of the work to be performed, and warrants that such liability policy shall include completed operations coverage as well as an additional insured endorsement naming the City of Reno as an additional insured with respect to operations performed by or for the undersigned for which the City of Reno has issued a building permit, without exclusion for bodily injury or property damage within the completed operations of hazard.

By Mark Wallard Date 8-8-2014
Builder/General Contractor or the Authorized Agent

**Building Permit**
Permission is hereby granted to execute the work described in this application in accordance with the Rules, Regulations, and Ordinances of the City of Reno.

APPROVED
Building and Safety Division

CITY OF RENO
BUILDING DIVISION

**Subcontractors:**

PIONEER ELECTRIC LTD
1790 CARSON AVE
SPARKS, NV 89431
(775)358-9259
**NV Lic.:** 0017067

IRA HANSEN & SONS PLUMBING & HEATING INC
58 Hardy Dr.
SPARKS, NV 89431
(775)626-7777
**NV Lic.:** 0023569A

FLEET HEATING & AIR INCORPORATED
1760 DEMING WAY
SPARKS, NV 89431
(775)358-0744
**NV Lic.:** 0046312

PAID
AUG 08 2014
CITY OF RENO
PERMIT PLACE

**ALL INSPECTIONS MUST BE COMPLETED**

## 4819 KIETZKE LN LOT:

### Inspection Record

| | Inspector Signature | Date |
|---|---|---|
| **Building Inspections** | | |
| B436 Frame | | |
| B463 Sheetrock | | |
| **Electrical Inspections** | | |
| B543 Electrical Meter Set | | |
| B552 Electrical Rough | | |
| **Mechanical Inspections** | | |
| B540 Mechanical Top Out | | |
| **Plumbing Inspections** | | |
| B504 Plumbing Rough | | |
| B507 Plumbing Top Out | | |
| B516 Gas Piping/Pressure Test | | |
| B528 Manometer | | |
| B531 Grease Interceptor Plumbing | | |
| **Fire Inspections** | | |
| F769 Fire Final | | |
| **WC Health Inspections** | | |
| H785 Health Food Rough | | |
| H788 Health Equipment Final | | |
| H790 Health Final | | |
| **Final Inspections** | | |
| B573 Plumbing Final | | |
| B576 Mechanical Final | | |
| B579 Electrical Final | | |
| B582 Commercial Building Final | | |
| B637 1704 Special Insp Final Report | | |
| B687 1704 Epoxy Anchorage | | |

**On-line inspection scheduling now available on the City of Reno's website www.reno.gov > Online Services Menu > Community Development Permits > Virtual Permit Place. Contractors may create an account and schedule inspections or check plan status.**

**PERMIT NUMBER: BLD14-07033**

## POST THIS PERMIT IN A CONSPICUOUS PLACE

Permit Inspection Record
City of Reno Building Permit

**GENERAL NOTES:**

It is unlawful to remove this record from the job site until all final inspections have been made.

For inspections, please call the Building Div. automated phone line at (775) 334-2396 at any time, 24 hours a day. Contractors may also schedule inspections on-line at anytime once a registered account is established at the Virtual Permit Place at http://applications.cityofreno.com/accela/. Inspections may be set until 5:00 am of the day the inspection is to be performed. On the day of the inspection, you may call the Building Inspector directly or through an operator at (775) 334-2060 from 7:30 a.m. to 8:00 a.m. to request an inspection time.

Fire Department Inspections:
After the Fire Department inspections are scheduled, the Fire Inspector will telephone the contact number provided on the automated inspection dispatch within 48 hours to schedule an inspection time.

Please refer to the Fire Department comments posted on the back front page of the approved plans for additional information and requirements.

NOTICE:

This Form shall be a permanent part of approved plans attached hereto. Approved plans must be on the job site at all times and the inspection card posted for inspection purposes. Plans are approved in accordance the IBC except that noted structural details shall be provided before construction is initiated in noted areas. The Reno Building Division shall receive a copy of all testing and field reports. Any changes in the approved drawings shall be submitted in writing for approval. Provide or repair, as required, sidewalks, curbs and gutters in accordance with RMC. Excavation, fill, compaction and drainage shall comply with the IBC 90% minimum compaction under all concrete slabs.

Corrections and modifications as noted on plans and provisions of building codes and ordinances as adopted by the City of Reno whether specified on plans or not, shall be complied with.

**PERMIT EXPIRATION:**

**In accordance with the IBC, this permit shall expire if work is not commenced within 180 days from the issue date or if work is suspended or abandoned at any time after the work is commenced for a period of 180 days.**

C OF O REQUIRED

BLD14-07033
REV

**City of Reno**
**Department of Community Development**
**Division of Building and Safety**

**Acceptance or non-acceptance of application for special inspector, tester, or registered professional as being a qualified person pursuant to the International Building Code § 1704.1**
**(For use only by the City of Reno)**

Permit number: BLD14-07033
Project address: 4819 Kietzke Lane
Application Number: _____
Applicant: _____

APPLICATION ACCEPTED BY BUILDING OFFICIAL

ARVIL SINGLETON
(Print name)

Arvil Singleton 8-7-14
(Signature and date)

APPLICATION NOT ACCEPTED BY BUILDING OFFICIAL

_____
(Print name)

_____
(Signature and date)

RECEIVED
AUG 07 2014
CITY OF RENO
PERMIT PLACE

**City of Reno**
**Department of Community Development**
**Building & Safety Division**

**Application to Perform Special Inspection and Testing Services**
(Chapter 17 of the International Building Code)

Permit number: _____
Project address: _____
Application number: _____

1. Name of applicant Natural Grocer- Reno

2. List the special inspection and testing service duties you will perform based upon tables 1704.3 thru 1708.1.4 of the International Building Code.

3. List and attach copies of all professional license(s) which demonstrate your competence to perform the special inspection and testing services listed in Question 2:
Special Inspector Andrew Jordan IAC
12/2/04 Tr Bot Structural Steel & Welding
5111854 - 85

4. List all disciplinary actions and outcomes.

**Each person signing below verifies that the above-named applicant meets or exceeds the International Building Code qualifications to perform each listed inspection above and will comply with all local, state, and federal laws. Each person signing below understands and agrees that the project owner or contractor or the engineer of record or architect of record acting as the owner's agent is responsible for funding the special inspection and testing services.**

| **Owner or Contractor** | **Project Engineer/Architect** | **Special Inspector/Tester Registered Professional** |
|---|---|---|
| Rick Wantland | Jon Eldridge | Katie Brandhueller PE |
| Project Superintendent | Structural Engineer | Senior Engineer |
| (Print name and Title) | (Print name and Title) | (Print name and Title) |
| (Signature and Date) | (Signature and Date) | (Signature and Date) 8/5/14 |

VA

Home > My ICC

**Certified Professional Information:**

Last, First MI: Jordan, Andrew L

Certified under this name: Andrew L Jordan

Company: Converse Consultants

City, State Zip: Reno, NV 89506

Certification Type(s): Reinforced Concrete Special Inspector Associate (expires 08/29/2015)
Structural Masonry Special Inspector (expires 08/29/2015)
Structural Steel & Welding Special Inspector (expires 08/29/2015)

Contact Information

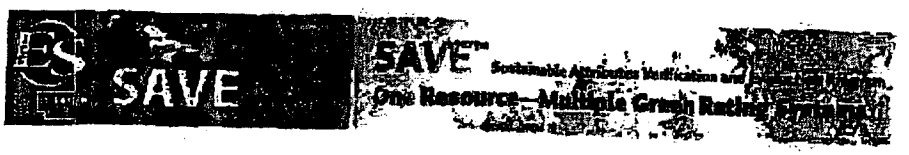
1-888-ICC-SAFE (422-7233), ext. 5534

Contact Us

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INTERNATIONAL BUILDING CODE SPECIAL INSPECTION SCHEDULE
To be completed by Project Design Engineer/Architect

| REQUIRED | | CONTINUOUS | PERIODIC | IBC |
|---|---|---|---|---|
| | 1. Inspection of fabricators | | | 1704.2 |
| | 2. Wood construction | | | 1704.6 |
| | 3. Soils | | | 1704.7 |
| | 4. Pile foundations | | | 1704.8 |
| | 5. Pier foundations | | | 1704.9 |
| | 6. Sprayed fire-resistant materials | | | 1704.11 |
| | a. Surface Conditions | | | 1704.11.1 |
| | b. Applications (temp) | | | 1704.11.2 |
| | c. Thickness | | | 1704.11.3 |
| | d. Density | | | 1704.11.4 |
| | e. Bond Strength | | | 1704.11.5 |
| | 7. Exterior insulation and finish systems | | | 1704.12 |
| | 8. Special cases (e.g. epoxy, hardy panels, ICF, SIPS) | | | 1704.13 |
| | Smoke control 909 IBC | | | 1704.14 |
| | a. | | | |
| | b. | | | |
| | c. | | | |
| | d. | | | |
| | e. | | | |

SEISMIC RESISTANCE SPECIAL INSPECTIONS REQUIRED

| REQUIRED | | CONTINUOUS | PERIODIC | IBC |
|---|---|---|---|---|
| X | Structural steel | | | 1707.2 |
| | Structural wood | | | 1707.3 |
| | Cold-formed steel framing | | | 1707.4 |
| | Storage racks& access floors | | | 1707.5 |
| | Architectural components | | | 1707.6 |
| | Mechanical & electrical components | | | 1707.7 |
| | Seismic isolation systems | | | 1707.8 |

1704.3

REQUIRED VERIFICATION AND INSPECTION OF STEEL CONSTRUCTION

| REQ'D | VERIFICATION AND INSPECTION | CONT. | PERIODIC | IBC REF. |
|---|---|---|---|---|
| | 1. Material verification of high-strength bolts, nuts and washers: | | | |
| | a. Identification markings to conform to ASTM standards specified in the approved construction documents. | | X | |
| | b. Manufacturers certificate of compliance required. | | X | |
| | 2. Inspection of high-strength bolting: | | | |
| | a. Slip critical connections | X | X | 1704.3.3 |
| | 3. Material verification of structural steel: | | | |
| | a. Identification markings to conform to ASTM standards specified in the approved construction documents. | | | 1708.4 |
| | 4. Material verification of weld filler materials: | | | |
| | a. Identification markings to conform to AWS specification in the approved construction documents. | | | |
| | 5. Inspection of welding: | | | |
| | a. Structural Steel: | | | |
| | 1) Complete and partial penetration groove welds | X | | 1704.3.1 |
| | 2) Multi-pass fillet welds. | X | | 1704.3.1 |
| | 3) Single-pass fillet weld v> 5/16" | X | | 1704.3.1 |
| | 4) Single-pass fillet weld v< 5/16" | | X | 1704.3.1 |
| | 5) Floor and deck welds | | X | |
| | b. Reinforcing steel: | | | |
| | 1) Verification of weldability of reinforcing steel other than ASTM A 706 | | X | 1903.5.2 |
| | 2) Reinforcing steel-resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special reinforced concrete shear walls and shear reinforcement. | X | | 1903.5.2 |
| | 3) Shear reinforcement | X | | 1903.5.2 |
| | 4) Other reinforcing steel. | | X | 1903.5.2 |
| | 6. Inspection of steel frame joint details for compliance with approved construction documents: Details such as bracing and stiffening. Member locations. Application of joint details at each connection. | | X | 1704.3.2 |

TABLE 1704.4
REQUIRED VERIFICATION AND INSPECTION OF CONCRETE CONSTRUCTION

| REQ'D | VERIFICATION AND INSPECTION | CONT. | PERIODIC | IBC REF. |
|---|---|---|---|---|
| | 1. Inspection of reinforcing steel, including pre-stressing tendons, and placement. | | X | 1903.5<br>1907.1<br>1907.7<br>1914.4 |
| | 2. Inspection of reinforcing steel welding in accordance with Table 1704.3, Item 5B | | | 1903.5.2 |
| | 3. Inspect bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased. | X | | 1912.5 |
| | 4. Verifying use of required design mix. | | X | 1904<br>1905.2-<br>1905.4<br>1914.2<br>1914.3 |
| | 5. At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete. | X | | 1905.6<br>1914.10 |
| | 6. Inspection of concrete and shotcrete placement for proper application techniques. | X | | 1905.9<br>1905.10<br>1914.6<br>1914.7<br>1914.8 |
| | 7. Inspection for maintenance of specified curing temperature and techniques. | | X | 1905.11<br>1905.13<br>1914.9 |
| | 8. Inspection of pre-stressed concrete: | | | |
| | 9. Application of pre-stressing forces. | X | | |
| | 10. Grouting of bonded pre-stressing tendons in the seismic-force-resisting system. | X | | |
| | 11. Erection of pre-cast concrete members. | | X | |
| | 12. Verification of in-situ concrete strength, prior to stressing of tendons in post tensioned concrete and prior to removal of shores and forms from beams and structural slabs. | | X | 1906.2 |

TABLE 1704.5.1
LEVEL 1 SPECIAL INSPECTIONS

| REQ'D | INSPECTION TASK | CONT. | PERIODIC | IBC REF. |
|---|---|---|---|---|
| | 1. As masonry construction begins the following shall be verified to ensure compliance: | | | |
| | a. Proportions of site-prepared mortar. | | X | |
| | b. Construction of mortar joints. | | X | |
| | c. Location of reinforcement and connectors. | | X | |
| | d. Pre-stressing technique | | X | |
| | e. Grade and size of pre-stressing tendons and anchorages. | | X | |
| | 2. The inspection program shall verify: | | | |
| | a. Size and location of structural elements. | | X | |
| | b. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction. | | X | |
| | c. Specified size, grade and type of reinforcement. | | X | |
| | d. Welding of reinforcing bars. | X | | |
| | e. Protection of masonry during cold weather (temperature below 40° F) or hot weather (temperature above 90°F). | | X | Sec 2104.3 2104.4 |
| | f. Application and measurement of pre-stressing force. | | X | |
| | 3. Prior to grouting, the following shall be verified to ensure compliance: | | | |
| | a. Grout space is clean | | X | |
| | b. Placement of reinforcement and connectors and pre-stressing grout for bonded tendons. | | X | |
| | c. Proportions of site-prepared grout and pre-stressing grout for bonded tendons. | | X | |
| | d. Construction of mortar joints. | | X | |
| | 4. Grout placement shall be verified to ensure compliance with code and construction document provisions. | X | | |
| | a. Grouting of pre-stressing bonded tendons. | X | | |
| | 5. Preparation of any required grout specimens, mortar specimens and/or prisms shall be observed. | X | | Sec. 2105.2.2 2105.3 |
| | 6. Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified. | | X | |

BLD 14-07033

TRUCKEE MEADOWS WATER AUTHORITY
www.tmwa.com

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1355 Capital Blvd. •P.O. Box 30013 •Reno, NV 89520-3013
Water Resources (P)775.834.8029 (F)775.834.8280

August 5, 2014

Permit Place
Community Dvlp. Dept.
City of Reno
P.O. Box 1900
Reno, NV 89505

RECEIVED
AUG 0 5 2014
CITY OF RENO
PERMIT PLACE

RE: Project: Natural Grocers and Vitamin Cottage (TI)
Address: 4819 Kietzke Ln. Reno, NV
Parcel #: 024-055-33

To Whom It May Concern:

This letter is to inform you that no additional water rights are required for this project. **Landscaping is not included**. Should you have any further questions in regard to the above project, please call me at (775) 834-8021.

Sincerely,

David Nelson
Water Resources Technician

DN/dn

*Truckee Meadows Water Authority is a not-for-profit, community-owned water utility, overseen by elected officials and citizen appointees from Reno, Sparks and Washoe County.*

BLD 14-07033
Revision

We are submitting a special inspections package (BLD14-07033). Contact for this package is Kathi Brandmueller at 775-856-3833

RECEIVED
AUG 07 2014
CITY OF RENO
PERMIT PLACE

# Building Permit Review

To the Applicant: This information is necessary in order for the Planning Division to process your building permit application. Please answer all the questions on this form. Failure to complete all sections may delay or prevent the approval of your permit. If you have questions about this application, please call 321-8309.

Assessor's Parcel Number: 024-055-33 *

Project Name: SPECIALTY RETAILER

Address: 4819 KIETZKE LANE, RENO, NV 89509 Phone: 303.872.0487

*(If you are unsure, you may contact the Washoe County Assessor at 328-2277)

RECEIVED
JUN 18 2014
CITY OF RENO
Community Development Dept.

Zoning: AC | ARTERIAL COMMERCIAL

Type of Business: RETAIL SALES | CONVENIENCE - GROCERY STORE

| | | |
|---|---|---|
| Will your business area be increased? | Yes G | (No) G |
| Will there be any change in how the space will be used in your business (i.e. storage converted to office use, etc.)? | (Yes) G | No G |
| Will you be expanding or reconstructing any portion of an existing, paved parking area? | Yes G | (No) G |
| Will your business, when completed, be open between the hours of 11 p.m. and 6 a.m.? | Yes G | (No) G |
| Will you be using, selling or storing any materials defined in RMC 18.06.030(31) and/or NRS 459.430 as hazardous wastes? (if you are unsure, please consult with the District Health Department at 328-2400) | Yes G | (No) G |

If yes, please describe: _____

| | | |
|---|---|---|
| Will there be an application for a new liquor license following the expansion or remodel? | Yes G | (No) G |
| With the remodel or expansion, will any new mechanical equipment be added at roof or ground level? | (Yes) G | No G |

If so, please describe location and manner of screening: ALL RTU'S TO BE PLACED IN EXISTING RTU LOCATIONS, ADDITION OF GENERATOR & ROOFTOP CONDENSORS.

Are you located in a

(NO) Transit Corridor (180.06.510B) (Within 1/4 mile of Virginia Street from North McCarran Boulevard to South Meadows Parkway or from Fourth Street from Virginia Street to the east City limits)

(YES) Focal Center (18.06.510C) (Within 1/4 mile of UNR, Meadowood Mall, Park Lane, Reno-Tahoe International Airport, or in the Downtown)

---

If you have answered "No" to all of the above questions, skip to the reverse of this page for signature. If you have answered AYes@ to one or more of these questions, please provide the following:

What is the size of the property where the expansion or remodel is located?
(Please provide acres or square feet) 17.69 ACRES

Please indicate the size of the existing building, in square feet: 117,740 SF

If you are expanding an existing building, please provide the total new area, in square feet: 0

Does the business for which you are performing the remodel use the whole building? Yes G (No) G

If not, please indicate the area, in square feet, to be used by the business you represent: 31,948 SF

What is the structure being used for now? OFFICE DEPOT - RETAIL



(Continued on reverse)

*Building Permit Review (Continued)*

What will the structure be used for once your remodel or expansion is completed? SPECIALTY RETAIL - GROCERY

If different portions of your business area are used for different purposes, please indicate how much area will be devoted to different types of activities (for example, office, restaurant, sales area, residence), using square feet:

Office Space 1,309 sq. ft. Retail (incl. Restaurants) 16,435 sq. ft.
Warehouse 12,070 sq. ft. Residential Dwelling Units Ø total
Studio # Ø 1 bedroom # Ø
2-3 bedroom # Ø 4+ bedroom # Ø

How many paved, striped parking spaces are on the property? 889

Are any of the existing parking spaces accessible? If so, how many? 16 (Yes) No
Is there existing landscaping on the property? (Yes) No
Please indicate, in approximate square feet, the total existing landscaped area: 124,400 SF
Is there any landscaping installed between the parking area and the street? (Yes) No
Please describe: 30' BUFFER ZONE OF GRASS, TREES & BUSHES
Are you on a corner lot? Yes (No)
If yes, please indicate cross-street:
Will the new business use an outdoor loudspeaker? Yes (No)
Signs (describe)

**AFFIDAVIT**

I/WE, DAVID GROOMS, VERIFY that I/we am/are owner(s) of this property or his duly authorized agent and that the foregoing statements and answers herein contained and the information herein submitted are in all respects true and correct.

SIGNED: _____ SIGNED: _____

Mailing: 1335 ELATI STREET, UNIT A Mailing: _____

Address: DENVER CO 80204 Address: _____

Phone: 303 842 0487 Phone: _____

**M°GLAMERY**
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structural • civil • forensic

3734 Osage Street | Denver, CO 80211
**T: 303.455.8988 | F: 303.455.8446**
mcglamerystructural.com
A VERTEX Company | vertexeng.com

BLD14-07033

June 19, 2014

Mr. Eric Simonson
Building Official
City of Reno
1 East First Street
Reno, NV 89501

RECEIVED
JUN 20 2014
CITY OF RENO
Community Development Dept.

Re: Specialty Retailer @ 4819 Kietzke Lane

Dear Mr. Simonson,

We are writing to confirm that the additional roof framing members specified within the structural design drawings dated 6.17.14 have been designed to support the proposed rooftop equipment in accordance with the International Building Code, 2012 Edition, and ASCE 7-10.

Please call with any questions.

Sincerely,
**McGlamery Engineering Group, LLC**

Jon J. Eldridge, PE, LEED AP
Project Engineer
JJE/smc

APPROVED
6.20.14
CITY OF RENO
BUILDING OFFICIAL

PROFESSIONAL ENGINEER - STATE OF NEVADA
JON J. ELDRIDGE
Exp: 12.31.14
CIVIL
No. 22635
6.19.14

BLD 14-07033
REV

vega
architecture llc

Ms. Julie Steinlage
City of Reno | Building and Safety Division
1 East First Street
Reno, NV 89501
**Date 7/2/14**

RECEIVED
JUL 03 2014
CITY OF RENO
PERMIT PLACE

RE: VNVRN | Specialty Retailer Reno
4819 Kietzke Lane
**BUILD NUMBER: BLD14-07033**
Response to Comments

Dear Ms. Julie Steinlage,

This letter is in response to the comments made by the City of Reno dated July 2, 2014, after review of the VNVRN | Specialty Retailer Reno Permit and Construction Documents, dated June 17, 2014. All required documents are attached.

Building Review
Reviewed by Arvil Singleton on June 18, 2014

1. Provide cut sheets and listings for all kitchen and scullery equipment.

   **Response: Please see the attached cut sheets for all kitchen and scullery equipment. A letter is also enclosed outlining the use of the kitchen and scullery. This has also been sent to the Health Department for review.**

2. Provide a fire rated grease hood exhaust duct enclosure shaft.

   **Response: The grease duct does not penetrate a fire rating assembly so a shaft is not required. We are also providing a pre-manufactured zero clearance grease duct system that does not require an enclosure to isolate the grease duct from combustibles.**

3. Provide a cover letter addressing the listed comments, how each comment is addressed, identify revisions on plans by clouding the areas and tag with a delta symbol.

   **Response: All required files are attached. We are not aware of any comments that will require a change to our drawing plan set. I spoke with Julie Steinlage on July 2, 2014 at 10:15 AM to approve that this response can be delivered by mail as no large format drawings will be replaced.**

Environmental Review
Reviewed by Arvil Singleton on July 01, 2014

1. Provide grease interceptor sizing using the enclosed formula.

   **Response: Please see the attached stamped and signed document showing the grease interceptor sizing using the provided formula.**

1335 Elati St Unit A | Denver, CO 80204 303.872.0487 720.862.3822 vegaarchitecture.com
ADDRESS TEL FAX URL

Health Review
Reviewed by Mike Wolf on June 23, 2014

1. Needs asbestos sampling.

   **Response: Asbestos report of existing building is currently underway. Per a conversation with Mike Wolf, the Asbestos report will be hand delivered to the Washoe County Health Department for review and a pink slip will be provided for release of hold on building permit.**

Structural Review
Reviewed by Arvil Singleton on July 01, 2014

1. Provide Special Inspection package for epoxy anchorage.

   **Response: Special Inspection package to be provided by others prior to issuance of permit per my conversation with Julie Steinlage on July 2, 2014 at 10:15 AM.**

1. Provide engineering to verify the existing roof system will support the added roof top equipment including grease hood.

   **Response: All proposed rooftop units for this project are replacing existing units that weigh more than the new proposed units, with the exception of RTU #5. Per the mechanical engineer for this project, the proposed RTU #5 is 125 lbs heavier than the current unit that is being replaced. However, we feel that the existing adjacent joists are sufficient to support this minimal additional RTU weight.**

   **Where new equipment is being added to the roof, such as the generator and condensers, we are specifying additional roof framing members to support this new load per sheet S2.1. Calculations are provided for this new roof framing in support of the proposed equipment loading.**

**ATTACHMENTS: Cut sheets for all kitchen and scullery equipment, Description of demonstration kitchen procedures, Grease Interceptor Sizing Sheet, Cut sheet and installation instructions for zero clearance grease duct.**

Please call or email with any questions.

Sincerely yours,




David Grooms | AIA | LEED AP

1335 Elati St Unit A | Denver, CO 80204 303.872.0487 720.862.3822 vegaarchitecture.com
ADDRESS TEL FAX URL

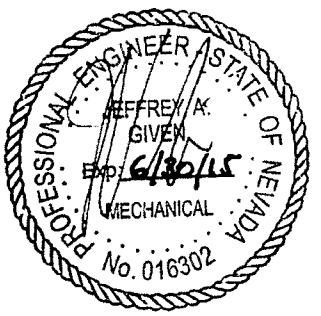
BLD14-07033
REV

# RMC GREASE INTERCEPTOR SIZING

| | | | |
|---|---|---|---|
| PROJECT: VC Reno | DATE: | 07/01/14 | PROJ. ENG. |
| PROJ. #: | BY: | Mike Tamburro | APPROVED |

| | |
|---|---|
| PEAK MEALS PER HOUR: | 20 |
| WASTE FLOW RATE: | 2 |
| RETENTION TIME: | 1.5 |
| STORAGE FACTOR: | 1.5 |
| TOTAL GALLONS REQUIRED: | 90 |

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CITY OF RENO
PERMIT PLACE

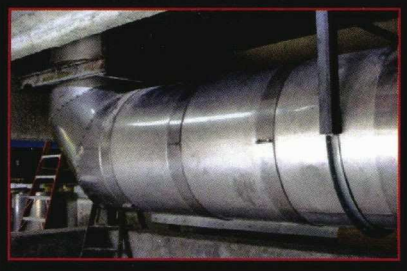


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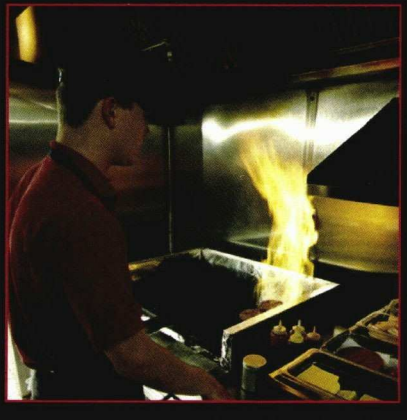
# THE CLEAR CHOICE IN GREASE DUCTS

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PLANNING & DEVELOPMENT SERVICES

## ZERO CLEARANCE GREASE DUCT AND INTEGRAL FIRE-RATED CHASE










- *3" & 4" Wall Thickness*
- *High Temperature Blanket Insulation*
- *5" to 36" I.D. Diameters*
- *Smaller Footprint with 3" Wall*
- *Lighter Weight*
- *2-Hour Fire Rating*
- *Limited Lifetime Warranty*

ZeroClear™ is the most innovative factory-built kitchen grease duct in the industry. With a zero clearance rating, our integrated chase construction sets the standard for design.

Available in both stainless and aluminized steel exteriors, ZeroClear™ can be customized to your unique application requirements. ZeroClear™ is the clear choice for new restaurant construction or retrofitting future expansions or modifications.

c UL us LISTED
CLASSIFIED UL

UL Listed per UL1978
UL Classified per UL 2221
IMC, UMC and NFPA96 Code Compliance

USA: 1.800.848.2149
CDA: 1.800.263.9308
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www.zeroclear.com

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# ZERO CLEARANCE GREASE DUCT AND INTEGRAL FIRE-RATED CHASE

## INTEGRAL CHASE

No longer will architects or contractors need to design and install a fire-rated chase to provide protection as required for welded steel or other grease duct designs. The ZeroClear system helps reduce floor space requirements *(fig.1)* and additional time and costs associated with constructing an on-site fire chase *(fig.2)*.

## SETTING THE STANDARD

ZeroClear meets the following stringent codes and standards:

| CERTIFICATIONS | | | |
|---|---|---|---|
| Model | UL1978 | UL2221 | ASTM-E2336* |
| Z3/ZC | Yes | Yes: 2 Hr | Yes: 1 Hr |
| Z4/ZC+ | Yes | Yes: 2 hr | Yes: 2 hr |

*ASTM E2336 is only code required for field applied grease duct enclosures (i.e. grease duct insulation wraps applied to field fabricated grease duct)

## PERFORMANCE

Energy efficiency and overall performance are greatly improved with round grease duct designs due to less flow resistance. In addition, round systems are much easier to clean and reduce the opportunity for grease accumulation in the corners, like rectangular systems, increasing the risk of fire.

## SIMPLICITY

Almost no slope is required on horizontal runs of ZeroClear. Carbon steel duct systems require a 1/4" drop per 1 foot of ducting for proper contaminant drainage. *Example: A 40ft. horizontal run of Selkirk's Grease Duct would require 10 inch less headroom than a typical field fabricated system.*

## DESIGN SERVICES

The modular concept of factory-built grease duct provides for maximum design flexibility and ease of installation. Just ask for ZeroClear when utilizing your design services engineer for a complete system layout. The Selkirk engineering staff provides design services for special product applications and for installations requiring complex routing or unusual manifold systems.

zero CLEAR™

"The Clear Choice."

c UL us LISTED

CLASSIFIED UL

UL Listed per UL1978
UL Classified per UL 2221
IMC, UMC and NFPA96 Code Compliance

SCIZCFLYER 06/11

## Grease Duct "Footprint" – 24" I.D. ZeroClear™ vs. 12"x36" Fabricated Welded Steel

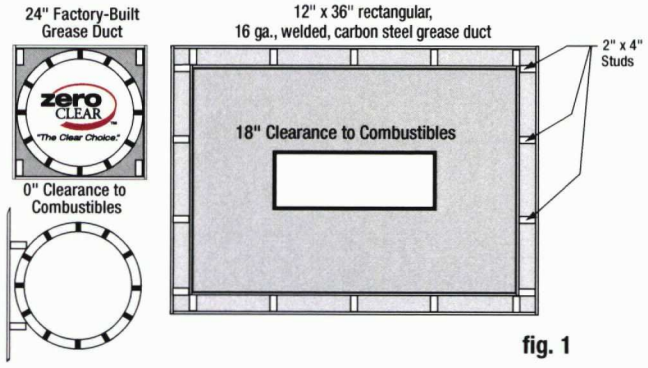



fig. 1

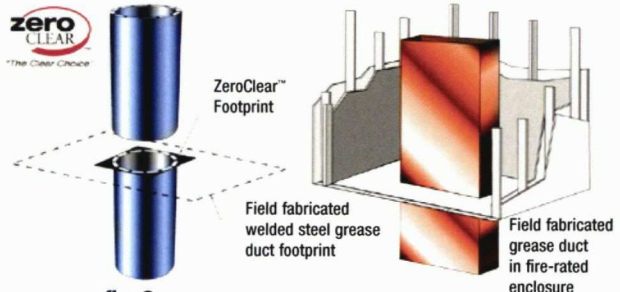



fig. 2

## Comparison of wrapped, welded steel and ZeroClear™ after 2000ºF (simulated grease fire) for 30 minutes.




***ZeroClear™*** *after 2000ºF (simulated grease fire) for 30 minutes.*

*12"x 36" rectangular, 16 Ga., welded, carbon steel duct with generic "wrap" insulation – after 2000ºF (simulated grease fire) for 30 minutes.*

## THE CLEAR ADVANTAGE

- *Better flow characteristics*
- *Prefabricated/modular design*
- *Superior safety and high temperature resistance*
- *Stainless steel maintains strength at much higher temperatures than carbon steel*
- *Cylindrical duct systems are far superior structurally compared to rectangular ducts*
- *Limited Lifetime Warranty*

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# INSTALLATION INSTRUCTION SUPPLEMENT

## MODEL PS & IPS FOR TYPE B GAS VENT

c UL us LISTED

**⚠WARNING**
**Failure to follow these Installation Instructions could cause FIRE, CARBON MONOXIDE POISONING, OR DEATH. If you are unsure of Installation requirements, call the Phone Number listed on the front of these instructions.**

**READ AND FOLLOW THESE SUPPLEMENTAL INSTRUCTIONS IF THE MODEL PS OR IPS SYSTEM BEING INSTALLED INCLUDE LABELS CONFIRMING LISTING AS TYPE B GAS VENT.**

Model PS and IPS vent systems are also Listed by Underwriters Laboratories, Inc. (UL) for use as a Type B Gas Vent in accordance with the Standard for Gas Vent, UL-441.

This Installation Instruction Supplement includes very important information specific to the Type B Gas Vent application for use with Model PS & IPS systems. This information is intended only to supplement the main instructions found in this document. For complete guidelines for installation and maintenance of Model PS & IPS, see the main section of this document in conjunction with this instruction supplement.

Type B Gas Vent is intended for use only with Listed gas appliances incorporating draft hoods and other Listed gas appliances specified for use with Type B gas vent. When used in an application where the appliance is Listed for use with Type B Gas Vent, Model PS and IPS may be installed as Type B gas vent with the following clearances to combustibles:

| Clearances for Type B Gas Vent | | |
|---|---|---|
| **Model** | **Diameter** | **Minimum Airspace Clearance to Combustibles** |
| PS | 5" – 24" | 1" |
| PS | 26" – 48" | 2" |
| IPS | 5" – 48" | 1" |

If the appliance to which Model PS or IPS is attached is not Listed for use with Type B gas vent, refer to the main PS/IPS Installation Instructions and follow the installation guidelines for the flue gas temperature and pressure ratings applicable. PS / IPS installation as a Building Heating Appliance or 1400°F chimney may be required. If the application involves maximum flue gas temperatures in the range suitable for Type B gas vent (400°F maximum above ambient) but the appliance is not Listed for use with Type B gas vent, the Local Authority having Jurisdiction may accept the installation / use of such, at the clearances specified above, as an "Engineered System" per local code.

### REQUIRED PARTS

When installed as Type B Gas Vent in sizes 5" through 12" diameter, the Model PS / IPS system should incorporate either a Listed Type B Gas Vent termination cap or a Model UT "CT" termination cap in order to comply with UL441 wind test / cap requirements. Also, when installed as a Type B gas vent, ventilated roof assemblies are not required. However, proper minimum airspace clearances as noted above must be maintained.

### SURROUNDINGS / ENCLOSURE

When used as a Type B Gas Vent, Model PS and IPS may be enclosed in a chase fabricated from combustible materials. Check local codes to determine the required fire rating, if any, for such enclosures. When used as a Type B gas vent and extending up through any zone of a building outside that in which the heating appliance to which it is connected is located, Model PS and IPS should be provided with a fire rated enclosure. Such enclosure should have a fire resistance rating equal to or greater than that of the floor, wall, or roof assemblies through which it passes.

### POSTING OF NOTICES

When used as a Type B Gas Vent, a notice should be posted near the connection to the appliance indicating that the Model PS / IPS system, as installed, is to be used only with gas appliances producing flue gas temperatures not exceeding 400°F above ambient. The notice should also include a recommendation that the vent be inspected prior to the heating season to assure an unrestricted flue. For such purposes the cap may need to be removed and replaced after inspection.

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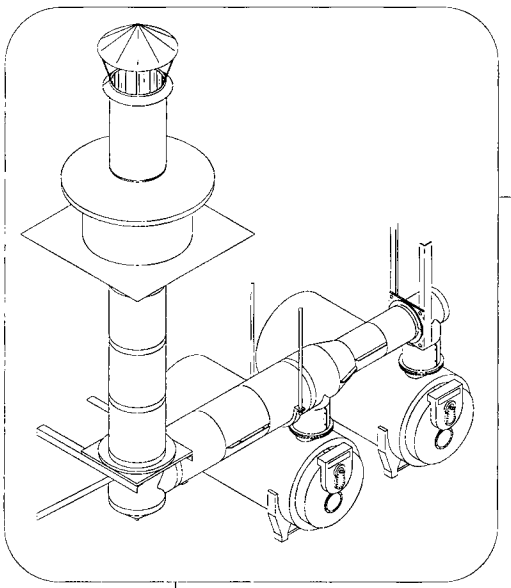
Selkirk Commercial/Industrial representatives throughout North America are qualified to provide field service to assist contractors, builders, engineers and architects in designing Boiler Stacks and Breechings, Grease Ducts, Diesel and Turbine Exhausts, Freestanding Stack Systems, and Residential Chimney and Gas Vent Systems. Contact the Selkirk Regional Office nearest you for assistance.

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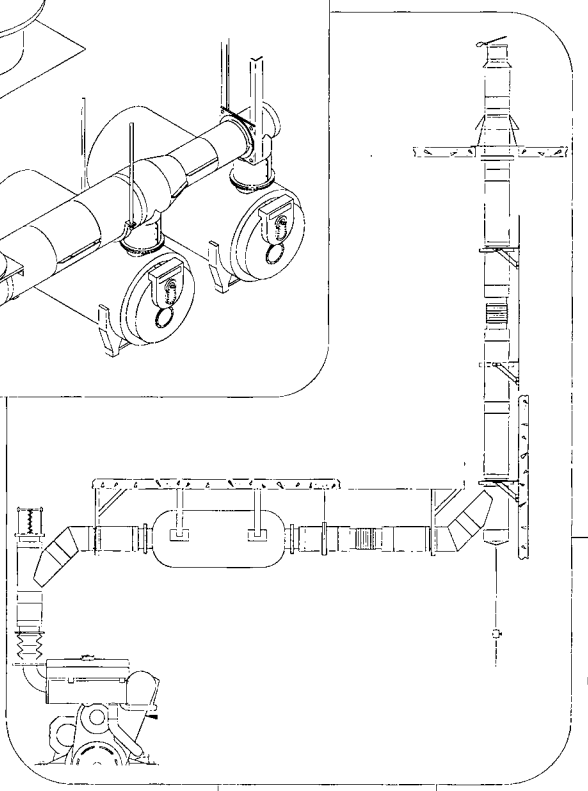
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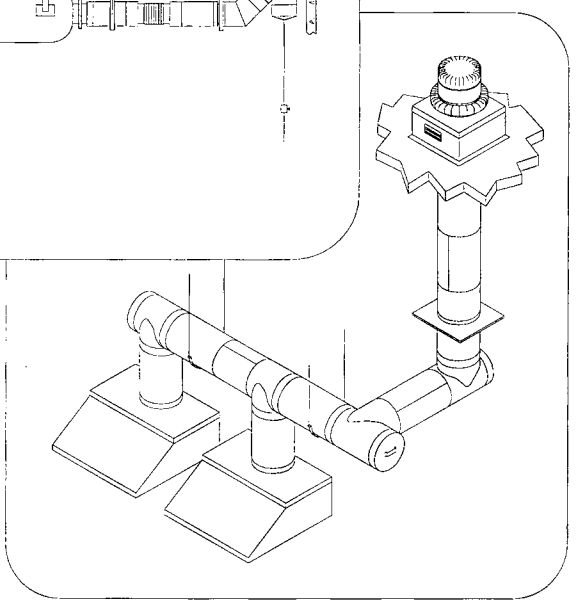
# INSTALLATION INSTRUCTIONS & MAINTENANCE GUIDE

## MODEL G, PS, IPS & ZC
## SINGLE WALL, DOUBLE WALL AIR & FIBER INSULATED POSITIVE PRESSURE PIPING SYSTEMS



- BOILER STACK
- ENGINE EXHAUST
- GREASE DUCT





c UL us
LISTED

**A MAJOR CAUSE OF CHIMNEY RELATED FIRES IS FAILURE TO MAINTAIN REQUIRED CLEARANCES (AIR SPACES) TO COMBUSTIBLE MATERIALS. IT IS OF UTMOST IMPORTANCE THAT THIS CHIMNEY BE INSTALLED IN ACCORDANCE WITH THESE INSTRUCTIONS.**

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# GENERAL INFORMATION

## SAFETY PRECAUTIONS

**⚠WARNING**

**Failure to follow these Installation Instructions could cause FIRE, CARBON MONOXIDE POISONING, OR DEATH. If you are unsure of Installation requirements, call the Phone Number listed on the front of these instructions.**

**Caution-Risk of injury. Sheet metal parts may be sharp. Always wear gloves and appropriate eye, foot, and other protection when handling these products.**

Follow these instructions carefully. Failure to follow these instructions could result in an unsafe installation. If you are unsure of any instructions contact the factory at the number indicated on the last page of these instructions.

A major cause of chimney/duct related fires is failure to maintain required clearances (airspace) to combustible materials. It is of utmost importance that this product be installed only in accordance with these instructions.

## FEATURES

Model G, PS and IPS products are cylindrical, prefabricated, modular venting systems incorporating flanged joints, designed for both quick assembly and pressure sealing capability. Model G is single wall vent. Model PS is of double wall construction incorporating a 1" airspace between walls and Model IPS incorporates 1" to 4" thick fiber insulation. Their circular cross section and high quality stainless steel inner wall construction provide for a system with high strength-to-weight ratio and low friction losses.

## UNDERWRITERS LABORATORIES LISTINGS

Selkirk single wall Model G and double wall models PS and IPS venting systems are Listed by Underwriters Laboratories, Inc. (UL) under UL File MH6673 in the following product categories and in the diameters indicated:

| **Model G** (Single wall pipe) | |
|---|---|
| Grease Duct for Restaurant Cooking Appliances | 5" - 36"ID |
| Chimney Liner for Existing Chimneys (Canada) CAN/ULC S635 | 5" - 48"ID |

| **Model PS** (Double wall, 1" air insulation) | |
|---|---|
| Building Heating Appliance Chimney | 5"- 48" ID |
| 1400° Fahrenheit Chimney | 5"– 48"ID |
| Grease Duct for Restaurant Cooking Appliances | 5" - 48"ID |

| **Model IPS** (Double wall, 1, 2, 3 or 4" thick fiber insulation) | |
|---|---|
| Building Heating Appliance Chimney | 5"- 48"ID |
| 1400° Fahrenheit Chimney | 5"–48" ID |
| Building Heating Appliance Chimney(Type HT) | 5"- 24"ID |
| Low Temperature Venting System, Type L | 5" - 24"ID |
| Grease Duct for Restaurant Cooking Appliances | 5" - 48"ID |

For Zero clearance grease duct applications (model IPS-Z3 & IPS-Z4) see Section G, "Grease Ducts".

## APPLICATIONS

**Building Heating Appliance Chimney Listing** - Under this category, Model PS and IPS have been determined suitable for venting flue gases at a temperature not exceeding 1000°F, under continuous operating conditions, from gas, liquid and solid fuel fired appliances. Intermittent operation (less than one hour) at temperatures not exceeding 1400°F, and brief (maximum 10 minute) operation at temperatures not exceeding 1700°F, is also permitted under this application.

**Building Heating Appliance Chimney (Type HT) Listing** - Under this category, the 5" through 24" ID Model IPS has qualified for UL's additional, optional "Type HT" rating (for Building Heating Appliance Chimneys) which indicates they have been evaluated and found suitable for exposure to 2100°F flue gases for a 10 minute duration. Many local, state and regional code authorities require a "Type HT" rating for chimneys for certain appliance venting applications; especially solid fuel.

Building Heating Appliance Chimneys are suitable for use with Building Heating Appliances and other Low Heat Appliances as described in the Chimney Selection Chart of National Fire Protection Association (NFPA) Standard No. 211.

**1400°F Chimney Listing** - Under this category, Model PS and IPS have been determined suitable for venting flue gases at a temperature not exceeding 1400°F, under continuous operating conditions and intermittent service (less than one hour) at temperatures not exceeding 1800°F. As such, Model PS and IPS are suitable for use with ovens and furnaces as described in the Chimney Selection Chart of NFPA No. 211, in addition to other Applications.

**Low Temperature Venting System, Type L (L-Vent) Listing** - Under this category, 5" through 24" ID Model IPS has been determined suitable for use with gas and oil fueled appliances Listed as suitable for venting with Type L or Type B venting systems. This qualifies the system for handling continuous flue gas temperatures at a maximum of 480°F above ambient, and permits full enclosure in combustible chase construction, assuming the specified minimum airspace clearance-to-combustibles is maintained.

**Grease Duct for Commercial Cooking Appliances Listing** - Applications and instructions for this category are covered in Section "G" entitled "Grease Duct".

Based upon the above referenced UL Listings and supplemental, UL confirmed pressure testing, Model PS and IPS are also suitable for use as complete exhaust systems for diesel engine and gas turbines. When Model PS/IPS is used as an engine or turbine exhaust it is intended to be installed in accordance with NFPA 37 "Stationary Combustion Engines and Gas Turbines". This code states, "When such (flue gas) temperatures do not exceed 1000°F (538°C) except for infrequent, brief periods, the engines shall be classified as low heat appliances". For continuous operation over 1000°F and not exceeding 1400°F the exhaust system should be installed as a 1400°F Chimney.

Model IPS may be used to meet various needs, such as:

a) Reduce outer pipe surface temperature.
b) Reduce building heat gain by retaining energy inside the duct.
c) Increase the efficiency of energy recovery systems by reducing exhaust gas temperature losses.
d) Increase chimney or exhaust system draft loss performance due to reduced exhaust gas temperature drop.
e) Reduce building noise levels caused by high speed or pulsating exhaust induced noise. NOTE: Specific tests have not been conducted to measure acoustic performance.

Model PS and IPS exhaust systems are intended for use in connecting the heating appliance, engine, or turbine to the outdoors, while operating under positive forced draft, negative induced draft or neutral gravity flow internal pressure conditions. Model PS and IPS (all insulation thicknesses) may be intermixed in the same chimney system, assuming the proper associated airspace clearances-to-combustibles are maintained.

Complete system sizing and capacity information may be obtained from the "Chimney, Gas Vent, and Fireplace Systems" chapter of the ASHRAE Handbook, from the Selkirk "Sizing Handbook for Chimneys & Gas Vents", or by contacting Selkirk Technical Support. In spite of these general sizing guidelines, it is most important that the heating appliance, engine or turbine manufacturer's installation instructions are followed. Not following the equipment manufacturer's instructions may result in inadequate chimney performance and/or a violation of the equipment manufacturer's installation requirements.

**ADDITIONAL APPLICATIONS**

Model G, PS & IPS are also suitable for negative, neutral or positive pressure pre-fabricated piping systems intended for use in a variety of applications including but not limited to the following: Fume Venting, Chimney Liner, Chutes, Particle Conveying, Dryer Vents and Ventilation Ducts.

SUITABLE FOR POSITIVE PRESSURE VENTING APPLICATIONS WITH MAXIMUM 60" WATER COLUMN INTERNAL STATIC PRESSURE AT 1000 DEGREES F.

**CREOSOTE AND SOOT – FORMATION AND NEED FOR REMOVAL**

When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited this creosote makes an extremely hot fire.

The chimney should be inspected at least once every 2 months during the heating season to determine if a creosote or soot buildup has occurred; if creosote or soot has accumulated, it should be removed to reduce the risk of chimney fire.

Refer to Elbow & Offset section for additional limitations with regards to burning solid fuel.

**USE OF INDIVIDUAL PARTS**

These instructions comprise both general guidelines and special requirements for all parts in the product line. Before specifying a design or beginning an installation please carefully review these instructions.

**SURROUNDINGS / ENCLOSURE**

Selkirk Model G, PS and IPS chimneys are primarily intended to be used in fire resistive, noncombustible surroundings or installed unenclosed. They are not intended for use in one or two family residences. (CAUTION — Do not enclose this chimney in a chase or passageway of ordinary wood or other combustible material.)

For Type L Vent installations, Model IPS may be enclosed within a chase fabricated from combustible building materials. Check local codes to determine the required fire rating, if any, for such chase enclosures.

Where the chimney extends through any zone of a building (outside that in which the heating appliance connected to it is located), it shall be provided with an enclosure having a fire resistance rating equal to or greater than that of the floor, ceiling, wall or roof assemblies through which it passes.

Model PS and IPS Chimney may penetrate a combustible roof using either the Roof Support Assembly (P-MRS) or the Ventilated Roof Thimble (P-MVT). These are the only parts intended for use with combustible construction. All other parts, such as Plate and Wall Supports, and Floor and Wall Guides, are for attachment to non-combustible construction.

Where, according to local code, no chase enclosure is necessary, Model PS and IPS may be placed adjacent to walls of combustible construction at the minimum clearance specified on each pipe section and in the individual Listing; see CLEARANCES section and Tables A-1a through A-1d. Contact local building or fire officials about restrictions and installation inspection requirements in your area.

**MULTI-ENGINE EXHAUSTS**

A common exhaust system for multiple engine or turbine installations is generally not recommended. Check with your engine or turbine manufacturer prior to common exhaust system design. Exhaust gas from operating units tends to flow to non-operating units where condensation may form. Water in engine or turbines at start-up may cause damage. In general, a separate exhaust system should be provided for each engine or turbine.

**PART NUMBERS**

These instructions identify major Model G, PS and IPS parts by name or part number. Actual parts always carry a prefix to indicate internal diameter and either the letter "G" for Model G, "P" for Model PS or "IP" for Model IPS. IPS also includes a suffix to indicate insulation thickness. For example: 24P-42 is a 24 inch diameter of model PS, 42 inches in length; 24IP-42C2 is a 24 inch diameter section of Model IPS, 42 inches long having 2 inches of fiber insulation between the walls.

## CLEARANCES

| Venting Category | Maximum Continuous Flue Gas Temp. | Type Clearance |
|---|---|---|
| Type L Vent | 480°F over ambient | Enclosed* |
| Building Heating Appliance Chimney (BHA) | 1,000°F | Unenclosed* |
| B.H.A Chimney (Type HT)(IPS 5"-24") | 1,000°F | Unenclosed* |
| 1,400°F Chimney | 1,400°F | Unenclosed* |
| Grease Duct | 500°F | Unenclosed* |
| * = See Section Entitled "Surroundings/Enclosure" | | |

**Table A-1a: Model G**
**Min. Airspace Clearance-to-Combustible Construction**

See Section "G", Grease Ducts

**Table A-1b: Model PS**
**Min. Airspace Clearance-to-Combustible Construction**

| Pipe I.D. | Type L Vent | Building Heating Appliance Chimney (1,000°F) | 1,400°F Chimney | Grease Duct |
|---|---|---|---|---|
| 5-16" | - | 6" | 6" | A |
| 18" | - | 7" | 8" | A |
| 20" | - | 7" | 9" | A |
| 22" | - | 8" | 10" | A |
| 24" | - | 8" | 12" | A |
| 26" | - | 8" | 13" | A |
| 28" | - | 9" | 14" | A |
| 30" | - | 9" | 16" | A |
| 32" | - | 10" | 17" | A |
| 34" | - | 10" | 19" | A |
| 36" | - | 10" | 20" | A |
| 42" | - | 11" | 20" | A |
| 48" | - | 12" | 20" | A |

**Table A-1c: Model IPS-C1**
**Min. Airspace Clearance-to-Combustible Construction**

| Pipe I.D. | Type L Vent | Building Heating Appliance Chimney (1,000°F) | 1,400°F Chimney | Grease Duct |
|---|---|---|---|---|
| 5-6" | 3" | 1" | 1" | A |
| 8" | 3" | 1" | 2" | A |
| 10-16" | 3" | 2" | 2" | A |
| 18-24" | 3" | 3" | 3" | A |
| 26-32" | - | 4" | 4" | A |
| 36" | - | 5" | 5" | A |
| 42-48" | - | 6" | 6" | A |

A = See Section "G" Entitled "Grease Duct"

**Table A-1: Model IPS-C2 & IPS-C4**
**Min. Airspace Clearance-to-Combustible Construction**

| Pipe I.D. | Type L Vent | Building Heating Appliance Chimney (1,000°F) | 1,400°F Chimney | Grease Duct |
|---|---|---|---|---|
| 5-16" | 2" | 0.5" | 0.5" | A |
| 18" | 2" | 1" | 2" | A |
| 20" | 2" | 1.5" | 2" | A |
| 22-24" | 2" | 2" | 2" | A |
| 26-32" | - | 3" | 3" | A |
| 36" | - | 4" | 4" | A |
| 42-48" | - | 5" | 5" | A |

A = See Section "G" Entitled "Grease Duct"

For non-combustible construction, maintain clearances as required for installation, access for inspection or per local code.

### OUTER PIPE SURFACE TEMPERATURE

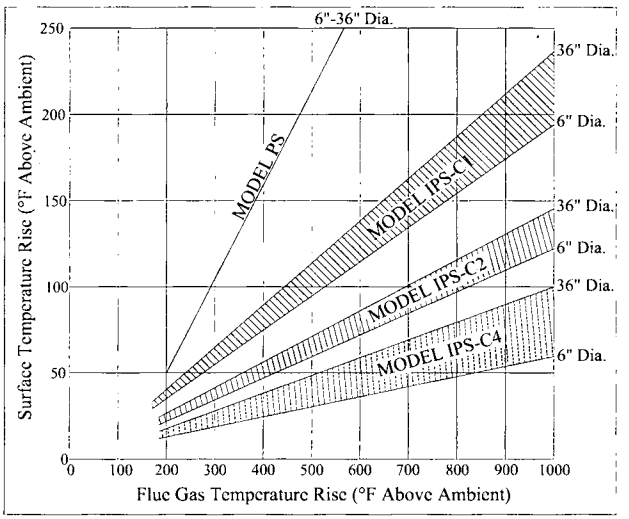
As an aid for estimating expected outer wall surface temperatures, fiber insulated Model IPS has been tested in a vertical configuration using input energy levels consistent with "UL 103; Standard for Chimneys, Factory-Built, Residential Type and Building Heating Appliance". Testing with 1, 2 and 4 inch insulation thicknesses resulted in development of Chart A-1 and Table A-2, indicating the maximum expected outer surface temperatures. Compared to vertical configurations, horizontal configurations of Model IPS will have lower surface temperatures due to a higher convective heat transfer co-efficient. Thus, for horizontal configurations, Chart A-1 and Table A-2 are acceptable to use as they will give conservative answers. The Tables in A-2 give the same results as Chart A-1 for the indicated outer pipe surface temperature, flue gas temperature and pipe size at an ambient temperature of 70°F.

The chart can also be used for other operating conditions. For example, at an actual flue gas operating temperature of 400°F (corresponding to a flue gas temperature rise of 330°F at an ambient temperature of 70°F), all diameters of Model IPS would require 1 inch of insulation to maintain the outer surface temperature below 140°F.

Note: These tests were all conducted in accordance with UL-103 in a vertical configuration with 1000°F flue gases and air surrounding the pipe. Appreciable higher outer wall surface temperatures would have been reached if insulation had been placed around the outer wall of the pipe.

**Do not wrap or place insulation** around these systems in an effort to reduce clearances to combustibles, create some type of fire protective enclosure or for any purpose – unless Selkirk Corp and the Authority Having Jurisdiction have reviewed and approved such action.

**Chart A-1: Model PS and IPS Estimated Maximum Outer Pipe Temperature Rise above Ambient Temperature**




| **Table A-2a:** Required Insulation thickness for 120°F Surface Temp | | | | |
|---|---|---|---|---|
| | IPS Duct Diameter | | | |
| Flue Temp | 6" | 12" | 24" | 36" |
| 1000°F | - | - | - | - |
| 900°F | - | - | - | - |
| 800°F | 4 | 4 | - | - |
| 700°F | 4 | 4 | - | - |
| 600°F | 4 | 4 | 4 | - |
| 500°F | 2 | 4 | 4 | 4 |
| 400°F | 1 | 2 | 2 | 2 |
| 300°F | 1 | 1 | 1 | 1 |

| **Table A-2b:** Required Insulation thickness for 140°F Surface Temp | | | | |
|---|---|---|---|---|
| | IPS Duct Diameter | | | |
| Flue Temp | 6" | 12" | 24" | 36" |
| 1000°F | 4 | 4 | - | - |
| 900°F | 4 | 4 | - | - |
| 800°F | 4 | 4 | 4 | - |
| 700°F | 4 | 4 | 4 | 4 |
| 600°F | 2 | 2 | 4 | 4 |
| 500°F | 1 | 2 | 2 | 2 |
| 400°F | 1 | 1 | 1 | 1 |
| 300°F | 1 | 1 | 1 | 1 |

| **Table A-2c:** Required Insulation thickness for 160°F Surface Temp | | | | |
|---|---|---|---|---|
| | IPS Duct Diameter | | | |
| Flue Temp | 6" | 12" | 24" | 36" |
| 1000°F | 4 | 4 | 4 | - |
| 900°F | 4 | 4 | 4 | 4 |
| 800°F | 4 | 4 | 4 | 4 |
| 700°F | 2 | 2 | 2 | 4 |
| 600°F | 2 | 2 | 2 | 2 |
| 500°F | 1 | 1 | 1 | 2 |
| 400°F | 1 | 1 | 1 | 1 |
| 300°F | 1 | 1 | 1 | 1 |

**PIPE JOINT ASSEMBLY**

All flange-to-flange inner pipe joints are identical (except for Adjustable Lengths, Variable Lengths and Lined Bellows Joints), thus eliminating special orientation for correct use. Assembly is accomplished as follows:

1. Parallel flanges are brought together (See Fig A-1).
2. Sealant is applied to the groove of the inner "V" Band. Refer to SEALANT USAGE section for proper sealant selection.
3. The inner "V" band is then tightly clamped around the flanges using end clamp hardware. NOTE: Light tapping with a wooden or similar mallet all around the band while tightening the clamp helps to align and pull the flanges together (See Fig A-1).
4. (For Model IPS only) insert strip of insulation (supplied) in area of V-band, around entire circumference of assembly. Position insulation to insure no void spaces remain (See Fig A-2).
5. The outer channel band is then installed by inserting the edges of the band into the outer pipe grooves and drawing it closed with the screws and nuts. For vertical exterior joints apply sealant to the joint between the Channel Band and the outer pipe (See Figs. A-2 & A-3). *For horizontal/sloping exterior joints, it is recommended to apply sealant (P-600) to both sides of the Channel Band (top side is sufficient (9 o'clock to 3 o'clock position)) with nut/bolt connection pointing down.

**Caution-Risk of injury. Sheet metal parts may be sharp. Always wear gloves and appropriate eye, foot, and other protection when handling these products.**

**Fig. A-1 – Pipe Joint Assembly**

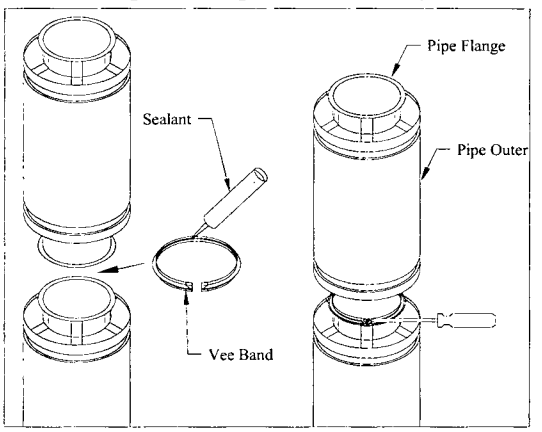



**Fig. A-2 – Pipe Joint Assembly**

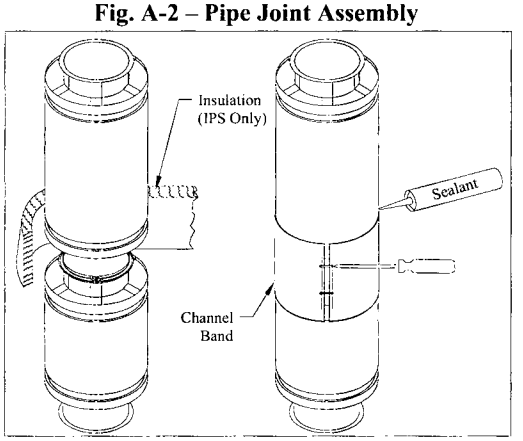
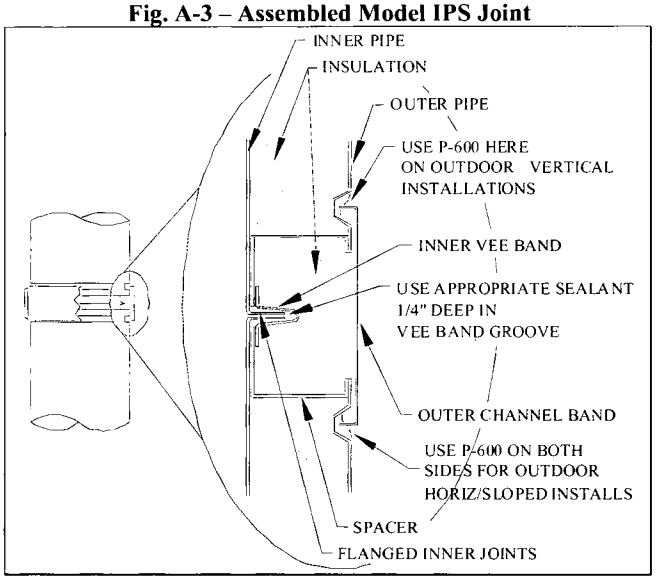


**Fig. A-3 – Assembled Model IPS Joint**




CAUTIONS

A. THE OUTER CHANNEL BANDS ARE DESIGNED TO SLIDE IN THEIR MATING GROOVES. DO NOT ATTACH BY SCREWS INTO THE OUTER CASING.
B. DO NOT ALLOW SCREWS TO PENETRATE THE INNER PIPE. THIS CAN CAUSE CORROSION, GAS LEAKAGE OR EXPANSION FAILURE.
C. NEVER USE SCREWS THROUGH THE OUTER JACKET OF AN ADJUSTABLE LENGTH OR EXPANSION JOINT.

**SEALANT USAGE**

1. Part No. P-600: a silicone sealant for flue gas temperature up to 600°F. Also used for weathering/sealing on outdoor seams & Channel Bands where necessary
2. Part No. P-2000: a high temperature pre-mixed sealant for flue gas temperature up to 2000°F. P2000 IS WATER SOLUBLE AND SHOULD NOT BE USED WHERE EXPOSED TO WEATHER.

| Sealant Coverage (Expected Number of Joints Sealed per Tube) | |
|---|---|
| Inner Dia. | # of Joints |
| 5-6" | 10 |
| 8-10" | 9 |
| 12" | 8 |
| 14-16" | 7 |
| 18-20" | 6 |
| 22-24" | 5 |
| 26-28" | 4 |
| 30-32" | 3 |
| 36" | 2 |
| 42-48" | 1 |

**PIPE WEIGHT**

The approximate weight of the pipe in lbs. per foot is equal to its Multiplier multiplied by its inside diameter (in inches). See chart below

| Weight of Pipe | |
|---|---|
| **Model** | **Multiplier** |
| G | 0.5 |
| PS | 0.9 |
| IPS-C1 | 1.1 |
| IPS-C2 | 1.3 |
| IPS-C4 | 1.7 |
| IPS-Z3 | 1.7 |
| IPS-Z4 | 2.0 |

Example:
36"IPS-C1 weighs approximately 36 x 1.1 = 39.6 Lbs/Ft.

**SUPPORT METHODS**

Vertical Installations require one of following methods of support. Refer to the corresponding section for proper installation instructions.

1. Pier or Appliance outlet (See Section B for details)
2. Base supported tee (See Section B)
3. Plate Support Assembly (P-PA) (See Section D for details)
4. Roof Support Assembly (P-MRS). (See Section F for details)
5. Wall Support Assembly (P-WA) (See Section E for details)
6. Fan Adapter Termination (FAT) (See Section G for details)
7. Roof Support Section (RSS) (See Section G for details)

Table A-3, (Support Methods & Height Limits), shows the maximum height limits for each support method.

Full Rings (P-FR) are used in vertical installations as wall guides to maintain proper alignment of the system and are for lateral support for wind loads. Proper spacing of full ring guides and supports must be maintained. Requirements can be found in Table A-4, (Vertical Support & Guide Spacing), under the columns designated "S-V".

The vertical freestanding height above the roof or top guide is limited due to wind considerations. The limitations for "Free Standing Height", can be found in Table A-4 under the columns designated "F". The table includes height limits for all vertical support methods based on model designation and diameter.

Horizontal installations or horizontal portions of vertical installations are supported primarily by use of Half Rings (P-HR) or Support Straps (P-SS) that are installed using minimum ½" threaded rod or structural steel provided by other. See Table A-5 for maximum spacing between horizontal supports. Plate Supports (P-PA) are also used to support and stabilize the system at changes in direction. For further details on the use of the Plate Supports, see section D.

## Table A-3 Support Methods and Height Limits

| | Parts Used | IPS-C1 | IPS-C2 | IPS-C4 & Z3 | IPS-Z4 | PS | G |
|---|---|---|---|---|---|---|---|
| Pier or Appliance Outlet Sizes 5 thru 8" | P-CF & P-BK | 82' | 56' | 30' | 26' | 100' | 150' |
| Base Supported Tee | P-MT & P-BK | 29' | 20' | 16' | 14' | 35' | 50' |
| Plate Support Assembly | | | | | | | |
| Sizes 5" – 20" | P-PA | 162' | 108' | 55' | 47' | 200' | 300' |
| Sizes 22" – 48" | P-PA | 82' | 56' | 30' | 26' | 105' | 150' |
| Plate Support Assembly with High Strength Base (See Fig. D-3) | | | | | | | |
| Sizes 5" – 20" | P-PA | 243' | 162' | 82' | 70' | 300' | NA |
| Sizes 22" – 48" | P-PA | 123' | 84' | 45' | 38' | 150' | NA |
| Roof Support Assembly | P-MRS | 8' | 7'-10" | 7'-7" | 6'-6" | 8' | NA |
| Wall Support Assembly | P-WA | 30' | 20' | 15' | 13' | 30' | NA |
| Fan Adapter Termination | P-FAT | Models Z3 & Z4 Only – See Table G-2 | | | | | |
| Roof Support Section | P-RSS | Models Z3 & Z4 Only – See Table G-2 | | | | | |
| Full Angle Ring | P-FR | See Table A-4: Dimension S-V (See Fig. A-6, A-7, A-8, D-6 for examples) | | | | | |
| Guy Section | P-GS | | | | | | |
| Wall Guide | P-WG | | | | | | |
| Floor Guide | P-FG | | | | | | |
| Free Standing Height above Full Angle Ring, Guy Section, Wall Guide and Floor Guide. | | See Table A-4: Dimension F (See Fig. A-6, A-7, A-8, D-6 for examples) | | | | | |
| Support Strap | For horizontal use only (See Table A-5, S-H) | | | | | | |

Notes:

1. Pier or appliance must be able to support pipe weight (and guy loads, if any) regardless of maximum height.
2. P-MT and P-JL with integral internal stiffener posts are available for increasing base supported tee heights. Consult factory for details. In general, base supported tees are the least desirable alternative.

## Table A-4 Vertical Support and Guide Spacing

| Dia. | PS & IPS-C1 | | IPS-C2 | | IPS-C4, Z3 & Z4 | | Model G | |
|---|---|---|---|---|---|---|---|---|
| (In.) | S-V | F | S-V | F | S-V | F | S-V | F |
| 5 | 17'0" | 8'6" | 15'4" | 7'8" | 12'8" | 6'4" | 23'10" | NA |
| 6 | 17'6" | 8'9" | 15'10" | 7'11" | 13'4" | 6'8" | 23'4" | NA |
| 8 | 18'6" | 9'3" | 16'10" | 8'5" | 14'6" | 7'3" | 23'2" | NA |
| 10 | 19'4" | 9'8" | 17'10" | 8'11" | 15'6" | 7'9" | 23'2" | NA |
| 12 | 20'4" | 10'2" | 18'10" | 9'5" | 16'8" | 8'4" | 23'9" | NA |
| 14 | 21'2" | 10'7" | 19'10" | 9'11" | 17'10" | 8'11" | 24'2" | NA |
| 16 | 22'2" | 11'1" | 21'0" | 10'6" | 19'0" | 9'6" | 24'2" | NA |
| 18 | 23'2" | 11'7" | 22' | 11' | 20'2" | 10'1" | 25'9" | NA |
| 20 | 24' | 12' | 23' | 11'6" | 21'4" | 10'8" | 26'5" | NA |
| 22 | 24'10" | 12'4" | 23'8" | 11'10" | 22' | 11' | 27'1" | NA |
| 24 | 25'6" | 12'9" | 24'6" | 12'3" | 23' | 11'6" | 27'1" | NA |
| 26 | 26'4" | 13'1" | 25' | 12'6" | 23'8" | 11'10" | 28'4" | NA |
| 28 | 27' | 13'6" | 26'2" | 13'1" | 24'8" | 12'4" | 28'11" | NA |
| 30 | 27'-10" | 13'10" | 26'10" | 13'5" | 25'4" | 12'8" | 29'9" | NA |
| 32 | 28'6" | 14'3" | 27'8" | 13'10" | 26'4" | 13'2" | 30'3" | NA |
| 36 | 30' | 15' | 29'2" | 14'7" | 27'10" | 13'11" | 31'8" | NA |
| 42 | 26'6" | 13'3" | 25'10" | 12'11" | 24'10" | 12'5" | 27'9" | NA |
| 48 | 23' | 11'6" | 22'8" | 11'4" | 21'10" | 10'11" | 23'11" | NA |

S-V = Maximum spacing between two guides or a support and a guide in a vertical position.

F = Maximum height above a guide or support for free standing system above a roof or parapet wall.

## Table A-5: S-H Horizontal Support Spacing Half Rings (P-HR), Full Rings (P-FR) & Support Straps (P-SS)

| Dia. | PS & IPS-C1 | IPS-C2 | IPS-C4, Z3 & Z4 | Model G |
|---|---|---|---|---|
| 5"-12" | 16' | 14' | 12' | 20' |
| 14"-24" | 14' | 12' | 10' | 17' |
| 26"-48" | 11' | 9' | 7' | 11' |

**EXTERIOR CORROSION PROTECTION**: IT IS RECOMMENDED TO APPLY AN EXTERIOR GRADE HIGH HEAT PAINT TO ANY PLATE SUPPORTS, FULL/HALF ANGLE RINGS, WALL SUPPORTS/GUIDES, ALUMINIZED OUTER WALLS & ROOF/WALL FLASHING COMPONENTS, EXPOSED OUTDOORS TO ENSURE MAXIMUM CORROSION PROTECTION AGAINST THE ELEMENTS. (Ex. Rustoleum V2100 series High Heat Industrial Aerosol)

## THERMAL EXPANSION

Good installation practice requires that any length of exhaust system between two fixed points subject to more than 1/4 inch expansion must have an Adjustable Length (P-AG) or Bellows Joint (P-BJ) to compensate for expansion. PS/IPS will expand approximately 1 inch for every 100°F temperature rise per 100 feet of pipe.

For Grease Duct applications any length over 12 feet installed between two fixed points i.e.: Hood Outlet and Elbow, Plate and Wall Support, etc., must be provided with an Adjustable Length (P-AG) to compensate for expansion and contraction.

It is essential that these parts be properly installed and provided with adequate guidance to prevent binding or excessive bending forces. (See detailed installation information contained in Section C, Thermal Expansion.)

The exhaust system designer must be aware that the inner joints have negligible flexing capability, and in addition, Tees and Elbows are not designed to withstand excessive bending forces. Because the amount of outer casing axial movement is less than the inner casing movement, but still significant, the outer jackets of piping and Adjustable Lengths must also slide to avoid excessive forces on Tees, Elbows or Fixed Joints. To accommodate outer casing movements, external guides along walls, at floors, or in lateral breechings, must allow for movement of the pipe. Further; Full/Half Rings, Wall Guides or Floor Guides must be so located that Outer Channel Band movements will be away from the ring.

## CHIMNEY GUYING AND BRACING

Model G, PS, IPS, Z3 & Z4 Grease Duct has thin pipe walls relative to its diameter (t/D<0.006 for all sizes) and has the characteristics of a continuous pipe of 300 Series Stainless Steel. Therefore it will expand and contract along its entire length with changes in temperature. Thus, unless properly supported and guided, structural damage to the exhaust system will occur. For these reasons, conventional methods of attaching guides and braces to the outer pipe cannot be used. Correctly installed Angle Rings (P-FR and P-HR), Wall Guides (P-WG), Floor Guides (P-FG), Guy Sections (P-GS), Plate Support Assemblies (P-PA) and Wall Support Assemblies (P-WA) will serve to keep the chimney aligned and supported, provide for adequate wind load resistance and allow for axial thermal expansion and contraction.

Stabilization of the part of the chimney which extends above the roof or a parapet wall requires special consideration. For low, freestanding installations (up to Dimension F in Table A-4) the chimney needs no special guying or bracing. However, to protect the roof flashings from loads caused by wind against the exposed chimney, the installation must be stabilized with a Full Angle Ring (P-FR) as illustrated in Fig. A-6.

In addition to the requirement for alignment and stabilization of the chimney, the need often exists for guying or otherwise bracing taller chimneys to resist upsetting forces. The Model PS or IPS part that can be used for this purpose is called a Guy Section (P-GS). It is composed of two pieces of standard 18 inch long pipe welded together and rigidly captured between two heavy duty steel flanges that are welded together about their entire perimeter (see A-4 for details). With holes every 30°, the heavy duty attachment allows great flexibility of multiple cable guys (a minimum of three). In all but the simplest installation, contact the factory for complete guy tension and preload calculations.

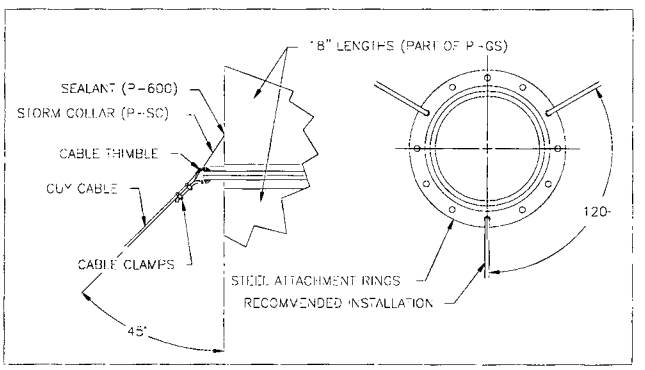
The purpose of guying or bracing is to prevent wind effects from developing excessive bending forces or horizontal displacements in exposed chimneys. This means that cables which are attached to the guy section must be slightly slack or loose, allowing for thermal expansion to occur without damaging fasteners or attachments. Some stack configurations require spring loaded Guy Tensioners (P-GT) to preload the guy cables for a satisfactory installation (See Fig. A-9). These displacement limiting tension devices must be incorporated in cable guys if expected thermal expansion exceeds allowable slack in the cables.

For stack heights above the roof requiring guy wires or rigid bracing to minimize thermal expansion effects, a Plate Support Assembly (P-PA) or Wall Support Assembly (P-WA) must be installed at or near the roof line. If necessary, Guy Tensioners should be used.

The height limit of a Model PS/IPS stack above the roof can vary depending on the Stack Support involved (see Table A-3) and whether the stack is welded, braced or guyed. Using the Roof Support (P-MRS), the maximum height allowed is dependent on size as indicated in Fig. A-6 and its accompanying Table A-4

For stacks greater than those specified for single Guy Section configurations (See Fig. A-6) such as two level guying or those that will be located in severe weather locations, a welded Model IPS assembly is recommended. The availability of multilevel guying (as shown in Fig. A-7) depends on wind load, height, pipe diameter and material thickness. Not all multilevel guying height and diameter combinations are possible. Contact the factory for a detailed design of welded multi-guyed Model PS/IPS stacks.

**Fig A-4. Guy Section details and cable attachments**




Guy wires should be attached to flanges of the Guy Section at appropriate locations. If the exposed stack is to expand by sliding vertically within a fixed structural framework of either wall guides or floor guides, the rings for those parts should be located just below the upper channel band of the involved pipe section. Wire cable, pipe or angle-iron are all suitable materials for guying or bracing. Galvanized or stainless steel is recommended for durability and ease of maintenance.

**Fig. A-6. Height Limits for single set of Rigid Braces**

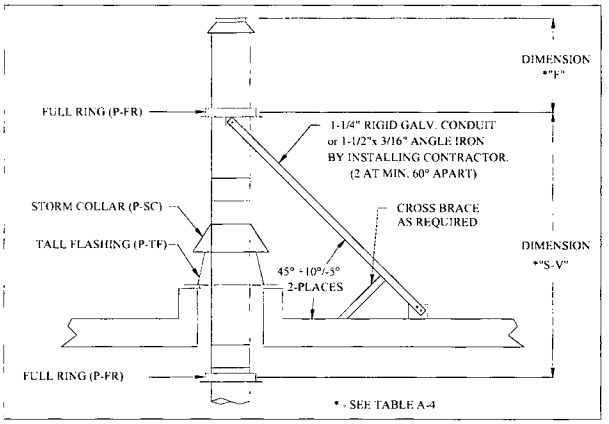



**Fig. A-7. Guying Requirements Example for Maximum Height above roof for multiple sections of Model PS/IPS**

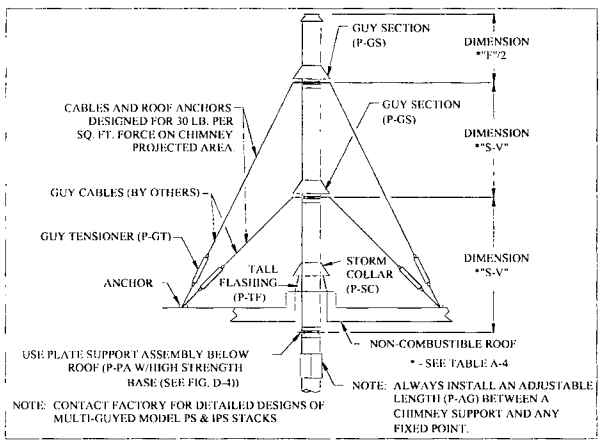
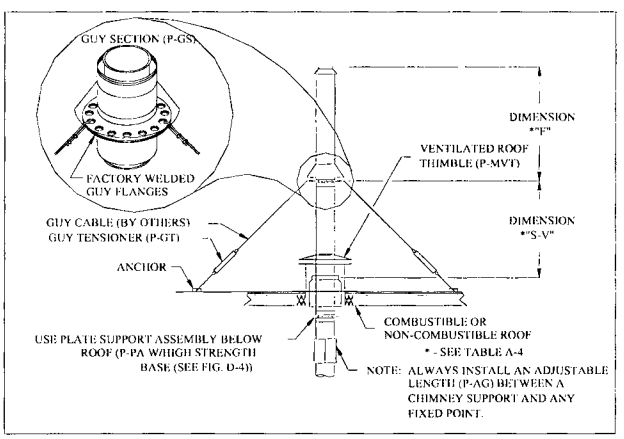



**Fig. A-8. Guying Requirements for Chimneys Supported at Roof**




CHIMNEY GUYING AND BRACING (cont'd)

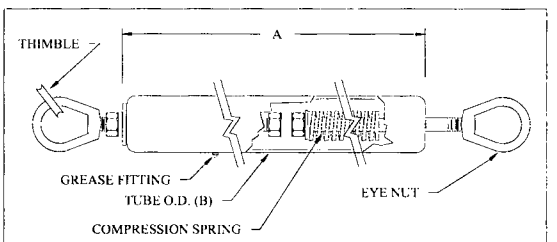
Cable guying is often not as desirable as pipe or angle iron bracing. Cable tensioning requires periodic adjustment and a minimum of three points are required at each guying level. Where guying is used, usual thermal expansion and contraction must be carefully considered to avert excessive loads on points of attachment and supports.

When rigid braces are used in conjunction with a Full Angle Ring, often only two braces are required, with a minimum plan view angle between them of not less than 60°. See fig. A-6 for an example using rigid braces with a Full Angle Ring.

Another structurally equivalent alternative to guy wires and one which puts less load on the stack and its support structure is to use a Full Ring (P-FR) firmly attached to three rigid legs in a tripod arrangement in lieu of a Guy Section and guy wires (see Fig. A-8). Many other structurally equivalent solutions are possible.

NOTE: All guying materials, except Guy Sections and Tensioners, are by others and normally can be readily and economically obtained locally.

**Fig. A-9. Guy Tensioner**




GUY TENSIONER DIMENSIONS

| TENSIONER SIZE | TUBE LENGTH A | TUBE O.D. B | MAX. SPRING COMPRESSION TRAVEL | WEIGHT |
|---|---|---|---|---|
| 1050 | 24" | 1 7/8" | 3" | 15 lbs. |
| 1350 | 24" | 1 7/8" | 3" | 22 lbs. |
| 2100 | 38" | 2 3/8" | 3" | 25 lbs. |
| 2700 | 38" | 2 3/8" | 3" | 37 lbs. |

**SEISMIC REQUIREMENTS**

In certain areas of the country, local codes contain requirements to address seismic risks. Seismic requirements for chimneys and grease ducts usually include specifications for additional "sway bars" / bracing, or similar devices in order to help stabilize the system in the event of an earthquake.

Specific guidelines (including spacing, location, size and method of attachment of bracing / sway bars or other devices) for addressing seismic requirements vary depending upon the adopted code, seismic zone, duct size, location in building, etc. and are not within the scope of these installation instructions.

Consult with a design professional in order to determine compliance options for these potentially complex requirements when this product is to be installed in a building where these additional requirements apply.

The support methods described in these instructions have been proven adequate (via UL certification) for locations where there are no additional seismic zone requirements. In order to address additional seismic requirements they may be further supplemented with a variety of generic sway bars or braces that attach to or around the outer wall of the grease duct system. Full Angle Rings (P-FR), Half Angle Rings (P-HR) and Support Straps (P-SS) may be included as components of such supplemental bracing.

**45° LATERAL TEE (P-JL)**

For systems that require a 45° entry to the vertical chimney, the 45° Lateral Tee may be supported or suspended similar to a 90° Tee, (see next item). Use of this part necessitates an additional 45° Elbow if there is a horizontal breeching (see Fig. B-1b). When base supported, the 45° Tee will carry a maximum of 30 feet of chimney height (see support methods in Section A), and may be installed with a cap or cleanout exactly the same as the 90° Tee. See Fig. B-5 for an example of the use of 45° Lateral Tees in a manifold breeching. This system has lower flow losses than using 90° Tees and thus, for any given set of appliances, a smaller diameter manifold can be used.

**90° TEE (P-MT)**

The 90° Tee will support up to 30 feet of vertical chimney height when it is supported from below. This tee fitting is used to join horizontal connectors into a vertical chimney as well as a drain or inspection fitting. For the latter purpose, the Drain Tee Cap (P-TC) is installed at the base of the tee, and piped to a suitable drain. NOTE: The 90° Tee should not be used on engine or turbine exhausts except when used as an inspection access where there is no change in flow direction.

**TEE PRECAUTIONS**

1. Use an expansion joint in all horizontal breechings or laterals.
2. Provide access for easy removal of Tee Cap.
3. Use two axis support as in Fig. B-2a and B-2b to protect Tees or Elbows, if over 1/4 inch of expansion is expected in the lateral or breeching.
4. Never support any Model PS/IPS pipe from the outer casing.
5. Always install system so that sliding of expansion joints takes place, rather than bending at fittings.
6. Never allow more than 35 feet of chimney / duct above a base supported tee without resupporting.

**DRAIN TEE CAP (P-TC)**

The Drain Tee Cap is used as an end cap in horizontal runs, as an inspection fitting cover, and as a drain for vertical stacks. When not used as a drain the nipple shall be closed off with a pipe cap supplied by the installer. When used as a drain, a trap or a valve should be used in the drain line.

Always connect the drain fitting of the Drain Tee Cap to a suitable drain. This will allow rain entering the chimney to wash down, dilute and remove any corrosive combustion condensate. Also, always install the Tee Cap with sealant on mating surfaces of the flanged joint as well as in the groove of the Vee Bands. This will prevent leaks and assure that the drain functions as intended.

When placed on top of a supporting framework or flat plate, the Tee Cap closure becomes inaccessible and cannot be removed. Thus where access is desired into the tee or chimney, there are several options:

a) Suspended Tee. Use a Plate Support Assembly (P-PA) or Wall Support Assembly (P-WA) at the upper tee joint or higher (see Fig. B-4a and B-4b).
b) Support the Tee from its lower joint with a Plate Support Assembly (P-PA) and use an additional 18" pipe length below the Plate Support as a cleanout section to carry the Tee Cap (see Fig. B-3a and B-3b).
c) Use a Wall Support Assembly above or below the Tee in the same manner as the Plate Support in step a) and b) above.

**Fig. B-1a – Single axis support for short lateral run**

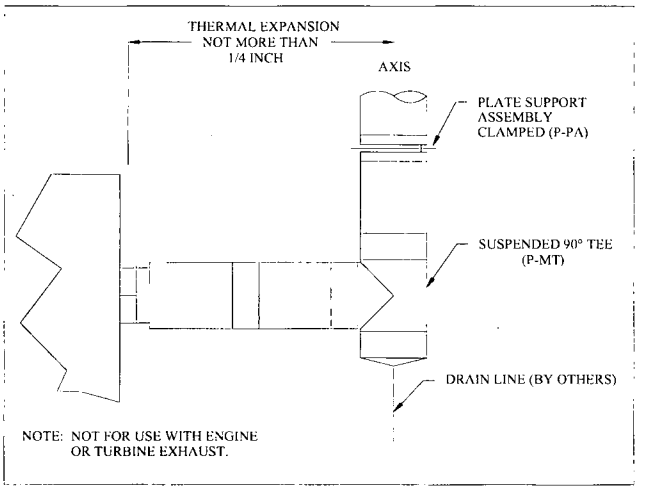
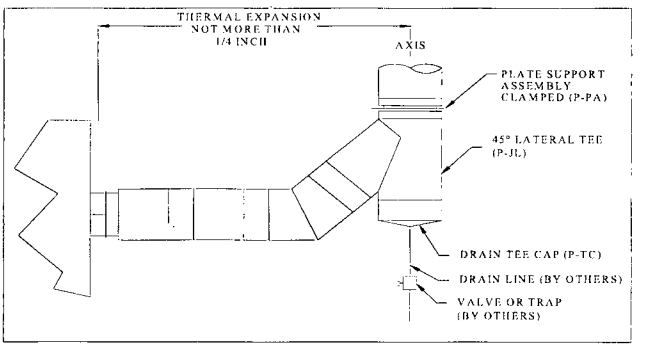



**Fig. B-1b – Single axis support for short lateral runs**




**THERMAL EXPANSION LENGTHS**

Based on temperature and length, if more than 1/4" of thermal expansion is expected in the horizontal run between an appliance connection and a tee, the use of two axis support (see Fig. B-2a and B-b) is recommended. This enables the Adjustable Length to absorb expansion movement and prevents distortion or damage to the Tee. See Section C for complete thermal expansion design requirements and suggested details.

**Allowable lengths for 1/4" thermal expansion (see Fig. B-1a and B-1b).**

| Gas Temperature Rise | Length |
|---|---|
| 200°F | 12'6" |
| 300°F | 8'4" |
| 400°F | 6'3" |
| 500°F | 5'0" |
| 600°F | 4'2" |
| 700°F | 3'7" |
| 800°F | 3'1" |
| 900°F | 2'9" |
| 1,000°F | 2'6" |

**Fig. B-2a – Two axis support protects fittings from bending stress due to long lateral runs.**

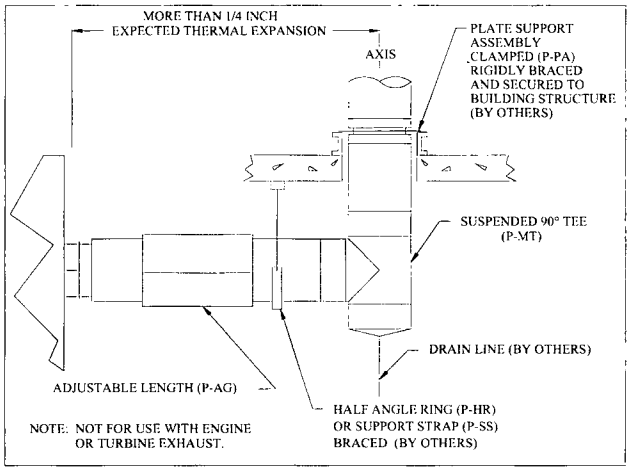
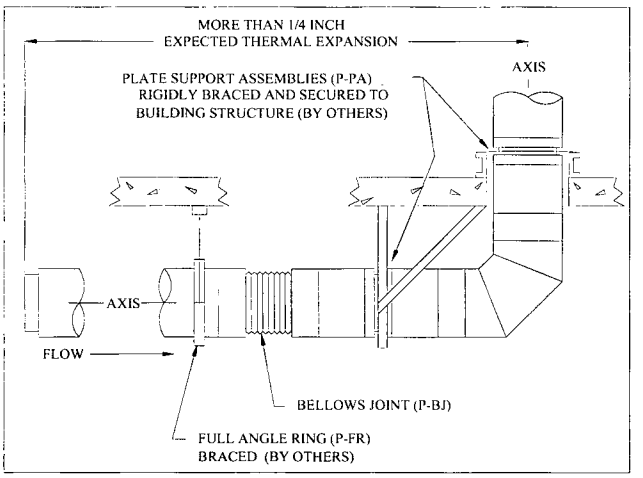



**Fig. B-2b - Two axis support protects fittings from bending stresses due to long laterals**




### 90° WYE (P-JY)

The Wye fitting is useful where the vertical chimney must be located between two boilers, and a low pressure loss system is needed. The Wye fitting can also be used to make connections from engines with dual exhaust outlets into a larger single exhaust system. It may be suspended by a Plate or Roof Support, and the usual precautions for avoiding thermal expansion deformation must be observed for breechings and manifolds.

### INCREASERS: STEPS (P-OS) & TAPERED (P-OT)

Where space is limited, the Step Increaser (P-OS) provides the necessary increase, in a lineal distance of 2 inches from end to end. It should be installed so as to avoid deflection from static loads or thermal expansion forces. This is a nonstructural part.

Tapered Increasers (P-OT) are made with a standard side angle of 14° (28° included angle of cone) for low pressure losses, and provide increases of one, two or three sizes. Length varies (see catalog) from 6 inches for the 6 x 8 size to 26 inches for 24 x 36 Tapered Increaser.

Outer jackets of Tapered Increasers are conical and span the distance between outer pipe jackets to maintain double wall construction. Tapered Increasers are considered to have the same strength in side and axial loads as straight pipe.

### ELBOWS

All Elbows feature the standard flanged Vee Band end joints. The 15° Adjustable Elbow is made in two halves, each with a 7 1/2° included angle and an internal flanged joint which can be opened and rotated from straight to the maximum 15° angle. For any angle adjustment, this Elbow provides a joint which can be used in tension or compression and sealed as necessary for the operating temperature and pressure.

The fixed 30°, 45° and 90° Elbows can be used to make up fixed 60°, 75° and 90° turns, and can be combined with the Adjustable Elbow for other angles. All elbows must be protected from thermal expansion and bending forces.

**Fig. B-3a - Two axis base support with Tee Cap Access**

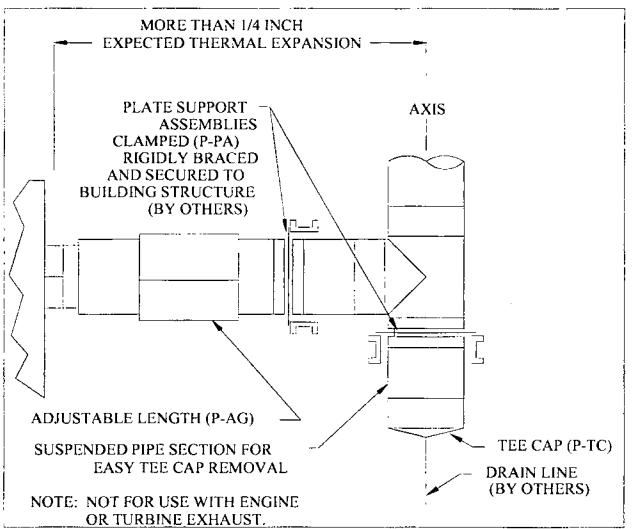
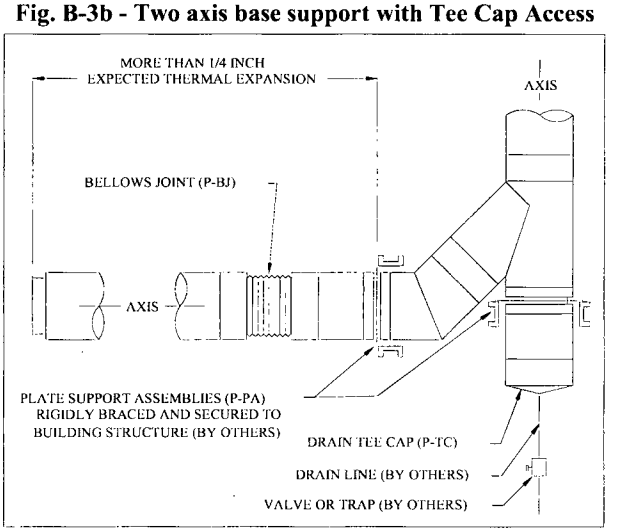



**Fig. B-3b - Two axis base support with Tee Cap Access**



## USE OF ELBOWS, OFFSETS AND MANIFOLDS

Sloped or horizontal offsets in the vertical portion of a chimney above the breeching should be avoided except where absolutely necessary. Sloped offsets require more expansion joints and secure bracing above and below elbows. Special care should be exercised in designing the bracing for elbows because elbows (and fittings) can only take limited forces due to any bending moments. Structural parts such as posts or beams may also be needed to hold chimney supports in position (see Fig. B-6).

**Fig. B-4a - Tee suspended from Wall Support**

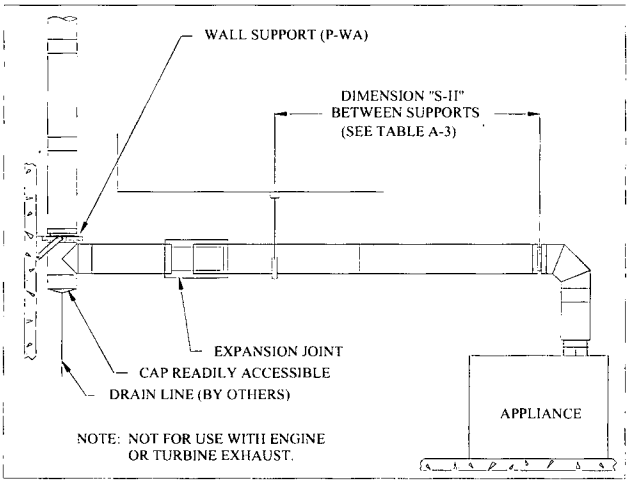
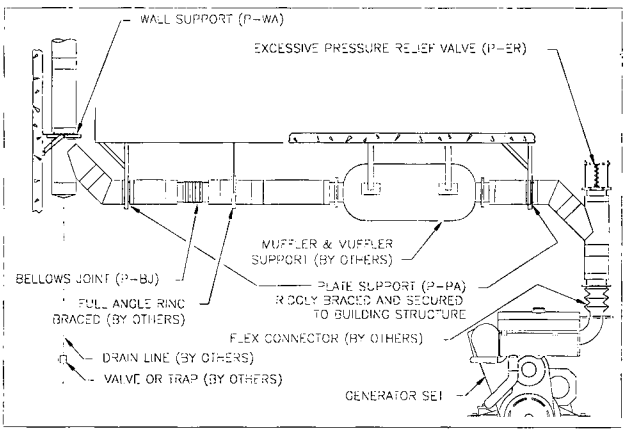



**Fig. B-4b - Lateral Tee suspended from Wall Support**




There is no limit on the angle or slope of an offset for gas or liquid fuel burning appliances, but with a solid fuel burning appliance the slope must not be greater than 30° from the vertical. Chimneys for combination fuel heating appliances which are capable of burning solid fuel or are convertible to solid fuel are limited to the same 30° slope even if the current choice of fuel is gas or oil.

The length of offset, if one is necessary, is determined by strength considerations. The maximum dimension between supports, given as the "S-H" Dimension in Table A-5 of these instructions, is applicable to all horizontal and sloped orientations. To assure proper guidance of expansion joints and to prevent unnecessary joint bending, use an adequate number of supports such as Full Rings, at closer intervals.

**Fig. B-5 - Multiple appliance manifold using 45° Tees**

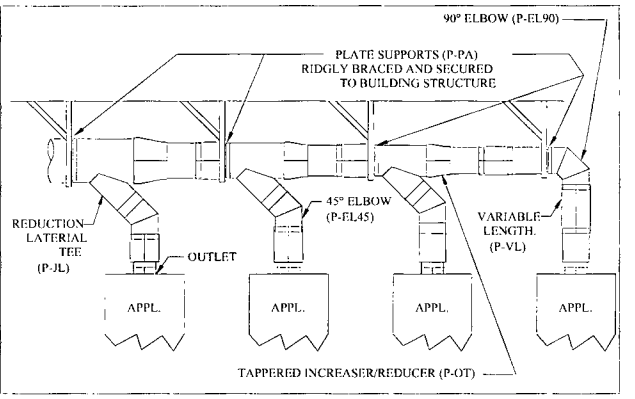
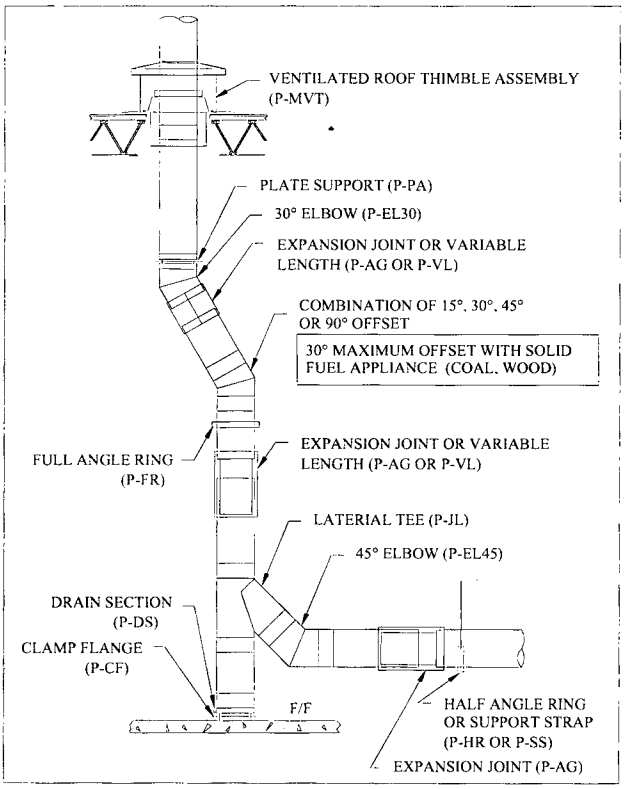



**Fig. B-6 – Base Supported Stack with Offset**




When it is necessary to provide additional structural stiffening at the elbows or fittings, rigidity can be provided by using an additional Plate Support Assembly (See Fig. B-7) located at the other end of the elbow or fitting and bolting lateral braces across the corners using standard brackets.

With frequent resupport, there is no structural or operating limit to the length of horizontal or sloped portions of a Model PS/IPS chimney, providing the system meets the capacity, pressure drop or available draft requirements of the appliance or equipment. The carrying capacity of Model PS/IPS supports and their structure attachments must consider the weight of the offset plus whatever vertical pipe is carried by that support. Height limits for supports are tabulated in Section A of these instructions.

The ends of any sloped or horizontal offset must be anchored to prevent overstressing elbows and to assure proper operation of expansion joints. The vertical sections of chimney above the offset must also be supported or anchored and guided where necessary. Model PS/IPS Roof Supports, Ventilated Thimbles, Wall Supports, Plate Supports, Wall Guides and Full Rings may be used in a variety of ways for offset support to obtain a structurally stable chimney system. Selected methods of using Model PS/IPS supports are shown in Fig. B-7, B-8.

Resupports must be securely anchored to walls, posts, or locally fabricated rigid framework. This framework must be designed to assure stability of attached Model PS/IPS supports, such as Plate Supports and Wall Supports. Supports suspended by threaded rod or from small size angles or straps are usually not satisfactory to resist bending moments due to offsets. The horizontal portion of a Model PS/IPS chimney system between the appliance and the vertical chimney is defined by most building codes as a "connector", and such connectors may be horizontal without any impairment of system function. Frequently in boiler or equipment rooms, headroom is limited and there is generally some access for inspection and maintenance. Thus horizontal breechings or manifolds using Model PS/IPS are not subject to any fuel restrictions.

The 30° limitation on offset slope for solid fuels also does not apply to breeching or manifolds in the boiler equipment room.

**Fig. B-7**

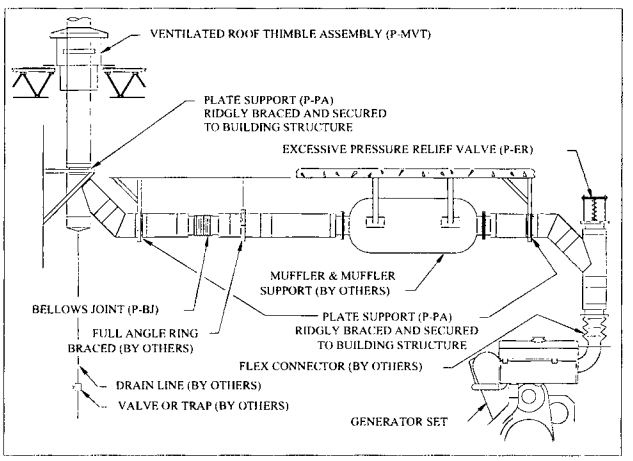



**Fig. B-8**

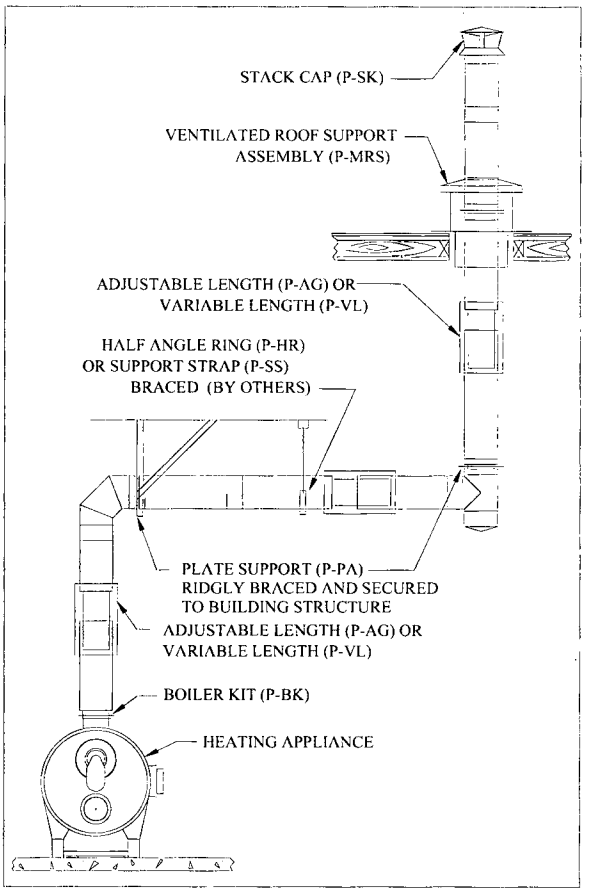
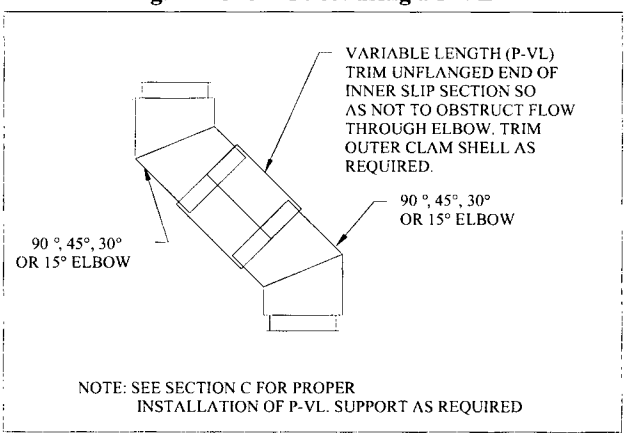



**Fig. B-9 Short Offset using a P-VL**



## THERMAL EXPANSION

The inner pipe of Model PS/IPS is load bearing and its thermal expansion is the same as that of a continuous pipe. A simplified rule for exhaust pipe expansion estimation is that the axial growth will be approx. 1" per 100' of pipe length for each 100°F the flue gas temperature is above the surrounding air temperature.

When assembled in any orientation, the amount of thermal expansion of the inner pipe is directly dependent on the inner wall temperature and the length of pipe between fixed points. Good installation practice requires that expansion greater than 1/4 inch will be compensated for using a Bellows Joint or Adjustable Length, depending on the maximum pressure encountered.

The flanged inner piping joints have negligible flexing capacity, and in addition, tees and elbows are not designed to withstand bending moment forces. Because the amount of outer casing axial movement is the same as inner casing movement, the outer jackets of piping must slide to avoid excessive forces on tees, elbows or fixed points. To accommodate outer casing movements, external guides along walls at floors, or in lateral breechings, must allow for movement of pipe.

NOTE: When resupporting a high rise exhaust system, Adjustable Lengths (P-AG) or Bellows Joints (P-BJ) must be used just below every support above the first to compensate for thermal expansion. For engine and turbine exhaust systems requiring pressures to 60 inches of water column, or where the construction must be absolutely gas tight, all welded Bellows Joints (P-BJ) are recommended for expansion and vibrational movements of the exhaust piping. Out-of-doors construction or low pressure systems, such as boilers (to 6 inches of water column), can effectively use the Adjustable Length (P-AG).

Spacing of guides and supports, when a thermal expansion part is used, should be not greater than specified in Section A. Proper guiding and support of expansion parts often requires closer spacing.

## BELLOWS JOINTS: LINED (P-BJ)

For exhaust pressure to 60 inches of water column, Bellows Joints are recommended for expansion and vibrational movements of the piping. See Fig. C-2 for an illustration of a Bellows Joint (P-BJ).

Fig. C-1 illustrates the use of Bellows Joints in a typical installation. The use of the Lined Bellows Joints (P-BJ) is shown to compensate for the axial expansion of the long horizontal run.

The Lined Bellows (P-BJ) has a 0.035" thick or heavier straight stainless steel liner to protect the thinner Bellows material from heat and flow effects. It is used anywhere in a system for axial and vibrational movements only and must be accurately supported and guided. This part has limited lateral movement (1/8" max.) and lateral offsets and parallel misalignments should be eliminated. The purpose of the liner is to minimize contact, smooth flow, control erosion and eliminate resonance caused by exhaust gases passing through the bellows.

The Lined Bellows requires careful placement of piping guides to avoid interference on thermal expansion. Bellows should not be installed w/ any compression, but at its full uncompressed length in ambient state.

**Fig. C-1 - Location of Bellows Joint in Typical System**

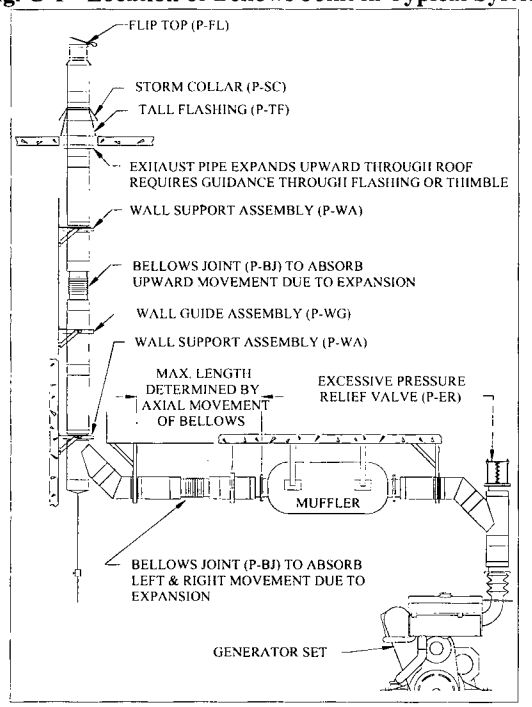
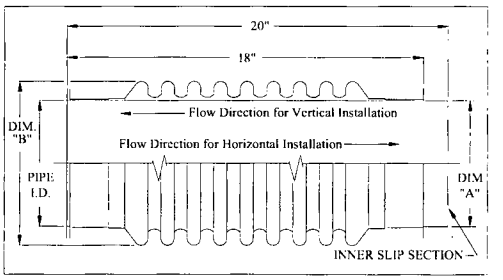



**Fig. C-2 - Bellows Joints (P-BJ)**




| Pipe I.D. | Dim. A Stub End O.D. | Dim. B O.D. | Bellows No. Conv. | Mat'l Thick-ness | Axial Spring Rate (Lb/in) | Axial Compr. |
|---|---|---|---|---|---|---|
| 6" | 6.07" | 7.10" | 16 | 0.012" | 113 | 3.0" |
| 8" | 8.07" | 9.25" | 12 | 0.012" | 116 | 3.0" |
| 10" | 10.07" | 11.25" | 12 | 0.012" | 125 | 3.0" |
| 12" | 12.07" | 13.25" | 22 | 0.018" | 153 | 3.0" |
| 14" | 14.07" | 16.25" | 11 | 0.018" | 158 | 3.0" |
| 16" | 16.07" | 18.25" | 11 | 0.018" | 161 | 3.0" |
| 18" | 18.07" | 20.25" | 11 | 0.018" | 180 | 3.0" |
| 20" | 20.07" | 22.25" | 11 | 0.020" | 210 | 3.5" |
| 24" | 24.07" | 26.50" | 11 | 0.020" | 250 | 3.5" |
| 28" | 28.07" | 30.50" | 11 | 0.020" | 290 | 3.5" |
| 32" | 32.07" | 34.75" | 9 | 0.025" | 553 | 3.5" |
| 36" | 36.07" | 38.75" | 9 | 0.025" | 620 | 3.5" |
| 42" | 42.07" | 44.75" | 9 | 0.025" | 710 | 3.5" |
| 48" | 48.07" | 50.75" | 9 | 0.025" | 819 | 3.5" |

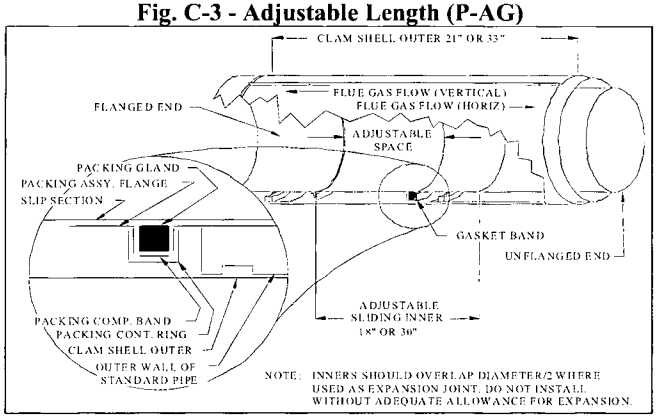
For any PS/IPS piping system requiring low axial expansion forces the Bellows Joints (P-BJ) will deflect with minimum friction at a known "spring rate." The values for spring rates given in the table assumes there are no other frictional constraints and proper alignment of the liner of the P-BJ.

At an operating gas temperature of 1000°F (70°F, ambient) the PS inner pipe in a typical engine exhaust system will be at a temperature rise of approximately 750°F. The same 1,000°F gas temperature will create higher inner pipe temperatures for model IPS because it is better insulated.

Allowable expansion movements for Bellows Joints P-BJ are given in Figure C-2. For the following Bellows sizes, estimated cycle life is 6" - 12" = 4000 and 16" - 36" = 30,000 at 750°F.

The system operating pressure of 60 inches water column (2.08 psi) is based on the estimated capability of ceramic sealed Vee Band joints. The actual pressure limit of the welded bellows will be 10 psi for 6" to 12" diameter and 5 psi for 16" to 48" diameter at 750°F.

**Fig. C-3 - Adjustable Length (P-AG)**



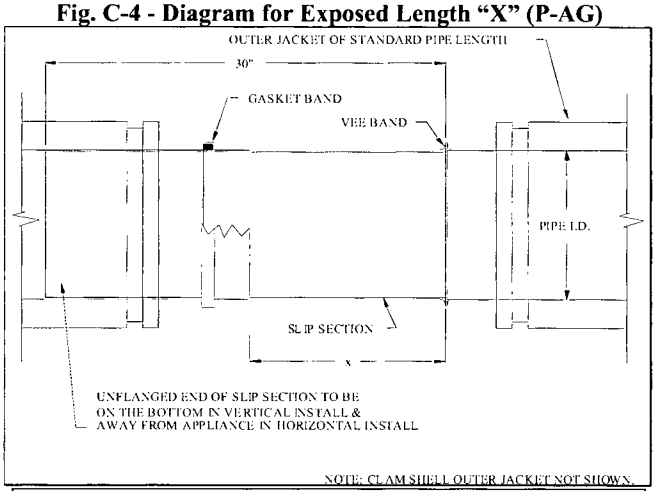

## ADJUSTABLE LENGTH (P-AG)

The Adjustable Length has two major functions: To make up odd lengths of pipe as needed in short runs, and to serve as an expansion joint for thermal expansion in longer runs of pipe. The Adjustable Length may be used when pressures do not exceed 6" water column or in well ventilated areas. When used in systems of any orientation, it can perform both functions simultaneously.

The Adjustable Length comprises a sliding inner section, flanged on one end only (see Fig. C-3). This sliding piece is sized to fit closely inside a standard pipe section. At the sliding joint the assembly as shipped is fitted with a special graphited packing seal. The sliding outer jacket is the same thickness as that used on piping outer casings. It is placed around the sliding inner joint and must also slide in order to avoid expansion stresses.

For proper installation, an Adjustable Length must have adequate overlap and sufficient allowance for thermal expansion movement (see Fig. C-4). An Adjustable Length sliding inner pipe may be trimmed to ensure correct mating to a fitting or other short part. Care must be exercised so that proper penetration is maintained at low temperatures and no interferences occur at high temperatures.

**Fig. C-4 - Diagram for Exposed Length "X" (P-AG)**

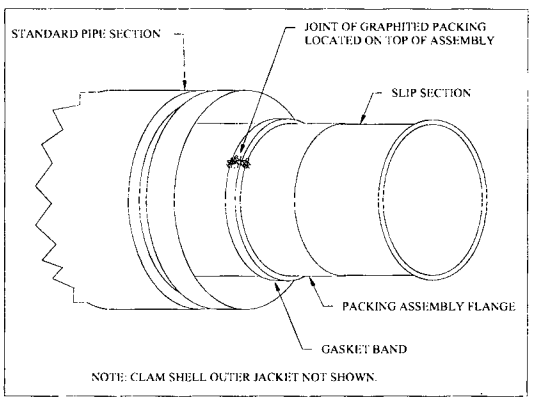



| Maximum "X" Dimension | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pipe Size | 6" | 8" | 10" | 12" | 16" | 20" | 24" | 28" | 32" | 36" | 42" | 48" |
| Max X | 25.5" | 24.5" | 22" | 21" | 19" | 17" | 15" | 13" | 11" | 9" | 7.5" | 4.5" |

| Minimum "X" Dimension | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Operating Temperature* | 200 | 300 | 400 | 500 | 800 | 1000 | 1200 | 1400 |
| Min X for 50' Length | 0.7" | 1.2" | 1.7" | 2.2" | 3.7" | 4.7" | 5.7" | 6.7" |
| Min X for 100' Length | 1.4" | 2.4" | 3.4" | 4.4" | 7.4" | 9.4" | 11.4" | 13.4" |

* Temperature of 60°F assumed at time of installation, thus a temperature of 400 is a 340° rise and 100 feet will expand 3.4 inches. 30ft of pipe would expand: (30/100) * 3.4 = 1"

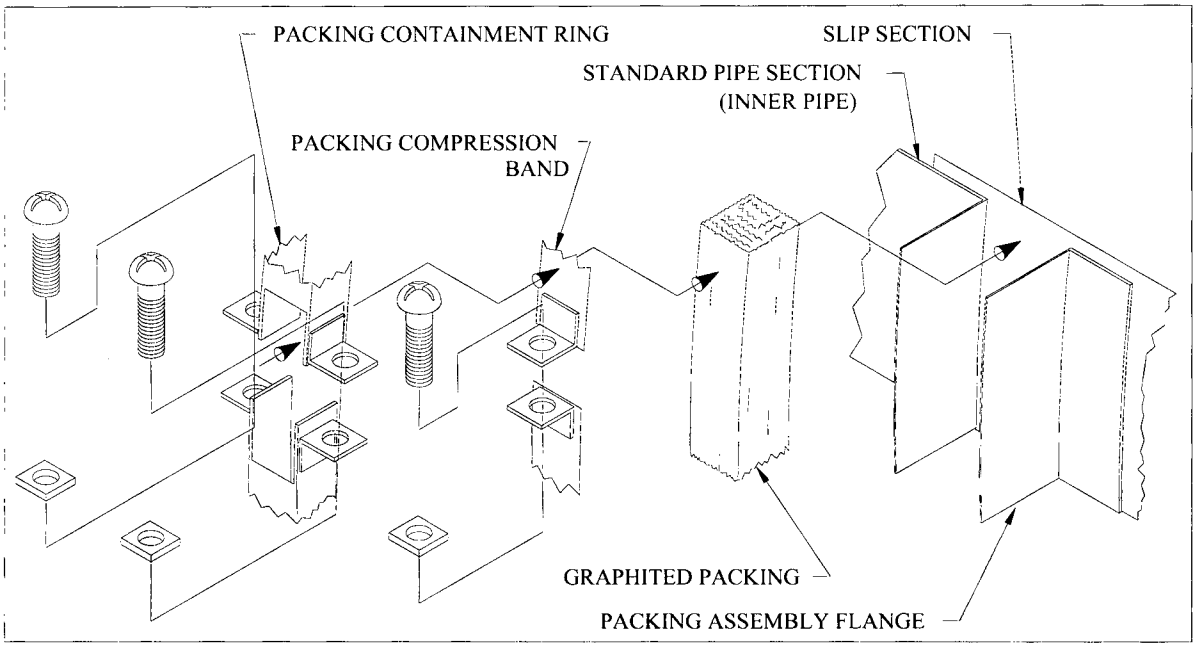
**Fig. C-5.**
**Gasket Band assembled on Adjustable Length (P-AG)**




VERTICAL INSTALLATION OF BELLOWS AND ADJUSTABLE LENGTHS

When a Bellows Joint (P-BJ) or an Adjustable Length (P-AG) is installed in a vertical position between two fixed points, such as between a P-PA and a P-MRS, it should be installed immediately below or one pipe length below the higher support. To assure proper axial alignment, guides (P-WG or P-FR or P-FG) must be installed at the pipe section below the bellows or adjustable length (see Fig. C-1). This combination of parts will assure proper movement of bellows and adjustable lengths and thus relieve loads due to thermal expansion. It is desirable to install bellows and adjustable lengths near the top of a vertical section to ensure that they do not bottom out during installation and thus become ineffective at relieving thermal expansion loads. This arrangement of parts will also resist wind loads on installations which run up building exterior walls.

**Fig. C-6. Gasket Band Assembly Parts for Adjustable Length (P-AG)**




HORIZONTAL INSTALLATION OF BELLOWS AND ADJUSTABLE LENGTHS

Horizontal or sloped installations of Bellows (P-BJ or P-BJU) or Adjustable Lengths (P-AG) use the same parts, assembled in the same relationship, as a vertical assembly. These expansion joints, when required may be placed anywhere between two fixed points of horizontal or sloped installation as long as they are properly guided, properly supported; and for sloped installations in particular, as long as bottoming out is prevented. It is recommended, but not required; that the Lined Bellows inner shield and the Adjustable Length sliding inner be attached to the upstream end of a horizontal installation (the free end is downstream, away from appliance). When the adjustable is put in place for horizontal runs, the packing joint must be on the top of the pipe (see Fig C-4).

ADJUSTABLE LENGTH PACKAGING

Adjustable Lengths are shipped with their outer pipe clam shell jacket inside the sliding inner pipe. The gasket band assembly is preassembled at shipment on the inner pipe. It only needs to be loosened for attachment to an adjacent piece of pipe and then tightened for a leak resistant fit. (See "Thermal Expansion" in this section.)

INSTALLATION OF ADJUSTABLE LENGTH PACKING

Normally, disassembly of the Adjustable Length is not necessary; but if the gasket band must be removed for any reason, it can be reassembled using the following procedure. (Some of this procedure can be done with the hardware conveniently placed on the floor. Performing this procedure with the Adjustable Length in this position could be difficult for a person working alone.)

a) Prepare the sliding inner section for assembly by placing the packing assembly flange over the sliding inner section (Refer to Fig. C-3, C-5, and C-6 for a description of all parts involved.) Make sure the packing assembly flange is oriented correctly.
b) Place the sliding inner slip section into a standard section of IPS Duct.
c) Wrap the graphited packing around the slip section of the Adjustable Length between the standard section pipe flange and the packing assembly flange. (Using an ordinary staple to hold both ends of the graphited packing together aids in the assembly.)
d) Clearly mark on the packing assembly flange the location of the joint of the graphited packing. (See Fig. C-5 for the ultimate location of the joint.)
e) Slide the packing assembly flange toward the standard section inner pipe flange so that graphited packing is captured between those two flanges.
f) Place the packing compression band around the graphited packing with the graphited packing joint located at the midpoint of either half of the band. Tightly secure the compression band with the hardware provided, but Do Not Over-tighten.
g) Both halves of the packing containment ring can now be placed over the graphited packing and compression band so that the compression band joints are exposed at the notched-out section at the ends of the containment ring halves (See Fig. C-6).
h) Fasten both joints of the containment ring with appropriate hardware and secure (Do not over-tighten because the sliding inner must still remain movable.)
i) This whole assembly can now be put in place, extended to its correct length and secured with a Vee Band.
j) Tighten both joints of the compression band so that the graphited packing is firmly registered against the sliding inner.
k) Retighten both joints of the containment ring.
l) Install the outer pipe covering jacket (and insulation strip if IPS) so it fits loosely and can slide freely when the duct expands or contracts.

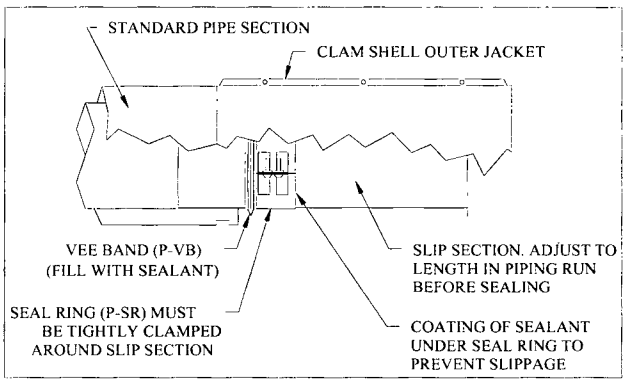
**VARIABLE LENGTH (P-VL)**

In straight runs of Model PS/IPS, the Variable Length serves two major functions: 1) to make up for odd lengths of pipe in short runs, and 2) to provide for joint sealing. This part adjusts to a needed fixed exact length. Its internal joint must be sealed by working sealant under the seal ring, as well as between this ring and the flange to be joined by the Vee Band (See Fig. C-8).

Observe all precautions for cleaning surfaces to be sealed and carefully follow the Variable Length installation procedures specified below.

The Variable Length comprises a sliding inner section, flanged at one end only. This sliding piece is sized to fit closely inside a standard pipe section. A seal ring is provided to prevent the inner section from slipping after assembly. The sliding outer jacket is aluminized steel of the same thickness as that used on piping outer casings. It is placed around the assembled inner and finishes the appearance of the Variable Length. For detailed methods of installation see instructions contained below in this section.

**Fig. C-8 - Variable Length (P-VL)**




**SHORT AND ODD LENGTHS ADJUSTABLE LENGTH (P-AG) AND VARIABLE LENGTH (P-VL)**

The following data is for any PS system where a short length (4" to 26") is needed. This applies in horizontal runs between the appliance and tee, between two fittings, and similar situations. For gaps of 4" to 26" both the inner and outer pipes of the Adjustable Length may need to be trimmed. The Variable Length has a corresponding gap 4" to 26".

Observe these steps in making up a short length assembly for the Adjustable Length.

1. If the Adjustable Length has been pre-assembled into a standard pipe section, disassemble carefully, observing the position of the gasket band and the gasket.
2. For Adjustable Lengths shipped unassembled, refer to Fig. C-4 prior to starting any cutting.
3. Check both the foregoing table and the Adjustable Length table prior to cutting, and make sure that the inner pipe is as long as possible with due allowance for thermal expansion. The outer pipe should be 3 inches longer than the inner.
4. Cut and finish the pipe ends carefully to avoid burrs which would interfere with reassembly or thermal expansion movements.
5. Assemble the inner section and gasket band in accordance with Fig. C-4, checking again for possible interference.
6. Check the fit of the gasket to be sure there are no gaps between it and the inner pipe.
7. Install outer pipe (and insulation strip if model IPS). It may face the same or the opposite direction of the inner, providing there is adequate room for expansion movement.

Observe these steps in making up a short length assembly for the Variable Length:

1. Prior to installation in the run of chimney, clean the Vee Band and surfaces to be cemented.
2. Install slip connection and adjust to length in run.
3. Install sealed Vee Band, joining flanged end of slip section to next length of pipe.
4. Work in sealant between slip section and its external section of pipe.
5. Apply thin layer of sealant to inside of Seal Ring.
6. Position Seal Ring as shown in Fig. C-3 and clamp tightly before cement sets.
7. Fill Vee Band with sealant and install over flanges of joint between pipe and Seal Ring.

**Fig. C-8 - Variable Length used as appliance connector**

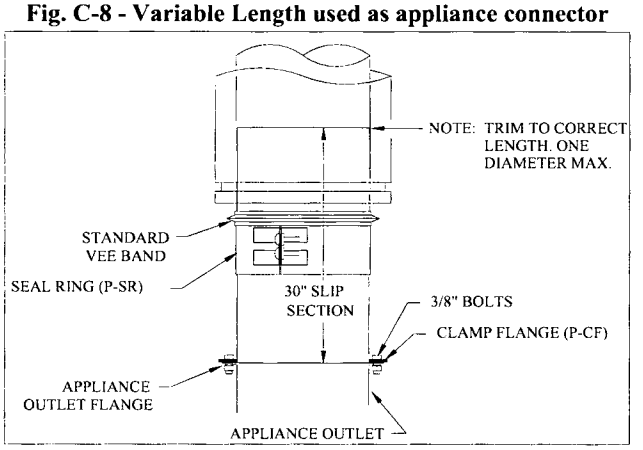



**Fig. C-9 - Variable Length used to terminate into an existing Masonry Chimney**

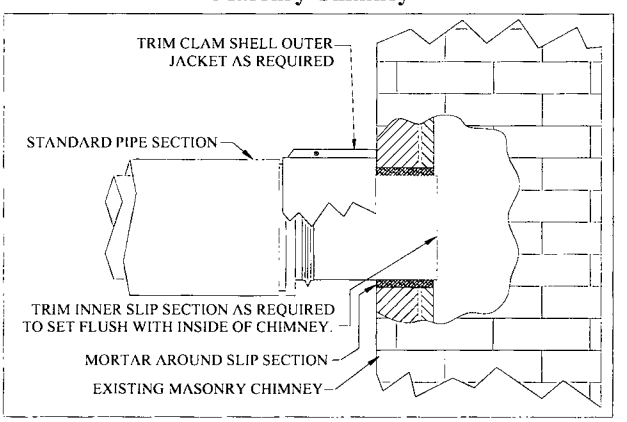


**PLATE SUPPORT ASSEMBLY (P-PA)**

The Plate Support Assembly consists of a Clamp Flange (P-CF) (located above the Vee Band), bolted into a Plate Support (located below the Vee Band). The clamping force between these parts is applied to the Vee Band. The Plates secured to structural steel framing thus, the assembly and the pipe are anchored against upward, downward and angular displacements. Joints of the plates and flanges must be located 90° apart, with notches aligned for relief at Vee Band end clips.

The Plate Support Assembly is the maximum strength support for a vertical PS/IPS chimney. It is also used to maintain positive joint alignment and support for expansion joints in horizontal chimneys. Between any two fixed points in a system or wherever an expansion joint must slide to prevent bending of tees or elbows, locate and secure Plate Support Assemblies as necessary by means of structural ties to the building. This may require supports both upstream and downstream of a tee, which then protects the tee from excessive bending stresses.

Support height limits for plate assemblies are given in Section A of these instructions.

Greater stability may be obtained by resupporting above with additional Plate Support Assemblies, using an Adjustable Length or Expansion Joint below each point of Support. To obtain these strengths, all holes must be bolted with 3/8 inch bolts (see Fig. D-1).

**Fig. D-1 - Plate Support Assembly**

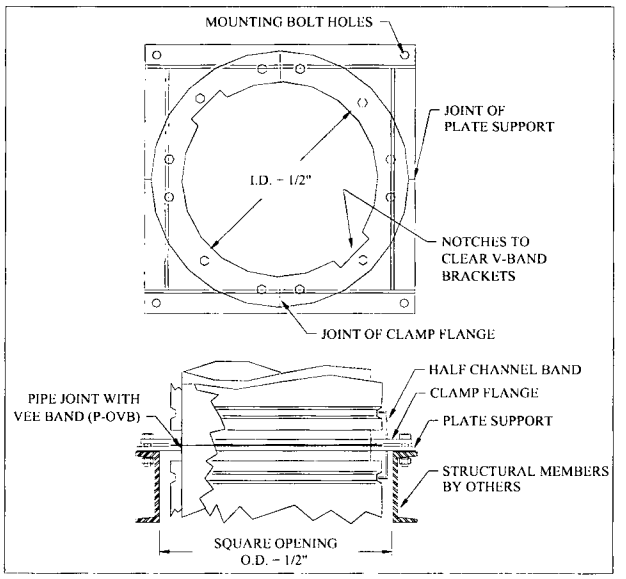


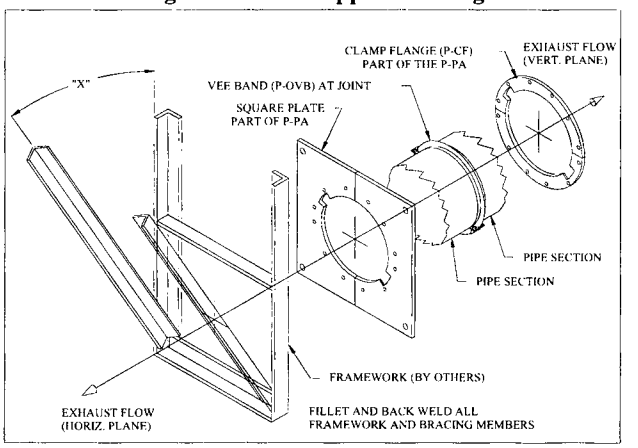

**Plate Support Height Limits:**
**See Section A**

The notches in the Plate Support and in the Clamp Flanges are to accommodate Vee Band end clips, thus allowing the Vee to rest solidly on the Plate. The bolt circle and spacing of the plates and flanges are identical, providing a variety of options in supporting and reinforcing a chimney.

The Plate Support method is intended only for attachment to NONCOMBUSTIBLE surroundings such as steel structure, concrete block or other masonry at clearances adequate for access and assembly. Heat conduction through supporting brackets can be reduced by use of spacers such as insulating millboard. The Plate Support is not suitable for attachment to wood or combustible walls. Exception: In an L Vent application, the PA may be attached to wood framing if non-combustible millboard is placed between the two surfaces.

The Plate Support Assembly must be secured to the building with a rigid structural framework. Under no circumstances should a plate support be secured with threaded rods since this will not prevent pipe sway. See Fig D-2 for proper bracing techniques.

**Fig. D-2 - Plate Support Bracing**




Satisfactory performance and long service life of Model PS/IPS systems requires the product be rigidly braced and supported. Every installation presents unique support and bracing requirements and the following guidelines will provide minimum acceptable sizes for the mechanical hardware supplied by others.

Note: IF BRACING IS USED, MINIMUM "X" ANGLE (IN FIG. D-2) IS 30°. IF BRACING IS NOT USED, WELDED FRAME MEMBERS MUST BE ATTACHED TO STRUCTURAL MEMBERS TO PROVIDE EQUIVALENT RIGIDITY OF FRAMEWORK.

| Pipe Size | P-PA Thickness | Framework (in.) | Bracing |
|---|---|---|---|
| 5" – 20" | 3/16" | 2x1x3/16 to 5x1-3/4x3/16 Channel or equivalent | 2x2x3/16 |
| 24" – 36" | 1/4" | 5x1x3/4 to 6x2x5/16 Channel or equivalent | 3x3x1/4 |
| 42" – 48" | 3/8" | 6x2x5/16 Channel or equivalent | 4x4x3/8 |

**CLAMP FLANGE (P-CF)**

The heavy steel Clamp Flange is pre-drilled with bolt holes to match those in the plate Support and the Full Ring. Each Flange half has a notch for relief at Vee Band clamp locations.

The Clamp Flange may be used to hold down an Adjustable or standard pipe length on a round flanged appliance outlet. Holes for 3/8" bolts should be drilled as necessary, or one set of flanges may be welded to the top of the boiler flange, with the other set used around the inner pipe above the pipe flange. The inside diameter of the Clamp Flange is not intended to fit below a round boiler outlet flange.

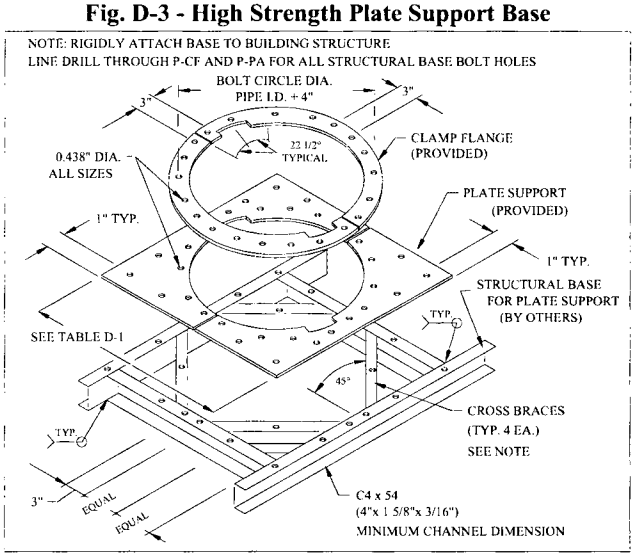
When used in this manner at a boiler outlet, the inner cutouts should be filled with suitable refractory cement.

The Clamp Flange may be used as a hold down on a refractory base or oven, given the proper size opening hole for support and correctly placed bolts or masonry anchors.
See Model PS/IPS System Catalog for Clamp Flange dimensions including bolt circle dimensions.

## HIGH STRENGTH PLATE SUPPORT BASE

Greater height limits and stability can be gained for pipe sizes over 20 inch diameter by using a High Strength Plate Support Base as shown in Fig. D-3. The structural base as shown has been tested by Underwriters' Laboratories, Inc. and has a minimum factor of safety of 4. Follow all of the design guidelines illustrated in Fig. D-3 to obtain maximum strength in the assembly. Rigidly attach the assembly to the support structure. To minimize construction time and assure alignment of all parts, use the plate support as a template and predrill the bolt holes in the structural base.

**Fig. D-3 - High Strength Plate Support Base**




| Table D-1. P-PA Assembled Overall Size | | |
|---|---|---|
| Insulation Thickness/Size | P-PA Size (in.) | Bolt Circle dia.(in.) |
| PS & IPS-C1 | Pipe Size + 6" | Pipe Size + 4" |
| IPS-C2 | Pipe Size + 8" | Pipe Size + 6" |
| IPS-Z3 | Pipe Size + 10" | Pipe Size + 8" |
| IPS-C4 | Pipe Size + 12" | Pipe Size + 10" |

## WALL SUPPORT ASSEMBLY (P-WA)

The Wall Support Assembly consists of a Full Angle Ring, Brackets and Struts, plus two Clamp Flanges. These Flanges are clamped over and under the Vee Band of an inner joint, and against the Ring for secure attachment to the inner chimney pipe, as shown, in Fig. D-4.

To assemble the two Flanges and Ring, use the Clamp Flange in the middle, to hold the outer parts together by placing it to span the split in the Ring. To provide clearance for the clamp ends of the inner band, the 4 inch wide notches of both Clamp Flanges should be in alignment and 180° apart. All holes should be completely and tightly bolted, using the hardware provided. Full strength is attained with this assembly whether the Ring is located above or below the joint being supported (see Fig. D-5).

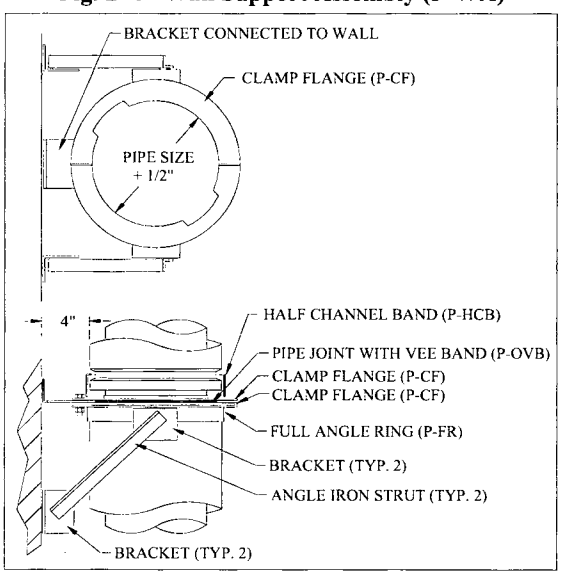
When attached to a masonry wall or suitable non-combustible structure, the Wall Support forms a fixed point in the chimney system, thus expansion movement above and below must be considered during system planning.

The Wall Support Assembly is suitable for use as the support just below the point where the chimney becomes freestanding. For such use, a Full Angle Ring or Wall Guide Assembly should be installed a distance of 6 to 10 feet below the Wall Support. This stabilizes the exposed end and thus resists side forces due to wind (see Fig. D-6).

PS and IPS C-1 Wall Supports may be used at 30 foot spacings. Use IPS C-2 Wall Supports at 20 foot spacings for chimney resupport. Use appropriate expansion joints and Full Rings or Wall Guides for lateral stability at appropriate spacings. The height of a chimney between supports is measured from the Adjustable Length, which must be used below each support.

Clearance from a non-combustible wall to chimney outer casing varies slightly with the size of the Wall Support, but will be between 4 and 4-1/2 inches.

**Fig. D-4 - Wall Support Assembly (P-WA)**




## WALL GUIDE ASSEMBLY (P-WG)

The Wall Guide Assembly (P-WG) comprises a Full Angle Ring (P-FR) plus brackets, angle struts and hardware for assembly (but does not include anchor bolts for attachment to a wall). The Ring, which is split in two halves for ease of assembly, is 1/8 inch larger than the outside diameter of the chimney pipe to allow for sliding movement during thermal expansion. In any Guide application the proper position of the Ring, when assembled around any pipe section, is at a joint but below the outer band. This allows the outer band to move away from the Ring.

The Wall Guide Assembly (P-WG) is designed for 2 to 10 inches of clearance from pipe outer casing to noncombustible walls. The side struts may be placed either up or down as convenient.

This Assembly is intended to resist lateral or side loads only, and is not for carrying the weight of a vertical chimney.

The horizontal struts allow for attachment to the wall after the chimney has been positioned. The angle of attachment may vary as needed for the chimney-to-wall clearance.

The Wall Guide Assembly is not for attachment to wood walls, wood structure or other combustible materials. If the stack must be attached to an interior or exterior combustible wall, spacers should be used to maintain proper clearance and minimize heat conduction through supporting metal parts.

**Fig. D-5 -Exploded view of Wall Support Assembly (P-WA)**

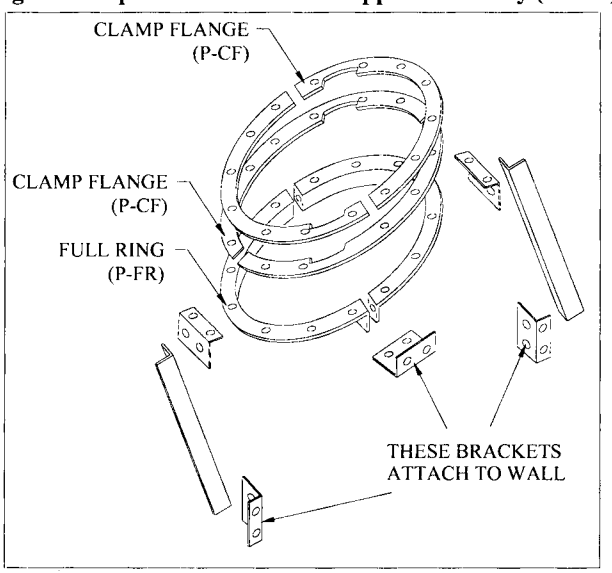
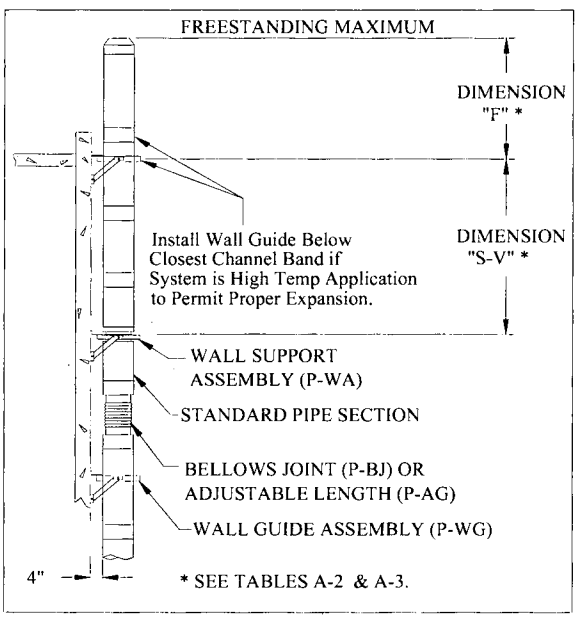



**Fig. D-6 - Upper end of exhaust system using Wall Support (P-WA)**




**Note: Important - Location of Wall Guides and Full Rings on Tall systems serving as engine exhaust or other high temperature applications.**

In order to avoid potential problems due to thermal expansion, Wall Guides (WG) and Full Rings (FR) on tall engine (and other high temperature) exhaust systems must ALWAYS be installed at an elevation BELOW the closest Channel Band (CB).

Mistakenly installing a WG or FR directly (or some minimum distance) above a Channel Band could result in obstruction of the natural vertical "growth" in height of the system when the appliance is operated and result in physical damage. Contact the factory if there are any questions. (See Fig D-6)

**Fig. D-7 - View of Wall Guide, facing wall (P-WG)**

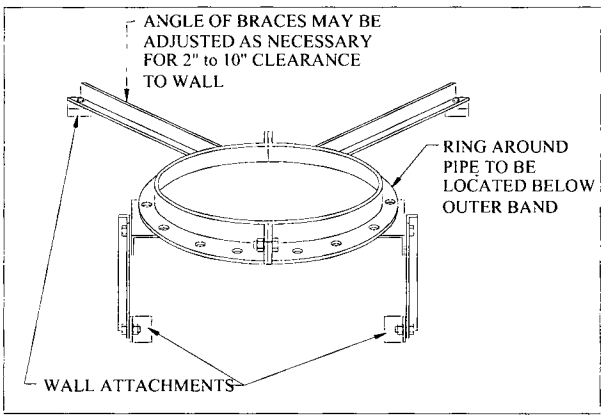
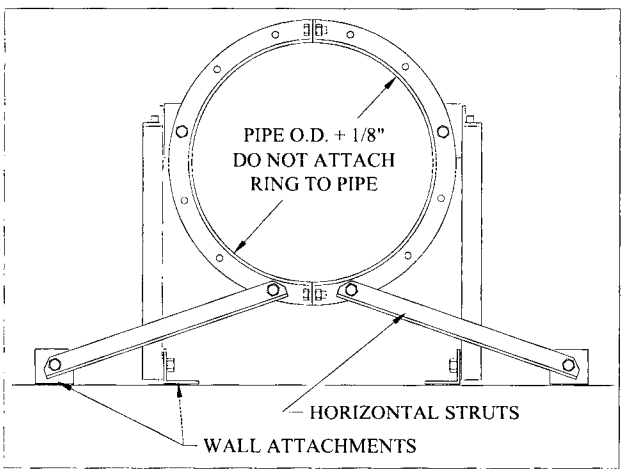


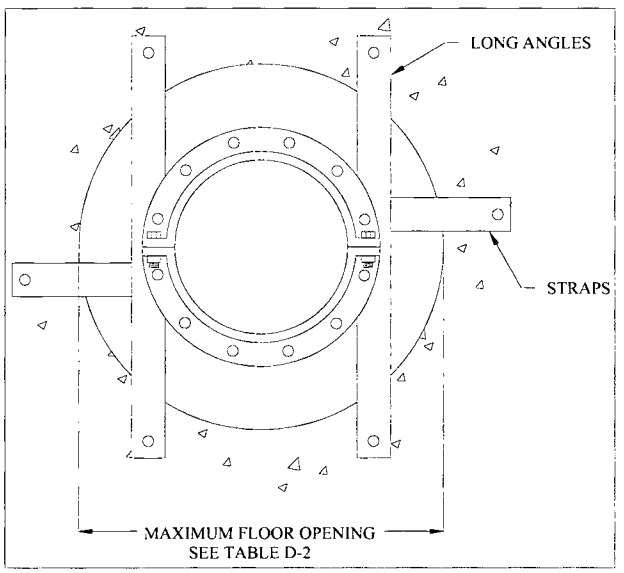

**Fig. D-8 - Plan view of Wall Guide (P-WG)**



**FLOOR GUIDE (P-FG)**

The Floor Guide comprises a Full Ring, two long angles, and two flat straps, and is used where the system can be braced within a floor opening. As shown in the plan view, the flat straps provide bracing to prevent sideways bending of the long angles.

**Fig. D-9: Floor Guide (P-FG)**




| Table D-2: Floor Guide Maximum Floor Opening | |
|---|---|
| Insulation Thickness/Size | Maximum Floor Opening |
| PS & IPS-C1 | Pipe Size + 10" |
| IPS-C2 | Pipe Size + 12" |
| IPS-Z3 | Pipe Size + 14" |
| IPS-C4 | Pipe Size + 16" |

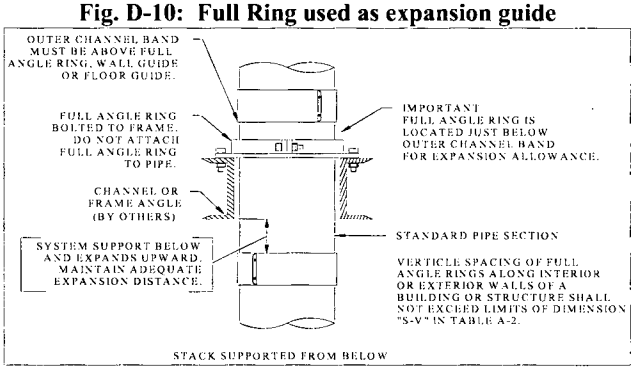
**FULL ANGLE RING (P-FR)**

The Full Angle Ring may also be used as an expansion guide by attachment to a suitable structural steel frame. For a support cradle for horizontal run, half ring or Support Straps may be suspended by rods.

**IMPORTANT CAUTION:** The Supports and Guides described here are only suitable for attachment to noncombustible construction.

**MAINTENANCE OF STRUCTURAL STEEL USED OUTDOORS**: IT IS RECOMMENDED TO APPLY AN EXTERIOR GRADE HIGH HEAT PAINT TO ANY PLATE SUPPORTS, FULL/HALF ANGLE RINGS, WALL SUPPORTS/GUIDES, EXPOSED OUTDOORS TO ENSURE MAXIMUM CORROSION RESISTANCE. (Ex. Rustoleum V2100 series High Heat Industrial Aerosol)

**Fig. D-10: Full Ring used as expansion guide**



## ROOF SUPPORT ASSEMBLY (P-MRS)

The Roof Support Assembly is primarily for penetration of roofs of combustible construction. It can be installed with wood framing at two inch minimum clearance to the Thimble structural shield (see Fig. E-2 & Fig. E-4).

Nominal framing dimensions are given in Table E-1 (see also Fig. E-1). For pitched roofs it is necessary to construct a level curb suitable for attachment of the support brackets.

The vertical length of this assembly allows penetration of roof structure up to 8 inches deep.

Air circulation through the Roof Support should not be blocked off if the chimney is being used for high temperature applications (1,000°F and above) and is installed through combustible roof structure. In small boiler rooms with gravity air supply, it may also serve as a ventilation air outlet.

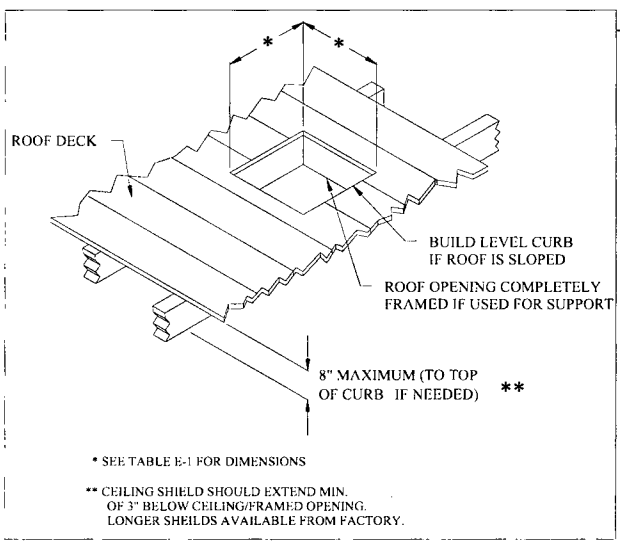
See Table A-3 for Roof Support Capacities.

Use of a Full Angle Ring or a Wall or Floor Guide Assembly is recommended, just below the Roof Support.

The Roof Support Assembly mounts directly to combustible structure using four 1/4 X 2 1/2 inch lag screws in each support bracket. The holes for the lag bolt at the bottom of the brackets may not be factory predrilled and will require to be done in the field . The PS/IPS pipe from below and the next pipe section above are attached to the Roof Support using the Clamp Flange provided (Fig E-2). The Flashing is then centered over the opening. The Storm Collar is placed on the pipe and in contact with the Flashing. Use silicone sealant at the joint between pipe and collar.

The ceiling shield is then attached to the support body using the fasteners provided

**Fig. E-1: Framing dimensions for Thimble and Roof Support Assembly. (P-MVT & P-MRS)**




## VENTILATED ROOF THIMBLE (P-MVT)

The Ventilated Roof Thimble, which does not include a pipe section, is primarily for penetration of building roofs of combustible construction. It can be installed with wood framing at two inch minimum clearance to the Thimble structural shield (see Fig. E-3 & E-5). It may be used with all types of roofs.

Nominal framing dimensions are given in Table E-1 and shown in Fig. E-1. For pitched roofs, it is necessary to construct a level curb.

The Thimble mounts directly to a level combustible structure using four 1/4 X 2 1/2 inch lag screws in each external bracket. Pipe is assembled from below and inserted up through the Full Ring provided with the Ventilated Thimble. The Flashing is then centered over the framed opening. The Storm Collar is placed on the pipe and in contact with the Flashing. Use silicone sealant at the joint between pipe and collar.

The Storm Collar has internal spacers, and when placed over the pipe will rest on the Flashing to maintain clearance for the ventilation air exit. The ceiling shield is then attached to the thimble body using the fasteners provided.

This Thimble includes a Full Ring (Part No. P-FR) which provides lateral chimney support to resist outdoor wind loads; follow the "F" dimension shown in Section A for maximum free standing heights above the Full Ring which is secured to the Thimble body.

For the Ventilated Roof Thimble (as with the Roof Support) do not block off air circulation through the Thimble if the stack is installed through combustible roof structure.

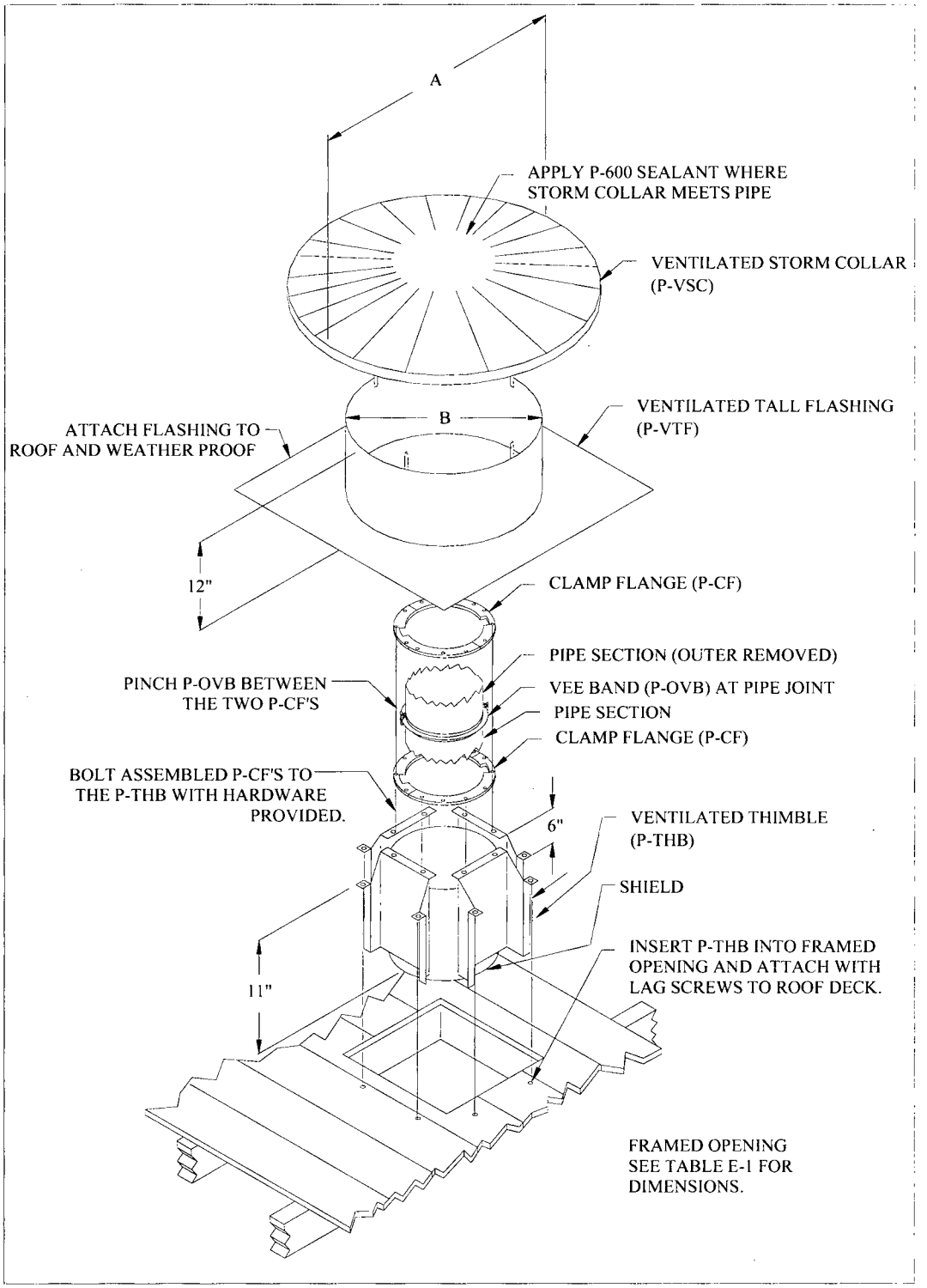
When installing PS pipe through the Thimble, be certain there is adequate vertical expansion allowance between pipe Outer Channel bands and the Full Ring supplied with the Ventilated Thimble. If an Outer Channel Band is directly below this Full Ring, on upward expansion, the Ring may distort or damage the tabs on the assembled Channel Bands.

**Table E-1: Roof Support and Ventilated Thimble Dimensions (P-MRS & P-MVT)**

| Wall Thickness /Designation | Framing Dimension | Collar Diameter Dim 'A' | Flashing Diameter Dim 'B' |
|---|---|---|---|
| 1"/PS & IPS-C1 | Pipe Size + 8" | Pipe Size +20.5" | Pipe Size +14.5" |
| **2"/IPS-C2** | Pipe Size + 10" | Pipe Size + 22.5" | Pipe Size +16.5" |
| **3"/IPS-Z3** | Pipe Size + 12" | Pipe Size + 24.5" | Pipe Size +18.5" |
| **4"/IPS-C4** | Pipe Size + 14" | Pipe Size + 26.5" | Pipe Size +20.5" |
| *See Figs. E-2 through E-5. | | | |

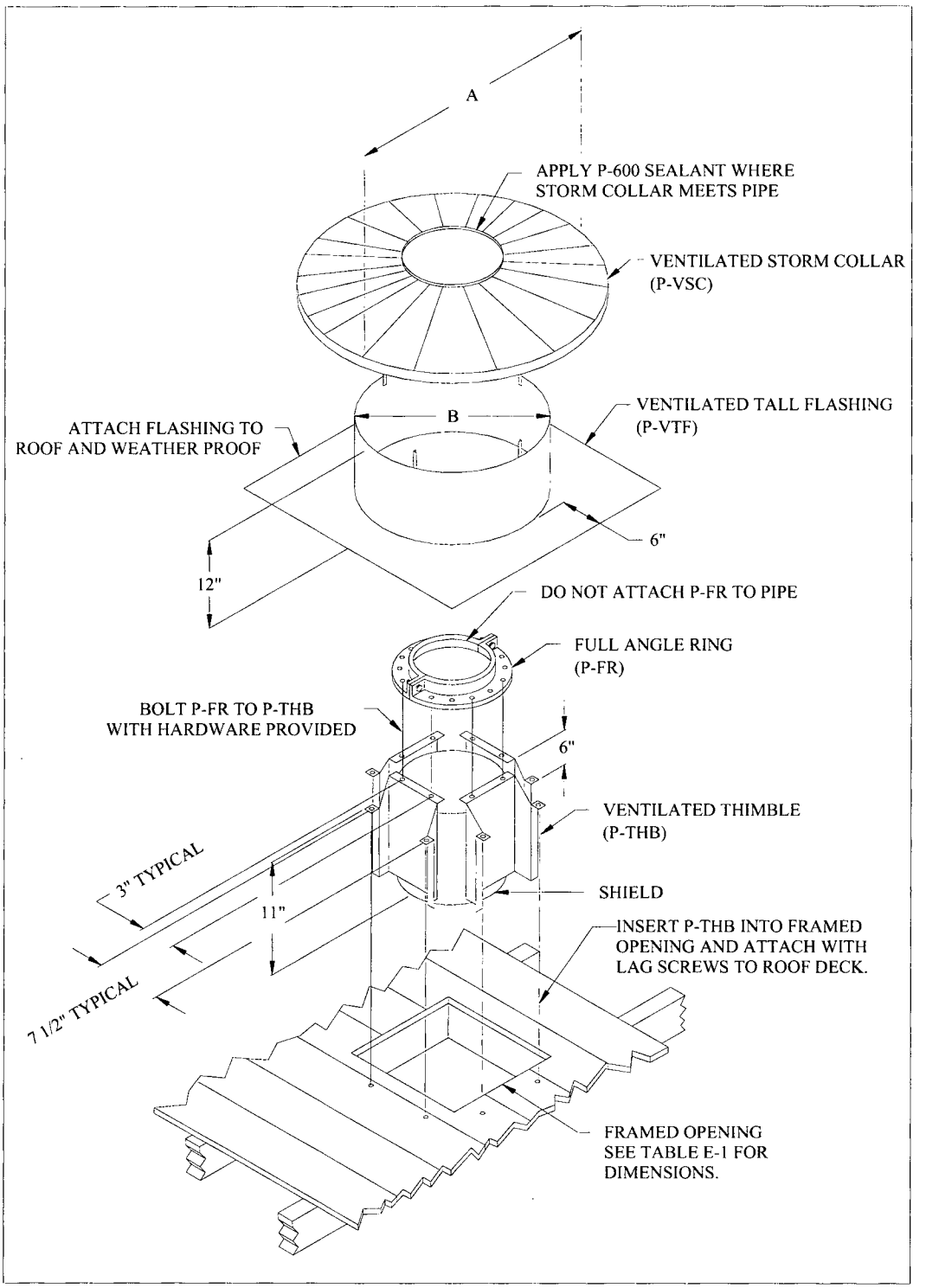
**EXTERIOR CORROSION PROTECTION**: IT IS RECOMMENDED TO APPLY AN EXTERIOR GRADE HIGH HEAT PAINT TO ANY ALUMINIZED OUTER WALLS & ROOF/WALL FLASHING COMPONENTS, EXPOSED OUTDOORS TO ENSURE MAXIMUM CORROSION PROTECTION AGAINST THE ELEMENTS. (Ex. Rustoleum V2100 series High Heat Industrial Aerosol)

**Fig. E-2 - Roof Support Installation (P-MRS)**




**NOTE:** SEE TABLE E-1 FOR A, B AND FRAMING DIMENSIONS. SHIELD SHOULD EXTEND MIN. 3" BELOW CEILING/FRAMED OPENING. LONGER SHIELDS ARE AVAILABLE FROM THE FACTORY.

**Fig. E-3 - Installation of Ventilated Roof Thimble (P-MVT)**




**NOTE:** SEE TABLE E-1 FOR A, B AND FRAMING DIMENSIONS. SHIELD SHOULD EXTEND MIN. 3" BELOW CEILING/FRAMED OPENING. LONGER SHIELDS ARE AVAILABLE FROM THE FACTORY.

**Fig. E-4 – Roof Support Installation (P-MRS)**

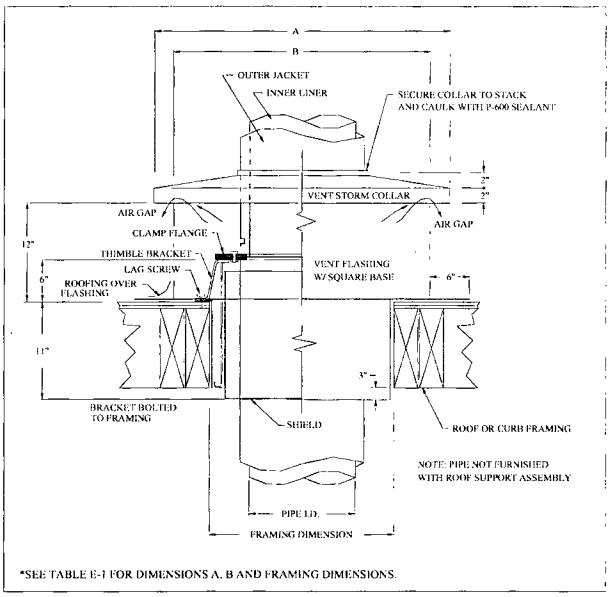
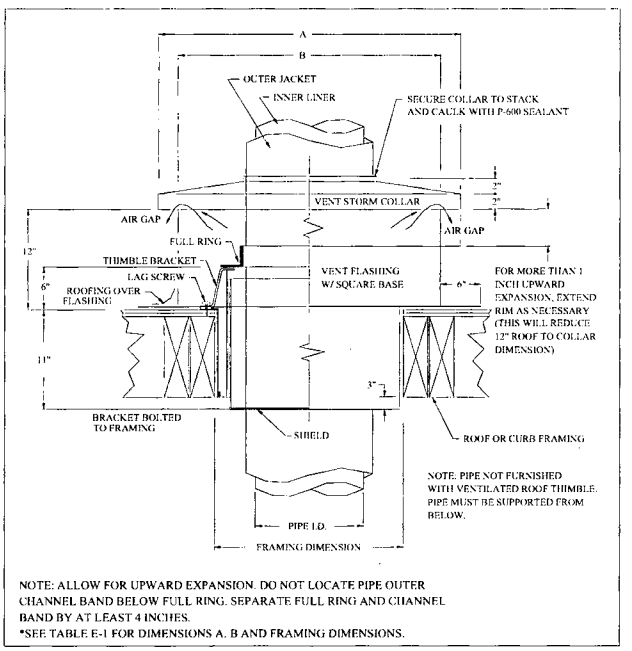



**Fig. E-5 – Installation of Ventilated Roof Thimble (P-MVT)**




## FLASHINGS AND STORM COLLARS (P-TF AND P-SC)

The Flashing Assembly consists of a square base Tall Cone Flat Roof Flashing, plus a Storm Collar counter flashing. Both of these fit the outside diameter of Model PS/IPS pipe. These parts are made of galvanized steel, which should be cleaned and painted after installation to help resist corrosion. These parts are optionally available in stainless steel for ease of maintenance.

This nonventilated Flashing is for use only on completely noncombustible, flat or slightly pitched roofs. The Flashing is not intended to take any side load or wind loads, thus a Full Angle Ring below the roof is used for lateral stability. For heights above the angle ring exceeding the Dimension F freestanding limit, external guiding or guying is required to stabilize against wind loads.

To allow for thermal expansion upward through the Flashing, the first outer band below the Flashing must be down far enough to avoid interference. Further, if more than 5 inches of expansion is expected, the Storm Collar should be extended downward with an added ring of galvanized steel.

For maximum height above the roof, use a Plate Support Assembly (P-PA) just below the roof with appropriate guying or bracing above the roof.

The Storm Collar mounts on the pipe immediately above the Flashing. The joint between Storm Collar and pipe should be sealed with silicone sealant.

**Fig. E-6 - Installation of Tall Cone Flashing (P-TF)**

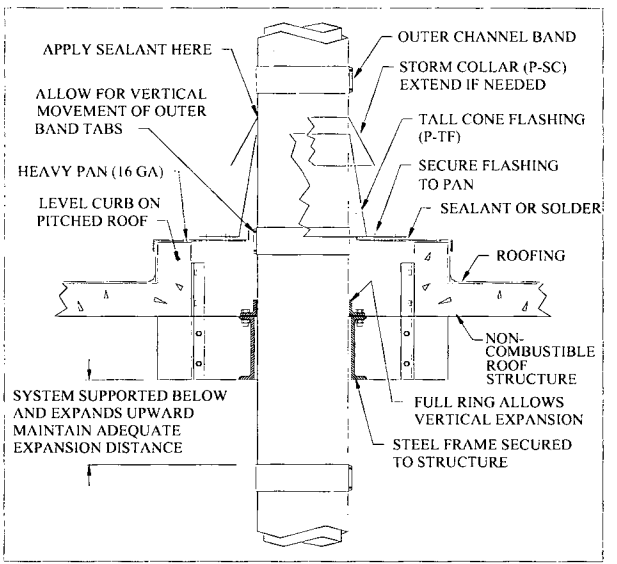
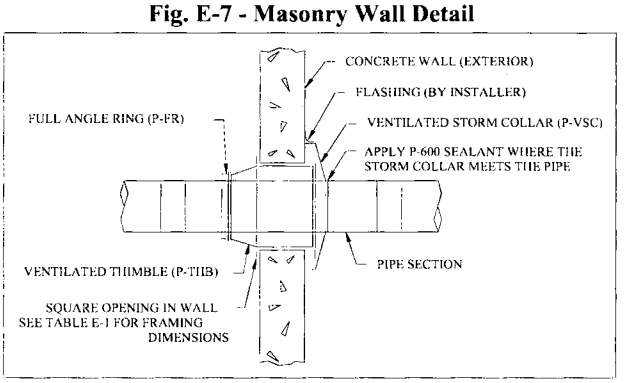



**Fig. E-7 - Masonry Wall Detail**




OTHER PENETRATIONS

In many engine exhaust and other applications, Model IPS may pass through an exterior masonry wall horizontally. Fig. E-7 shows a simple solution which can be easily incorporated.

GENERAL

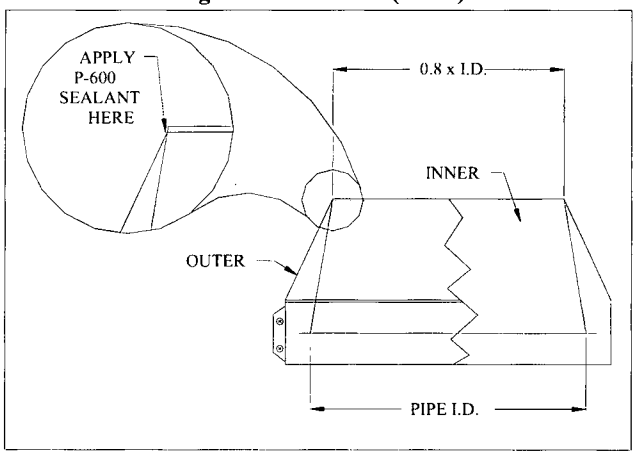
An upward discharge (such as with an Exit Cone or Open Top) provides the most effective means of dispersing chimney gases into the atmosphere and away from immediate surroundings. Such terminations however, will allow entry of rain unless there is upward flow at high velocity. A Stack Cap is only partially effective in excluding rain. Its effectiveness depends on chimney gas flow rate, raindrop characteristics and wind velocity.

With all PS/IPS Chimney terminations, where rain may enter the chimney outlet, the following precautions must be taken:

1. All inner joints must be sealed with sealant.
2. Install a Drain Section at least 5 pipe diameters below the chimney outlet, but above any Tee or Elbow.
3. If a 90° or 45° Tee is used to catch rain, connect the Tee Cap drain fitting to a suitable drain. Use a trap in the drain if the system is under positive pressure.

Note: The Drain Section and Tee Cap drain may both be used.

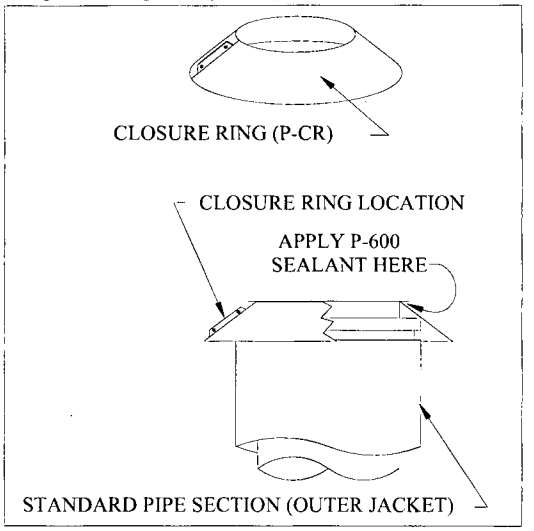
**Fig. F-1 - Exit Cone (P-EC)**




**EXIT CONE (P-EC)**

The Exit Cone is of double wall construction, with separable inner and outer cones. The inner cone has a 28° included cone angle and is sized to increase outlet velocity to 1.5 times chimney velocity. It attaches with a standard Inner Vee Band to the uppermost chimney pipe section. The outer cone is then pushed down into contact with the inner cone, clamped to the outer pipe, and the gap between cones is sealed with silicone. To prevent rain from reaching an appliance, this installation requires use of a Drain Section (P-DS), drained Tee or both in the vertical chimney.

**Fig. F-2 - Open top using Closure Ring (P-CR)**




**OPEN TOP USING CLOSURE RING (P-CR)**

A vertical Model PS/IPS Chimney can be terminated above the roof with a standard pipe length using a Closure Ring (P-CR) provided that rain entering is collected and drained from a Tee at the base of the vertical, or by a Drain Section located indoors at least 5 pipe diameters down from the chimney outlet. The Closure Ring fits under the flanged end of the pipe and provides protection against rain entering the space between inner and outer jackets. The Ring is secured by means of screws through end tabs. It should be sealed with sealant underneath the flange and at closure tab area.

**STACK CAP (P-SK)**

NOTE: Stack Caps are not recommended for use with engine or turbine exhausts.

The Stack Cap combines partial protection against rain entry with low exit flow resistance. (Resistance coefficient is roughly 0.05 velocity heads.) It is mounted to the end of a standard pipe section by use of the standard Vee Band. A Closure Ring is provided as part of the Stack Cap so that the insulating air space is maintained through the upper end of the chimney. A Closure Ring should be installed as described above. See Fig. F-3.

**REMOVAL OF TERMINATION CAP FOR INSPECTION & CLEANING**

Termination Caps can be removed for inspection and cleaning of the chimney system. To remove termination, reverse the order of installation procedure. See sections corresponding to the termination cap and Pipe Joint Assembly.

**DRAIN SECTION (P-DS)**

The Drain Section is a short length of inner pipe having an internally welded rain collection ring. As indicated in the cross sectional drawing (Fig. F-4), rain entering the chimney and running down the pipe wall will be collected and piped down into a trap, jar, or shallow sump. A distance of at least 5 diameters of pipe (more improves performance) should be used between the Drain Section and the chimney outlet to assure effective operation.

It is recommended to install the Drain Section indoors in a vertical chimney, thus avoiding freeze-ups. It eliminates the problems inherent in the use of air gap, above-the-roof types of stack drains by minimizing gas cooling and blow back problems. It can be used in conjunction with a Stack Cap or an Exit Cone for even greater effectiveness. Flow resistance of the rain collection ring is 0.25 velocity heads. The drain line should be run to a water seal or trap located below the top of the Drain Section gutter to prevent internal overflow due to back pressure. *If it must be used outdoors, then the gap between the hole in the outer wall and the drain port protrusion must be sealed w/ silicone.

**Fig. F-3 - Installation of Stack Cap (P-SK)**

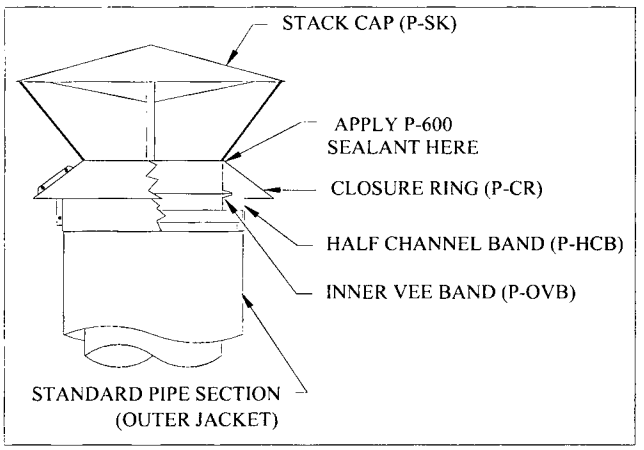



**Fig. F-4 - Construction of Drain Section**

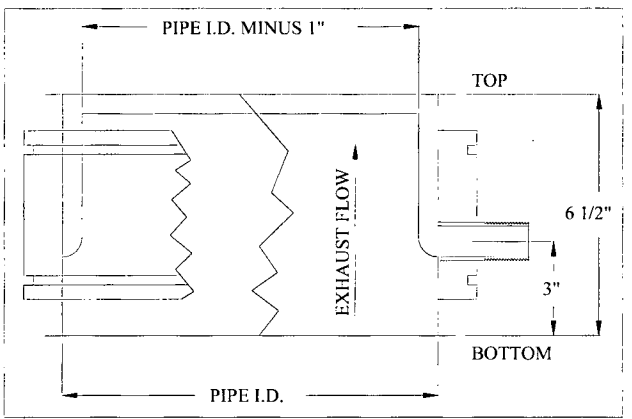
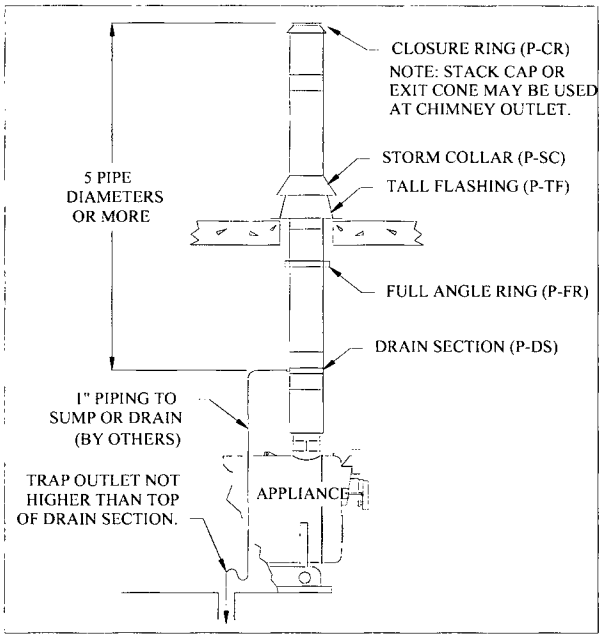



**Fig. F-5 - Installation required for Drain Section (P-DS)**




## TERMINATION HEIGHT

A minimum chimney height of 8 feet above the roof it penetrates or above all nearby flat roof, wall or deck is recommended for any PS/IPS Chimney terminations. This will help disperse exhaust gases away from the building, and will minimize contamination of nearby air intakes. Gases will be discharged above working and breathing level and there will be little chance of debris being dropped into the chimney. The additional height will also improve the effectiveness of a Drain Section.

Regardless of the foregoing recommendation, height of a chimney should meet the following requirements.

a) Proper height for the category of appliance to which it is connected. (See NFPA 211.)
b) Adequate for the draft needs of the appliance.
c) Complies with applicable building or fire codes.
d) Complies with applicable air pollution regulations for height and velocity.

## FLANGE ADAPTER (P-FD)

Attachment of a Bellows Joint to the silencer outlet or any flanged connection uses the Flange Adapter. It has a 3/8" thick steel flange with appropriate 150 lb. ANSI bolt pattern. An outer band is furnished to cover the air space around this adapter. (See Fig. F-6 for the actual configuration of the Flange Adapter and Fig. F-7 for an illustration of an assembled unit.)

**Fig. F-6 - Flange Adapter (P-FD)**

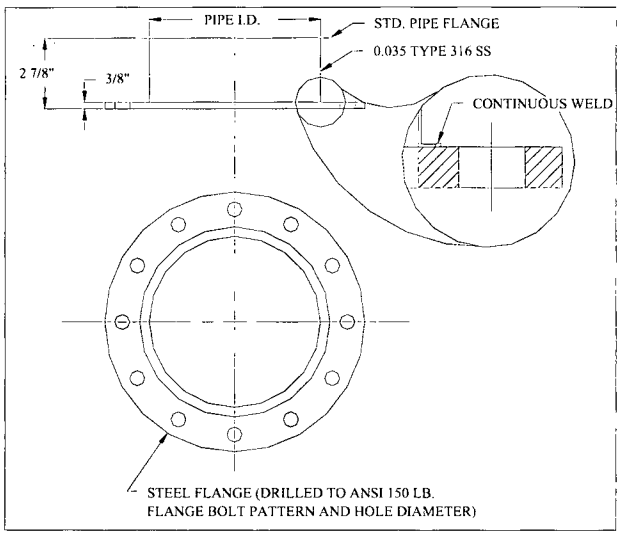
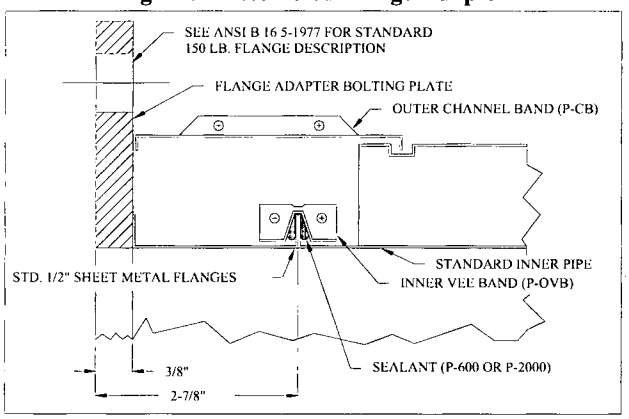



**Fig. F-7 - Assembled Flange Adapter**



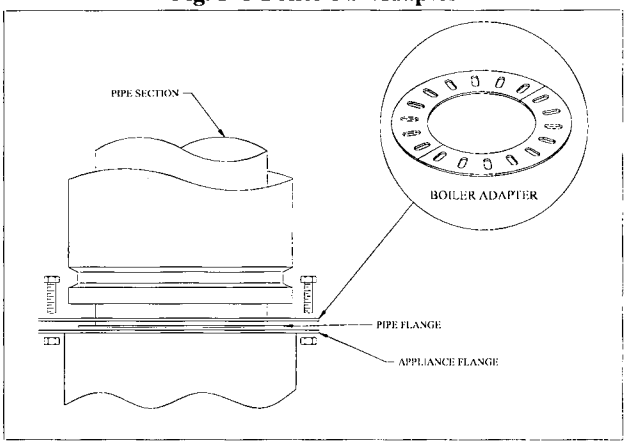

**BOILER KIT ADAPTER (P-BK)**

A Boiler Kit Adapter is designed to connect PS/IPS pipe to a boiler or other appliance having a flanged outlet with a 4, 6, 8 or 12 bolt hole pattern. The Boiler Adapter is a flat ¼" thick steel ring supplied in two half-circle pieces with twenty four 3/8" x1" slots equally spaced around the face of the adapter (See Fig. F-8).

To Install:

1. Apply a continuous bead of sealant to the face of the pipe flange and to the appliance flange.
2. Align the pipe flange with the appliance and position one half of the Boiler Adapter ring over the pipe's inner wall flange, aligning the bolt slots in the P-BK with bolt holes in the appliance and secure ring with bolts.
3. Install second half of the ring as described in step 2.
4. Tighten all nuts and bolts in an alternating pattern until the pipe flange is seated firmly between the appliance and the adapter.

**Fig. F-8 Boiler Kit Adapter**




**SEAL RING (P-SR)**

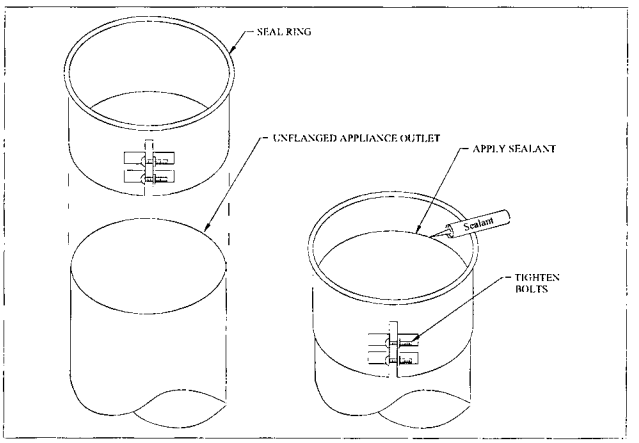
The Seal Ring is designed to seal the PS/IPS flanged inner wall to an appliance equipped with an unflanged outlet collar. The Seal Ring collar has a joint that allows the diameter of the collar to adjusted and tightened down on an adjoining collar (See Fig F-9).

Note: The SR does not provide any load bearing support and must be isolated from loads and expansion forces. This is done by installing a support assembly above (vertical runs) or beside (horizontal runs) the SR. Refer to Support Section for details.

To Install:

1. Loosen the hardware on the side of the SR collar.
2. Slide the SR over the adjoining pipe segment. The SR must engage a minimum of 2.5 inches.
3. Tighten the bolts on the SR collar.
4. Apply a continuous bead of sealant to the inside seam of the collar and SR.
5. Connect the inner wall flange of the first pipe section to the SR using the standard Joint Assembly Procedure.

**Fig. F-9 – Seal Ring**



## EXCESSIVE PRESSURE RELIEF VALVE (P-ER)

Excessive Pressure Relief Valves are intended to help control the venting of pressure which may occur during an exhaust system backfire. Engines have the potential to inject unburned fuel into an exhaust system during start up or due to an engine malfunction.

This unburned fuel creates a condition where a backfire could occur. The Explosion Relief Valve will help prevent damage to other parts such as Flex Connectors, Silencers, Catalytic Converters, Convoluted Bellows and Heat Recovery Equipment.

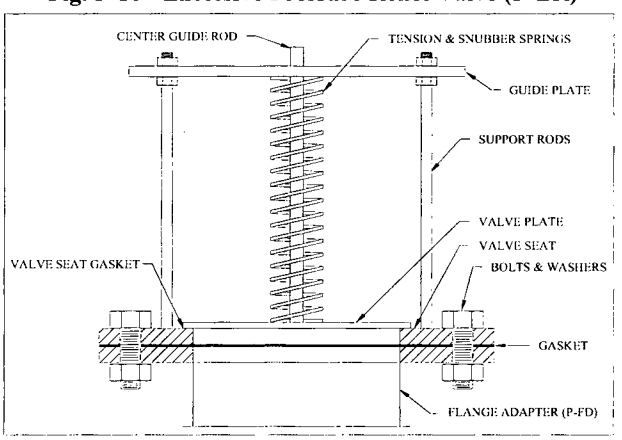
Further precedence for use of Excessive Pressure Relief Valves can be found in NFPA 37, "Standards for the Installation and Use of Stationary Combustion Engines and Gas Turbines".

The Excessive Pressure Relief Valve should be located in the system at the first change in direction (see Fig. B-7 and Fig. C-1) and is supplied with bolts, washers, nuts, and gasket to provide a complete gas tight connection to the 150 lb. ANSI flanged Flange Adapter (see Fig. F-10).

**Caution:** This device is designed to relieve excessive pressure in the case of an engine malfunction for the sole purpose of protecting the physical integrity of the exhaust system and related parts. If such malfunction occurs, the device will release hot gases, sparks and/or flames into the immediate vicinity of the ER.

As such, this device should never be installed where human contact with any such release is possible, or near any flammable or combustible materials.

**Fig. F-10 - Excessive Pressure Relief Valve (P-ER)**



## INSTRUCTIONS AND SAFETY STANDARDS

**Listings:**

Selkirk Model G, PS, IPS and Zero Clear™ (ZC) Grease Ducts are Listed (safety certified) by Underwriters Laboratories, Inc. (UL) in accordance with UL1978, the "Standard for Grease Ducts". They are intended to be installed in accordance with the following installation instructions and NFPA 96, the (National Fire Protection Association) "Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations".

Selkirk Model Zero Clear™ IPS-Z3 (Also known as ZC or Z3) and Zero Clear Plus™ IPS-Z4 (Also known as ZC+ or Z4) Grease Duct Systems are Listed with a minimum zero inch clearance to combustibles. Selkirk Models G, PS and IPS grease duct systems are Listed for use at certain minimum airspace clearance to combustibles, as identified on the labels and in these instructions.

**Classifications:**

Selkirk Model Zero Clear™ (IPS-Z3/ZC) and Zero Clear Plus™ (IPS-Z4/ZC+) Grease Ducts are also Classified by UL in accordance with UL2221, the "Standard for Fire Tests for Fire Resistant Grease Duct Enclosure Assemblies" and ASTM-E2336 , the "Test Methods for Fire Resistive Grease Duct Enclosures". Zero Clear™ (ZC/Z3) is Classified for a maximum 2 hour fire resistance rating per UL2221 and a maximum 1 hour fire resistance rating per E2336. Zero Clear Plus™ (Z4/ZC+) is Classified for a maximum 2 hour fire resistance rating per ASTM-E2336. These ratings qualify the insulation and the outer wall of the ZeroClear™ (ZC) products as an alternate to the specified hourly rated fire resistive shaft enclosures (therefore eliminating the need for a separate fire resistive enclosure) and for installation at zero clearance to combustibles. See Table G-1.

**Table G-1 – Grease Duct Certifications**

| Model | Certification Per UL1978 | Certification/ Fire Rating Per UL2221 | Certification / Fire Rating per ASTM-E2336 |
|---|---|---|---|
| G, PS, IPS | Yes | No | No |
| IPS-Z3/ZC | Yes | Yes: 2 Hour | Yes: 1 Hour |
| IPS-Z4/ZC+ | Yes | Yes: 2 Hour | Yes: 2 Hour |

Model G, PS, IPS, ZC and ZC+, Grease Duct Systems are based on the same construction. While Model PS employs a 1" insulating airspace between walls, Model IPS incorporates a 1", 2" or 4" of fiber insulation between walls and Model ZC (IPS-Z3) incorporates 3" of special fiber insulation between walls. Model ZC+ (IPS-Z4) incorporates 4" of special fiber insulation between walls. Component assembly is basically the same for each system. Model G is a single wall system, composed of the inner liner of Model PS, IPS, ZC and ZC+.

APPLICATION

Model G, PS, IPS, Z3 and Z4 are suitable for use in installations using exhaust system components for the removal of smoke and grease-laden vapors from commercial, industrial, institutional and similar type applications. Model G, PS, IPS, Z3 and Z4 Grease Ducts are intended for use as complete systems. They connect the hood or grease extractor system to the outdoors through an exhauster or blower system.

Round Selkirk Grease Ducts provide for efficient airflow (lower friction loss compared to rectangular or square ducting) and superior structural integrity achieved using lighter gauge stainless steel material and fewer reinforcing members. These systems are completely integrated for a very efficient mechanical design and have the additional benefit of providing a very clean appearance on final assembly.

System installation specifications are as described in the NFPA96 and these grease ducts are to be installed to conform to that standard or as described in these installation instructions. (Grease duct systems are not to be interconnected with any other building ventilating or exhaust system.) Systems installed in accordance with these instructions comply with NFPA96, the International Mechanical Code (IMC), Uniform Mechanical Code (UMC) and other codes.

Round Selkirk Grease Ducts are permitted to be installed in accordance with the clearances shown in Table G-2. Some special provisions for Grease Ducts are necessary and, in particular, cleanout openings must be provided. Cleanout openings should: 1) be provided at each change in direction of grease ducts, unless the entire length of duct can be inspected and cleaned from either the hood or discharge end or from both ends, 2) be at the sides of the duct, and 3) have the lower edge of the opening at least 1/2 above from the bottom of the duct.

System size and capacity information can be obtained from: 1) A chapter in the "ASHRAE Handbook" series entitled "Chimneys, Gas Vent and Fireplaces", or 2) Chapter 3, "Air Pollution Engineering Manual of the U.S. Environmental Protection Agency" 1973. Refer to Selkirk Model PS, IPS, ZC and ZC+ Product Catalog for descriptions of all necessary parts.

INTERMIXING OF SYSTEM PARTS

Model G, PS, IPS, Z3 and Z4 may be intermixed within a system, assuming proper clearances are maintained for the respective components. When penetrating a roof, Model PS, IPS, Z3 or Z4 duct sections and appropriate roof penetration components must be used. Do not use Model G sections to penetrate the roof.

**SURROUNDINGS**

Selkirk Models G, PS and IPS are primarily intended to be used in noncombustible surroundings. Models Z3 and Z4 can be used for either combustible or noncombustible surroundings.

Where the ducting is installed in an open room and does not require an enclosure it must have a minimum clearance to adjacent combustible walls as shown in the section titled "Clearances". The ducting may be located in corners formed by two combustible walls under the above condition.

Interior installations in all buildings should be installed as follows:

1) If a ceiling or wall has a fire resistance rating and is penetrated by a Models G, PS, or IPS Grease Duct, then the duct shall be enclosed with a continuous enclosure extending from the penetration, through any concealed spaces, to or through the roof so as to maintain the integrity of the fire separations required by the applicable building code. NOTE: If penetrated by Z3 or Z4 no additional enclosure is required however the appropriate Through Penetration Firestop (TPF) must be used. See Through Penetration Section.
2) If a ceiling or wall does not have a fire resistance rating and is penetrated by a Model G, PS or IPS Grease Duct installed at the correct minimum clearance for unenclosed duct, then no enclosure is required.
3) Where the Model G, PS and IPS ducting extends through any story of a building above that in which the connected appliances are located, it must be enclosed in the upper stories with walls having a fire resistance rating of not less than one hour for buildings of two or three stories in height. If the building is four stories or more in height, the enclosure wall shall have a fire resistance rating of not less than two hours.

NOTE: Based on its qualifications model ZeroClear (Z3 and Z4) may be used in place of a separate fire rated enclosure in situations where fire rated enclosures would normally be required.

**CLEARANCES**

**Table G-2: Minimum Airspace Clearance to Combustibles for Grease Duct**

| Pipe ID | Model PS | Model IPS-C1 | Model IPS-C2 | Model IPS-C4 | Model Z3 & Z4 | Model G |
|---|---|---|---|---|---|---|
| 5" | 5" | 2" | 1" | 1" | 0" | 18" Or Per Local Code For single Wall construction Per NFPA 96 |
| 6" | 5" | 2" | 1" | 1" | 0" | |
| 8" | 5" | 3" | 1" | 1" | 0" | |
| 10" | 5" | 3" | 1" | 1" | 0" | |
| 12" | 6" | 3" | 1" | 1" | 0" | |
| 14" | 7" | 3" | 1" | 1" | 0" | |
| 16" | 8" | 3" | 1" | 1" | 0" | |
| 18" | 9" | 4" | 2" | 2" | 0" | |
| 20" | 10" | 4" | 2" | 2" | 0" | |
| 22" | 11" | 4" | 3" | 3" | 0" | |
| 24" | 11" | 4" | 3" | 3" | 0" | |
| 26" | 12" | 5" | 4" | 4" | 0" | |
| 28" | 12" | 5" | 4" | 4" | 0" | |
| 30" | 13" | 5" | 4" | 4" | 0" | |
| 32" | 13" | 5" | 4" | 4" | 0" | |
| 36" | 14" | 6" | 5" | 5" | 0" | |
| 42" | 16" | 7" | 6" | 6" | N/A | |
| 48" | 17" | 7" | 6" | 6" | N/A | |

**For noncombustible construction maintain clearances as required for installation, access for inspection, or per local code.**

Combustible roofs may be penetrated by using either the Roof Support Assembly (P-MRS), Roof Support Section (RSS), the Ventilated Roof Thimble (P-MVT), Ventilated Roof Curb (See Fig. G-5) or Fan Adapter Termination (FAT). Vertical walls or combustible materials may be penetrated using the Wall Penetration Assembly (THB). These are the only parts intended for use with combustible construction. All other parts, such as Plate and Wall Supports, Floor and Wall Guides, are for attachment to noncombustible construction.

**SLOPE**

Based upon performance considerations associated with its Listing by Underwriters Laboratories, Inc. (UL), no specific slope is required when installing Model G, PS, IPS, Z3 or Z4 grease ducts in a horizontal run. While inclusion of some slope is permitted, slope is NOT mandatory. Normal system components permit a small amount of slope as the system is being installed. Many building and / or mechanical codes dictate the inclusion of some minimum slope in horizontal runs of grease duct. This is an important consideration for rectangular, welded steel systems, since pooling of grease is a risk. The G, PS, IPS, Z3 and Z4 cylindrical systems are exempt from this requirement.

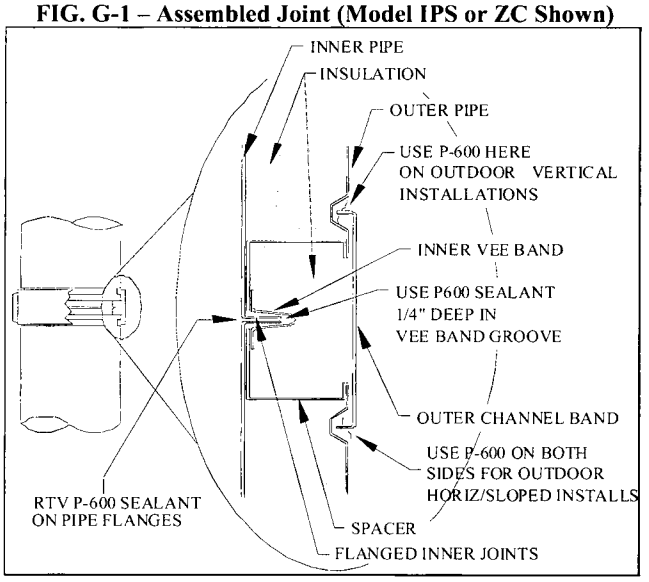
In some areas the local code authority may insist on inclusion of 1/4 inch per foot slope. In such case, a short "Slope Transition" (P-ST) section is available. The Slope Transition includes a slight offset at one end in order to create the ¼" per foot slope within its length. For correct installation, two Slope Transitions are generally required. Install one at each end of the horizontal run to initiate the required slope and then return to the proper inlet orientation for the vertical portions of the system.

**PIPE & FITTING JOINT ASSEMBLY**

All grease ducts must be liquid tight according to NFPA 96. The following procedure can be used to assure that all joints in the installation meet that requirement. Assembly is accomplished as follows:

1. Clean all pipe flanges and Vee Band inner surfaces with an appropriate organic solvent, such as Acetone, MEK, or other commercial degreaser (Caution: Observe adequate safety measures when using).
2. Apply a thin layer of RTV P-600 silicone sealant to the face of each pipe flange (Caution: The use of any other sealant on flange surface may impair sealing effectiveness).
3. Parallel flanges are brought together immediately.
4. Joint sealant is applied to the groove of the Inner Vee Band. Use P-600 Joint Sealant.
5. Plan to locate the clamp and tightening flanges of the Vee Bands on the sides of the grease duct horizontal run to eliminate possibility of leaks.
6. As soon as possible or within 15 minutes of applying the sealant, install the Vee Band and tightly clamp it around the flanges using end clamp hardware. (Visegrip welding pliers are extremely useful for holding the Vee Bands in place while installing the end clamp tightening bolts.) NOTE: Light tapping with a hammer all around the band while tightening the end clamp bolts helps to align and pull the flanges together.
7. (For IPS, Z3 and Z4 only), install a 4" wide strip of insulation (supplied) over the entire Vee Band, filling the space between the spacers as shown in Fig. A-2.
8. The outer channel band is then installed by inserting the edges of the band into the outer pipe grooves and drawing it closed with the screws and nuts. For exterior joints apply sealant to the joint between the Channel Band and the outer pipe (See Figs. A-2 & A-3 & Pipe Joint Assy).

**FIG. G-1 – Assembled Joint (Model IPS or ZC Shown)**




Note: Flange to flange inner pipe joints are identical except for Adjustable Lengths (P-AG) and Variable Lengths (P-VL). These require special orientation for correct use.

NOTE: DO NOT SEAL THE CLEANOUT ACCESS COVERS. THEY MUST REMAIN FREE OF SEALANT FOR FREQUENT INSPECTION PURPOSES.

CAUTIONS

1. The outer channel bands are designed to slide in their mating grooves. Do not attach by screws into the outer casing.
2. Do not allow screws to penetrate the inner pipe. This can cause corrosion, gas leakage or expansion failure.
3. Never use screws through the outer jacket of an adjustable length or expansion joint.

**GREASE DUCT JOINT SEALANT**

Selkirk Joint Sealant (P-600) is a pre-mixed, one-part, acetoxy cure silicone adhesive. Properly made joints are gas tight and highly resistant to oil, water, solvents and all acids except hydrofluoric. P600 has a "Tack-Free" time of 15 minutes at 77° F and a "Cure" time of 24 hours.

When stored in original, unopened containers below 90°F, P600 has a shelf life of 30 months from date of manufacture. After a container has been opened, a plug of cured material may form in the nozzle or tube tip during storage. Remove the cured material and the remaining sealant is ready to use.

Note: As of September 2008, Selkirk P-2000 High Temperature sealant is no longer required for Grease Duct (Model G, PS, IPS & ZC) applications. Selkirk P-600 Sealant is approved for application on both the Pipe Flanges and in the Vee-Band for Grease Duct. However, if desired, P-2000 High Temperature Sealant can be used as an alternate to P-600 in the Vee Band. In such case, P600 is still required between the flanges.

## MAINTENANCE AND SAFETY

The Model G, PS, IPS, Z3 and Z4 Grease Duct System have a special group of parts which are specifically designed to create a safe and reliable system. Those special parts include:

- Nozzle/Port Section (special part code) to integrate a fire suppression system or act as an interface for hot water/detergent maintenance section
- Grease Tee's (P-GMT) - Provide access to the duct at a 90° changes of direction for cleaning and inspection. Includes a 1" required dam to prevent liquids from spilling out when opened.
- Cleanout Doors (P-TCN) – Allows for access to the snout of a tee for inspecting and cleaning the duct.
- No-Tool Access Cap (P-NTAC) – Similar to the TCN but does not require tools to open.
- Inline Access Door (IAD) – Provides access to a straight length of grease duct for cleaning or inspection.

NFPA96 contains some very specific requirements concerning the safety features which must be incorporated into grease duct systems. This document includes guidelines to be followed related to the operation, inspection and cleaning of grease ducts and it indicates that the system shall be cleaned at frequent intervals prior to surfaces becoming heavily contaminated with grease or oily sludge. Depending on the amount of cooking equipment usage there should be a daily or weekly inspection to determine if grease or other residue has been deposited within the section. When the grease or other residues are in evidence as deposits, the entire system should be cleaned in accordance with accepted procedures. The Cleanouts and Access Components (mentioned above) are specifically designed to aid in this process and should be located at each change in direction. Long straight vertical and horizontal runs may need additional cleanouts to allow the system to be completely inspected and cleaned.

## AUTOMATIC CLEANING

An automatic hot water/detergent injection system can be integrated into the G, PS, IPS, Z3 and Z4 Grease Duct systems by using the dual purpose Nozzle/Port Section (which is also used for fire suppression) and Tees with nippled Base Drains. All of these related parts have standard NPT hardware so that conventional nozzles and piping can easily be attached. Please keep in mind that if plumbing is connected to cleanout inspection caps, flexible high temperature, high pressure plumbing must be provided with shutoff valves so that the inspection process can be completed on a regular basis.

A typical installation would provide hot water at approximately 160°F and use a detergent injected by conventional hardware so that the entire grease duct system can be scrubbed down daily (using jet spray characteristics) for the removal of grease, dirt and dust. Normally the automatic cleaning system is designed as a unit, however a modular design would prove satisfactory.

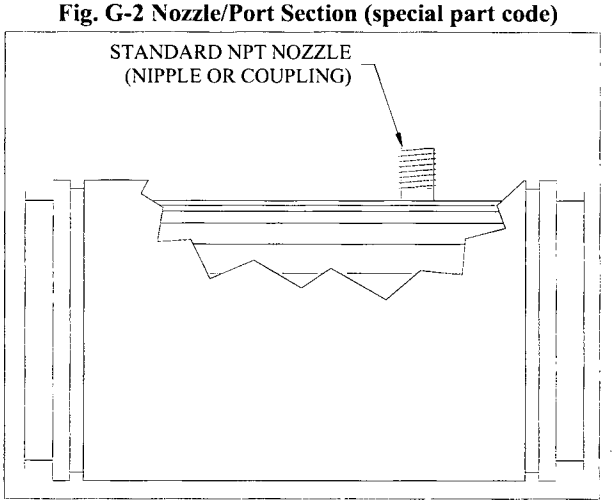
Automatic cleaning implies that the grease drains are connected to appropriate hardware so that the residues of the cleaning process are piped directly to drains and not grease traps or fixed size buckets.

## FIRE SUPPRESSION

The practice of NFPA 96 concerning fire safety requires that fire extinguishing equipment shall be provided for the protection of duct systems, grease removal devices and hoods, especially if all the cooking equipment is not served by Listed grease extractors. The use of a special Pipe Section w/ Port/Nozzle allows various types of fire extinguishing equipment to be integrated into the grease ductwork, if necessary. Some of the various types are: 1) CO2 extinguishing systems (NFPA 12), 2) Sprinkler systems (NFPA 13), 3) Foam-Water Sprinkler/Spray Systems (NFPA 16), and 4) Dry Chemical Extinguishing Systems (NFPA 17). The Nozzle Section (See Fig. G-2) can be positioned so that the nozzle fitting is either on the sides or top of the section consistent with good fire protection design practice. Various diameter NPT couplings offered allow for flexibility when making the required connections (See Fig. G-2).

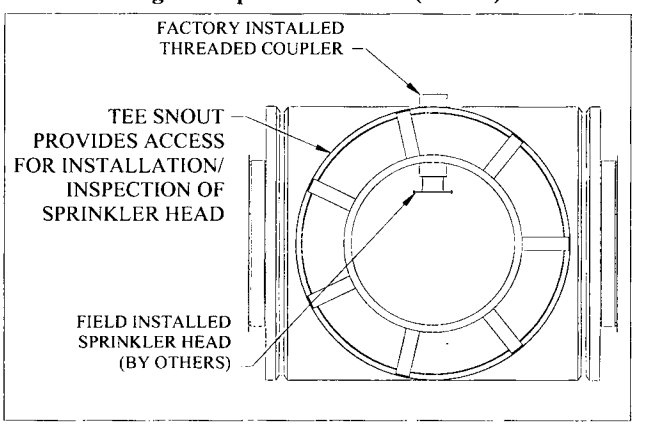
Nozzle Grease duct tee sections with sprinkler port (P-NTS) are also available for installations requiring sprinkler heads with access for inspection / cleaning. The P-NTS tee sections include a coupling to accept standard ½" (or ¾") NPT sprinkler heads (See Fig. G-3).

**Fig. G-2 Nozzle/Port Section (special part code)**




Note: The access port of the tee section should be located/oriented horizontal to upward to avoid the possibility of collecting grease.

**Fig. G-3 Sprinkler Section (P-NTS)**



## HOOD TRANSITION

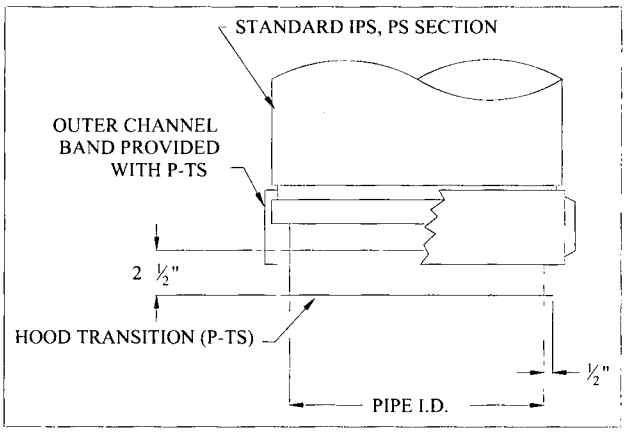
The Model G, PS, IPS, Z3 and Z4 Grease Duct Hood Transition (TS or TSU) Stubs are stainless steel extensions of the standard inner pipe used in normal Model G, PS, IPS, Z3 and Z4 Duct Sections. The P-TS is furnished as a single wall piece with 1/2 inch flanges at both ends. The P-TSU (Unflanged Hood Transition Stub) is available for those installations where the flange is needed only on one end.

The TS or TSU Stub can be welded directly to the hood or to a transition which has been fabricated to match the opening in the hood. The transition must be constructed so that it does not create a high air flow loss. A third alternative, when required, is to fabricate a special transition piece which tapers the exhaust hood port into the Model G, PS, IPS, Z3 and Z4 Grease Duct stack diameter so that a smooth, low loss connection occurs.

The use of Model G, PS, IPS, Z3 and Z4 Grease Duct Transition Stub allows many different termination methods to be considered for high quality, simple, practical installations.
Provision should be made to have transition welded to hood or attached per NFPA 96 bolt on system.

When appropriate, special tapered hood transitions (rectangular to round or round to round) are produced to order. They are fabricated as a welded, stainless steel unit and may be provided with or without flanges for direct field attachment via welding. They are provided with the appropriate insulation and a two piece, "clam shell" type outer wall / protective enclosure for around the insulation.

**Fig. G-4 Hood Transition (P-TS)**




## CLEANOUT TEE CAP (P-TCN)

The Cleanout Tee Cap provides access for inspection into the grease duct. Both the inner and outer has handles for easy removal.

When using with part numbers P-MT, P-JL, and P-JY, a step Increaser (P-OS) is required to assure the cleanout opening is at least 1 inch from the bottom of the duct.
When using cleanouts, always prevent leaks and assure that the grease duct functions as intended (see Joint Assembly Procedures).

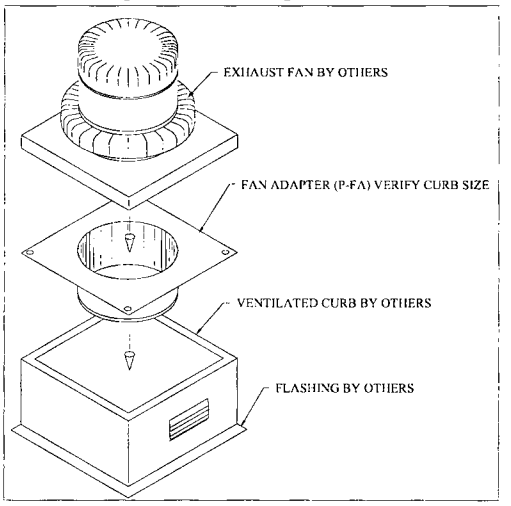
## FAN ADAPTER (P-FA)

The Fan Adapter is used, in many installations, to provide for the final connection between the grease duct system and an "upblast" fan. The adapter incorporates a square plate (on the top or outlet end) and a short section of duct incorporating a flanged end (on the bottom or inlet end). It is designed to set directly on top of the roof curb (by others) and directly beneath the fan base (by others). (See Fig. G-5)

The Fan Adapter is first attached to the roof curb using bolts or screws through the square plate and into the curb. The inlet end connects to the remainder of the grease duct system using a Vee Band and typical assembly methods described under "Pipe Fitting Joint Assembly".

A vented curb should be used if the roof construction being penetrated is of combustible construction.

**Fig. G-5 Fan Adapter (P-FA)**




## ROOF SUPPORT SECTION & FAN ADAPTER TERMINATION

The Roof Support Section (RSS) is a section of ZC grease duct that is designed to penetrate through the roof and attaches to the roof surface, providing support for the duct system parts suspended below, or extended above the RSS.

Similarly, The Fan Adapter Termination (FAT) is a section of a ZC grease duct that incorporates a fan curb and provides a surface for mounting and installing an up-blast discharge fan. The FAT eliminates the need for a separate welded fan curb termination assembly. The square curb is specifically designed to accommodate hinged type exhaust fans, commonly used for extraction of cooking fumes. The FAT also provides vertical support for the duct system and in some applications, when installed and supported properly, the weight of the hood and duct system may be suspended from the FAT.

The RSS & FAT are non-ventilated roof penetration components that are only available in model Z3 or Z4. However they can be used with other systems provided the proper clearances are maintained for the other grease duct parts.

To Install:

1. Prior to installation, refer to WEIGHT OF PIPE section and hood manufacturer to determine the total combined weight of the hood and the duct system. If the total weight of the entire system exceeds the Maximum Suspended Weight specified in Table G-2, the duct system will require additional vertical support. Refer to SUPPORT METHODS section of instructions
2. Determine the total length of the Grease Duct System. If total length of duct exceeds 12 feet, an Adjustable Length (P-AG) and additional support will be required to compensate for thermal expansion. Refer to THERMAL EXPANSION section for proper installation instructions.
3. Determine the exact location where the grease duct system will penetrate the roof. Prepare an opening in the roof ¼" larger than the diameter of the outer casing.
4. Determine if adequate support is available to bear the load of the RSS or FAT and other duct system parts. If necessary, add additional steel roof joists and bracing, creating a framework to support the load of the duct (see Figs. G-6 & G-7). Refer to Table G-2 (RSS & FAT Suspended Weight & Length Limits) and WEIGHT OF PIPE section to determine load bearing capacity and compare it to the anticipated total load to make certain the grease duct system is properly supported and that the component parts and structural members are not overloaded.
5. Once adequate support is established and any supplemental bracing / framing is fabricated, install inlet end of RSS & FAT into roof opening. Ensure that the top surface of the RSS or FAT is level, and secure roof plate to structural members of roof using the appropriate fasteners (by others).
6. Apply roofing material over roof plate to seal off any openings in the roof.
7. For the FAT, see fan instructions for proper installation of the fan assembly. For the RSS, refer to Section "A" PIPE & FITTING JOINT ASSEMBLY for instructions on attaching additional duct sections to the top of the RSS. Once sections are properly attached, install the Storm Collar (SC) included with the RSS so that it shields the top plate of the RSS (See Fig G-6).
8. Refer to instructions for installing remaining grease duct system components

| Table G-2. RSS & FAT Suspended Weight Limit | |
|---|---|
| **Pipe Size** | **Max Weight Suspended from RSS & FAT** |
| 8" – 14" | 400 Lbs. |
| 16" – 20" | 500 Lbs. |

**Fig. G-6. Roof Support Section (RSS)**

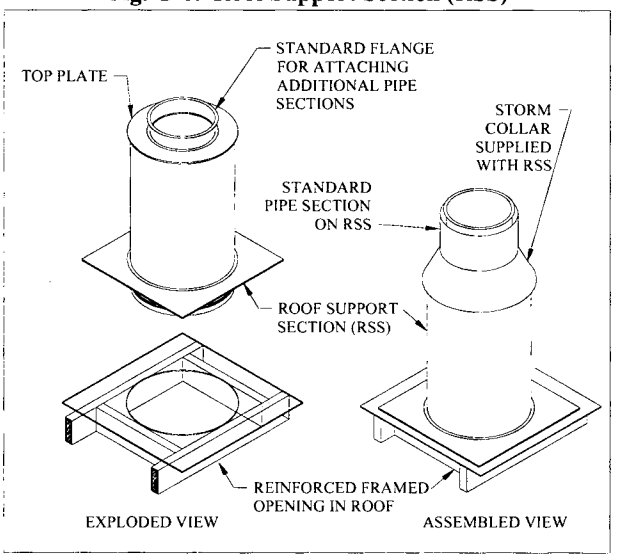
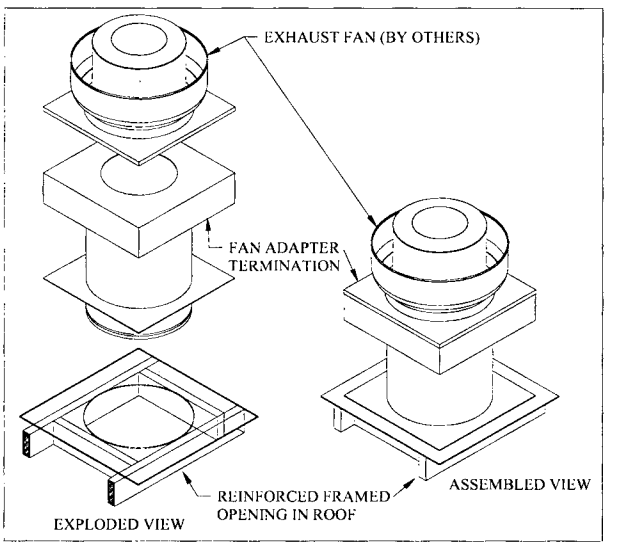



**Fig. G-7. Fan Adapter Termination (FAT)**



## THROUGH-PENETRATION FIRESTOP (UL SYSTEM C-AJ-7101) (TPF)

### Through-Penetration Firestop (UL System C-AJ-7101) for Model Zero Clear™ and Zero Clear Plus™

Fire Resistance Rating: 2 Hour (F & T)

Whenever the Zero Clear™ (Z3) or Zero Clear Plus™ (Z4) grease duct passes through a fire rated wall or floor, a Through-Penetration Firestop Kit must be used to retain the fire rating. Use one Through-Penetration Firestop Kit for a floor penetration and two Through-Penetration Firestop Kits for a wall penetration.

Kit Contents:

- Closure Band (1)
- Cover Plate Half (2)
- 12" Wide Insulation Strip (1)
- 4" Wide Insulation Strip (1)

Note: Firestop Putty / Caulk Not Included

To Install:

1. Cut a circular hole into the fire rated floor or wall that is 2" greater in diameter than the OD of the duct.
2. Center the Z3 or Z4 grease duct within the hole and support to maintain position.
3. Tightly pack the 1" gap between the outer wall of the duct and the hole with the 4" Wide 6 pcf ceramic fiber insulation strip provided. This insulation must encircle the outer wall of the duct and fill the gap to within ½" of the floor surface or to within ½" of both surfaces of the wall (See G-9).
4. Apply a minimum ½" depth of 3M Fire Barrier Moldable Putty or 3M CP25WB+ caulking, flush with the top surface of the floor or flush with both surfaces of the wall (See G-9).
5. Install the two piece rectangular Cover Plate. The two piece rectangular Cover Plate is designed to fit over the Putty or caulk and around the outer wall of the duct. There will be a nominal 1/4" gap around the pipe and the two parts of the plate must overlap each other a minimum of 1". Secure in place with appropriate hardware (See G-8 & G-10).
6. Wrap a 12" wide strip of the ceramic fiber insulation around the grease duct. The insulation must butt up to the cover plate and outer wall of the duct. Secure in place with the closure band using the hardware provided.
7. Note that cover plates, wrap insulation and closure bands are installed on the top surface of a floor penetration and on both surfaces of a wall penetration.

**Caution:** Do not use the Adjustable Length (P-AG) with the Through Penetration Firestop.

**Fig. G-8 Floor Penetration**

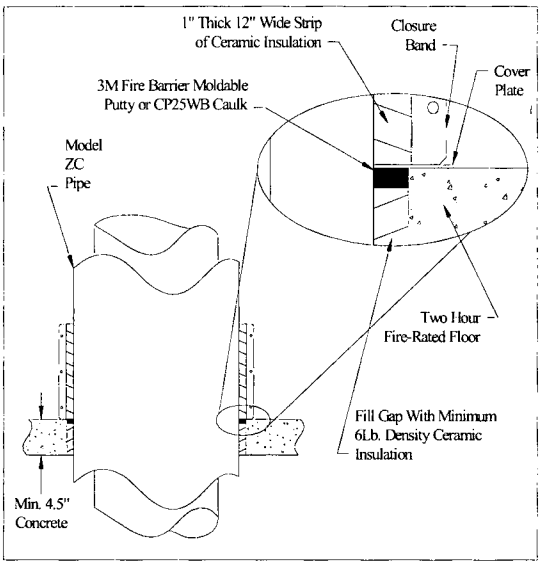



**Fig. G-9 Wall Penetration**

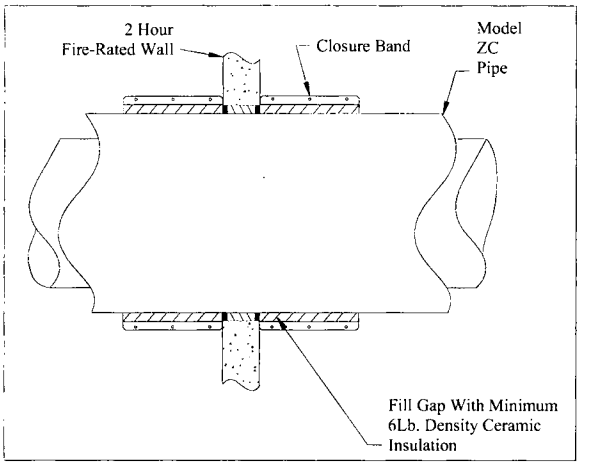
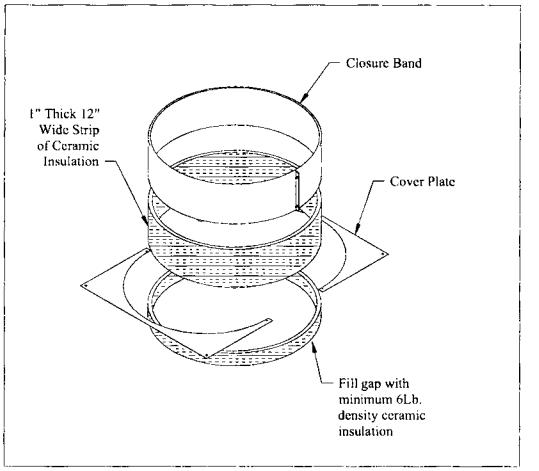



**Fig. G-10 Isometric View of Through Penetration Firestop Kit**



## NO-TOOL ACCESS CAP (P-NTAC)

The No-Tool Access Cap provides no tool access for inspection and cleaning of the grease duct. When connected to an MT, JL or JY, the P-NTAC functions as a no tool substitute to a 90° Grease Tee (P-GMT) and a standard Cleanout Tee Cap (P-TCN).

Parts List

1 x NT-Cover
1 x NT-Cap
1 x NT-Dam
2 x 1/2 Vee-Band
4-11 x Wing Nuts (based on pipe diameter)
1 x Insulation Disc (IPS and ZC only; Factory Installed)
1 x Insulation Wrap (IPS and ZC only)
1 x Insulation Shield (IPS and ZC only)
1 x Hex Bolt (IPS and ZC only)
1 x Hex Nut (IPS and ZC only)

Installation Procedure

1. The No-Tool Cap is factory installed to the NT-Dam with the use of several wing nuts. Using the Vee-Band and sealant (as specified in main instructions) secure the NT-Dam and the NT-Cap to the flange of the Manifold Tee MT (not included). Be sure the handle of the NT-Cap faces outward as shown (See Fig. G-12).
2. (IPS & ZC Models only) Insert the insulation Wrap into the cavity between the spacer clips of the tee section and the Vee-Band. Wrap insulation around the entire circumference of the assembly filling the entire cavity. Excess insulation may be trimmed and discarded (See Fig. G-13).
3. (IPS & ZC Models only) Install the Insulation Shield over the Insulation Wrap and outer wall of the tee section, using care not to pinch the insulation in the process. Use the Hex Nut and Bolt to tighten the tabs on the Insulation Shield, securing it to the outer of the tee section. (See Fig. G-13 & G-14)
4. Slide the NT-Cover over the NTAC assembly. Using the Wing Nut and Bolt supplied, tighten the tabs to secure the NT-Cover to the tee section. (See Fig. G-15)

Note: The access cap of the tee section should be positioned/oriented horizontal to upward to avoid the possibility of it collecting any grease.

**Fig. G-11. No-Tool Access Cap (NTAC)**

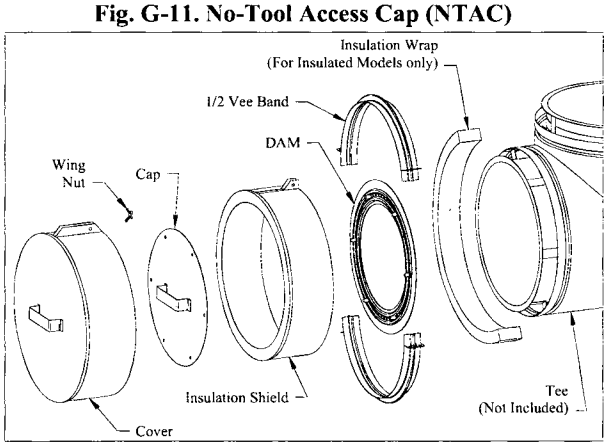



**Fig. G-12.**

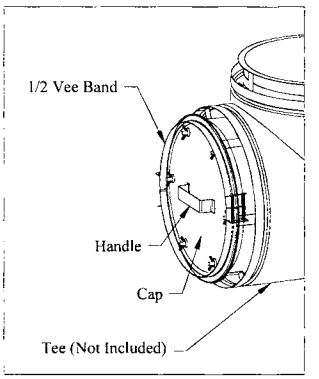



**Fig. G-13.**

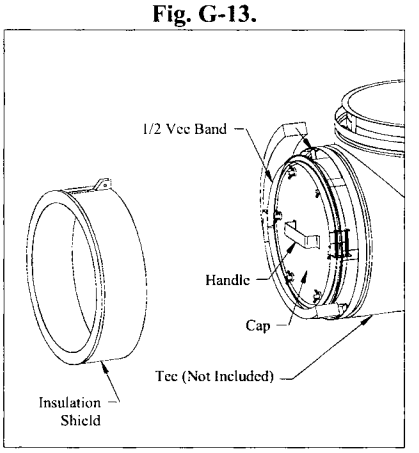



**Fig. G-14.**

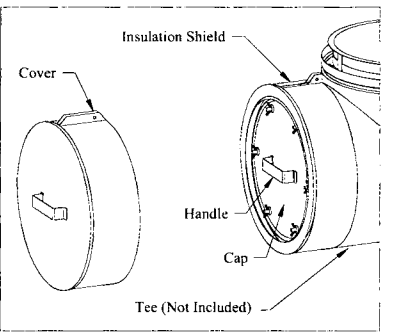
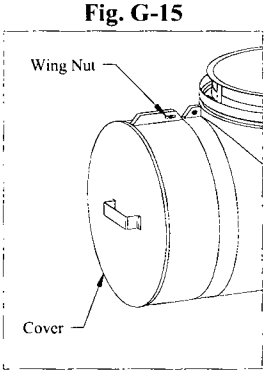



**Fig. G-15**



(No-Tool Access Cap Continued)
To Remove Cap for Inspection and Cleaning

1. Unscrew bolt / wing nut securing No-Tool Cover to assembly. Remove No-Tool Cover from assembly by pulling straight out. Place aside in safe place during inspection / cleaning (See Fig. G-14).
2. Unscrew wing nuts securing No-Tool Cap to No-Tool Dam. Remove No-Tool Cap from assembly by pulling straight out. Place wing nuts and cap aside in safe place during inspection / cleaning (G-16).

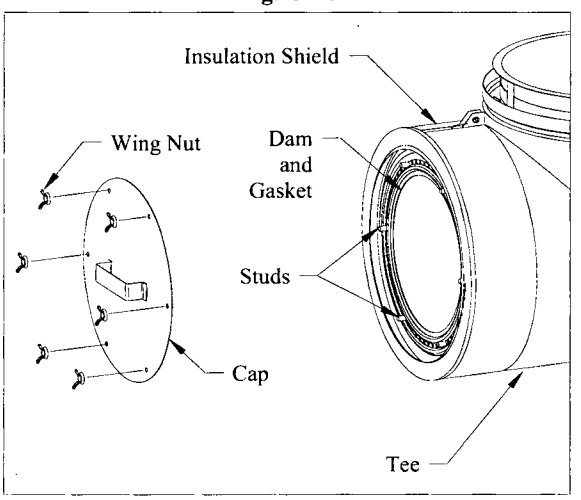
NOTE: IPS and ZC models include a band of insulation around the circumference of the inner duct. Removal of this insulation is not required for access to duct for inspection / cleaning.

To Replace Cap After Inspection and Cleaning

(Replace assembly in reverse order of removal process.)

1. Align holes in No-Tool Cap over studs on dam. Guide cap over holes until cap contacts dam. Secure cap in place with wing nuts, insuring that all wing nuts are secured and pulling cap tightly against dam. (See Fig. G-16)
2. Carefully Guide No-Tool Cover back in place over assembly until it extends over outer wall of tee assembly. Secure in place by tightening bolt / wing nut. (See Fig. G-14 & G-15)

**Fig. G-16**




## FIELD INSTALLED GREASE DUCT ACCESS DOORS

For Model G installations, it is permissible to install Listed Grease Duct Access Doors provided they are installed per the manufacturer's installation instructions.

## INTERCONNECTION WITH RECTANGULAR GREASE DUCTS

As a general rule, Selkirk grease duct systems are intended to be installed as complete systems without the use of other manufactured or generic components. However, Selkirk recognizes the occasional need for a rectangular portion of the grease duct due to space limitations at certain locations within the system. In such case, it is permissible to transition to / from the Selkirk grease duct to a code compliant, rectangular, welded steel grease duct system (by others) and back again. When such situations occur, Selkirk will fabricate and supply single wall stainless steel (with code specified 0.043" minimum thickness) round to rectangular transition(s) of the correct dimensions and specifications to permit connection via fully welded (per code) attachment between the Selkirk stainless steel transition(s) and the rectangular grease duct segment(s). (The round end of the transition will mate with the Selkirk round grease duct without welding.)

Maintain proper minimum airspace clearances between any single wall rectangular duct and rectangular/round transitions and combustibles per applicable code. In most cases this minimum airspace clearance will be 18".

Where required by code, these transitions (and the rectangular portion of the system) are to be protected with a fire rated enclosure. Such enclosure may be either a field applied wrap system or separate fire protective shaft enclosure with an appropriate fire resistance rating. When installed with Model ZeroClear™ the fire rated enclosure system must extend to and overlap the adjacent section of ZeroClear™ a minimum of 6" and be mechanically secured to insure it remains in place.

## INLINE ACCESS DOOR

**Removal Procedure for Duct Inspection and Cleaning.**

**To remove Access Door for inspection and Cleaning:**

1. NOTE: For Installations on single wall Model G Product proceed to step #3. Locate the Snap-Down latches securing the Outer Cover to the outer wall of the duct. Using your thumb or device such a flat head screwdriver, rotate the Arm of the Snap-Down latch to the open position (See Fig.G-17). Once all the Snap-Down latches are opened, remove Outer Cover and set it aside in a safe place during inspection / cleaning of the duct.
2. NOTE: For uninsulated model PS ducts, proceed to step #3. For insulated IPS and ZC models, a foil encapsulated Insulation Plug is used to insulate the duct and access door. Carefully remove the insulation plug from the wall cavity of the duct. (See Fig. G-18). Once the Insulation Plug is removed, set it aside in a safe place during inspection / cleaning of the duct.
3. Unscrew the Wing Nuts securing the Access Door to the Duct and remove Inner Access Door. Place Access Door and all fasteners aside in a safe place during inspection and cleaning of the duct (See Fig. G-19).

**To replace Access Door after inspection and cleaning:**

NOTE: Replace assembly in reverse order of removal process.

1. Install the Inner Access Door by aligning the bolt holes in the door with the studs protruding from the duct. Secure the Access Door in place with the Wing Nuts that were removed earlier (See Figs. G-18 & G-19).

2. NOTE: For uninsulated model PS ducts, proceed to step #3. For insulated IPS and ZC models, install the Insulation Plug (removed earlier), into the wall cavity of the duct, making sure that the entire opening in the duct is filled with the insulation (See Fig. G-20).

3. Center the Outer Cover (removed earlier), over the hole in the duct, making sure that an even amount of the outer wall is covered around the perimeter of the hole. Hold the cover in this location and rotate the Arm of the Snap-Down Latches to the closed position (See Fig. G-17). Ensure that all the Snap-Down Latches are in the closed position and that the outer cover is held securely in place.

**Fig. G-17 – Inline Access Door**

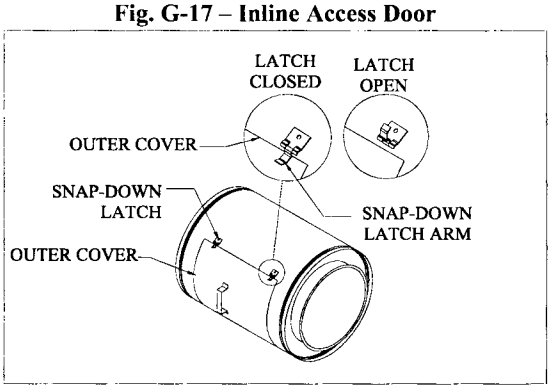



**Fig. G-18**

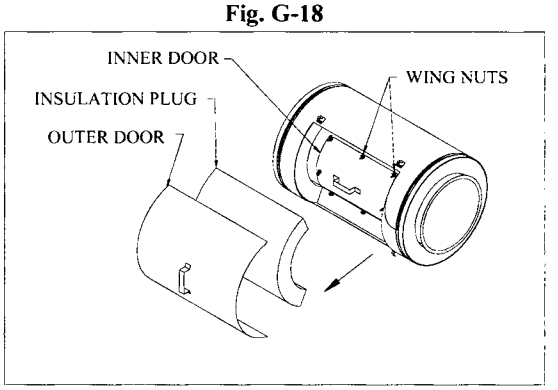



**Fig. G-19**

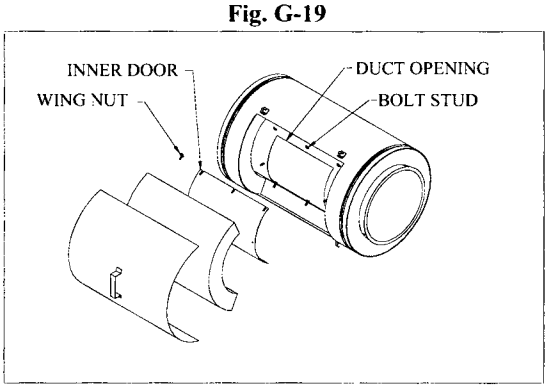
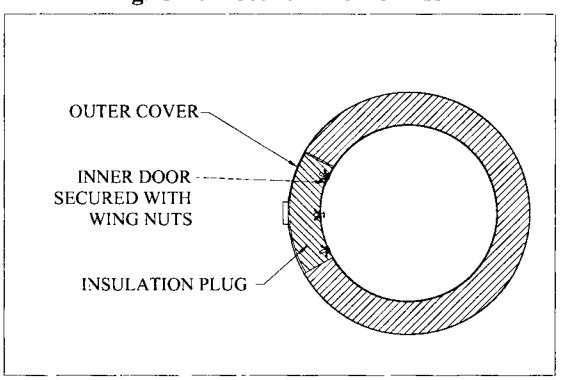



**Fig. G-20 – Section View of IAD**



## GREASE DUCT SAMPLE DRAWINGS

**Fig. G-21 Sample Drawing (Grease Duct Installation)**

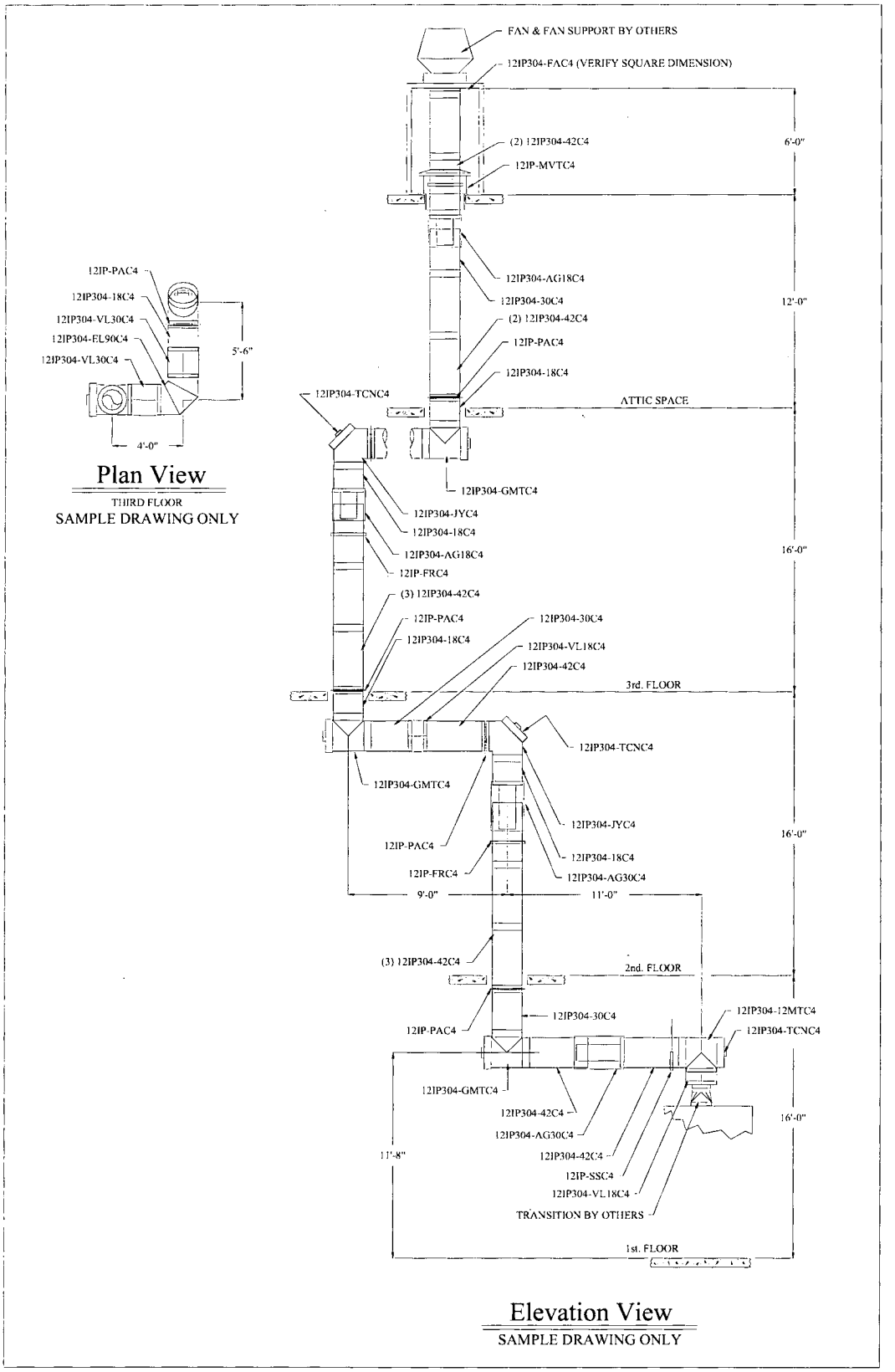
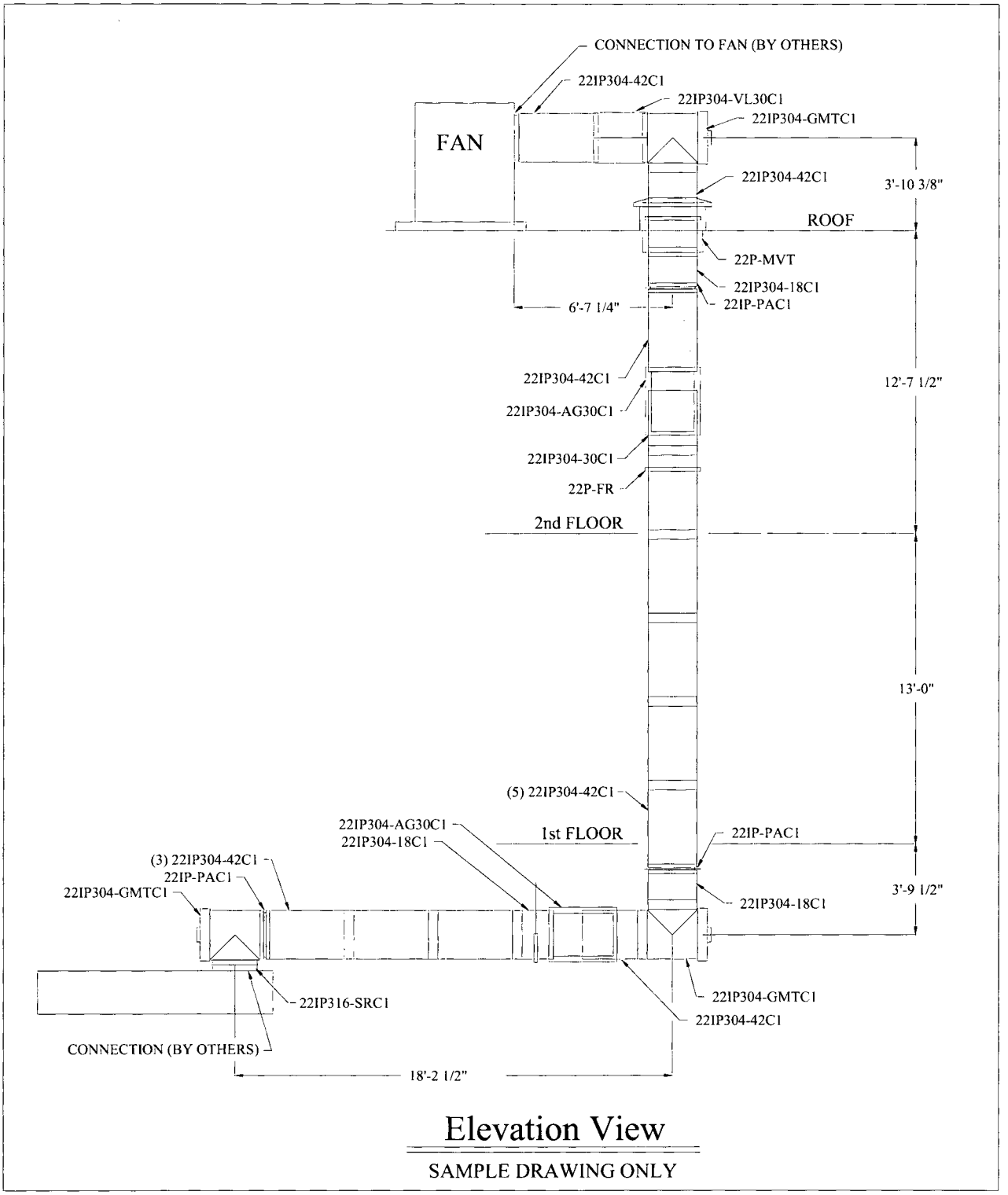


**Fig. G-22 Sample Drawing (Grease Duct Installation)**



BLD 14-070 33
REV

vega
architecture llc

David Orozco
Washoe County Health District
1001 E 9th St
Reno, NV 89512
**Date 7/1/14**

RECEIVED
JUL 03 2014
CITY OF RENO
PERMIT PLACE

Dear David,

The following procedures have been developed to demonstrate the methods used to ensure food safety at the Specialty Grocery store in Reno, Nevada. They have been customized to meet the specific design for the remodel of this store.

## Demonstration Kitchen

### Overview

The Demonstration Kitchen space is used to conduct cooking demonstrations by either an outside guest presenter or an Nutritional Health Coach who is employed by the store. Guest presenters must be granted approval and be scheduled to use the room by our Kitchen Demo Coordinator at the Home Office. Below is the list of store responsibilities for upkeep on the room and the level of assistance required during a demonstration.

### Process

I. When there is a scheduled event in the Demonstration Kitchen:
   A. Prior to the event, ensure the room is ready for the presenter and guests.
      1. Demonstration Room and Sink Room should remain unlocked, but any locked kitchen cabinets need to be unlocked.
      2. Turn on lights and power switches to the oven and cook top (the disconnects) to the room. These switches may be located in different areas (cook-top switch located in the Scullery room adjacent to kitchen area.)
         a) There is an indicator light above the soffit in the Haba department/near the front end that will be red when power to the kitchen is on.
      3. The floor is clean and swept.
      4. The necessary paper products are available for the tasting portion of the demo – paper cups, paper plates, and napkins.

II. Once the speaker arrives:
      1. Take presenter to the kitchen and have them take inventory of what pantry items are in stock prior to them shopping. See document ***"Demonstration Kitchen Guidelines"*** for a list of approved items.

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ADDRESS TEL FAX URL

a) Pantry items not already in kitchen may be purchased along with the demonstration ingredients with the "**Demo Kitchen Expense Card**".
b) They may come earlier in the day or day before to shop. If so, all items may be stored in the demo kitchen refrigerator. Items must be stored with a date and that they are to be used for a demonstration.

III. At the end of the cooking demonstration:
   A. Complete the *closing count* on the Demo Kitchen supply checklist to ensure all equipment is present.
   B. Sweep and mop the floors. (Using the mop sink outside the kitchen area)
      1. Presenter is responsible for cleaning all dishes and utensils used in the demonstration. Cleaning must be supervised by properly trained staff to ensure proper protocol is followed.
   C. Sanitize the kitchen counters and tables. Use a bottle marked "bleach solution" which should be kept at 100ppm or ppm as instructed by the City health code.
      1. Instructions for preparing sanitizing solutions are posted in Kitchen Area.
      2. PH strips are to be kept in the sink room for ease of availability.
      3. Test ppm with pH test strips prior to using to ensure the solution is at the proper mix.
   D. Check the refrigerator and throw out any leftovers. The only items to be left in the refrigerator are staples to be used for future demonstrations. (all potentially hazardous food must be dated marked according to the food code.)
   E. Empty the trash.
   F. Put dishes away in their labeled cabinet.
   G. Lock the cabinets.
   H. Turn off cook top and oven disconnects/switches and the lights. Cooktop master power switch is located in the dish area adjacent to the kitchen.

IV. Grease Interceptor Maintenance
   A. The grease interceptor must be cleaned on a quarterly basis. If there is an odor, clean immediately.
   B. To clean: unscrew the four screws and scoop out the floating grease with a cup.
      1. Grease should be disposed of in the trash; not placed down a sink.

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## V. Demonstration Kitchen Guidelines

### Overview

VI. The Demonstration Kitchen is to be utilized only for the following purposes:

A. Educational cooking demonstrations performed by outside guest presenters.

B. NHCs that have completed their training and have passed their mock presentation my offer up to one cooking class developed by the Home Office per month.

VII. The Demonstration Kitchen is NOT to be used for:

A. Cooking of product to be sold in the store.

B. Employee personal use (meal preparation, food storage, etc.).

C. Vendors to prepare foods for sampling or to store product during a demo.

D. Storage of boxes, back stock, or other clutter.

### Process

A. Cooking Demonstration Presenters:

1. The Kitchen Demo Coordinator will approve guest presenters who offer presentations in keeping with our company ingredient philosophy, using the Healthy Meal Wheel as a guide and emphasizing vegetables, protein, and healthy fats at each meal. Guest presenters will need to read and agree to our online agreement before they can register as a presenter. This will weed out all those who do not qualify so anyone who agrees to the info on the page is highly likely to get to do a demo. The agreement does not indicate eligibility based on their nutritional agenda but tells them they cannot speak out against ours.
2. Each kitchen will be equipped with basic cooking instruments. See the "**Demo Kitchen Supply Check List** " for the list of items provided.
    a) It is the responsibility of the guest presenter to provide any equipment needed above and beyond this list.
3. Foods and ingredients to be used by the presenter:
    a) A reloadable gift card (similar to the store purchase card- distributed and managed by the Kitchen Demo Coordinator) will be used to purchase ingredients for the presentation from the store where the presentation will take place. This card will be referred to as the Demo Kitchen Expense Card and is located in the Demo Kitchen Binder.
    b) We encourage presenters to take advantage of this opportunity and use as many ingredients from our store as possible. Presenters must let the audience know where any ingredients not purchased within the store can be purchased. Presenters can bring in products from outside vendors as long as they are from an approved source and do not include:
        (1) Hydrogenated oil or partially hydrogenated oil

(2) Interesterfied oil

(3) Artificial sweeteners (including aspartame, acesulfame K, and sucralose),

(4) Artificial colors

(5) Artificial flavors

(6) MSG

(7) Enriched or bleached flours

(8) Olestra

(9) If non-organic produce, non-naturally raised meats, or ingredients containing sulfates, nitrates or wine are used in the recipe, this must be displayed prominently to inform chemically sensitive customers.

c) We will provide the following basic pantry items:

| | | |
|---|---|---|
| Healthy Cooking Fats** | Butter<br>Coconut oil | Extra virgin olive oil<br>Ghee (clarified butter) |
| Condiments** | Apple cider vinegar<br>Balsamic vinegar<br>Dijon mustard<br>Hot sauce<br>Ketchup | Lemon and/or lime juice<br>Mayonnaise<br>Rice wine vinegar<br>Tamari (wheat free soy-sauce)<br>Worcestershire sauce |
| Natural Sweeteners** | Maple syrup<br>Molasses<br>Raw honey | Stevia<br>Sucanat |
| Herbs & Spices** | Basil<br>Bay leaves<br>Cayenne pepper<br>Chili powder<br>Cinnamon<br>Coriander<br>Cumin (ground)<br>Curry powder<br>Dill<br>Garlic powder<br>Ginger (ground) | Herbamare<br>Herbes de Provence<br>Nutmeg<br>Oregano<br>Parsley<br>Pepper (black)<br>Red chili flakes<br>Rosemary<br>Sea salt<br>Tarragon<br>Thyme |
| Baking** | Arrowroot powder<br>Baking powder<br>Baking soda | Cocoa powder<br>Cornstarch<br>Vanilla extract |

d) Basic pantry items above:

(1) Will be requested to be donated by brands we sell.

(2) If not donated, they will be bought by the store with the ***Demo Kitchen Expense Card.***

(a) Items should be purchased as needed for specific events.

(3) The date of first use should be marked on pantry items in permanent marker. Basic bulk herbs must be replaced every 6 months.

e) For the public to attend an event, reservations are not needed and it is first come, first seated. A 1-2 oz. food sample for each seated person should be allotted for each demo.

4. Presenters must sign a Specialty Grocer Demonstration Kitchen user agreement which includes requirements for set up and clean up of the space, utensils, appliances, etc.

## General Guidelines for Demo Kitchen Menu Planning

I. Cooking techniques

II. Steaming (vegetables) (medium temperature on range)

III. Soups (meat and vegetable) (medium temperature on range)

IV. Sauté's (meats and veggies in coconut oil, sesame oil, or grapeseed oil) (medium-low temperature on range)

V. Sauces

VI. Pan sauces (medium-low temperature on range)

VII. Blender sauces and dressings

VIII. Baking (meats, vegetable dishes, and desserts)

IX. Broiling (meats)

X. Braising (meats and veggies)

A. Cooking demo's will occur 1x per month initially and work up to 3x per month over a 2 year time frame.

B. There will be no deep frying or high temperature cooking using fats and oils.

XI. Any food that is served that has not met the Idaho Food Codes specific guidelines for cooking temperatures and holding times must meet proper consumer advisory provisions

## Produce Cleaning Procedures

### Overview

I. Cleaning and sanitization procedures play an important role in the Produce department. These procedures help us to ensure the organic integrity and safety of our products which in turn helps us to provide our customers with safe, high quality organic Produce. These procedures are also an important part of keeping us compliant

with local, state, and federal regulations governing food safety and organic product handling.

## Produce Equipment Cleaning Procedures

I. The standard Produce cleaning process involves 3 steps:
   A. Cleaning
      1. Hot soapy water is used to clean the object.
      2. The Store Manager will use the store card to purchase a natural dish soap product for this purpose from the store.
   B. Rinsing
      1. The object is rinsed clean using running water.
   C. Sanitizing
      1. The object is sprayed with the bleach sanitizing solution and air dried.

II. The Scullery room adjacent to the Demonstration Kitchen has a 3 compartment sink where the cleaning, rinsing and sanitization steps will occur for mobile objects such as knives, cutting boards and totes as well as the nut butter grinding machine.
   A. The first sink will contain enough hot soapy water to wash the object.
   B. The second sink will be used to rinse the object under running water.
   C. The third sink will be used to sanitize the object with sanitizing solution (not with spray bottles) and allow to air dry on a rack adjacent to the sink. Bleach sanitizing solution is to be prepared using the following guidelines and chlorine test paper must be used to check the concentration of the sanitizer
      1. Solution must have a minimum concentration of 50-99 ppm at 75°F for water with a pH of 8 or less, or 100°F for water with a pH of 10 or less.
      2. Solution must be in contact with the surface for a minimum of 10 seconds and be prepared with the follow guidelines.

| Minimum Concentration | Minimum Temperature | |
|---|---|---|
| mg/L | pH 10 or less / °C (°F) | pH 8 or less / °C (°F) |
| 25 | 49 (120) | 49 (120) |
| 50 | 38 (100) | 24 (75) |
| 100 | 13 (55) | 13 (55) |

III. The 3 step process will be accomplished for non-mobile objects such as sinks, machinery, and prep surfaces via the use of separate buckets for soapy and rinse water and the spray bottle sanitizing solution. These steps must be taken every time a non food item is to be washed in the produce sink. Sanitizing of the sink must occur before and after non food items are washed to prevent contamination of produce.
   A. One bucket will be filled with hot soapy water.
   B. One bucket will be filled with clean rinse water.
   C. The spray sanitizing solution will be used to sanitize the object, which will be allowed to air dry. Bleach sanitizing solution is to be prepared in a water spray bottle using the following guidelines.
      1. Sanitizer will evaporate and must be made before use.

2. Solution must have a minimum concentration of 50-99 ppm at 75°F for water with a pH of 8 or less, or 100°F for water with a pH of 10 or less.
3. Solution must be in contact with the surface for a minimum of 10 seconds.

IV. Make sure to have enough clean towels available to perform the cleaning process.

V. The 3 step cleaning process must be repeated within 4 hours of use anytime an object, surface or machine has been used.

VI. Other than for crisping, the 3 step cleaning process must be completed anytime an object, surface, machine, etc. has been used for one type of fruit or vegetable, prior to using that object, surface, machine, etc. for a different type of fruit or vegetable. This includes the sink and the heat wrap machine! **For example: If you use your knife, cutting board, and heat wrapper to cut and wrap watermelon, you will need to complete the 3 step cleaning, rinsing and sanitization process for all materials-i.e. all tools, machinery, surfaces, the sinks, etc.- prior to cutting and wrapping honeydew melons.**

## Produce Handling and Temperature

All cut leafy greens should be considered a potentially hazardous and should be stored at 41°F after leaves have been cut, shredded, sliced, chopped, or torn. This also applies to commercially prepared or pre-packaged leafy greens. If prepared on site, the leafy greens must be clearly marked with the date of preparation and be discarded after 7 days of the preparation date. The temperature of the greens or packaged greens is to be completed with a thin probe thermometer. Cut greens are to be probed in the thick stem portion and must be held at 41°F. For packaged greens, the thermometer is to be placed in between packages and the temperature gauge must stabilize for an accurate reading. For individual packages of commercially prepared greens, fold the package around the thermometer and allow temperature to stabilize.

## Heat Wrap Machine Cleaning Process

I. To clean the heat wrap machine:
   A. Unplug the machine. Make sure the plug stays dry.
   B. Allow the heat bar to cool.

II. Wash the machine.
   A. Dip one of the towels in the soapy water and squeeze to remove excess soapy water.
   B. Wipe down all surfaces of the heat wrapper where contact with produce might have occurred.

III. Rinse the machine.
   A. Dip one of the towels in the clear rinse water and squeeze to remove excess water.
   B. Wipe down all surfaces of the heat wrapper where contact with produce might have occurred.
   C. Make sure the soap residue is removed.
   D. You may have to complete this step a number of times to remove all of the soap.

IV. Sanitize the machine by spraying the contact surfaces with the bleach solution spray and allow to air dry.

## Misters Spray Nozzle Cleaning Process

I. To clean the mister spray nozzles:
   A. Fully tighten the valve on the mister section before removing the nozzles, to close off that section.
   B. Remove spray nozzles from the line by gently unscrewing them.
   C. Immerse both pieces of the nozzles in bleach water solution and allow them to soak for a few moments.
   D. Thoroughly rinse the nozzles.
   E. Replace the nozzles on the line.

   F. Adjust the spray nozzles so as to give the best coverage to wet items.

II. Preparing the Sanitizing Solution

   A. Use a spray bottle labeled BLEACH with a black marker.
   B. Pour a few drops of bleach into the bleach cap and pour it into the spray bottle.
   C. Fill the spray bottle with water.
   D. Close the bottle and shake.
   E. Open the bottle and test the solution with a new pH strip.
   F. Compare the strip color to the pH chart. 100ppm is the required concentration, unless your local health department requires differently (refer to your Store Manager).
   G. Add water or bleach until the required concentration is attained (confirmed via a PH strip test as noted above).

## Produce Cut Melon Procedures

Overview

Anytime you are handling a Potentially Hazardous Food or PHF, it is important to be particularly cautious of how that food is handled. Cut melons are considered a PHF, because they meet the criteria for food that could potentially harbor a microorganism (i.e. bacteria, food borne illness, etc.). These criteria include the fact that cut melons are not treated by heat or antimicrobial agents, as well as the fact that they contain a lot of moisture and have a low PH-all factors which could potentially provide a breeding ground for microorganisms. The key to ensuring that the cut melons we provide to our customers are safe is for all employees to follow the appropriate guidelines for handling them.

## Cut Melons Procedure

I. Complete this entire process for one melon variety at a time. All materials, sinks, surfaces, and equipment will need to be cleaned and sanitized prior to completing this process for another variety of melon.

II. Remove melons from the cooler. Melons must have an internal temperature of 41 degrees before beginning the cutting process.

III. Rinse melons under running water with a clean and sanitized brush.

IV. Pat melons dry with clean paper towels.

V. Cut melons with a clean, sanitized knife.

VI. Use the heat wrap machine to wrap melons.

- A. Turn on the machine and give it time to warm up.
- B. Pull out a length of wrap.
- C. Lay the section of melon face down on the wrapping platform.
- D. Pull the loose end of the wrap tightly over the melon, tucking in the ends.
- E. Holding the melon, turn the melon to pull the other side of the wrap tight around the melon.
- F. Cut the wrap from the machine.
- G. Tuck the last exposed ends of wrap tightly along the bottom of the melon.
- H. Rub the wrapped bottom of the melon on the warming platform to seal the ends.
- I. Repeat for each section of melon to be wrapped.

VII. Wrapped melons must be stored in the cooler and have reached an internal temperature of 41 degrees before being placed for sale.

VIII. Melons must be labeled with their common food name and include the date of preparation.

IX. Clean Up

- A. Follow the standard Produce cleaning process for all materials, equipment, and surfaces utilized, including sinks and the heat wrap machine. Please refer to the document entitled Produce Cleaning Procedures for the full description of the cleaning and sanitization process. The standard cleaning procedure involve 3 steps:
  1. Cleaning
     - a) Hot soapy water is used to clean the object.
     - b) The Store Manager will use the store card to purchase a natural dish soap product for this purpose from the store
  2. Rinsing
     - a) The object is rinsed clean using running water.
  3. Sanitizing
     - a) The object is sprayed with the bleach sanitizing solution and air dried.
- B. The cleaning and sanitization process must be completed within 4 hours of cutting and wrapping any type of melon.
- C. The cleaning and sanitization process must be completed anytime an object, surface or machine has been used for one type of melon (or any other fruit or vegetable), prior to using that object, surface or machine for a different type of melon (or any other fruit or vegetable). For example: If you use your knife, cutting board, and heat wrapper to cut and wrap watermelon, you will need to complete the 3 step cleaning, rinsing and sanitization process for all materials-i.e. all tools, machinery, surfaces, etc.- prior to cutting and wrapping honeydew melons.

X. Monitor refrigeration temperatures on the rack and the back stock cooler throughout the day to ensure that cut melons are being held at the appropriate temperature.

- A. The temperature range is between 38°F and 41°F, with 40°F being the ideal.

## Fresh Ground Nut Butters

### Overview

Natural Grocers by Vitamin Cottage is known for its fresh ground nut butters. In order for us to provide this product and service, the following guidelines must be followed.

### Process

I. All food handlers must wash hands and wear gloves prior to making containers of fresh ground nut butters. The grinding process must be done win an area with direct access to a handsink. Preferably in the Scullery or Demonstration Kitchen.
   A. Anyone who is sick or ill, may not prepare fresh ground nut butters.

II. When opening a box of nuts, cut open the internal bag with scissors from the cleaning kit (Almond or Peanut) based on the type of nut you will be grinding.

III. Starting with a clean machine, pour the nut pieces into the hopper and replace the lid.
   A. Ensure you are placing Peanuts into the Peanut Butter machine and Almond pieces into the Almond Butter machine.
      1. If cross-contamination occurs, write off the amount of product in the hopper (i.e. 12 lbs. of peanuts) and re-clean the machine.

IV. Ensure you are using the properly labeled container – we have separately labeled containers for each nut butter that we sell. Labeling must adhere to guidelines set forth in the state health code.
   A. Due to current health regulations, customers are not allowed to bring in their own containers.

V. Make enough nut butters to cover 1 day worth of sales **or** grind a minimum of 1 box.
   A. Once a box is open, the entire box must be used.
   B. If you are interrupted during the grinding process, return to the task and finish grinding as soon as possible.
      1. Re-wash hands and put on a new set of gloves.
   C. Monitor the machine to ensure it does not begin to overheat. **If the grinder begins to feel hot, pause the grinding process until the machine has cooled**.
   D. Once you are done grinding the amount of nut butters needed, the machine may not be used again for a new batch until it has been cleaned.
      1. Multiple boxes ground back to back are considered a batch.
      2. When grinding multiple boxes, take a break between each box to allow the machine time to cool down and not overheat.

VI. Each container of ground nut butter must be labeled with a sticker indicating the net weight, the store's city, zip code and the day it was ground.
   A. Check the box next to the appropriate nut butter type.
      1. Stores that are certified organic by One Cert, will have an additional USDA organic symbol on their store's labels.
   B. Place the filled container on a scale at the register.
   C. From the total weight indicated on the scale, deduct .07 lbs. for the tare weight of the container, and record this number as its net weight.
   D. The date is the day the nuts were ground.

VII. The machine must be cleaned after each use and a cleaning log is to be kept documenting each time the machine was cleaned. (Follow the separate instructions on Nut Butter Machine Cleaning).

## Nut Butter Machine Cleaning Instructions

I. The following procedures must be observed with regard to nut butter machine cleaning:

A. Each machine must be cleaned by the end of the day in which that machine was used. Make sure that the machine is reassembled as soon as the parts are dry.
B.
C. Completed cleaning logs are to be kept on file at your store. These will be checked for completeness as part of your Store Inspection.
D.
E. All stores have 1 kit for Peanut Butter cleaning and 1 kit for Almond Butter cleaning. Replacement materials may be obtained from the Operations Administrative Assistant at Home Office.

1. *** Do not use the produce sinks for cleaning of nut butter machines. Use the 3 compartment sink in the dish room***

II. **Materials needed: (never use any abrasive brushes or soaps for cleaning machine parts)**

III. Cart for transporting equipment
IV. Clean cloth rags
V. Chlorine bleach/Water Sanitizing solution (**tested to a minimum of 100ppm)
VI. Dishwashing Detergent (recommend Ecover Liquid)
VII. Hot Water
VIII. Paper Towels
IX. Bowl to hold sanitizing rag (for cleaning spindle)
X. Rubber gloves – sturdy heat resistant
XI. Single use gloves
XII. Small empty cups to hold black knobs
XIII. Rubber mallet (for Kaldi's machine only)
XIV. Flat head Screw Driver (Olde Tyme)
XV. Fixed plate puller ( aka: tack puller)
XVI. Safety glasses
XVII. Kaldi Tools (Kaldi)
XVIII. Tooth Brush (1 for peanut butter machine and 1 for almond butter machine)
XIX.

1. **Note:** Do not inter-mix Almond and Peanut machine parts or cleaning tools in order to avoid allergen cross-contamination and undue wear on parts – **KEEP ALL PARTS SEPARATE**. Clean each machine start to finish before cleaning the next machine. Make sure that all sinks or tubs used for cleaning are clearly signed with allergen information.

I. Please **disassembled** and clean in the following order:
   A. **Wash hands and apply single-use gloves prior to disassembling.**
   B. Ensure you are using the correct cleaning procedure for your **specific model of machine**. (See model number). Using the incorrect instructions, could result in damage to the machine.
   C. Ensure the hopper is empty (no remaining nut butter stock.)
   D. Unplug machine.
   E. Remove the chute knob on front of machine which secures the hopper. Set knob in cup. Place hopper & lid on table.
   F. Remove black knob (set screw) from cap. Set knob in cup. Turn cap clockwise and remove. Turn cap up on counter so that opening is to the top.
   G. Pushing in (up) on the lock pin at the neck of machine, hand turn to the left to engage the shaft and prevent it from rotating (you will feel it click into place). While continuing to press up on the lock pin, continue to unscrew and remove the outer rotary cutting plate. Place rotary plate inside the cap sitting on the counter.
   H. Unscrew the two black knobs (one on each side of the collar). Place these into the cup.
   I. Pull collar straight out from machine.
   J. Using the slotted screw driver, **loosen** the fixed plate cap **screws** and remove the fixed plate. You may find a putty knife helpful in removing the fixed plate. BE CAREFUL NOT TO DAMAGE THE PLATE.
   K. Place the fixed plate inside the cap with the cutting plate from step 6.
   L. **Change to sturdy heat-resistant rubber gloves prior to cleaning.**
   M. Wipe down all parts with paper toweling to remove nut butter residues. (This could clog your sink if you try to rinse it down the sink.)
   N. Wash the spindle and machine with a rag of hot soapy water and rinse thoroughly. Follow this with a separate clean cloth soaked in bleach solution to sanitize spindle and machine. Let air dry completely.
   O. Bring all parts to the three part sink for cleaning (knobs, hopper/lid, cap, cutting plates and collar).
   P. In the first bin of the sink, run hot water with dishwashing detergent. Clean parts thoroughly with toothbrush and cleaning cloth. Use cloth and hot soapy water to clean hard to reach areas of the parts.
   Q. In the middle bin of the sink, rinse the parts using clear hot water.
   R. In the last bin of sink, fill sanitizing sink compartment with lukewarm water and bleach. (Wear safety glasses when working with bleach). Bleach soaking solution should be tested with pH test strips to ensure mix meets the 50 ppm – 100 ppm ratio before use. (Approximately 2 caps full of bleach for a full sink of water.). Soak parts in bleach solution for at least 1 minute
   S. Let parts air dry until completely dry before re-assembly. Do not rinse parts after they have dried. Do not place drying items on shelf above items that are already clean and dry.
   T. Clean, rinse, sanitize, and air dry the tools used to disassemble and clean the machine.
   U. Remove gloves and wash hands.
   V. Re-assemble machine as soon as parts are dried in order to insure the integrity of the cleaning process. Store dry machine on counter behind the service counter and not in the Scullery Room per Idaho Food Code.

II. Please **re-assemble** in the following order:
   A. **Wash hands and apply single-use gloves prior to assembly.**
   B. Replace the fixed plate into collar (line up holes on collar with screw holes).

C. Tighten small screws on the collar alternating from side to side until tight. Do not tighten one side and then the other as this will cause the bushing ring to not be seated properly in the collar.
D. Return collar to the machine.
E. Replace black knobs on each side of the collar. Make sure these are finger-tight. Do not over tighten or you will strip the inside threads.
F. Holding pin at neck of machine in the up position, twist the spindle until it clicks into place. Replace the rotary cutting place and tighten by spinning to the right.
G. Replace the cap, making sure the three open slots are facing down. Turn gently to click into place.
H. Replace the black set screw on the side of the cap.
I. Replace plastic hopper on top of collar (align hole in hopper with knob hole)
J. Replace the knob on front of machine to secure hopper in place.
K. Replace plastic hopper lid.
L. Plug machine back in.
M. Return all cleaning supplies to the nut butter machine cleaning tote and replenish/ replace supplies as necessary.

## Glove Use

Gloves must be used in situations what require employees to handle food products. Gloves are to be supplied that are made of food grade plastic. No latex is permitted. Gloves are to fit the hand properly and be used for single use only. Never reuse or wash disposable gloves. Employees shall be trained on how to remove gloves to prevent contamination. Care should be taken to remove gloves by grasping at the cuff and pulling off the hand so the glove turns inside out to prevent any further contamination. Gloves should be changed when: they be come soiled, before beginning a different task, at least every four hours, handling raw animal product, or before handling cooked or ready-to-eat food.

## Allergens

III. The person in charge must be able to correctly identify the following major food allergens as well as their side effects.
IV. Milk (e.g. butter, yogurt, cheeses, chocolate milk, ice cream, and desserts
V. Egg (anything containing egg)
VI. Peanut
VII. Tree Nuts (e.g. walnuts, almonds, hazel, cashew, pistachio, and pecan)
VIII. Fish (e.g. flounder, salmon, bass, and cod
IX. Shellfish (e.g. crab, lobster, and shrimp)
X. Wheat (e.g. bread, flour, roux, breading, desserts, soup bases, and some flavorings)
XI. Soy (e.g. tofu and sauce)

## Pest Control

Pest control at and around the facility is to be handled by a third party pest control company and inspected on a regular basis. Pests and pest harborage shall be controlled by methods such as trapping devices or extermination. When applying pesticides in any area which the potential for food contact exists, care shall be taken to avoid any contamination. Only pesticides registered for use in a food application are permitted. If any contact with a food item does occur, the item must be properly disposed of immediately.

## Sick or Injured Employee

I. No employee, while infected with a communicable disease that can be transmitted by foods or who is a carrier of organisms that cause such a disease or while afflicted with a boil, an infected wound on an exposed body part, or an acute respiratory infection, shall work in any capacity in which there is a likelihood of such employee contaminating food or food-contact surfaces with pathogenic organisms or transmitting disease to other persons. It shall be the responsibility of the employee to report to the person in charge when infected with or a carrier of a communicable disease or an organism that may be transmitted by food. Any employee with a pustular lesion, such as a boil or infected wound, on any exposed portions of the body shall keep such lesion covered by a dry, waterproof, durable, tight fitting bandage and a single-use glove, if on the hands or wrist, that shields the wound from direct contact with food or equipment. Food employees experiencing persistent sneezing, coughing, or a runny nose that causes discharges from the eyes, nose or mouth may not work with exposed food, clean equipment, utensils, and linens, or unwrapped single-service or single-use articles.

II. Employees may not return to work for at least 24 hours after symptoms have cleared from any of the following: Diarrhea, vomiting, sore throat with fever, jaundice, infected cuts or burns on hands or arms. Employees diagnosed with any of the following: E.coli O157:H7, Salmonella Typhi, Shigella, Hepatitis A, or Norovirus shall be excluded from food service. Management shall be responsible for informing employees of any of the listed hazardous diseases and the necessary precautions to prevent the spread of any diseases.

## Employee Hygiene

I. Food Employees shall clean their hands and exposed portions of their arms for at least 20 seconds and shall use the following cleaning procedure:
I. Vigorous friction on the surfaces of the lathered fingers, finger tips, areas between the fingers, hands and arms for at least 15 seconds, followed by;
II. Thorough rinsing under clean, running warm water; and

III. Immediately follow the cleaning procedure with thorough drying of cleaned hands and arms.

IV. Food employees shall pay particular attention to the areas underneath the fingernails during the cleaning procedure.

### When to Wash

I. Food employees shall clean their hands and exposed portions of their arms immediately before engaging in food preparation including working with exposed food, clean equipment and utensils, and unwrapped single-service and single-use articles and:

II. When returning to the kitchen after using the toilet room.

III. After coughing, sneezing, using a handkerchief or disposable tissue, using tobacco, eating, or drinking.

IV. When switching between working with raw foods of animal origin and working with ready-to-eat foods.

V. After touching bare human body parts other than clean hands and clean, exposed portions of arms.

VI. During food preparation, as often as necessary to remove soil and contamination and to prevent cross-contamination when changing tasks.

VII. Before donning single-use gloves for working with food, and between removing soiled gloves and putting on clean gloves.

VIII. After handling soiled equipment or utensils.

IX. After caring for or handling any animals.

X. After engaging in any activities that contaminate the hands.

### Hand Sanitizers

Hand sanitizers may be used in addition to but not in place of proper handwashing.

### Where to Wash

Food employees shall clean their hands in a hand sink or approved automatic hand washing facility and may not clean their hands in a sink used for food preparation or ware washing, or in a utility sink or a curbed cleaning facility used for the disposal of mop water and similar liquid waste.

### Fingernail Care

I. Food employees shall keep their fingernails clean, trimmed, filed and maintained so the edges and surfaces are cleanable and not rough.

II. Unless wearing intact gloves in good repair, a food employee may not wear fingernail polish or artificial fingernails when working with exposed food.

III. This section does not apply to employees such as check out staff who handle wrapped or packaged foods, clean equipment, utensils, and unwrapped single-service and single-use articles.

### Clothing

I. Employees shall wear clean outer clothing to prevent cross-contamination.

### Jewelry

A. While preparing food, food employees may not wear jewelry, including medical information jewelry, on their arms and hands. This section does not apply to the wearing of a single ring.

B. This section does not apply to employees such as check out staff who handle wrapped or packaged foods, clean equipment, utensils, and unwrapped single-service and single-use articles.

### Dressing Rooms and Locker Areas

A. The shower room or break room is not be used for food preparation, food storage, food display, ware washing, or storage of utensils and equipment.

B. Lockers are to be used for the orderly storage of employee clothing and other belongings.

### Hygienic Practices

A. Employees shall maintain a high degree of personal cleanliness and shall conform to good hygienic practices during all working periods.

### Eating, Drinking, or Using Tobacco

I. Except as specified in paragraph II, employees shall consume food, drink or use tobacco only in designated areas. Such designated areas must be located so that eating or tobacco use of an employee does not result in contamination of food, equipment, utensils, or other items needing protection.

II. An employee may drink from a closed beverage container if:

A. The container is clean.

B. It does not contaminate the employee's hands, and

C. It is stored to prevent the contamination of exposed food, clean equipment, utensils, linens, unwrapped single-service and single-use articles.

## Hair Restraints

I. Except as provided under paragraph II of this section, employees engaged in food preparation shall wear hair restraints, such as hats, hair coverings, nets, or other effective means, to effectively keep hair from contacting exposed food, clean equipment, utensils, and linens, and unwrapped single-service or single-use articles.

II. This section does not apply to employees such as check out staff who handle wrapped or packaged foods, clean equipment, utensils, and unwrapped single-service and single-use articles.

## Pets on Premises

I. Employees shall be prohibited from touching, petting, or otherwise handling dogs while serving food or beverages, handling tableware.

II. Patrol dogs accompanying police or security officers in offices, and demonstration kitchen, sales, and service areas are allowed. Dogs must be kept on a leash at all times.

III. Service animals are allowed in the retail space only and must be on a leash at all times.

IV. Accidents involving dog waste shall be cleaned immediately and use the following steps:

   A. The employee must wear gloves when any risk of exposure to excrement is present. Also, measures should be take to prevent building patrons from any contamination while the cleaning process is taking place.

   B. The waste is to be collected, placed in a plastic bag, and disposed of in the exterior trash enclosure immediately. Gloves must be disposed of in a similar manner. Collection of waste is to be completed using only disposable collection devices.

   C. The employee completing the cleaning procedure must sanitize hands and use a new pair of gloves for the sanitizing process.

   D. Sanitizing solution must be prepared using a spray bottle and consist of approved concentrations.

   E. The infected area must be cleaned with disposable paper towel and placed in a bag for immediate disposal along with the gloves used for the sanitizing. Sanitizing solution must be in contact with the infected area for a minimum of 30 seconds.

   F. The employee is to wash hands using proper hand sanitizing procedure before returning to normal duties.

   G.

Sincerely yours,

Doug Poppe | LEED AP BD+C, ND

1335 Elati St Unit A | Denver, CO 80204 303.872.0487 720.862.3822 vegaarchitecture.com
ADDRESS TEL FAX URL

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KYSOR/WARREN

STRATUS

# PX3XN — Multi-Deck

## Capacities

| Length | Facing Area ($FT^2$) | Cubic Capacity ($FT^3$) |
|---|---|---|
| 4' | 15.32 | 34.48 |
| 6' | 22.95 | 51.63 |
| 8' | 30.61 | 68.87 |
| 12' | 45.90 | 103.27 |

## Refrigeration Data

| | BTUH per FT Unlighted Shelves One Row Canopy LED Lights | | BTUH per FT Unlighted Shelves One Row Canopy T8 Lights | | Add BTUH per FT per Row Lighted Shelves | | Add BTUH per FT per Row Nose Lights or Additional T8 Canopy Light | | Evap. Temp. | Discharge Air | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Parallel | Single | Parallel | Single | LED | T8 | LED | T8 | | Temp | Velocity |
| Cut Produce | 1135 | 1226 | 1141 | 1232 | 11 | 19 | 11 | 19 | +26°F | +33°F | 200 FPM |
| Bulk Produce | 1078 | 1164 | 1084 | 1170 | 11 | 19 | 11 | 19 | +29°F | +36°F | 200 FPM |

BTUH determined using EC Fan Motors. Add 13 BTUH for additional LED canopy light.

## Electrical Data

| Length | ECM Fan Data | | Shelf Light - Amps Per Lighted Shelf | | Nose Light - Amps | | Canopy Light - Amps | |
|---|---|---|---|---|---|---|---|---|
| | Fan Qty | Amps | LED | T8 | LED | T8 | 1 Row LED | 2 Row T8 |
| 4' | 1 | 0.10 | 0.12 | 0.25 | 0.10 | 0.25 | 0.24 | 0.50 |
| 6' | 2 | 0.20 | 0.09 | 0.22 | 0.18 | 0.44 | 0.37 | 0.88 |
| 8' | 2 | 0.20 | 0.12 | 0.25 | 0.20 | 0.50 | 0.48 | 1.00 |
| 12' | 4 | 0.40 | 0.12 | 0.25 | 0.36 | 0.75 | 0.72 | 1.50 |

All electrical data based on 115V and unlighted shelves.

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## Defrost Data

| Defrost | Per Day | Fail Safe | Termination |
|---|---|---|---|
| Off Cycle | 6 | 18 min | +47°F |

When using night curtains, terminate with a 30 minute fail safe and 47°F termination temperature.

Type I refrigerator, intended for use in an area where the environmental conditions are controlled and maintained such that conditions do not exceed 75 deg F and 55% relative humidity. Kysor/Warren, whose policy is one of continuous improvement, reserves the right to change at any time, specifications, design or prices without incurring obligation.

A proud partner of GREENCHILL

The above case model has case lengths that are UL and NSF approved.

Issue: 6.5.2012

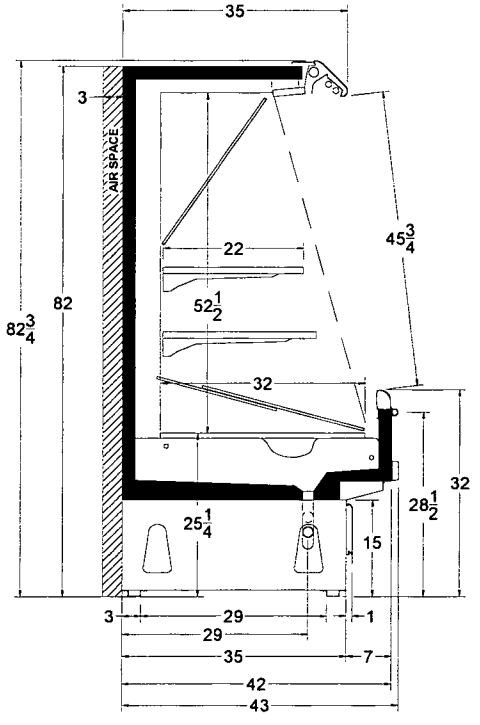
**Kysor/Warren**
**5201 Transport Blvd**
**Columbus, GA 31907**
**800-866-5596 phone**
**706-568-8990 fax**
**www.kysorwarren.com**

KYSOR/WARREN

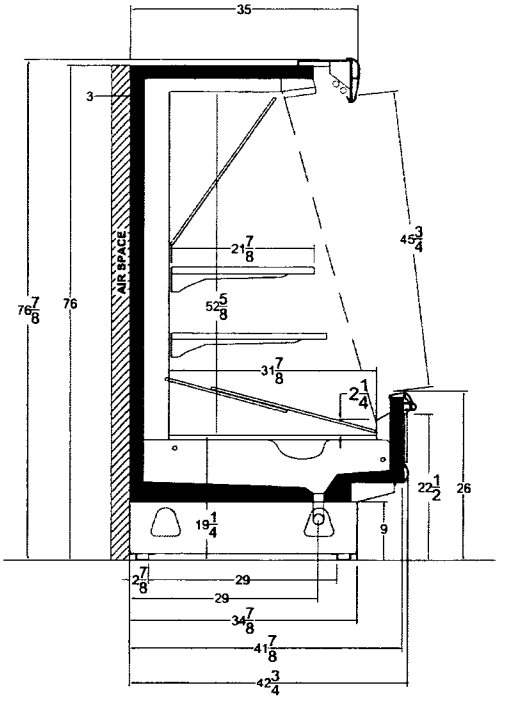
STRATUS

PX3XN — Multi-Deck

## Profile Views



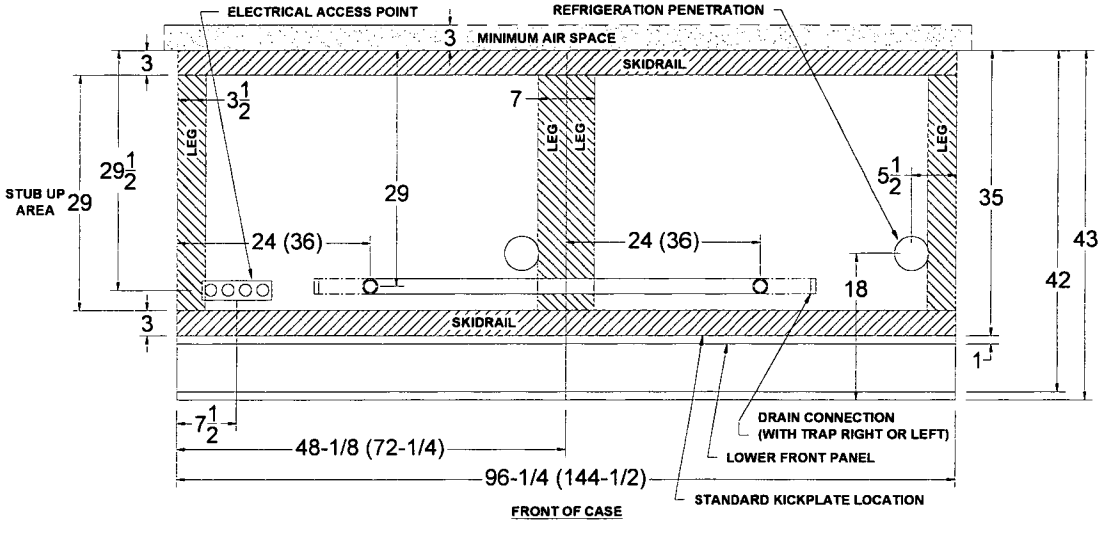

15" Standard Base




9" Base Option

Add 3 ½ " thickness for a pair of ends.

## Floor Plan



KYSOR/WARREN STRATUS

#103

# RX7SL - Low Temperature (Anthony)

## Capacities

| Doors | * Facing Area ($FT^2$) | * Cubic Capacity ($FT^3$) |
|---|---|---|
| 2 | 28.6 | 70.1 |
| 3 | 42.9 | 105.2 |
| 4 | 57.2 | 140.3 |
| 5 | 71.4 | 175.4 |

* ASHRAE/ ARI Total Display Area ($ft^2$/Door)
* ASHRAE/ ARI Gross Volume ($ft^3$/ Door)

## Refrigeration Data

| | BTUH per Door - LED Lights ECM Fans | | Evap. Temp. | Discharge Air | |
|---|---|---|---|---|---|
| | Parallel | Conventional | | Temp. | Velocity (1 hr. after defrost) |
| Ice Cream | 1293 | 1319 | -18°F | -11°F | 175 - 225 FPM |
| Frozen Food | 1182 | 1205 | -11°F | -4°F | 175 - 225 FPM |

## Electrical Data

| Doors | ECM Fan Data | | LED Lights | | | Anti-Sweat | Drain Heater | Electric Defrost Heater (208V) |
|---|---|---|---|---|---|---|---|---|
| | | | GE Immersion | Optimax Pro Low Power | Quanta StarFire | Eliminaator | | |
| | Fan Qty | Amps | Amps | Amps | Amps | Amps | Amps | Amps |
| 2 | 2 | 0.42 | 0.30 | 0.33 | 0.72 | 1.79 | 0.12 | 6.73 |
| 3 | 3 | 0.63 | 0.45 | 0.48 | 1.06 | 2.60 | 0.30 | 10.10 |
| 4 | 4 | 0.84 | 0.60 | 0.64 | 1.40 | 3.43 | 0.24 | 13.46 |
| 5 | 5 | 1.05 | 0.75 | 0.80 | 1.74 | 4.25 | 0.42 | 16.83 |

* Anthony 101 doors for export outside of US only. Not available in the US.
All electrical data based on 115V

## Defrost Data

| Defrost | Per Day | Fail Safe | Termination |
|---|---|---|---|
| Electric | 1 | 45 min | 55°F |
| Hot Gas | 1 | 30 min | 65°F |

Type I refrigerator, intended for use in an area where the environmental conditions are controlled and maintained such that conditions do not exceed 75 deg F and 55% relative humidity. Kysor/Warren, whose policy is one of continuous improvement, reserves the right to change at any time, specifications, design or prices without incurring obligation.

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The above case model has case lengths that are UL and NSF approved.

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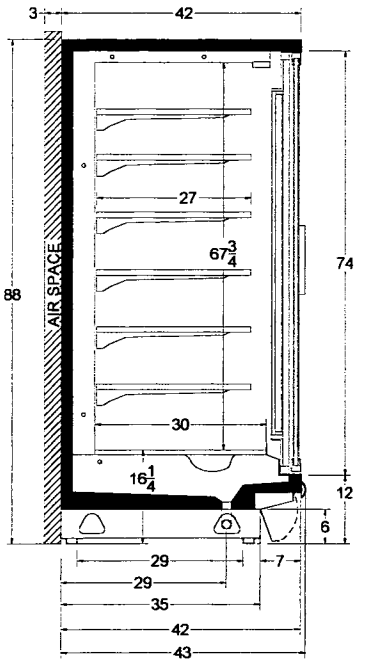
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KYSOR/WARREN

STRATUS

# RX7SL - Low Temperature (Anthony)

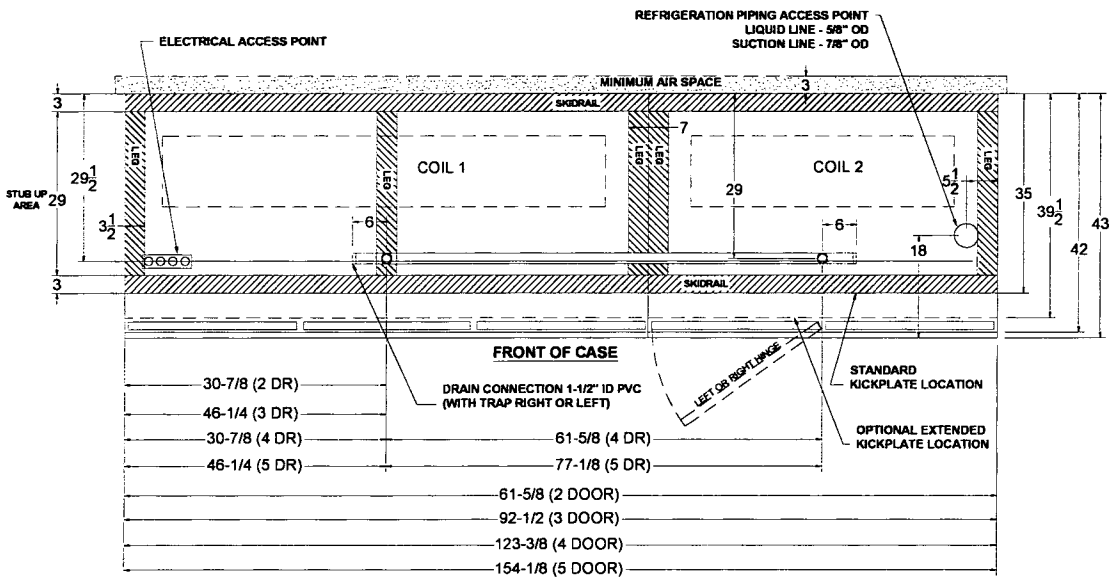
## Profile View




Add 3" thickness for a pair of ends.

22" - 27" (Maximum) Shelf Depths

## Floor Plan View



KYSOR/WARREN®

STRATUS

#110

DN8LN - Multi-Deck - Platinum

## Capacities

| Length | Facing Area ($FT^2$) | Cubic Capacity ($FT^3$) |
|---|---|---|
| 4' | 21.44 | 43.78 |
| 6' | 32.11 | 65.56 |
| 8' | 42.83 | 87.45 |
| 12' | 64.22 | 131.13 |

## Refrigeration Data

| BTUH per FT of Case Unlighted Shelves One Row Canopy - LED Lights | | BTUH per FT of Case Unlighted Shelves One Row Canopy - T8 Lights | | Add BTUH per FT per Row Lighted Shelves | | Add BTUH per FT per Row Nose Lights or Additional T8 Canopy Light | | Evap. Temp. | Discharge Air | |
|---|---|---|---|---|---|---|---|---|---|---|
| Parallel | Single | Parallel | Single | LED | T8 | LED | T8 | | Temp | Velocity |
| 1419 | 1533 | 1425 | 1539 | 11 | 19 | 11 | 19 | +26°F | +33°F | 200 FPM |

BTUH determined using EC Fan Motors. Add 13 BTUH for additional LED canopy light.

## Electrical Data

| Length | ECM Fan Data | | Shelf Light - Amps Per Lighted Shelf | | Nose Light - Amps | | Canopy Light - Amps | |
|---|---|---|---|---|---|---|---|---|
| | Fan Qty | Amps | LED | T8 | LED | T8 | 1 Row LED | 2 Row T8 |
| 4' | 1 | 0.14 | 0.12 | 0.25 | 0.10 | 0.25 | 0.24 | 0.50 |
| 6' | 2 | 0.28 | 0.09 | 0.22 | 0.18 | 0.44 | 0.37 | 0.88 |
| 8' | 2 | 0.28 | 0.12 | 0.25 | 0.20 | 0.50 | 0.48 | 1.00 |
| 12' | 4 | 0.56 | 0.12 | 0.25 | 0.36 | 0.75 | 0.72 | 1.50 |

All electrical data based on 115V and unlighted shelves.

## Defrost Data

| Defrost | Per Day | Fail Safe | Termination |
|---|---|---|---|
| Off Cycle | 6 | 18 min | +47°F |

Type I refrigerator, intended for use in an area where the environmental conditions are controlled and maintained such that conditions do not exceed 75 deg F and 55% relative humidity. Kysor/Warren, whose policy is one of continuous improvement, reserves the right to change at any time, specifications, design or prices without incurring obligation. Dual-Jet and Air Defrost are registered trademarks of Kysor/Warren.

c UL us LISTED

ANSI / NSF 7

The above case model has case lengths that are UL and NSF approved.

ENERGY STAR PARTNER

Issue: 7.1.2010

**Kysor/Warren**
**5201 Transport Blvd**
**Columbus, GA 31907**

**800-866-5596 phone**
**706-568-8990 fax**

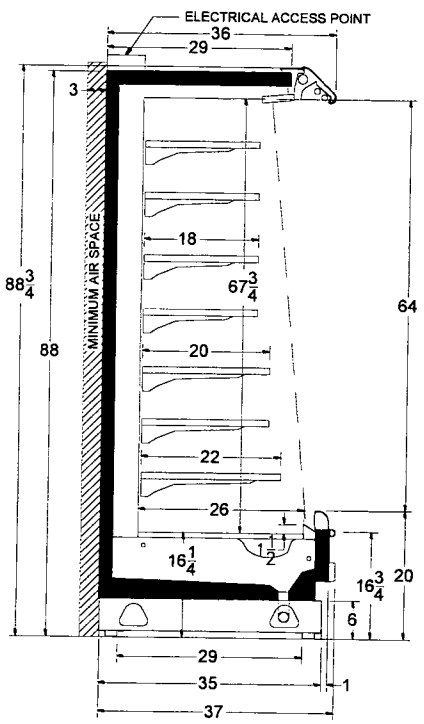
**www.kysorwarren.com**

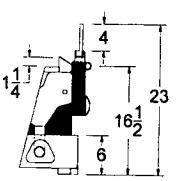
KYSOR/WARREN®

STRATUS

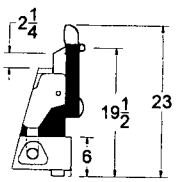
# DN8LN - Multi-Deck - Platinum

## Platinum Profile View

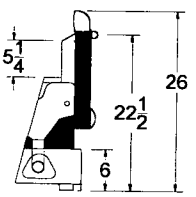



DN8LP



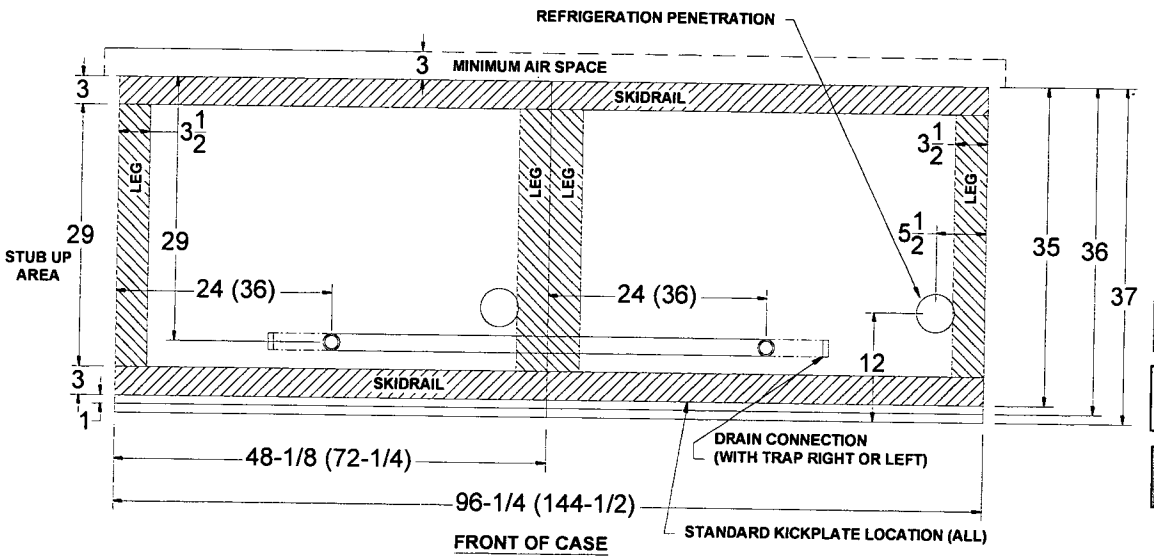

DN8XN




DN8HN

Add 3 ½" thickness for a pair of ends.

## Platinum Floor Plan



# DN6LP -- STRATUS Multi-Deck

Issue Date: 12/6/2012

## Capacities

| Length (FT) | Facing Area ($FT^2$) | Cubic Capacity ($FT^3$) |
|---|---|---|
| 4 | 17.7 | 38.3 |
| 6 | 26.5 | 57.3 |
| 8 | 35.4 | 76.5 |
| 12 | 53.2 | 114.7 |

## Refrigeration Data

| BTUH per FT of Case Unlighted Shelves - One Row Canopy - LED Lights | | BTUH per FT of Case Unlighted Shelves - One Row Canopy - T8 Lights | | Add BTUH per FT per Row Lighted Shelves | | Add BTUH per FT per Row Nose Lights or Additional T8 Canopy Light | | Evap. Temp. | Discharge Air | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Temp. | Velocity |
| Parallel | Single | Parallel | Single | LED | T8 | LED | T8 | | | |
| 1089 | 1177 | 1100 | 1189 | 11 | 19 | 11 | 19 | +28°F | +33°F | 185 FPM |

## Electrical Data

| Length | Canopy - Amps | | Canopy - Amps | | Shelf Lights - Amps Per Lighted Shelf | | Nose Lights - Amps | | ECM Fan Data | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 Row LED | 2 Row T8 | 1 Row Standard T5 | 1 Row High Output T5 | LED | T8 | LED | T8 | # Fans | Amps |
| 4' | 0.24 | 0.5 | 0.23 | 0.45 | 0.12 | 0.25 | 0.1 | 0.25 | 1 | 0.1 |
| 6' | 0.37 | 0.88 | 0.35 | 0.65 | 0.09 | 0.22 | 0.18 | 0.44 | 2 | 0.2 |
| 8' | 0.48 | 1 | 0.46 | 0.9 | 0.12 | 0.25 | 0.2 | 0.5 | 2 | 0.2 |
| 12' | 0.72 | 1.5 | 0.69 | 1.35 | 0.12 | 0.25 | 0.36 | 0.75 | 4 | 0.2 |

## Defrost Data

| Defrost | Per Day | Fail Safe | Termination |
|---|---|---|---|
| Off-Cycle | 6 | 18 min. | +47°F |

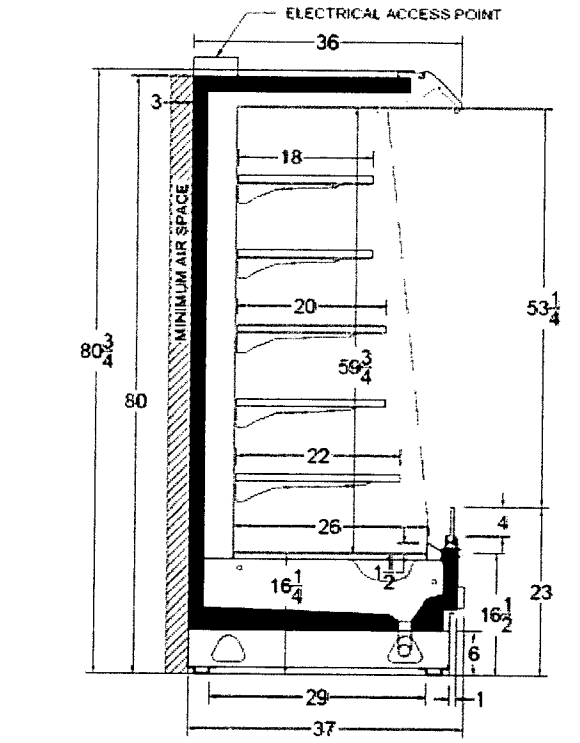
Type I refrigerator, intended for use in an area where the environmental conditions are controlled and maintained that conditions do not exceed 75°F and 55% relative humidity. Heatcraft Worldwide Refrigeration, whose policy is one of continuous improvement, reserves the right to change at any time specifications, designs, or prices without incurring obligation.

The above case model has case lengths that are UL and NSF approved.



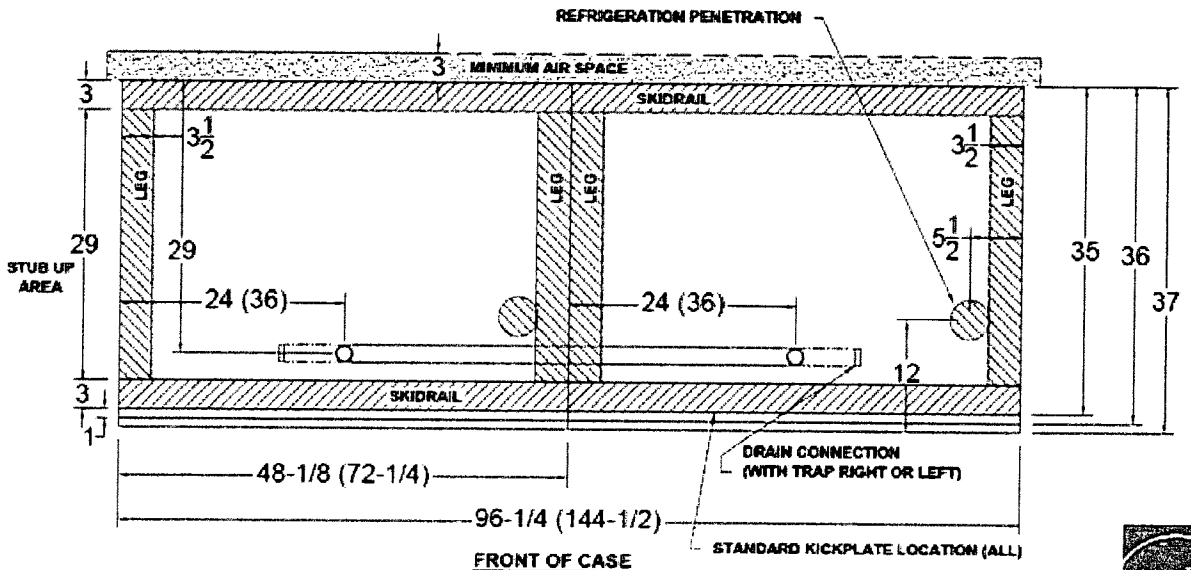
Merchandising Applications

DN6LP Cross View




Add 3" thickness for a pair of ends.

DN6LP Plan View




KYSOR/WARREN®
5201 Transport Blvd. · Columbus, GA 31907
P: 800.866.5596 · F: 706.568.8990
heatcraftrpd.com

ENERGY STAR PARTNER

A Proud Partner of: GREENCHILL

KYSOR/WARREN

STRATUS

#109

# DX8LN - Multi-Deck - Platinum

## Capacities

| Length | Facing Area ($FT^2$) | Cubic Capacity ($FT^3$) |
|---|---|---|
| 4' | 21.4 | 53.6 |
| 6' | 32.1 | 80.4 |
| 8' | 42.8 | 107.2 |
| 12' | 64.2 | 160.8 |

## Refrigeration Data

| BTUH per FT of Case Unlighted Shelves One Row Canopy - LED Lights | | BTUH per FT of Case Unlighted Shelves One Row Canopy - T8 Lights | | Add BTUH per FT per Row Lighted Shelves | | Add BTUH per FT per Row Nose Lights or Additional T8 Canopy Light | | Evap. Temp. | Discharge Air | |
|---|---|---|---|---|---|---|---|---|---|---|
| Parallel | Single | Parallel | Single | LED | T8 | LED | T8 | | Temp | Velocity |
| 1161 | 1254 | 1167 | 1260 | 11 | 19 | 11 | 19 | +26°F | +33°F | 225 FPM |

BTUH determined using EC Fan Motors. Add 13 BTUH for additional LED canopy light.

## Electrical Data

| Length | ECM Fan Data | | Shelf Light - Amps Per Lighted Shelf | | Nose Light - Amps | | Canopy Light - Amps | |
|---|---|---|---|---|---|---|---|---|
| | Fan Qty | Amps | LED | T8 | LED | T8 | 1 Row LED | 2 Row T8 |
| 4' | 1 | 0.14 | 0.12 | 0.25 | 0.10 | 0.25 | 0.24 | 0.50 |
| 6' | 2 | 0.28 | 0.09 | 0.22 | 0.18 | 0.44 | 0.37 | 0.88 |
| 8' | 2 | 0.28 | 0.12 | 0.25 | 0.20 | 0.50 | 0.48 | 1.00 |
| 12' | 4 | 0.56 | 0.12 | 0.25 | 0.36 | 0.75 | 0.72 | 1.50 |

All electrical data based on 115V and unlighted shelves.

## Defrost Data

| Defrost | Per Day | Fail Safe | Termination |
|---|---|---|---|
| Off Cycle | 6 | 18 min | +47°F |

Type I refrigerator, intended for use in an area where the environmental conditions are controlled and maintained such that conditions do not exceed 75 deg F and 55% relative humidity. Kysor/Warren, whose policy is one of continuous improvement, reserves the right to change at any time, specifications, design or prices without incurring obligation. Dual-Jet and Air Defrost are registered trademarks of Kysor/Warren.

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ANSI / NSF 7

The above case model has case lengths that are UL and NSF approved.

ENERGY STAR PARTNER

Issue: 7.16.2010

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**Columbus, GA 31907**

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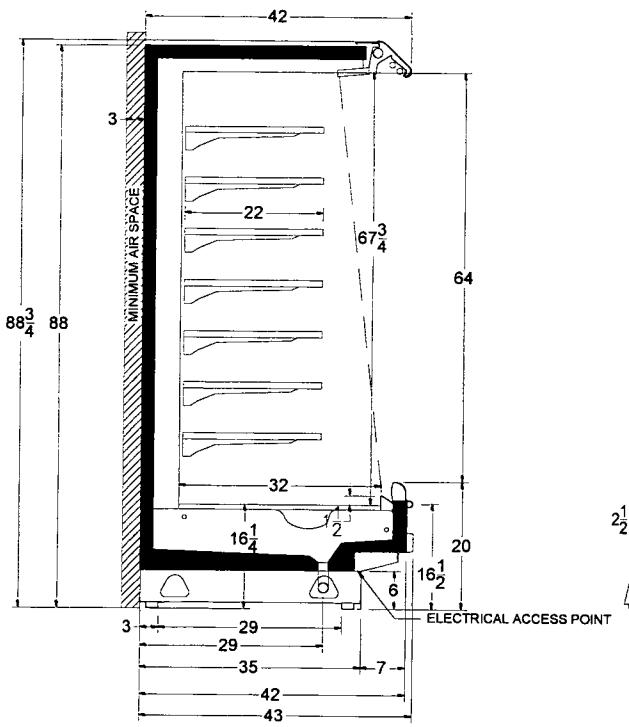
**www.kysorwarren.com**

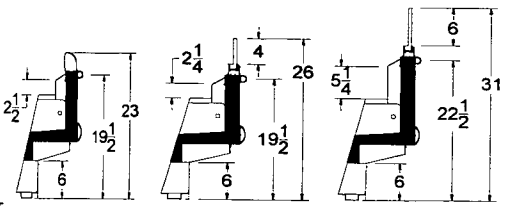
KYSOR/WARREN

STRATUS

# DX8LN - Multi-Deck - Platinum

## Platinum Profile View

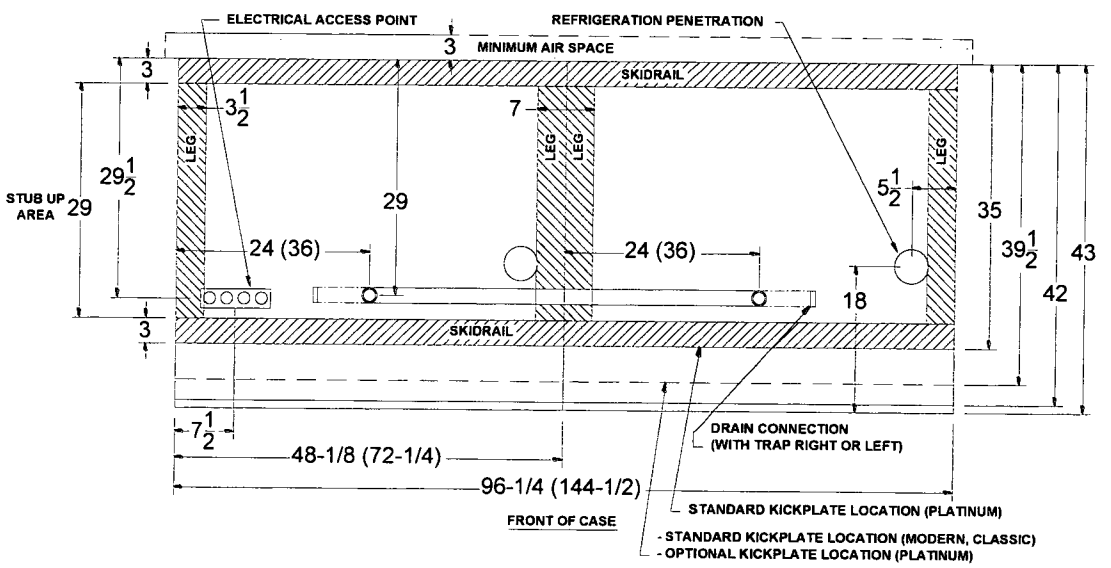



DX8XN DX8XP DX8HP

Add 3" thickness for a pair of ends.

## Platinum Floor Plan



KYSOR/WARREN

STRATUS

#110

# DN8LN - Multi-Deck - Platinum

## Capacities

| Length | Facing Area ($FT^2$) | Cubic Capacity ($FT^3$) |
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| 4' | 21.44 | 43.78 |
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|---|---|---|---|---|---|---|---|---|---|---|
| Parallel | Single | Parallel | Single | LED | T8 | LED | T8 | | Temp | Velocity |
| 1419 | 1533 | 1425 | 1539 | 11 | 19 | 11 | 19 | +26°F | +33°F | 200 FPM |

BTUH determined using EC Fan Motors. Add 13 BTUH for additional LED canopy light.

## Electrical Data

| Length | ECM Fan Data | | Shelf Light - Amps Per Lighted Shelf | | Nose Light - Amps | | Canopy Light - Amps | |
|---|---|---|---|---|---|---|---|---|
| | Fan Qty | Amps | LED | T8 | LED | T8 | 1 Row LED | 2 Row T8 |
| 4' | 1 | 0.14 | 0.12 | 0.25 | 0.10 | 0.25 | 0.24 | 0.50 |
| 6' | 2 | 0.28 | 0.09 | 0.22 | 0.18 | 0.44 | 0.37 | 0.88 |
| 8' | 2 | 0.28 | 0.12 | 0.25 | 0.20 | 0.50 | 0.48 | 1.00 |
| 12' | 4 | 0.56 | 0.12 | 0.25 | 0.36 | 0.75 | 0.72 | 1.50 |

All electrical data based on 115V and unlighted shelves.

## Defrost Data

| Defrost | Per Day | Fail Safe | Termination |
|---|---|---|---|
| Off Cycle | 6 | 18 min | +47°F |

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c UL us ANSI / NSF 7

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GREENCHILL

ENERGY STAR PARTNER

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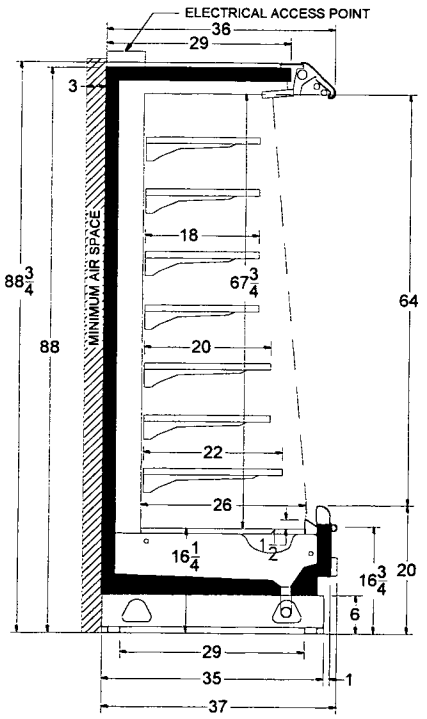
**www.kysorwarren.com**

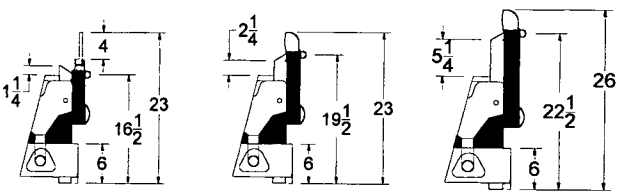
KYSOR/WARREN®

STRATUS

# DN8LN - Multi-Deck - Platinum

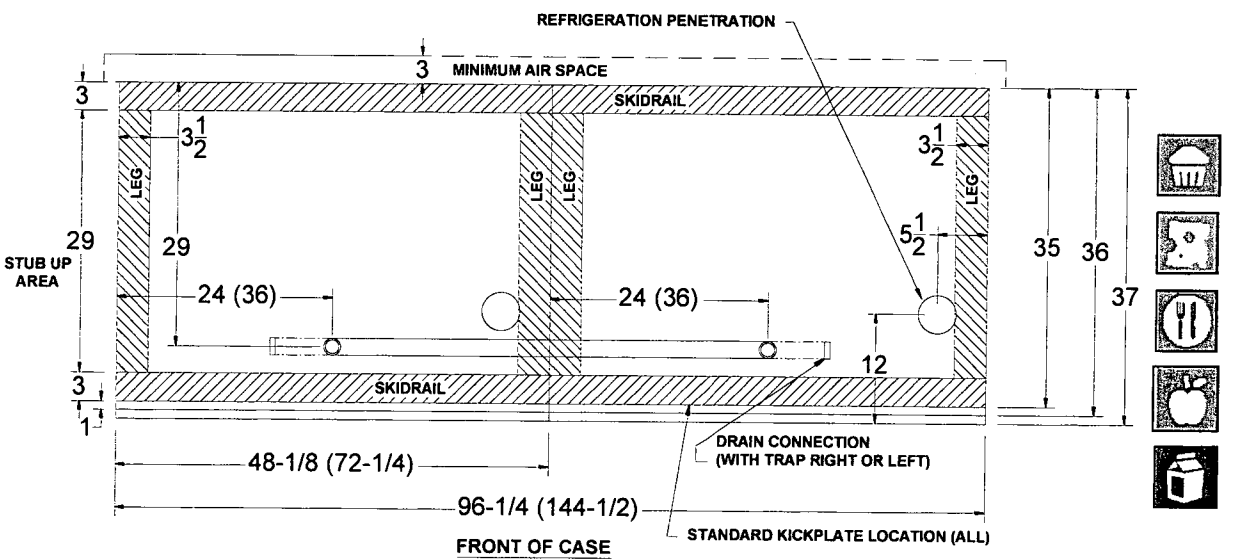
## Platinum Profile View




Add 3 ½" thickness for a pair of ends.

## Platinum Floor Plan

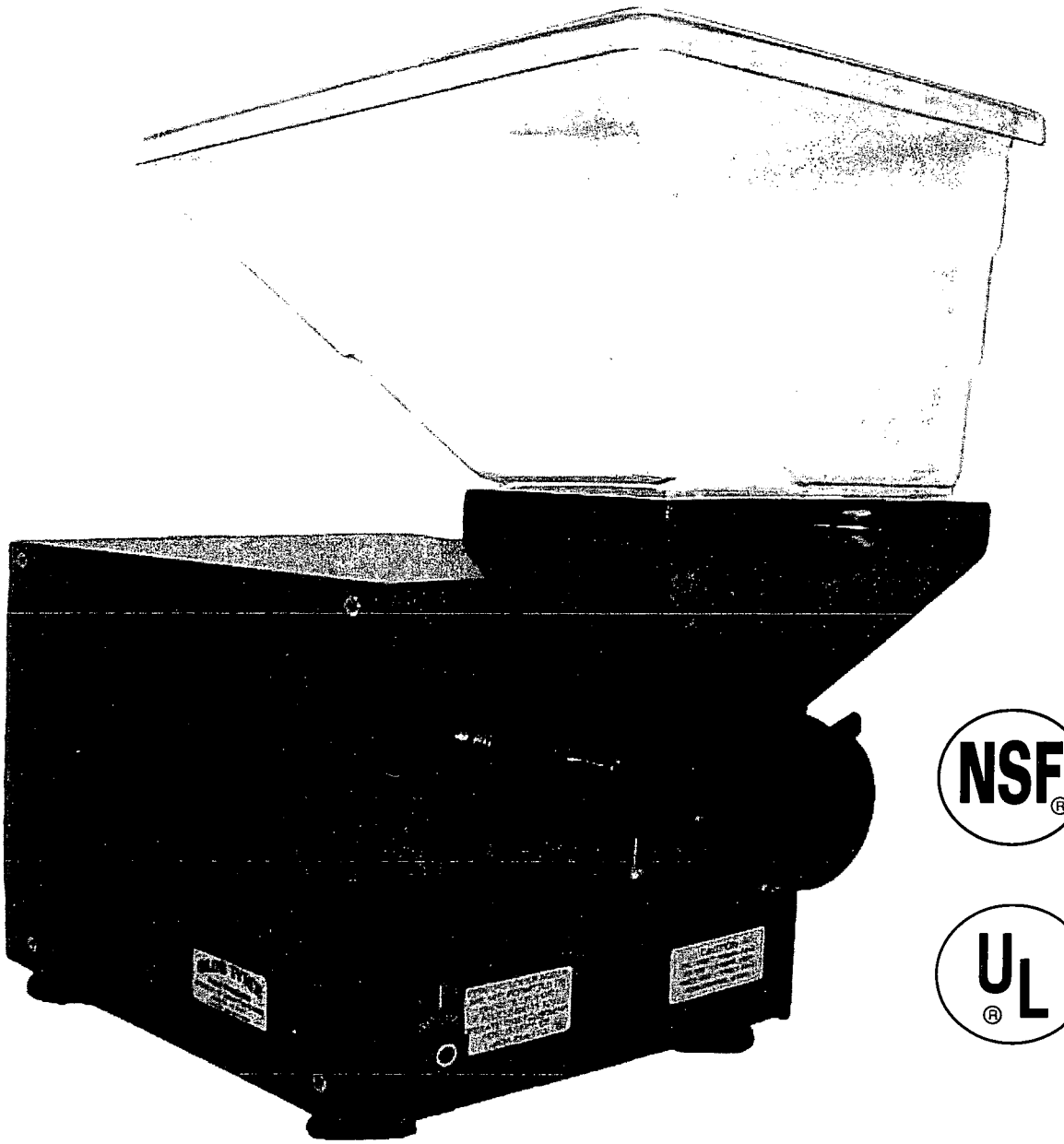


# FRESH GROUND NUT BUTTER MILL

# OPERATING MANUAL

## WITH PARTS LIST AND ELECTRICAL DIAGRAM

## MODEL: PN2



NSF®

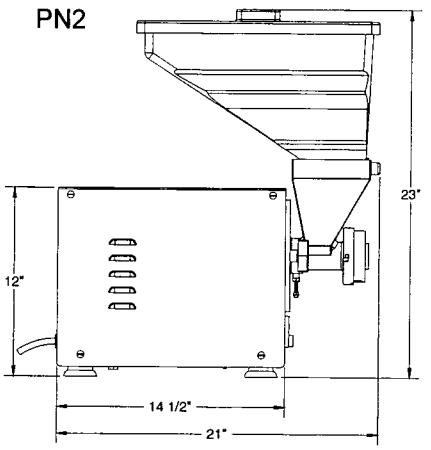
UL®

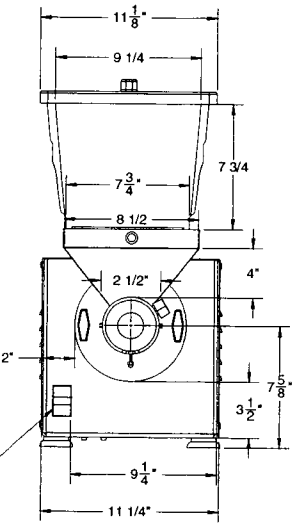
FINEST FROM THE FIELDS
HAMPTON FARMS

**IMPORTANT! This machine requires a dedicated 115 volt 20.0 amp circuit.**
**Do NOT tamper in any way with the 20 AMP plug.**
**Any cutting or tampering with the provided electrical cord voids ALL manufacturer warrantees.**

## DIMENSIONS

PN2




**Weight = 85 lbs.**

## INSTALLATION

Remove Nut Butter Machine from carton and inspect for damage that may have occurred in shipment. Nut Butter Mill should be operated on a sturdy counter or table. The location should be visible to your customers while the machine is operating. Do not use extension cords.

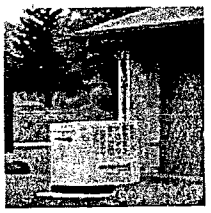
## SET UP INSTRUCTIONS

- Before the first use, wipe down with a dry cloth, using a food-grade sanitizer.
- Loosen the chute Knob on the front of the Hopper.
- Install plastic chute onto the Hopper.
- Secure the chute by tightening the chute Knob.
- Plug the unit into a 115 volt outlet, with a dedicated 20 AMP circuit.
- Pour properly sized nut butter stock into the chute. Chute will hold approximately 17.5 lb. (IMPORTANT – Not all nut types can be used in this machine. Refer to Page 3, INPUT section)
- Place the chute cover onto the plastic chute.

## OPERATING PROCEDURES

- Push the green "START" button and it will illuminate and the machine will start.
- To stop the machine at any time, simply push the red "STOP" button and the machine will shut off.
- The machine will shut off automatically if not stopped manually.
  - o **Timer:** This machine is equipped with an internal timer which can be adjusted to run for times ranging from 1 second to 17 minutes with each push of the "START" button. The machine is factory set to run for 24 seconds. This is sufficient time to fill a 16 oz (1 LB.) container of PEANUT Butter. (Volumes will vary depending on the type of product being ground).
    For instructions on how to adjust the timer, visit the following web location:
    www.hamptonfarms.com/nut-butter-stock/

If more butter is needed you can simply start the cycle again by pressing the green start button after the first cycle has finished. You can always stop the machine at any time by pressing the red stop button.



# GENERAC® QUIETSOURCE® SERIES STANDBY GENERATORS

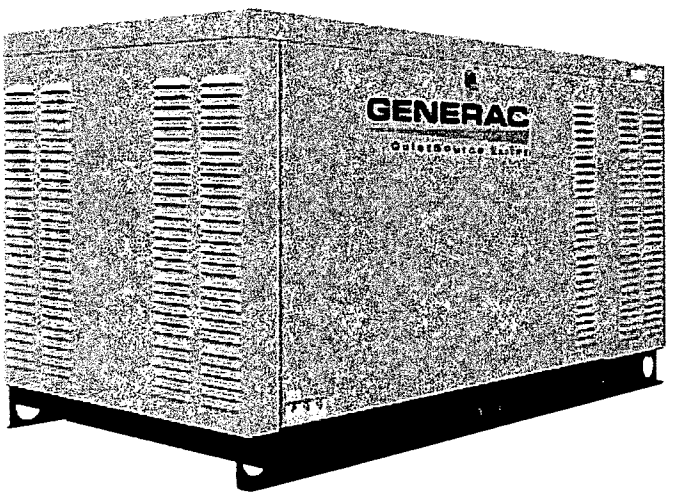
## 22 kW

## Liquid-Cooled Engine Generator Sets

Standby Power Rating
Model QT022 (Gray) - 22 kW 60Hz

INCLUDES:

- Generac Naturally Aspirated Gaseous Fueled 2.4L Engine
- Two Line LCD Tri-lingual Digital Nexus™ Controller
- Isochronous Electronic Governor
- Sound Attenuated Enclosure
- Closed Coolant Recovery System
- Smart Battery Charger
- UV/Ozone Resistant Hoses
- ±1% Voltage Regulation
- Natural Gas or LP Operation
- 2 Year Limited Warranty
- UL 2200 Listed




c UL us LISTED

USA ENGINEERED & BUILT

QUIET-TEST

Meets EPA Emission Regulations
CA/MA emissions Compliant

## FEATURES

- **INNOVATIVE DESIGN & PROTOTYPE TESTING** are key components of GENERAC'S success in "IMPROVING POWER BY DESIGN." But it doesn't stop there. Total commitment to component testing, reliability testing, environmental testing, destruction and life testing, plus testing to applicable CSA, NEMA, EGSA, and other standards, allows you to choose GENERAC POWER SYSTEMS with the confidence that these systems will provide superior performance.

- **TEST CRITERIA:**
  - ✓ **PROTOTYPE TESTED**
  - ✓ **SYSTEM TORSIONAL TESTED**
  - ✓ **NEMA MG1-22 EVALUATION**
  - ✓ **MOTOR STARTING ABILITY**

- **SOLID-STATE, FREQUENCY COMPENSATED VOLTAGE REGULATION.** This state-of-the-art power maximizing regulation system is standard on all Generac models. It provides optimized FAST RESPONSE to changing load conditions and MAXIMUM MOTOR STARTING CAPABILITY by electronically torque-matching the surge loads to the engine. An unequalled ±1% voltage regulation.

- **SINGLE SOURCE SERVICE RESPONSE** from Generac's extensive dealer network provides parts and service know-how for the entire unit, from the engine to the smallest electronic component.

- **GENERAC TRANSFER SWITCHES.** Long life and reliability are synonymous with GENERAC POWER SYSTEMS. One reason for this confidence is that the GENERAC product line includes its own transfer systems and controls for total system compatibility.

GENERAC® ISO 9001:2008

# Application & Engineering Data

# QT022

## GENERATOR SPECIFICATIONS

| | |
|---|---|
| TYPE | Synchronous |
| ROTOR INSULATION | Class H |
| STATOR INSULATION | Class H |
| TELEPHONE INTERFERENCE FACTOR (TIF) | <50 |
| ALTERNATOR OUTPUT LEADS 3 PHASE | 4 wire |
| BEARINGS | Sealed Ball |
| COUPLING | Flexible Disc |
| LOAD CAPACITY (STANDBY RATING) | 22 kW |
| EXCITATION SYSTEM | Direct |

## VOLTAGE REGULATION

| | |
|---|---|
| TYPE | Electronic |
| SENSING | Single Phase |
| REGULATION | ± 1% |

## GENERATOR FEATURES

Revolving field heavy duty generator
Directly connected to the engine
Operating temperature rise 120 °C above a 40 °C ambient
Insulation is Class H rated at 150 °C rise
All models are fully prototyped tested

## ENCLOSURE FEATURES

| | |
|---|---|
| Aluminum weather protective enclosure | Ensures protection against mother nature. Electrostatically applied textured epoxy paint for added durability. |
| Enclosed critical grade muffler | Quiet, critical grade muffler is mounted inside the unit to prevent injuries. |
| Small, compact, attractive | Makes for an easy, eye appealing installation. |
| SAE | Sound attenuated enclosure ensures quiet operation. |

## ENGINE SPECIFICATIONS

| | |
|---|---|
| MAKE | Generac |
| MODEL | In line |
| CYLINDERS | 4 |
| DISPLACEMENT | 2.4 Liter |
| BORE | 3.41 |
| STROKE | 3.94 |
| COMPRESSION RATIO | 9.5:1 |
| INTAKE AIR SYSTEM | Naturally Aspirated |
| LIFTER TYPE | Hydraulic |

## GOVERNOR SPECIFICATIONS

| | |
|---|---|
| TYPE | Electronic |
| FREQUENCY REGULATION | Isochronous |
| STEADY STATE REGULATION | ± 0.25% |

## ENGINE LUBRICATION SYSTEM

| | |
|---|---|
| OIL PUMP | Gear |
| OIL FILTER | Full flow spin-on cartridge |
| CRANKCASE CAPACITY | 4 Quarts |

## ENGINE COOLING SYSTEM

| | |
|---|---|
| TYPE | Closed |
| WATER PUMP | Belt driven |
| FAN SPEED | 1980 |
| FAN DIAMETER | 18.1 inches |
| FAN MODE | Pusher |

## FUEL SYSTEM

| | |
|---|---|
| FUEL TYPE | Natural gas, propane vapor |
| CARBURETOR | Down Draft |
| SECONDARY FUEL REGULATOR | Standard |
| FUEL SHUT OFF SOLENOID | Standard |
| OPERATING FUEL PRESSURE | 5" - 14" $H_2O$ |

## ELECTRICAL SYSTEM

| | |
|---|---|
| BATTERY CHARGE ALTERNATOR | 12V 30 Amp |
| STATIC BATTERY CHARGER | 2 Amp |
| RECOMMENDED BATTERY | Group 26, 525CCA |
| SYSTEM VOLTAGE | 12 Volts |

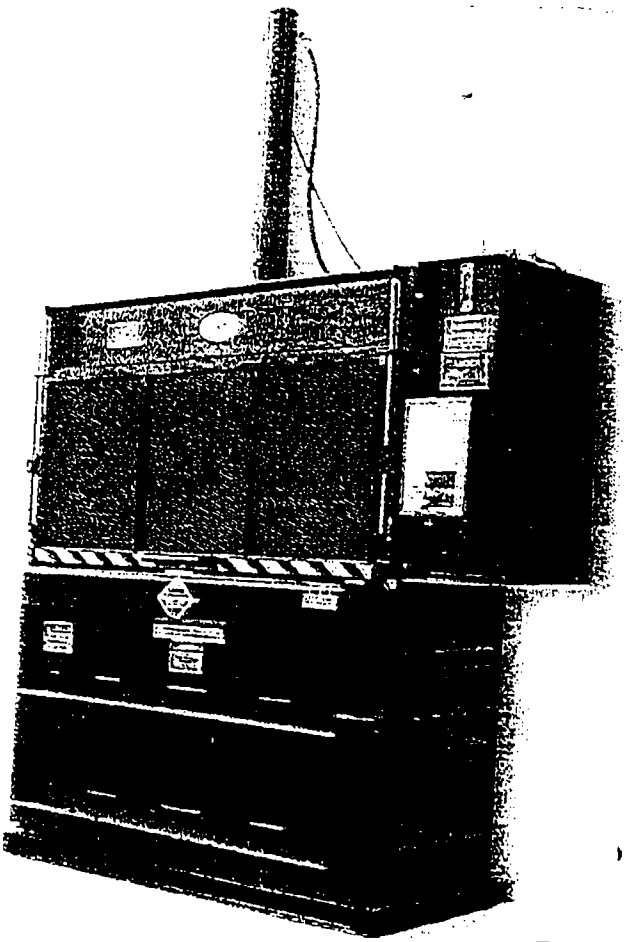
Rating definitions - Standby: Applicable for supplying emergency power for the duration of the utility power outage. No overload capability is available for this rating. (All ratings in accordance with BS5514, ISO3046 and DIN6271). (All ratings in accordance with BS5514, ISO3046, ISO8528, SAE J1349 and DIN6271).

Machining & Manufacturing Services
2319 Harrow Gate Drive
Barrington, Illinois 60010
TEL 847-382-0766 FAX 847-382-8913
e-mail: machining-mfg.services@comcast.net
http://www.chicago-compactors.com

# OWNER / OPERATOR MANUAL
## VERTICAL BALER

## MODELS

- VB-42-B
- VB-42-H
- VB-60-B
- VB-60-B-LP
- VB-60-T
- VB-60-H
- VB-60-X
- VB-60-H-DC
- VB-60-H-LP
- VB-72-B
- VB-72-B-LP
- VB-72-T
- VB-72-H
- VB-72-X
- VB-72-H-DC
- VB-72-H-LP
- VB-46-LD
- VB 42-SR — [illegible] DRWG AND SPECS.



C UL US LISTED

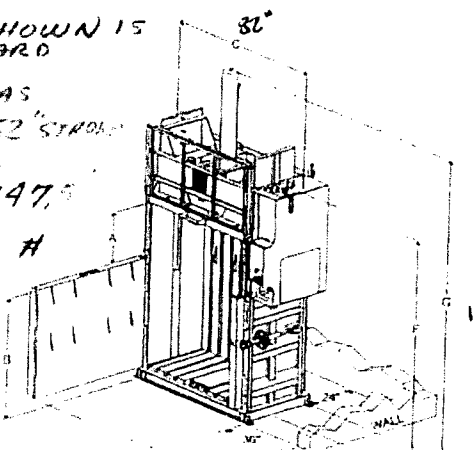
"Equipping The World For A Better Environment"

## VERTICAL BALER SPECIFICATIONS

| | Model | | VB-42-B | VB-60-B | VB-60-T | VB-60-H | VB-60-X | VB-72-B | VB-72-T | VB-72-H | VB-72-X |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A | Feed Opening Height in (mm) | | 24 (610) | 24 (610) | 24 (610) | 24 (610) | 24 (610) | 24 (610) | 24 (610) | 24 (610) | 24 (610) |
| B | Load Height in (mm) | | 52 (1321) | 52 (1321) | 52 (1321) | 52 (1321) | 52 (1321) | 52 (1321) | 52 (1321) | 52 (1321) | 52 (1321) |
| C | Overall Width in (mm) | | 64 (1626) | 82 (2083) | 82 (2083) | 82 (2083) | 82 (2083) | 94 (2388) | 94 (2388) | 94 (2388) | 94 (2388) |
| D | Overall Depth in (mm) | | 40.5 (1029) | 40.5 (1029) | 40.5 (1029) | 40.5 (1029) | 40.5 (1029) | 40.5 (1029) | 40.5 (1029) | 40.5 (1029) | 40.5 (1029) |
| E | Overall Depth Door open in (mm) | | 85 (2159) | 97 (2464) | 97 (2464) | 97 (2464) | 97 (2464) | 109 (2769) | 109 (2769) | 109 (2769) | 109 (2769) |
| F | Frame Height in (mm) | | 98.5 (2502) | 98.5 (2502) | 98.5 (2502) | 98.5 (2502) | 98.5 (2502) | 98.5 (2502) | 98.5 (2502) | 98.5 (2502) | 98.5 (2502) |
| G | Overall Height Installed in (mm) | | 138 (3505) | 138 (3505) | 145.5 (3696) | 145.5 (3696) | 145.5 (3696) | 138 (3505) | 145.5 (3696) | 145.5 (3696) | 145.5 (3696) |
| | Nominal Bale Size in (mm) | W | 42 (1067) | 60 (1524) | 60 (1524) | 60 (1524) | 60 (1524) | 72 (1829) | 72 (1829) | 72 (1829) | 72 (1829) |
| | | D | 30 (762) | 30 (762) | 30 (762) | 30 (762) | 30 (762) | 30 (762) | 30 (762) | 30 (762) | 30 (762) |
| | | H | 48 (1219) | 48 (1219) | 48 (1219) | 48 (1219) | 48 (1219) | 48 (1219) | 48 (1219) | 48 (1219) | 48 (1219) |
| | Bale Weight (OCC) Up To lb (kg) | | 750 (340) | 1,000 (454) | 1,200 (544) | 1,400 (635) | 1,400 (635) | 1,200 (544) | 1,400 (635) | 1,600 (726) | 1,600 (726) |
| | Cylinder in (mm) | B | 6 (152) | 6 (152) | 6 (152) | 7 (178) | 7 (178) | 6 (152) | 6 (152) | 7 (178) | 7 (178) |
| | | S | 44 (1118) | 44 (1118) | 52 (1321) | 52 (1321) | 52 (1321) | 44 (1118) | 52 (1321) | 52 (1321) | 52 (1321) |
| | | R | 3.5 (89) | 3.5 (89) | 4 (102) | 4 (102) | 4 (102) | 3.5 (89) | 4 (102) | 4 (102) | 4 (102) |
| | Motor hp (kw) | | 10 (7.5) | 10 (7.5) | 15 (11.2) | 15 (11.2) | 20 (14.9) | 10 (7.5) | 15 (11.2) | 15 (11.2) | 20 (14.9) |
| | Pump @1800 rpm Gpm (l/min) | | 9 (34) | 9 (34) | 10.5 (40) | 10.5 (40) | 13.5 (51) | 9 (34) | 10.5 (40) | 10.5 (40) | 13.5 (51) |
| | System Pressure psi (BAR) | | 2,100 (145) | 2,100 (145) | 2,400 (165) | 2,400 (165) | 2,400 (165) | 2,100 (145) | 2,400 (165) | 2,400 (165) | 2,400 (165) |
| | Platen Force lbs (kN) | | 59,370 (264) | 59,370 (264) | 67,850 (302) | 92,350 (410) | 92,350 (410) | 59,370 (264) | 67,850 (302) | 92,350 (410) | 92,350 (410) |
| | Platen Face Pressure psi (kPa) | | 66 (456) | 45 (310) | 51 (352) | 69 (476) | 69 (476) | 37 (255) | 42 (290) | 57 (393) | 57 (393) |
| | Average Cycle Time sec | | 53 | 53 | 50 | 74 | 58 | 53 | 50 | 74 | 58 |
| | (W/Optional Regen) | | 32 | 32 | 31 | 57 | 45 | 32 | 31 | 57 | 45 |
| | Unit Weight lb (kg) | | 4,500 (2045) | 4,700 (2132) | 4,750 (2160) | 4,800 (2177) | 4,850 (2205) | 5,200 (2364) | 5,250 (2386) | 5,300 (2410) | 5,350 (2430) |

VB-42-B SHOWN IS STANDARD

** VB-42-H HAS 7" Ø CYL W/52" STROKE, 15 HP MOTOR, G" → O.A. HEIGHT 147.5 INSTALLED, WEIGHT 4600 #, PLATEN FORCE 92,350 LBS




130" = 11'-6"

**Machining & Manufacturing Services**
2319 Harrow Gate Drive
Barrington, Illinois 60010
TEL 847-382-0766 FAX 847-382-8913
e-mail: machining-mfg.services@comcast.net
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Metalfrio | Solutions

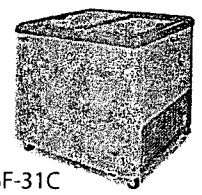
# HORIZONTAL TOP SERIES

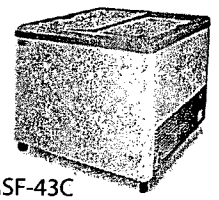
*LED Lights enhanced product display*

## FEATURES

- Interior LED lights for POS attraction
- Flat tempered glass sliding lids
- White zinc coated, baked on enamel steel exterior
- Painted white powder coated steel interior
- Standard flat wire baskets with 3 compartments
- Removable rubber bumper guards / grill side
- Dual heavy-duty casters / two locking
- Molded plastic lid frame heated with reverse gas
- External analog thermometer display
- Control panel w/adj temp range +10 to -18°F
- Bottom defrost drain with plug
- Lid lock and keys
- Refrigerant CFC-free R-134a
- Refrigerant CFC-free R-404a (MSF71C only)
- 6-1/2 ft power cord and plug set

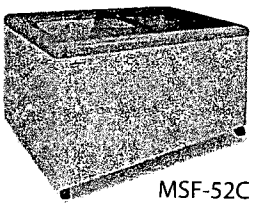
**OPTIONS** Custom graphics and light canopy

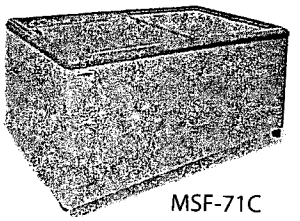

MSF-31C


MSF-43C


Control Panel

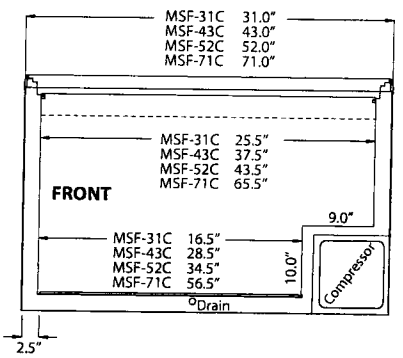

External Temp Display

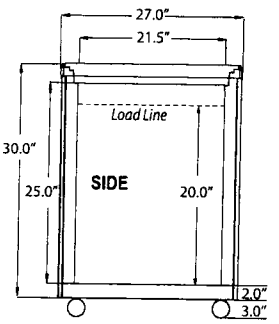

MSF-52C

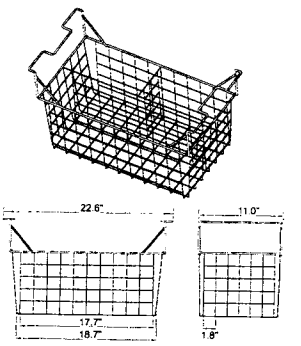

MSF-71C

## SPECIFICATIONS

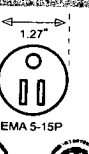
| Model | Baskets/Fixed Dividers | External Dimensions W x D x H | Gross Cu Ft | Net Cu Ft | Shipping Weight | Amps | Compressor H/P | Electrical |
|---|---|---|---|---|---|---|---|---|
| MSF-31C | 2 / 2 | 31.0" x 27.0" x 33.0" | 7.5 | 6.0 | 159 | 2.0 | 1/3 | 115/120V, 60Hz |
| MSF-43C | 3 / 2 | 43.0" x 27.0" x 33.0" | 11.5 | 9.0 | 192 | 3.5 | 1/3 | 115/120V, 60Hz |
| MSF-52C | 4 / 2 | 52.0" x 27.0" x 33.0" | 14.0 | 11.5 | 224 | 3.5 | 1/3 | 115/120V, 60Hz |
| MSF-71C | 5 / 2 | 71.0" x 27.0" x 33.0" | 20.0 | 16.5 | 280 | 6.0 | 2/3 | 115/120V, 60Hz |




**WARRANTY**
18 Months Parts and Labor
5 Years Compressor (part only)
Administered by:
Metalfrio Solutions
(888) 403-0070 Toll Free




Product design and specifications are subject to modification by manufacturer without prior notice.


Metalfrio Solutions, Inc.
110 Enterprise Parkway - Boerne, TX 78006
(888) 403-0070 Toll Free - (888) 339-1904 Toll Free Fax
www.metalfrio.com - sales@metalfrio.com



Effective Date -August, 2012

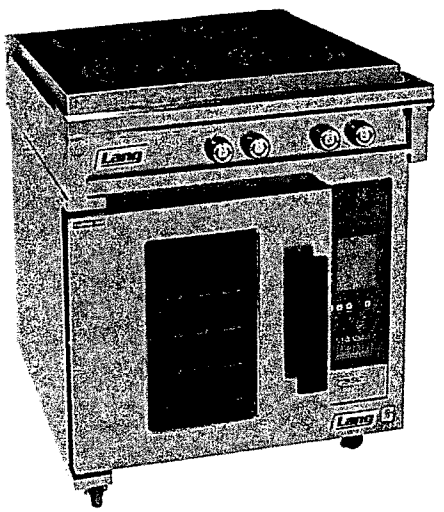
Item No. _____

Project _____

Quantity _____

## 30" Electric Induction Top Range with Convection Oven Base

# Model: RI30C Series



*Model RI30C-PTA Shown*

### SHORT/BID SPECIFICATION

Range shall be a LANG Manufacturing Model RI30 ___ [Specify one]:

_APA: Accu-Plus Control

_PTA: Platinum Control

A 30" wide heavy duty electric heated unit with five half size pan capacity convection oven base and 18.2 kW total power input; all stainless steel exterior; fully insulated oven with stainless steel interior, heavy duty door hinged left, with double pane viewing window and five chrome plated oven rack standard; with individual cook-top component controls; 4 ea. 8" diameter induction burner.

### STANDARD PRODUCT WARRANTY

- Two year, parts & labor
- Lifetime warranty on oven door mechanism

### CONSTRUCTION FEATURES

- 6mm glass induction top thickness for added durability
- One piece heavy duty 430 Series stainless steel exterior, with attractive No. 4 finish
- Cooking compartment is 430 Series stainless steel
- 2" insulation on six sides of cooking compartment
- Heavy duty compartment door, with large double pane tempered glass window
- Powerful blower centered on side of compartment
- Nine position oven rack slide supports
- Five chrome-plated oven racks provided
- 4" swivel casters standard
- 2-3/4" wide full width front grease trough
- Grease drain in trough with full width & depth spillage drawers

### PERFORMANCE FEATURES

- Compact 30" wide range incorporates half-size convection oven with five 13 X 18" pan capacity
- No flames or hot coils contribute to safer, cleaner cooking
- Induction cooking results in a cooler kitchen
- Controlled heating allows for precise, consistent cooking
- 150° to 450° F oven operating temperature range
- Solid state oven temperature control accurate to 4° F
- Two speed fan with fan pulse capability
- Door interlock switch cuts power to fan
- Choice of cook top configurations, to include:
  - ❑ 4 ea. 8" diameter induction burner

### CONTROLS [For Oven] CHOICE OF:

❑ Accu-Plus™ Control [-APA]
- Simple knob-set time and temperature controls
- 1-hour timer with non-stop buzzer
- Pulse-fan switch
- HIGH-LOW speed fan switch
- Power-ON switch

❑ Platinum Control [-PTA]
- Solid state, icon driven, one-touch programmable controls
- Up to 99 product programs, with multiple baking tiers
- Time, temperature, heat loss and adjustable shelf compensation
- Cook-n-Hold programming
- 2-speed fan & variable-rate pulse-fan control

c UL us NSF



LANG MANUFACTURING • 10 SUNNEN DR. ST. LOUIS, MO 63143
PHONE: 314-678-6315 • FAX: 314-781-3636 • www.langworld.com

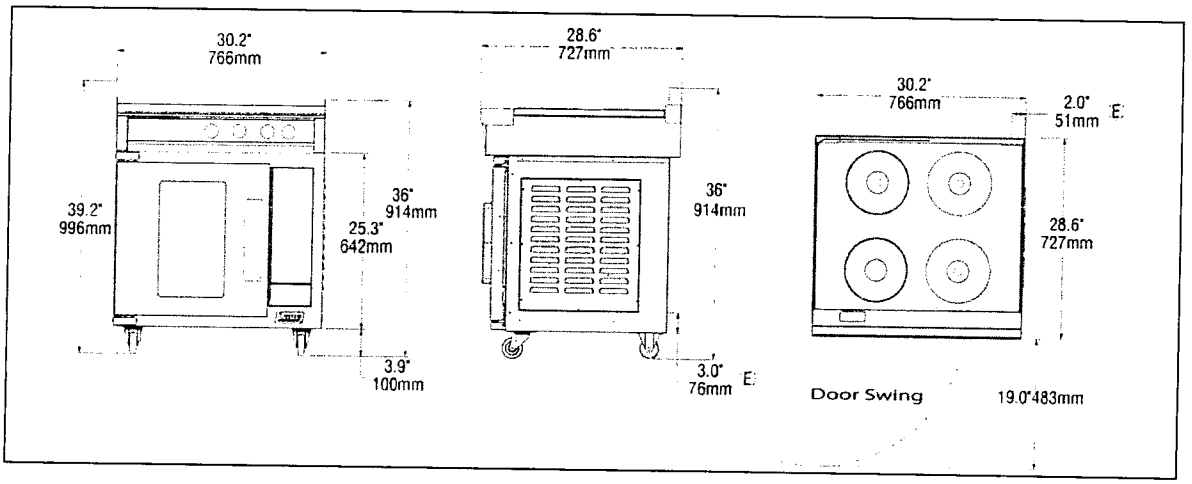
## 30" Electric Induction Top Range with Convection Oven Base — Model: RI30 Series

### INSTALLATION REQUIREMENTS

- Unit is shipped in one piece
- Ⓔ Single 208/240V, 1/ 3-Phase
- Installation under approved vent hood required. Consult local codes. [Power connection from bottom. See below]

### OPTIONS & ACCESSORIES

❑ Extra wire pan rack [Five provided as std.]




[Front View/Elevation] [Right Side View] [Top View/Plan]

| Model | Height x Width x Depth (With standard 4" casters) | Clearance from combustible surface | Weight | | Freight Class |
|---|---|---|---|---|---|
| | | | Actual | Shipping | |
| RI30_ | 36" x 30.2" x 30"<br>914mm x 766mm x 762mm | Sides: 3"<br>Back: 3" | 362* lbs.<br>165 kg | 412* lbs.<br>187 kg | 85 |

| Model | Ⓔ Electrical Requirements | | | |
|---|---|---|---|---|
| | Voltage | Total kW | Phase | Amps/Line |
| RI30_ | 208V/60Hz | 18.2 | 1/3 | 87.5/54 |
| | 240V/60Hz | 18.2 | 1/3 | 75.8/47 |

### CAD SYMBOLS & PRICING

The KCL CADdetail — AutoQuotes

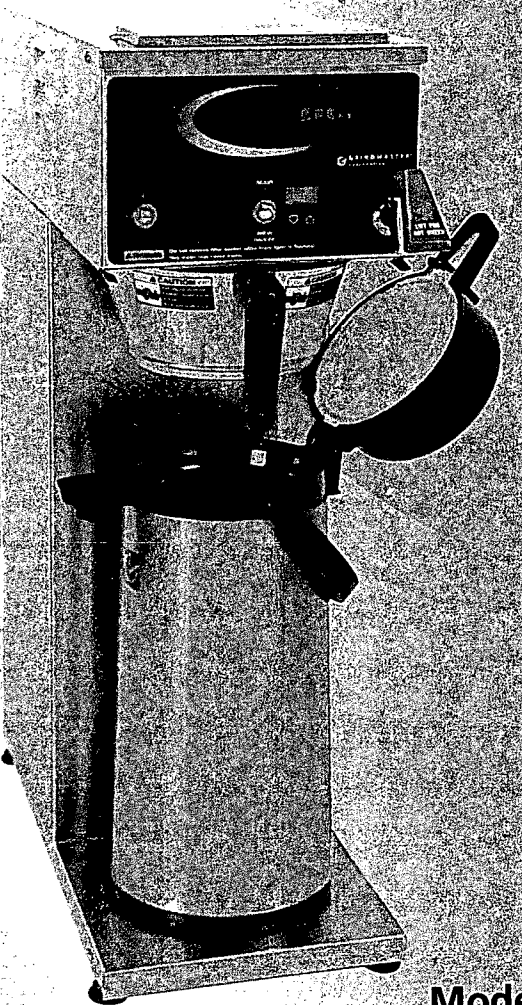
*Due to continuous improvements, specifications subject to change without notice.*

Lang — World Class Cooking Solutions

**LANG MANUFACTURING • 10 SUNNEN DR. ST. LOUIS, MO 63143**
**PHONE: 314-678-6315 • FAX: 314-781-3636 • www.langworld.com**

# Model B-SAP

## PRECISIONBREW™ Airpot Brewer



**Model B-SAP**
(Airpot sold separately)

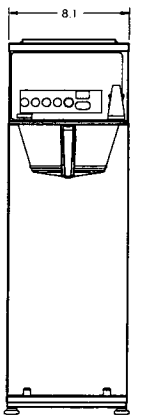
**Digitally controlled airpot brewer holds brew temperature to ± 1°F throughout brew cycle. Brew temperature, brew volume, operator defined pre-infusion/pulse brewing, and low temp/no brew are programmable from the front display.**

GRINDMASTER™
CORPORATION

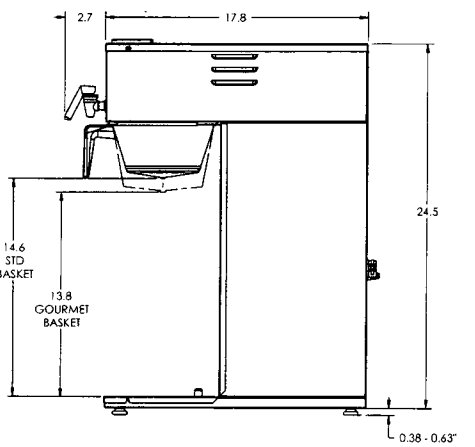
PRECISIONBREW
COMMERCIAL BREWING SYSTEM

# Model B-SAP

- Model B-SAP is a single, digitally controlled brewer that brews into a 1.9L (64oz.) up to 2.5L (85oz) Airpot (Airpot sold separately).
- The Airpots hold freshly brewed coffee for hours without additional heat.
- Precise Brew Temperature - The brewer will hold the brew temperature to +/- 1°F during the complete brew cycle.
- Brew Volume - can be set by 'teach' mode to eliminate trial-and-error set-up.
- Pulse brewing/pre-infusion - Allows the brew sequence to extract up to 20% more dissolved solids per batch of coffee. Programmable: number of pulses, pulse-on time and pulse-off time. Changing the pulse sequence does not affect the brew volume.
- Low Temp/No Brew - Allows the brew cycle to begin only when the water has reached the optimum brew temperature.
- Cycle Counter - The brewer counts the total number of brew cycles.
- Programming Lock-Out - The brewer settings can be "locked" to prevent tampering.
- Pour-Over Capability - Automatically converts to pour-over mode when the inlet valve does not sense water. Also capable of being manually set to pour-over mode through the front.
- Dual Voltage with toggle switch models are available to accept 120/240V or 120V supply.
- Gourmet brew basket (pn 71431) available as an option.
- Warranty - 2 years parts and labor on the brewer. 4 years part warranty on the control board.




Front View




Side View

| Specification | Model B-SAP |
|---|---|
| Electrical | 120V/ 1780W/ 14.9A<br>120/240V/ 3500W/ 14.6A<br>120/208V/ 2630W/ 12.7A |
| Brew Capacity<br>(# of 2.2 liter airpots / hour) | @ 120V: 8<br>@ 240V: 16<br>@ 208V: 12 |
| Water Line | 1/4" flare |
| Water Line Pressure | 30-80 psi |
| Tank Drain | Yes |
| Tank Size | 1.38 gallons |
| Dimensions (H x W x D) | 25" x 8-1/4" x 17-3/4" (64 cm x 20 cm x 46 cm) |
| Ship Dimensions (H x W x D) | 28" x 13" x 24" (69 cm x 30.5 cm x 61 cm) |
| Weight | 28 lbs (12.7 kg) |
| Ship Weight | 37 lbs (16.8 kg) |
| Listings | UL, CUL, NSF, (CE for E models only) |

Specifications are subject to improvement or change without notice.

c UL us NSF CE

GRINDMASTER™
CORPORATION

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Crathco® Cold and Frozen Beverage Dispensers • American Metal Ware® Coffee and Tea Systems
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P.O. Box 35020 • Louisville, KY 40232 • USA
www.grindmaster.com • email: info@grindmaster.com

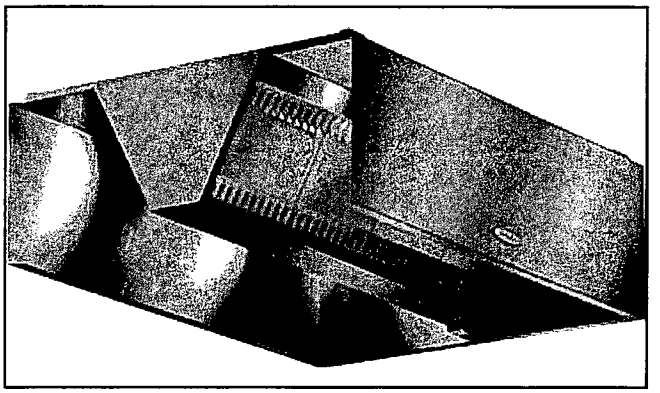
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PRINTED IN USA

0905 Form # AM-202-04

GREENHECK
Building Value in Air.

# MODEL G __ __ __ Island Style Canopy Hood

October 2008



Exhaust only island style with Grease-X-Tractor™ Filter

## QUICK SPECIFICATION

Kitchen Ventilation hood(s) shall be of the Type I, single island canopy. The hood(s) shall be UL 710 Listed without (with) fire damper for 400°F, 600°F or 700°F rated cooking appliances.

The hood(s) exterior shall be constructed of a minimum of 18 gauge stainless steel with an embossed finish (430 SS), if 300 series SS is required, a #4 polished finish is to be provided. The hood(s) shall be constructed using the standing seam method for optimum strength. All seams, joints and penetrations of the hood enclosure shall be welded and/or liquid tight. Lighter material gauges, alternate material types and finishes are not acceptable. All unexposed interior surfaces shall be constructed of a minimum 18 gauge corrosion-resistant steel including, but not limited to ducts, plenum, and brackets.

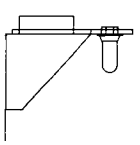
The hood(s) shall include a filter housing constructed of the same material as the hood. The filters shall be UL 1046 Classified and the filter housing shall terminate in a pitched, full length grease trough which shall drain into a removable grease container.

The hood(s) shall include a Performance Enhancing Lip (PEL) to improve capture efficiency by turning air back into the hood.

Due to continuous research, Greenheck reserves the right to change specifications without notice.

## Internal Supply Plenum

### Face Supply



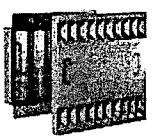
Face Supply hood(s) supply make-up air horizontally through face via perforated panels.

## Standard Features

- UL 710 Listed and bears the National Sanitation Foundation (NSF) Seal of Approval (Standard 2)
- Rated for 400°F, 600°F, 700°F
- Standard construction is a minimum of 18 gauge 430 stainless steel with an embossed finish
- Longer hoods are available in multiple sections and can be made to appear as one hood by utilizing our continuous capture option to improve performance and aesthetics
- Include Performance Enhancing Lip (PEL) to improve capture efficiency by turning air back into the hood
- Flexible lengths, widths and heights
- Standing seam construction for superior strength
- Excellent dimensional tolerances due to highly tooled manufacturing

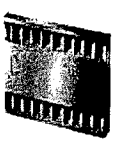
## Filtration Options

### Grease Grabber™



Multistage filtration system for heavy to extra-heavy duty grease applications. It removes 99% of grease particles larger than 3 microns in diameter and 100% of particles 9 microns or larger.

### Grease-X-Tractor™



High-efficiency stainless steel (aluminum) filter that is designed for medium to heavy duty grease applications and removes 69% of the grease particles 8 microns or larger.

### Steel Baffle Filter



The industry standard filter suited for light duty grease applications, removing 28% of particles at 8 microns and larger.

### High-Velocity Cartridge



Stainless steel cartridge filter that is designed for light duty grease applications and removes 42% of particles at 8 microns and larger.

GREENHECK
Building Value in Air.

# MODEL G _ _ _ Island Style Canopy Hood

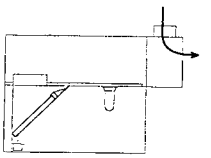
## Options & Accessories

| Type I Island Style Canopy Hoods Options and Accessories | Make-Up Air Style | Single Island (V-Bank) | | Pizza Oven |
|---|---|---|---|---|
| | | Exhaust Only | Face Supply | Exhaust Only |
| | Model | EV | FV | ER |
| Grease Grabber™ Multistage Filtration System | GG-- | Optional | - | Optional |
| Grease-X-Tractor™ Centrifugal Filtration | GX-- | Optional | Optional | Optional |
| Baffle Filter | GH-- | Optional | Optional | Optional |
| High-Velocity Cartridge Filter | GK-- | Optional | Optional | Optional |
| Horizontal Supply Plenum (HSP) | - | Optional | - | Optional |
| Air Curtain Supply Plenums (ASP) | - | Optional | - | Optional |
| Variable Supply Plenums (VSP) | - | Optional | - | Optional |
| Back Supply Plenum (BSP) | - | - | - | Optional |
| Material Options | - | Optional | Optional | - |
| Lighting Options | - | Optional | Optional | Optional |
| Additional Supply Duct Collars | - | Optional | Optional | - |
| Tapered Hood | - | Optional | - | - |
| *Supply Collar Shape Round/Rectangle | - | Optional | Optional | Optional |
| Exhaust Collar Shipping | - | Optional | Optional | Optional |
| Exhaust Collar Shape Round/Rectangle | - | Optional | Optional | Optional |
| Switches | - | Optional | Optional | - |
| Ceiling Enclosures | - | Optional | Optional | Optional |
| Utility Cabinets Hood Mount/Wall Mount | - | Optional | Optional | Optional |
| Backsplash Panels/Sidesplash Panels | - | Optional | Optional | Optional |
| End Skirt | - | Optional | Optional | - |
| Airspace/Filler Panels | - | Optional | Optional | Optional |
| Exhaust Air Balancing Baffles | - | Optional | Optional | - |
| Insulated Supply Plenum | - | - | Optional | - |
| Automatic Fire Damper | - | Optional | Optional | Optional |
| Filter Removal Tool | - | Optional | Optional | - |
| Trim Strips | - | Optional | Optional | - |

*Round supply collars are not available on back supply plenums

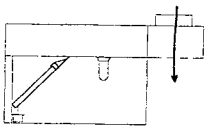
## External Supply Plenums

### Horizontal Supply Plenum - HSP



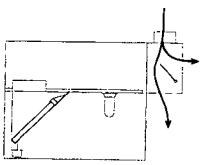
**Horizontal Supply Plenum** has perforated diffusers that distribute the aire evenly in to the air space.

### Air Curtain Supply Plenum - ASP



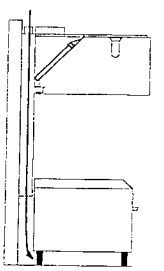
**Air Curtain Supply Plenum** introduces air in a downward pattern that minimizes the mixing with make-up air in the space.

### Variable Supply Plenum - VSP



**Variable Supply Plenum** introduces air either through the face, or the face and air curtain both.

### Back Supply Plenum - BSP



**Back Supply Plenum** introduces air below and behind the cooking equipment.

## Model Designation Guide –Type I Island Canopy Hoods

**GH** **E** **V**

**Greenheck Hood Type**
- GH Baffle Filter
- GX Grease-X-Tractor™
- GG Grease Grabber™
- GK High-Velocity Cartridge Filter

**Make-Up Air Style**
- E Exhaust Only
- F Face Supply

**Configuration**
- V V-Bank Single Island Canopy
- R Pizza Hood

*For hood specifications visit: www.Greenheck.com*

**Code Information**

Greenheck Kitchen Hoods are built in accordance with the following codes, standards, and recommended practices.
- **UL 710**
- **NSF**
- **UL 1046**
- **IMC**
- **NFPA 96**
- **UMC**

c UL us LISTED

NSF

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REFRIGERATOR MANUFACTURER
Turbo air
more durable, efficient, beautiful

1250 Victoria St
Carson, CA 90746
Tel. 310-900-1000
Fax. 310-900-1077
www.turboairinc.com

| | |
|---|---|
| Project : | |
| Model # : | |
| Item # : | Qty : |
| Available W/H : | |
| Approval : | |

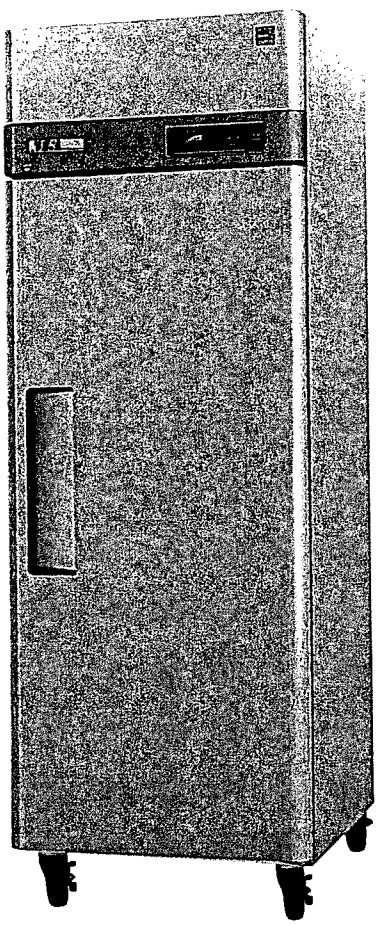
# Soild Door Refrigerator

Reach-In Top Mounts
M3 Series

## Model : M3R19-1

## FEATURES / BENEFITS

- **DIGITAL TEMPERATURE CONTROL SYSTEM**
  Provides precise and constant temperature. This level of precision allows food products to remain fresh over an extended period of time.
- **HIGH-TECH MONITOR**
  The monitor digitally displays the present temperature. You can easily change the temperature by adjusting the thermostat.
- **HOT GAS CONDENSATE SYSTEM**
  Through Turbo Air's creative innovation, the condensate system surfaces have been specially treated to resist corrosion. This not only increases efficiency without the risk of refrigerant leakage from corrosion, but also prevents the overflow of condensate water.
- **REVERSIBLE DOOR HINGE**
- **EFFICIENT REFRIGERATION SYSTEM**
  M3's solid door refrigerators are designed with oversized and balanced (CFC Free R-134A) refrigeration systems. These include efficient evaporators and condensers for faster cooling and greater efficiency.
- **AUTOMATIC EVAPORATOR FAN MOTOR DELAYS**
  Through stopping the evaporator fan when the refrigerator door opens, the circulation of hot, moist air into the refrigerator is prevented. This increases energy efficiency and lengthens the life of the compressor.
- **ADJUSTABLE, HEAVY DUTY, PE(POLYETHYLENE) COATED WIRE SHELVES**
- **STAINLESS STEEL CABINET CONSTRUCTION**
  The Turbo Air M3 refrigerator model boasts a stainless steel exterior (galvanized steel top, bottom and back) and stainless steel interior with AL inside walls and door liners. It guarantees the utmost in cleanliness and long product life. Unlike other companies' products, the sharp corners and edges have been rounded to reduce the risk of injury. The M3 can add a touch of style to the most refined setting.
- **HIGH-DENSITY POLYURETHANE INSULATION**
  The entire cabinet structure and solid doors are foamed-in-place using high density, CFC free polyurethane insulation.
- **ERGONOMICALLY DESIGNED DOORS**
  Customers' fatigue fades away with easy grip handles and doors that open effortlessly. These features along with self-closing doors make this the ultimate choice in customer convenience.
- **MAGNETIC DOOR GASKETS**
  Magnetic door gaskets are of one piece construction, removable without tools for ease of cleaning and replacement.
- **TOP MOUNT COMPRESSOR UNITS**
  The refrigeration systems are designed to ensure that each part is properly sized and balanced to achieve the highest efficiency and performance.



**REFRIGERATOR HOLDS 33°F ~ 38°F FOR THE BEST IN FOOD PRESERVATION**

Intertek Intertek ISO9001:2008 2 YEAR WARRANTY 5 YEAR WARRANTY ENERGY STAR® Qualified

| Model | Swing Door | CU./FT. | #of Shelves | HP | AMPS | Crated Weight (lbs.) | L x D* x H † (inches) |
|---|---|---|---|---|---|---|---|
| M3R19-1 | 1 | 20 | 3 | 1/4 | 4.2 | 194 | 25 1/4 x 31 1/2 x 72 1/8 |

*Depth does not include 1-3/8" for rear condensate enclosure. † Height does not include 5" for caster height.

# Soild Door Refrigerator

Reach-In Top Mounts
M3 Series

## Model : M3R19-1

| ELECTRICAL DATA | |
|---|---|
| Voltage | 115/60/1 |
| Plug Type | NEMA-5-15P |
| Full Load Amperes | 4.2 |
| Compressor HP | 1/4 |
| Feed Wires with Ground | 3 |
| Cord Length ft. | 9 |
| Refrigerant | R-134A |
| **DIMENSIONAL DATA** | |
| # of Doors | 1 |
| # of Racks Accepted | 1 |
| Net Capacity cu. ft. | 20 |
| Ext. Length Overall in. | 25 1/4 (640mm) |
| Ext. Depth Overall in.* | 31 1/2 (800mm) |
| Ext. Height Overall in.† | 72 1/8 (1831mm) |
| Int. Length Overall in. | 21 5/8 (550mm) |
| Int. Depth Overall in. | 27 3/8 (694mm) |
| Int. Height Overall in. | 58 1/4 (1478mm) |
| Gross Weight lbs. | 194 |
| # of Shelves | 3 |
| Shelf Size (LxD) in. | 20 1/2 x 24 3/8 |

Design and specifications subject to change without notice.
Actual shipping weight may differ due to extra packing materials for product protection.
* Depth does not include 1-3/8" for rear condensate enclosure.
† Height does not include 5" for caster height.

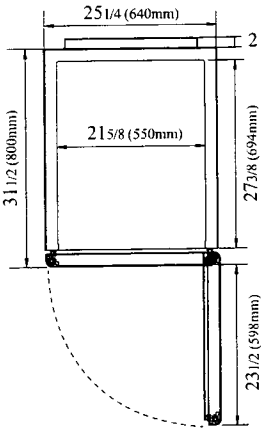
- **WARRANTY :** 2 Year Parts and Labor Warranty
  Additional 3 Year Warranty on Compressor

- INCANDESCENT INTERIOR LIGHTING
- DOOR LOCKS
- SELF-CONTAINED SYSTEM
- 4" SWIVEL CASTERS
- SOLID AND STURDY GRILLE DESIGN

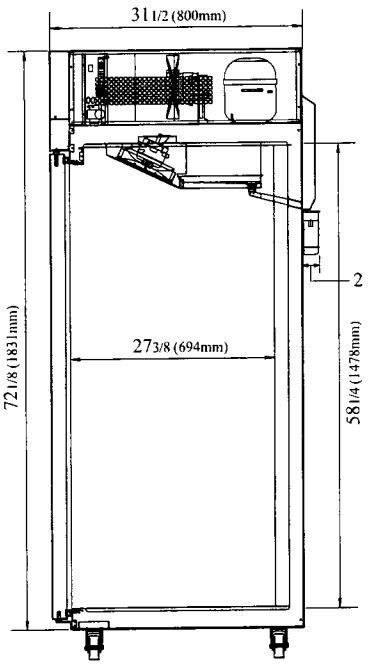
- **OPTIONAL ACCESSORIES :**
  - ☐ 5" Diameter swivel casters
  - ☐ 6" Standard legs
  - ☐ Additional PE coated wire shelves

## PLAN VIEW

(unit : inch)




PLAN VIEW




SIDE VIEW

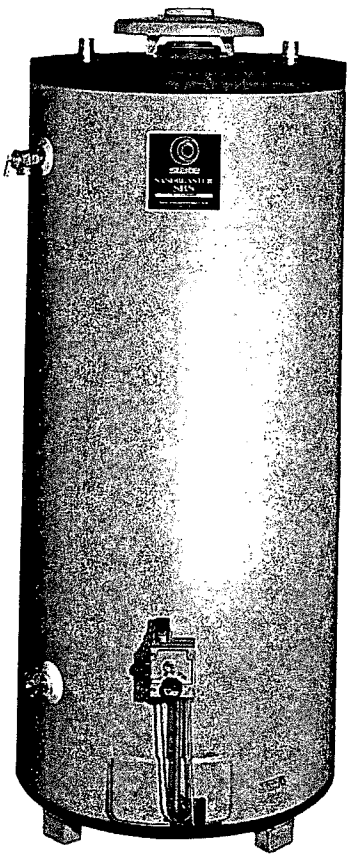
Ver.201307

Intertek Intertek ISO9001:2008 5 YEAR WARRANTY ENERGY STAR® Qualified

- **Turbo Air** : 800-627-0032 ▪ **GK** : 800-500-3519
- **Warranty** : 800-381-7770 ▪ **AC** : 888-900-1002

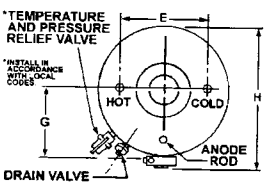
Turbo air GERMAN KNIFE Radiance GREEN WORLD Turbo air

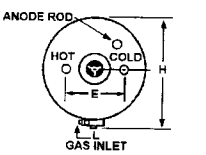
# SANDBLASTER® SBS
## Commercial Gas Water Heaters

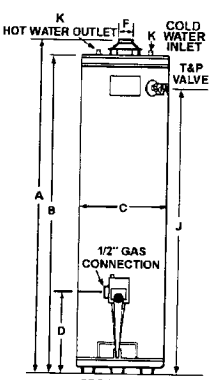


### Sandblaster SBS Light-Duty Series

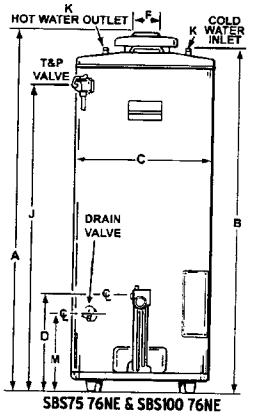
- **Recoveries** – From 60 to 73 GPH, at 100°F Rise.
- **For applications where required first-hour delivery (at 100°F Rise) is 142 gallons or less.**
- **Self-Cleaning Design** – Reduces sediment buildup, saves energy and money, prolongs tank life.
- **Low $NO_x$** – Complies with SCAQMD Rule 1146.2, Southern California and Texas approved.
- **Standing Pilot Ignition System.**
- **Aluminized Steel Multi-Port Burner** – For even heat distribution, maximum efficiency, quiet operation.
- **Foam Insulation** – Reduces heat loss over 2-1/2 times more effectively than standard fiberglass.
- **Factory-Installed Energy Cut-Off** ("ECO").
- **Anode Rod** – protects glasslined tank against electrolytic corrosion.
- **Tank Inspection Port** – (Excludes SBS65 65NE).
- **Maximum Hydrostatic Working Pressure:** 150 psi.
- **3 or 5-Year Tank Warranty** – With no "fine print" excluding sediment buildup.



SBS65 65NE



SBS75 76NE & SBS100 76NE

SBS65 65NE

SBS75 76NE
SBS100 76NE

| Model Number | Gallon Cap. | BTU'S Per Hour Natural or Propane (LP) | First Hour Delivery Gallons 100°F Rise | Recovery, Gallons at Degree F Rise | | | Dimensions in Inches | | | | | | | | | | Gas Conn. | Approx. Shipping Weight (lbs.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 80° | 100° | 140° | A | B | C | D | E | F | G | H | J | K | | |
| SBS65 65NE ✤ | 65 | 65,000[1] | 106 | 75 | 60 | 43 | 65 | 59½ | 24 | 15½ | 8 | 4 | — | 25½ | 54¼ | ¾ | ½" | 215 |
| SBS75 76NE ✤ | 74 | 75,100 | 125 | 91 | 73 | 52 | 61 | 58½ | 26½ | 15 3/16 | 16 | 4 | 14½ | 28½ | 50⅝ | 1 | ½" | 275 |
| SBS100 76NE ✤ | 98 | 75,100 | 142 | 91 | 73 | 52 | 68⅝ | 66½ | 27¾ | 15 3/16 | 16 | 4 | 14½ | 29 11/16 | 57⅜ | 1¼ | ½" | 350 |

When ordering Propane, change "N" to "P" in model number (SBS75 76PE).
[1] Propane rated 55,000 Btu.

✤ All models available in Canada. When ordering, add "CGA" to model number (SBS75 76N CGA).

All Sandblaster SBS Series water heaters are design-certified by CSA International or UL as Automatic Circulating, Automatic Instantaneous, or Automatic Storage water heaters. When used singly or in manifolded multiples with additional heaters or storage tanks, they can provide an independent hot water system. When installed with a mixing valve, they can provide both 140°F general use hot water and 180°F sanitizing hot water simultaneously.

All models over 75,000 Btu input meet or exceed Federal Efficiency Requirements prescribed by the Energy Policy and Conservation Act of 1992 (EPACT) for Commercial Water Heaters. They also meet or exceed the thermal efficiency and/or standby loss requirements of the U.S. Department of Energy and current edition of ASHRAE/ESNA 90.1.

For more information on Sandblaster® contact:
State Water Heaters
500 Tennessee Waltz Parkway, Ashland City, TN 37015
800-365-0024 Toll-free USA
www.statewaterheaters.com

SOLID STATE

SGSS00107 September 2010R

THERMA-STOR®
HEAT RECOVERY WATER HEATER
Environmentally Friendly • Cost Effective • UL Approved

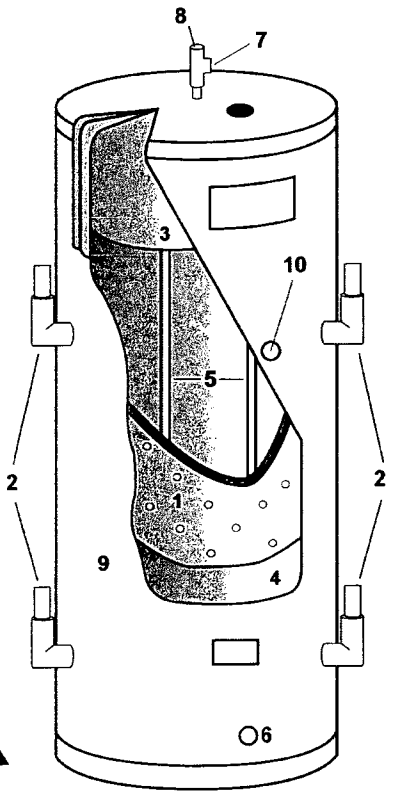
**The Innovative Leader in Heat Recovery Technology**

# Therma-Stor II-2

**TS-224B**
**Revised 6/11**

## Heat Recovery Water Heater Specification Information

c UL us




Therma-Stor plate design, with rapid, free-flowing paths for refrigerant gas, promotes excellent waste heat transfer throughout the tank.



### Unit Specifications

- Tank Dimensions
  Diameter: 28 1/8", Height: 62 1/4"
- Unit Dimensions (with fittings)
  Diameter: 30 3/8", Height: 67", Weight: 380 lbs
- 120 gallon nominal water capacity
- Max heat exchange rating 80,000 BTU/hr
- 150 PSI max operating water pressure
- Rated for 450 psi refrigerant operating water pressure
- R-16 insulation
- Double wall vented protection between refrigerant and water
- Triple leak checked, shipped with $N_2$ holding charge

Part No. 4018910

*Specifications subject to change without notice.*

### Certifications

- UL/cUL® (SA5939)
- ASHRAE 90
- CRN's available upon request

### Construction Specifications

1. Dual-circuit refrigerant heat exchange plate designed for maximum heat transfer with minimum pressure drop.
2. 1-1/8" O.D. refrigerant upper inlets and lower outlets.
3. Industrial glass lined 114-gallon hot water storage tank.
4. 2" foam-in-place urethane insulation (R-16).
5. Dual anode protection against corrosion for extended tank life.
6. 1-1/4" male NPT water inlet.
7. 1-1/4" male NPT water outlet.
8. 150 psi and 210°F pressure/temperature relief valve.
9. Attractive enameled galvanized external wrapper.
10. Mid-tank 3/4" Male NPT connection for recirculating loop return or for aquastat (mid-port).

### Overview

The Therma-Stor II-2 Heat Recovery Water Heater features a dual-circuit heat exchanger encompassing a 114-gallon water tank. Each circuit is compatible with refrigeration loads of up to 10 tons. (refer to chart on the back). Larger refrigeration loads can be accommodated by piping the circuits together or considering the Therma-Stor II-2 High Flow (HF) unit.

### Operation

Therma-Stor II-2 heats water by transferring refrigerant superheat to water. Hot gas leaving the compressor(s) is piped through the refrigeration circuits en route to the condenser(s). The II-2 is compatible with any typical refrigeration system within sizing guidelines (using capillary tube systems with the Therma-Stor is normally not recommended). Plumbing recirculating loop return water to the mid-port allows recirc line losses to be heated with reclaimed heat without affecting overall heating efficiency. Hot water production depends on the evaporator load (capacity), run time of the compressor and water usage (see the Therma-Stor Return On Investment Calculation Form available at www.HeatWaterForFree.com for more information).

### Typical Applications

The Therma-Stor II-2 is ideally suited for heating water in facilities with one or two compressor, mid-sized refrigeration systems. Common installations include:

- Restaurants
- Cafeterias
- Health care facilities
- Walk-in coolers/freezers

## Sizing Guidelines

The Therma-Stor II-2 can accommodate refrigeration loads of up to 10 tons per circuit depending on refrigerant and evaporator temperatures. The individual circuits can be piped together in parallel to accommodate larger loads (see diagrams below)*. Single and dual circuit units are available with larger refrigeration capacities (Therma-Stor II-1 and II-2 HF). Therma-Stor units are not intended as a substitute for air or water cooled condensers. These capacity ratings are based on approximately 15 lb. pressure drop at maximum capacity.

**II-2**

Max. Recommended Capacity (in tons) for Typical Refrigeration Systems

| Refrigerant | Low Temperatures | Medium Temperatures |
|---|---|---|
| R-22 | 8.5 | 10 |
| R-134A | 7 | 8 |
| R-404A, R-502, R-507 | 6 | 7 |

## Water Temperature Control

Incorporating provisions in the refrigerant piping to bypass hot gas around the Therma-Stor directly to the condenser is recommended for large capacity systems. This prevents water from overheating during periods of sustained refrigeration operation with no/low water demand. A typical arrangement incorporates a three-way valve operated by an aquastat that senses water temperature. An alternate arrangement is a water bleed valve that would bleed hot water out of the tank. An aquastat can be mounted on the mid-port if there is no recirculation loop or connected to the water outlet piping to sense water temperature. Refer to diagram A below.

## Supermarket Applications

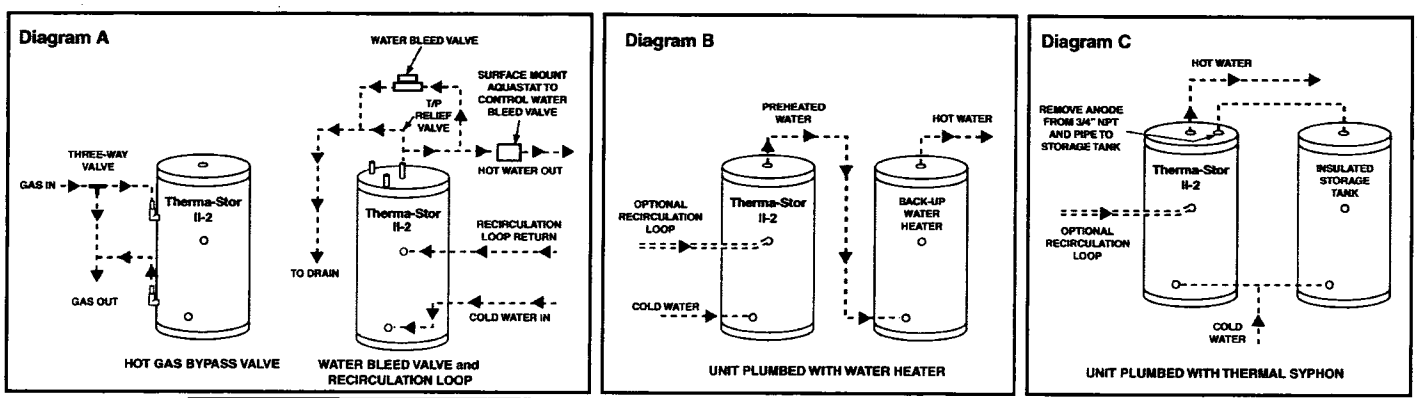
The Therma-Stor II-2 is often plumped in series with a conventional water heater. See diagram B. Consider the III-2 in lieu of the conventional water heater. See the III-2 spec sheet for more information.

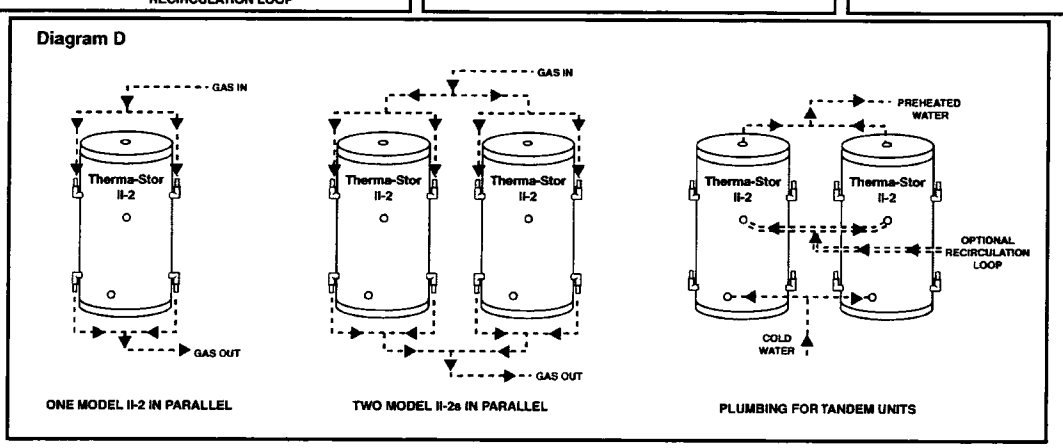
In applications with "batch" cleaning, adding a Therma-Stor TS-120 storage tank is recommended. The TS-120 storage tank can be installed to accommodate thermal-syphoning (circulating without a pump). See diagram C, refer to Therma-Stor 120 spec sheet for more information.

If the Therma-Stor System is installed with a circulating loop, pump the water as slowly as possible and return to the 3/4" NPT mid-port. Do not circulate directly between the water heater and the Therma-Stor unit unless the heater has been deactivated so that it acts as storage only.

The Therma-Stor II-2 can also be installed in parallel to accommodate larger loads. See diagram D.

** Note: When piping both circuits in parallel, the model II-2 requires the refrigerant outlets to be piped together at the bottom of the tank (before being piped vertically).*



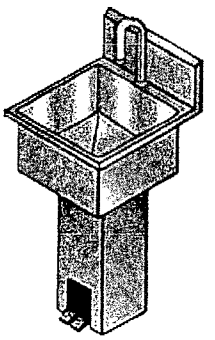



## Wall and Floor Mount Hand Sinks

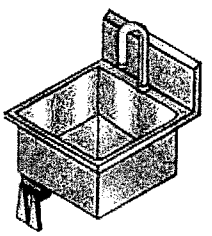
- Choose from 16" x 16" x 10" or 14" x 12" x 10" bowl sizes
- Spec Series 16 Gauge 300 Series Stainless Steel
- Includes knee and foot operated valves, goose neck spouts, and basket drains
- Wall brackets included

## Standard Wall and Floor Mount Sinks

| Model No. | Description | Bowl Size L x W x D (In.) | Bowl Size L x W x D (mm.) | Approx. Weight (Lbs.) | Approx. Weight (Kg.) | Cubic Ft. |
|---|---|---|---|---|---|---|
| FMHS-16 | 16" x 16" Floor Mount Hand Sink | 16 x 16 x 10 | 406 x 406 x 254 | 40 | 18 | 10.0 |
| FMHS-16R | Right Splash | 16 x 16 x 10 | 406 x 406 x 254 | 45 | 20 | 10.0 |
| FMHS-16L | Left Splash | 16 x 16 x 10 | 406 x 406 x 254 | 45 | 20 | 10.0 |
| FMHS-16RL | Right and Left Splash | 16 x 16 x 10 | 406 x 406 x 254 | 50 | 23 | 10.0 |
| | | | | | | |
| FMHS-1412 | 14" x 12" Floor Mount Hand Sink | 14 x 12 x 10 | 356 x 305 x 254 | 30 | 14 | 7.0 |
| FMHS-1412R | Right Splash | 14 x 12 x 10 | 356 x 305 x 254 | 35 | 16 | 7.0 |
| FMHS-1412L | Left Splash | 14 x 12 x 10 | 356 x 305 x 254 | 35 | 16 | 7.0 |
| FMHS-1412RL | Right and Left Splash | 14 x 12 x 10 | 356 x 305 x 254 | 40 | 18 | 7.0 |
| | | | | | | |
| WMHS-16 | 16" x 16" Wall Mount Hand Sink | 16 x 16 x 10 | 406 x 406 x 254 | 30 | 14 | 5.0 |
| WMHS-16R | Right Splash | 16 x 16 x 10 | 406 x 406 x 254 | 35 | 16 | 5.0 |
| WMHS-16L | Left Splash | 16 x 16 x 10 | 406 x 406 x 254 | 35 | 16 | 5.0 |
| WMHS-16RL | Right and Left Splash | 16 x 16 x 10 | 406 x 406 x 254 | 40 | 18 | 5.0 |
| | | | | | | |
| WMHS-1412 | 14" x 12" Wall Mount Hand Sink | 14 x 12 x 10 | 356 x 305 x 254 | 25 | 11 | 4.0 |
| WMHS-1412R | Right Splash | 14 x 12 x 10 | 356 x 305 x 254 | 30 | 14 | 4.0 |
| WMHS-1412L | Left Splash | 14 x 12 x 10 | 356 x 305 x 254 | 30 | 14 | 4.0 |
| WMHS-1412RL | Right and Left Splash | 14 x 12 x 10 | 356 x 305 x 254 | 35 | 16 | 4.0 |



FMHS-16



WMHS-16

KOHLER®

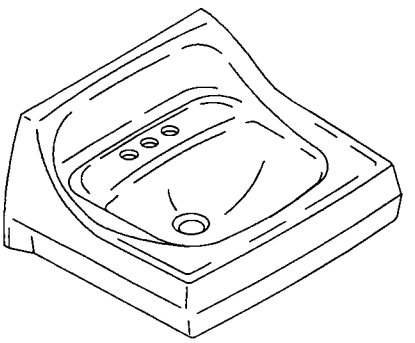
# KINGSTON™

## WALL-MOUNT LAVATORY
# K-2005
## ALSO K-2006, K-2007

**ADA** | **CSA B651** | **OBC**

## Features

- *Vitreous china*
- *Wall-mount*
- *With hanger*
- *With overflow*
- *Drilled for concealed arm carrier*
- *Optional soap dispenser hole on left (-L) or right (-R)*
- *8" (20.3 cm) centers, 4" (10.2 cm), centers or single hole*
- *21-1/4" (54 cm) x 18-1/8" (46 cm)*



## Codes/Standards Applicable

Specified model meets or exceeds the following:

- *ADA*
- *ICC/ANSI A117.1*
- *CSA B651*
- *OBC*
- *ASME A112.19.2/CSA B45.1*

## Colors/Finishes

- 0: White
- Other: Refer to Price Book for additional colors/finishes

### Accessories

- CP: Polished Chrome
- Other: Refer to Price Book for additional colors/finishes

## Specified Model

| Model | Description | Colors/Finishes | |
|---|---|---|---|
| K-2005 | Lavatory with 4" (10.2 cm) centers less soap dispenser hole | ❑ 0 | ❑ Other_____ |
| K-2005-L | Lavatory with 4" (10.2 cm) centers with soap dispenser hole on left | ❑ 0 | ❑ Other_____ |
| K-2005-R | Lavatory with 4" (10.2 cm) centers with soap dispenser hole on right | ❑ 0 | ❑ Other_____ |
| K-2006 | Lavatory with 8" (20.3 cm) centers less soap dispenser hole | ❑ 0 | ❑ Other_____ |
| K-2007 | Lavatory with single hole less soap dispenser hole | ❑ 0 | ❑ Other_____ |
| K-2007-L | Lavatory with single hole with soap dispenser hole on left | ❑ 0 | ❑ Other_____ |
| K-2007-R | Lavatory with single hole with soap dispenser hole on right | ❑ 0 | ❑ Other_____ |
| **Recommended Accessories** | | | |
| K-8998 | P-Trap | ❑ CP | ❑ Other_____ |

## Product Specification

Lavatory shall be made of vitreous china. The lavatory shall be 21-1/4" (54 cm) in length and 18-1/8" (46 cm) in width. Lavatory shall be wall-mounted with hangers. Lavatory shall have 8" (20.3 cm) centers (K-2006), 4" (10.2 cm) centers (K-2005), or single hole (K-2007). Lavatory shall have overflow. Lavatory shall be drilled for concealed arm carrier. Lavatory shall have optional soap dispenser hole left (-L) or right (-R). Lavatory shall be Kohler Model K-_____-_____-_____.



USA/Canada: 1-800-4KOHLER
(1-800-456-4537)
www.kohler.com

# KINGSTON™

## Technical Information

| Fixture*: | |
|---|---|
| Basin area | 16″ (40.6 cm) x 10″ (25.4 cm) |
| Water depth | 3-1/8″ (7.9 cm) |
| Drain hole | 1-3/4″ (4.4 cm) D. |
| * Approximate measurements for comparison only. | |

| Holes | K-2005 | K-2006 | K-2007 |
|---|---|---|---|
| Spout | 1-1/4″ (3.2 cm) D. | 1-3/8″ (3.5 cm) D. | 1-3/8″ (3.5 cm) D. |
| Faucet | 1-1/4″ (3.2 cm) D. | 1-3/8″ (3.5 cm) D. | |
| Soap dispenser | 1-1/4″ (3.2 cm) D. | | 1-1/4″ (3.2 cm) D. |

| Included components: | |
|---|---|
| Hanger | 64839 |

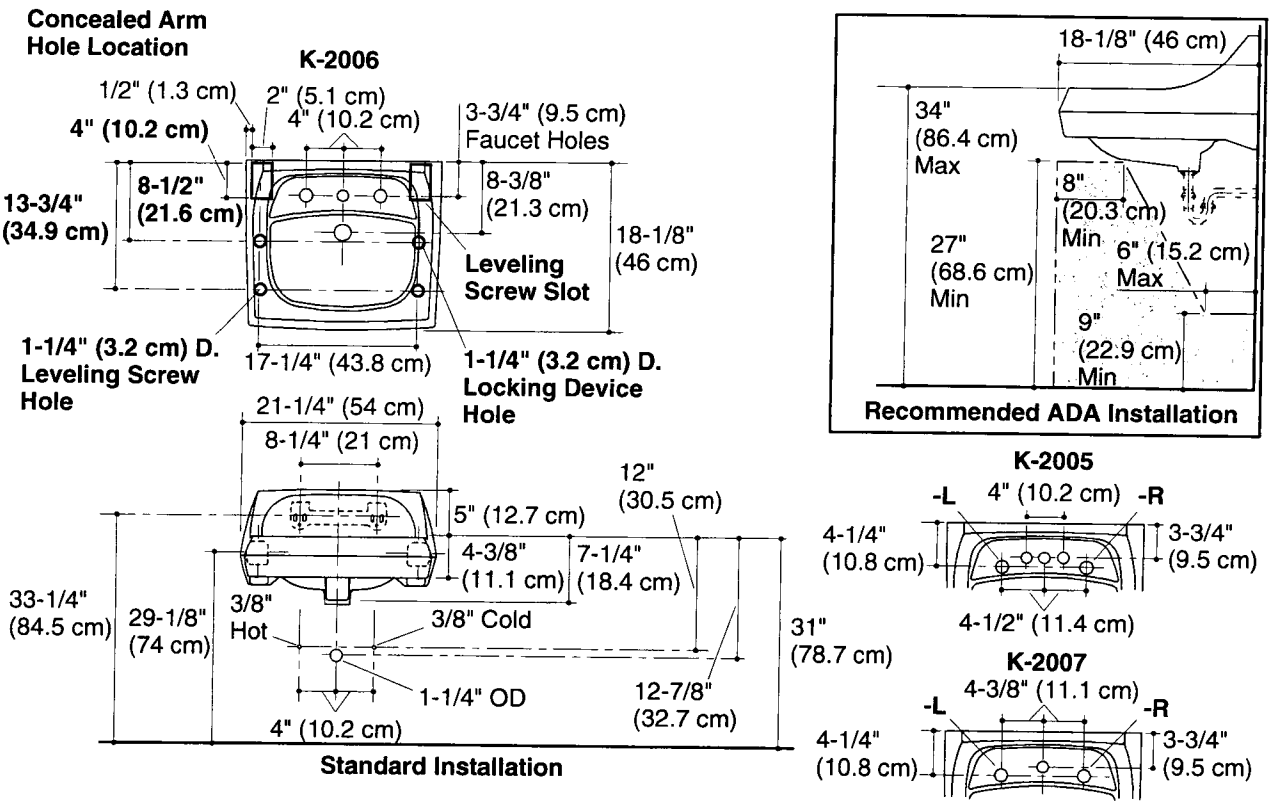
## Installation Notes

Install this product according to the installation guide.

Will comply with **ADA** when installed per Section 606 Lavatories of the Act.

Will comply with **CSA B651** when installed per Clause 4.3.3 of the standard.

Will comply with **OBC** when installed per Clause 3.8.3.11.



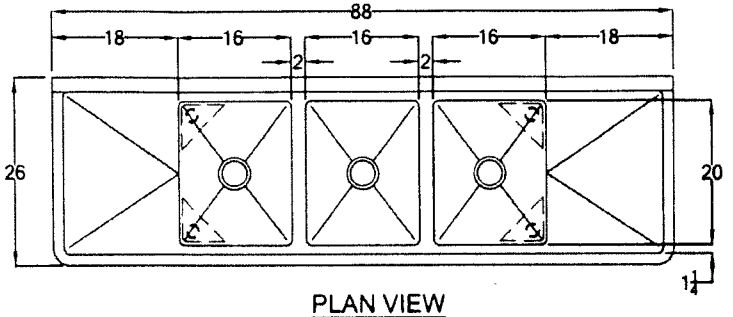

## Product Diagram



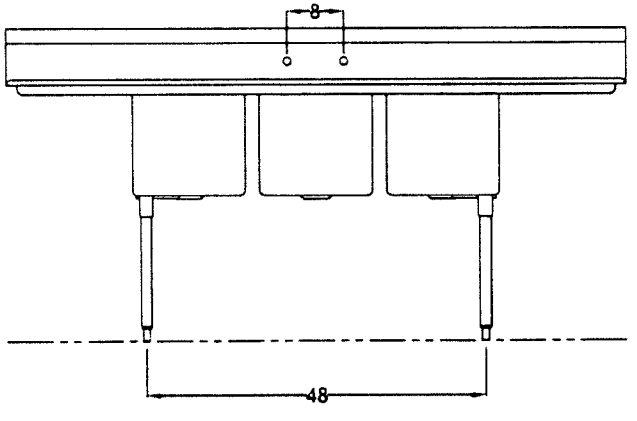
THE BOLD LOOK OF KOHLER®

BREAKROOM

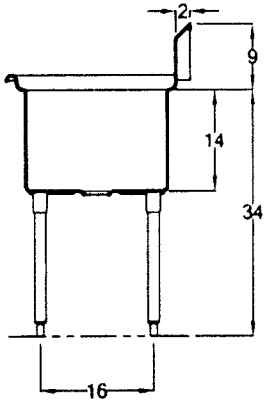
| | |
|---|---|
| 1 | TOP & BACKSPLASH<br>16 GA 300 SERIES SS |
| 2 | (3) SINK BOWLS<br>16 GA 300 SERIES SS |
| 3 | (2) Ø1-1/8" HOLES FOR<br>FAUCET BY OTHERS |
| 4 | SS LEG SOCKETS |
| 5 | Ø1-5/8" OD GALV LEGS |
| 6 | ADJ. PLASTIC BULLET FEET |




PLAN VIEW
Scale: 1/2"=1'-0"




ELEVATION
Scale: 1/2"=1'-0"




SECTION
Scale: 1/2"=1'-0"

DRAWING STATUS ☐ APPROVED ☐ APPROVED AS NOTED ☐ REVISE & RESUBMIT BY:_____ DATE:_____ CAT #:

SPG
STORAGE PRODUCTS GROUP
Universal Stainless
14032 E. 33rd Place
Aurora, Colorado 80011
Phone: 303.375.1511
Fax: 303.375.1626

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All dimensions are in inches.
Tolerances
(Unless Otherwise Specified)
.x ± .1
.xx ± .06
.xxx ± .031
Fractions: ± 1/8
Angles: ± 1°

DWG BY: JTV
DATE: 11/09/10

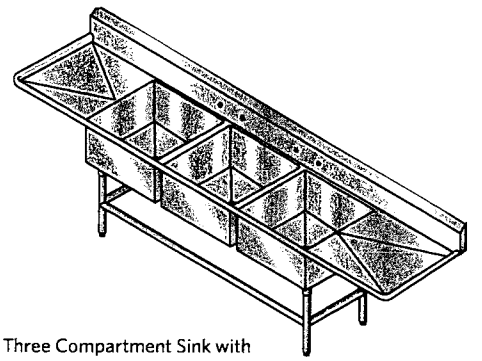
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PROJECT: CATALOG STANDARD
MODEL #: M-3N162014-2D18 | ITEM #: | QTY: SEE P.O.
DESCRIPTION: SK3,16x20x14-2D18
DWG #: M-3N162014-2D18 | REV: | SHEET: 1 OF 1

NSF CSA

BREAKROOM SINK 35

## 3 Compartment Sinks with 2 Drainboards

- Sinks with bowls wider than 20" require two sets of faucet holes

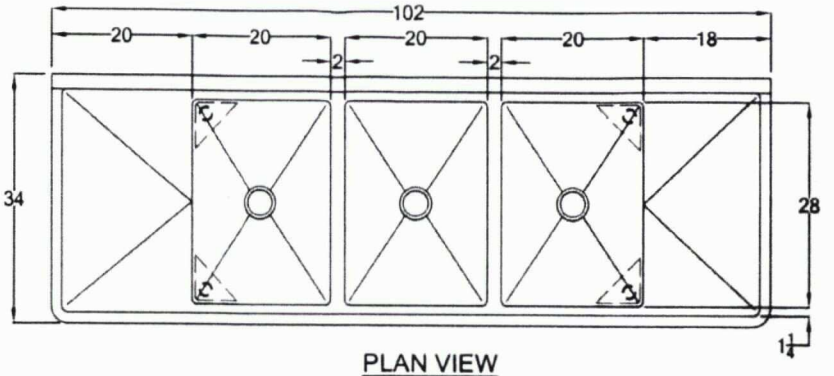


Three Compartment Sink with 2 Drainboards

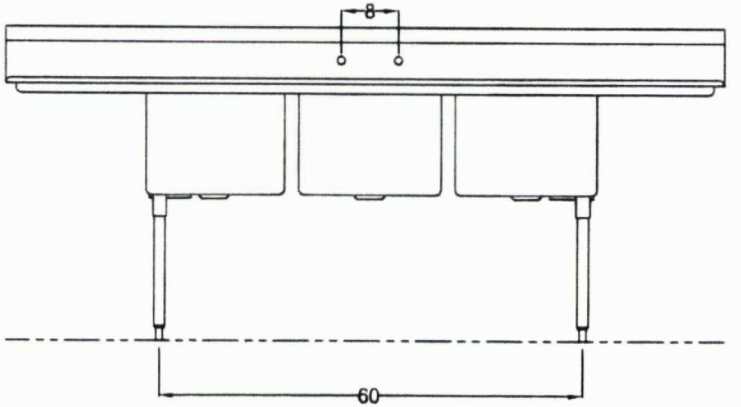
| Standard N Series Model No. | Approx. Weight (Lbs.) | (Kg.) | Cubic Ft. | Spec SL Line Model No. | Approx. Weight (Lbs.) | (Kg.) | Cubic Ft. | Drainboard Length (In.) | (mm.) | Dimensions L x W (In.) | (mm.) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bowl Size 16" x 18" (406 x 457 mm.) L x W** | | | | | | | | | | | |
| 3N1618-2D18 | 121 | 55 | 38 | 3SL1618-2D18 | 139 | 63 | 40 | 18 | 457 | 88 x 23 1/2 | 2235 x 597 |
| 3N1618-2D24 | 128 | 58 | 43 | 3SL1618-2D24 | 147 | 67 | 46 | 24 | 610 | 100 x 23 1/2 | 2540 x 597 |
| **Bowl Size 16" x 20" (406 x 508 mm.) L x W** | | | | | | | | | | | |
| 3N1620-2D18 | 125 | 57 | 38 | 3SL1620-2D18 | 142 | 65 | 40 | 18 | 457 | 88 x 25 1/2 | 2235 x 648 |
| 3N1620-2D24 | 132 | 60 | 43 | 3SL1620-2D24 | 151 | 69 | 46 | 24 | 610 | 100 x 25 1/2 | 2540 x 648 |
| **Bowl Size 18" x 18" (457 x 457 mm.) L x W** | | | | | | | | | | | |
| 3N18-2D18 | 127 | 58 | 40 | 3SL18-2D18 | 146 | 66 | 43 | 18 | 457 | 94 x 23 1/2 | 2388 x 597 |
| 3N18-2D24 | 134 | 61 | 46 | 3SL18-2D24 | 155 | 70 | 49 | 24 | 610 | 106 x 23 1/2 | 2743 x 597 |
| **Bowl Size 18" x 24" (457 x 610 mm.) L x W** | | | | | | | | | | | |
| 3N1824-2D18 | 172 | 78 | 49 | 3SL1824-2D18 | 196 | 89 | 53 | 18 | 457 | 94 x 29 1/2 | 2388 x 749 |
| 3N1824-2D24 | 180 | 82 | 56 | 3SL1824-2D24 | 207 | 94 | 61 | 24 | 610 | 106 x 29 1/2 | 2743 x 749 |
| 3N1824-2D30 | 200 | 91 | 61 | 3SL1824-2D30 | 217 | 99 | 66 | 30 | 762 | 118 x 29 1/2 | 2997 x 749 |
| **Bowl Size 20" x 20" (508 x 508 mm.) L x W** | | | | | | | | | | | |
| 3N20-2D18 | 180 | 82 | 55 | 3SL20-2D18 | 204 | 93 | 60 | 18 | 457 | 100 x 25 1/2 | 2540 x 749 |
| 3N20-2D24 | 191 | 87 | 62 | 3SL20-2D24 | 220 | 100 | 69 | 24 | 610 | 112 x 25 1/2 | 2854 x 749 |
| 3N20-2D30 | 215 | 98 | 69 | 3SL20-2D30 | 230 | 105 | 76 | 30 | 762 | 124 x 25 1/2 | 3150 x 749 |
| **Bowl Size 24" x 24" (610 x 610 mm.) L x W** | | | | | | | | | | | |
| 3N24-2D24 | 206 | 94 | 64 | 3SL24-2D24 | 239 | 109 | 69 | 24 | 610 | 124 x 29 1/2 | 3150 x 749 |
| 3N24-2D30 | 226 | 103 | 71 | 3SL24-2D30 | 249 | 113 | 76 | 30 | 762 | 136 x 29 1/2 | 3454 x 749 |
| **Bowl Size 20" x 28" (508 x 711 mm.) L x W** | | | | | | | | | | | |
| 3N2028-2D20 | 186 | 85 | 61 | 3SL2028-2D20 | 219 | 100 | 69 | 20 | 508 | 104 x 33 1/2 | 2642 x 851 |
| 3N2028-2D24 | 206 | 94 | 68 | 3SL2028-2D24 | 229 | 104 | 77 | 24 | 610 | 112 x 33 1/2 | 2946 x 851 |
| 3N2028-2D30 | 225 | 102 | 75 | 3SL2028-2D30 | 239 | 108 | 84 | 30 | 762 | 124 x 33 1/2 | 3251 x 851 |
| **Bowl Size 24" x 30" (610 x 762 mm.) L x W** | | | | | | | | | | | |
| 3N2430-2D24 | 244 | 111 | 76 | 3SL2430-2D24 | 273 | 124 | 82 | 24 | 610 | 124 x 35 1/2 | 3150 x 902 |
| 3N2430-2D30 | 254 | 115 | 84 | 3SL2430-2D30 | 283 | 129 | 90 | 30 | 762 | 136 x 35 1/2 | 3454 x 902 |
| **Bowl Size 30" x 30" (762 x 762 mm.) L x W** | | | | | | | | | | | |
| 3N30-2D30 | 285 | 130 | 94 | — | — | — | — | 30 | 762 | 154 x 35 1/2 | 3912 x 902 |

PRODUCE ROOM

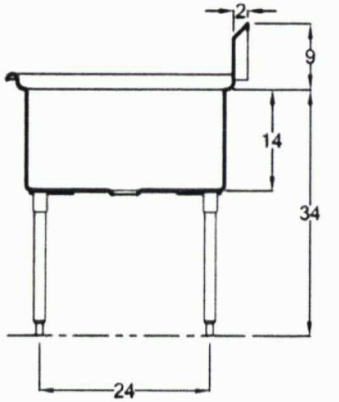
| | |
|---|---|
| 1 | TOP & BACKSPLASH<br>16 GA 300 SERIES SS |
| 2 | (3) SINK BOWLS<br>16 GA 300 SERIES SS |
| 3 | (2) Ø1-1/8" HOLES FOR<br>FAUCET BY OTHERS |
| 4 | SS LEG SOCKETS |
| 5 | Ø1-5/8" OD GALV LEGS |
| 6 | ADJ. PLASTIC BULLET FEET |




PLAN VIEW
Scale: 1/2"=1'-0"




ELEVATION
Scale: 1/2"=1'-0"




SECTION
Scale: 1/2"=1'-0"

DRAWING STATUS ☐ APPROVED ☐ APPROVED AS NOTED ☐ REVISE & RESUBMIT BY:_____ DATE:_____ CAT #:

SPG
STORAGE PRODUCTS GROUP
Universal Stainless
14002 E. 33rd Place
Aurora, Colorado 80011
Phone: 303.375.1511
Fax: 303.375.1626

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Tolerances
(Unless Otherwise Specified)
.x ± .1
.xx ± .06
.xxx ± .031
Fractions: ± 1/8
Angles: ± 1°

DWG BY: JTV
DATE: 11/09/10

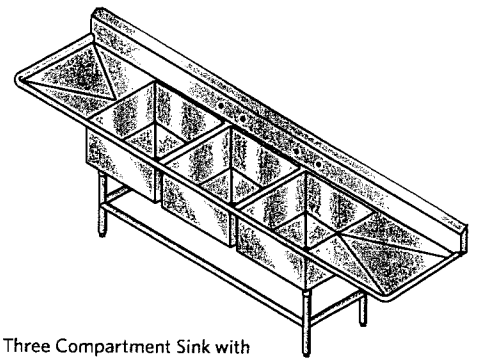
CUSTOMER:
PROJECT: CATALOG STANDARD
MODEL #: M-3N202814-2D20 | ITEM #: | QTY: SEE P.O.
DESCRIPTION: SK3,20x28x14-2D20
DWG #: M-3N202814-2D20 | REV: | SHEET: 1 OF 1

NSF CSA

PRODUCE SINK 36

## 3 Compartment Sinks with 2 Drainboards

- Sinks with bowls wider than 20" require two sets of faucet holes



Three Compartment Sink with 2 Drainboards

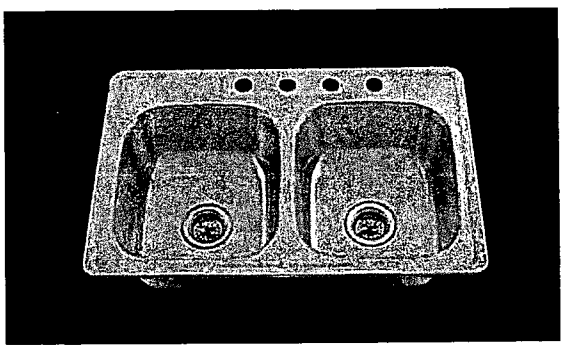
| Standard N Series Model No. | Approx. Weight (Lbs.) | (Kg.) | Cubic Ft. | Spec SL Line Model No. | Approx. Weight (Lbs.) | (Kg.) | Cubic Ft. | Drainboard Length (In.) | (mm.) | Dimensions L x W (In.) | (mm.) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bowl Size 16" x 18" (406 x 457 mm.) L x W** | | | | | | | | | | | |
| 3N1618-2D18 | 121 | 55 | 38 | 3SL1618-2D18 | 139 | 63 | 40 | 18 | 457 | 88 x 23 1/2 | 2235 x 597 |
| 3N1618-2D24 | 128 | 58 | 43 | 3SL1618-2D24 | 147 | 67 | 46 | 24 | 610 | 100 x 23 1/2 | 2540 x 597 |
| **Bowl Size 16" x 20" (406 x 508 mm.) L x W** | | | | | | | | | | | |
| 3N1620-2D18 | 125 | 57 | 38 | 3SL1620-2D18 | 142 | 65 | 40 | 18 | 457 | 88 x 25 1/2 | 2235 x 648 |
| 3N1620-2D24 | 132 | 60 | 43 | 3SL1620-2D24 | 151 | 69 | 46 | 24 | 610 | 100 x 25 1/2 | 2540 x 648 |
| **Bowl Size 18" x 18" (457 x 457 mm.) L x W** | | | | | | | | | | | |
| 3N18-2D18 | 127 | 58 | 40 | 3SL18-2D18 | 146 | 66 | 43 | 18 | 457 | 94 x 23 1/2 | 2388 x 597 |
| 3N18-2D24 | 134 | 61 | 46 | 3SL18-2D24 | 155 | 70 | 49 | 24 | 610 | 106 x 23 1/2 | 2743 x 597 |
| **Bowl Size 18" x 24" (457 x 610 mm.) L x W** | | | | | | | | | | | |
| 3N1824-2D18 | 172 | 78 | 49 | 3SL1824-2D18 | 196 | 89 | 53 | 18 | 457 | 94 x 29 1/2 | 2388 x 749 |
| 3N1824-2D24 | 180 | 82 | 56 | 3SL1824-2D24 | 207 | 94 | 61 | 24 | 610 | 106 x 29 1/2 | 2743 x 749 |
| 3N1824-2D30 | 200 | 91 | 61 | 3SL1824-2D30 | 217 | 99 | 66 | 30 | 762 | 118 x 29 1/2 | 2997 x 749 |
| **Bowl Size 20" x 20" (508 x 508 mm.) L x W** | | | | | | | | | | | |
| 3N20-2D18 | 180 | 82 | 55 | 3SL20-2D18 | 204 | 93 | 60 | 18 | 457 | 100 x 25 1/2 | 2540 x 749 |
| 3N20-2D24 | 191 | 87 | 62 | 3SL20-2D24 | 220 | 100 | 69 | 24 | 610 | 112 x 25 1/2 | 2854 x 749 |
| 3N20-2D30 | 215 | 98 | 69 | 3SL20-2D30 | 230 | 105 | 76 | 30 | 762 | 124 x 25 1/2 | 3150 x 749 |
| **Bowl Size 24" x 24" (610 x 610 mm.) L x W** | | | | | | | | | | | |
| 3N24-2D24 | 206 | 94 | 64 | 3SL24-2D24 | 239 | 109 | 69 | 24 | 610 | 124 x 29 1/2 | 3150 x 749 |
| 3N24-2D30 | 226 | 103 | 71 | 3SL24-2D30 | 249 | 113 | 76 | 30 | 762 | 136 x 29 1/2 | 3454 x 749 |
| **Bowl Size 20" x 28" (508 x 711 mm.) L x W** | | | | | | | | | | | |
| 3N2028-2D20 | 186 | 85 | 61 | 3SL2028-2D20 | 219 | 100 | 69 | 20 | 508 | 104 x 33 1/2 | 2642 x 851 |
| 3N2028-2D24 | 206 | 94 | 68 | 3SL2028-2D24 | 229 | 104 | 77 | 24 | 610 | 112 x 33 1/2 | 2946 x 851 |
| 3N2028-2D30 | 225 | 102 | 75 | 3SL2028-2D30 | 239 | 108 | 84 | 30 | 762 | 124 x 33 1/2 | 3251 x 851 |
| **Bowl Size 24" x 30" (610 x 762 mm.) L x W** | | | | | | | | | | | |
| 3N2430-2D24 | 244 | 111 | 76 | 3SL2430-2D24 | 273 | 124 | 82 | 24 | 610 | 124 x 35 1/2 | 3150 x 902 |
| 3N2430-2D30 | 254 | 115 | 84 | 3SL2430-2D30 | 283 | 129 | 90 | 30 | 762 | 136 x 35 1/2 | 3454 x 902 |
| **Bowl Size 30" x 30" (762 x 762 mm.) L x W** | | | | | | | | | | | |
| 3N30-2D30 | 285 | 130 | 94 | — | — | — | — | 30 | 762 | 154 x 35 1/2 | 3912 x 902 |

# PFT3322 Series
PFT332283
# Stainless Steel Sinks

PROFLO®

## Product Features

- Stainless steel double bowl sink
- Self-rimming
- Sink clips included
- Available with 3 or 4 faucet holes
- 20 or 22 gauge
- Overall Size 33" x 22"
- Bowl Size 14" x 16"
- Bowl depth 6", 7" or 8"
- Drain diameter 3 1/2"
- Minimum cabinet size 36"
- Under spray coating and pads for sound deadening and insulation
- 6" bowls are ADA compliant when installed to ADA guidelines



PFT332264

## Model Numbers

| | |
|---|---|
| *PFT332263* | 33X22 3H 6.0 22 GA 2B SS SINK ADA compliant |
| *PFT332264* | 33X22 4H 6.0 22 GA 2B SS SINK ADA compliant |
| *PFT332273* | 33X22 3H 7.0 20 GA 2B SS SINK |
| *PFT332274* | 33X22 4H 7.0 20 GA 2B SS SINK |
| *PFT332283* | 33X22 3H 8.0 20 GA 2B SS SINK |
| *PFT332284* | 33X22 4H 8.0 20 GA 2B SS SINK |

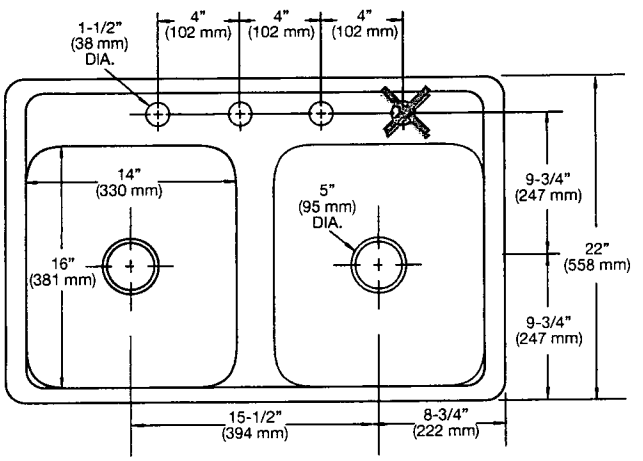
| MODEL | DEPTH "A" | |
|---|---|---|
| | IN | MM |
| PFT33226 | 6" | 152 mm |
| PFT33227 | 7" | 178 mm |
| PFT33228 | 8" | 203 mm |

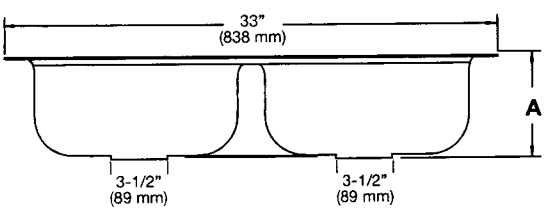
## Warranty and Codes

This PROFLO stainless steel sink carries a 2- year limited warranty. In an effort to continually improve our products, we will make design changes from time to time. We reserve the right to ship newly designed product to fill any order unless it is agreed in writing to do otherwise.

These products meet or exceed ASME/ANSI A112.19.3m. (excluding PFT332283 & PFT332284)

## Product Specifications




* All measurements are nominal. Please verify before actual installation.

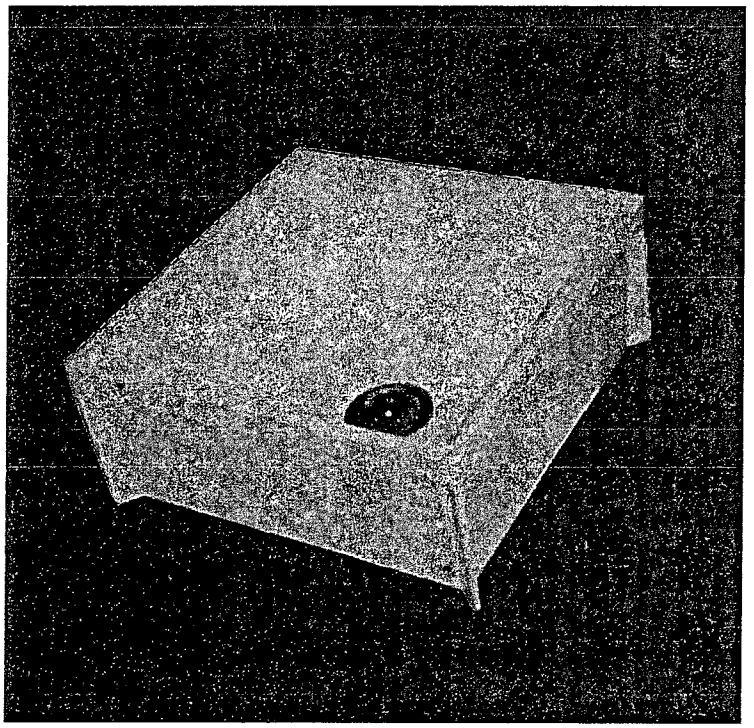
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# MOLDED-STONE® MOP SERVICE BASIN

# MSB 2424
# MSB 3624

***Molded-Stone® Mop Service Basin***



## NOTES

## OPTIONS

- *Service Faucet (830-AA): Chrome plated with vacuum breaker, integral stops, adjustable wall brace, pail hook and ¾" hose thread on spout.*
- *Hose and Hose Bracket (832-AA)*
- *Mop Hanger (889-CC)*
- *Alternate Strainer (1453-BB) - For residential use (EFS-3624 and EFS-2424)*
- *3" Quick Drain Connector (QDC-3XH): Neoprene connecting gasket suitable for attaching extra heavy cast iron soil pipe and Schedule 40 steel pipe to the drain body. Neoprene connecting gasket (QDC-3SN) suitable for attaching hubless cast iron pipe (no hub, nominal O.D. of 3.31") and service weight cast iron soil pipe (nominal O.D. of 3.38") to the drain body.*
- *Silicone Sealant (833-AA)*
- *Vinyl Bumperguard (E-77-AA)*
- *Stainless Steel Bumperguard (E-88-AA)*
- *Stainles Steel Wall Guard (MSG2424, MSG2828, MG3232, MSG3636, and MSG3624)*

## FEATURES

- ***MSB 2424***

*The MSB 2424 shall have overall outside dimensions of 24" x 24" x 10". The molding shall be done in matched metal dies under heat and pressure resulting in a one-piece homogeneous product. The unit shall have 10" high walls with not less than 1" wide.*

*The stainless steel drain body is designed to provide for a caulk connection or QDC-3 joint to a 3" drain pipe. A combination dome strainer and lint basket made from stainless steel shall be included with factory installed stainless steel drain body for caulked joint to accept a 3" pipe.*

- ***MSB 3624***

*The MSB 3624 shall have overall outside dimensions of 36" x 24" x 10". The molding shall be done in matched metal dies under heat and pressure resulting in a one-piece homogeneous product. The unit shall have 10" high walls with not less than 1" wide shoulders and an integrally molded shelf 10 ⅝" wide where indicated.*

*The stainless steel drain body is designed to provide for a caulk connection or QDC-3 joint to a 3" drain pipe. A combination dome strainer and lint basket made from stainless steel shall be included with factory installed stainless steel drain body for caulked joint to accept a 3" pipe.*

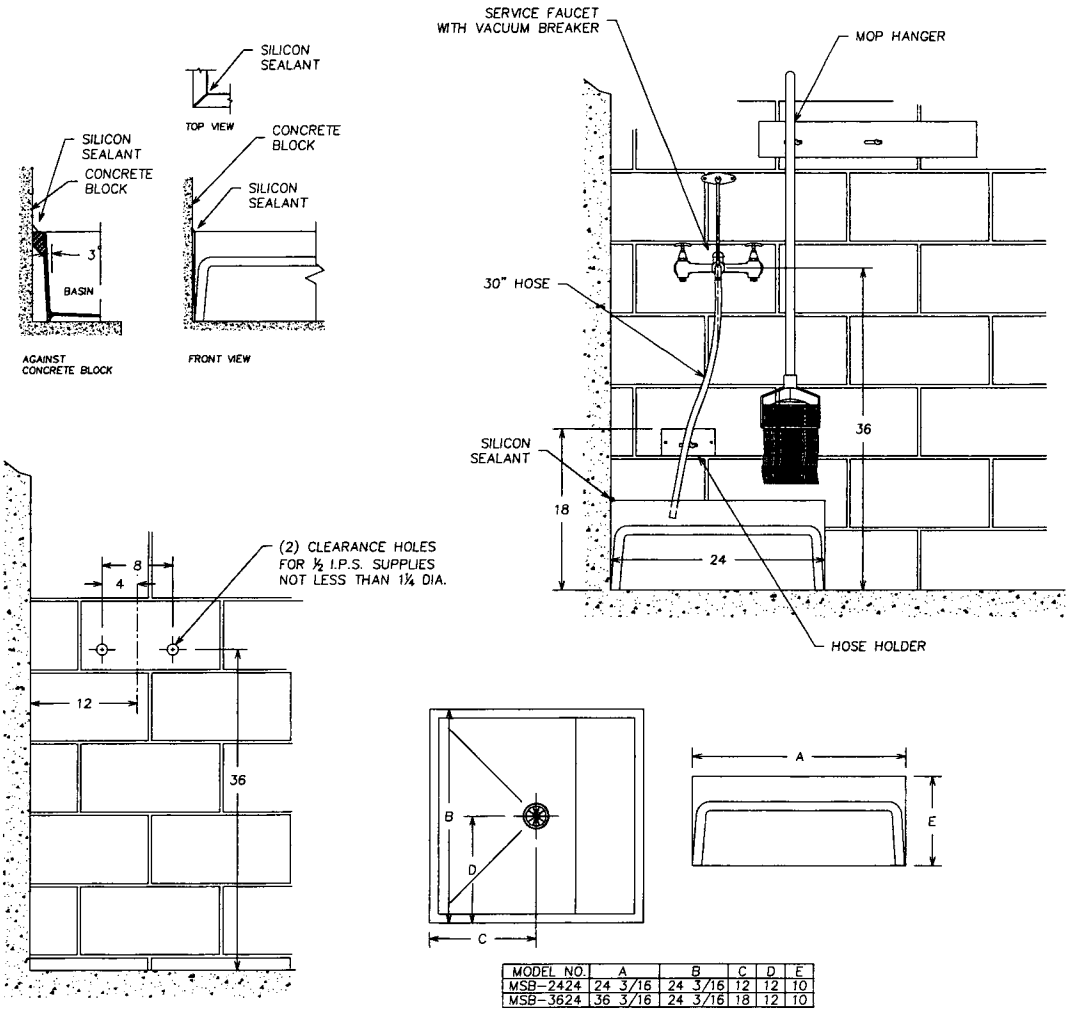
FIAT PRODUCTS®
A CRANE PLUMBING COMP ANY

CR/PL© 04/03 Printed in U.S.A.

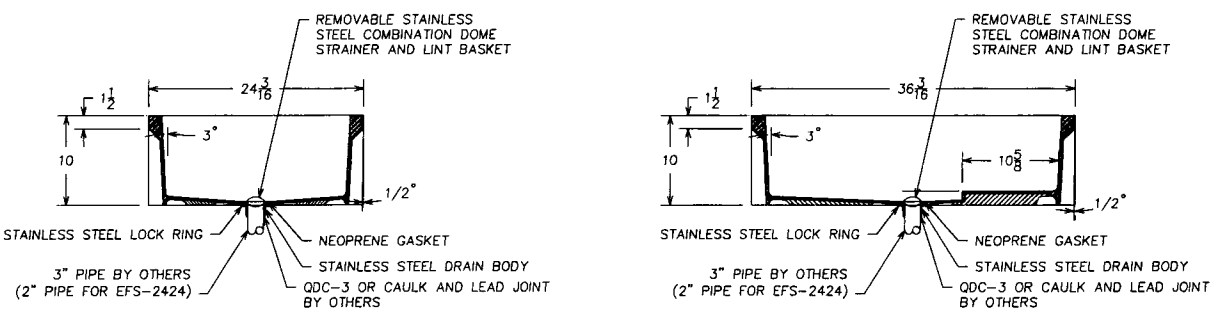
# MOLDED-STONE® MOP SERVICE BASIN

# MSB 2424
# MSB 3624

*Molded-Stone® Mop Service Basin*




| MODEL NO. | A | B | C | D | E |
|---|---|---|---|---|---|
| MSB-2424 | 24 3/16 | 24 3/16 | 12 | 12 | 10 |
| MSB-3624 | 36 3/16 | 24 3/16 | 18 | 12 | 10 |




FIAT PRODUCTS®
A CRANE PLUMBING COMP ANY

**IMPORTANT:** Roughing-in dimensions may vary ½" and are subject to change or cancellation without prior notice.

CR/PL© 04/03 Printed in U.S.A

KOHLER®

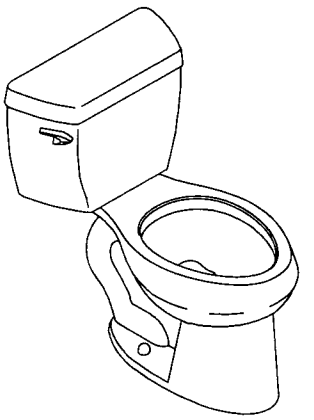
HIGHLINE®

# PRESSURE LITE® 1.0 TOILET
# K-3519

ADA | CSA B651 | OBC

## Features

- *Vitreous china*
- *Elongated bowl*
- *Equipped with Sloan FLUSHMATE® – Sloan® Valve Company*
- *Polished chrome trip lever*
- *Less seat and supply*
- *12″ (305 mm) rough-in*
- *1.0 gpf (3.8 lpf)*
- *2-1/4″ (57 mm) glazed trapway*
- *11-1/2″ (292 mm) x 9-1/2″ (241 mm) water area*
- *30-1/8″ (765 mm) x 21-1/4″ (540 mm) x 31-1/4″ (794 mm)*



## Codes/Standards Applicable

Specified model meets or exceeds the following:

- *ADA*
- *ICC/ANSI A117.1*
- *CSA B651*
- *OBC*
- *ASME A112.19.2/CSA B45.1*
- *EPA WaterSense®*

## Colors/Finishes

- 0: White
- Other: Refer to Price Book for additional colors/finishes

### Accessories

- CP: Polished Chrome
- PB: Polished Brass
- Other: Refer to Price Book for additional colors/finishes

## Specified Model

| Model | Description | Trip Lever | Colors/Finishes | |
|---|---|---|---|---|
| K-3519 | Pressure-Lite 1.0 toilet | left-hand | ❑ 0 | ❑ Other_____ |
| K-3519-RA | Pressure-Lite 1.0 toilet | right-hand | ❑ 0 | ❑ Other_____ |
| K-3519-T | Pressure-Lite 1.0 toilet with tank cover locks | left-hand | ❑ 0 | ❑ Other_____ |
| K-3519-TR | Pressure-Lite 1.0 toilet with tank cover locks | right-hand | ❑ 0 | ❑ Other_____ |

| Recommended Accessories | | | | | |
|---|---|---|---|---|---|
| K-4650 | Lustra™ elongated open-front toilet seat — for Accessibility compliance | ❑ 0 | | | ❑ Other_____ |

## Product Specification

The elongated bowl toilet shall be made of vitreous china. Toilet shall be 30-1/8″ (765 mm) in length, 21-1/4″ (540 mm) in width, and 31-1/4″ (794 mm) in height with a 11-1/2″ (292 mm) x 9-1/2″ (241 mm) water area. Toilet shall be 12″ (305 mm) rough-in. Toilet shall be 2-1/4″ (57 mm) glazed trapway. Toilet shall be less seat and supply. Toilet shall have a 1.0 gal (4.0 L) per flush. Toilet shall be equipped with Sloan Flushmate - Sloan Valve Company. Toilet shall include a polished chrome trip lever. Toilet shall be Kohler Model K-3519-____ or K-3519-____-____.



USA/Canada: 1-800-4KOHLER
(1-800-456-4537)
www.kohler.com

# HIGHLINE®

| Recommended Accessories | | | | | |
|---|---|---|---|---|---|
| K-4664 | Brevia™ seat with cover | ❑ 0 | | | ❑ Other_____ |
| K-7637 | Angle supply with stop – 3/8″ NPT | | ❑ CP | ❑ PB | ❑ Other_____ |

## Technical Information

| Fixture: | |
|---|---|
| Elongated bowl toilet | Two-piece, elongated |
| Water per flush | 1.0 gpf (4.0 lpf) |
| Passageway | 2-1/4″ (57 mm) |
| Water area | 11-1/2″ (292 mm) x 9-1/2″ (241 mm) |
| Water depth from rim | 5-3/4″ (146 mm) |
| Seat post hole centers | 5-1/2″ (140 mm) |
| Minimum static pressure required | 35 psi (241 kPa) |
| Maximum static pressure | 80 psi (551.6 kPa) |

| Included components: | |
|---|---|
| Bowl | K-4304 |
| Tank | K-4484 |
| Tank cover | 1036375 |
| Trip lever | K-9481 |

## Installation Notes

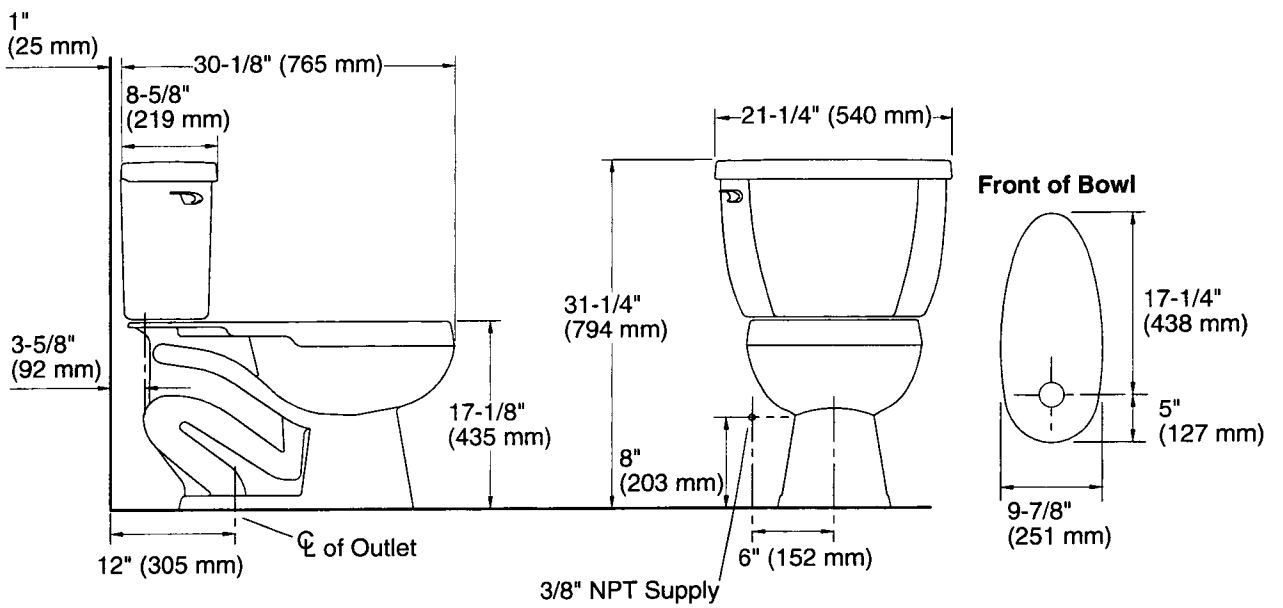
Install this product according to the installation guide.

For back-to-back installations, the toilet shall be connected to the vertical stack using one of the three following fittings: double fixture fitting, double combination wye and 1/8 bends, or double wye and 1/8 bends.

Will comply with the American Disabilities Act **(ADA)** when installed per the requirements of the Accessibility Guidelines, Section 604 Water Closets, of the Act. The Model Plumbing Codes require the installation of elongated open-front toilet seats in public bathrooms.

Will comply with **CSA B651** when installed per Clause 4.3.6 of the standard.

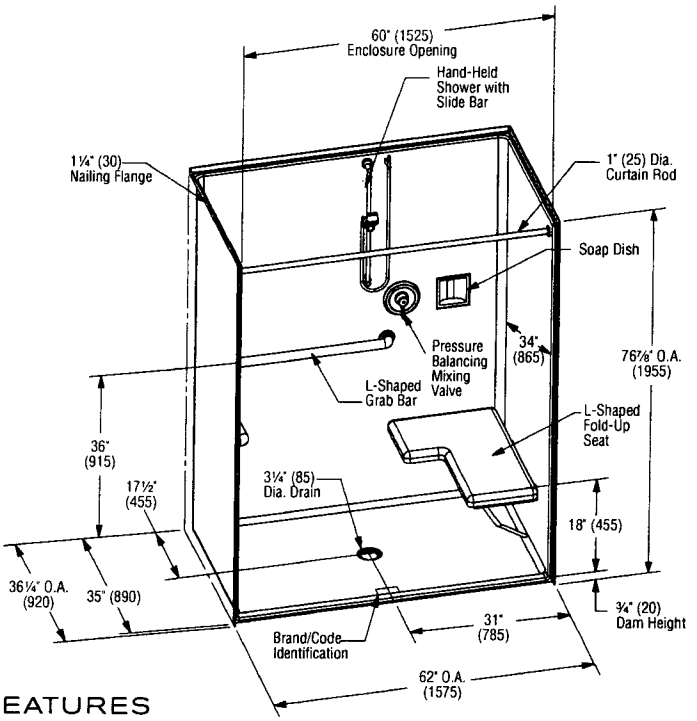
Will comply with **OBC** when installed per Clause 3.8.3.8 and 3.8.3.9.




## Product Diagram



THE BOLD LOOK OF KOHLER®




# 1603BFSC

Fax on Demand #6028

Interior: 60 x 34 x 74 ⅞ (1525 x 865 x 1900)
Exterior: 62 x 36 ¼ x 76 ⅞ (1575 x 920 x 1955)

ADA/ANSI compliant when fully equipped and installed according to guidelines.

## FEATURES

Dimensions: inches (mm)

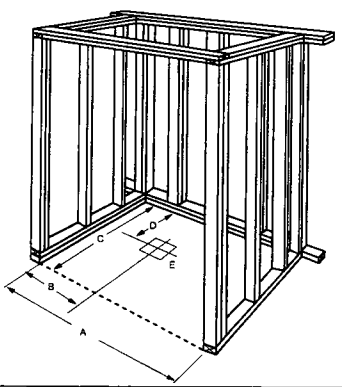
| Model # | Material | Wall Finish | Pieces | Drain | Dam | Net Wt lbs (kg) | Pkg Wt lbs (kg) |
|---|---|---|---|---|---|---|---|
| 1603BFSC | Gelcoat | Smooth | 1 | Center | ¾" (20mm) Skirt, NO interior threshold | 160 (72) | 170 (77) |

## OPTIONS

| Color | GRAB BAR | SEAT | ACCESSORIES |
|---|---|---|---|
| Premium, Special | Straight, L-shaped, Horizontal L-shaped, U-shaped | L-shaped Fold-up (choice of cushioned, teak, phenolic) | Handheld Shower Assembly, Mixing Valve, Drain, Shower Curtain, Curtain Rod, Soap Dish |

## FRAMING DIMENSIONS

Alcove




**LEGEND:**

A = Overall Width
B = Rough Center
C = Overall Depth
D = Rough-in

| Type | A | B | C | D | E: BOX OUT |
|---|---|---|---|---|---|
| Alcove | 62 (1575) | 31 (785) | 36 ¼ (920) | 17 ½ (445) | 6 x 6 (150 x 150) |

SPECIFICATION SUBMITTAL

## Highlights

- 3 Function Hand Shower
- Includes Back Flow Prevention System
- 60" Metal Hose with Matching Finish

# 16 Series

### Hand-Held Shower

Valve Not Included
Rated at 2.5 GPM

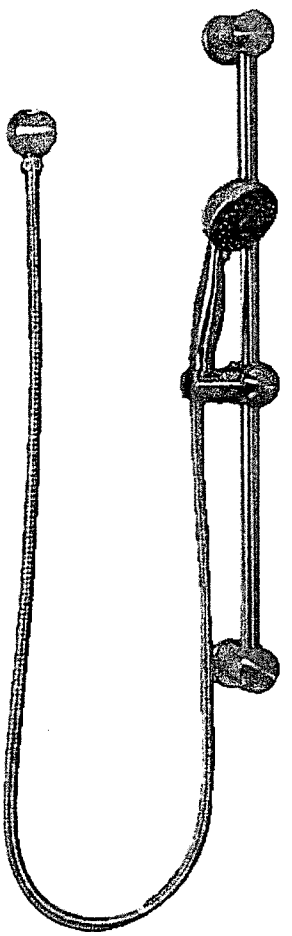
## Code Compliance

Price Pfister products are designed and manufactured in compliance with the following standards and codes:

- IAPMO certified
- ASME A112.18.1
- CSA B125 certified
- ANSI A117.1 (Lever handles only)

| Finishes | 016-300C | 016-300E | 016-300K | 016-300U | 016-300Y | 016-300Z |
|---|---|---|---|---|---|---|
| Rustic Bronze | | | | X | | |
| Tuscan Bronze | | | | | X | |
| Rustic Pewter | | X | | | | |
| Polished Chrome | X | | | | | |
| Oil Rubbed Bronze | | | | | | X |
| Pforever Pfinish® Brushed Nickel | | | X | | | |

| Features | 016-300C | 016-300E | 016-300K | 016-300U | 016-300Y | 016-300Z |
|---|---|---|---|---|---|---|
| 28" brass slide bar | X | X | X | X | X | X |
| 3 Function Hand Shower with Dual Check Valves | X | X | X | X | X | X |
| 60" Metal Hose with Matching Finish | X | X | X | X | X | X |
| Includes Back Flow Prevention System | X | X | X | X | X | X |
| Includes Hand Shower, Hose, Slide Bar, and Drop Elbow | X | X | X | X | X | X |
| Self Cleaning Spray Head | X | X | X | X | X | X |
| Step-By-Step Installation Instructions | X | X | X | X | X | X |
| Pforever Warranty® | X | X | X | X | X | X |



016-300C ☐
016-300E ☐
016-300K ☐
016-300U ☐
016-300Y ☐
016-300Z ☐

For additional information, please contact your Price Pfister representative, or visit our website at www.pricepfister.com.

**Project:** _____

**Contractor:** _____

**SS-016-02**

**1-800-PFAUCET** www.pricepfister.com
19701 DaVinci, Lake Forest, CA 92610
05/21/08

Price Pfister®
Pfreshest Ideas in Pfaucets.

## FOOD SERVICE FACILITY
## CONSTRUCTON REQUIREMENTS

July 11, 2014

Doug Poppe
Vega Architecture LLC
1335 Elati Street Unit A
Denver, Colorado 80204

RE: Construction plans for Specialty Retailer located at 4819 Kietzke Lane, Reno, Nevada, City of Reno Building Department Permit #BLD14-07033

## NOTICE

**The recipient of this letter shall be responsible for informing all contractors and/or subcontractors of the contents and conditions stipulated herein.**

**An application to operate the referenced facilities must be completed and the appropriate permit fees paid prior to the WCHD's allowing the facilities to begin operation. Specialty Retailer will be permitted as grocery and deli.**

**At a minimum the contractor must request the WCHD to make three inspections: (1) at the time the rough plumbing is installed, (2) at the time the equipment is ready to be installed, and (3) at the time the equipment is installed and operating. This latter request should be made several days before the anticipated opening date.**

**The WCHD may make additional inspections and will make additional inspections if requested to do so by the contractor.**

**The WCHD reserves the right to require on-site corrections when necessary to ensure compliance with applicable codes and regulations.**

Applicable personnel of the WCHD have reviewed the referenced plans. The WCHD's Food Safety Program has approved the plan provided that the items noted below are incorporated into the construction. At this time, the plans need the approval of WCHD's Air Quality Management Division. The WCHD will sign off the plans at the City of Reno Building Department when the Air Quality Management Division approves the plans.

**The following are some WCHD generic construction requirements:**

1) Food service equipment must comply with NSF criteria standards for use, construction and installation **(WCHD regulation 050.205).**

2) Floor sinks must be installed such that top of the rim is either level with or no more than 3/8 inch below the finished floor. Floor sinks must be installed such that they are at least half-exposed from under equipment or otherwise readily accessible (as defined by the 2009 UPC) for inspection and cleaning purposes. Floor sinks may not be installed inside cabinets.

3) Food service electrical, gas, water and drain lines, when exposed, shall be located one (1) inch from the wall and at least six (6) inches off the floor. **(WCHD regulation 120.045, NSF installation Manual, Chapter 3).** Unistrut-type supports shall not be used in food preparation, wet storage, or utensil wash areas.

4) Individual drain lines shall be required from all drained food service and utensil cleaning equipment. Each shall drain to a floor sink **(WCHD regulation 080.035, UPC Chapter 8).**

**No revisions are required to be submitted on any of the items listed herein.**

**Any newly permitted food service establishment in Washoe County shall be in conformance with the WCHD Food Protection Manager Regulations within 60 days of issuance of the permit to operate. The establishment shall be provided with the required Certified Food Protection Manager's coverage based on its risk category assigned.**

**Washoe County Health District Regulations Governing Food Establishments may be accessed online at: http://www.washoecounty.us/health/ehs/regulations.html**

Please contact David Orozco at (775) 328-2691 should you wish to discuss this letter or to make arrangements for inspections. We request that you make inspection requests at least one workday in advance. Inspections may be scheduled by calling the above phone number or the City of Reno automated inspection request line at (775) 334-2396 or online through the Virtual Permit Place at http://applications.cityofreno.com/accela.

Sincerely yours,

David Orozco, Registered Environmental Health Specialist
Environmental Health Services Division
Washoe County Health District

cc: Bob Sack, Division Director
Tony Macaluso, Supervisor

BLD 14-07033 REV

McGLAMERY
ENGINEERING GROUP | A VERTEX COMPANY
structural • civil • forensic

3734 Osage Street | Denver, CO 80211
T: 303.455.8988 | F: 303.455.8446
mcglamerystructural.com
A VERTEX Company | vertexeng.com

July 02, 2014

City of Reno
Building and Safety Division
1 East 1st Street
Reno, NV 89501

RECEIVED
JUL 03 2014
CITY OF RENO
PERMIT PLACE

Re: Case #: BLD14-07033
Firecreek Crossing of Reno
4819 Kietzke Lane
Parcel #024-055-33

Dear Building Inspector,

The following letter is in response to the structural items listed on the Application Status Trail Report dated 07/01/14.

*01) Provide Special Inspection package for epoxy anchorage.*

**Response: Special Inspection package to be provided by others.**

*02) Provide engineering to verify the existing roof system will support the added roof top equipment including grease hood.*

**Response: All proposed rooftop units for this project are replacing existing units that weigh more than the new proposed units, with the exception of RTU #5. Per the mechanical engineer for this project, the proposed RTU #5 is 125 lbs heavier than the current unit that is being replaced. However, we feel that the existing adjacent joists are sufficient to support this minimal additional RTU weight.**

**Where new equipment is being added to the roof, such as the generator and condensers, we are specifying additional roof framing members to support this new load per sheet S2.1. Calculations are provided for this new roof framing in support of the proposed equipment loading.**

Please call with any questions.

Sincerely,
**McGlamery Engineering Group, LLC**

Jon J. Eldridge, PE, LEED AP
Project Engineer

JJE/smc

PROFESSIONAL ENGINEER-STATE OF NEVADA
JON J. ELDRIDGE
Exp: 12.31.14
CIVIL
No. 22635

**7.2.14**

McGLAMERY ENGINEERING GROUP, LLC
3734 OSAGE STREET
DENVER, COLORADO 80211
Ph. (303) 455-8988
Fax (303) 455-8446

JOB #14-28868
SHEET NO. 1 OF
CALCULATED BY JE DATE
CHECKED BY DATE
SCALE

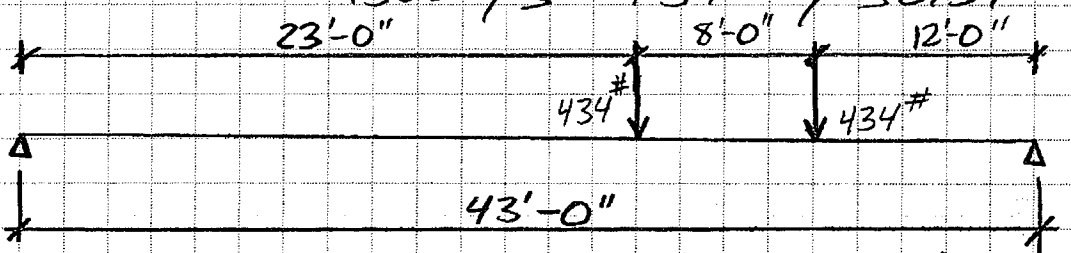
→ CHECK NEW ROOF FRAMING FOR SUPPORT OF NEW GENERATOR/CONDENSER LOADS:

- ASSUME EXIST ROOF FRAMING IS ADEQUATE TO SUPPORT EXIST ROOF LOADS

- NEW LOADS: CONDENSER WEIGHT (2 x 1300 lbs) GOVERNS OVER GENERATOR (950 lbs)

↳ WORST CASE LOADING:

- CONDENSER WT SPLIT OVER 3 JOISTS:
1300#/3 = 434 #/ JOIST




*ADD 4'-0" OF ROOF LOADING TRIB (CONSERV)

↳ USE 5x27 GLU-LAM BEAM - SEE CALC ATTACHED

- MAX END REACTION = 3.7k

↳ USE SIMPSON HGUS5.25/12 HANGERS (CAPACITY = 9.6k)



PRODUCT 204-1 (Single Sheets) 205-1 (Padded)

Title :
Dsgnr:
Description :

Job #
Date: 1:14PM, 2 JUL 14

Scope :



# General Timber Beam



**Description** Glu-lam beams under condensers

## General Information

Code Ref: 1997 NDS, 2003 IBC, 2003 NFPA 5000. Base allowables are user defined

| | | | | | |
|---|---|---|---|---|---|
| Section Name | 5.0x27.0 | Center Span | 43.00 ft | .....Lu | 43.00 ft |
| Beam Width | 5.000 in | Left Cantilever | ft | .....Lu | 0.00 ft |
| Beam Depth | 27.000 in | Right Cantilever | ft | .....Lu | 0.00 ft |
| Member Type | GluLam | Douglas Fir, 24F - V8 | | | |
| | | Fb Base Allow | 2,400.0 psi | | |
| Load Dur. Factor | 1.150 | Fv Allow | 240.0 psi | | |
| Beam End Fixity | Pin-Pin | Fc Allow | 650.0 psi | | |
| | | E | 1,700.0 ksi | | |

## Full Length Uniform Loads

| | | | | |
|---|---|---|---|---|
| Center | DL | 84.00 #/ft | LL | 60.00 #/ft |
| Left Cantilever | DL | #/ft | LL | #/ft |
| Right Cantilever | DL | #/ft | LL | #/ft |

## Point Loads

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dead Load | 434.0 lbs | 434.0 lbs | lbs | lbs | lbs | lbs | lbs |
| Live Load | lbs | lbs | lbs | lbs | lbs | lbs | lbs |
| ...distance | 23.000 ft | 31.000 ft | 0.000 ft | 0.000 ft | 0.000 ft | 0.000 ft | 0.000 ft |

## Summary

**Beam Design OK**

Span= 43.00ft, Beam Width = 5.000in x Depth = 27.in, Ends are Pin-Pin

| | | | |
|---|---|---|---|
| Max Stress Ratio | 0.821 : 1 | | |
| Maximum Moment | 40.5 k-ft | Maximum Shear * 1.5 | 5.0 k |
| Allowable | 49.4 k-ft | Allowable | 37.3 k |

| | | | | | |
|---|---|---|---|---|---|
| Max. Positive Moment | 40.53 k-ft | at 22.876 ft | Shear: | @ Left | 3.42 k |
| Max. Negative Moment | 0.00 k-ft | at 43.000 ft | | @ Right | 3.64 k |
| Max @ Left Support | 0.00 k-ft | | Camber: | @ Left | 0.000 in |
| Max @ Right Support | 0.00 k-ft | | | @ Center | 0.928 in |
| Max. M allow | 49.39 | | | @ Right | 0.000 in |

| | | | | Reactions... | | | |
|---|---|---|---|---|---|---|---|
| fb | 800.67 psi | fv | 36.88 psi | Left DL | 2.13 k | Max | 3.42 k |
| Fb | 975.64 psi | Fv | 276.00 psi | Right DL | 2.35 k | Max | 3.64 k |

## Deflections

| Center Span... | Dead Load | Total Load | Left Cantilever... | Dead Load | Total Load |
|---|---|---|---|---|---|
| Deflection | -0.619 in | -0.950 in | Deflection | 0.000 in | 0.000 in |
| ...Location | 21.844 ft | 21.672 ft | ...Length/Defl | 0.0 | 0.0 |
| ...Length/Defl | 833.7 | 543.22 | | | |
| **Camber ( using 1.5 * D.L. Defl ) ...** | | | **Right Cantilever...** | | |
| @ Center | 0.928 in | | Deflection | 0.000 in | 0.000 in |
| @ Left | 0.000 in | | ...Length/Defl | 0.0 | 0.0 |
| @ Right | 0.000 in | | | | |

**Description** Glu-lam beams under condensers

## Stress Calcs

**Bending Analysis**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Ck | 20.128 | Le | 79.088 ft | Sxx | 607.500 in3 | Area | 135.000 in2 |
| Cf | 0.860 | Rb | 32.022 | Cl | 0.411 | | |

| | Max Moment | Sxx Req'd | Allowable fb |
|---|---|---|---|
| @ Center | 40.53 k-ft | 498.55 in3 | 975.64 psi |
| @ Left Support | 0.00 k-ft | 0.00 in3 | 2,374.86 psi |
| @ Right Support | 0.00 k-ft | 0.00 in3 | 2,374.86 psi |

| **Shear Analysis** | @ Left Support | @ Right Support |
|---|---|---|
| Design Shear | 4.65 k | 4.98 k |
| Area Required | 16.831 in2 | 18.038 in2 |
| Fv: Allowable | 276.00 psi | 276.00 psi |

**Bearing @ Supports**

| | | | |
|---|---|---|---|
| Max. Left Reaction | 3.42 k | Bearing Length Req'd | 1.052 in |
| Max. Right Reaction | 3.64 k | Bearing Length Req'd | 1.120 in |

## Query Values

| M, V, & D @ Specified Locations | | Moment | Shear | Deflection |
|---|---|---|---|---|
| @ Center Span Location = | 0.00 ft | 0.00 k-ft | 3.42 k | 0.0000 in |
| @ Right Cant. Location = | 0.00 ft | 0.00 k-ft | 0.00 k | 0.0000 in |
| @ Left Cant. Location = | 0.00 ft | 0.00 k-ft | 0.00 k | 0.0000 in |

# FACE MOUNT HANGERS — STRUCTURAL COMPOSITE LUMBER



| Actual Joist Size | Model No. | Ga | Dimensions W | H | B | Min/ Max | Fasteners Face | Joist | Allowable Loads DF/SP Species Header Uplift (160) | Floor (100) | Snow (115) | Roof (125) | SPF/HF Species Header Floor (100) | Snow (115) | Ro (12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3½ x 18 | HU416/HUC416 | 14 | 3⅜ | 13⅜ | 2½ | Min | 20-16d | 8-10d | 1515 | 2975 | 3360 | 3610 | 2565 | 2895 | 31 |
| | | | 3⅜ | 13⅜ | 2½ | Max | 26-16d | 12-10d | 2015 | 3870 | 4365 | 4695 | 3330 | 3760 | 40 |
| | HGUS412 | 12 | 3⅜ | 10⅞ | 4 | — | 56-16d | 20-16d | 5045 | 9600 | 9600 | 9600 | 8255 | 8255 | 82 |
| | HGUS414 | | 3⅜ | 12⅞ | 4 | — | 66-16d | 22-16d | 5515 | 10100 | 10100 | 10100 | 8685 | 8685 | 86 |
| | HUCQ412-SDS | 14 | 3⅜ | 11 | 3 | — | 14-SDS ¼"x2½" | 6-SDS ¼"x2½" | 2510 | 5460 | 5560 | 5560 | 3930 | 4000 | 40 |
| 5¼ x 7¼ | HU68/HUC68 | 14 | 5½ | 5¹³⁄₁₆ | 2½ | Min | 10-16d | 4-16d | 900 | 1490 | 1680 | 1805 | 1280 | 1445 | 15 |
| | | | 5½ | 5¹³⁄₁₆ | 2½ | Max | 14-16d | 6-16d | 1345 | 2085 | 2350 | 2530 | 1795 | 2025 | 21 |
| | HGUS5.50/8 | 12 | 5½ | 6¹⁵⁄₁₆ | 4 | — | 36-16d | 12-16d | 3235 | 7460 | 7460 | 7460 | 6415 | 6415 | 64 |
| 5¼ x 9¼ - 9½ | HU610/HUC610 | 14 | 5½ | 7⅞ | 2½ | Min | 14-16d | 6-16d | 1345 | 2085 | 2350 | 2530 | 1795 | 2025 | 21 |
| | | | 5½ | 7⅞ | 2½ | Max | 18-16d | 8-16d | 1795 | 2680 | 3020 | 3250 | 2305 | 2605 | 28 |
| | HHUS5.50/10 | | 5½ | 9 | 3 | — | 30-16d | 10-16d | 3735 | 5635 | 6380 | 6880 | 4835 | 5480 | 59 |
| | HUCQ610-SDS | | 5½ | 9 | 3 | — | 12-SDS ¼"x2½" | 6-SDS ¼"x2½" | 2520 | 4680 | 5380 | 5715 | 3370 | 3875 | 41 |
| | HGUS5.50/10 | 12 | 5½ | 8⁹⁄₁₆ | 4 | — | 46-16d | 16-16d | 4095 | 9100 | 9100 | 9100 | 7825 | 7825 | 78 |
| 5¼ x 11¼ - 11⅞ | HU612/HUC612 | 14 | 5½ | 9⅞ | 2½ | Min | 16-16d | 6-16d | 1345 | 2380 | 2685 | 2890 | 2050 | 2315 | 24 |
| | | | 5½ | 9⅞ | 2½ | Max | 22-16d | 8-16d | 1795 | 3275 | 3695 | 3970 | 2820 | 3180 | 34 |
| | HHUS5.50/10 | | 5½ | 9 | 3 | — | 30-16d | 10-16d | 3735 | 5635 | 6380 | 6880 | 4835 | 5480 | 59 |
| | HUCQ612-SDS | | 5½ | 11 | 3 | — | 14-SDS ¼"x2½" | 6-SDS ¼"x2½" | 2520 | 5315 | 5315 | 5315 | 3825 | 3825 | 38 |
| | HGUS5.50/12 | 12 | 5½ | 10½ | 4 | — | 56-16d | 20-16d | 5045 | 9600 | 9600 | 9600 | 8255 | 8255 | 82 |
| 5¼ x 14 | HU616/HUC616 | 14 | 5½ | 12¹⁄₁₆ | 2½ | Min | 20-16d | 8-16d | 1795 | 2975 | 3360 | 3610 | 2565 | 2895 | 31 |
| | | | 5½ | 12¹⁄₁₆ | 2½ | Max | 26-16d | 12-16d | 2695 | 3870 | 4365 | 4695 | 3330 | 3760 | 40 |
| | HHUS5.50/10 | | 5½ | 9 | 3 | — | 30-16d | 10-16d | 3735 | 5635 | 6380 | 6880 | 4835 | 5480 | 59 |
| | HUCQ612-SDS | | 5½ | 11 | 3 | — | 14-SDS ¼"x2½" | 6-SDS ¼"x2½" | 2520 | 5315 | 5315 | 5315 | 3825 | 3825 | 38 |
| | HGUS5.50/14 | 12 | 5½ | 12½ | 4 | — | 66-16d | 22-16d | 5515 | 10100 | 10100 | 10100 | 8685 | 8685 | 86 |
| 5¼ x 16 | HU616/HUC616 | 14 | 5½ | 12¹⁄₁₆ | 2½ | Min | 20-16d | 8-16d | 1795 | 2975 | 3360 | 3610 | 2565 | 2895 | 31 |
| | | | 5½ | 12¹⁄₁₆ | 2½ | Max | 26-16d | 12-16d | 2695 | 3870 | 4365 | 4695 | 3330 | 3760 | 40 |
| | HHUS5.50/10 | | 5½ | 9 | 3 | — | 30-16d | 10-16d | 3735 | 5635 | 6380 | 6880 | 4835 | 5480 | 59 |
| | HUCQ612-SDS | | 5½ | 11 | 3 | — | 14-SDS ¼"x2½" | 6-SDS ¼"x2½" | 2520 | 5315 | 5315 | 5315 | 3825 | 3825 | 38 |
| | HGUS5.50/14 | 12 | 5½ | 12½ | 4 | — | 66-16d | 22-16d | 5515 | 10100 | 10100 | 10100 | 8685 | 8685 | 86 |
| 5¼ x 18 | HU616/HUC616 | 14 | 5½ | 12¹⁄₁₆ | 2½ | Min | 20-16d | 8-16d | 1795 | 2975 | 3360 | 3610 | 2565 | 2895 | 31 |
| | | | 5½ | 12¹⁄₁₆ | 2½ | Max | 26-16d | 12-16d | 2695 | 3870 | 4365 | 4695 | 3330 | 3760 | 40 |
| | HHUS5.50/10 | | 5½ | 9 | 3 | — | 30-16d | 10-16d | 3735 | 5635 | 6380 | 6880 | 4835 | 5480 | 59 |
| | HUCQ612-SDS | | 5½ | 11 | 3 | — | 14-SDS ¼"x2½" | 6-SDS ¼"x2½" | 2520 | 5315 | 5315 | 5315 | 3825 | 3825 | 38 |
| | HGUS5.50/14 | 12 | 5½ | 12½ | 4 | — | 66-16d | 22-16d | 5515 | 10100 | 10100 | 10100 | 8685 | 8685 | 86 |
| 7 x 9¼ - 9½ | HU410-2/ HUC410-2 | 14 | 7⅛ | 9⅛ | 2½ | Min | 14-16d | 6-16d | 1345 | 2085 | 2350 | 2530 | 1795 | 2025 | 21 |
| | | | 7⅛ | 9⅛ | 2½ | Max | 18-16d | 8-16d | 1795 | 2680 | 3020 | 3250 | 2305 | 2605 | 28 |
| | HHUS7.25/10 | | 7¼ | 9 | 3⅝ | — | 30-16d | 10-16d | 3735 | 5635 | 6380 | 6880 | 4835 | 5480 | 59 |
| | HGUS7.25/10 | 12 | 7¼ | 8⅝ | 4 | — | 46-16d | 16-16d | 4095 | 9100 | 9100 | 9100 | 7825 | 7825 | 78 |
| 7 x 11¼ - 11⅞ | HU412-2/ HUC412-2 | 14 | 7⅛ | 11⅛ | 2½ | Min | 16-16d | 6-16d | 1345 | 2380 | 2685 | 2890 | 2050 | 2315 | 24 |
| | | | 7⅛ | 11⅛ | 2½ | Max | 22-16d | 8-16d | 1795 | 3275 | 3695 | 3970 | 2820 | 3180 | 34 |
| | HHUS7.25/10 | | 7¼ | 9 | 3⅝ | — | 30-16d | 10-16d | 3735 | 5635 | 6380 | 6880 | 4835 | 5480 | 59 |
| | HGUS7.25/12 | 12 | 7¼ | 10⅜ | 4 | — | 56-16d | 20-16d | 5045 | 9600 | 9600 | 9600 | 8255 | 8255 | 82 |
| 7 x 14 | HU414-2/ HUC414-2 | 14 | 7⅛ | 13⅜ | 2½ | Min | 20-16d | 8-16d | 1795 | 2975 | 3360 | 3610 | 2565 | 2895 | 31 |
| | | | 7⅛ | 13⅜ | 2½ | Max | 26-16d | 12-16d | 2695 | 3870 | 4365 | 4695 | 3330 | 3760 | 40 |
| | HHUS7.25/10 | | 7¼ | 9 | 3⅝ | — | 30-16d | 10-16d | 3735 | 5635 | 6380 | 6880 | 4835 | 5480 | 59 |
| | HGUS7.25/14 | 12 | 7¼ | 12⅝ | 4 | — | 66-16d | 22-16d | 5515 | 10100 | 10100 | 10100 | 8685 | 8685 | 86 |
| 7 x 16 | HU414-2/ HUC414-2 | 14 | 7⅛ | 13⅜ | 2½ | Min | 20-16d | 8-16d | 1795 | 2975 | 3360 | 3610 | 2565 | 2895 | 31 |
| | | | 7⅛ | 13⅜ | 2½ | Max | 26-16d | 12-16d | 2695 | 3870 | 4365 | 4695 | 3330 | 3760 | 40 |
| | HHUS7.25/10 | | 7¼ | 9 | 3⅝ | — | 30-16d | 10-16d | 3735 | 5635 | 6380 | 6880 | 4835 | 5480 | 59 |
| | HGUS7.25/14 | 12 | 7¼ | 12⅞ | 4 | — | 66-16d | 22-16d | 5515 | 10100 | 10100 | 10100 | 8685 | 8685 | 86 |
| 7 x 18 | HU414-2/ HUC414-2 | 14 | 7⅛ | 13⅜ | 2½ | Min | 20-16d | 8-16d | 1795 | 2975 | 3360 | 3610 | 2565 | 2895 | 31 |
| | | | 7⅛ | 13⅜ | 2½ | Max | 26-16d | 12-16d | 2695 | 3870 | 4365 | 4695 | 3330 | 3760 | 40 |
| | HHUS7.25/10 | | 7¼ | 9 | 3⅝ | — | 30-16d | 10-16d | 3735 | 5635 | 6380 | 6880 | 4835 | 5480 | 59 |
| | HGUS7.25/14 | 12 | 7¼ | 12⅞ | 4 | — | 66-16d | 22-16d | 5515 | 10100 | 10100 | 10100 | 8685 | 8685 | 86 |
| 7x14 to 30 | For additional hangers see HGU/HHGU on page 107. | | | | | | | | | | | | | | |

See footnotes on page 105.

BLD 14-07033

# ACKNOWLEDGMENT OF ASBESTOS ASSESSMENT
## Washoe County Air Quality Management Division

**Permit Number: ASB14-0672**

**Property Owner:** FIRECREEK CROSSING **Phone:**

**Property Being Evaluated:** T.I. - DEMO AND BUILDBACK, INTERIOR REMODEL FOR NEW VITAMIN COTTAGE NATURAL FOOD MARKET

**Address:** 4819 KIETZKE LN RENO

| TYPE OF PROJECT | TYPE OF PROPERTY | PROPERTY BEING ASSESSED |
|---|---|---|
| RENO | NON-RES | PARTIAL* |

**FILING FEE:** $62.00

*Note: If this project is a partial renovation and additional work is to be conducted later, additional asbestos assessment(s) will be required unless this assessment covers all pertinent representative asbestos suspected materials throughout the building.

**General Contractor:**
MCPHERSON CONTRACTORS, INC
RICK WANTLAND
3501 S.W. FAIRLAWN RD., STE 100
TOPEKA, KS 66614

**Consultant or Assessment Company:**
ENVIRONMENTAL TESTING & CONSULTING
14640 TOLL RD
RENO, NV 89521-8466

**Abatement Contractor:**

RECEIVED
AUG 04 2014
CITY OF RENO
PERMIT PLACE

**Assessment Results:** ACM ABSENT

**Abatement Completed:**

** Note: If asbestos present, abatement must be conducted in accordance with NESHAP and OSHA regulations before renovation or demolition work may proceed.

**10-DAY NOTIFICATION MANDATORY FOR DEMOLITION** Rick Wantland
Owner / Representative's Name

**Comments:**
Interior remodel of existing retail space for new Vitamin Cottage. Sampling found NO ACM present.
Use best methods for dust control during construction and dispose of waste properly.

Laura J Mendoza
Health District Representative

8/14/14
Date

Signature on this asbestos assessment document does NOT constitute full Health District approval for this project. Any additional Health permits such as are required for bar or restaurant operations, underground storage tanks, hazardous material disposal or air pollution sources must be obtained separately.

Signature by the Washoe County Health District does not warrant, nor should this report be taken to warrant, that asbestos was or was not present on stated property. Exposure to even small amounts of airborne asbestos fibers may cause cancer. For this reason the Health District recommends that all asbestos handling and abatement work be performed by certified asbestos contractors.



$62.0 CHG1 1 0004714 H054512 IND

M°GLAMERY
ENGINEERING GROUP | A VERTEX COMPANY
structural • civil • forensic

3734 Osage Street | Denver, CO 80211
**T: 303.455.8988 | F: 303.455.8446**
mcglamerystructural.com
A VERTEX Company | vertexeng.com

BLD14-07033

June 19, 2014

Mr. Eric Simonson
Building Official
City of Reno
1 East First Street
Reno, NV 89501

Re: Specialty Retailer @ 4819 Kietzke Lane

Dear Mr. Simonson,

We are writing to confirm that the additional roof framing members specified within the structural design drawings dated 6.17.14 have been designed to support the proposed rooftop equipment in accordance with the International Building Code, 2012 Edition, and ASCE 7-10.

Please call with any questions.

Sincerely,
**McGlamery Engineering Group, LLC**

Jon J. Eldridge, PE, LEED AP
Project Engineer
JJE/smc

PROFESSIONAL ENGINEER STATE OF NEVADA
JON J. ELDRIDGE
Exp: 12.31.14
CIVIL
No. 22635
6.19.14

STREET ADDRESS: 4819 Kitzke

BUSINESS NAME: Specialty Retailer BLD 14.07033

| SEWER FIXTURE WEIGHTING SHEET | NEW | DELETED |
|---|---|---|
| BAR SINK – WASH UP SINK | 2 //// 8 | |
| BATHROOM GROUP – WATER CLOSET, LAVATORY, TUB OR SHOWER- HOTEL OR MOTEL ONLY | 8 | |
| BATHTUB OR SHOWER STALL | 2 1 2 | |
| CAR WASH – SELF SERVE (PER BAY) | 28 | |
| CAR WASH - AUTO WASH | 100 | |
| CLINIC SINK | 3 | |
| DIPPER WELL | 6 | |
| DISHWASHER – COMMERCIAL | 35 | |
| DISHWASHER - CONVEYOR | 100 | |
| DISHWASHER – RESIDENTIAL TYPE | 2 | |
| DISPOSAL – COMMERCIAL (W/INDEPENDENT WATER SUPPLY) | 50 | |
| DRINKING FOUNTAIN OR WATER COOLER | .5 | |
| FLOOR DRAIN OR FLOOR SINK | 2 ///// ///// ///// ///// 40 | |
| HAIR WASH SINK | 5 | |
| KITCHEN SINK – BREAK ROOM | 2 1 2 | |
| KITCHEN SINK – COMMERCIAL (3 COMPARTMENT SINK OR SIMILAR) | 4 2 8 | |
| LAUNDRY MACHINE – RESIDENTIAL TYPE <4.5 CU FT (12-20 CAPACITY) | 8 | |
| LAUNDRY MACHINE – COMMERCIAL (MAX 35 LB CAPACITY) | 50 | |
| LAUNDRY MACHINE – COMMERCIAL – PER LB (ABOVE 35) | 1.5 | |
| LAUNDRY SINK | 4 | |
| LAVATORY | 1 1 1 | |
| MOP SINK OR SERVICE SINK | 2 1 2 | |
| RV DUMP STATION | 25 | |
| RV PARK PER WET SPACE | 7 | |
| URINAL | 2 | |
| WASHFOUNTAIN – CIRCULAR SPRAY | 3 | |
| WATER CLOSET | 4 1 4 | |
| WHIRLPOOL BATH OR COMINATION BATH/SHOWER | 4 | |
| TRENCH DRAINS (PER 30 FT OF TRENCH DRAIN) | 15 | |
| PEDICURE CHAIRS | 3 | |

67
285
19,095-

(1) MULTIPLY BY 1.5 FOR FACILITIES WITH USE OF 12 HRS OR GREATER & LESS THAN 16 HRS MULTIPLY BY 2 FOR FACILITIES WITH USE OF 16 HRS OR GREATER

(2) $285 PER FIXTURE UNIT EFFECTIVE 10/1/13

using 67 Credits from BLD14.02208

Ø

Street Address: 4819 KIETZKE LANE, RENO, NEVADA 89509

Business Name: SPECIALTY RETAILER BLD 14-07033

RECEIVED
JUN 18 2014
CITY OF RENO
Community Development Dept.

Hours of Operation: 1 to 11 hrs/ day ☒ 12 to 15 hrs/ day ☐ 16 to 24 hrs/ day ☐
(check one)
Signature:

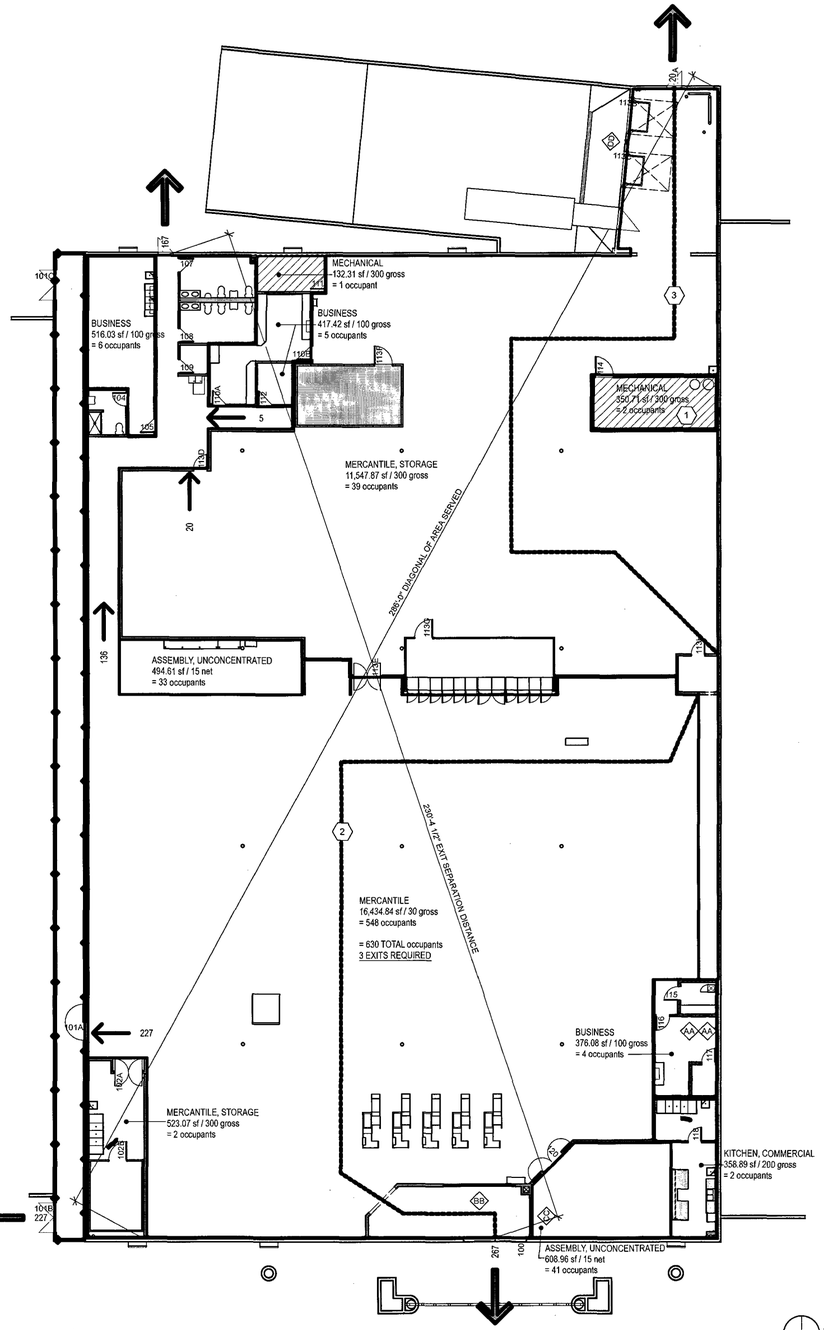
| Count all PLUMBING fixtures and attach to Permit Application. All plumbing fixtures added and/ or removed must be illustrated in the submitted plans. | Number of Fixtures ADDED | Number of Fixtures DELETED |
|---|---|---|
| Bar Sink | Ø | Ø |
| Bathroom Group – hotel/motel room (lav, wc, shower) | Ø | Ø |
| Bathtub | Ø | Ø |
| Car Wash – Self Serve (per bay) | Ø | Ø |
| Car Wash – Auto Wash | Ø | Ø |
| Clinic Sink | Ø | Ø |
| Coffee Making Station – Commercial | 1 | Ø |
| Dipper Well | Ø | Ø |
| Dishwasher – Commercial | Ø | Ø |
| Dishwasher – Conveyor | Ø | Ø |
| Dishwasher – Residential type | Ø | Ø |
| Disposal – Commercial (with independent water supply) | Ø | Ø |
| Drinking Fountain or Water Cooler | Ø | Ø |
| Floor Drain or Floor Sink | 20 | Ø |
| Hair Wash Sink | Ø | Ø |
| Kitchen Sink – Break Room | 1 | Ø |
| Kitchen Sink – Commercial (3 compartment sink or similar) | 2 | Ø |
| Laundry Machine – Residential type <4.5 cu ft (12-20 lbs capacity) | Ø | Ø |
| Laundry Machine – Commercial (max 35 lb capacity) | Ø | Ø |
| Laundry Machine – Commercial - per lb capacity (above 35 lbs) | Ø | Ø |
| Laundry Sink | Ø | Ø |
| Lavatory | 1 | Ø |
| Mop Sink or Service Sink | 1 | Ø |
| RV Dump Station | Ø | Ø |
| RV Park - per wet space | Ø | Ø |
| Shower Stall – per head | 1 | Ø |
| Urinal | Ø | Ø |
| Wash Fountain – circular spray | Ø | Ø |
| Wash-up Sink | 4 | Ø |
| Water Closet | 1 | Ø |
| Whirlpool Bath or Combination Bath/Shower | Ø | Ø |
| Trench Drains (per 30 ft of trench drain) | Ø | Ø |
| Other | Ø | Ø |
| Total Fixtures | 32 | |
| | | |
| Fax number: 775-334-2043 | | |

## PROJECT DIRECTORY


**ARCHITECT:**
VEGA ARCHITECTURE LLC
1335 ELATI ST., UNIT A
DENVER, CO 80205
CONTACT: ROB FORSLUND
T: 303.872.0487
F: 720.682.3822
E: ROB@VEGAARCHITECTURE.COM

**STRUCTURAL ENGINEER:**
MCGLAMERY STRUCTURAL GROUP
3734 OSAGE STREET
DENVER, CO 80211
CONTACT: SAMUEL MCGLAMERY
T: 303.455.8988
F: 303.455.8446
E: SMCGLAMERY@MCSTRUCTURALGROUP.COM

**MEP ENGINEER:**
GIVEN & ASSOCIATES, INC.
735 S XENON CT. #201
LAKEWOOD, CO 80228
CONTACT: JEFF GIVEN
T: 303.716.1270
F: 303.716.1272
E: JEFFG@GIVENANDASSOCIATES.COM


**2 MAIN LEVEL CODE PLAN**
SCALE: 1/16" = 1'-0"

## CODE ANALYSIS

**APPLICABLE CODES:**

2012 NORTHERN NEVADA AMENDMENTS
2012 INTERNATIONAL BUILDING CODE
2012 INTERNATIONAL MECHANICAL CODE
2012 INTERNATIONAL FUEL GAS CODE
2012 UNIFORM MECHANICAL CODE
2012 UNIFORM PLUMBING CODE
2011 NATIONAL ELECTRICAL CODE
2009 INTERNATIONAL ENERGY CONSERVATION CODE

**GOVERNING AUTHORITY:**

CITY OF RENO, STATE OF NEVADA

**SCOPE OF WORK:**

TENANT FINISH OF EXISTING BUILDING. EXTERIOR MODIFICATIONS LIMITED TO PAINTING. STRUCTURAL MODIFICATIONS LIMITED TO REINFORCEMENT OF ROOF JOISTS AND EXISTING BEARING WALL.

**OCCUPANCY GROUP:** **M | MERCANTILE**
NON-SEPARATED MIXED USE: M, S-2, B
(WITH A-3, ASSEMBLY AS ACCESSORY OCCUPANCY)
M IS THE MOST RESTRICTIVE OCCUPANCY

**TYPE OF CONSTRUCTION:** **TYPE V B**, BUILDING IS SPRINKLERED THROUGHOUT

**ALLOWABLE AREA:** 9,000 SF PER FLOOR + 300% OF 9,000 = **36,000 SF**
(IBC 506.3 AUTOMATIC SPRINKLER SYSTEM INCREASE)

**EXISTING TENANT AREA:** **31,240 SF** GROUND FLOOR (NO PROPOSED CHANGE)

**ALLOWABLE BLDG HEIGHT:** 40'-0" (1 STORY) + 20'-0" = **60'-0"**
(IBC 504.2 AUTOMATIC SPRINKLER SYSTEM INCREASE)

**EXISTING BLDG HEIGHT:** **44'-6"** (1 STORY) (NO PROPOSED CHANGE)

**FIRE SPRINKLER SYSTEM:** FIRE SPRINKLER SYSTEM SHALL BE PROVIDED AS REQUIRED BY GOVERNING AUTHORITY; SYSTEM WILL BE PERMITTED SEPARATELY.

SPRINKLERS ARE NOT REQUIRED BELOW THE WOOD SLAT CEILING AS THE ASSEMBLY MEETS NFPA 8.15.14 OPEN SPACE REQUIREMENTS.

**FIRE ALARM SYSTEM:** FIRE ALARM SYSTEM SHALL BE PROVIDED AS REQUIRED BY GOVERNING AUTHORITY; SYSTEM WILL BE PERMITTED SEPARATELY.

**SNOKE/HEAT REMOVAL:** NOT REQUIRED. LESS THAN 50,000 SF DIVIDED AREA AND NO HIGH PILED COMBUSTIBLE STORAGE PER IBC 910.2.

**OCCUPANT LOAD:**

| | | | |
|---|---|---|---|
| SALES: | 16,435 SF @ 30 SF/OCC | = | 548 OCC |
| STOCK/STORAGE: | 12,070 SF @ 300 SF/OCC | = | 41 OCC |
| BUSINESS: | 1,309 SF @ 100 SF/OCC | = | 14 OCC |
| ASSEMBLY (UNCONCENTRATED): | 1,104 SF @ 15 SF/OCC | = | 74 OCC |
| KITCHEN, COMMERCIAL | 359 SF @ 200 SF/OCC | = | 2 OCC |
| MECHANICAL: | 493 SF @ 300 SF/OCC | = | 2 OCC |
| | **TOTAL** | = | **681 OCC** |

NOTE: OCCUPANT LOAD BASED ON AGGREGATE OCCUPANCIES. REFER TO CODE PLAN FOR OCCUPANCY LOADS OF INDIVIDUAL SPACES.

**REQUIRED EGRESS WIDTH:**
RETAIL FLOOR:
630 OCC X 0.2"/OCC (PER IBC 1005.1) = 126"
**THREE EXITS REQUIRED**

STOCK ROOM:
40 OCC X 0.2"/OCC (PER IBC 1005.1) = 8"

**PROVIDED EGRESS WIDTH:**
RETAIL FLOOR:

| | | |
|---|---|---|
| DOOR 100 | = | 58" CLEAR WIDTH |
| DOOR 101A | = | 45.5" CLEAR WIDTH |
| DOOR 106 | = | 33.5" CLEAR WIDTH |
| **TOTAL** | | **= 137"** |

STOCK ROOM:

| | | |
|---|---|---|
| DOOR 113A | = | 33.5" CLEAR WIDTH |
| DOOR 113D | = | 68.5" CLEAR WIDTH |
| **TOTAL** | | **= 102"** |

| PLUMBING COUNT: | REQUIRED: | PROVIDED: |
|---|---|---|
| WATER CLOSETS: | 2M / 2F | 2M / 2F / 1UNISEX |
| LAVATORIES: | 1M / 1F | 2M / 2F / 1UNISEX |
| DRINKING FOUNTAIN: | 1 | 2 |

## CODE PLAN LEGEND

- COMMON PATH OF TRAVEL ..... 50 → EXIT ACCESS
- EXIT ACCESS ----- 50 → EXIT DISCHARGE
- 1-HFR RATED WALL
- 2-HFR RATED WALL
- 3-HOUR FIRE-RATED WALL
- INCIDENTAL USE
- ACCESSORY USE

## CODE PLAN KEYNOTES

1. INCIDENTAL USE: REFRIGERANT MACHINERY ROOM PER IBC TABLE 508.2.5.
2. MAXIMUM TRAVEL DISTANCE = 225'-0" TO CLOSEST EXIT < 250'-0" PER IBC TABLE 1016.2
3. MAXIMUM TRAVEL DISTANCE = 195'-6" TO CLOSEST EXIT < 250'-0" PER IBC TABLE 1016.2

## ZONING INFORMATION

| | |
|---|---|
| **LOT AREA:** | 770,576 SF / 17.69 ACRES |
| **BUILDING FOOTPRINT:** | 171,740 SF |
| **ZONING:** | **AC | ARTERIAL COMMERCIAL**<br>(GOVERNING USE AND DEVELOPMENT REGULATIONS) |
| **PROPOSED BLDG USE:** | **RETAIL SALES | CONVENIENCE - GROCERY STORE** |
| **PROPOSED BLDG AREA:** | GROUND FLOOR = 31,948 GSF 31,240 NSF |
| **PARKING REQUIRED:** | 31,948 GSF/ 220 = 145 SPACES |
| **PARKING PROVIDED:** | **157 SPACES** DESIGNATED FOR SPECIALTY RETAIL<br>(NO PROPOSED CHANGE)<br>**889 TOTAL** SPACES IN SHOPPING CENTER<br>*INCLUDING 16 ACCESSIBLE SPACES* |
| **BICYCLE PARKING:** | 1 PER 20 CAR PARKING SPACES<br>157/20 = 8 BICYCLE SPACES REQUIRED<br>**12 PROVIDED** |

## ENERGY ANALYSIS

**2009 IECC | CHAPTER 5 | COMMERCIAL ENERGY EFFICIENCY REQUIREMENTS** FOR NEW WORK CLIMATE ZONE 5

**BUILDING ENVELOPE REQUIREMENTS -- OPAQUE ASSEMBLIES** (TABLE 502.2(1))

| | REQUIRED: | EXISTING: | PROVIDED: |
|---|---|---|---|
| ROOFS | R-20 ci | R-19 ci | NO CHANGE |
| WALLS | U-0.090 | U-0.90 | U-0.068 |
| FLOORS | R-10 ci | N/A | NO CHANGE |
| SLAB-ON-GRADE | NR | N/A | NO CHANGE |
| SWINGING DOORS | U-0.70 | N/A | NO CHANGE |
| ROLL-UP DOOR | U-0.50 | N/A | NO CHANGE |

**BUILDING ENVELOPE REQUIREMENTS -- FENESTRATION** (TABLE 502.3)

| | REQUIRED: | EXISTING: | PROVIDED: |
|---|---|---|---|
| *CURTAIN WALL/STOREFRONT* | U-0.45 | N/A | NO CHANGE |
| ENTRANCE DOOR | U-0.80 | N/A | NO CHANGE |
| ALL OTHER | U-0.55 | N/A | NO CHANGE |

1. ALL NEW WORK SHALL COMPLY WITH THE MINIMUM R-VALUES AND MAXIMUM U-VALUES LISTED ABOVE.
2. REPLACEMENT WINDOW AND DOOR ASSEMBLIES SHALL BE LABELED CERTIFYING THAT THEY HAVE BEEN TESTED IN ACCORDANCE WITH NFRC PROCEDURES BY AN ACCREDITED, INDEPENDENT LAB. WINDOWS SHALL HAVE AN AIR INFILTRATION RATE OF NO MORE THAN 0.3 CFM/SF AND SWINGING DOORS NO MORE THAN 0.5 CFM/SF.
3. OPENINGS AND PENETRATIONS IN THE BUILDING ENVELOPE SHALL BE APPROPRIATELY SEALED.
4. AIR INTAKES AND EXHAUST OPENINGS INTEGRAL TO THE BUILDING ENVELOPE SHALL BE EQUIPPED WITH NOT LESS THAN A CLASS I MOTORIZED, LEAKAGE-RATED DAMPERS.
5. *TRUCKS WILL NOT BE PARKED IN THE LOADING DOCK DOORWAY; THEREFORE, THE OVERHEAD* DOOR NEED NOT BE EQUIPPED WITH WEATHERSEALS.
6. THE VESTIBULE IS ENCLOSED BY AN AUTOMATIC ENTRANCE DOOR AT THE EXTERIOR AND AN AIR CURTAIN AT THE RETAIL SPACE.
7. RECESSED LIGHTING INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE SEALED TO LIMIT AIR LEAKAGE BETWEEN CONDITIONED AND UNCONDITIONED SPACES.

## RESPONSIBILITY MATRIX

| | FURNISHED BY | INSTALLED BY |
|---|---|---|
| **DIVISION 3: *CONCRETE*** | | |
| FLOOR POLISHING | TENANT | TENANT |
| **DIVISION 6: WOOD AND PLASTICS** | | |
| COMMUNITY ROOM COUNTERS | TENANT | TENANT |
| COFFEE CABINET | TENANT | TENANT |
| KITCHEN CABINETS | TENANT | TENANT |
| COAT HOOKS | TENANT | TENANT |
| BUMPERS | GC | GC |
| **DIVISION 8: DOORS AND WINDOWS** | | |
| HOLLOW METAL DOORS AND FRAMES | TENANT | GC |
| WOOD DOORS | TENANT | GC |
| REFER TO DOOR, WINDOW AND HARDWARE SCHEDULES | | |
| **DIVISION 9: FINISHES** | | |
| EXTERIOR PAINTING | TENANT | TENANT |
| INTERIOR PAINTING | TENANT | TENANT |
| ENTRANCE WALK-OFF MAT | TENANT | TENANT |
| CARPET | TENANT | TENANT |
| RESILIENT WALL BASE | TENANT | TENANT |
| RUBBER FLOORING @ STAIR | TENANT | TENANT |
| **DIVISION 10: SPECIALTIES** | | |
| ILLUMINATED EXTERIOR SIGNAGE | TENANT | TENANT |
| INTERIOR DIMENSIONAL LETTERS | TENANT | TENANT |
| REFER TO EQUIPMENT SCHEDULE FOR TOILET ACCESSORIES | | |
| **DIVISION 11: EQUIPMENT** | | |
| REFRIGERATED MERCHANDISERS | TENANT | TENANT |
| REFER TO EQUIPMENT SCHEDULE FOR ELECTRICAL EQUIPMENT | | |
| **DIVISION 12: FURNISHINGS** | | |
| CART CORRAL | TENANT | TENANT |
| WINDOW COVERINGS | TENANT | TENANT |
| **DIVISION 22: PLUMBING** | | |
| REFER TO EQUIPMENT SCHEDULE FOR PLUMBING FIXTURES | | |

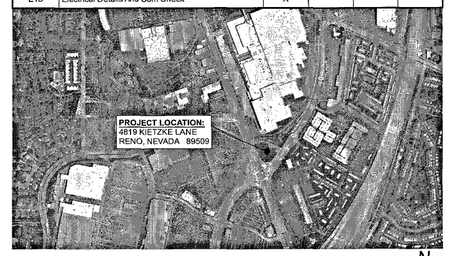
## BID ALTERNATES

1. ERICO CADDY SPEED LINK CABLE SYSTEM, PART #SLD15L5, ACCESSORIES AND SUPPLEMENTAL STEEL AS *REQUIRED FOR COMPLETE INSTALLATION OF THE ALBEO TYPE "A1" & "A3" LIGHT* FIXTURES IN LIEU OF THE STANDARD AIRCRAFT CABLE (RE: SHEET E1).
2. PROVIDE METAL JOIST SUPPORTED CEILINGS IN LIEU OF STRUCTURAL SUSPENDED GRID SYSTEM.
3. CURRENT TENANT TO PROVIDE PRICING FOR (E) BAILER TO REMAIN.
4. CURRENT TENANT TO PROVIDE PRICING FOR E) TRASH COMPACTOR TO REMAIN.

BAG
ATTACHED

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| A1 | Architectural Information | X | | | |
| A2 | Architectural Site Plan | X | | | |
| A3 | Main Level Demolition Floor Plan | X | | | |
| A4 | Main Level Demolition Floor Plan | X | | | |
| A5 | Main Level Floor Plan | X | | | |
| A6 | Main Level Floor Plan | X | | | |
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| A8 | Upper Level Floor Plan | X | | | |
| A9 | Roof Plan | X | | | |
| A10 | Roof Plan | X | | | |
| A11 | Main Level Reflected Ceiling Plan | X | | | |
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| A13 | Critical Dimension Plan | X | | | |
| A14 | Critical Dimension Plan | X | | | |
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| A16 | Finish Plan | X | | | |
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| A26 | Interior Elevations | X | | | |
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| A28 | Demonstration Kitchen | X | | | |
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| S3.0 | Details 301-320 | X | | | |
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| P3 | Sanitary & Vent Plan | X | | | |
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| P5 | Water & Gas Plans | X | | | |
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| P7 | Plumbing Details | X | | | |
| Electrical | | | | | |
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| E12 | Electical Panel Schedules | X | | | |
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**1 VICINITY MAP**
NOT TO SCALE

2 SET


BLD14-07033

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DAVID GROOMS REGISTERED No. 7058 6/18/14 ARCHITECT STATE OF NEVADA

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f: 720.862.3822


# SPECIALTY RETAILER

4819 KIETZKE LANE
RENO, NEVADA 89509

06.17.2014
PERMIT + CONSTRUCTION

issue / date

sheet title: Cover Sheet

by: af

app: rf

sheet no.: G1 of 1

BLD14-07033

DAVID GROOMS
REGISTERED
No 7059
ARCHITECT
STATE OF NEVADA

## Plan Review Tracking Sheet
### City of Reno, Nevada

**Case Number: BLD14-07033**

**Owner:** FIRECREEK CROSSING OF RENO LL
C/O EPROPERTY TAX-DEPT 207
PO BOX 4900

**Tenant:** SPECIALTY RETAILER

**Job Site:** 4819 KIETZKE LN **Lot:**

**Parcel Number:** 024-055-33

**Application Type:** Building/Commercial/Remodel & Addition/NA

**Type:** V-B **Group:** M

**Fire Sprinklers:** Yes **Fire Alarm:** Yes

**Occupancy Use:** SPECIALTY RETAILER

**Valuation:** $ 640,000.00 **Number of Units:** 0

**Builder/ Contractor:** FIRECREEK CROSSING OF RENO LL

**Accepted By:** WARNERB **Date:** 06/18/2014

**Description of Work to be Done:**

TENANT IMPROVEMENT.
EXTERIOR MODIFICATIONS TO EXISTING BUILDING, INCLUDES PINTING, STRUCTURAL MODIFICATIONS TO ROOF JOISTS AND EXISTING BEARING WALL; PLUMBING, ELECTRICAL, MECH ,ROOFTOP UNITS

| Approved Plan Check Review | | Date | O.T. Hours |
|---|---|---|---|
| Building | | AB / 7-7-14 | / |
| Plumbing | | AB / 7-1-14 | / |
| Mechanical | | AB / 7-1-14 | / |
| Electrical | | AB / 7-1-14 | / |
| Structural | | AB / 8-7-14 | / |
| C.D. Planning | DBM | / 7/2/14 | / jp |
| Fire | WS | / 7-7-14 | / |
| C.D. Engineering | N/A JS | / 6/24/14 | / jp |
| Environmental Control | | AB / 7-7-14 | / |
| Health | WDO | / 8/6/14 | / jp |
| Downtown Redevelopement | | / | / |
| Landscaping Review | | / | / |
| Outside Plan Review | | / | / |
| Urban Forester | | / | / |
| Traffic Impact Fee Review | JS | / 6/24/14 | / jp |
| SWP Fee Review | | / | / |
| Signs | | / | / |
| Permit Technician Approval | | / | / |
| Charge Out | | / | / |
| Scanning | | / | / |

T32 0

# ABBREVIATIONS

| | |
|---|---|
| ACT | ACOUSTICAL CEILING TILE |
| AD | ADDENDA |
| ADA | AMERICANS WITH DISABILITIES ACT |
| ADAPT | ADAPTABLE |
| ADJ | ADJUSTABLE; ADJACENT |
| AFF | ABOVE FINISH FLOOR |
| AFG | ABOVE FINISH GRADE |
| AL | ALUMINUM |
| ALT | ALTERNATE |
| APPROX | APPROXIMATE |
| ARCH | ARCHITECTURAL |
| A/V | AUDIO / VIDEO |
| BD | BOARD |
| BLDG | BUILDING |
| BLK | BLOCK |
| BLKG | BLOCKING |
| BM | BEAM |
| BO | BOTTOM OF |
| BTWN | BETWEEN |
| CCBR | CLOSED CELL BACKER ROD |
| CJ | CONTROL JOINT |
| CLG | CEILING |
| CLKG | CAULKING |
| CLO | CLOSET |
| CLR | CLEAR |
| CMU | CONCRETE MASONRY UNIT |
| COL | COLUMN |
| CONC | CONCRETE |
| COND | CONDITION |
| CONN | CONNECTION |
| CONST | CONSTRUCTION |
| CONT | CONTINUOUS |
| CRCQ | COLD ROLLED COMMERCIAL QUALITY |
| CVG | CLEAR VERTICAL GRAIN |
| D | DEEP |
| DEG | DEGREE |
| DEMO | DEMOLITION; DEMOLISH |
| DET | DETAIL |
| DETER | DETERMINE |
| DF | DRINKING FOUNTAIN |
| DIA | DIAMETER |
| DIAG | DIAGONAL |
| DIM | DIMENSION |
| DN | DOWN |
| DS | DOWN SPOUT |
| DW | DISHWASHER |
| DWG | DRAWING |
| DWR | DRAWER |
| E | EAST |
| (E) | EXISTING |
| EA | EACH |
| EIFS | EXTERIOR INSULATING FINISH SYSTEM |
| EJ | EXPANSION JOINT |
| EL | ELEVATION |
| ELEC | ELECTRICAL |
| EMER | EMERGENCY |
| ENCL | ENCLOSURE |
| EQ | EQUAL |
| EQUIP | EQUIPMENT |
| EWC | ELECTRIC WATER COOLER |
| EXP | EXPOSED; EXPANSION |
| EXT | EXTERIOR |
| F | FEMALE |
| FA | FIRE ALARM |
| FC | FIRE CODE GYPSUM PANEL |
| FD | FLOOR DRAIN |
| FDTN | FOUNDATION |
| FE | FIRE EXTINGUISHER |
| FEC | FIRE EXTINGUISHER CABINET |
| FFE | FURNITURE, FIXTURES AND EQUIPMENT |
| FFF | FROM FINISH FACE |
| FFLR | FINISH FLOOR |
| FHC | FIRE HOSE CABINET |
| FIN | FINISH |
| FLD | FIELD |
| FLR | FLOOR |
| FLUOR | FLUORESCENT |
| FO | FINISHED OPENING |
| FOS | FACE OF STUD |
| FPR | FIRE PROTECTION RATING |
| FRP | FIBERGLASS REINFORCED POLYESTER |
| FRT | FIRE RETARDANT TREATED |
| FS | FLOOR SINK |
| FT | FOOT; FEET |
| FTG | FOOTING |
| GA | GYPSUM ASSOCIATION |
| GALV | GALVANIZED |
| GC | GENERAL CONTRACTOR |
| GLAZ | GLAZING |
| GSM | GALVANIZED SHEET METAL |
| GYP | GYPSUM |
| H | HIGH |
| HB | HOSE BIB |
| HC | HOLLOW CORE |
| H/C | HANDICAP |
| HDW | HARDWARE |
| HDWD | HARDWOOD |
| HFR | HOUR FIRE RESISTANCE |
| HM | HOLLOW METAL |
| HR | HOUR |
| HT | HEIGHT |
| HVAC | HEATING, VENTILATING AND AIR CONDITIONING |
| IBC | INTERNATIONAL BUILDING CODE |
| ID | INSIDE DIAMETER; IDENTIFIER |
| IN | INCH |
| INCL | INCLUDE(D) |
| INFO | INFORMATION |
| INSUL | INSULATION |
| INT | INTERIOR |
| IT | INFORMATION TECHNOLOGY |
| JAN | JANITOR |
| JST | JOIST |
| JT | JOINT |
| KIT | KITCHEN |
| KO | KNOCKOUT |
| LAB | LABORATORY |
| LAV | LAVATORY |
| LB | POUND |
| LF | LINEAR FEET |
| LT | LIGHT |
| LVL | LEVEL |
| M | MALE |
| MATL | MATERIAL |
| MAX | MAXIMUM |
| MECH | MECHANICAL |
| MED | MEDIUM |
| MEZZ | MEZZANINE |
| MFC | MINERAL FIBER CEMENT |
| MFD | MANUFACTURED |
| MFR | MANUFACTURER |
| MH | MANHOLE |
| MIN | MINIMUM; MINUTE |
| MIRR | MIRROR |
| MISC | MISCELLANEOUS |
| MO | MASONRY OPENING |
| MTD | MOUNTED |
| MTL | METAL |
| N | NORTH |
| N/A | NOT APPLICABLE |
| NIC | NOT IN CONTRACT |
| NFPA | NATIONAL FIRE PROTECTION ASSOCIATION |
| NO | NUMBER |
| NOM | NOMINAL |
| NTS | NOT TO SCALE |
| OC | ON CENTER |
| OCC | OCCUPANT |
| OD | OUTSIDE DIAMETER / DIMENSION |
| OH | OVERHEAD; OVERHAND |
| OP H | OPPOSITE HAND |
| OPNG | OPENING |
| OPP | OPPOSITE |
| PBD | PARTICLE BOARD |
| PC | PRECAST |
| PL | PROPERTY LINE; PLATE |
| PLAM | PLASTIC LAMINATE |
| PLAS | PLASTIC; PLASTER |
| PLYWD | PLYWOOD |
| PR | PAIR |
| PREP | PREPARE |
| PT | PAINT; POINT; PRESSURE TREATED |
| PVC | POLYVINYL CHLORIDE |
| QTY | QUANTITY |
| QT | QUARRY TILE |
| R | RADIUS |
| RCP | REFLECTED CEILING PLAN |
| RD | ROOF DRAIN |
| RE: | REFER TO |
| REFR | REFRIGERATOR |
| REINF | REINFORCING (ED) |
| REQ | REQUIREMENTS; REQUIRED |
| REV | REVISION |
| RI | RISER(S) |
| RM | ROOM |
| RO | ROUGH OPENING |
| S | SOUTH |
| SAF | SELF-ADHERED FLASHING |
| SC | SOLID CORE |
| SCHED | SCHEDULE |
| SECT | SECTION |
| SF | SQUARE FEET |
| SHT | SHEET |
| SIM | SIMILAR |
| SL | SLOPE |
| SPEC | SPECIFICATION |
| SQ | SQUARE |
| SSTL | STAINLESS STEEL |
| ST | STAIN; STREET |
| STC | SOUND TRANSMISSION CLASS |
| STD | STANDARD |
| STL | STEEL |
| STRUCT | STRUCTURAL |
| SUSP | SUSPENDED |
| T | TEMPERED |
| T & B | TOP AND BOTTOM |
| T & G | TONGUE AND GROOVE |
| THK | THICK(NESS) |
| TO | TOP OF |
| TPD | TOILET PAPER DISPENSER |
| TR | TREAD(S) |
| TS | TUBE STEEL |
| TYP | TYPICAL |
| UL | UNDERWRITERS LABORATORY |
| UNFIN | UNFINISHED |
| UNO | UNLESS NOTED OTHERWISE |
| UTIL | UTILITIES |
| V | VINYL |
| VCT | VINYL COMPOSITION TILE |
| VERT | VERTICAL |
| VIF | VERIFY IN FIELD |
| VOC | VOLATILE ORGANIC COMPOUND |
| VTR | VENT-THRU ROOF |
| W | WEST; WIDE |
| WC | WATER CLOSET |
| WDW | WINDOW |
| WH | WATER HEATER |
| WIR | WALK-IN-REFRIGERATOR |
| WIF | WALK-IN-FREEZER |
| W/ | WITH |
| W/I | WITHIN |
| W/O | WITHOUT |
| WRB | WATER RESISTIVE BARRIER |
| WD | WOOD |
| WT | WEIGHT |
| YD | YARD |
| YR | YEAR |
| & | AND |
| ∠ | ANGLE |
| @ | AT |
| x | BY, MULTIPLY |
| ℄ | CENTERLINE |
| ° | DEGREE |
| Ø | DIAMETER |
| / | DIVIDE, PER |
| ' | FEET |
| > | GREATER THAN |
| ≥ | GREATER THAN OR EQUAL TO |
| " | INCHES |
| < | LESS THAN |
| ≤ | LESS THAN OR EQUAL TO |
| # | NUMBER, POUND |
| % | PERCENT |
| ⊥ | PERPENDICULAR |
| ± | APPROXIMATELY (PLUS OR MINUS) |

NOTE: ABBREVIATIONS ARE BASED ON THE CONSTRUCTION SPECIFICATIONS INSTITUTE'S UNIFORM DRAWING SYSTEM "TERMS AND ABBREVIATIONS" MODULE. CLARIFY ANY ABBREVIATIONS NOT LISTED WITH ARCHITECT.

# MATERIAL LEGEND

SECTION

- EARTH
- GRAVEL
- CONCRETE, CAST IN PLACE
- CONCRETE, PRECAST
- BRICK
- CONCRETE MASONRY
- STONE
- CAST STONE
- MANUFACTURED STONE
- WOOD (ROUGH) CONTINUOUS
- WOOD (ROUGH) BLOCKING OR SHIM
- WOOD (FINISH)
- SAND, PLASTER, MORTAR, GROUT
- METAL
- EIFS
- RIGID INSULATION
- BATT, LOOSE-FILL INSULATION
- ACOUSTICAL TILE & PANELS
- CERAMIC TILE, QUARRY TILE
- RESILIENT FLOORING, PLASTIC LAMINATE
- CARPET
- GYPSUM BOARD
- PLYWOOD
- PARTICLE BOARD
- GLASS
- METAL STUDS (LARGE SCALE)
- METAL STUDS (SMALL SCALE)
- WOOD STUDS

PLAN and ELEVATION

- BRICK MASONRY
- CONCRETE MASONRY
- LAP SIDING
- STONE VENEER
- STANDING SEAM METAL ROOFING
- STUCCO, EIFS
- GYPSUM BOARD, PLASTER
- ASPHALT
- CONCRETE
- CARPET
- CERAMIC TILE
- MIRROR
- GLASS
- LANDSCAPE

# ARCHITECTURAL SYMBOLS

- **BUILDING SECTION:** DRAWING NUMBER / SHEET NUMBER
- **WALL SECTION:** DRAWING NUMBER / SHEET NUMBER
- **DETAIL SECTION:** DRAWING NUMBER / SHEET NUMBER
- **EXTERIOR ELEVATION:** DRAWING NUMBER / SHEET NUMBER
- **INTERIOR ELEVATION:** DRAWING NUMBER / SHEET NUMBER
- **SECTION/DETAIL:** DRAWING NUMBER / SHEET NUMBER
- **DETAIL ENLARGEMENT:** DRAWING NUMBER / SHEET NUMBER
- **REFERENCE GRID**
- **EXISTING REFERENCE GRID**
- **VERTICAL ELEVATION DATUM** — T.O. LEVEL EL. 126'-5 1/4"
- **PLAN ELEVATION DATUM** — 8'-0" AFF
- **PLAN ELEVATION CHANGE** STAIR DIRECTION SYMBOL, SLOPE DIRECTION — ORIGIN OF CHANGE
- **VERTICAL ELEVATION CHANGE** ROOF SLOPE — 3:12
- **PLAN NORTH INDICATOR** TRUE NORTH
- **ROOM IDENTIFIER:** ROOM NAME, ROOM NUMBER — ROOM NAME 123
- **DOOR IDENTIFIER** — 123
- **WINDOW IDENTIFIER** — ID
- **KEYNOTE** — ##
- **FFE IDENTIFIER** — ID
- **FINISH IDENTIFIER** — PT / ID
- **WALL TYPE** — W2
- **PARTITION TYPE** — P3
- **REVISION CLOUD**
- **REVISION INDICATOR:** ISSUE NUMBER, REVISION TYPE — 01 REV

# LINE SYMBOLS

- LINE OF OBJECT BELOW (BEYOND) PLANE OF VIEW
- LINE OF OBJECT ABOVE (BEHIND) PLANE OF VIEW
- IMAGINARY LINE
- PROPERTY LINE
- GRID LINE, ELEVATION LINE
- CENTER LINE
- BREAK LINE
- NON-RATED WALL TO STRUCTURE
- SMOKE PARTITION
- 1 HOUR FIRE-RATED WALL
- 2 HOUR FIRE-RATED WALL
- 3 HOUR FIRE-RATED WALL
- 4 HOUR FIRE-RATED WALL
- MATCH LINE RE: XXX-XXX

# GENERAL NOTES

1. ALL WORK SHALL BE EXECUTED IN ACCORDANCE w/ THE 2012 IBC AND ALL FEDERAL, STATE, AND LOCAL CODES AND AGENCIES HAVING JURISDICTION. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND RESPECTIVE SUB-CONTRACTORS TO BUILD TO SATISFY THESE CODES AND CALL FOR ALL NECESSARY INSPECTIONS.
2. DO NOT SCALE DRAWINGS. ALL NOTES AND NOTED DIMENSIONS TAKE PRECEDENCE OVER VISUAL REPRESENTATIONS OF ASSUMED INFORMATION SHOWN. ALL MANUFACTURERS' OR FABRICATORS' PRINTED WARNINGS, SPECIFICATIONS AND INSTALLATION INSTRUCTIONS TAKE PRECEDENCE OVER CONSTRUCTION DRAWINGS UNLESS AN EXCEPTION IS NOTED. MANUFACTURERS' OPERATING RECOMMENDATIONS SHALL BE STRICTLY OBSERVED.
3. CONSTRUCTION SITE TO COMPLY WITH NFPA 1, NFPA 241 AND ALL CODES ADOPTED BY THE LOCAL JURISDICTION.
4. DIMENSIONS SHOWN ON FLOOR PLANS, SECTIONS, ELEVATIONS, AND DETAILS ARE TO GRID LINES, FINISH FACE OF EXISTING WALLS, AND TO THE FACE OF STUDS, MASONRY, AND CONCRETE OF NEW WALLS UNLESS OTHERWISE NOTED.
5. VERIFY ALL EXISTING STRUCTURAL AND LOAD-BEARING CONDITIONS PRIOR TO ANY DEMOLITION WORK OR ANY NEW CONSTRUCTION. CONTACT ARCHITECT IMMEDIATELY IF ANY DISCREPANCIES EXIST.
6. IF THE CONTRACTOR ASCERTAINS AT ANY TIME THAT REQUIREMENTS OF THIS CONTRACT CONFLICT WITH, OR ARE IN VIOLATION OF APPLICABLE LAWS, CODES, REGULATIONS AND ORDINANCES, HE/SHE SHALL NOT PROCEED WITH WORK IN QUESTION, EXCEPT AT HIS/HER OWN RISK, UNTIL THE ARCHITECT HAS BEEN NOTIFIED IN WRITING AND WRITTEN DETERMINATION IS MADE BY THE ARCHITECT. WHERE COMPLETED OR PARTIALLY COMPLETED WORK IS DISCOVERED TO BE IN VIOLATION WITH APPLICABLE LAWS, CODES , REGULATIONS AND ORDINANCES, CONTRACTOR SHALL BE REQUIRED TO REMOVE THAT WORK FROM THE PROJECT AND REPLACE SUCH WORK WITH ALL NEW COMPLYING WORK AT NO ADDITIONAL COST TO THE OWNER OR ARCHITECT.
7. ANY WORK INSTALLED IN CONFLICT WITH THE CONTRACT DOCUMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS/HER EXPENSE AND AT NO ADDITIONAL EXPENSE TO THE OWNER, ARCHITECT, OR CONSULTANTS.
8. ANY FIRE EXTINGUISHERS MOVED DURING CONSTRUCTION ARE TO BE RELOCATED IN ACCORDANCE WITH FIRE MARSHALL'S DIRECTION.
9. ONCE FIRE ALARM SYSTEM IS INSTALLED, FIRE ALARM SYSTEM SHALL REMAIN IN SERVICE AT ALL TIMES DURING CONSTRUCTION. WRITTEN AUTHORIZATION FROM LOCAL FIRE DISTRICT WILL BE REQUIRED IF EITHER SYSTEM IS TO BE SHUT DOWN.
10. CONTRACTOR SHALL PROVIDE AND INSTALL ALL STIFFENERS, BRACINGS, BACK-UP PLATES AND SUPPORTING BRACKETS REQUIRED FOR THE INSTALLATION OF ALL CASEWORK, TOILET ACCESSORIES AND OF ALL FLOOR-MOUNTED OR SUSPENDED EQUIPMENT.
11. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES BELOW GRADE AND RELATED SERVICES CONNECTIONS WITH THE RESPECTIVE UTILITY COMPANIES.
12. INSTALLATION OF ALL SELECTED MATERIALS SHALL BE COMPLETE IN ALL RESPECTS PRIOR TO FINAL ACCEPTANCE. ANY MISCELLANEOUS ITEMS OR MATERIALS NOT SPECIFICALLY NOTED BUT REQUIRED FOR PROPER INSTALLATION SHALL BE FURNISHED BY THE CONTRACTOR.
13. ALL ITEMS TO BE INSTALLED PER MANUFACTURERS' SPECIFICATIONS AT MINIMUM. NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND MANUFACTURERS' RECOMMENDATIONS PRIOR TO INSTALLATION.
14. NO ITEMS SHALL BE SUSPENDED FROM/ATTACHED TO THE ROOF DECK INCLUDING LIGHT FIXTURES, MECHANICAL EQUIPMENT, FIRE SPRINKLERS, AND SUSPENDED CEILINGS UNLESS SPECIFICALLY NOTED ON DRAWINGS.
15. G.C. TO OBTAIN AND RETAIN ALL PRODUCT CERTIFICATION AND IDENTIFICATION INFORMATION FOR THE FOLLOWING:
    - DOORS
    - TOILET PARTITIONS
    - ROOFING

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DAVID GROOMS REGISTERED No. 7058 6/5/14 ARCHITECT STATE OF NEVADA

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SPECIALTY RETAILER

4819 KIETZKE LANE
RENO, NEVADA 89509

06.17.2014
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sheet title: Architectural Information

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app: rf

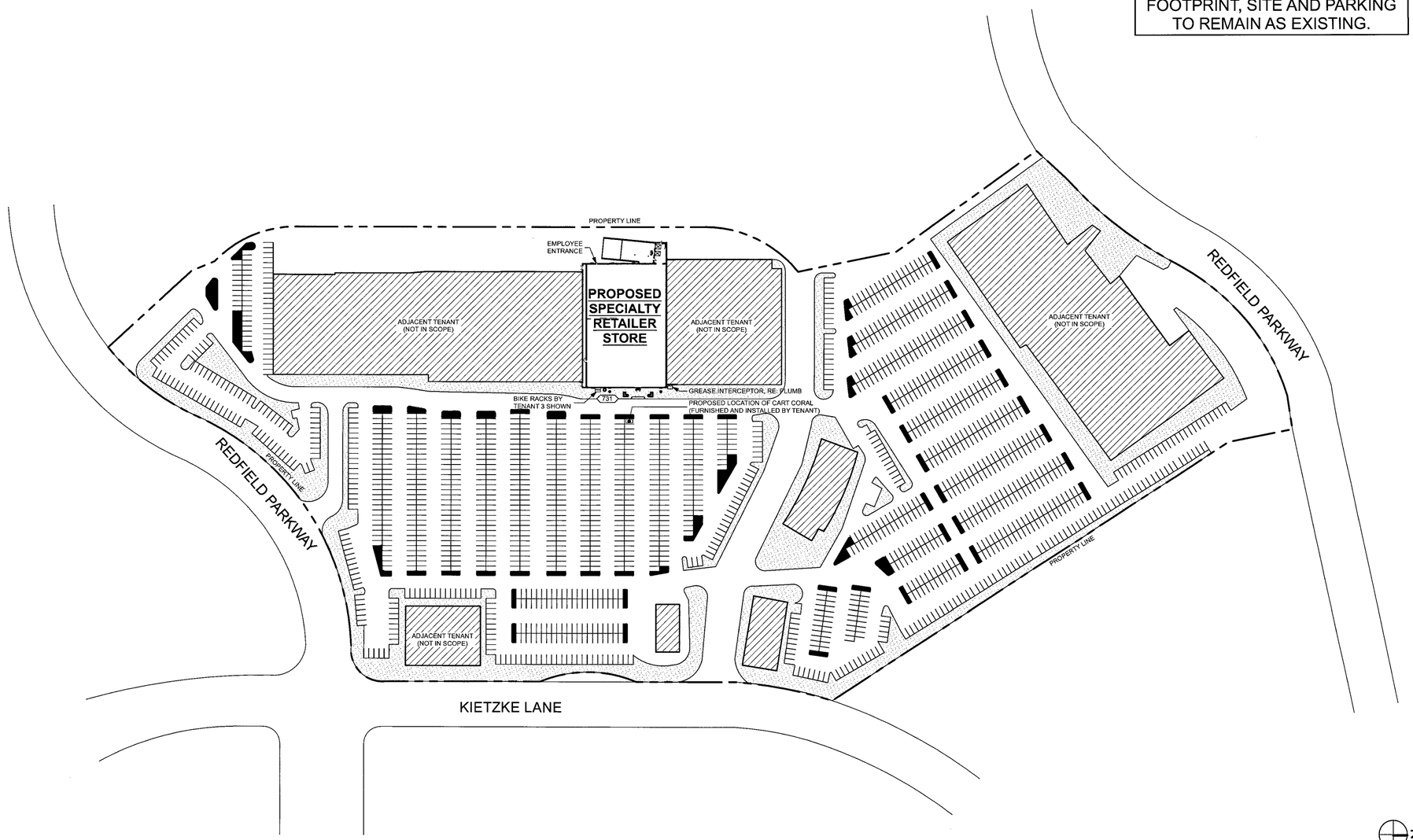
A1 of 30 — sheet no.

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NOTE: NO PROPOSED CHANGES TO SITE PLAN. BUILDING FOOTPRINT, SITE AND PARKING TO REMAIN AS EXISTING.




1 **ARCHITECTURAL SITE PLAN**
SCALE: 1" =100'

0 50' 100' 200'

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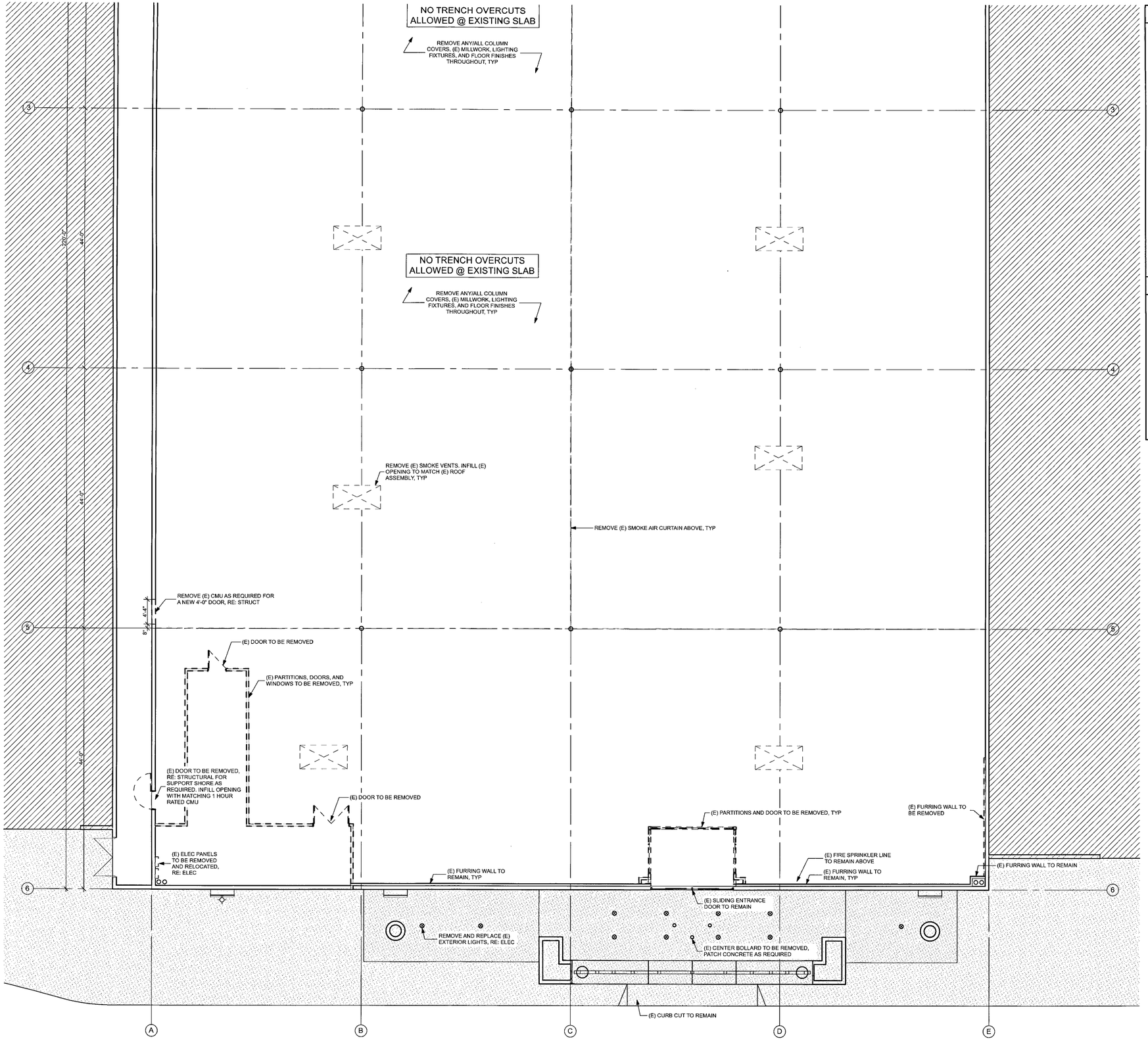
issue / date

sheet title: Architectural Site Plan

by: af

app: rf

sheet no.: A2 of 30




## 1 MAIN LEVEL DEMOLITION PLAN

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

0 4' 8' 16'

## DEMOLITION PLAN NOTES

1. INFORMATION CONTAINED HERE IS A RESULT OF LIMITED FIELD VERIFICATION. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING THE LOCATIONS OF STRUCTURAL, MECHANICAL, ELECTRICAL, PIPING AND CONDUIT PRIOR TO PROCEEDING WITH THE DEMOLITION WORK.
2. IF ANY DISCREPANCIES, INCONSISTENCIES, OR OMISSIONS ARE FOUND, THE ARCHITECT SHALL BE NOTIFIED IN WRITING FOR CLARIFICATION PRIOR TO PROCEEDING WITH WORK.
3. COORDINATE EXTENT OF DEMOLITION WITH DIMENSIONS OF NEW CONSTRUCTION.
4. ALL EXISTING PERSONAL PROPERTY TO BE REMOVED BY OTHERS PRIOR TO DEMOLITION. ALL REMAINING ITEMS ARE THE PROPERTY OF THE OWNER. G.C. SHALL COORD. W/ OWNER'S REPRESENTATIVE THE SALVAGE OF FIXTURES, FURNISHINGS, DOORS & MISCELLANEOUS EQUIPMENT AND STORE UNTIL FURTHER DIRECTION BY OWNER.
5. INTENT OF DEMOLITION IS TO RETURN BUILDING TO BASIC CORE AND SHELL WITH A LEVEL FLOOR. REMOVE ALL INTERIOR PARTITIONS, FLOOR FINISHES, AND EXISTING CEILINGS TO STRUCTURE, UNO.
6. ALL EXISTING INSULATED FURRING WALLS ON EXTERIOR WALLS TO REMAIN, UNO.
7. REMOVE SHEET-APPLIED TINTING FROM ALL EXISTING DOORS AND WINDOWS.
8. ALL ROOFTOP EQUIPMENT TO REMAIN AS INDICATED. REMOVE ALL DUCTS TO RTUS.
9. REMOVE ALL ELECTRICAL AND CONDUIT TO PANELS.
10. REFER TO STRUCTURAL DRAWINGS FOR EXTENT OF DEMOLITION FOR STRUCTURAL WORK.
11. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION REQUIREMENTS.
12. REMOVE ALL (E) FLOOR FINISHES, UNO.
13. REMOVE ALL (E) CEILINGS, SOFFITS AND LIGHT FIXTURES, UNO.
14. REMOVE ALL (E) MILLWORK AND DISPLAYS.

## DEMOLITION PLAN LEGEND

- EXISTING CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE REMOVED
- EXISTING DOOR TO REMAIN
- EXISTING DOOR TO BE REMOVED
- EXISTING DROPPED CEILING ABOVE TO BE REMOVED

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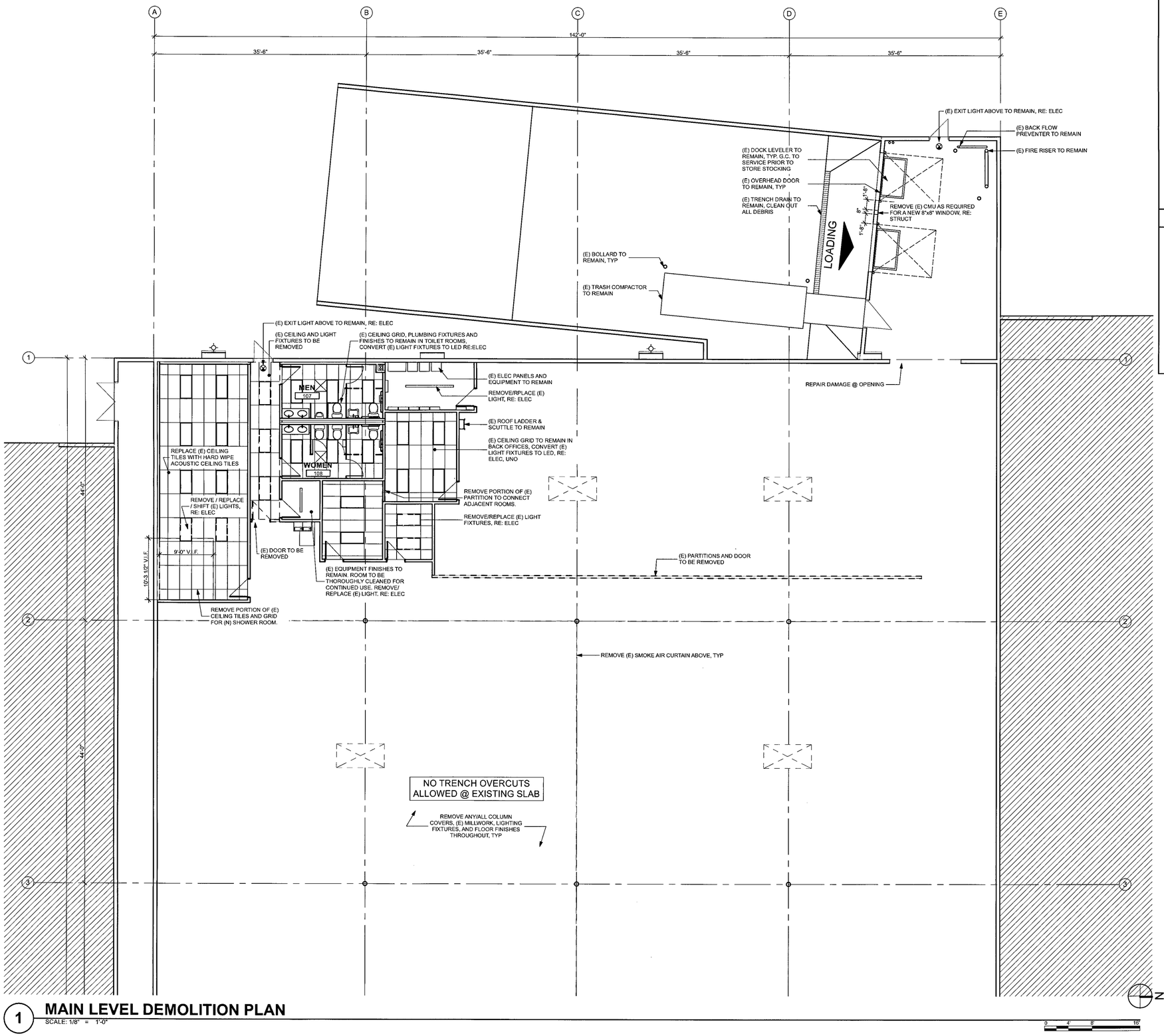
issue / date

sheet title: Main Level Demolition Floor Plan

by: af

app: rf

sheet no.: A3 of 30




1 **MAIN LEVEL DEMOLITION PLAN**
SCALE: 1/8" = 1'-0"

## DEMOLITION PLAN NOTES

1. INFORMATION CONTAINED HERE IS A RESULT OF LIMITED FIELD VERIFICATION. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING THE LOCATIONS OF STRUCTURAL, MECHANICAL, ELECTRICAL, PIPING AND CONDUIT PRIOR TO PROCEEDING WITH THE DEMOLITION WORK.
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6. ALL EXISTING INSULATED FURRING WALLS ON EXTERIOR WALLS TO REMAIN, UNO.
7. REMOVE SHEET-APPLIED TINTING FROM ALL EXISTING DOORS AND WINDOWS.
8. ALL ROOFTOP EQUIPMENT TO REMAIN AS INDICATED. REMOVE ALL DUCTS TO RTUS.
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13. REMOVE ALL (E) CEILINGS, SOFFITS AND LIGHT FIXTURES, UNO.
14. REMOVE ALL (E) MILLWORK AND DISPLAYS.

## DEMOLITION PLAN LEGEND

- EXISTING CONSTRUCTION TO REMAIN
- EXISTING CONSTRUCTION TO BE REMOVED
- EXISTING DOOR TO REMAIN
- EXISTING DOOR TO BE REMOVED
- EXISTING DROPPED CEILING ABOVE TO BE REMOVED

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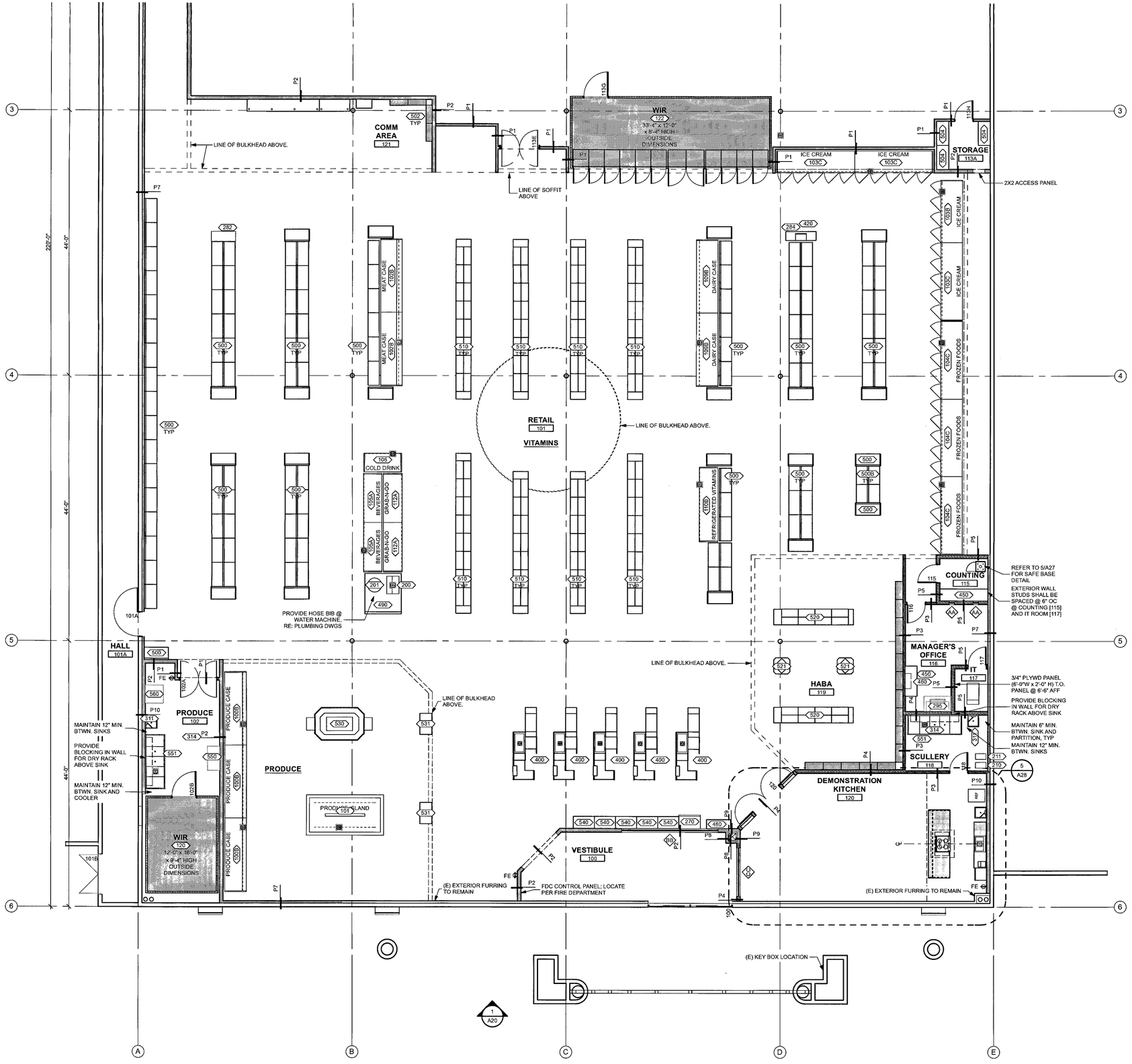
Issue / date

sheet title: Main Level Demolition Floor Plan

by: af

app: rf

sheet no.: A4 of 30




## 1 MAIN LEVEL FLOOR PLAN

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

## FLOOR PLAN NOTES

1. SEE CRITICAL DIMENSION PLAN FOR WALL AND FLOOR SINK DIMENSIONS.
2. PROVIDE METAL CORNER BEAD ON ALL EXPOSED CORNERS & EDGES.
3. PORTABLE FIRE EXTINGUISHERS SHALL BE FURNISHED BY G.C. AS REQUIRED BY THE INTERNATIONAL FIRE CODE. EXTINGUISHERS SHALL BE TYPE 3-A, 40-B; C W/ WALL BRACKET MOUNTED SO THAT TOP OF EXTINGUISHER IS @ 5'-0" AFF
4. NO OSB, PARTICLE BOARD OR CHIPBOARD ALLOWED FOR ANY ITEM IN PROJECT. ALL PLYWOOD TO BE FORMALDEHYDE FREE.
5. PARTITIONS ARE TYPE P1 UNLESS OTHERWISE INDICATED. PARTITION TYPES CONTINUE AT OPENINGS AND AROUND CORNERS, UNO.
6. REFER TO EQUIPMENT / FIXTURE SCHEDULE (SHEET A19) FOR KEY TO EQUIPMENT IDENTIFIERS.
7. REFER TO FIXTURE PLAN 1/A17 & 1/A18 AND ENLARGED PLANS (SHEET A26) FOR ADDITIONAL EQUIPMENT.
8. REFER TO SHEET A5 FOR PARTITION TYPES.
9. REFER TO SHEET A29 FOR DOOR, FRAME AND WINDOW SCHEDULES.
10. REFER TO 8/A22 FOR TYPICAL GYP.BD. CONTROL JOINT LAYOUT.
11. ALL CONCRETE JOINTS, SEAMS, TIE-INS, ETC. MUST BE CLEAN, NEAT, AND PROFESSIONAL LOOKING.
12. SIGN BAND LENGTHS ARE APPROXIMATE; VERIFY ACTUAL DIMENSIONS IN FIELD.

## FLOOR PLAN LEGEND

- NEW CONSTRUCTION; REFER TO PARTITION TYPES
- NEW DOOR AS SCHEDULED
- WALK-IN REFRIGERATOR/FREEZER WALL (BY OTHERS)

## PARTITION TYPES

| TYPE | PLAN VIEW | ASSEMBLY | RATING (TEST) |
|---|---|---|---|
| P1 | 4 7/8" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON 3 5/8" 20 GA. STL. STUDS @ 16" O.C. | |
| P2 | 7 1/4" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON 6" 20 GA. STL. STUDS @ 16" O.C. | |
| P3 | 4 7/8" | **NON LOAD BEARING ACOUSTICAL PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON 3 5/8" 20 GA. STL. STUDS @ 16" O.C. SOUND BATTS WITHIN STUD CAVITY | |
| P4 | 7 1/4" | **NON LOAD BEARING ACOUSTICAL PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON 6" 20 GA. STL. STUDS @ 16" O.C. SOUND BATTS WITHIN STUD CAVITY | |
| P5 | 7 1/2" SECURE SIDE | **NON LOAD BEARING SECURITY PARTITION:** 5/8" GYP. BD. OVER 1/4" METAL SECURITY MESH (AMICO SSM .50-13F) TO B.O. ADJ CLG ON 6" 20 GA. STL. STUDS @ 16" O.C.; 5/8" GYP. BD. ON SECURE SIDE OF PARTITION; SOUND BATTS WITHIN STUD CAVITY | |
| P6 | STOCK RM. SIDE 7 1/4" MECH. RM. SIDE | **NON LOAD BEARING ACOUSTICAL PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON (2) ROWS OF 2 1/2", 20 GA. STL. STUDS @ 16" O.C. & 1" APART; 3 1/2" GLASS FIBER SOUND BATTS ONE SIDE. @ SIM LOCATION, (1) LAYER 5/8" GYP. BD. ONLY ON INTERIOR SIDE. | 50-52 STC (WP 5015) |
| P7 | WALL AS SCHED 4 1/4" | **FURRING:** 5/8" GYP.BD. ON 3 5/8" 20 GA. STL. STUDS @ 24" O.C. ON WALL AS SCHED. SOUND BATTS WITHIN STUD CAVITY ONLY @ EXTERIOR WALL | |
| P8 | CHASE SIDE 4 1/4" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. (ONE SIDE) ON 3 5/8" 20 GA. STL. STUDS @ 16" O.C. | |
| P9 | CHASE SIDE 6 5/8" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. ON 6" 20 GA. STL. STUDS @ 16" O.C. | |
| P10 | WALL AS SCHED 6 5/8" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. ON 6" 20 GA. STL. STUDS @ 16" O.C. ON WALL AS SCHED | |

**NOTES:**

1. WHERE PARTITION IS LESS THAN 10' HIGH AND NON LOAD BEARING, 25 GA. STL. FRAMING IS ACCEPTABLE.
2. REFER TO GA FIRE RESISTANCE DESIGN MANUAL FOR MORE SPECIFIC CONSTRUCTION REQUIREMENTS OF FIRE RATED ASSEMBLIES.
3. WHERE A WALL OR PARTITION IS TO RECEIVE TILE OR FRP, USE 5/8" GLASS FIBER FACED GYPSUM BASED TILE BACKER IN LIEU OF STANDARD GYP. BD.
4. PROVIDE 5/8" EXT GRADE PLYWD AT INSIDE OF PARAPET WALLS IN LIEU OF STANDARD GYP. BD.
5. ALL BATT INSULATION (SOUND & THERMAL) SHALL BE FORMALDEHYDE FREE.
6. PROVIDE FLEXIBLE FLASHING AT ALL EXTERIOR PENETRATIONS.
7. REFER TO CRITICAL DIMENSION PLAN FOR PARTITION HEIGHTS.

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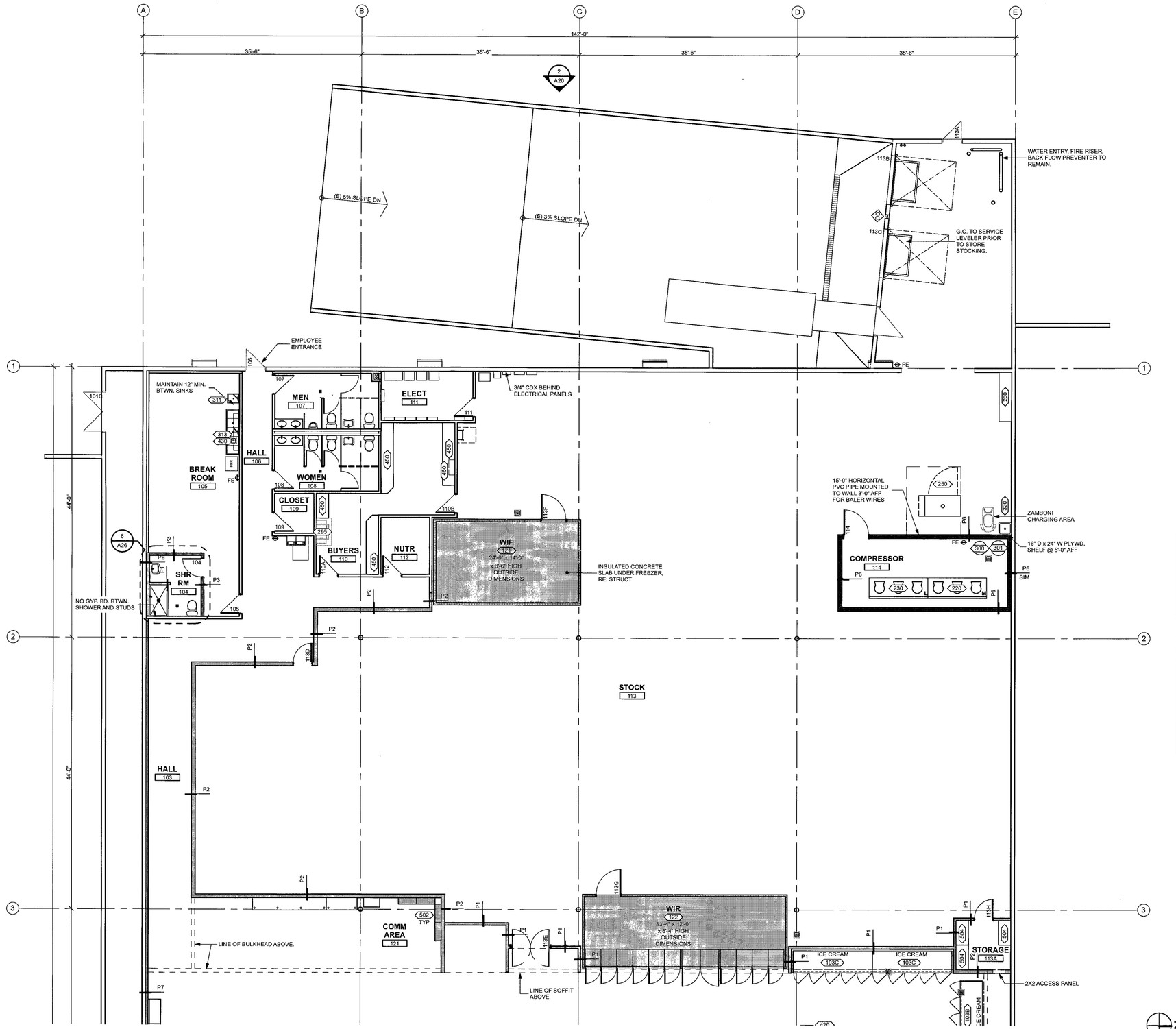
issue / date

sheet title: Main Level Floor Plan

by: af

app: rf

A5 of 30 sheet no.




1 **MAIN LEVEL FLOOR PLAN**
SCALE: 1/8" = 1'-0"

## FLOOR PLAN NOTES

1. SEE CRITICAL DIMENSION PLAN FOR WALL AND FLOOR SINK DIMENSIONS.
2. PROVIDE METAL CORNER BEAD ON ALL EXPOSED CORNERS & EDGES.
3. PORTABLE FIRE EXTINGUISHERS SHALL BE FURNISHED BY G.C. AS REQUIRED BY THE INTERNATIONAL FIRE CODE. EXTINGUISHERS SHALL BE TYPE 3-A, 40-B; C W/ WALL BRACKET MOUNTED SO THAT TOP OF EXTINGUISHER IS @ 5'-0" AFF
4. NO OSB, PARTICLE BOARD OR CHIPBOARD ALLOWED FOR ANY ITEM IN PROJECT. ALL PLYWOOD TO BE FORMALDEHYDE FREE.
5. PARTITIONS ARE TYPE P1 UNLESS OTHERWISE INDICATED. PARTITION TYPES CONTINUE AT OPENINGS AND AROUND CORNERS, UNO.
6. REFER TO EQUIPMENT / FIXTURE SCHEDULE (SHEET A19) FOR KEY TO EQUIPMENT IDENTIFIERS.
7. REFER TO FIXTURE PLAN 1/A17 & 1/A18 AND ENLARGED PLANS (SHEET A26) FOR ADDITIONAL EQUIPMENT.
8. REFER TO SHEET A5 FOR PARTITION TYPES.
9. REFER TO SHEET A29 FOR DOOR, FRAME AND WINDOW SCHEDULES.
10. REFER TO 8/A22 FOR TYPICAL GYP.BD. CONTROL JOINT LAYOUT.
11. ALL CONCRETE JOINTS, SEAMS, TIE-INS, ETC. MUST BE CLEAN, NEAT, AND PROFESSIONAL LOOKING.
12. SIGN BAND LENGTHS ARE APPROXIMATE; VERIFY ACTUAL DIMENSIONS IN FIELD.

## FLOOR PLAN LEGEND

NEW CONSTRUCTION; REFER TO PARTITION TYPES

NEW DOOR AS SCHEDULED

WALK-IN REFRIGERATOR/FREEZER WALL (BY OTHERS)

## PARTITION TYPES

| TYPE | PLAN VIEW | ASSEMBLY | RATING (TEST) |
|---|---|---|---|
| P1 | 4 7/8" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON 3 5/8" 20 GA. STL. STUDS @ 16" O.C. | |
| P2 | 7 1/4" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON 6" 20 GA. STL. STUDS @ 16" O.C. | |
| P3 | 4 7/8" | **NON LOAD BEARING ACOUSTICAL PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON 3 5/8" 20 GA. STL. STUDS @ 16" O.C. SOUND BATTS WITHIN STUD CAVITY | |
| P4 | 7 1/4" | **NON LOAD BEARING ACOUSTICAL PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON 6" 20 GA. STL. STUDS @ 16" O.C. SOUND BATTS WITHIN STUD CAVITY | |
| P5 | SECURE SIDE 7 1/2" | **NON LOAD BEARING SECURITY PARTITION:** 5/8" GYP. BD. OVER 1/4" METAL SECURITY MESH (AMICO SSM .50-13F) TO B.O. ADJ CLG ON 6" 20 GA. STL. STUDS @ 16" O.C.; 5/8" GYP. BD. ON SECURE SIDE OF PARTITION; SOUND BATTS WITHIN STUD CAVITY | |
| P6 | STOCK RM. SIDE / MECH. RM. SIDE 7 1/4" | **NON LOAD BEARING ACOUSTICAL PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON (2) ROWS OF 2 1/2", 20 GA. STL. STUDS @ 16" O.C. & 1" APART; 3 1/2" GLASS FIBER SOUND BATTS ONE SIDE @ SIM LOCATION, (1) LAYER 5/8" GYP. BD. ONLY ON INTERIOR SIDE. | 50-52 STC (WP 5015) |
| P7 | WALL AS SCHED 1/4" | **FURRING:** 5/8" GYP.BD. ON 3 5/8" 20 GA. STL. STUDS @ 24" O.C. ON WALL AS SCHED. SOUND BATTS WITHIN STUD CAVITY ONLY @ EXTERIOR WALL | |
| P8 | CHASE SIDE 1/4" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. (ONE SIDE) ON 3 5/8" 20 GA. STL. STUDS @ 16" O.C. | |
| P9 | CHASE SIDE 6 5/8" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. ON 6" 20 GA. STL. STUDS @ 16" O.C. | |
| P10 | WALL AS SCHED 6 5/8" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. ON 6" 20 GA. STL. STUDS @ 16" O.C. ON WALL AS SCHED | |

**NOTES:**

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2. REFER TO GA FIRE RESISTANCE DESIGN MANUAL FOR MORE SPECIFIC CONSTRUCTION REQUIREMENTS OF FIRE RATED ASSEMBLIES.
3. WHERE A WALL OR PARTITION IS TO RECEIVE TILE OR FRP, USE 5/8" GLASS FIBER FACED GYPSUM BASED TILE BACKER IN LIEU OF STANDARD GYP. BD.
4. PROVIDE 5/8" EXT GRADE PLYWD AT INSIDE OF PARAPET WALLS IN LIEU OF STANDARD GYP. BD.
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6. PROVIDE FLEXIBLE FLASHING AT ALL EXTERIOR PENETRATIONS.
7. REFER TO CRITICAL DIMENSION PLAN FOR PARTITION HEIGHTS.

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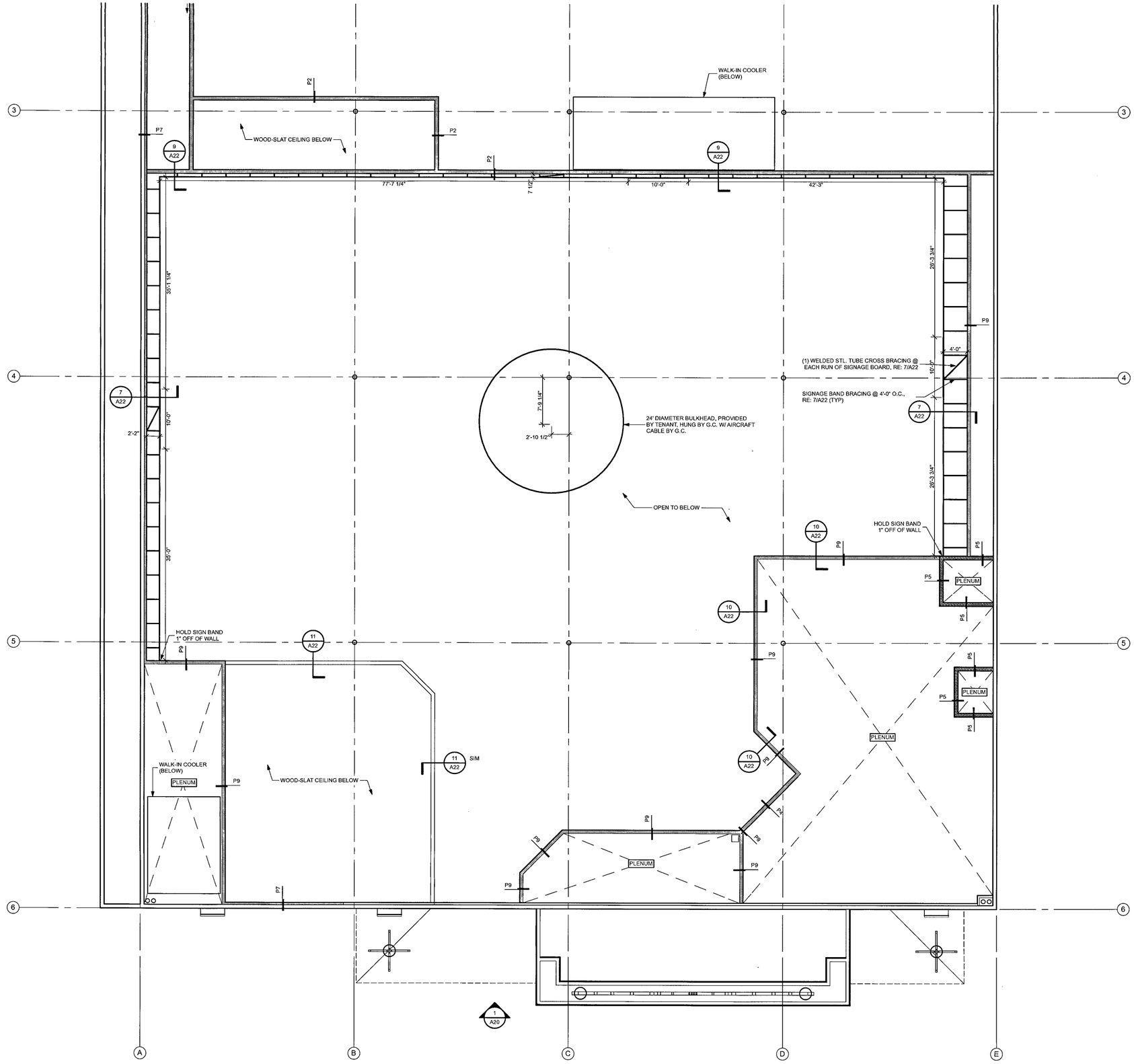
Issue / date

sheet title: Main Level Floor Plan

by: af

app: rf

sheet no.: A6 of 30




## 1 UPPER LEVEL FLOOR PLAN

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

## FLOOR PLAN NOTES

1. SEE CRITICAL DIMENSION PLAN FOR WALL AND FLOOR SINK DIMENSIONS.
2. PROVIDE METAL CORNER BEAD ON ALL EXPOSED CORNERS & EDGES.
3. PORTABLE FIRE EXTINGUISHERS SHALL BE FURNISHED BY G.C. AS REQUIRED BY THE INTERNATIONAL FIRE CODE. EXTINGUISHERS SHALL BE TYPE 3-A, 40-B; C W/ WALL BRACKET MOUNTED SO THAT TOP OF EXTINGUISHER IS @ 5'-0" AFF
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8. REFER TO SHEET A5 FOR PARTITION TYPES.
9. REFER TO SHEET A29 FOR DOOR, FRAME AND WINDOW SCHEDULES.
10. REFER TO 8/A22 FOR TYPICAL GYP.BD. CONTROL JOINT LAYOUT.
11. ALL CONCRETE JOINTS, SEAMS, TIE-INS, ETC. MUST BE CLEAN, NEAT, AND PROFESSIONAL LOOKING.
12. SIGN BAND LENGTHS ARE APPROXIMATE; VERIFY ACTUAL DIMENSIONS IN FIELD.

## FLOOR PLAN LEGEND

- NEW CONSTRUCTION; REFER TO PARTITION TYPES
- NEW DOOR AS SCHEDULED
- WALK-IN REFRIGERATOR/FREEZER WALL (BY OTHERS)

## PARTITION TYPES

| TYPE | PLAN VIEW | ASSEMBLY | RATING (TEST) |
|---|---|---|---|
| P1 | 4 7/8" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON 3 5/8" 20 GA. STL. STUDS @ 16" O.C. | |
| P2 | 7 1/4" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON 6" 20 GA. STL. STUDS @ 16" O.C. | |
| P3 | 4 7/8" | **NON LOAD BEARING ACOUSTICAL PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON 3 5/8" 20 GA. STL. STUDS @ 16" O.C. SOUND BATTS WITHIN STUD CAVITY | |
| P4 | 7 1/4" | **NON LOAD BEARING ACOUSTICAL PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON 6" 20 GA. STL. STUDS @ 16" O.C. SOUND BATTS WITHIN STUD CAVITY | |
| P5 | SECURE SIDE, 7 1/2" | **NON LOAD BEARING SECURITY PARTITION:** 5/8" GYP. BD. OVER 1/4" METAL SECURITY MESH (AMICO SSM .50-13F) TO B.O. ADJ CLG ON 6" 20 GA. STL. STUDS @ 16" O.C.; 5/8" GYP. BD. ON SECURE SIDE OF PARTITION; SOUND BATTS WITHIN STUD CAVITY | |
| P6 | STOCK RM. SIDE, MECH. RM. SIDE, 7 1/4" | **NON LOAD BEARING ACOUSTICAL PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON (2) ROWS OF 2 1/2", 20 GA. STL. STUDS @ 16" O.C. & 1" APART; 3 1/2" GLASS FIBER SOUND BATTS ONE SIDE. @ SIM LOCATION, (1) LAYER 5/8" GYP. BD. ONLY ON INTERIOR SIDE. | 50-52 STC (WP 5015) |
| P7 | WALL AS SCHED, 4 1/4" | **FURRING:** 5/8" GYP.BD. ON 3 5/8" 20 GA. STL. STUDS @ 24" O.C. ON WALL AS SCHED. SOUND BATTS WITHIN STUD CAVITY ONLY @ EXTERIOR WALL | |
| P8 | CHASE SIDE, 4 1/4" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. (ONE SIDE) ON 3 5/8" 20 GA. STL. STUDS @ 16" O.C. | |
| P9 | CHASE SIDE, 6 5/8" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. ON 6" 20 GA. STL. STUDS @ 16" O.C. | |
| P10 | WALL AS SCHED, 6 5/8" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. ON 6" 20 GA. STL. STUDS @ 16" O.C. ON WALL AS SCHED | |

**NOTES:**

1. WHERE PARTITION IS LESS THAN 10' HIGH AND NON LOAD BEARING, 25 GA. STL. FRAMING IS ACCEPTABLE.
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3. WHERE A WALL OR PARTITION IS TO RECEIVE TILE OR FRP, USE 5/8" GLASS FIBER FACED GYPSUM BASED TILE BACKER IN LIEU OF STANDARD GYP. BD.
4. PROVIDE 5/8" EXT GRADE PLYWD AT INSIDE OF PARAPET WALLS IN LIEU OF STANDARD GYP. BD.
5. ALL BATT INSULATION (SOUND & THERMAL) SHALL BE FORMALDEHYDE FREE.
6. PROVIDE FLEXIBLE FLASHING AT ALL EXTERIOR PENETRATIONS.
7. REFER TO CRITICAL DIMENSION PLAN FOR PARTITION HEIGHTS.

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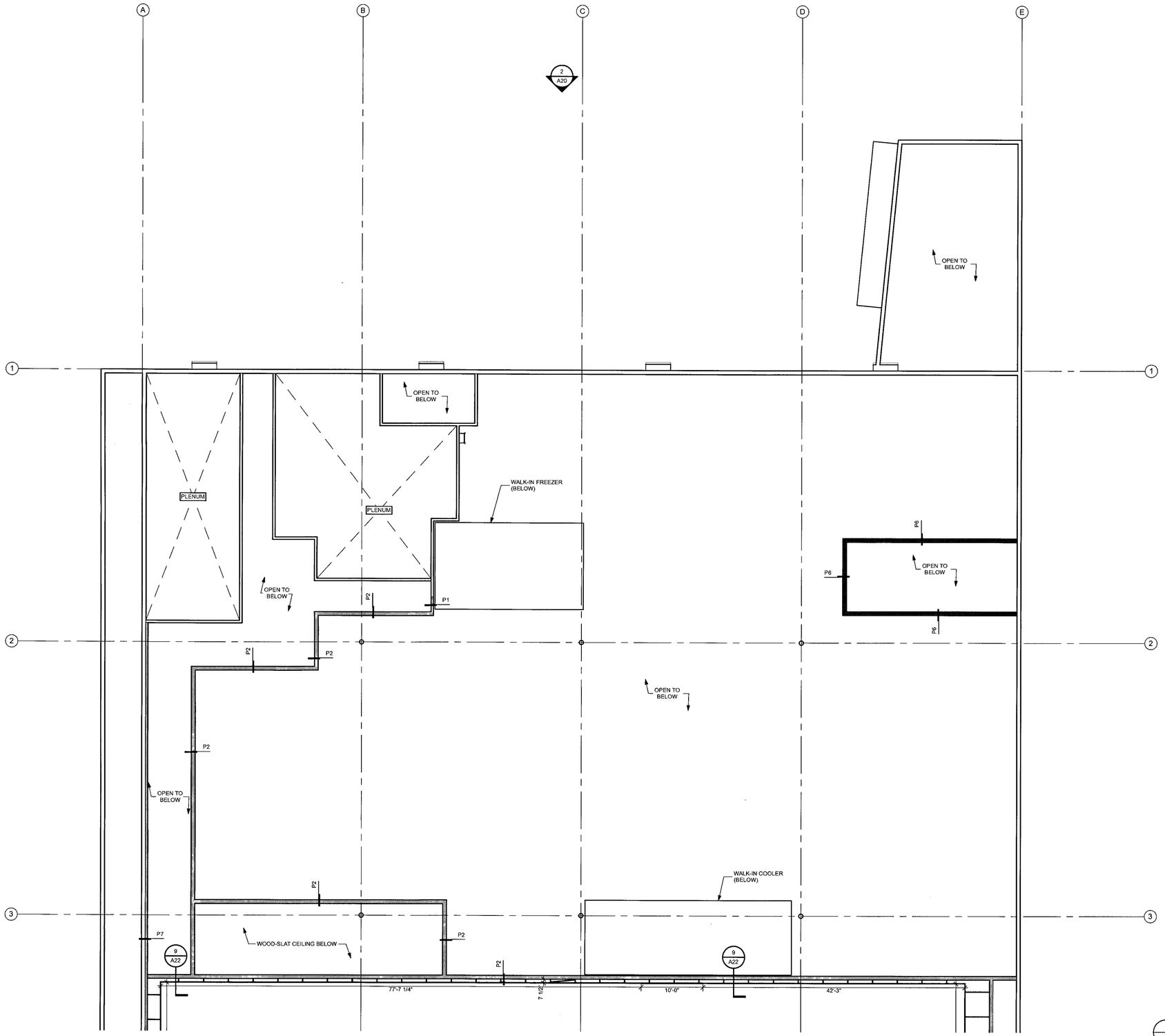
issue / date

sheet title: Upper Level Floor Plan

by: af

app: rf

sheet no.: A7 of 30




## 1 UPPER LEVEL FLOOR PLAN

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

0 4' 8' 16'

## FLOOR PLAN NOTES

1. SEE CRITICAL DIMENSION PLAN FOR WALL AND FLOOR SINK DIMENSIONS.
2. PROVIDE METAL CORNER BEAD ON ALL EXPOSED CORNERS & EDGES.
3. PORTABLE FIRE EXTINGUISHERS SHALL BE FURNISHED BY G.C. AS REQUIRED BY THE INTERNATIONAL FIRE CODE. EXTINGUISHERS SHALL BE TYPE 3-A, 40-B; C W/ WALL BRACKET MOUNTED SO THAT TOP OF EXTINGUISHER IS @ 5'-0" AFF
4. NO OSB, PARTICLE BOARD OR CHIPBOARD ALLOWED FOR ANY ITEM IN PROJECT. ALL PLYWOOD TO BE FORMALDEHYDE FREE.
5. PARTITIONS ARE TYPE P1 UNLESS OTHERWISE INDICATED. PARTITION TYPES CONTINUE AT OPENINGS AND AROUND CORNERS, UNO.
6. REFER TO EQUIPMENT / FIXTURE SCHEDULE (SHEET A19) FOR KEY TO EQUIPMENT IDENTIFIERS.
7. REFER TO FIXTURE PLAN 1/A17 & 1/A18 AND ENLARGED PLANS (SHEET A26) FOR ADDITIONAL EQUIPMENT.
8. REFER TO SHEET A5 FOR PARTITION TYPES.
9. REFER TO SHEET A29 FOR DOOR, FRAME AND WINDOW SCHEDULES.
10. REFER TO 8/A22 FOR TYPICAL GYP.BD. CONTROL JOINT LAYOUT.
11. ALL CONCRETE JOINTS, SEAMS, TIE-INS, ETC. MUST BE CLEAN, NEAT, AND PROFESSIONAL LOOKING.
12. SIGN BAND LENGTHS ARE APPROXIMATE; VERIFY ACTUAL DIMENSIONS IN FIELD.

## FLOOR PLAN LEGEND

NEW CONSTRUCTION; REFER TO PARTITION TYPES

NEW DOOR AS SCHEDULED

WALK-IN REFRIGERATOR/FREEZER WALL (BY OTHERS)

## PARTITION TYPES

| TYPE | PLAN VIEW | ASSEMBLY | RATING (TEST) |
|---|---|---|---|
| P1 | 4 7/8" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON 3 5/8" 20 GA. STL. STUDS @ 16" O.C. | |
| P2 | 7 1/4" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON 6" 20 GA. STL. STUDS @ 16" O.C. | |
| P3 | 4 7/8" | **NON LOAD BEARING ACOUSTICAL PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON 3 5/8" 20 GA. STL. STUDS @ 16" O.C. SOUND BATTS WITHIN STUD CAVITY | |
| P4 | 7 1/4" | **NON LOAD BEARING ACOUSTICAL PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON 6" 20 GA. STL. STUDS @ 16" O.C. SOUND BATTS WITHIN STUD CAVITY | |
| P5 | SECURE SIDE 7 1/2" | **NON LOAD BEARING SECURITY PARTITION:** 5/8" GYP. BD. OVER 1/4" METAL SECURITY MESH (AMICO SSM .50-13F) TO B.O. ADJ CLG ON 6" 20 GA. STL. STUDS @ 16" O.C.; 5/8" GYP. BD. ON SECURE SIDE OF PARTITION; SOUND BATTS WITHIN STUD CAVITY | |
| P6 | STOCK RM. SIDE MECH. RM. SIDE 7 1/4" | **NON LOAD BEARING ACOUSTICAL PARTITION:** (1) LAYER 5/8" GYP. BD. (EA. SIDE) ON (2) ROWS OF 2 1/2", 20 GA. STL. STUDS @ 16" O.C. & 1" APART; 3 1/2" GLASS FIBER SOUND BATTS ONE SIDE. @ SIM LOCATION, (1) LAYER 5/8" GYP. BD. ONLY ON INTERIOR SIDE. | 50-52 STC (WP 5015) |
| P7 | WALL AS SCHED 4 1/4" | **FURRING:** 5/8" GYP.BD. ON 3 5/8" 20 GA. STL. STUDS @ 24" O.C. ON WALL AS SCHED. SOUND BATTS WITHIN STUD CAVITY ONLY @ EXTERIOR WALL | |
| P8 | CHASE SIDE 4 1/4" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. (ONE SIDE) ON 3 5/8" 20 GA. STL. STUDS @ 16" O.C. | |
| P9 | CHASE SIDE 6 5/8" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. ON 6" 20 GA. STL. STUDS @ 16" O.C. | |
| P10 | WALL AS SCHED 6 5/8" | **NON LOAD BEARING PARTITION:** (1) LAYER 5/8" GYP. BD. ON 6" 20 GA. STL. STUDS @ 16" O.C. ON WALL AS SCHED | |

**NOTES:**

1. WHERE PARTITION IS LESS THAN 10' HIGH AND NON LOAD BEARING, 25 GA. STL. FRAMING IS ACCEPTABLE.
2. REFER TO GA FIRE RESISTANCE DESIGN MANUAL FOR MORE SPECIFIC CONSTRUCTION REQUIREMENTS OF FIRE RATED ASSEMBLIES.
3. WHERE A WALL OR PARTITION IS TO RECEIVE TILE OR FRP, USE 5/8" GLASS FIBER FACED GYPSUM BASED TILE BACKER IN LIEU OF STANDARD GYP. BD.
4. PROVIDE 5/8" EXT GRADE PLYWD AT INSIDE OF PARAPET WALLS IN LIEU OF STANDARD GYP. BD.
5. ALL BATT INSULATION (SOUND & THERMAL) SHALL BE FORMALDEHYDE FREE.
6. PROVIDE FLEXIBLE FLASHING AT ALL EXTERIOR PENETRATIONS.
7. REFER TO CRITICAL DIMENSION PLAN FOR PARTITION HEIGHTS.

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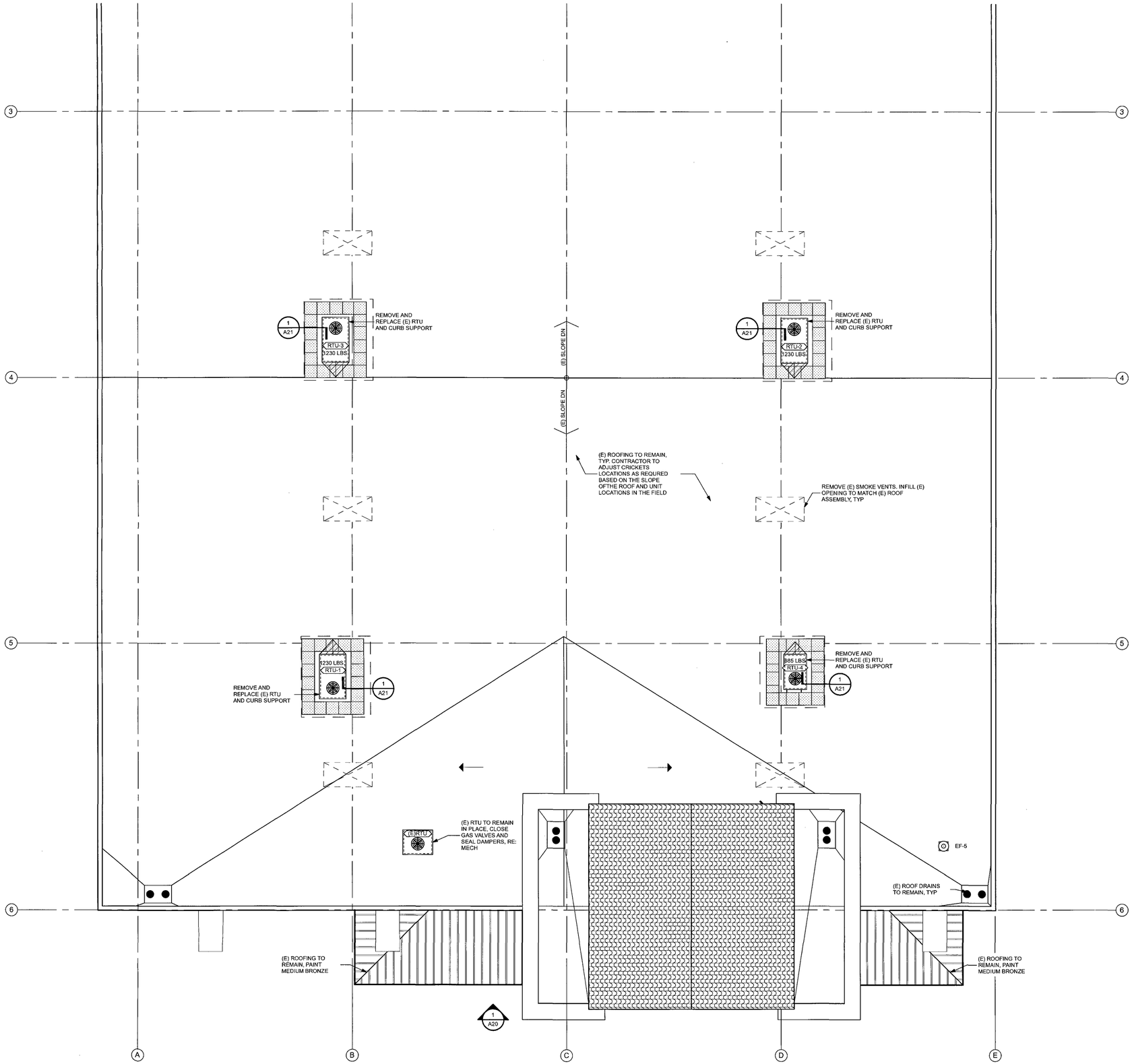
issue / date

sheet title: Upper Level Floor Plan

by: af

app: rf

sheet no.: A8 of 30




## 1 ROOF PLAN

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

## ROOF PLAN NOTES

1. MAINTAIN A MINIMUM SLOPE OF 1/4" PER FOOT, UNO.
2. REFER TO STRUCTURAL DRAWINGS FOR LOCATIONS OF ROOF TOP EQUIPMENT AND CURBS.
3. ENSURE EQUIPMENT CURBS OVERHANG JOISTS BELOW EQUALLY ON EACH SIDE AND CENTER EQUIPMENT ACCORDINGLY.
4. THE PLACEMENT OF ROOFTOP EQUIPMENT IS CRITICAL. IF ROOF TOP EQUIPMENT IS UNABLE TO BE LOCATED AS INDICATED, NOTIFY ARCHITECT BEFORE EQUIPMENT IS INSTALLED IN A DIFFERENT LOCATION.
5. INSTALL CRICKETS AT ALL ROOFTOP EQUIPMENT AS SHOWN.
6. ENSURE ALL EXHAUST VENTS AND AIR INTAKES ARE A MINIMUM OF 10'-0" APART.
7. DO NOT LOCATE EQUIPMENT LESS THAN 10'-0" FROM PARAPET WALLS, UNO.
8. SEALANT POCKETS & PITCH POCKETS ARE NOT ACCEPTABLE FOR ANY PENETRATION OTHER THAN REFRIGERATION LINES AND RELATED REFRIGERATION EQUIPMENT.
9. ROOF CURBS SHALL HAVE THE CURB SET BY THE MECHANICAL OR REFRIGERATION CONTRACTOR. G.C. SHALL ENSURE ALL CURBS ARE INSTALLED LEVEL AND VERIFY PLACEMENT PER THE DRAWINGS. FLASHING, COUNTER-FLASHING, NAILERS, TO BE INSTALLED BY ROOFING CONTRACTOR.
10. NEOPRENE FLASHING IS NOT PERMITTED.
11. ALL SINGLE-PLY FLASHING TO BE REINFORCED.
12. ALL WOOD USED ON ROOF FOR NAILERS, CURBS, BLOCKING ETC., SHALL BE PRESSURE TREATED EXCEPT THAT PROVIDED BY TENANT SALES. ENSURE FASTENERS ARE APPROVED FOR PRESSURE TREATED WOOD. IF PT. WD. IS IN DIRECT CONTACT WITH OTHER METALS, PROVIDE MEMBRANE BARRIER TO PREVENT CORROSION OF METAL BY CHEMICALS USED IN THE PT. PROCESS. **NAILS ARE NOT PERMITTED AT ANY LOCATION ON THE ROOF, ABOVE OR BELOW THE MEMBRANE.**
13. G.C. TO ENSURE THAT ALL LOOSE ITEMS THAT COULD PUNCTURE THE ROOF MEMBRANE (NAILS, SCREWS, SCRAP SHEET METAL) ARE REMOVED IMMEDIATELY.
14. PROVIDE ADHESIVE WALKWAY PADS TO ENSURE A PROTECTED PATH OF TRAVEL AROUND ALL MECHANICAL EQUIPMENT AND ACCESS POINTS.
15. ALL MEMBRANES, ADHESIVES, SEAM PLATES, COVER BOARDS, ETC. TO BE COMPATIBLE AND APPROVED BY ROOFING MEMBRANE MFR. FOR USE TOGETHER.
16. ROOF DETAILS (RE: SHEET A21) ARE PROVIDED TO INDICATE DESIGN INTENT ONLY. ALL ROOFING DETAILS ARE TO BE APPROVED BY THE ROOFING MFR. FOR USE WITH THIS PROJECT TO COMPLY WITH A 20 YEAR WARRANTY. DETAILS BY THE ARCHITECT DO NOT OVERRIDE THE INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS OF THE MEMBRANE MFR. NOTIFY ARCHITECT OF ANY DISCREPANCY.
17. PAINT ALL EXPOSED GAS PIPING BRIGHT YELLOW.

## ROOF PLAN LEGEND

| | | | |
|---|---|---|---|
| SLOPE DN 1/2":1'-0" | SLOPE OF STRUCTURE (AS INDICATED) | SCP | SCUPPER |
| | SLOPE OF INSULATION | OFS | OVERFLOW SCUPPER |
| | (E) MEMBRANE ROOFING | VTR | VENT THROUGH ROOF |
| | CRICKET (TAPERED INSULATION) | | EXHAUST FAN |
| | (E) CRICKET (TAPERED INSULATION) | | |

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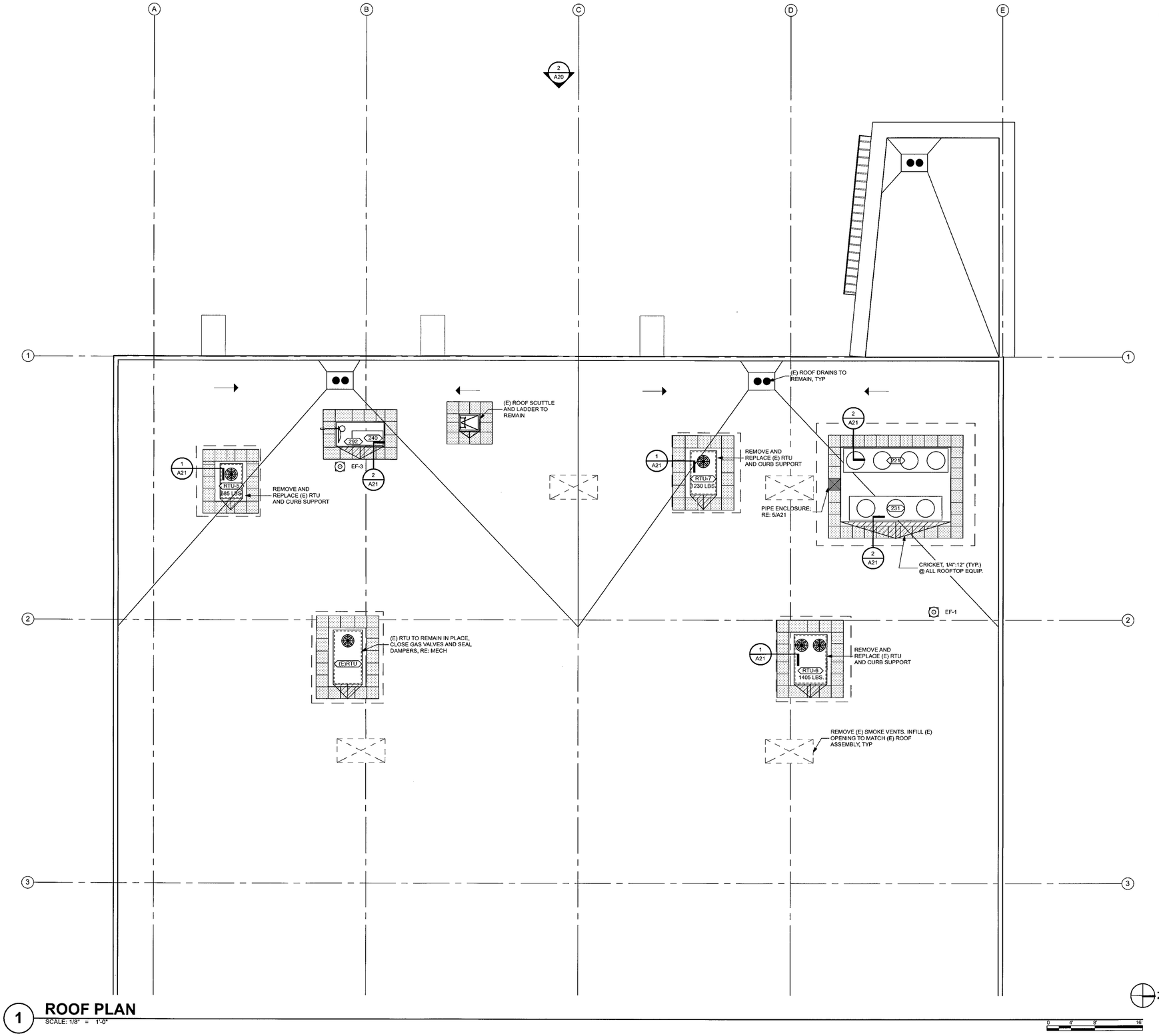
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sheet title: Roof Plan

by: af

app: rf

sheet no.: A9 of 30




1 **ROOF PLAN**
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

## ROOF PLAN NOTES

1. MAINTAIN A MINIMUM SLOPE OF 1/4" PER FOOT, UNO.
2. REFER TO STRUCTURAL DRAWINGS FOR LOCATIONS OF ROOF TOP EQUIPMENT AND CURBS.
3. ENSURE EQUIPMENT CURBS OVERHANG JOISTS BELOW EQUALLY ON EACH SIDE AND CENTER EQUIPMENT ACCORDINGLY.
4. THE PLACEMENT OF ROOFTOP EQUIPMENT IS CRITICAL. IF ROOF TOP EQUIPMENT IS UNABLE TO BE LOCATED AS INDICATED, NOTIFY ARCHITECT BEFORE EQUIPMENT IS INSTALLED IN A DIFFERENT LOCATION.
5. INSTALL CRICKETS AT ALL ROOFTOP EQUIPMENT AS SHOWN.
6. ENSURE ALL EXHAUST VENTS AND AIR INTAKES ARE A MINIMUM OF 10'-0" APART.
7. DO NOT LOCATE EQUIPMENT LESS THAN 10'-0" FROM PARAPET WALLS, UNO.
8. SEALANT POCKETS & PITCH POCKETS ARE NOT ACCEPTABLE FOR ANY PENETRATION OTHER THAN REFRIGERATION LINES AND RELATED REFRIGERATION EQUIPMENT.
9. ROOF CURBS SHALL HAVE THE CURB SET BY THE MECHANICAL OR REFRIGERATION CONTRACTOR. G.C. SHALL ENSURE ALL CURBS ARE INSTALLED LEVEL AND VERIFY PLACEMENT PER THE DRAWINGS. FLASHING, COUNTER-FLASHING, NAILERS, TO BE INSTALLED BY ROOFING CONTRACTOR.
10. NEOPRENE FLASHING IS NOT PERMITTED.
11. ALL SINGLE-PLY FLASHING TO BE REINFORCED.
12. ALL WOOD USED ON ROOF FOR NAILERS, CURBS, BLOCKING ETC., SHALL BE PRESSURE TREATED EXCEPT THAT PROVIDED BY TENANT SALES. ENSURE FASTENERS ARE APPROVED FOR PRESSURE TREATED WOOD. IF PT. WD. IS IN DIRECT CONTACT WITH OTHER METALS, PROVIDE MEMBRANE BARRIER TO PREVENT CORROSION OF METAL BY CHEMICALS USED IN THE PT. PROCESS. **NAILS ARE NOT PERMITTED AT ANY LOCATION ON THE ROOF, ABOVE OR BELOW THE MEMBRANE.**
13. G.C. TO ENSURE THAT ALL LOOSE ITEMS THAT COULD PUNCTURE THE ROOF MEMBRANE (NAILS, SCREWS, SCRAP SHEET METAL) ARE REMOVED IMMEDIATELY.
14. PROVIDE ADHESIVE WALKWAY PADS TO ENSURE A PROTECTED PATH OF TRAVEL AROUND ALL MECHANICAL EQUIPMENT AND ACCESS POINTS.
15. ALL MEMBRANES, ADHESIVES, SEAM PLATES, COVER BOARDS, ETC. TO BE COMPATIBLE AND APPROVED BY ROOFING MEMBRANE MFR. FOR USE TOGETHER.
16. ROOF DETAILS (RE: SHEET A21) ARE PROVIDED TO INDICATE DESIGN INTENT ONLY. ALL ROOFING DETAILS ARE TO BE APPROVED BY THE ROOFING MFR. FOR USE WITH THIS PROJECT TO COMPLY WITH A 20 YEAR WARRANTY. DETAILS BY THE ARCHITECT DO NOT OVERRIDE THE INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS OF THE MEMBRANE MFR. NOTIFY ARCHITECT OF ANY DISCREPANCY.
17. PAINT ALL EXPOSED GAS PIPING BRIGHT YELLOW.

## ROOF PLAN LEGEND

| | | | |
|---|---|---|---|
| SLOPE DN 1/2":1'-0" | SLOPE OF STRUCTURE (AS INDICATED) | SCP | SCUPPER |
| | SLOPE OF INSULATION | OFS | OVERFLOW SCUPPER |
| | (E) MEMBRANE ROOFING | VTR | VENT THROUGH ROOF |
| | CRICKET (TAPERED INSULATION) | | EXHAUST FAN |
| | (E) CRICKET (TAPERED INSULATION) | | |

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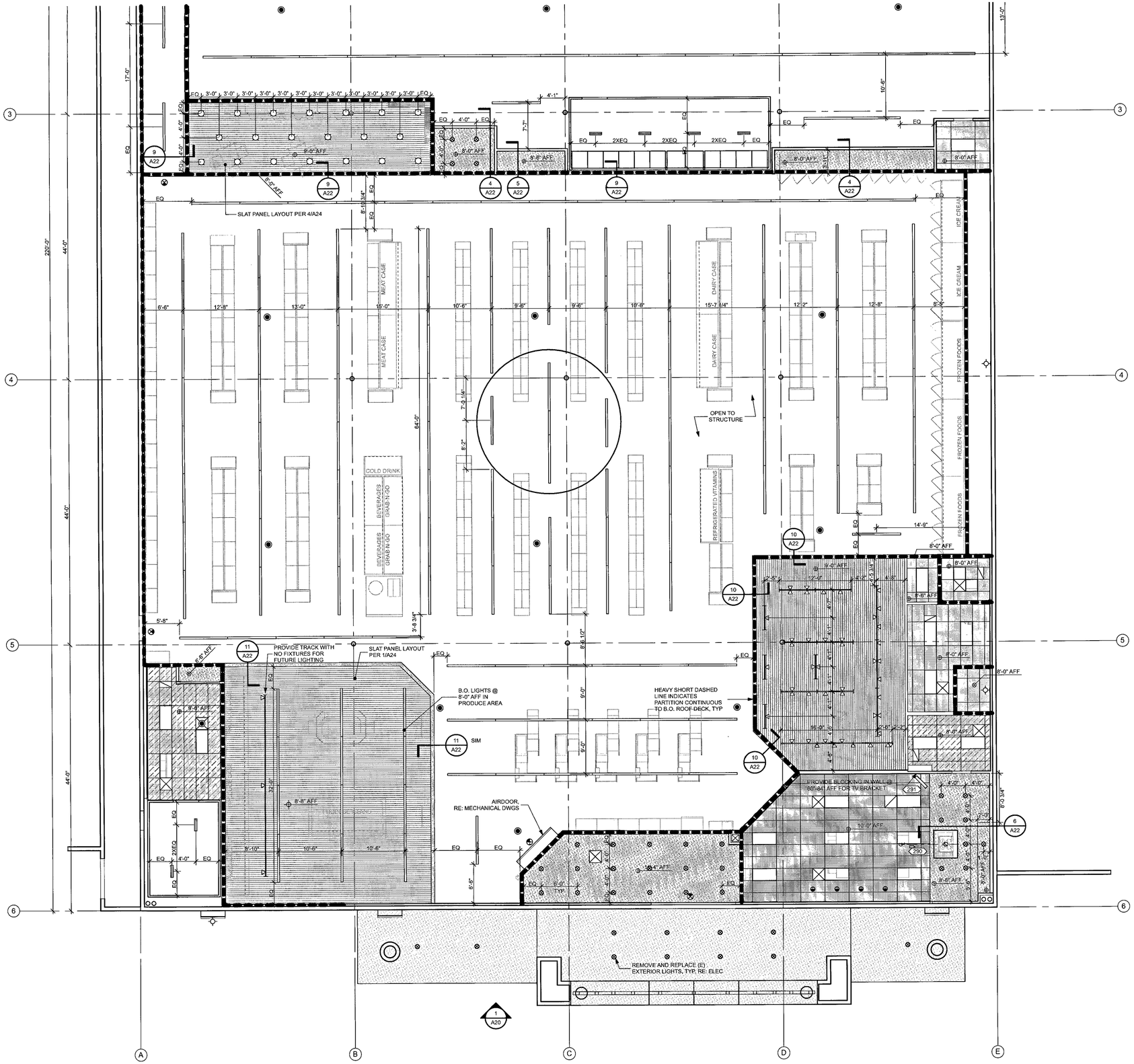
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by: af

app: rf

sheet no.: A10 of 30




## 1 MAIN LEVEL REFLECTED CEILING

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

## REFLECTED CEILING NOTES

1. REFER TO FLOOR PLANS FOR ROOM NAMES AND NUMBERS.
2. ALL DROPPED CEILINGS ARE 9'-0" ABOVE FINISH FLOOR, UNLESS OTHERWISE NOTED.
3. ALL REFLECTED CEILING PLAN DIMENSIONS ARE FROM FINISHED FACE TO FINISHED FACE.
4. ALL CEILING GRIDS ARE CENTERED ON ROOM OR CORRIDOR, UNO.
5. ALL FIXTURES SHOWN AT CEILING GRID TO BE CENTERED IN BOTH DIRECTIONS WITHIN THE TILE. CENTER ALL CEILING MOUNTED ITEMS WITHIN CEILING ELEMENTS, IN GYPSUM BOARD SOFFITS, AND BETWEEN OTHER CEILING MOUNTED FIXTURES.
6. COORDINATE ACCESS PANEL LOCATIONS WITH LOCATIONS OF OTHER CEILING MOUNTED ITEMS.
7. REFER TO ELECTRICAL AND MECHANICAL DRAWINGS FOR FIXTURE TYPES.
8. EMERGENCY LIGHTING SHALL REMAIN FUNCTIONAL DURING AND AFTER CONSTRUCTION.
9. REFER TO 8/A22 FOR TYPICAL GYP.BD. CONTROL JOINT LAYOUT
10. TERMINATE ALL PARTITIONS 8" ABOVE HIGHEST ADJACENT CEILING PER 3/A22, UNO.
11. PARTITIONS WITHOUT ADJACENT CEILINGS SHALL EXTEND TO STRUCTURE PER 1 AND 2/A22, UNO.
12. EXIT SIGNAGE MUST BE TACTILE PER IBC 1011.3.
13. REFER TO MECHANICAL FOR ALL AIRIUS FAN AND SIDEWALL DIFFUSER LOCATIONS.

NO ITEMS SHALL BE SUSPENDED FROM/ATTACHED TO THE ROOF DECK INCLUDING LIGHT FIXTURES, MECHANICAL EQUIPMENT, FIRE SPRINKLERS, AND SUSPENDED CEILINGS UNLESS SPECIFICALLY NOTED ON DRAWINGS.

## REFLECTED CEILING LEGEND

| SYMBOL | DESCRIPTION | HEIGHT |
|---|---|---|
| | RECESSED LED CAN LIGHT | CLG. |
| | RECESSED LED CAN WALLWASHER | CLG. |
| | WALL MOUNT LED FIXTURE | PER ELEC. |
| | PENDANT MOUNT FIXTURE | PER ELEC. |
| | WALL MOUNT LED FIXTURE | PER ELEC. |
| | TRACK LIGHTING FIXTURE | PER ELEC. |
| EXIT | EXIT SIGN | ABOVE DOOR |
| | 2x4 LED LAY-IN FIXTURE | CLG. |
| | 8' LED SUSPENDED STRIP FIXTURE | 9'-0" AFF, U.N.O. |
| | 4' LED SUSPENDED STRIP FIXTURE | 9'-0" AFF, U.N.O. |
| | SURFACE MOUNTED LED LIGHT, COORD. PLACEMENT W/ FAN COIL ZONE IN WALK-IN FREEZERS | CLG. |
| | SUPPLY DIFFUSER | CLG. |
| | RETURN DIFFUSER | CLG. |
| | AIRIUS THERMAL EQUALIZER FAN - SUSPENDED | RE: 7/A27 |
| | AIRIUS THERMAL EQUALIZER FAN - SUSPENDED CEILING TILE KIT | CLG. |
| | EXHAUST FAN | CLG. |
| | 2x4 SUSPENDED LAY-IN ACOUSTIC TILE CEILING (WHITE STANDARD EXPOSED "T" & WHITE TILES), PROVIDE SOUND BATTS ON TOP OF TILES. | PER PLAN |
| | 2x4 SUSPENDED LAY-IN HARD-WIPE VINYL ACOUSTIC TILE CEILING (WHITE STANDARD EXPOSED "T" & WHITE TILES), PROVIDE SOUND BATTS ON TOP OF TILES EXCEPT IN PRODUCE ROOM. | PER PLAN |
| | 2x4 SUSPENDED LAY-IN ACOUSTIC TILE CEILING (WHITE STANDARD EXPOSED "T" & HIGH-NRC (NRC 0.90 MIN) WHITE TILES). PROVIDE SOUND BATTS ON TOP OF TILES. | PER PLAN |
| | 5/8" GYP. BD. CEILING ATTACHED TO SUSPENDED DRYWALL GRID SYSTEM | PER PLAN |
| | MORINGSTAR HORIZONTAL PATTERN NATURAL 3 3/4" x 5/8" TONGUE AND GROOVE BAMBOO FLOORING ON 3/4" PLYWD ATTACHED TO SUSPENDED DRYWALL GRID SYSTEM | PER PLAN |
| | SUSPENDED WOOD SLAT CEILING @ 3 MEMBERS/LINEAR FT. ON 15/16" HEAVY DUTY T-BAR MAIN RUNNER @ 2'-0" O.C. PAINTED BLACK (REFER TO SHEET A24) | PER PLAN |

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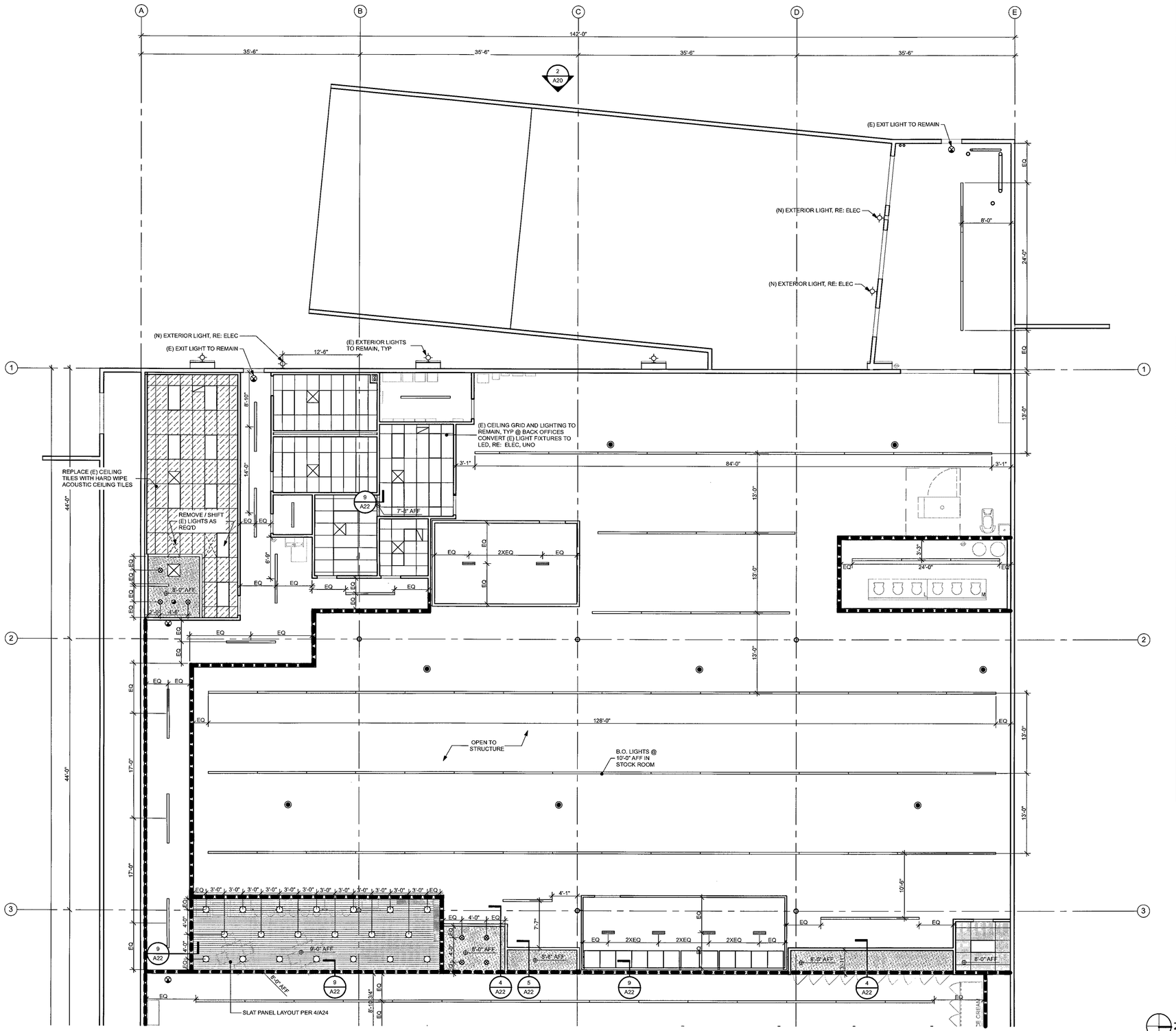
issue / date

sheet title: Main Level Reflected Ceiling Plan

by: af

app: rf

sheet no.: A11 of 30




## 1 MAIN LEVEL REFLECTED CEILING

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

0 4" 8" 16"

## REFLECTED CEILING NOTES

1. REFER TO FLOOR PLANS FOR ROOM NAMES AND NUMBERS.
2. ALL DROPPED CEILINGS ARE 9'-0" ABOVE FINISH FLOOR, UNLESS OTHERWISE NOTED.
3. ALL REFLECTED CEILING PLAN DIMENSIONS ARE FROM FINISHED FACE TO FINISHED FACE.
4. ALL CEILING GRIDS ARE CENTERED ON ROOM OR CORRIDOR, UNO.
5. ALL FIXTURES SHOWN AT CEILING GRID TO BE CENTERED IN BOTH DIRECTIONS WITHIN THE TILE. CENTER ALL CEILING MOUNTED ITEMS WITHIN CEILING ELEMENTS, IN GYPSUM BOARD SOFFITS, AND BETWEEN OTHER CEILING MOUNTED FIXTURES.
6. COORDINATE ACCESS PANEL LOCATIONS WITH LOCATIONS OF OTHER CEILING MOUNTED ITEMS.
7. REFER TO ELECTRICAL AND MECHANICAL DRAWINGS FOR FIXTURE TYPES.
8. EMERGENCY LIGHTING SHALL REMAIN FUNCTIONAL DURING AND AFTER CONSTRUCTION.
9. REFER TO 8/A22 FOR TYPICAL GYP.BD. CONTROL JOINT LAYOUT
10. TERMINATE ALL PARTITIONS 8" ABOVE HIGHEST ADJACENT CEILING PER 3/A22, UNO.
11. PARTITIONS WITHOUT ADJACENT CEILINGS SHALL EXTEND TO STRUCTURE PER 1 AND 2/A22, UNO.
12. EXIT SIGNAGE MUST BE TACTILE PER IBC 1011.3.
13. REFER TO MECHANICAL FOR ALL AIRIUS FAN AND SIDEWALL DIFFUSER LOCATIONS.

NO ITEMS SHALL BE SUSPENDED FROM/ATTACHED TO THE ROOF DECK INCLUDING LIGHT FIXTURES, MECHANICAL EQUIPMENT, FIRE SPRINKLERS, AND SUSPENDED CEILINGS UNLESS SPECIFICALLY NOTED ON DRAWINGS.

## REFLECTED CEILING LEGEND

| SYMBOL | DESCRIPTION | HEIGHT |
|---|---|---|
| ⊗ | RECESSED LED CAN LIGHT | CLG. |
| ◐ | RECESSED LED CAN WALLWASHER | CLG. |
| | WALL MOUNT LED FIXTURE | PER ELEC. |
| | PENDANT MOUNT FIXTURE | PER ELEC. |
| | WALL MOUNT LED FIXTURE | PER ELEC. |
| | TRACK LIGHTING FIXTURE | PER ELEC. |
| EXIT | EXIT SIGN | ABOVE DOOR |
| | 2x4 LED LAY-IN FIXTURE | CLG. |
| | 8' LED SUSPENDED STRIP FIXTURE | 9'-0" AFF, U.N.O. |
| | 4' LED SUSPENDED STRIP FIXTURE | 9'-0" AFF, U.N.O. |
| | SURFACE MOUNTED LED LIGHT; COORD. PLACEMENT W/ FAN COIL ZONE IN WALK-IN FREEZERS | CLG. |
| | SUPPLY DIFFUSER | CLG. |
| | RETURN DIFFUSER | CLG. |
| | AIRIUS THERMAL EQUALIZER FAN - SUSPENDED | RE: 7/A27 |
| | AIRIUS THERMAL EQUALIZER FAN - SUSPENDED CEILING TILE KIT | CLG. |
| | EXHAUST FAN | CLG. |
| | 2x4 SUSPENDED LAY-IN ACOUSTIC TILE CEILING (WHITE STANDARD EXPOSED "T" & WHITE TILES). PROVIDE SOUND BATTS ON TOP OF TILES. | PER PLAN |
| | 2x4 SUSPENDED LAY-IN HARD-WIPE VINYL ACOUSTIC TILE CEILING (WHITE STANDARD EXPOSED "T" & WHITE TILES). PROVIDE SOUND BATTS ON TOP OF TILES EXCEPT IN PRODUCE ROOM. | PER PLAN |
| | 2x4 SUSPENDED LAY-IN ACOUSTIC TILE CEILING (WHITE STANDARD EXPOSED "T" & HIGH-NRC (NRC 0.90 MIN) WHITE TILES). PROVIDE SOUND BATTS ON TOP OF TILES. | PER PLAN |
| | 5/8" GYP. BD. CEILING ATTACHED TO SUSPENDED DRYWALL GRID SYSTEM | PER PLAN |
| | MORINGSTAR HORIZONTAL PATTERN NATURAL 3 3/4" x 5/8" TONGUE AND GROOVE BAMBOO FLOORING ON 3/4" PLYWD ATTACHED TO SUSPENDED DRYWALL GRID SYSTEM | PER PLAN |
| | SUSPENDED WOOD SLAT CEILING @ 3 MEMBERS/LINEAR FT. ON 15/16" HEAVY DUTY T-BAR MAIN RUNNER @ 2'-0" O.C. PAINTED BLACK (REFER TO SHEET A24) | PER PLAN |

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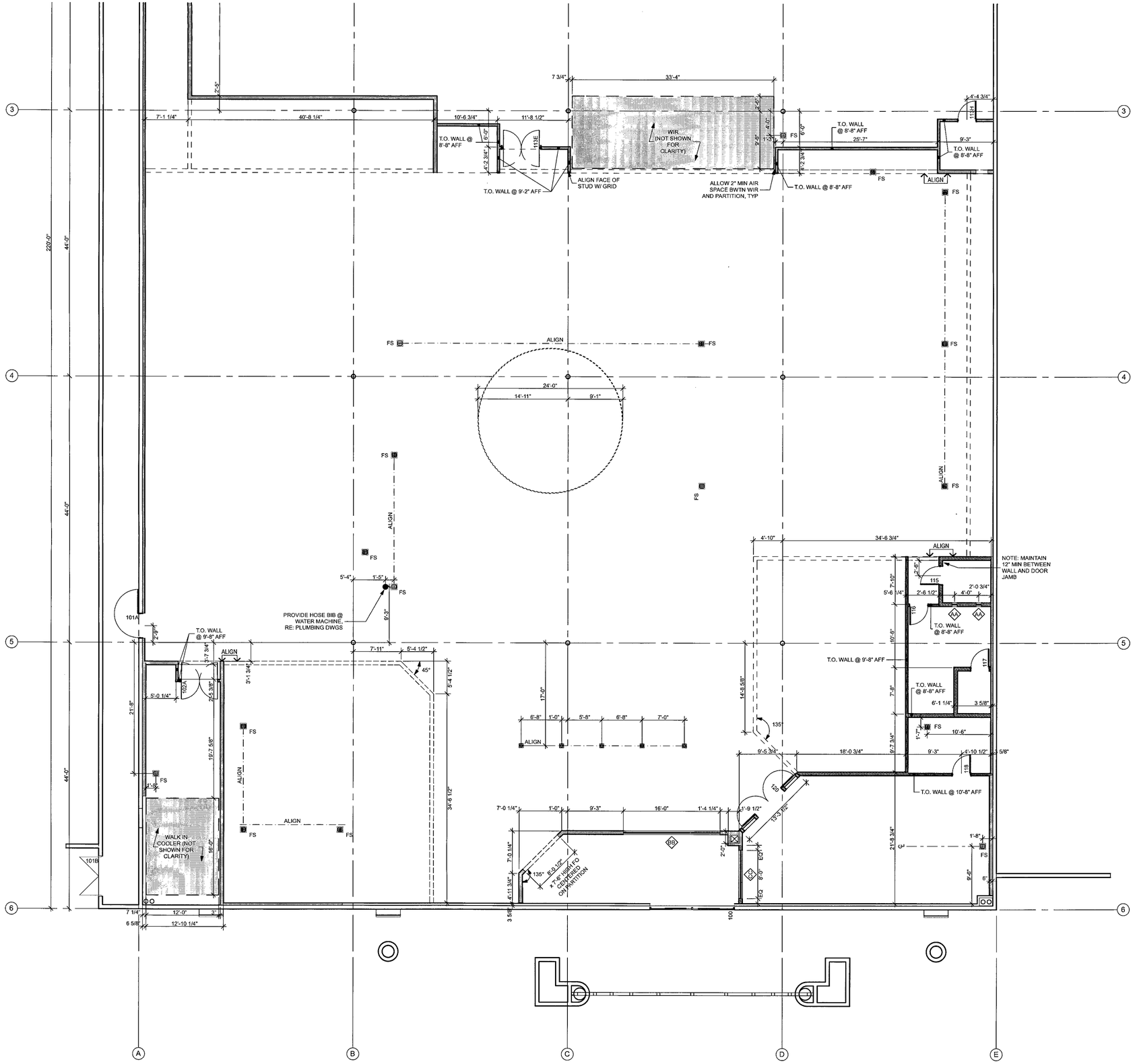
Issue / date

sheet title: Main Level Reflected Ceiling Plan

by: af

app: rf

sheet no.: A12 of 30




# CRITICAL DIMENSION PLAN NOTES

1. REFER TO FLOOR PLANS FOR ROOM NAMES AND NUMBERS.
2. DIMENSIONS ARE TO GRID LINES AND TO THE FACE OF STUDS, MASONRY, AND CONCRETE OF NEW WALLS UNLESS OTHERWISE NOTED.
3. FLOOR SINK DIMENSIONS ARE FROM FINISHED FACE OF WALL.
4. OPENINGS WITHIN STUD CONSTRUCTION ARE DIMENSIONED TO THEIR CENTERLINE.
5. DOOR OPENINGS WITHIN STUD PARTITIONS SHALL BE LOCATED WITH THE HINGE SIDE 4 1/2" FROM FACE OF STUD OF THE ADJACENT PARTITION, UNO.
6. REFER TO ENLARGED PLANS FOR ADDITIONAL DIMENSIONS.

PARTITIONS ARE CONTINUOUS TO BOTTOM OF ROOF DECK, UNO.

## 1 MAIN LEVEL CRITICAL DIMENSION PLAN

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

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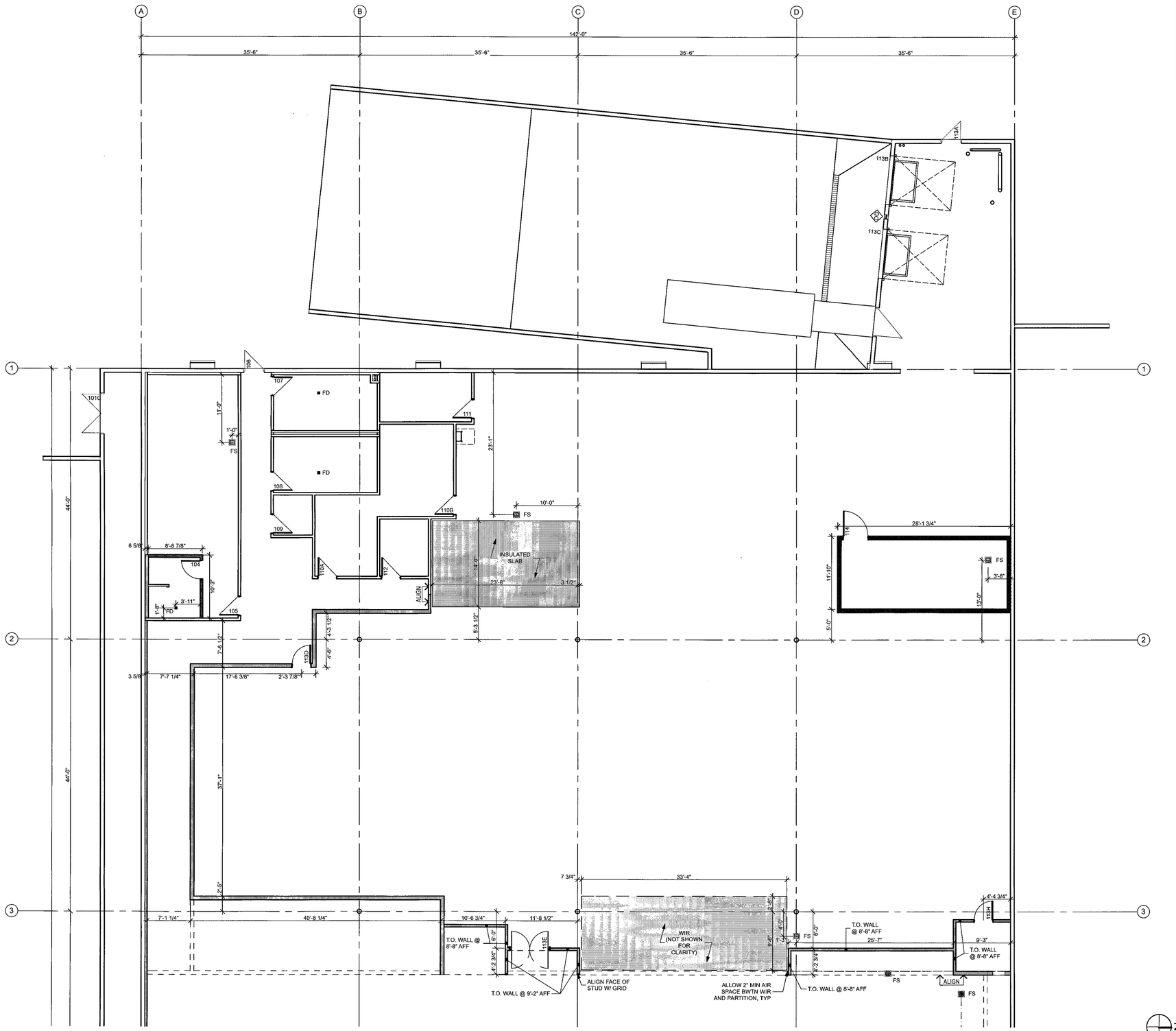
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## CRITICAL DIMENSION PLAN NOTES

1. REFER TO FLOOR PLANS FOR ROOM NAMES AND NUMBERS.
2. DIMENSIONS ARE TO GRID LINES AND TO THE FACE OF STUDS, MASONRY, AND CONCRETE OF NEW WALLS UNLESS OTHERWISE NOTED.
3. FLOOR SINK DIMENSIONS ARE FROM FINISHED FACE OF WALL.
4. OPENINGS WITHIN STUD CONSTRUCTION ARE DIMENSIONED TO THEIR CENTERLINE.
5. DOOR OPENINGS WITHIN STUD PARTITIONS SHALL BE LOCATED WITH THE HINGE SIDE 4 1/2" FROM FACE OF STUD OF THE ADJACENT PARTITION, UNO.
6. REFER TO ENLARGED PLANS FOR ADDITIONAL DIMENSIONS.

PARTITIONS ARE CONTINUOUS TO BOTTOM OF ROOF DECK, UNO.




1 **MAIN LEVEL CRITICAL DIMENSION PLAN**
SCALE: 1/8" = 1'-0"

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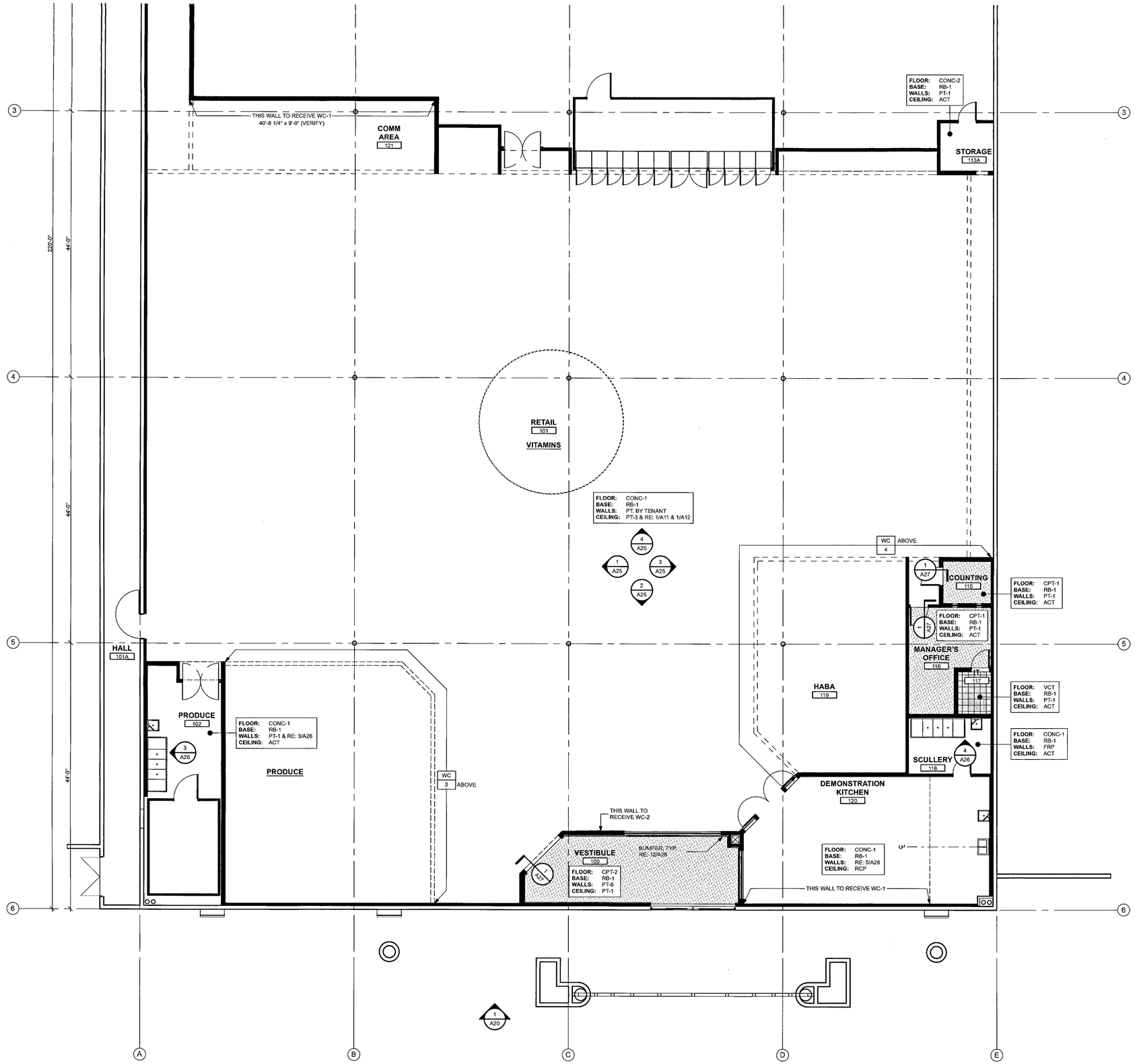
issue / date

sheet title: Critical Dimension Plan

by: af

app: rf

sheet no.: A14 of 30




## 2 MAIN LEVEL FINISH PLAN

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

## FINISH NOTES

1. IT IS THE G.C.'S RESPONSIBILITY TO ENSURE ALL MANUFACTURERS' SPECIFICATIONS FOR INSTALLATION.
2. ALL WALLS AND PARTITIONS WITHOUT A DESIGNATED FINISH ARE TO BE PAINTED.
3. REFER TO SHEET A27 FOR TYPICAL FLOORING TRANSITIONS. ALL FLOORING TRANSITIONS TO OCCUR UNDER CENTER OF DOORS, UNO.
4. ALL FLOORING MATERIALS TO CONTINUE UNDER CASEWORK TO TOE KICK AND UNDER OPEN COUNTER TO WALL.
5. APPLY ALL SEALANTS AND NON-SLIP AGENTS AS RECOMMENDED BY MANUFACTURER.
6. PRIME AND PAINT ALL GRILLES, ELECTRICAL PANELS, AND COVER PLATES TO MATCH ADJACENT SURFACES.
7. REFER TO SPECIFICATIONS FOR DETAILED PRODUCT DESCRIPTIONS.
8. TENANT HAS NATIONAL ACCOUNT WITH DALTILE. GC TO PURCHASE TILE WITH NATIONAL ACCOUNT PRICING.
9. ALLOW 10 DAYS IN SCHEDULE FOR CONCRETE FINISHING.
10. ALL WALLS AND PARTITIONS TO RECEIVE RESILIENT BASE (RB-1) UNO.
11. ALL INTERIOR COLUMNS SHALL BE PAINTED (PT-2) UNO.
12. ALL INTERIOR HOLLOW METAL DOOR FRAMES SHALL BE PAINTED (PT-8) UNO.
13. ALL WOOD DOORS SHALL BE SOLID CORE PRE-FINISHED BIRCH ROTARY CUT VENEER.
14. REFER TO REFLECTED CEILING PLANS FOR ADDITIONAL CEILING FINISHES.
15. REFER TO INTERIOR ELEVATIONS FOR ADDITIONAL WALL FINISHES.
16. ALL WALLS (NOT BULKHEADS) ABOVE WOOD SLAT CEILING SHALL BE PAINTED (PT-2) UNO.

PARTITION PREP FOR WALL COVERINGS: LEVEL 5 GYPBD FINISH AND 2 COATS OF WHITE PAINT (GLOSS FINISH) PRIOR TO INSTALLATION OF WALL COVERING

## FINISH LEGEND

| | | |
|---|---|---|
| CONC 1 | **CONCRETE** | **POLISHED BY TENANT** |
| | HARDENER: | L&M FGS HARDENER PLUS (2 COATS) |
| CONC 2 | **CONCRETE** | |
| | UNFINISHED | |
| CPT 1 | **CARPET** | |
| | MANUFACTURER: | TBD |
| | STYLE: | PATTERN LOOP |
| | SIZE: | 24" x 24" MODULAR TILES |
| CPT 2 | **CARPET** | |
| | WALK OFF MAT | |
| | MANUFACTURER: | TBD |
| | STYLE: | PATTERN LOOP |
| | SIZE: | 24" x 24" MODULAR TILES |
| CT 1 | **CERAMIC TILE** | |
| | MANUFACTURER: | DAL-TILE |
| | STYLE: | GLAZED PORCELAIN |
| | COLOR: | B928 URBAN PUTTY SPECKLE |
| | SIZE: | 12" x 12" |
| | GROUT: | MAPEI SANDED GROUT #11 SAHARA BEIGE |
| CT 2 | **CERAMIC TILE** | |
| | MANUFACTURER: | DAL-TILE |
| | STYLE: | GLAZED PORCELAIN |
| | COLOR: | B935 BROWN SPECKLE |
| | SIZE: | AS INDICATED ON DRAWINGS |
| | GROUT: | MAPEI SANDED GROUT #11 SAHARA BEIGE |
| FRP 1 | **FRP PANELS** | |
| | MANUFACTURER: | |
| | STYLE: | |
| | COLOR: | WHITE |
| PT 1 | **PAINT** | |
| | MANUFACTURER: | BENJAMIN MOORE |
| | STYLE: | LOW VOC; SEMI-GLOSS |
| | COLOR: | BM 2144-40 SOFT FERN |
| | PRIMER: | GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 2 | **PAINT** | |
| | MANUFACTURER: | GLIDDEN |
| | STYLE: | LOW VOC; SEMI-GLOSS |
| | COLOR: | #A0532 BARK |
| | PRIMER: | GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 3 | **PAINT** | |
| | MANUFACTURER: | LANNING CHEMICAL |
| | PRODUCT: | LW-256 FLAT WATERBASED DRY FALL |
| | COLOR: | TO MATCH GLIDDEN #A0532 BARK |
| PT 4 | **PAINT** | |
| | MANUFACTURER: | GLIDDEN |
| | STYLE: | LOW VOC; SEMI-GLOSS |
| | COLOR: | #A0970 SERENGETI PLAINS |
| | PRIMER: | GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 5 | **PAINT** | |
| | MANUFACTURER: | GLIDDEN |
| | PRODUCT: | #1280-1200 SPRAYMASTER PRO FLAT LATEX DRYFALL |
| | COLOR: | #A1748 SAND MOTIF |
| PT 6 | **PAINT** | |
| | MANUFACTURER: | GLIDDEN |
| | STYLE: | LOW VOC; SEMI-GLOSS |
| | COLOR: | #A0504 ORANGE MINERAL |
| | PRIMER: | GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 7 | **PAINT** | |
| | MANUFACTURER: | GLIDDEN |
| | STYLE: | LOW VOC; SEMI-GLOSS |
| | COLOR: | #A0964 VERTIGO |
| | PRIMER: | GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 8 | **PAINT** | |
| | MANUFACTURER: | GLIDDEN |
| | STYLE: | LOW VOC; SEMI-GLOSS |
| | COLOR: | #A1333 FOREST BLACK |
| | PRIMER: | GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 9 | **PAINT** | |
| | MANUFACTURER: | GLIDDEN |
| | STYLE: | EXTERIOR FLAT |
| | COLOR: | #A0515 CARIBBEAN SPICE |
| PT 10 | **PAINT** | |
| | MANUFACTURER: | GLIDDEN |
| | STYLE: | EXTERIOR FLAT |
| | COLOR: | #A1804 BROWN BAG |
| PT 11 | **PAINT** | |
| | MANUFACTURER: | ICI |
| | STYLE: | EXTERIOR FLAT |
| | COLOR: | #A1875 LOAM |
| PT 12 | **PAINT** | |
| | MANUFACTURER: | GLIDDEN |
| | STYLE: | EXTERIOR FLAT |
| | COLOR: | #A0532 BARK |
| RB 1 | **RESILIENT BASE** | **FURNISHED AND INSTALLED BY TENANT** |
| | MANUFACTURER: | JOHNSONITE |
| | STYLE: | COVE AT HARD FLOORING; STRAIGHT AT CARPET |
| | COLOR: | BURNT UMBER |
| | SIZE: | 4" |
| RF 1 | **RUBBER FLOORING** | **FURNISHED AND INSTALLED BY TENANT** |
| VCT 1 | **VINYL TILE** | **FURNISHED AND INSTALLED BY TENANT** |
| WC 1 | **WALL COVERING** | HISTORIC IMAGE TBD<br>**FURNISHED BY TENANT**<br>**INSTALLATION AND PARTITION PREP BY GC** |
| WC 2 | **WALL COVERING** | FIVE FOUNDING PRINCIPLES IMAGE<br>**FURNISHED BY TENANT**<br>**INSTALLATION AND PARTITION PREP BY GC** |
| WC 3 | **WALL COVERING** | PRODUCE GRAPHIC<br>**FURNISHED BY TENANT**<br>**INSTALLATION AND PARTITION PREP BY GC** |
| WC 4 | **WALL COVERING** | HABA GRAPHIC<br>**FURNISHED BY TENANT**<br>**INSTALLATION AND PARTITION PREP BY GC** |

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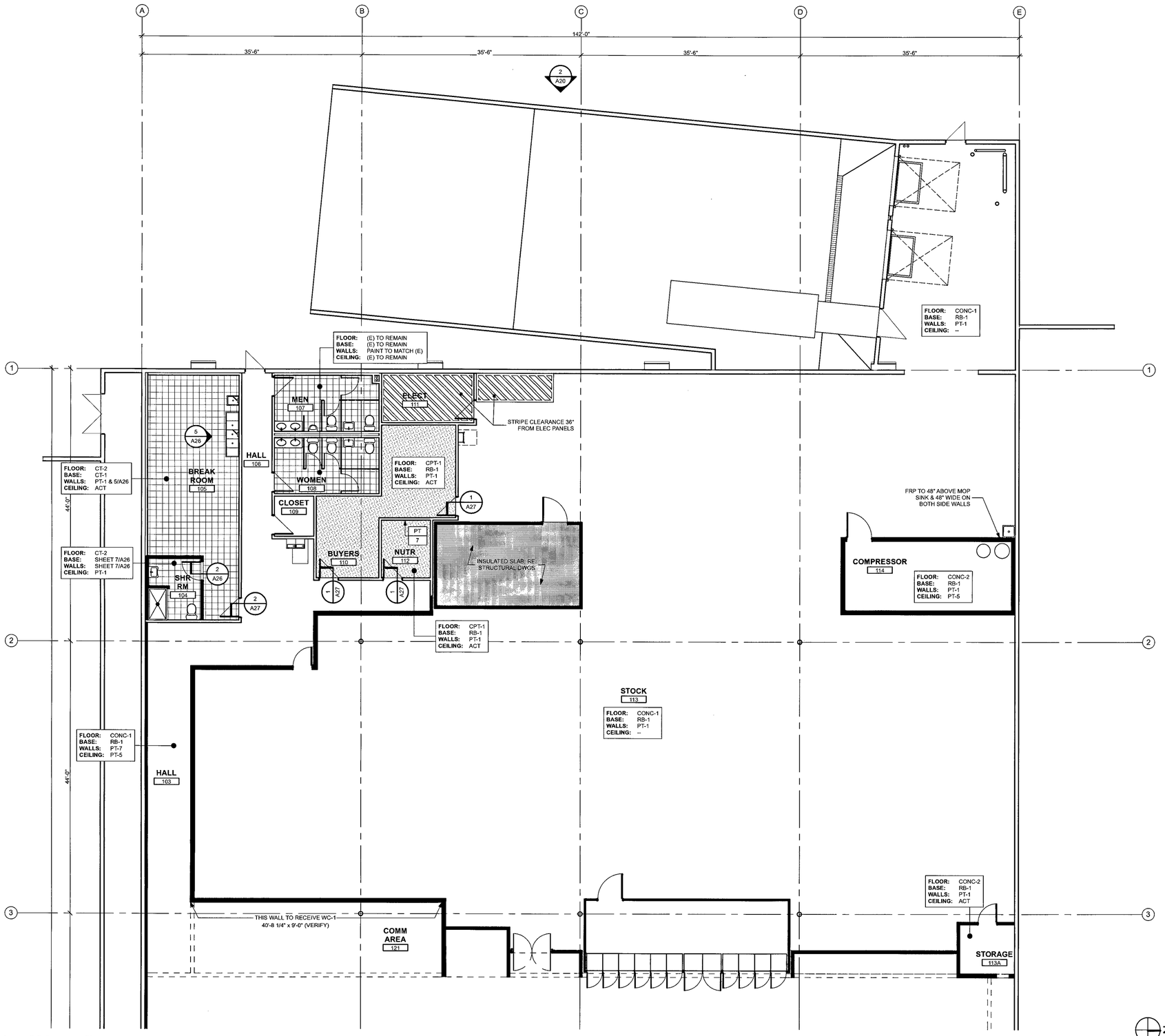
issue / date

sheet title: Finish Plan

by: af

app: rf

sheet no.: A15 of 30




## 2 MAIN LEVEL FINISH PLAN

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

## FINISH NOTES

1. IT IS THE G.C.'S RESPONSIBILITY TO ENSURE ALL MANUFACTURERS' SPECIFICATIONS FOR INSTALLATION.
2. ALL WALLS AND PARTITIONS WITHOUT A DESIGNATED FINISH ARE TO BE PAINTED.
3. REFER TO SHEET A27 FOR TYPICAL FLOORING TRANSITIONS. ALL FLOORING TRANSITIONS TO OCCUR UNDER CENTER OF DOORS, UNO.
4. ALL FLOORING MATERIALS TO CONTINUE UNDER CASEWORK TO TOE KICK AND UNDER OPEN COUNTER TO WALL.
5. APPLY ALL SEALANTS AND NON-SLIP AGENTS AS RECOMMENDED BY MANUFACTURER.
6. PRIME AND PAINT ALL GRILLES, ELECTRICAL PANELS, AND COVER PLATES TO MATCH ADJACENT SURFACES.
7. REFER TO SPECIFICATIONS FOR DETAILED PRODUCT DESCRIPTIONS.
8. TENANT HAS NATIONAL ACCOUNT WITH DALTILE. GC TO PURCHASE TILE WITH NATIONAL ACCOUNT PRICING.
9. ALLOW 10 DAYS IN SCHEDULE FOR CONCRETE FINISHING.
10. ALL WALLS AND PARTITIONS TO RECEIVE RESILIENT BASE (RB-1) UNO.
11. ALL INTERIOR COLUMNS SHALL BE PAINTED (PT-2) UNO.
12. ALL INTERIOR HOLLOW METAL DOOR FRAMES SHALL BE PAINTED (PT-8) UNO.
13. ALL WOOD DOORS SHALL BE SOLID CORE PRE-FINISHED BIRCH ROTARY CUT VENEER.
14. REFER TO REFLECTED CEILING PLANS FOR ADDITIONAL CEILING FINISHES.
15. REFER TO INTERIOR ELEVATIONS FOR ADDITIONAL WALL FINISHES.
16. ALL WALLS (NOT BULKHEADS) ABOVE WOOD SLAT CEILING SHALL BE PAINTED (PT-2) UNO.

PARTITION PREP FOR WALL COVERINGS: LEVEL 5 GYPBD FINISH AND 2 COATS OF WHITE PAINT (GLOSS FINISH) PRIOR TO INSTALLATION OF WALL COVERING

## FINISH LEGEND

| | | |
|---|---|---|
| CONC 1 | **CONCRETE** | **POLISHED BY TENANT** |
| | HARDENER: | L&M FGS HARDENER PLUS (2 COATS) |
| CONC 2 | **CONCRETE** | |
| | UNFINISHED | |
| CPT 1 | **CARPET** | |
| | MANUFACTURER: | TBD |
| | STYLE: | PATTERN LOOP |
| | SIZE: | 24" x 24" MODULAR TILES |
| CPT 2 | **CARPET** | |
| | WALK OFF MAT | |
| | MANUFACTURER: | TBD |
| | STYLE: | PATTERN LOOP |
| | SIZE: | 24" x 24" MODULAR TILES |
| CT 1 | **CERAMIC TILE** | |
| | MANUFACTURER: | DAL-TILE |
| | STYLE: | GLAZED PORCELAIN |
| | COLOR: | B928 URBAN PUTTY SPECKLE |
| | SIZE: | 12" x 12" |
| | GROUT: | MAPEI SANDED GROUT #11 SAHARA BEIGE |
| CT 2 | **CERAMIC TILE** | |
| | MANUFACTURER: | DAL-TILE |
| | STYLE: | GLAZED PORCELAIN |
| | COLOR: | B935 BROWN SPECKLE |
| | SIZE: | AS INDICATED ON DRAWINGS |
| | GROUT: | MAPEI SANDED GROUT #11 SAHARA BEIGE |
| FRP 1 | **FRP PANELS** | |
| | MANUFACTURER: | |
| | STYLE: | |
| | COLOR: | WHITE |
| PT 1 | **PAINT** | |
| | MANUFACTURER: | BENJAMIN MOORE |
| | STYLE: | LOW VOC; SEMI-GLOSS |
| | COLOR: | BM 2144-40 SOFT FERN |
| | PRIMER: | GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 2 | **PAINT** | |
| | MANUFACTURER: | GLIDDEN |
| | STYLE: | LOW VOC; SEMI-GLOSS |
| | COLOR: | #A0532 BARK |
| | PRIMER: | GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 3 | **PAINT** | |
| | MANUFACTURER: | LANNING CHEMICAL |
| | PRODUCT: | LW-256 FLAT WATERBASED DRY FALL |
| | COLOR: | TO MATCH GLIDDEN #A0532 BARK |
| PT 4 | **PAINT** | |
| | MANUFACTURER: | GLIDDEN |
| | STYLE: | LOW VOC; SEMI-GLOSS |
| | COLOR: | #A0970 SERENGETI PLAINS |
| | PRIMER: | GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 5 | **PAINT** | |
| | MANUFACTURER: | GLIDDEN |
| | PRODUCT: | #1280-1200 SPRAYMASTER PRO FLAT LATEX DRYFALL |
| | COLOR: | #A1748 SAND MOTIF |
| PT 6 | **PAINT** | |
| | MANUFACTURER: | GLIDDEN |
| | STYLE: | LOW VOC; SEMI-GLOSS |
| | COLOR: | #A0504 ORANGE MINERAL |
| | PRIMER: | GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 7 | **PAINT** | |
| | MANUFACTURER: | GLIDDEN |
| | STYLE: | LOW VOC; SEMI-GLOSS |
| | COLOR: | #A0984 VERTIGO |
| | PRIMER: | GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 8 | **PAINT** | |
| | MANUFACTURER: | GLIDDEN |
| | STYLE: | LOW VOC; SEMI-GLOSS |
| | COLOR: | #A1833 FOREST BLACK |
| | PRIMER: | GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 9 | **PAINT** | |
| | MANUFACTURER: | GLIDDEN |
| | STYLE: | EXTERIOR FLAT |
| | COLOR: | #A0515 CARIBBEAN SPICE |
| PT 10 | **PAINT** | |
| | MANUFACTURER: | GLIDDEN |
| | STYLE: | EXTERIOR FLAT |
| | COLOR: | #A1804 BROWN BAG |
| PT 11 | **PAINT** | |
| | MANUFACTURER: | ICI |
| | STYLE: | EXTERIOR FLAT |
| | COLOR: | #A1875 LOAM |
| PT 12 | **PAINT** | |
| | MANUFACTURER: | GLIDDEN |
| | STYLE: | EXTERIOR FLAT |
| | COLOR: | #A0532 BARK |
| RB 1 | **RESILIENT BASE** | **FURNISHED AND INSTALLED BY TENANT** |
| | MANUFACTURER: | JOHNSONITE |
| | STYLE: | COVE AT HARD FLOORING; STRAIGHT AT CARPET |
| | COLOR: | BURNT UMBER |
| | SIZE: | 4" |
| RF 1 | **RUBBER FLOORING** | **FURNISHED AND INSTALLED BY TENANT** |
| VCT 1 | **VINYL TILE** | **FURNISHED AND INSTALLED BY TENANT** |
| WC 1 | **WALL COVERING** | HISTORIC IMAGE TBD<br>**FURNISHED BY TENANT**<br>**INSTALLATION AND PARTITION PREP BY GC** |
| WC 2 | **WALL COVERING** | FIVE FOUNDING PRINCIPLES IMAGE<br>**FURNISHED BY TENANT**<br>**INSTALLATION AND PARTITION PREP BY GC** |
| WC 3 | **WALL COVERING** | PRODUCE GRAPHIC<br>**FURNISHED BY TENANT**<br>**INSTALLATION AND PARTITION PREP BY GC** |
| WC 4 | **WALL COVERING** | HABA GRAPHIC<br>**FURNISHED BY TENANT**<br>**INSTALLATION AND PARTITION PREP BY GC** |

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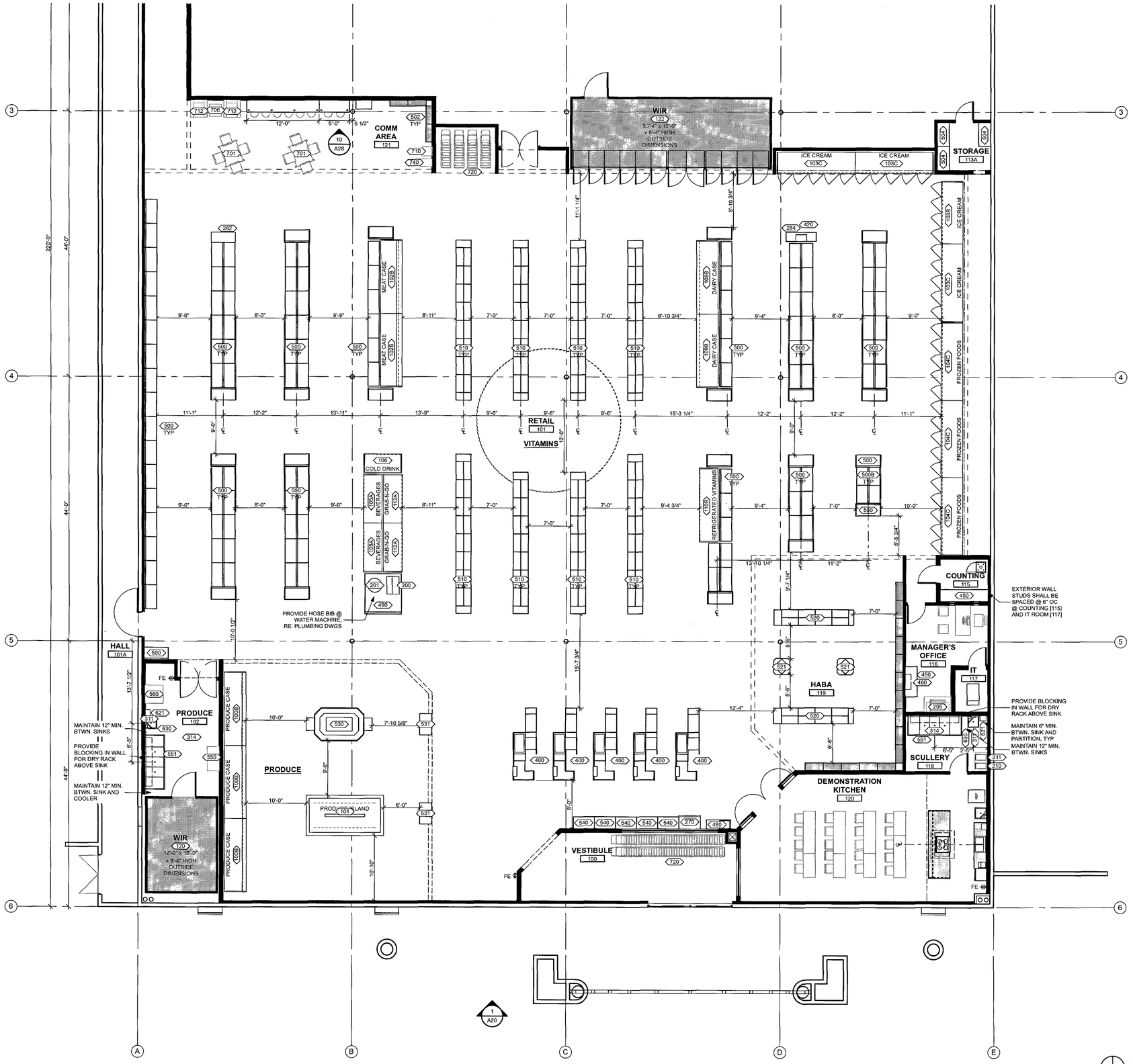
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A16 of 30 sheet no.

## FIXTURE PLAN NOTES

1. REFER TO SHEET A19 FOR EQUIPMENT SCHEDULE.
2. REFER TO CRITICAL DIMENSION PLAN (SHEET A13 & A14) FOR FLOOR SINK LOCATIONS.
3. REFER TO ENLARGED PLANS FOR ADDITIONAL EQUIPMENT IDENTIFIERS.




1 **MAIN LEVEL FIXTURE PLAN**
SCALE: 1/8" = 1'-0"


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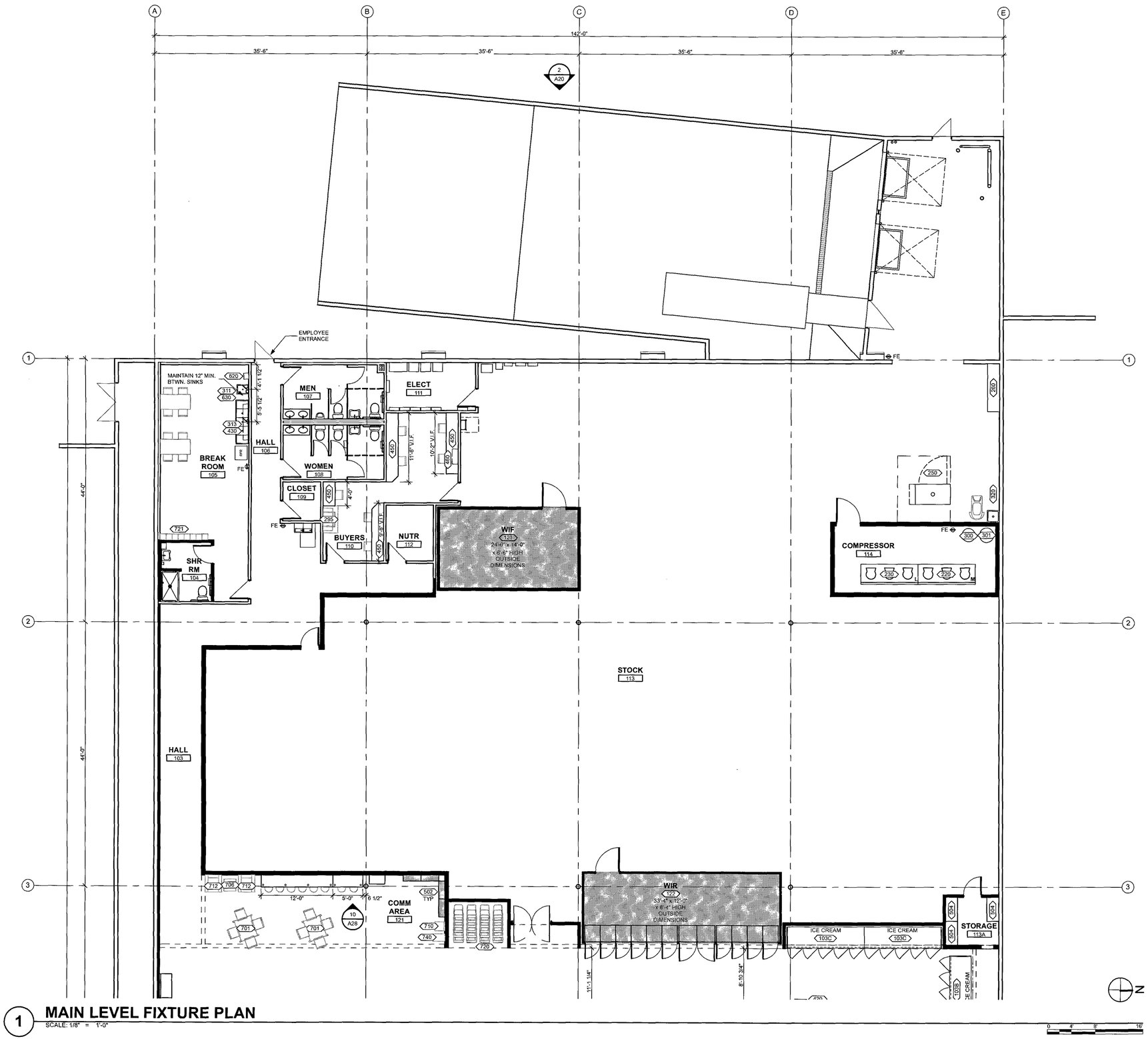
af by

app rf

A17 of 30 sheet no.

## FIXTURE PLAN NOTES

1. REFER TO SHEET A19 FOR EQUIPMENT SCHEDULE.
2. REFER TO CRITICAL DIMENSION PLAN (SHEET A13 & A14) FOR FLOOR SINK LOCATIONS.
3. REFER TO ENLARGED PLANS FOR ADDITIONAL EQUIPMENT IDENTIFIERS.




1 **MAIN LEVEL FIXTURE PLAN**
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

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Issue / date

sheet title: Fixture Plan

by: af

app: rf

sheet no.: A18 of 30

# EQUIPMENT / FIXTURE SCHEDULE

| ID | QTY | DESCRIPTION | MFR | MODEL | FURNISHED BY | INSTALLED BY | NOTES |
|---|---|---|---|---|---|---|---|
| **REFRIGERATED MERCHANDISERS** | | | | | | | |
| 100B | 3 | PRODUCE CASE | KYSOR/WARREN | PX3XN | TENANT | TENANT | 12'-0" UNIT |
| 101 | 1 | PRODUCE ISLAND | HILL PHOENIX | OIP | TENANT | TENANT | |
| 102B | 2 | MEAT CASE | KYSOR/WARREN | MX4XG | TENANT | TENANT | 12'-0" UNIT |
| 103B | 1 | ICE CREAM | KYSOR/WARREN | RX7SL | TENANT | TENANT | 4-DOOR |
| 103C | 3 | ICE CREAM | KYSOR/WARREN | RX7SL | TENANT | TENANT | 5-DOOR |
| 104C | 3 | FROZEN FOODS | KYSOR/WARREN | RX7SL | TENANT | TENANT | 5-DOOR |
| 105A | 2 | BEVERAGES | KYSOR/WARREN | DN8LN | TENANT | TENANT | 8'-0" UNIT |
| 106 | 1 | COLD DRINK | KYSOR/WARREN | DN6LP | TENANT | TENANT | 6'-0" UNIT |
| 109B | 2 | DAIRY CASE | KYSOR/WARREN | DX8LN | TENANT | TENANT | 12'-0" UNIT |
| 110B | 1 | REFRIGERATED VITAMINS | KYSOR/WARREN | DN8LN | TENANT | TENANT | 12'-0" UNIT |
| 112A | 2 | GRAB-N-GO | KYSOR/WARREN | DN8LN | TENANT | TENANT | 8'-0" UNIT |
| 120 | 1 | WALK IN REFRIGERATOR | - | - | TENANT | TENANT | PRODUCE |
| 121 | 1 | WALK IN FREEZER | - | - | TENANT | TENANT | FREEZER |
| 122 | 1 | WALK IN REFRIGERATOR | - | - | TENANT | TENANT | DAIRY |
| **ELECTRICAL EQUIPMENT** | | | | | | | |
| 200 | 1 | WATER MACHINE | | | TENANT | TENANT | |
| 201 | 1 | WATER MACHINE STORAGE TANK | - | - | TENANT | TENANT | |
| 210 | 1 | ALMOND BUTTER MACHINE | OLDE STYLE | PN2 | TENANT | TENANT | |
| 211 | 1 | PEANUT BUTTER MACHINE | OLDE STYLE | PN2 | TENANT | TENANT | |
| 220 | 1 | COMPRESSOR RACK \| MED TEMP | KYSOR/WARREN | - | TENANT | TENANT | 1 |
| 221 | 1 | ROOF TOP CONDENSER | HEATCRAFT | - | TENANT | TENANT | |
| 230 | 1 | COMPRESSOR RACK \| LOW TEMP | KYSOR/WARREN | - | TENANT | TENANT | 1 |
| 231 | 1 | ROOF TOP CONDENSER | HEATCRAFT | - | TENANT | TENANT | |
| 240 | 1 | STANDBY GENERATOR | GENERAC POWER | QT022 | TENANT | GC | |
| 250 | 1 | CARDBOARD BAILER | MACHINING & MFR'G | VB-60-B | TENANT | TENANT | 10 |
| 260 | 1 | FORKLIFT BATTERY CHARGER | - | - | TENANT | TENANT | |
| 270 | 1 | ICE MERCHANDISER | METALFRIO | MSF-43C | TENANT | TENANT | |
| 280 | 1 | COMMERCIAL RANGE | Lang | 1RF AD | TENANT | GC | |
| 282 | 1 | COFFEE GRINDER | - | - | TENANT | TENANT | |
| 283 | 1 | COFFEE MAKER | PRECISION BREW | B-SAP | TENANT | TENANT | |
| 284 | 1 | MICROWAVE | - | - | TENANT | TENANT | |
| 285 | 1 | COMMERCIAL HOOD | Greencheck | Type I | GC | GC | 7 |
| 286 | 1 | COMMERCIAL REFRIGERATOR | TURBO AIR | M3R19-1 | TENANT | GC | |
| 290 | 1 | CAMERA | - | - | TENANT | TENANT | 8 |
| 291 | 1 | TELEVISION / MONITOR | - | - | TENANT | GC | 9 |
| 292 | 1 | SATELLITE DISH | | | TENANT | TENANT | |
| 295 | 2 | PHOTO COPIER | | | TENANT | TENANT | |
| **PLUMBING FIXTURES** | | | | | | | |
| 300 | 1 | WATER HEATER | STATE | SBS75 76NE | GC | GC | |
| 301 | 1 | HEAT RECOVERY TANK | THERMA-STORE | II-2 | TENANT | GC | |
| 311 | 4 | HAND SINK | UNIVERSAL STAINLESS | WMHS-1617-VC | TENANT | GC | 2 |
| 312 | 1 | LAVATORY | KOHLER | K-2007 | GC | GC | |
| 313 | 1 | 3 COMPARTMENT SINK | UNIVERSAL STAINLESS | M-3N162014-2D18 | TENANT | GC | |
| 314 | 2 | 3 COMPARTMENT SINK | UNIVERSAL STAINLESS | M-3N202814-2D20 | TENANT | GC | |
| 315 | 1 | 2-COMPARTMENT SINK | PROFLO | PFT332283 | GC | GC | 3 |
| 320 | 1 | MOP SINK | FIAT | MSB 2424 | GC | GC | |
| 340 | 1 | WATER CLOSET | KOHLER | K-3519 | GC | GC | 4 |
| 360 | 1 | SHOWER | AQUATIC | 1603BFSD | GC | GC | 6 |
| **CASEWORK** | | | | | | | |
| 400 | 5 | CHECK STAND | KILLION INDUSTRIES | KCU-3500 | TENANT | GC | |
| 420 | 1 | MICROWAVE COUNTER | RJM CABINETS | - | TENANT | TENANT | |
| 430 | 1 | BREAK ROOM CABINETS | RJM CABINETS | - | TENANT | TENANT | |
| 450 | 6 | OFFICE COUNTER | - | - | TENANT | TENANT | |
| 460 | 2 | OFFICE CABINETS | RJM CABINETS | - | TENANT | TENANT | |
| 480 | 1 | CUBBIE CABINET | RJM CABINETS | - | TENANT | TENANT | |
| 490 | 1 | WATER MACHINE ENCLOSURE | RJM CABINETS | - | TENANT | TENANT | |
| **STORAGE** | | | | | | | |
| 500 | 20 | GROCERY SHELVES \| END CAP | LOZIER | - | TENANT | TENANT | |
| 500 | 111 | GROCERY SHELVES | LOZIER | - | TENANT | TENANT | |
| 500B | 4 | GROCERY SHELVES | LOZIER | - | TENANT | TENANT | 3'-0" |
| 502 | 4 | BOOK SHELVES | - | - | TENANT | TENANT | |
| 504 | 3 | METAL STOCK SHELVING | - | - | TENANT | TENANT | |
| 510 | 16 | VITAMIN SHELVES \| END CAP | EXCALIBER | - | TENANT | TENANT | LOW PROFILE |
| 510 | 124 | VITAMIN SHELVES | EXCALIBER | - | TENANT | TENANT | LOW PROFILE |
| 520 | 2 | HABA \| SHOP AROUND | RJM CABINETS | - | TENANT | TENANT | |
| 521 | 2 | HABA \| GONDOLA | RJM CABINETS | | TENANT | TENANT | |
| 522 | 15 | HABA \| WALL SHELVES | EXCALIBER | - | TENANT | TENANT | |
| 530 | 1 | PRODUCE RACK | | | TENANT | TENANT | |
| 531 | 2 | PRODUCE TABLE | - | - | TENANT | TENANT | |
| 540 | 5 | BOX BINS | - | - | TENANT | TENANT | |
| 550 | 1 | METAL RACK | - | - | TENANT | TENANT | |
| 551 | 2 | WALL-MOUNTED WIRE RACK | - | - | GC | GC | |
| 560 | 1 | WRAP TABLE | - | - | TENANT | TENANT | |

# EQUIPMENT / FIXTURE SCHEDULE

| ID | QTY | DESCRIPTION | MFR | MODEL | FURNISHED BY | INSTALLED BY | NOTES |
|---|---|---|---|---|---|---|---|
| **SPECIALTIES** | | | | | | | |
| 610 | 1 | TOILET TISSUE DISPENSER | KIMBERLY-CLARK | 09601 | GC | GC | |
| 620 | 2 | ELECTRIC PAPER TOWEL DISPENSER | KIMBERLY-CLARK | | TENANT | GC | |
| 621 | 3 | PAPER TOWEL DISPENSER | - | - | TENANT | GC | |
| 630 | 5 | SOAP DISPENSER | KIMBERLY-CLARK | 92145 | TENANT | GC | |
| 640 | 1 | MIRROR | - | - | GC | GC | |
| **FURNITURE** | | | | | | | |
| 701 | 2 | TABLE \| 4 SEATER | DOUBLE BUTTER | TURTADILLO \| METAL | TENANT | TENANT | |
| 703 | 4 | TRAINING TABLE \| LOW 48"x18" | - | 4'-0" x 1'-6" x 29" HIGH | TENANT | TENANT | |
| 703 | 4 | TRAINING TABLE \| LOW 84"x18" | - | 7'-0" x 1'-6" x 29" HIGH | TENANT | TENANT | |
| 706 | 1 | COFFEE TABLE | DOUBLE BUTTER | TURTADILLO \| SQUARE | TENANT | TENANT | |
| 710 | 29 | DINING CHAIR | DWR | KYOTO | TENANT | TENANT | |
| 712 | 2 | LOUNGE CHAIR | NOBLE HOUSE | JUSTIN \| 733884 | TENANT | TENANT | |
| 713 | 8 | STOOL | - | - | TENANT | TENANT | |
| 720 | 60 | GROCERY CART | TECHNIBUILT | 2368-7G-STK3 | TENANT | TENANT | |
| 721 | 1 | EMPLOYEE LOCKERS | - | - | TENANT | TENANT | |
| 730 | 1 | CART CORRAL | RTS Companies | Double Wide | TENANT | TENANT | |
| 731 | 1 | PICNIC TABLE | | | TENANT | TENANT | |
| 732 | 3 | BIKE RACK | Anova | LBR3PSURF | TENANT | TENANT | |
| 740 | 1 | FILING CABINET | - | - | TENANT | TENANT | |

# EQUIPMENT / FIXTURE SCHEDULE NOTES

**REFERENCE NOTES:**

1. CONTROL CIRCUIT FURNISHED AND INSTALLED BY TENANT. G.C. TO FURNISH AND INSTALL ALL CONDUIT FOR REFRIGERATION CONTROL WIRING.
2. SINK FAUCET: SLOAN VALVE, EAF-275-ISM, FURNISHED BY TENANT AND INSTALLED BY G.C.
3. SINK FAUCET: MOEN 7100CSL, FURNISHED AND INSTALLED BY G.C.
4. TOILET SEAT (SOLID PLASTIC): KOHLER K-4731-C, FURNISHED AND INSTALLED BY G.C..
5. NOT USED.
6. SHOWER ACCESSORIES TO INCLUDE U-SHAPED GRAB BAR, VINYL FLEXIBLE DAM, CURTAIN ROD AND SHOWER CURTAIN. (SEAT REQUIRED UNDER 2012 IBC).
7. INSTALLER TO PROVIDE UNI-STRUT CHANNELS BETWEEN JOIST AND VERTICAL HANGERS. BRACING AS REQUIRED TO SUSPEND HOOD.
8. COORDINATE CAMERA LOCATION WITH INSTALLER.
9. GC TO PROVIDE AND INSTALL VESA COMPLIANT TV BRACKET (VIDEOSECU #MW365B) FOR TELEVISION.
10. EXISTING TO REMAIN, RE: ADD ALTERNATE #4.

**GENERAL NOTES:**

1. WHERE "TENANT" IS DESIGNATED IN THE "INSTALLED BY" COLUMN, TENANT WILL DELIVER THE EQUIPMENT TO THE SITE AND PLACE IT IN ITS INTENDED LOCATION. FINAL ELECTRICAL, PLUMBING, AND REFRIGERATION CONNECTIONS WILL NEED TO BE COMPLETED BY A LICENSED CONTRACTOR UNDER THE GENERAL CONTRACT.
2. ADA GRAB BARS PROVIDED AND INSTALLED BY G.C.

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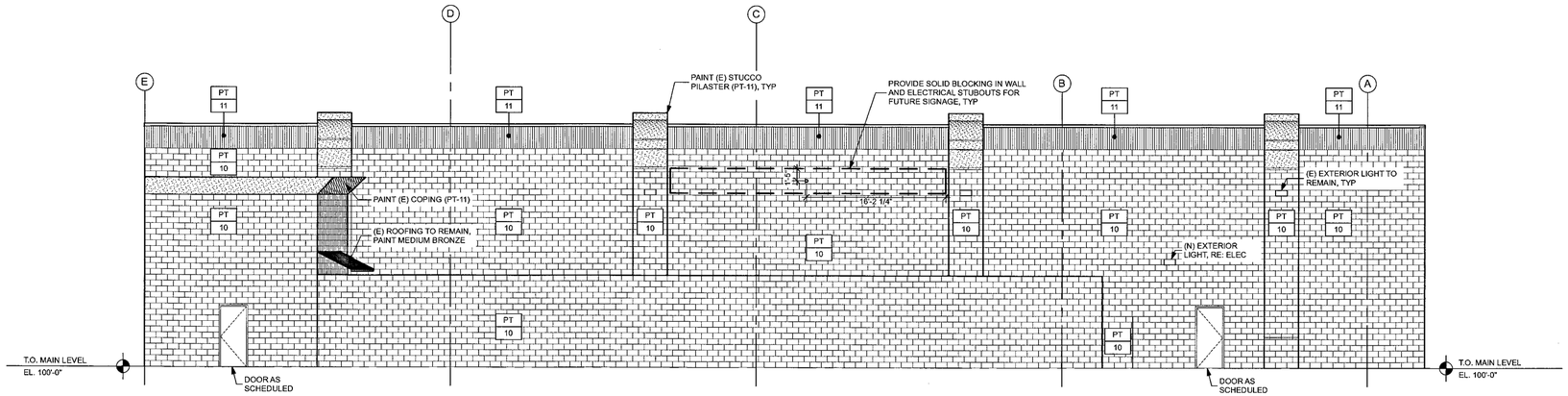
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by: af

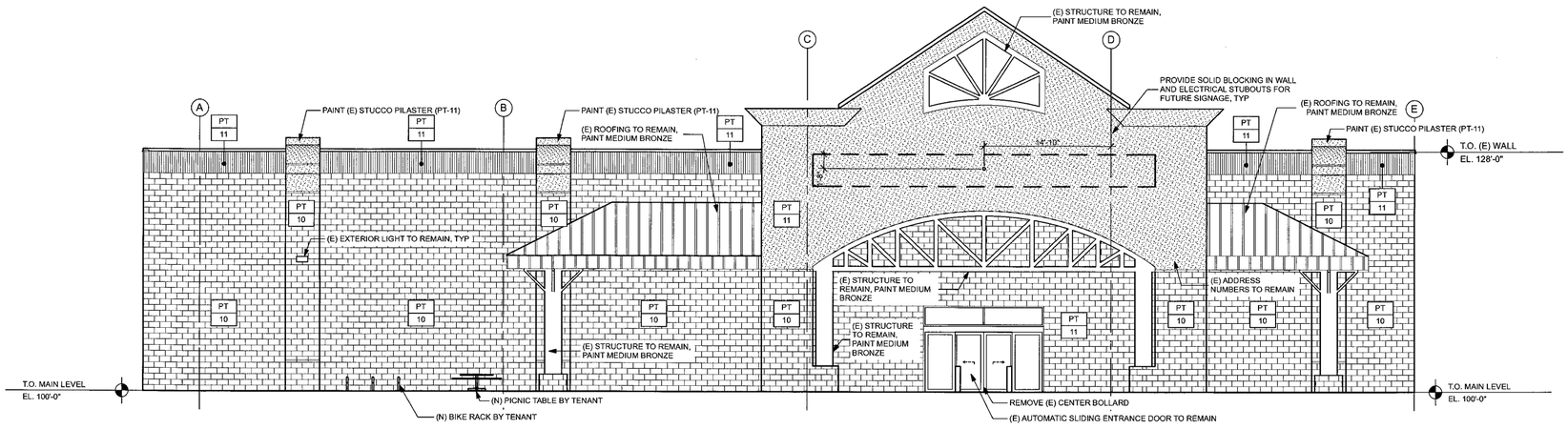
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sheet no.: A19 of 30




## 2 WEST ELEVATION

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




## 1 EAST ELEVATION

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

## EXTERIOR ELEVATION NOTES

1. SOFFITS UNDER FLAT AND PITCHED ROOFS SHALL BE PAINTED PT-12 UNO.
2. ALL EXTERIOR RAILINGS, HM DOORS & FRAMES, OVERHEAD DOOR AND EXPOSED STEEL SHALL BE PAINTED (PT-12) UNO.
3. ALL EXPOSED PIPING AND CONDUIT SHALL BE PAINTED TO MATCH ADJACENT WALL MATERIAL.
4. REFER TO ELECTRICAL DRAWINGS FOR BUILDING MOUNTED FIXTURE HEIGHTS AND LOCATIONS.

## FINISH LEGEND

| | | |
|---|---|---|
| CONC 1 | **CONCRETE**<br>HARDENER: | **POLISHED BY TENANT**<br>L&M FGS HARDENER PLUS (2 COATS) |
| CONC 2 | **CONCRETE**<br>UNFINISHED | |
| CPT 1 | **CARPET**<br>MANUFACTURER:<br>STYLE:<br>SIZE: | <br>TBD<br>PATTERN LOOP<br>24" x 24" MODULAR TILES |
| CPT 2 | **CARPET**<br>WALK OFF MAT<br>MANUFACTURER:<br>STYLE:<br>SIZE: | <br>TBD<br>PATTERN LOOP<br>24" x 24" MODULAR TILES |
| CT 1 | **CERAMIC TILE**<br>MANUFACTURER:<br>STYLE:<br>COLOR:<br>SIZE:<br>GROUT: | <br>DAL-TILE<br>GLAZED PORCELAIN<br>B928 URBAN PUTTY SPECKLE<br>12" x 12"<br>MAPEI SANDED GROUT #11 SAHARA BEIGE |
| CT 2 | **CERAMIC TILE**<br>MANUFACTURER:<br>STYLE:<br>COLOR:<br>SIZE:<br>GROUT: | <br>DAL-TILE<br>GLAZED PORCELAIN<br>B935 BROWN SPECKLE<br>AS INDICATED ON DRAWINGS<br>MAPEI SANDED GROUT #11 SAHARA BEIGE |
| FRP 1 | **FRP PANELS**<br>MANUFACTURER:<br>STYLE:<br>COLOR: | <br><br><br>WHITE |
| PT 1 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR:<br>PRIMER: | <br>BENJAMIN MOORE<br>LOW VOC; SEMI-GLOSS<br>BM 2144-40 SOFT FERN<br>GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 2 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR:<br>PRIMER: | <br>GLIDDEN<br>LOW VOC; SEMI-GLOSS<br>#A0532 BARK<br>GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 3 | **PAINT**<br>MANUFACTURER:<br>PRODUCT:<br>COLOR: | <br>LANNING CHEMICAL<br>LW-256 FLAT WATERBASED DRY FALL<br>TO MATCH GLIDDEN #A0532 BARK |
| PT 4 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR:<br>PRIMER: | <br>GLIDDEN<br>LOW VOC; SEMI-GLOSS<br>#A0970 SERENGETI PLAINS<br>GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 5 | **PAINT**<br>MANUFACTURER:<br>PRODUCT:<br>COLOR: | <br>GLIDDEN<br>#1280-1200 SPRAYMASTER PRO FLAT LATEX DRYFALL<br>#A1748 SAND MOTIF |
| PT 6 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR:<br>PRIMER: | <br>GLIDDEN<br>LOW VOC; SEMI-GLOSS<br>#A0504 ORANGE MINERAL<br>GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 7 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR:<br>PRIMER: | <br>GLIDDEN<br>LOW VOC; SEMI-GLOSS<br>#A0964 VERTIGO<br>GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 8 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR:<br>PRIMER: | <br>GLIDDEN<br>LOW VOC; SEMI-GLOSS<br>#A1833 FOREST BLACK<br>GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 9 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR: | <br>GLIDDEN<br>EXTERIOR FLAT<br>#A0515 CARIBBEAN SPICE |
| PT 10 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR: | <br>GLIDDEN<br>EXTERIOR FLAT<br>#A1804 BROWN BAG |
| PT 11 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR: | <br>ICI<br>EXTERIOR FLAT<br>#A1875 LOAM |
| PT 12 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR: | <br>GLIDDEN<br>EXTERIOR FLAT<br>#A0532 BARK |
| RB 1 | **RESILIENT BASE**<br>MANUFACTURER:<br>STYLE:<br>COLOR:<br>SIZE: | **FURNISHED AND INSTALLED BY TENANT**<br>JOHNSONITE<br>COVE AT HARD FLOORING; STRAIGHT AT CARPET<br>BURNT UMBER<br>4" |
| RF 1 | **RUBBER FLOORING** | **FURNISHED AND INSTALLED BY TENANT** |
| VCT 1 | **VINYL TILE** | **FURNISHED AND INSTALLED BY TENANT** |
| WC 1 | **WALL COVERING** | HISTORIC IMAGE TBD<br>**FURNISHED BY TENANT**<br>**INSTALLATION AND PARTITION PREP BY GC** |
| WC 2 | **WALL COVERING** | FIVE FOUNDING PRINCIPLES IMAGE<br>**FURNISHED BY TENANT**<br>**INSTALLATION AND PARTITION PREP BY GC** |
| WC 3 | **WALL COVERING** | PRODUCE GRAPHIC<br>**FURNISHED BY TENANT**<br>**INSTALLATION AND PARTITION PREP BY GC** |
| WC 4 | **WALL COVERING** | HABA GRAPHIC<br>**FURNISHED BY TENANT**<br>**INSTALLATION AND PARTITION PREP BY GC** |

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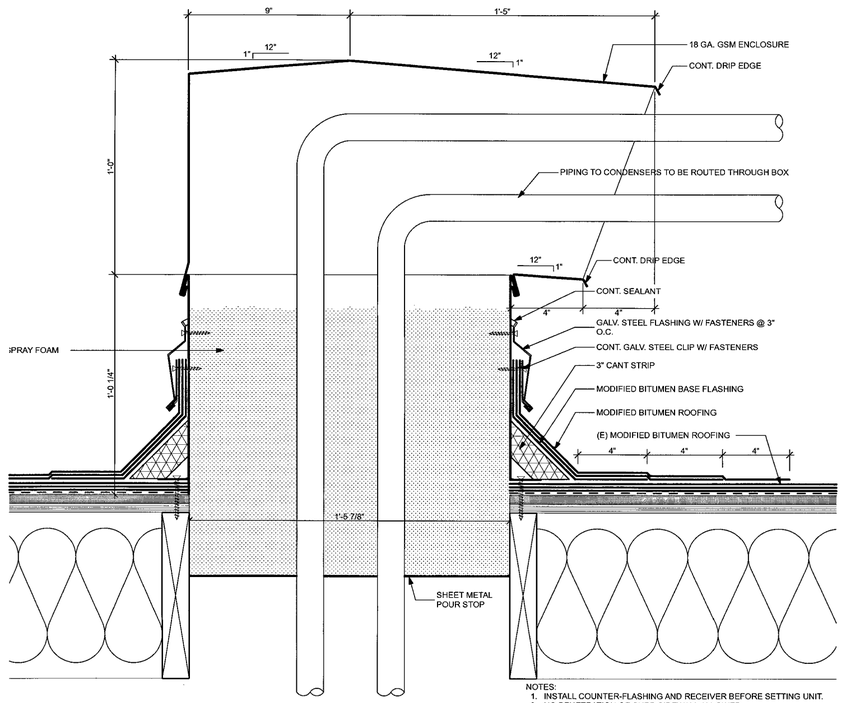
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by: af

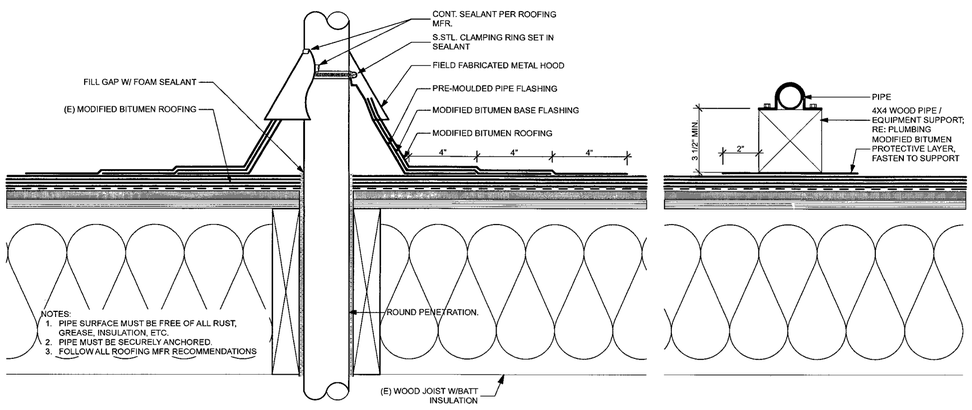
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NOTES:
1. INSTALL COUNTER-FLASHING AND RECEIVER BEFORE SETTING UNIT.
2. NO PENETRATION OF CURB SIDEWALL ALLOWED.

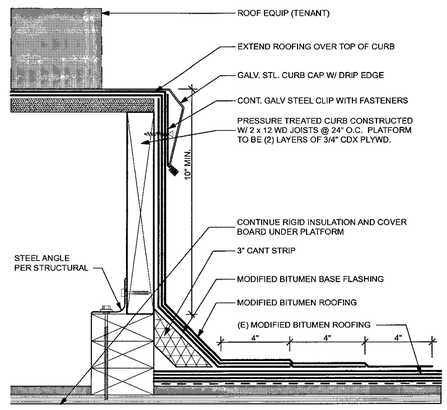
## 5 PIPE ENCLOSURE
SCALE: 3" = 1'-0"




## 4 TYPICAL ROOF PENETRATION
SCALE: 3" = 1'-0"

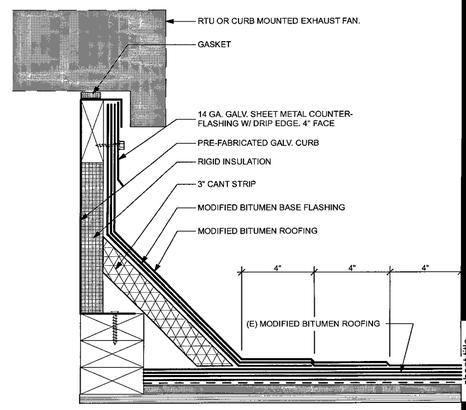



## 3 EQUIPMENT SUPPORT
SCALE: 3" = 1'-0"




NOTES:
1. INSTALL COUNTER-FLASHING AND RECEIVER BEFORE SETTING UNIT.
2. NO PENETRATION OF CURB SIDEWALL ALLOWED.

## 2 EQUIPMENT PLATFORM
SCALE: 3" = 1'-0"




NOTES:
1. INSTALL COUNTER-FLASHING AND RECEIVER BEFORE SETTING UNIT.
2. NO PENETRATION OF CURB SIDEWALL ALLOWED.

## 1 TYPICAL ROOF CURB
SCALE: 3" = 1'-0"

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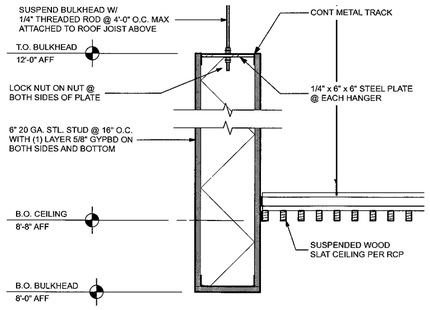
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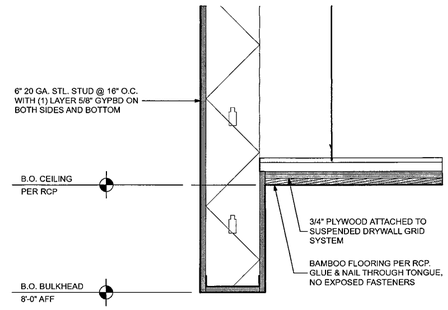
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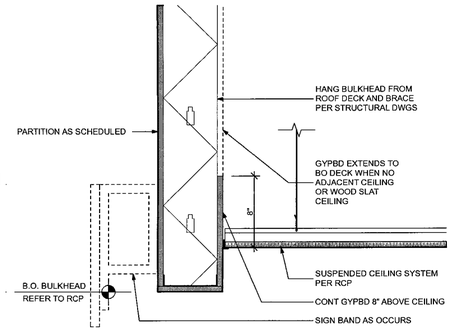

## 11 BULKHEAD @ PRODUCE

SCALE: 1 1/2"= 1'-0"



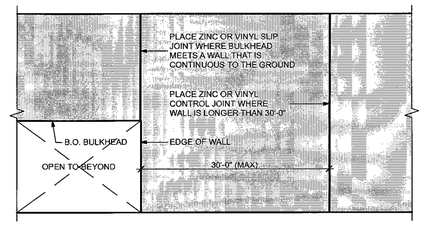

## 10 BULKHEAD @ HABA

SCALE: 1 1/2"= 1'-0"



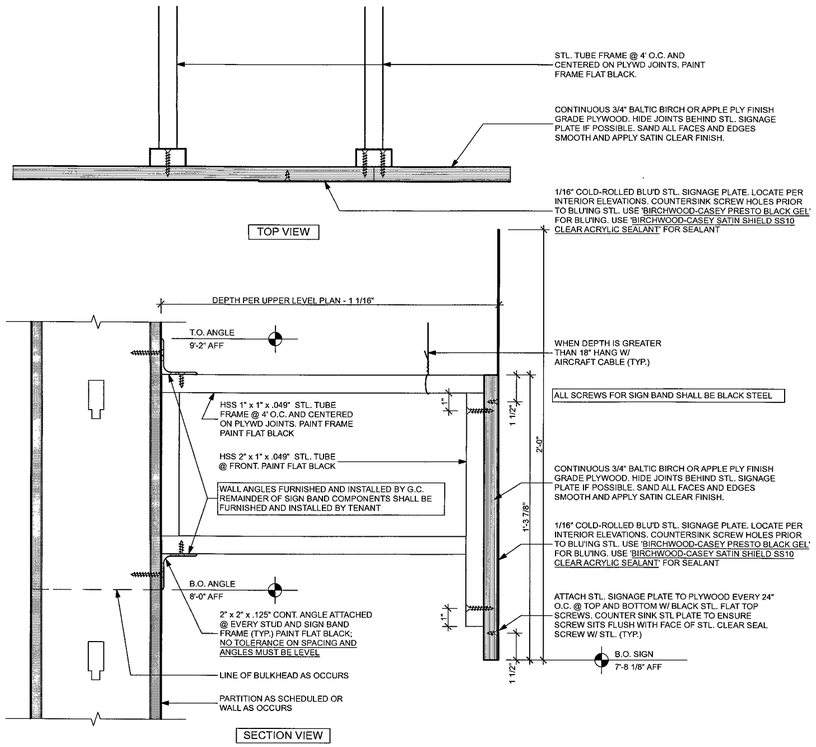

## 9 TYPICAL BULKHEAD

SCALE: 1 1/2"= 1'-0"



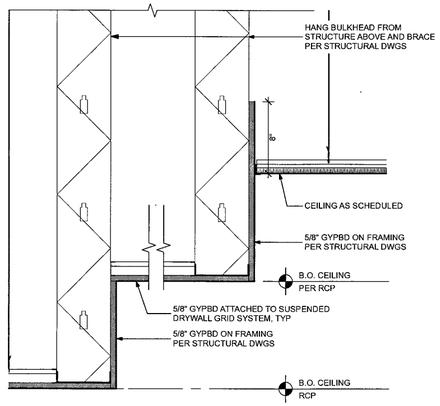

## 8 GYP.BD. CONTROL JOINTS

NOT TO SCALE



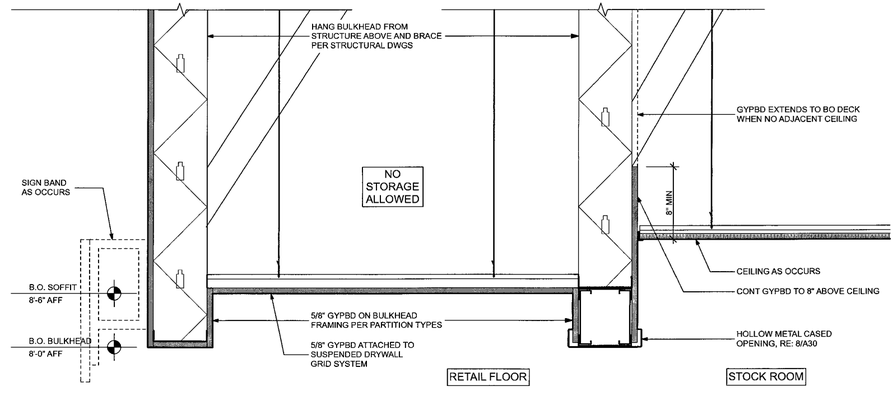

## 7 SIGN BAND SECTIONS

SCALE: 3" = 1'-0"



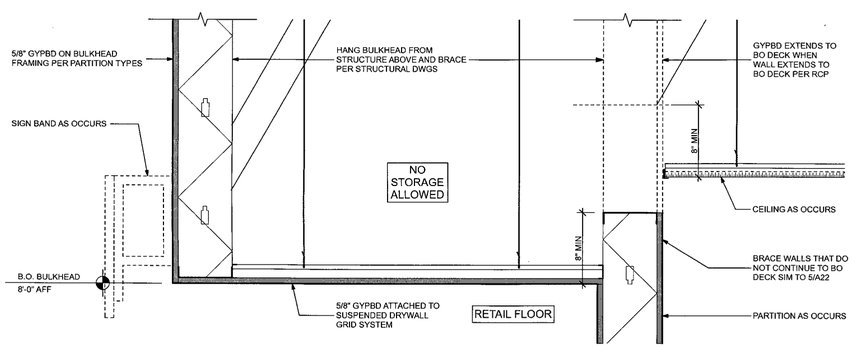

## 6 SOFFIT @ KITCHEN

SCALE: 1 1/2"= 1'-0"



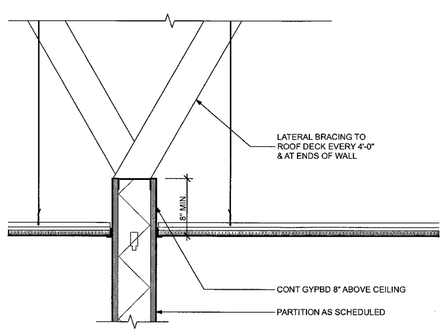

## 5 SOFFIT @ TRAFFIC DOORS

SCALE: 1 1/2"= 1'-0"



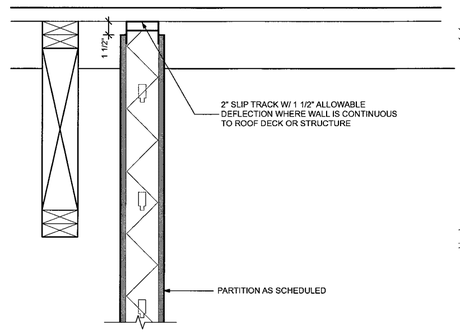

## 4 TYPICAL SOFFIT

SCALE: 1 1/2"= 1'-0"



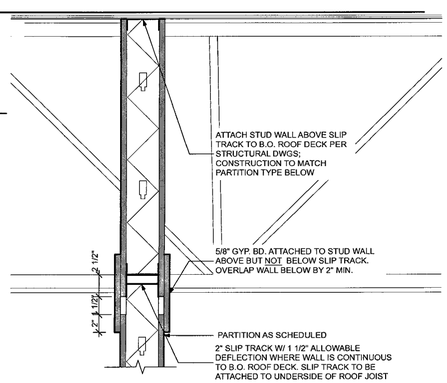

## 3 TYPICAL HEAD @ CEILING

SCALE: 1 1/2"= 1'-0"




## 2 HEAD PARALLEL TO JOIST

SCALE: 1 1/2"= 1'-0"




## 1 HEAD PERPENDICULAR TO JOIST

SCALE: 1 1/2"= 1'-0"

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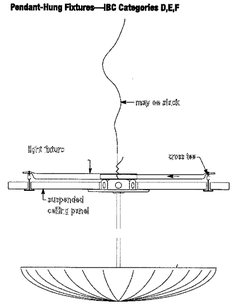
sheet title: Partition and Ceiling Details

by: af

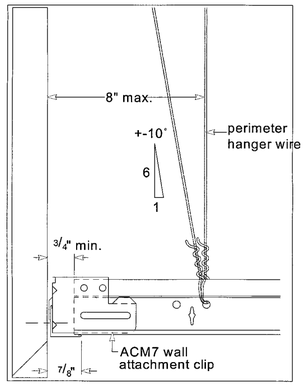
app: rf

sheet no.: A22 of 30

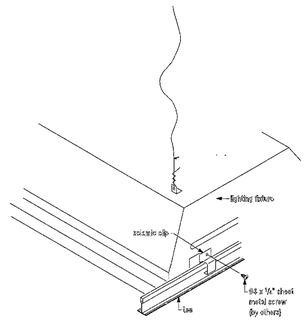
**Pendant-Hung Fixtures—IBC Categories D,E,F**




© USG Corporation




**Type G Light Fixture Attached to Grid—IBC Categories D,E,F**




© USG Corporation

## 6 PENDANT HUNG FIXTURE

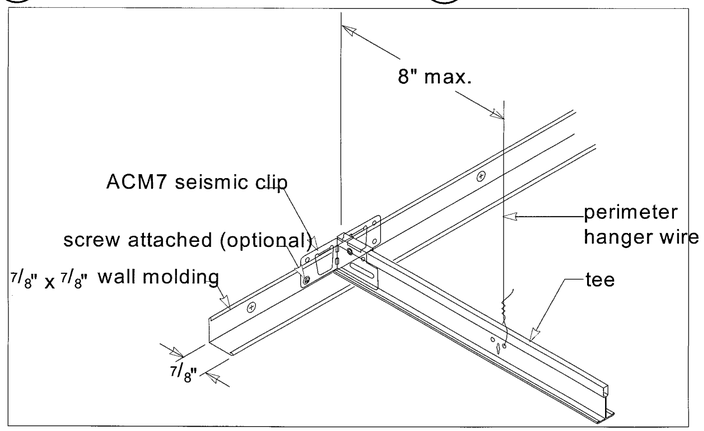
NOT TO SCALE

## 5 FLOATING WALL ACM 7 SEISMIC CLIP

NOT TO SCALE

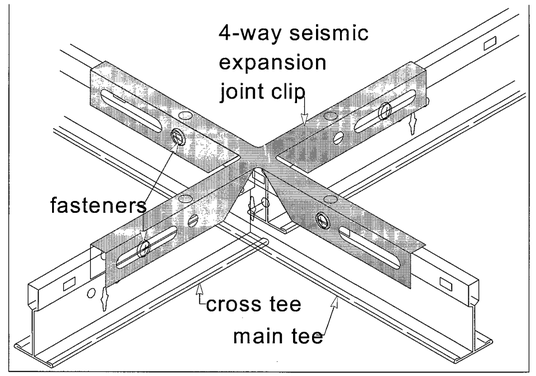
## 4 TYPE G LIGHT FIXTURE

NOT TO SCALE



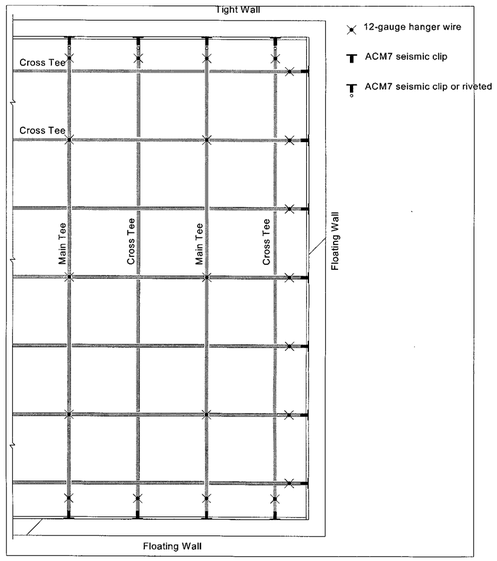

## 3 FIXED WALL PERIMETER SEISMIC CLIP

NOT TO SCALE




## 2 SEISMIC EXPANSION JOINT ISOMETRIC

NOT TO SCALE




## 1 SEISMIC CEILING CLIP LAYOUT

NOT TO SCALE

| SEISMIC ZONE 'D' CEILING AND LIGHT REQUIREMENTS | |
|---|---|
| **BASIC CONN, PERIMETER, LATERAL, SPLAY BRACING** | **REQ** |
| Minimum intersection strength limits @ MT / CT | 180 lbs |
| Vertical hanger wire 12-gauge @ 4' o.c | REQ |
| Connection device from vertical wire to the structure above must sustain min 100 lbs | REQ |
| Main tee classifications | Heavy-duty |
| 1 in 6 max plumb of vertical hanger wires | REQ |
| Perimeter vertical hanger wires not more than 8" from wall | REQ |
| Grid end/wall clearance | Min 3/4" |
| Perimeter closure (molding) width | Min 2 " |
| Grid connection to perimeter attached on two adjacent walls | REQ |
| Perimeter tee ends tied together | REQ |
| Horizontal restraint (splay wires or rigid bracing) within 2" of intersection and splayed 90° apart at 45° angles | REQ |
| Compression posts (struts) 12' o.c. in both directions, starting 6' from walls | REQ |
| Splay bracing connection strength 200 lbs or the design load, whichever is greater | REQ |
| Partition attachment | Bracing independent of ceiling splay bracing |
| Seismic separation joint[4] | REQ for areas > 2,500 sq. ft. (or full height partition) |
| Rigid bracing for ceiling plane elevation changes | REQ |
| **LIGHT FIXTURE ATTACHEMENT** | **REQ** |
| Light fixture (all types) mechanically attached to grid NEC 410-16 (two per fixture unless independently supported) | REQ |
| Surface-mounted fixtures attached to grid | Not REQ |
| Pendant-hung fixtures directly supported from structure with 9-gauge wire (or approved alternative)<br>Rigid lay-in or can light fixtures | REQ |
| ≤ 10 lbs – one wire to structure (may be slack) | REQ |
| 11 to 56 lbs – two wires from housing to structure (may be slack) | REQ |
| ≥ 57 lbs – supported directly to structure by approved | REQ |
| **LIGHT FIXTURE SUPP HANGER WIRES** | **REQ** |
| Intermediate Duty Main Tees with cross tee rating below 16 lbs./LF<br>Min. 12-gauge hanger wires must be attached to the grid members within 3 inches of each corner of each light fixture. | REQ |
| Heavy Duty Main Tees with cross tee rating below 16 lbs./LF<br>Min. 12-gauge hanger wires must be attached to the supporting cross tee within 3 inches of the corner of each light fixture. | REQ |
| Supplementary hanger wires for Heavy Duty Main Tees with cross tee rating equal to 16 lbs./LF | REQ |
| **SERVICE APPLICATIONS** | **REQ** |
| Air terminals<br>≤ 20 lbs – positively attached to grid | REQ |
| 21 to 56 lbs – positively attached to grid and two wires to structure (may be slack) | REQ |
| ≥ 57 lbs – directly supported to structure | REQ |
| Sprinkler heads and other penetration clearance | Min 2" dia. opening or a swing joint |
| Cable trays and electrical conduit independently supported and braced | REQ |

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by: af

app: rf

sheet no.: A23 of 30

## SLAT CEILING NOTES

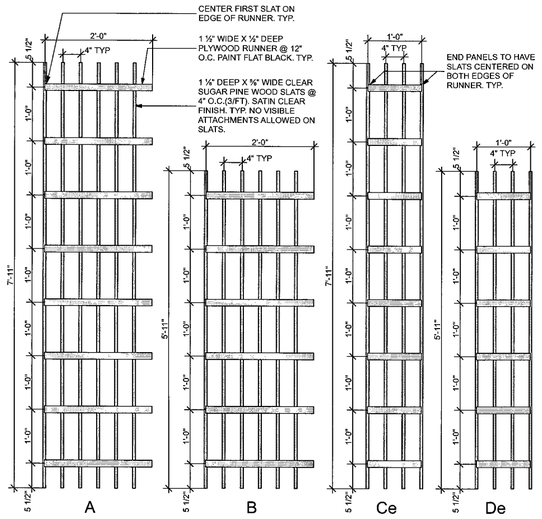
1. STARTING POINT ON SLAT CEILING PLANS DENOTES WHERE T-BAR LAYOUT IS TO BEGIN. REFER TO 3/A24.
2. DIMENSIONS ON SLAT CEILING PLANS ARE TO CENTER OF T-BAR. VERIFY ALL DIMENSIONS IN FIELD. PANELS NOT SHOWN FOR CLARITY.
3. LENGTH OF PANELS TO BE HELD 1" OFF ALL WALLS AND FROM ADJACENT PANELS.
4. WIDTH OF PANELS TO HELD OFF WALL AND ATTACHED TO ADJACENT PANEL PER 3/A24.
5. PANELS TO BE PREFABRICATED PER 5/A24.
6. SLAT ENDS ARE NOT TO CANTILEVER MORE THAN 6" PAST RUNNER.
7. TYPICAL 3 MEMBERS/FT SLAT PANEL HAS 71.5% OPENNESS.
8. INTENT AT VITAMINS IS TO PROVIDE OPEN CEILING GRID TO ACCOMMODATE POTENTIAL FUTURE INSTALLATION OF PANELS. PANELS AT VITAMINS N.I.C.

## CEILING PANEL MATRIX

| ROOM | A | Ac | Ae | Aec | B | Bc | Be | Bec | C | Cc | Ce | Cec | D | Dc | De | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PRODUCE CEILING COUNT | 38 | | | | 55 | 2 | | | 2 | | | | 2 | 1 | | |
| VITAMIN CEILING COUNT | | | | | | | | | | | | | | | | |
| COMMUNITY CEILING COUNT | 20 | | 5 | | | | | | 5 | | | | | | | |
| **TOTAL** | **58** | | **5** | | **55** | **2** | | | **7** | | | | **2** | **1** | | |

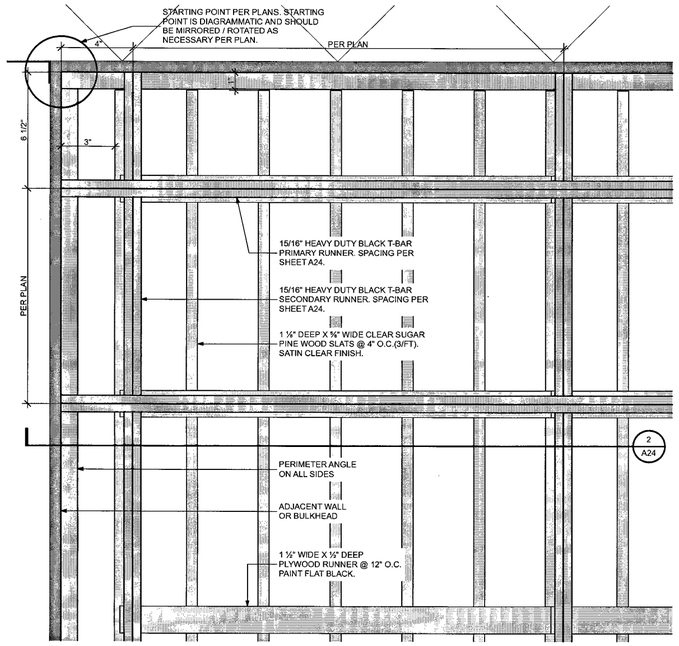
**LEGEND:**

'A' - PANEL LAYOUT. RE: 5/A24
'e' - END PANEL. RE: 5/A24
'c' - CUSTOM CUT PANEL. FIELD MEASURE.



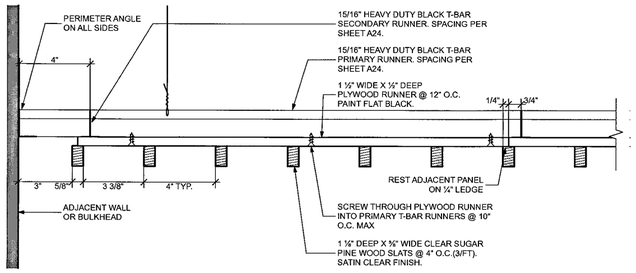

## 5 PANEL LAYOUT

SCALE: 3/4" = 1'-0"



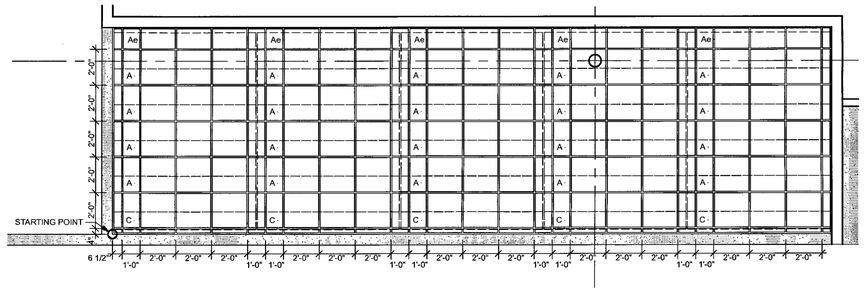

## 3 PANEL ATTACHMENT PLAN

SCALE: 3" = 1'-0"



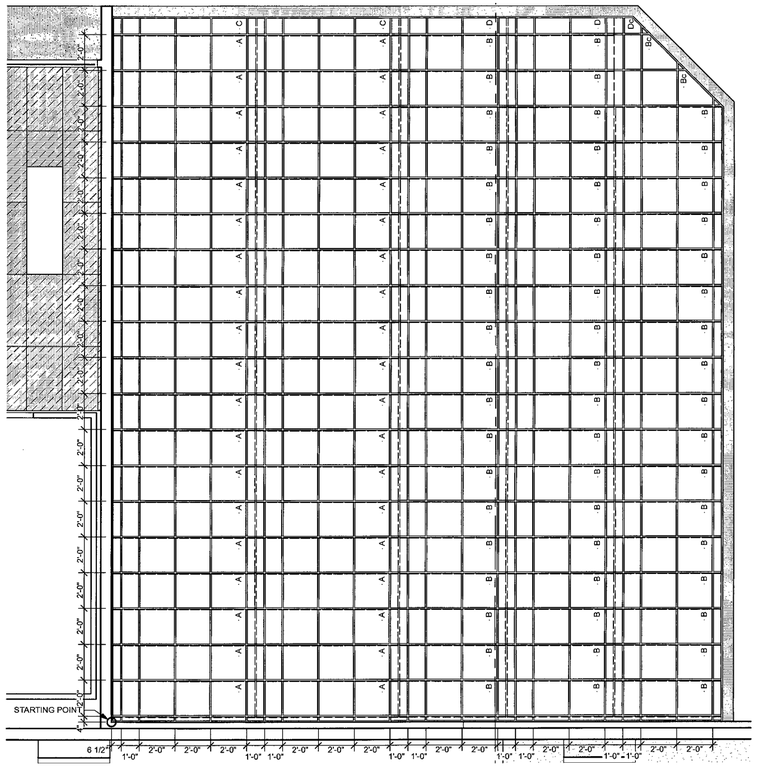

## 2 PANEL ATTACHMENT SECTION

SCALE: 3" = 1'-0"




## 4 COMMUNITY | SLAT CEILING PLAN

SCALE: 1/4" = 1'-0"




## 1 PRODUCE | SLAT CEILING PLAN

SCALE: 1/4" = 1'-0"

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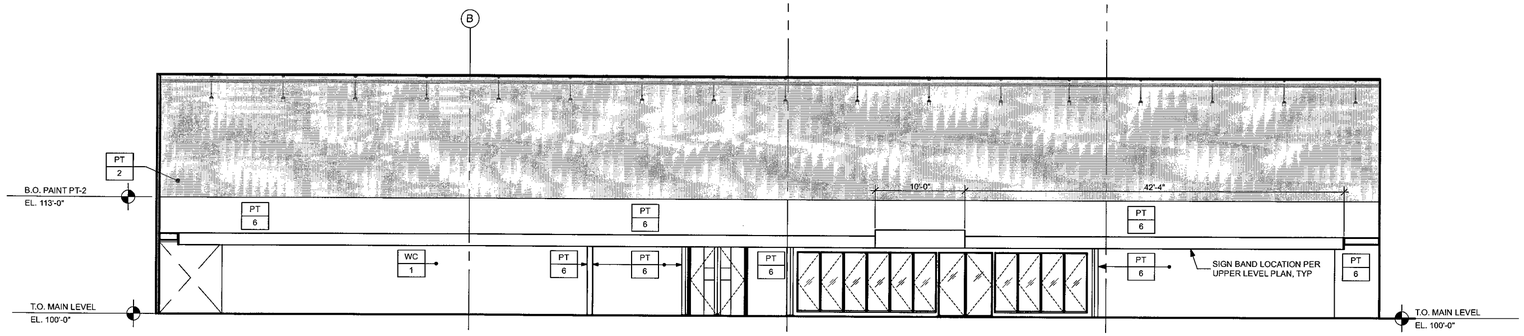
Issue / date

sheet title: Enlarged Slat Ceiling Plan

by: af

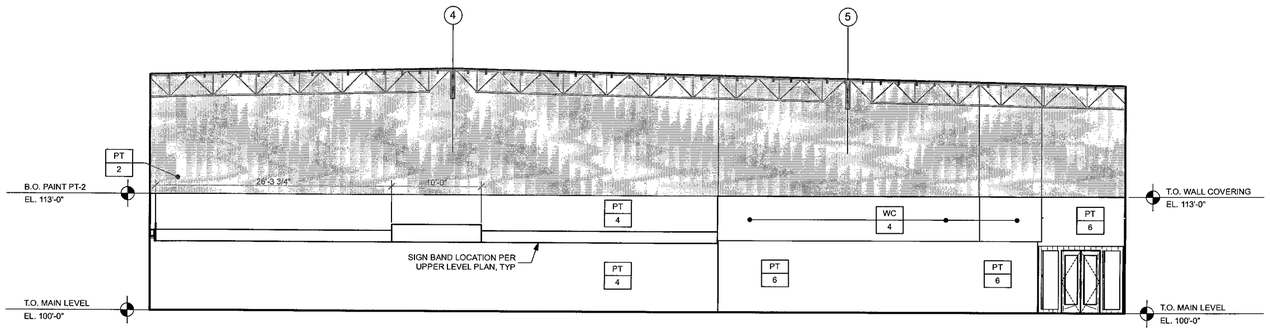
app: rf

sheet no.: A24 of 30



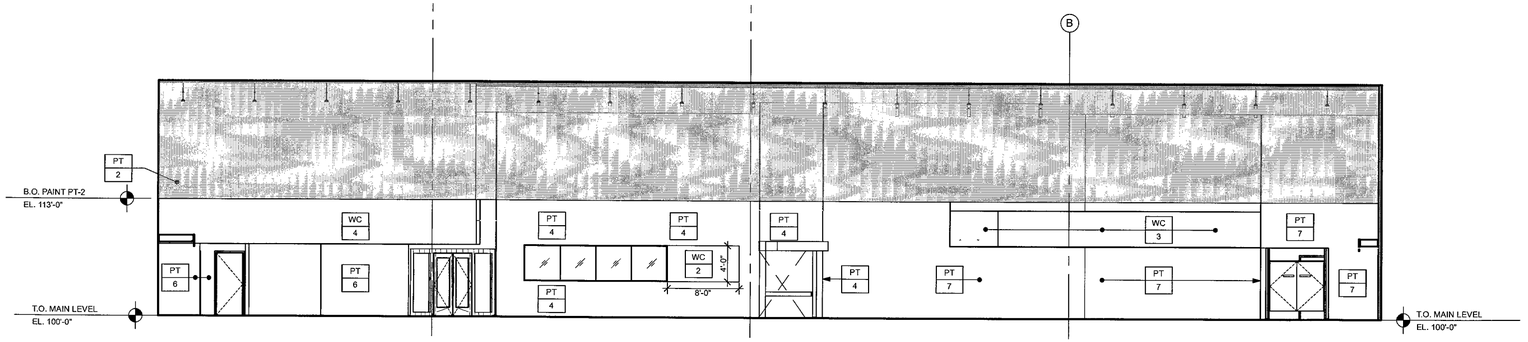

## 4 RETAIL | WEST ELEVATION

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



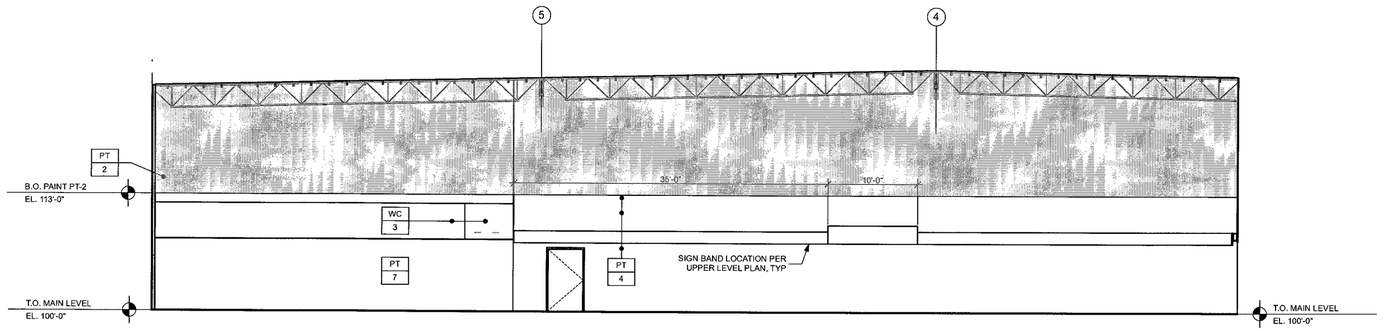

## 3 RETAIL | NORTH ELEVATION

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




## 2 RETAIL | EAST ELEVATION

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




## 1 RETAIL | SOUTH ELEVATION

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

## FINISH NOTES

1. IT IS THE G.C.'S RESPONSIBILITY TO ENSURE ALL MANUFACTURERS' SPECIFICATIONS FOR INSTALLATION.
2. ALL WALLS AND PARTITIONS WITHOUT A DESIGNATED FINISH ARE TO BE PAINTED.
3. REFER TO SHEET A27 FOR TYPICAL FLOORING TRANSITIONS. ALL FLOORING TRANSITIONS TO OCCUR UNDER CENTER OF DOORS, UNO.
4. ALL FLOORING MATERIALS TO CONTINUE UNDER CASEWORK TO TOE KICK AND UNDER OPEN COUNTER TO WALL.
5. APPLY ALL SEALANTS AND NON-SLIP AGENTS AS RECOMMENDED BY MANUFACTURER.
6. PRIME AND PAINT ALL GRILLES, ELECTRICAL PANELS, AND COVER PLATES TO MATCH ADJACENT SURFACES.
7. REFER TO SPECIFICATIONS FOR DETAILED PRODUCT DESCRIPTIONS.
8. TENANT HAS NATIONAL ACCOUNT WITH DALTILE. GC TO PURCHASE TILE WITH NATIONAL ACCOUNT PRICING.
9. ALLOW 10 DAYS IN SCHEDULE FOR CONCRETE FINISHING.
10. ALL WALLS AND PARTITIONS TO RECEIVE RESILIENT BASE (RB-1) UNO.
11. ALL INTERIOR COLUMNS SHALL BE PAINTED (PT-2) UNO.
12. ALL INTERIOR HOLLOW METAL DOOR FRAMES SHALL BE PAINTED (PT-8) UNO.
13. ALL WOOD DOORS SHALL BE SOLID CORE PRE-FINISHED BIRCH ROTARY CUT VENEER.
14. REFER TO REFLECTED CEILING PLANS FOR ADDITIONAL CEILING FINISHES.
15. REFER TO INTERIOR ELEVATIONS FOR ADDITIONAL WALL FINISHES.
16. ALL WALLS (NOT BULKHEADS) ABOVE WOOD SLAT CEILING SHALL BE PAINTED (PT-2) UNO.

PARTITION PREP FOR WALL COVERINGS: LEVEL 5 GYPBD FINISH AND 2 COATS OF WHITE PAINT (GLOSS FINISH) PRIOR TO INSTALLATION OF WALL COVERING

## FINISH LEGEND

| | | |
|---|---|---|
| CONC 1 | **CONCRETE**<br>HARDENER: | **POLISHED BY TENANT**<br>L&M FGS HARDENER PLUS (2 COATS) |
| CONC 2 | **CONCRETE**<br>UNFINISHED | |
| CPT 1 | **CARPET**<br>MANUFACTURER:<br>STYLE:<br>SIZE: | <br>TBD<br>PATTERN LOOP<br>24" x 24" MODULAR TILES |
| CPT 2 | **CARPET**<br>WALK OFF MAT<br>MANUFACTURER:<br>STYLE:<br>SIZE: | <br>TBD<br>PATTERN LOOP<br>24" x 24" MODULAR TILES |
| CT 1 | **CERAMIC TILE**<br>MANUFACTURER:<br>STYLE:<br>COLOR:<br>SIZE:<br>GROUT: | <br>DAL-TILE<br>GLAZED PORCELAIN<br>B928 URBAN PUTTY SPECKLE<br>12" x 12"<br>MAPEI SANDED GROUT #11 SAHARA BEIGE |
| CT 2 | **CERAMIC TILE**<br>MANUFACTURER:<br>STYLE:<br>COLOR:<br>SIZE:<br>GROUT: | <br>DAL-TILE<br>GLAZED PORCELAIN<br>B935 BROWN SPECKLE<br>AS INDICATED ON DRAWINGS<br>MAPEI SANDED GROUT #11 SAHARA BEIGE |
| FRP 1 | **FRP PANELS**<br>MANUFACTURER:<br>STYLE:<br>COLOR: | <br><br><br>WHITE |
| PT 1 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR:<br>PRIMER: | <br>BENJAMIN MOORE<br>LOW VOC; SEMI-GLOSS<br>BM 2144-40 SOFT FERN<br>GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 2 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR:<br>PRIMER: | <br>GLIDDEN<br>LOW VOC; SEMI-GLOSS<br>#A0532 BARK<br>GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 3 | **PAINT**<br>MANUFACTURER:<br>PRODUCT:<br>COLOR: | <br>LANNING CHEMICAL<br>LW-256 FLAT WATERBASED DRY FALL<br>TO MATCH GLIDDEN #A0532 BARK |
| PT 4 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR:<br>PRIMER: | <br>GLIDDEN<br>LOW VOC; SEMI-GLOSS<br>#A0570 SERENGETI PLAINS<br>GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 5 | **PAINT**<br>MANUFACTURER:<br>PRODUCT:<br>COLOR: | <br>GLIDDEN<br>#1280-1200 SPRAYMASTER PRO FLAT LATEX DRYFALL<br>#A1748 SAND MOTIF |
| PT 6 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR:<br>PRIMER: | <br>GLIDDEN<br>LOW VOC; SEMI-GLOSS<br>#A0504 ORANGE MINERAL<br>GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 7 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR:<br>PRIMER: | <br>GLIDDEN<br>LOW VOC; SEMI-GLOSS<br>#A0964 VERTIGO<br>GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 8 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR:<br>PRIMER: | <br>GLIDDEN<br>LOW VOC; SEMI-GLOSS<br>#A1833 FOREST BLACK<br>GLIDDEN HI HIDE WALL PRIMER SEALER #1000-1200 |
| PT 9 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR: | <br>GLIDDEN<br>EXTERIOR FLAT<br>#A0515 CARIBBEAN SPICE |
| PT 10 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR: | <br>GLIDDEN<br>EXTERIOR FLAT<br>#A1804 BROWN BAG |
| PT 11 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR: | <br>ICI<br>EXTERIOR FLAT<br>#A1875 LOAM |
| PT 12 | **PAINT**<br>MANUFACTURER:<br>STYLE:<br>COLOR: | <br>GLIDDEN<br>EXTERIOR FLAT<br>#A0532 BARK |
| RB 1 | **RESILIENT BASE**<br>MANUFACTURER:<br>STYLE:<br>COLOR:<br>SIZE: | **FURNISHED AND INSTALLED BY TENANT**<br>JOHNSONITE<br>COVE AT HARD FLOORING; STRAIGHT AT CARPET<br>BURNT UMBER<br>4" |
| RF 1 | **RUBBER FLOORING** | **FURNISHED AND INSTALLED BY TENANT** |
| VCT 1 | **VINYL TILE** | **FURNISHED AND INSTALLED BY TENANT** |
| WC 1 | **WALL COVERING** | HISTORIC IMAGE TBD<br>**FURNISHED BY TENANT**<br>**INSTALLATION AND PARTITION PREP BY GC** |
| WC 2 | **WALL COVERING** | FIVE FOUNDING PRINCIPLES IMAGE<br>**FURNISHED BY TENANT**<br>**INSTALLATION AND PARTITION PREP BY GC** |
| WC 3 | **WALL COVERING** | PRODUCE GRAPHIC<br>**FURNISHED BY TENANT**<br>**INSTALLATION AND PARTITION PREP BY GC** |
| WC 4 | **WALL COVERING** | HABA GRAPHIC<br>**FURNISHED BY TENANT**<br>**INSTALLATION AND PARTITION PREP BY GC** |

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app: rf

sheet no.: A25 of 30

## INTERIOR ELEVATION NOTES

1. DIMENSIONS SHOWN ON ENLARGED PLANS AND INTERIOR ELEVATIONS ARE FROM FINISHED FACE OF WALL/PARTITION, U.N.O.
2. REFER TO EQUIPMENT / FIXTURE SCHEDULE (SHEET A19) FOR KEY TO EQUIPMENT IDENTIFIERS.
3. REFER TO FINISH LEGEND (SHEET A15) FOR KEY TO FINISH IDENTIFIERS.
4. PROVIDE SOLID BLOCKING BEHIND ALL WALL MOUNTED FIXTURES.

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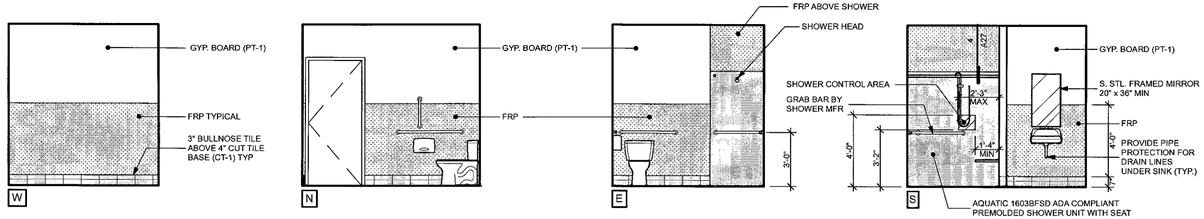
Issue / date

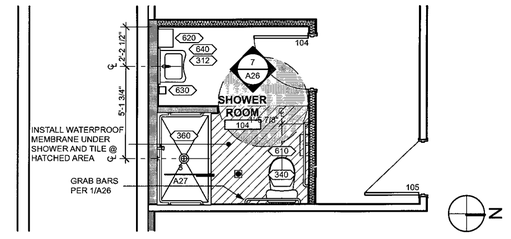
sheet title: Interior Elevations

by: af

app: rf

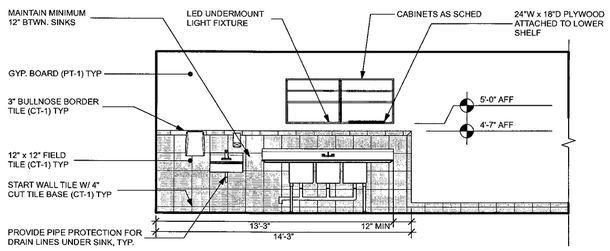
sheet no.: A26 of 30



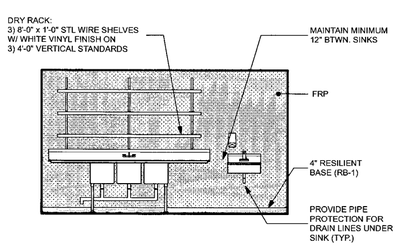




## 6 ENLARGED SHOWER ROOM PLAN
SCALE: 1/4" = 1'-0"

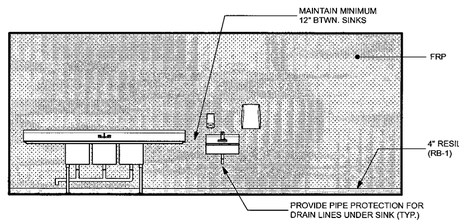
## 7 SHOWER ROOM ELEVATIONS
SCALE: 1/4" = 1'-0"



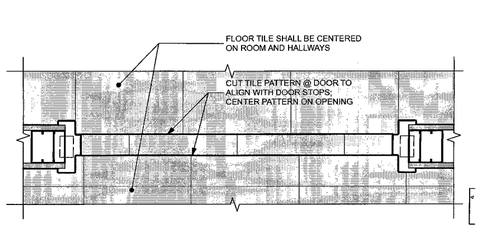

## 5 BREAK ROOM ELEVATION
SCALE: 1/4" = 1'-0"



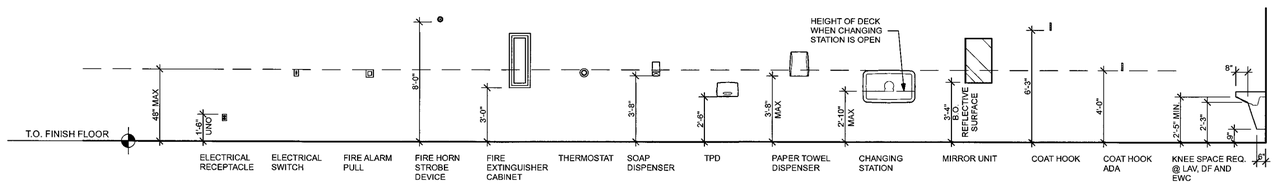

## 4 SCULLERY ELEVATION
SCALE: 1/4" = 1'-0"



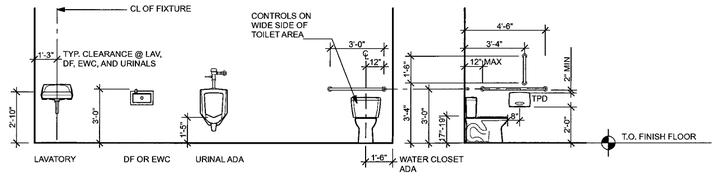

## 3 PRODUCE ROOM ELEVATION
SCALE: 1/4" = 1'-0"




## 2 THRESHOLD @ TILE DOOR
SCALE: 1 1/2"= 1'-0"




## 1 MOUNTING HEIGHTS LEGEND
SCALE: 1/4" = 1'-0"




A. LEGEND INDICATES RECOMMENDED MOUNTING HEIGHTS. CONTRACTOR SHALL COORDINATE SPECIFIC MOUNTING HEIGHTS WITH MANUFACTURERS' REQUIREMENTS FOR HANDICAPPED ACCESSIBILITY.

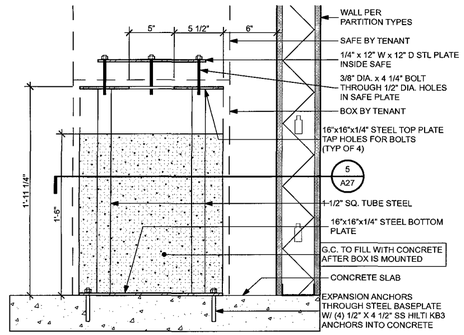
B. ACCESSORIES SHALL NOT PROJECT MORE THAN 4" FROM THE WALL IF THEIR LEADING EDGE IS BETWEEN 27" AND 80" ABOVE THE FINISH FLOOR.

C. OPERABLE PARTS (CONTROLS) SHALL BE LOCATED A MINIMUM OF 15", AND A MAXIMUM OF 48", ABOVE THE FINISH FLOOR.

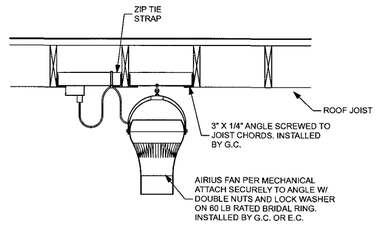
D. PROVIDE SOLID BLOCKING BEHIND ALL WALL HUNG FIXTURES

E. INCLUDE ONE COAT HOOK @ ADA MOUNTING HEIGHT EVERYWHERE COAT HOOKS ARE PROVIDED.

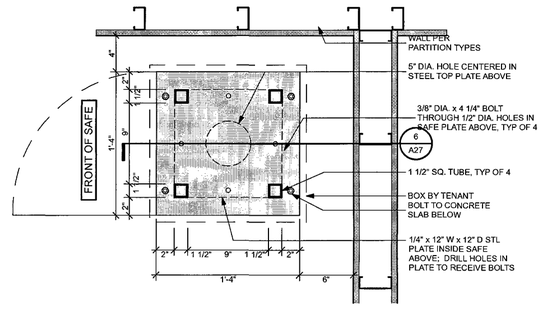
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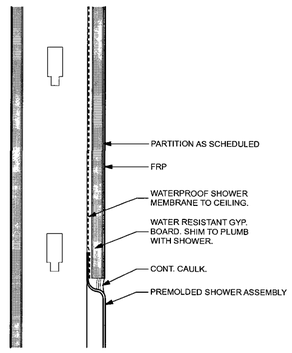

## 6 SAFE BASE SECTION
SCALE: 1 1/2"= 1'-0"



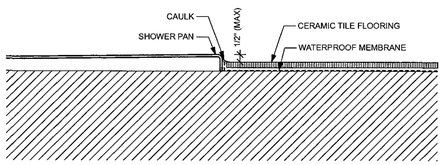

## 7 TYP FAN MOUNTING
SCALE: 3/4" = 1'-0"



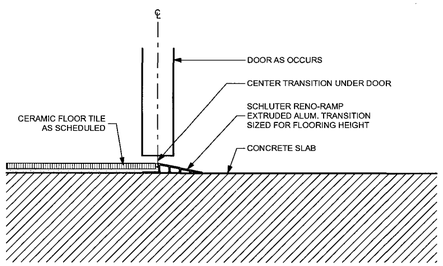

## 5 SAFE BASE PLAN
SCALE: 1 1/2"= 1'-0"



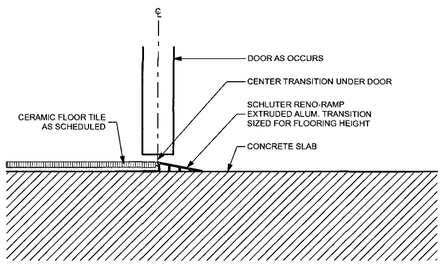

## 4 PREMOLDED SHOWER @ FRP
SCALE: 3" = 1'-0"




## 3 PREMOLDED SHOWER @ FLOOR
SCALE: 3" = 1'-0"




## 2 CERAMIC TILE @ SLAB
SCALE: 3" = 1'-0"




## 1 CARPET @ SLAB
SCALE: 3" = 1'-0"

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DAVID GROOMS REGISTERED No. 7058 6/17/14 ARCHITECT STATE OF NEVADA

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sheet title: Interior Details

by: af

app: rf

sheet no.: A27 of 30

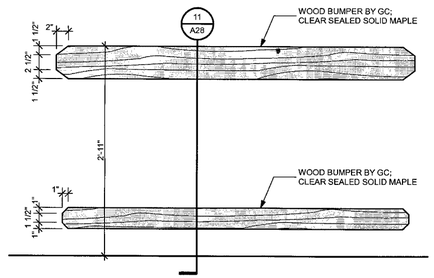
## MILLWORK NOTES

1. GENERAL CONTRACTOR TO SUPPLY AND INSTALL ALL GRANITE COUNTERTOPS. UTILIZE COOKTOP CUTOUT IN ISLAND FOR COFFEE COUNTER.
2. TENANT AND G.C. ARE NOT TO USE ANY PRODUCTS WHICH CONTAIN FORMALDEHYDE.
3. NO OSB, PARTICLE BOARD OR CHIP BOARD ALLOWED FOR ANY ITEM IN PROJECT.
4. STAINLESS STEEL SHALL MEET ASTM A 666 (TYP 304).
5. CHILDPROOF LOCKS ON ALL DOORS AND DRAWERS BY TENANT.
6. REFER TO EQUIPMENT / FIXTURE SCHEDULE (SHEET A19) FOR KEY TO EQUIPMENT IDENTIFIERS.
7. REFER TO FINISH LEGEND (SHEET A15) FOR KEY TO FINISH IDENTIFIERS.
8. PROVIDE SOLID BLOCKING BEHIND ALL WALL MOUNTED FIXTURES.

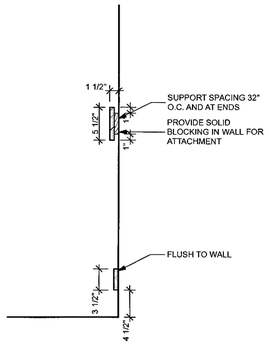
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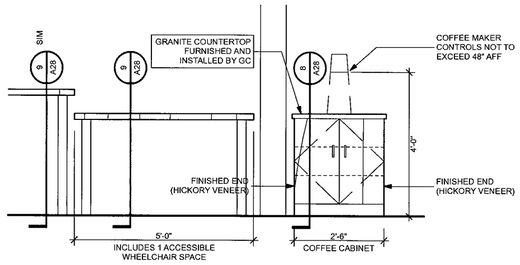
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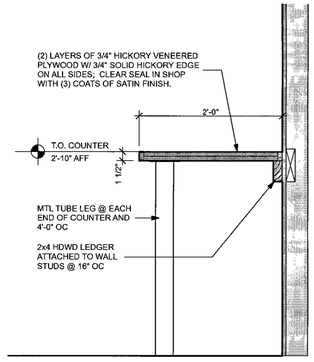

## 12 BUMPER ELEVATION
SCALE: 1" = 1'-0"



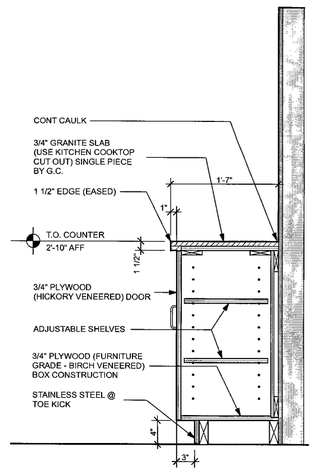

## 11 BUMPER SECTION
SCALE: 1" = 1'-0"



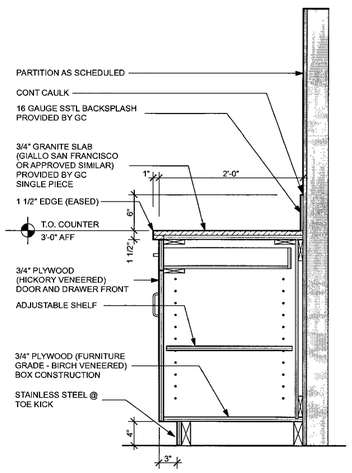

## 10 COFFEE ELEVATION
SCALE: 1/2" = 1'-0"



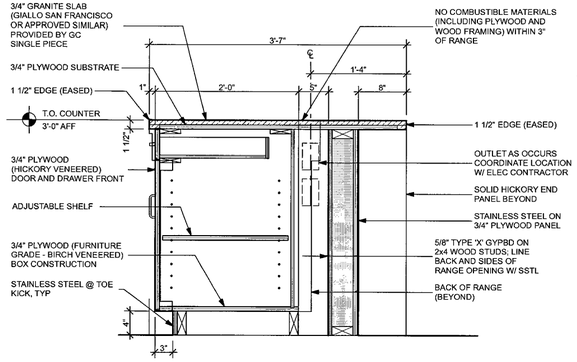

## 9 SECTION @ COUNTER
SCALE: 1" = 1'-0"



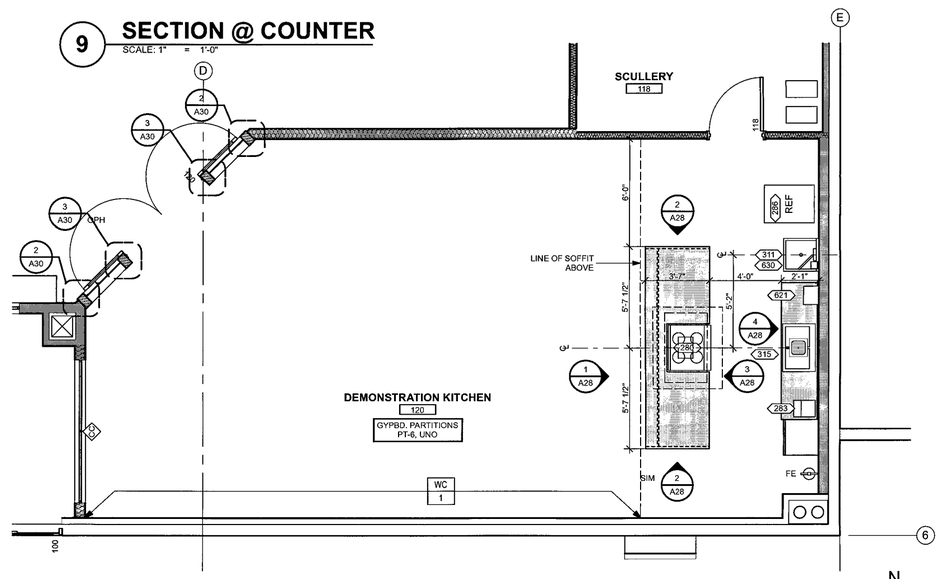

## 8 SECTION @ COFFEE
SCALE: 1" = 1'-0"



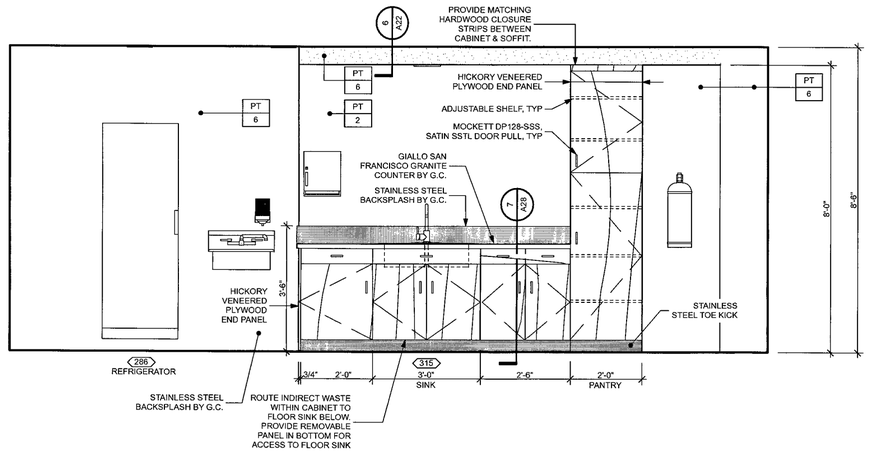

## 7 CABINET SECTION @ WALL
SCALE: 1" = 1'-0"



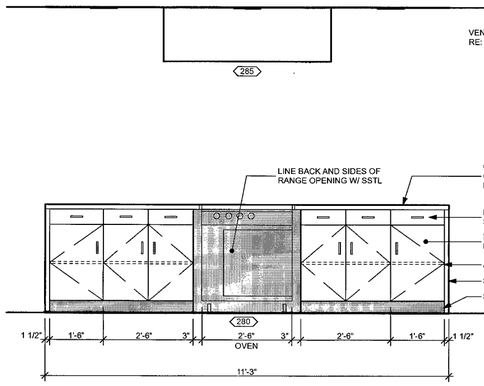

## 6 SECTION @ ISLAND
SCALE: 1" = 1'-0"



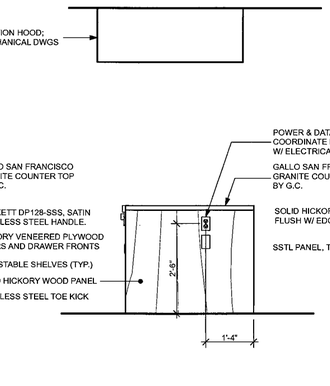

## 5 ENLARGED DEMONSTRATION KITCHEN
SCALE: 1/4" = 1'-0"



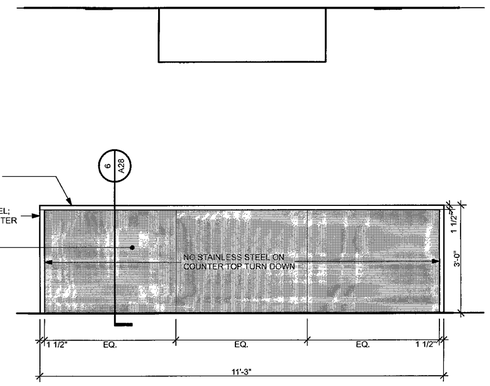

## 4 TALL CABINET AND SINK AREA
SCALE: 1/2" = 1'-0"




## 3 ISLAND REAR ELEVATION
SCALE: 1/2" = 1'-0"




## 2 ISLAND SIDE
SCALE: 1/2" = 1'-0"




## 1 ISLAND FRONT ELEVATION
SCALE: 1/2" = 1'-0"

# SPECIALTY RETAILER

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Issue / date

sheet title: Demonstration Kitchen

by: af

app: rf

A28 of 30 sheet no.

## LEGEND

### ELEVATIONS

T TEMPERED GLASS PANEL AS SCHEDULED
SO SWINGOUT SIDELIGHT
SX SLIDE/SWING PANEL
O FIXED SIDELIGHT

### GLAZING TYPES

G1 MANUFACTURER'S STANDARD TEMPERED GLAZING
G2 NOT USED
G3 1/4" TEMPERED GLASS
G4 3/16" TEMPERED PRIVACY GLASS. INSTALLED WITH REFLECTIVE SIDE ON RETAIL SIDE TO ALLOW STAFF TO SEE OVER RETAIL SPACE. IN COUNTING ROOM, INSTALL TO ALLOW VISION INTO THE COUNTING ROOM.
G5 1/2" TEMPERED INSULATED GLASS

### MATERIALS

ALUM EXTRUDED ALUMINUM
ALUM2 SHEET ALUMINUM
HM DOOR: HOLLOW METAL STEEL DOOR; REINFORCE FOR CLOSER (INSULATED IN EXTERIOR CONDITIONS)
FRAME: WELDED HOLLOW METAL FRAME; REINFORCE ALL FRAMES FOR CLOSERS
OH INSULATED SECTIONAL STEEL OVERHEAD DOOR
SOUND HM SOUND DOOR AND FRAME TO ACHIEVE STC 46 MINIMUM
STL STEEL
WD SOLID CORE BIRCH ROTARY CUT VENEERED DOOR

### FINISH

PFCC PRE-FINISHED CLEAR COAT
CLEAR CLEAR ANODIZED ALUMINUM
DK BRZ DARK BRONZE ANODIZED ALUMINUM
ENAM ENAMEL
MD BRZ MEDIUM BRONZE ANODIZED ALUMINUM
MFR MANUFACTURER'S STANDARD
PT PAINTED

## DOOR AND FRAME TYPE NOTES

A. REFER TO DOOR SCHEDULE FOR DOOR HEIGHT (H) AND WIDTH (W) AT INDIVIDUAL OPENINGS.
B. ALL HOLLOW METAL DOORS ARE 1 3/4" THICK UNO.
C. ALL HOLLOW METAL FRAME PROFILES HAVE A FACE WIDTH OF 2" UNO. FRAMES WITHIN MASONRY WALLS SHALL HAVE A 4" HEAD FACE.
D. STOREFRONT GLAZING IS 1" LOW-E INSULATED GLASS UNLESS OTHERWISE INDICATED. DOOR GLAZING IS AS SCHEDULED, UNLESS OTHERWISE INDICATED ON ELEVATIONS. REFER TO LEGEND FOR GLAZING TYPES.
E. DOOR HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST TO OPERATE. DEVICES SHALL BE INSTALLED 34" MINIMUM AND 48" MAXIMUM A.F.F. LOCKS USED ONLY FOR SECURITY PURPOSES AND NOT USED FOR NORMAL OPERATION ARE PERMITTED AT ANY HEIGHT.
F. ALL EXIT DOORS TO SWING IN THE DIRECTION OF TRAVEL.
G. ALL EXTERIOR DOORS TO RECEIVE THRESHOLDS & WEATHERSTRIPPING
H. EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.
J. MANUALLY OPERATED FLUSH BOLTS OR SURFACE BOLTS ARE NOT PERMITTED
K. ALL THRESHOLDS TO HAVE BEVELED EDGE W/ SLOPE OF 50% OR LESS AND NO MORE THAN 1/2" LEVEL CHANGE.
L. THE UNLATCHING OF ANY LEAF SHALL NOT REQUIRE MORE THAN ONE OPERATION
M. PANIC AND FIRE EXIT HARDWARE MUST HAVE A MAXIMUM UNLATCHING FORCE OF 15 LBS., AND THE ACTUATING PORTION OF THE RELEASING DEVICE SHALL EXTEND AT LEAST ONE-HALF OF THE DOOR LEAF WIDTH.
N. RESTROOM DOORS TO HAVE SIGN OF THE INTERNATIONAL SYMBOL OF ACCESSIBILITY
P. REINFORCE FRAMES AT HARDWARE LOCATIONS
Q. GC TO VERIFY WALL THICKNESS PRIOR TO ORDERING FRAMES.
R. GC TO VERIFY WITH STOREFRONT MFR. THAT EXTERIOR WINDOWS MEET LOCAL WIND LOADING REQUIREMENTS. FIELD VERIFY DIMENSIONS PRIOR TO ORDERING STOREFRONT.
S. REFER TO FINISH PLAN (SHEET A15) FOR FINISH SCHEDULE.
T. ALL HM FRAMES SHALL HAVE RUBBER JAMB BUMPERS. ALL DOOR BUMPERS / SILENCERS SHALL BE PROVIDED AND INSTALLED BY G.C.
U. ASTRAGALS SHALL BE CUT TO 6'-6" AND CENTERED ON THE HEIGHT OF THE DOOR; CONTINUOUS WELD TO DOOR IN LIEU OF SCREWS. PAINT ASTRAGAL TO MATCH DOOR.
V. DOOR VIEWERS SHALL BE INSTALLED AT 5'-0" AFF.
W. AQUARIUS LOCK & KEY IS CONTRACTED WITH THE TENANT TO PROVIDE DENOTED DOOR HARDWARE. CONTACT KEITH AT 303-880-0252
X. COLLINS DOOR AND HARDWARE IS CONTRACTED WITH THE TENANT TO PROVIDE ALL HOLLOW METAL AND WOOD DOORS AND FRAMES. ALL DOORS TO BE INSTALLED BY G.C.
Y. LATCH GUARDS TO BE A MIN. OF 6'-0" AND WELDED TO DOORS WHERE APPLICABLE.

## DOOR SCHEDULE

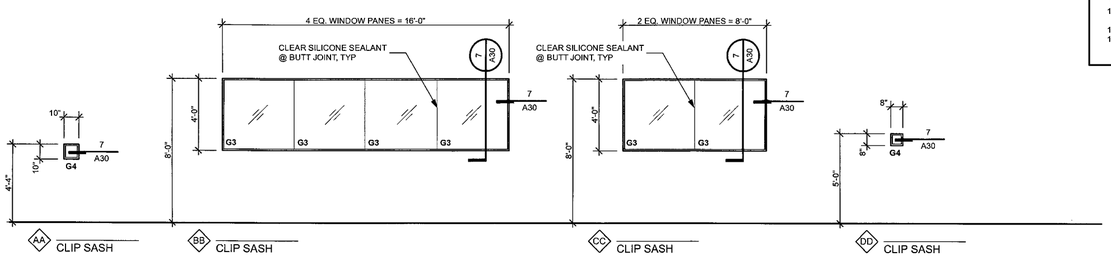
| ID | W x H | Renovation Status | DOOR | | | | FRAME | | | | HFR | STC | HDWR | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | TYPE | MATL | FIN | GLAZ | TYPE | MATL | FIN | GLAZ | | | | |
| 100 | 14'-0"x7'-8" | Existing | D | (E) | (E) | G1 | (E) | (E) | (E) | - | - | - | - | 2, 3, 5, 10, 12 |
| 101A | 4'-0"x7'-0" | New | A | HM | PT | - | A | HM | PT | - | 1 1/2 | - | HD.12 | |
| 101B | 6'-4"x7'-0" | Existing | (E) | (E) | (E) | - | (E) | (E) | (E) | - | (E) | - | HD.9 | 10 |
| 101C | 6'-4"x7'-0" | Existing | (E) | (E) | (E) | - | (E) | (E) | (E) | - | (E) | - | HD.9 | 10 |
| 102A | 6'-0"x5'-6" | New | C | ALUM 2 | MFR | G1 | C | HM | PT | - | - | - | - | 11 (PAIR OF DOORS) |
| 102B | 4'-0"x7'-0" | New | - | - | - | - | - | - | - | - | - | - | - | 4 |
| 104 | 3'-0"x7'-0" | New | A | WD | PFCC | - | B | HM | PT | - | - | - | HD.8 | |
| 105 | 3'-0"x7'-0" | Existing | A | (E) | PT | - | B | (E) | PT | - | - | - | HD.4 | 1, 10 |
| 106 | 3'-0"x7'-0" | Existing | A | (E) | PT | - | A | (E) | PT | - | | - | HD.6 | 1, 8, 10 |
| 107 | 3'-0"x7'-0" | Existing | A | (E) | PT | - | B | (E) | PT | - | - | - | HD.5 | 10 |
| 108 | 3'-0"x7'-0" | Existing | A | (E) | PT | - | B | (E) | PT | - | - | - | HD.5 | 10 |
| 109 | 3'-0"x7'-0" | Existing | A | (E) | PT | - | B | (E) | PT | - | - | - | HD.9 | 1, 10 |
| 110A | 3'-0"x7'-0" | Existing | A | (E) | PT | - | B | (E) | PT | - | - | - | HD.1 | 1, 10 |
| 110B | 3'-0"x7'-0" | Existing | A | (E) | PT | - | B | (E) | PT | - | - | - | HD.1 | 1, 10 |
| 111 | 3'-0"x7'-0" | Existing | A | (E) | PT | - | B | (E) | PT | - | - | - | HD.9 | 1, 10 |
| 112 | 3'-0"x7'-0" | Existing | A | (E) | PT | - | B | (E) | PT | - | - | - | HD.1 | 1, 10 |
| 113A | 3'-0"x7'-0" | Existing | A | (E) | PT | - | A | (E) | PT | - | - | - | HD.10 | 1, 10 |
| 113B | 8'-0"x10'-0" | Existing | E | (E) | PT | G1 | D | (E) | PT | - | - | - | - | |
| 113C | 8'-0"x10'-0" | Existing | E | (E) | PT | G1 | D | (E) | PT | - | - | - | - | |
| 113D | 3'-0"x7'-0" | New | B | HM | PT | - | B | HM | PT | - | - | - | HD.1 | |
| 113E | 6'-0"x8'-0" | New | C | ALUM 2 | MFR | G1 | C | HM | PT | - | - | - | - | 9 (PAIR OF DOORS) |
| 113F | 4'-0"x7'-0" | New | - | - | - | - | - | - | - | - | - | - | - | 4 |
| 113G | 4'-0"x7'-0" | New | - | - | - | - | - | - | - | - | - | - | - | 4 |
| 113H | 2'-0"x2'-0" | New | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 113H | 3'-0"x7'-0" | New | A | HM | PT | - | B | HM | PT | - | - | - | HD.9 | |
| 114 | 4'-0"x8'-0" | New | A | SOUND | PT | - | B | HM | PT | - | - | 46 | HD.7 | |
| 115 | 3'-0"x7'-0" | New | A | HM | PT | - | B | HM | PT | - | - | - | HD.2 | |
| 116 | 3'-0"x7'-0" | New | A | WD | PFCC | - | B | HM | PT | - | - | - | HD.1 | |
| 117 | 3'-0"x7'-0" | New | A | HM | PT | - | B | HM | PT | - | - | - | HD.3 | 7 |
| 118 | 3'-0"x7'-0" | New | A | WD | PFCC | - | B | HM | PT | - | - | - | HD.9 | |
| 120 | 6'-0"x7'-0" | New | F | CVGF | PFCC | G3 | E | CVGF | PFCC | G5 | -- | - | HD.11 | |

### DOOR SCHEDULE NOTES

1. PROVIDE NEW LOCK CODES COMPATIBLE W/ NEW LOCKSETS.
2. REFER TO DOOR TYPE ELEVATIONS FOR OPENING SIZE.
3. "DOORS TO REMAIN UNLOCKED DURING BUSINESS HOURS" TO BE POSTED WITH 1" LETTERS
4. DOOR PROVIDED WITH WALK-IN REFRIGERATION UNIT.
5. DOOR ABLE TO BE SWITCHED FROM HOLD OPEN MODE TO AUTOMATIC MODE.
6. NOT USED
7. UNDER-CUT DOOR 2"
8. PROVIDE LATCH GUARDS.
9. SCHEDULED FRAME SHALL PROVIDE A 6'-4" CLEAR WIDTH OPENING
10. VERIFY EXISTING DOOR MEETS OR EXCEEDS HARDWARE SCHEDULE REQUIREMENTS. MODIFY DOOR AS REQUIRED TO BRING HARDWARE UP TO SPEC OR EQUIVALENT.
11. 5'-6" HIGH DOORS IN A 7'-0" HIGH FRAMED OPENING. DOORS SHALL BE HUNG 12" ABOVE THE FLOOR AND 6" BELOW THE TOP OF OPENING.
12. G.C. TO HAVE DOOR SERVICED BEFORE OPERATION.

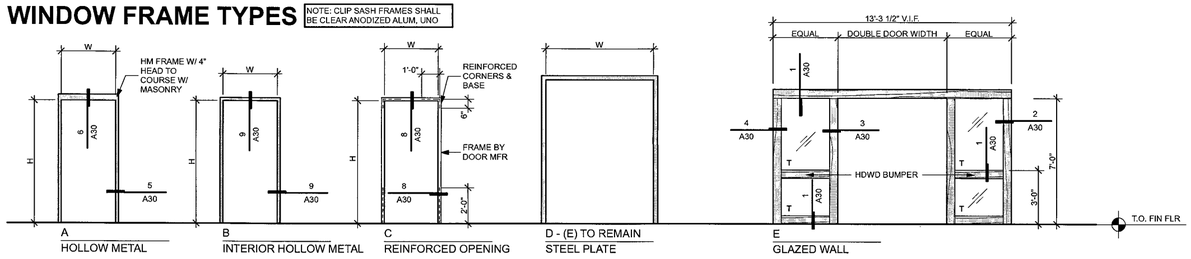
## DOOR HARDWARE SCHEDULE

| # | | FINISH | PROVIDED BY | INSTALLED BY |
|---|---|---|---|---|
| HD.1 | **MAIN FLOOR OFFICE DOORS / MANAGER DOOR** | | | |
| | HINGES: (1 1/2) PR HAGER BB1279 x 4 1/2 x 4 1/2 BUTT HINGES | US26D | TENANT | G.C. |
| | LOCKSET: SCHLAGE ND53JD RHO | 626 | TENANT | G.C. |
| | STOP: ROCKWOOD 403 WALL STOP | US26D | TENANT | G.C. |
| | CLOSER: DORMA 8916 AF89 or LCN 4041PA | 689 / AL | TENANT | G.C. |
| HD.2 | **COUNTING ROOM** | | | |
| | HINGES: (1 1/2) PR HAGER BB1191 x 4 1/2 x 4 1/2 BUTT HINGES | US32D | TENANT | G.C. |
| | LOCKSET: SCHLAGE ND80JD RHO | 626 | TENANT | G.C. |
| | CLOSER: DORMA 8916 AF89 or 4041PA | 689 / AL | TENANT | G.C. |
| | DEADBOLT: B560P SCHLAGE/ADA COMPLIANT | 626 | TENANT | G.C. |
| | STOP: ROCKWOOD 403 WALL STOP | US26D | TENANT | G.C. |
| | DOOR VIEWER: PRIME-LINE PRODUCTS U-10314 (160° RANGE) | US15 | G.C. | G.C. |
| | OFFSET ASTRAGAL: NATIONAL GUARD PRODUCTS 1392SP | STL | G.C. | G.C. |
| HD.3 | **IT ROOM** | | | |
| | HINGES: (1 1/2) PR HAGER BB1279 x 4 1/2 x 4 1/2 BUTT HINGES | US26D | TENANT | G.C. |
| | LOCKSET: SCHLAGE ND80JD RHO | 626 | TENANT | G.C. |
| | CLOSER: DORMA 8916 AF89 or LCN 4041PA | 689 / AL | TENANT | G.C. |
| | STOP: ROCKWOOD 403 WALL STOP | US26D | TENANT | G.C. |
| | OFFSET ASTRAGAL: NATIONAL GUARD PRODUCTS 1392SP | STL | G.C. | G.C. |
| HD.4 | **BREAK ROOM** | | | |
| | HINGES: (1 1/2) PR HAGER BB1279 x 4 1/2 x 4 1/2 BUTT HINGES | US26D | TENANT | G.C. |
| | LOCKSET: SCHLAGE ND10S RHO | 626 | TENANT | G.C. |
| | CLOSER: DORMA 8916 AF89 or LCN 4041PA | 689 / AL | TENANT | G.C. |
| | STOP: ROCKWOOD 403 WALL STOP | US26D | TENANT | G.C. |
| | KICKPLATE: ROCKWOOD K1038 10X34 | US32D | TENANT | G.C. |
| HD.5 | **TOILET ROOMS** | | | |
| | HINGES: (1 1/2) PR HAGER BB1279 x 4 1/2 x 4 1/2 BUTT HINGES | US26D | TENANT | G.C. |
| | PULL BARS: ROCKWOOD 105 X 70C | US32D | TENANT | G.C. |
| | PUSH PLATES: ROCKWOOD 70C | US32D | TENANT | G.C. |
| | CLOSER: DORMA 8916 AF89 or LCN 4041PA | 689 / AL | TENANT | G.C. |
| | STOP: ROCKWOOD 403 WALL STOP | US26D | TENANT | G.C. |
| | KICKPLATE: ROCKWOOD K1038 10X34 | US32D | TENANT | G.C. |
| HD.6 | **EMPLOYEE DOOR** | | | |
| | HINGES: (1 1/2) PR HAGER BB1191 x 4 1/2 x 4 1/2 BUTT HINGES | US32D | TENANT | G.C. |
| | PANIC DEVICE: VON DUPRIN 99 W/ E996L R/V ELECTRIFIED TRIM | - | TENANT | G.C. |
| | CLOSER: DORMA 8916 DS or LCN 4041CUSH | 689 / AL | TENANT | G.C. |
| | THRESHOLD: PEMKO 1665A | - | G.C. | G.C. |
| | PERIMETER GASKETING: PEMKO S88BL | - | G.C. | G.C. |
| | DOOR SWEEP: PEMKO 18100CNB | - | G.C. | G.C. |
| | DOOR VIEWER: PRIME-LINE PRODUCTS U-10314 (160° RANGE) | US15 | G.C. | G.C. |
| | RFID READER: KERI MS 5000 | - | TENANT | G.C. |
| | OFFSET ASTRAGAL: NATIONAL GUARD PRODUCTS 1392SP | STL | G.C. | G.C. |
| HD.7 | **COMPRESSOR / MECHANICAL ROOM** | | | |
| | HINGES: (2) PR HAGER BB1279 x 4 1/2 x 4 1/2 BUTT HINGES | US26D | TENANT | G.C. |
| | LOCKSET: SCHLAGE ND80JD RHO | 626 | TENANT | G.C. |
| | CLOSER: DORMA 8916 AF89 or LCN 4041PA | 689 / AL | TENANT | G.C. |
| | STOP: ROCKWOOD 403 WALL STOP | US26D | TENANT | G.C. |
| | THRESHOLD: PEMKO 1665A | - | G.C. | G.C. |
| | PERIMETER GASKETING: PEMKO S88BL | - | G.C. | G.C. |
| | DOOR SWEEP: PEMKO 18100CNB | - | G.C. | G.C. |
| HD.8 | **SHOWER ROOM** | | | |
| | HINGES: (1 1/2) PR HAGER BB1279 x 4 1/2 x 4 1/2 BUTT HINGES | US26D | TENANT | G.C. |
| | LOCKSET: SCHLAGE ND10S RHO | 626 | TENANT | G.C. |
| | CLOSER: DORMA 8916 AF89 or LCN 4041PA | 689 / AL | TENANT | G.C. |
| | DEADBOLT: B560P SCHLAGE/ADA COMPLIANT | 626 | TENANT | G.C. |
| | STOP: ROCKWOOD 403 WALL STOP | US26D | TENANT | G.C. |
| HD.9 | **SCULLERY/STORAGE** | | | |
| | HINGES: (1 1/2) PR HAGER BB1279 x 4 1/2 x 4 1/2 BUTT HINGES | US26D | TENANT | G.C. |
| | LOCKSET: SCHLAGE ND80JD RHO | 626 | TENANT | G.C. |
| | STOP: ROCKWOOD 403 WALL STOP | US26D | TENANT | G.C. |
| HD.10 | **RECEIVING / STOCK** | | | |
| | HINGES: (1 1/2) PR HAGER BB1191 x 4 1/2 x 4 1/2 BUTT HINGES | US32D | TENANT | G.C. |
| | PANIC DEVICE: VON DUPRIN 99 W/ E996L R/V ELECTRIFIED TRIM | US26D | TENANT | G.C. |
| | CLOSER: DORMA 8916 DS or LCN 4041CUSH | 689 / AL | TENANT | G.C. |
| | THRESHOLD: PEMKO 1665A | - | G.C. | G.C. |
| | PERIMETER GASKETING: PEMKO S88BL | - | G.C. | G.C. |
| | DOOR SWEEP: PEMKO 18100CNB | - | G.C. | G.C. |
| | DOOR VIEWER: PRIME-LINE PRODUCTS U-10314 (160° RANGE) | US15 | G.C. | G.C. |
| | RFID READER: KERI MS 5000 | - | TENANT | G.C. |
| | OFFSET ASTRAGAL: NATIONAL GUARD PRODUCTS 1392SP | STL | G.C. | G.C. |
| HD.11 | **DEMONSTRATION KITCHEN** | | | |
| | HINGES: (1 1/2) PR HAGER BB1279 x 4 1/2 x 4 1/2 BUTT HINGES | US32D | TENANT | G.C. |
| | PANIC DEVICE: VON DUPRIN 99 W/ 998L R/V | US26D | TENANT | G.C. |
| | CLOSER: DORMA 8916 AF89 or LCN 4041PA | 689 / AL | TENANT | G.C. |
| | STOP: ROCKWOOD 403 WALL STOP | US26D | TENANT | G.C. |
| HD.12 | **EMERGENCY ESCAPE OPENING** | | | |
| | HINGES: (1 1/2) PR HAGER BB1279 x 4 1/2 x 4 1/2 BUTT HINGES | US32D | TENANT | G.C. |
| | LOCKSET: SARGENT FM7100 | 626 | TENANT | G.C. |
| | CLOSER: DORMA 8916 AF89 or LCN 4041PA | 689 / AL | TENANT | G.C. |
| | THRESHOLD: PEMKO 1665A | - | G.C. | G.C. |
| | PERIMETER GASKETING: PEMKO S88BL | - | G.C. | G.C. |
| | DOOR SWEEP: PEMKO 18100CNB | - | G.C. | G.C. |
| | DOOR VIEWER: PRIME-LINE PRODUCTS U-10314 (160° RANGE) | US15 | G.C. | G.C. |
| | OFFSET ASTRAGAL: NATIONAL GUARD PRODUCTS 1392SP | STL | G.C. | G.C. |

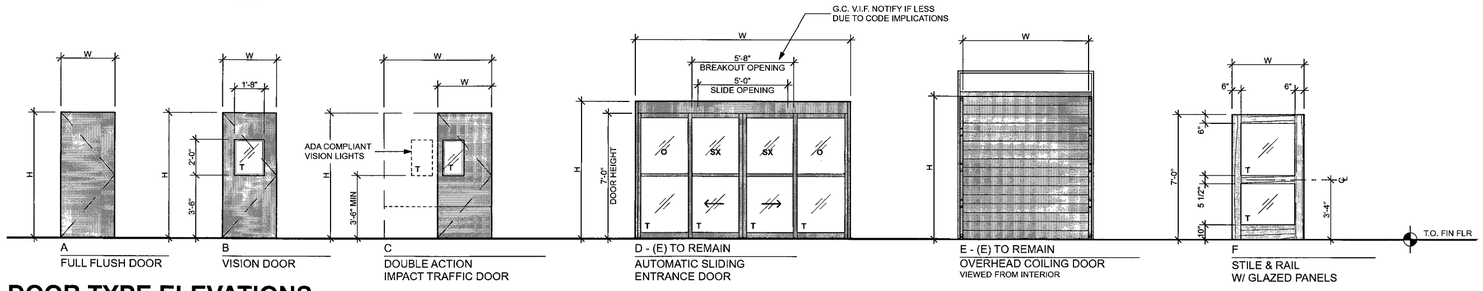



## WINDOW FRAME TYPES

NOTE: CLIP SASH FRAMES SHALL BE CLEAR ANODIZED ALUM, UNO




## DOOR FRAME TYPES




## DOOR TYPE ELEVATIONS

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SPECIALTY RETAILER
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RENO, NEVADA 89509

06.17.2014
PERMIT + CONSTRUCTION

Issue / date

sheet title: Door, Frame, Window Types and Schedules

by: af

app: rf

sheet no.: A29 of 30

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**06.17.2014**
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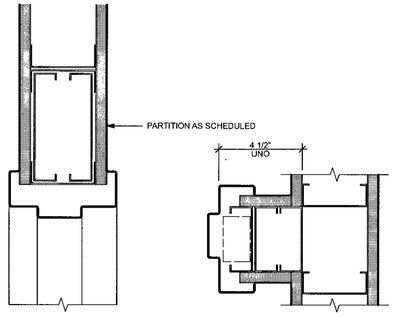
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sheet title
Door, Frame, and Window Details

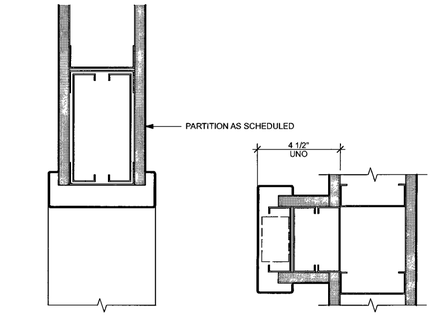
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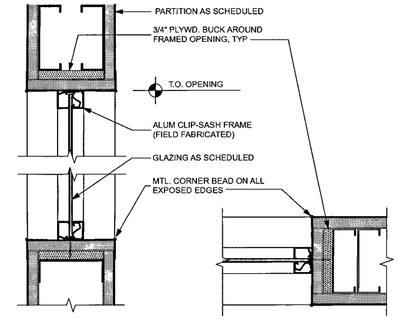
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A30 of 30



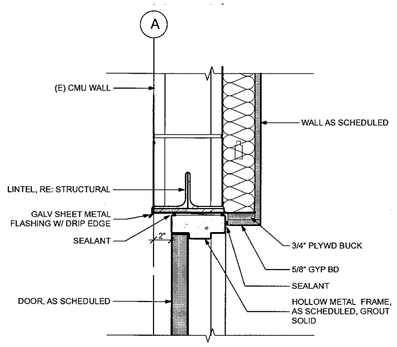

**9 HOLLOW METAL JAMB**
SCALE: 3" = 1'-0"



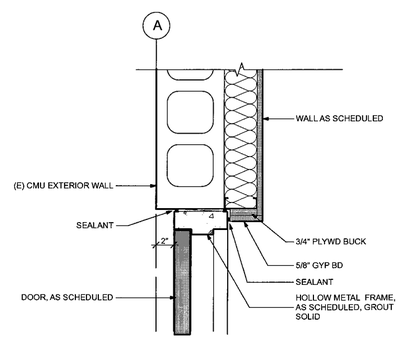

**8 REINFORCED OPENING**
SCALE: 3" = 1'-0"



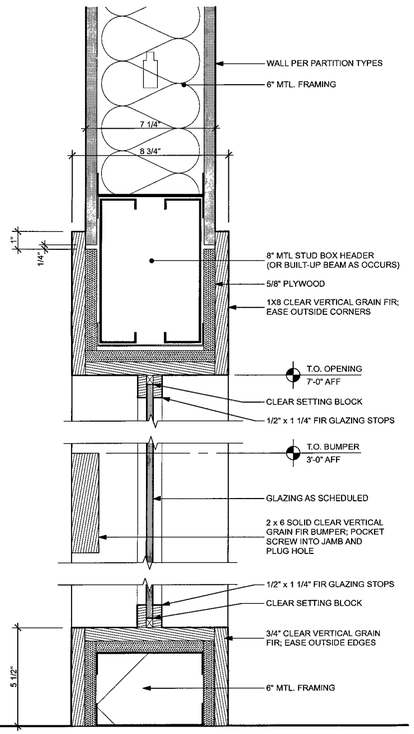

**7 BORROWED LIGHT JAMB**
SCALE: 3" = 1'-0"



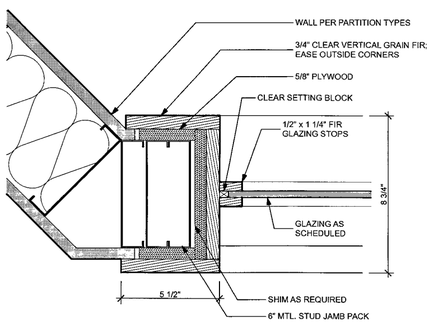

**6 HM DOOR HEAD @ CMU**
SCALE: 1 1/2"= 1'-0"



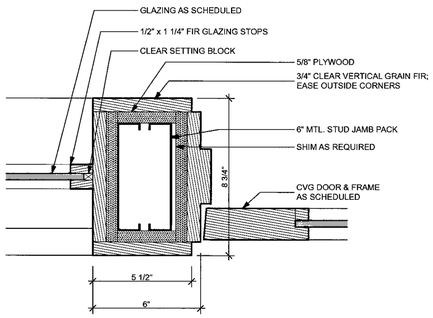

**5 HM DOOR JAMB @ CMU**
SCALE: 1 1/2"= 1'-0"



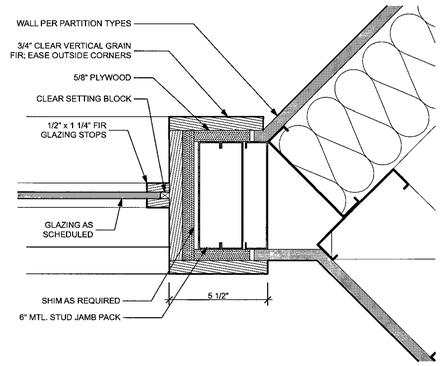

**1 WINDOW HEAD & SILL**
SCALE: 3" = 1'-0"




**4 WINDOW @ WALL**
SCALE: 3" = 1'-0"




**3 DOOR JAMB @ WINDOW**
SCALE: 3" = 1'-0"




**2 WINDOW @ WALL**
SCALE: 3" = 1'-0"

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## 010000 – GENERAL REQUIREMENTS:

All construction, unless specifically identified otherwise, shall conform to:

International Building Code (IBC) – 2012 Edition
2012 Northern Nevada Amendments
Minimum Design Loads for Building and Other Structures – ASCE 7-10
Risk Category of Building – II

## STRUCTURAL LIVE LOADING:

The structure has been designed in accordance with the building code and/or more restrictive requirements for loads as given below unless specific areas of the drawings indicate different loading criteria. Refer to drawings for load schedules.

| Gravity Loading | Uniform Live Load | |
|---|---|---|
| Offices | 50 | psf |
| Partition Allowance – All occupancies and uses | 15 | psf |
| Retail | 100 | psf |

## SNOW DESIGN DATA (IBC 1603-1.3):

The structure and its components have been designed in accord with the building code for a ground snow load of 30 psf. The following design criteria components are provided for reference.

Flat Roof Load: $P_f$ = 21 psf
Importance Factor: $I_s$ = 1.0
Exposure: $C_e$ = 1.0
Thermal Factor: $C_t$ = 1.0

## WIND DESIGN DATA (IBC 1603-1.4):

The structure and its components have been designed in accordance with the building code for a wind load criteria as follows.

$V_{ult}$ = 130 mph, Exposure "B"  $I_w$ = 1.0

## SEISMIC DESIGN DATA (IBC 1603-1.5):

The structure and its components have been designed in accordance with the building code for a seismic load criteria as follows.

Site Class: D
Basic Seismic Force Resisting System: Existing Masonry Shear Walls
Method of Analysis: Equivalent Lateral Force Method
Importance Factor: $I_e$ = 1.0
Spectral Acceleration (1 sec): $S_1$ = 67.8%
Spectral Acceleration (short): $S_s$ = 172.6%

## 013100 – COORDINATION:

The contract structural drawings and specifications represent the finished structure. They do not indicate the means or method or sequence of construction. The Contractor shall be responsible for and provide all measures necessary to protect the structure during construction. These measures shall include, but not be limited to: bracing, shoring of loads due to construction equipment, etc. The Contractor shall be responsible for the design and implementation of all scaffolding, bracing and shoring. Observation visits to the site by the Structural Engineer shall not include inspection of the above items. The Structural Engineer will not be responsible for the Contractor's means, methods, techniques, sequences or procedures of construction, nor will the Structural Engineer be responsible for construction site safety, or the safety precautions and the programs incident thereto.

Contractor shall verify all dimensions and coordinate site conditions with the drawings prior to construction. Any discrepancies and omissions shall be resolved with the Architect prior to construction and prior to proceeding. Do not use scaled dimensions. Where any discrepancies occur between plans, details, structural notes and specifications, the greater requirements shall govern. Where no specific detail is shown, construction shall conform to similar work on the project.

Not all openings, blockouts, inserts, curbs, pads, piping, ductwork, equipment, or sitework items and dimensions pertaining thereto are shown on the structural drawings. Refer to Architectural, Mechanical, Plumbing, Electrical and Civil drawings where applicable. It is the General Contractor's responsibility to coordinate with other disciplines and the subcontractors and equipment suppliers/manufacturers. Equipment being supported by or suspended from the structure shall be coordinated with the manufacturer of any pre-engineered framing or components. Where equipment weight is not shown on the Structural Drawings, verify actual weight and provide to Structural Engineer for confirmation of the structure's capacity. All openings shall be properly reinforced as approved by the Engineer.

Construction materials shall be spread out if placed on framed floors or roofs so as not to exceed the design live load per square foot.

All pre-engineered/prefabricated items and materials shall be installed in strict accordance with the manufacturer's requirements and alterations are allowed only with written permission from the manufacturer. Third party engineer's stamp may be required.

All details shown shall be incorporated into the project at all appropriate locations, whether specifically indicated or not. Typical details may or may not be cut on the drawings, and details may or may not be cut at all specific locations, but shall apply unless noted otherwise.

For clarity, all roof, floor and wall openings may not be shown on structural drawings. For exact size, number and location of openings, see architectural, mechanical, electrical and plumbing drawings. For framing at openings, see typical structural details. Verify all sizes, weights and location of mechanical and electrical equipment, ducts, etc. with mechanical and electrical engineers through Architect.

## 013200 – SUBMITTALS – SHOP DRAWINGS & PRODUCT DATA:

The review of shop drawings and other submittals is only for review of general compliance with the design concept of the project and the information provided in the contract documents. It is the General Contractor's responsibility to review the shop drawings prior to submitting to the Architect. The General Contractor is responsible for confirming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction; coordinating the work with that of all other trades; and performing the work in a safe and satisfactory manner.

Shop drawings shall be submitted for all structural items in addition to any items required by the specifications. The Submittals, Testing & Inspection matrix is provided as a guide only, and may not be all-inclusive. Construction documents shall not be reproduced for use as shop drawings.

The General Contractor shall review and stamp all shop drawings and product data for conformance with the construction documents prior to submittal. Any shop drawings or product data not reviewed and stamped by the General Contractor will be returned without review. The Contractor shall cloud or flag all items not in accordance with the contract documents.

Any changes, substitutions, or deviations from the original contract drawings shall be clouded by the manufacturer or fabricator. The Structural Engineer reserves the right to allow or not allow any changes to the original contract drawings at any time before or after shop drawing review.

The shop drawings do not replace the original contract drawings. Items omitted or shown incorrectly and which are not noted as clowed by the Structural Engineer or Architect are not to be considered changes to the original contract drawings.

Shop drawings will be returned for resubmittal if major errors or omissions are found during review.

Submit not more than five (5) sets for any one submittal. One copy will be retained by the Structural Engineer and the balance returned. Electronic submittals are not permitted without prior approval of Structural Engineer.

Allow a minimum of five working days for review of shop drawings by the Structural Engineer.

## 013300 – SUBMITTALS – STRUCTURAL DESIGN REQUIRED:

Submittals under this section pertain to supplier or sub-contractor designed components or systems. Where specific loading criteria is not outlined on the structural contract drawings, designer shall follow applicable requirements outlined in the referenced codes above.

All engineering designs and layouts performed by others shall be sealed by a Civil or Structural Engineer registered in the State of Jurisdiction. Complete design calculations, erection plans, and fabrication details, as applicable shall be included in the submittal process.

## 014000 – SPECIAL INSPECTIONS & QUALITY CONTROL

Special inspections shall be performed by a qualified inspector retained by the Owner and approved by the Architect and the Building Official.

Special inspections shall be performed by a qualified inspector under the direct supervision of a professional engineer registered in the State of Jurisdiction. Final inspection reports shall be signed and sealed by the supervising Engineer. The Contractor shall be responsible for providing a minimum of 24 hours notice to the special inspector and the testing laboratory prior to beginning any work for which special inspection or testing is required.

Duties and responsibilities of the special inspector:

The special inspector shall observe the work assigned for conformance with the approved design drawings and specifications.

The special inspector shall furnish inspection reports to the building official and to the Engineer or Architect of record. All discrepancies shall be brought to the attention of the Contractor for correction, then, if uncorrected, to the Engineer or Architect of record and the Building Official.

Upon completion of the assigned work, the Special Inspector shall complete and sign a final report certifying that to the best of the inspector's knowledge, the work is in conformance with the approved plans and specifications, and the applicable workmanship provisions of the code.

Special inspection is required during the following operations per IBC Section 1704:

Grading, excavation and filling: During earthwork excavations, grading and filling as required to satisfy requirements of the geotechnical report and IBC Chapters 17, 18 & 33 and Appendix J and during placement of engineered fill.

Reinforcing steel: Verify size, quantity and placement of all reinforcing steel prior to placing of any concrete. Review both permit drawings and shop drawings (mild steel and post tension shops) for rebar requirements.

Concrete: During taking of specimens and placement of all concrete. Unless noted otherwise, special inspection of non-structural slabs on grade is not required. See general structural notes and/or project specifications for frequency of testing and strength requirements.

Dry Pack: During installation to ensure compliance with structural drawings.

Welding: All structural field welding and shop welding (including welding of reinforcing steel), except welding performed in the shop of a building official-approved fabricator, as required by Section 1704.3 of the IBC.

Expansion bolting: Review torque of all bolts to ensure that installation and embedment requirements have been met.

Epoxy bolting: During installation of all bolts to ensure that installation and embedment requirements have been met.

Anchor bolts: Prior to and during placement of concrete.

## 020000 – FOUNDATIONS

Owner shall employ a Geotechnical Engineer licensed in the State of Jurisdiction to perform necessary testing and inspections for quality control and to ensure that the requirements of the geotechnical report are complied with. Test reports shall be submitted directly to the Architect and Engineer from the geotechnical engineer, with copy to Contractor.

Filled excavations or buried structures such as cesspools, cisterns, existing foundations, etc., or any unusual soils conditions encountered during site clearing or excavation shall be brought to the attention of the Architect immediately. Do not proceed until written instructions to remedy are received.

Abandoned footings, new or existing utilities, etc., that interfere with new construction shall be rerouted or removed as directed by the Architect.

Slope all exterior finished grades away from the building to ensure no ponding of water occurs around buildings.

Contractor is responsible for all shoring, cribbing, sheet piling, etc. as required to safely retain excavations and trenches during construction. Contractor shall retain a professional engineer licensed in the State of Jurisdiction to design all shoring, tie backs, etc. Where shoring is to be permanent, the design must meet all requirements of the building code.

## SPREAD FOOTINGS

Spread footing design is based on an allowable bearing pressure of 1,500 psf. Minimum footing widths, unless otherwise indicated, shall be 16 inches for continuous footings and 24 inches for isolated pad footings. Bearing elevation shall be a minimum of 24 inches below adjacent exterior grade.

Bearing capacity of subgrade shall be verified in the field by a qualified Geotechnical Engineer registered in the State of Jurisdiction.

## 033000 – CAST-IN-PLACE CONCRETE (SPECIAL INSPECTION REQUIRED)

Concrete work shall conform to all requirements of ACI 301, "Specifications for Structural Concrete for Buildings" and ACI 318, "Building Code Requirements for Reinforced Concrete", except as modified by the contract documents.

Concrete shall be ready mixed concrete in accordance with ASTM C94. Minimum 28 day compressive strength shall be 4000 psi except as follows:

slab on grade_____4,000 psi
footings, stem walls and grade beams_____3,000 psi
drilled piers _____3,000 psi

Cement shall conform to ASTM C150, Type I, Type II, or Type V if recommended by Geotechnical Engineer for foundation elements. Aggregate per ASTM C33. Lightweight aggregate per ASTM C330. Maximum 4" slump for all concrete. Do not tamp slabs (use roller bug, vibrating screed or bull float only). Concrete containing superplasticizing admixture shall have field-verified 3" maximum slump prior to adding admixture and 8" maximum slump at placement. Mix designs shall be designed by the concrete production facility in accordance with ACI 301 and approved by the Structural Engineer prior to construction. Provide air-entraining admixture at all concrete exposed to freeze/thaw cycles at a rate adequate to provide 6.0% air at point of placement. Do not allow air content of interior trowel finished slabs to exceed 3.0%.

Concrete shall be free of chloride. No fly ash additives shall be permitted in concrete flatwork or architecturally exposed concrete. When used, fly ash shall conform to ASTM C618, class F or C. Fly ash shall not replace more than 25% of cement by weight.

Provide sleeves for utility openings in concrete before placing concrete. Do not cut any conflicting reinforcing.

No construction joints other than those shown on the drawings shall be installed without approval of the Structural Engineer. Provide 3/4" chamfer at all exterior corners and edges of permanently exposed concrete.

*Do not subject concrete to any procedure that will cause segregation.* Deposit concrete as near as practicable to the final position to avoid segregation.

Concrete footings and pads may be poured against neat excavations provided the required concrete coverage for reinforcing is maintained.

Mechanically vibrate all concrete when placed, except that slabs on grade need be vibrated only around embedded items and underfloor ducts, etc. Mechanically vibrate only the top 5 feet of drilled pier concrete. Revibrate top of drilled pier 15 minutes after placing concrete.

Mixing and delivery as measured from batch time to completion of discharge from truck shall not exceed 90 minutes. When air temperature is above 90 deg F (32 deg C), reduce mixing, delivery time and discharge to 60 minutes.

Cure exposed concrete for a minimum of 7 days in accordance with ACI 308.1 procedures in order to prevent cracking. Cure with curing and sealing compound, moist curing, moisture-retaining cover curing, or combinations thereof. If curing compound is used, apply at a rate specified by the manufacturer. Concrete shall be maintained above 50 degrees F and in a moist condition for a minimum of 7 days after placement.

All concrete shall be tested by an independent testing agency and results reported to the Architect.

Slab on grade shall be constructed with floor flatness, FF=40 and levelness, FL=30. Floor flatness to be measured and confirmed in accordance with ASTM E 1155.

## 033100 – REINFORCING STEEL

Reinforcing steel deformed bars shall conform to ASTM A615, grade 60 (fy = 60 ksi). Reinforcing to be welded shall conform to ASTM A706, grade 60 (fy = 60 ksi) low alloy deformed bars. Welded wire fabric per ASTM A185, wire per ASTM A82. Welding of reinforcing shall be according to AWS D1.4. No tack welding of reinforcing bars allowed.

All reinforcing steel shall be detailed and placed in conformance with the latest editions of ACI 318 and the CRSI "Manual of Standard Practice for Reinforced Concrete Construction", and as modified by the drawings. All reinforcing bar bends shall be made cold.

All reinforcing steel, including welded wire fabric in slabs on grade, shall be accurately placed and supported by plastic or metal chairs, spacers or hangers. For concrete surfaces exposed to view, where legs of bar supports are in contact with forms, use plastic protected wire or stainless steel bar supports.

Provide the following minimum clear concrete coverage:
cast against and permanently exposed to earth..... 3"
exposed to earth or weather:
#6 and larger..... 2"
#5 and smaller..... 1½"
columns (to ties)..... 1½"
beams (to stirrups)..... 1½"
suspended slabs..... ¾"
all others per latest edition of ACI 318.

BAR SPLICES

| Bar Size: | Concrete f'c: | | Masonry | | | |
|---|---|---|---|---|---|---|
| | 3ksi | 4ksi | 5ksi | 1–Layer | 2–Layers | |
| 3 | 1'-9" | 1'-7" | 1'-6" | 1'-3" | 1'-3" | |
| 4 | 2'-4" | 2'-1" | 1'-11" | 1'-8" | 1'-11" | |
| 5 | 3'-0" | 2'-8" | 2'-4" | 2'-6" | 2'-11" | |
| 6 | 4'-6" | 3'-1" | 2'-9" | 3'-7" | 5'-6" | |
| 7 | 5'-2" | 4'-5" | 3'-11" | 4'-10" | 7'-6" | |
| 8 | 5'-11" | 5'-2" | 4'-8" | 7'-3" | 11'-3" | |
| 9 | 6'-8" | 5'-9" | 5'-2" | 9'-3" | 14'-3" | |
| 10 | 7'-6" | 6'-5" | 5'-9" | 11'-8" | 18'-1" | |
| 11 | 8'-3" | 7'-2" | 6'-5" | 14'-5" | 22'-4" | |

Note: #14 and #18 bars can not be lap spliced.

Stagger alternate splices a minimum of one lap length. Lap welded wire fabric so that the overlap between outermost cross wires of each sheet is not less than the cross wire spacing but not less than 6 inches. All splice locations subject to approval and shall be made in accordance with the drawings. Extend all horizontal reinforcing continuous around corners and intersections or provide bent corner bars to match and lap with horizontal bars at corners and intersections of footings and walls.

Reinforcing bar spacings given are maximum on centers. Dowel all vertical reinforcing to foundation. Skew hooks as required for concrete cover. Securely tie all bars in position before placing concrete. "Wet sticking" of dowels is not permitted.

Spliced bars shall be placed at the same effective depth unless noted otherwise. Reinforcing bars noted "continuous" or with length not shown shall be fully continuous and spliced only as shown, or where approved by the Engineer.

Reinforcing bar hooks shall be standard ACI hooks unless noted otherwise.

## 042200 – CONCRETE UNIT MASONRY (SPECIAL INSPECTION REQUIRED)

Masonry work shall conform to all requirements of the IBC Chapter 21, ACI 530/ASCE5/TMS 402 "Building Code Requirements for Masonry Structures".

Hollow concrete masonry units shall conform to ASTM C90, net compressive strength of 1900 psi per ASTM C140.

Mortar shall conform to ASTM C270, Type S with 28 day compressive strength of 1800 psi, tested per ASTM C780. All masonry below grade shall have mortar conforming to Type M, with 28 day compressive strength of 2,500 psi. Masonry cement, pre-mixed mortar and retardant additives shall not be used.

Grout shall conform to ASTM C476, fine or coarse grout, with 28 day compressive strength of 2,500 psi. Grout shall be free of fly ash and chloride.

Horizontal joint reinforcing shall be ladder type with no. 9 gage wire conforming to ASTM A82. Provide minimum 6" laps at all splices.

See details and notes on drawings for size and spacing of reinforcing bars (in no case shall walls have less than #5 vertical bars at 48 inches o.c. Lap splices of reinforcing in masonry shall be per section 033100. Tie reinforcing or provide bar positioners at 8'-0"oc to maintain proper alignment. Dowels shall match size and spacing of all vertical reinforcing. Extend all horizontal bond beam reinforcing in masonry continuous around corners and intersections or provide bent corner bars to match and lap horizontal bond beam reinforcing at corners and intersections. All reinforcing in masonry shall be accurately located and tied in place prior to grouting and the position maintained during grouting.

All cells and courses with reinforcing and additional grout spaces as required by the drawings shall be filled solid with grout. Limit maximum grout lift to 5'-0" for low lift grouting procedures and 12'-8" for high lift grouting procedures. Each grout pour stopping 1½ inches below the top course of lift. Place grout continuously. Do not interupt grouting for more than one hour. Mechanically vibrate grout in vertical spaces immediately after pouring and again about 5 minutes later. Rodding of grout is not acceptable.

Unless noted otherwise on the drawings, provide vertical masonry control joints such that no straight run of wall exceeds 20'-0". Coordinate locations with Architect.

For cold weather and hot weather construction and protection requirements comply with all requirements of ACI 530.1/ ASCE 6/ TMS 602 "Specifications for Masonry Structures".

Testing and Inspection: Owner will engage special inspectors to perform tests and inspections and prepare reports. Allow inspectors access to scaffolding and work areas, as needed to perform tests and inspections. Retesting of materials that fail to meet specified requirements shall be done at contractors expense.

Inspections: Level 1 special inspections according to the IBC.
Begin masonry construction only after inspectors have verified proportions of site prepared mortar.
Place grout only after inspectors have verified compliance of grout spaces and of grades, sizes, and locations of reinforcing.

Prior to construction perform 1 set of mortar, grout, and prism tests.

Test 1 additional set of mortar, grout, and prism tests for each 5,000 sq. ft. of wall area or portion there of.

Mortar Test: (Property specification): For each mix provided, according to ASTM C780. Test Mortar for compressive strength.

Grout test: (Compressive strength): For each mix provided, according to ASTM C1019.

Prism Test: For each type of construction provided, according to ASTM C1314 at 28 days.

## 051200 – STRUCTURAL STEEL

Structural steel construction shall conform with the latest AISC 303 "Code of Standard Practice for Steel Buildings and Bridges". AISC 360 "Specification for Structural Steel Buildings – Allowable Stress Design and Plastic Design", including commentary, and applicable provisions of AWS D1.1 "Structural Welding Code".

Where connections are not fully detailed in drawings include all steel-to-steel connections and steel-to-steel portion of all connections to other materials. Design connections for specific forces where shown on the drawings. Where specific forces are not shown, design shall be for maximum conditions based on capacities of connecting members.

Structural steel W shapes shall be ASTM A992. Channels, angles, S shapes, plates and bars shall be ASTM A36. Structural square or rectangular tube shapes shall be ASTM A500, grade B (fy = 46 ksi). Steel pipe shall be ASTM A53, Type E or S, grade B (fy = 35 ksi).

Bolts shall be ASTM A325N. All high-strength bolts shall be tightened to the snug-tight condition as defined by AISC unless noted otherwise.

Anchor bolts and plain threaded rods and anchors shall be ASTM A36 or A307, Grade A.

Bolts, anchor bolts, expansion bolts, etc., shall be installed with steel washers.

Welding electrodes shall conform to AWS D1.1, Grade E70xx. E90 series electrodes shall be used for ASTM A706 reinforcing bars. All welding shall be done by welders holding valid certificates issued by an accepted testing agency and having current experience in type of welds shown on the drawings or notes. All welding per American Welding Society standards. Contractor may shop weld or field weld at their discretion. Shop welds or field welds shall be shown on shop drawings. Full penetration welds shall be tested and certified by an independent testing laboratory.

Beams, columns and braces shall not be spliced without prior approval of Structural Engineer.

Headed studs shall be Nelson granular flux-filled headed anchor studs or approved equivalent, made from cold finished low carbon steel, and shall conform to ASTM A108, *Grades 1015 or 1020 with a minimum tensile strength of 60,000 psi.* Stud welding inspection and testing shall conform to AWS D1.1.

Deformed bar anchor studs shall be Nelson D21 granular flux-filled rebar studs or approved equal made from low carbon cold rolled steel with a minimum tensile strength of 70,000 psi. Stud welding inspection and testing shall conform to AWS D1.1.

Drypack grout for column base plates and bearing plates shall be nonmetallic shrinkage-resistant grout with a minimum 28 day compressive strength of 5000 psi.

Provide fabricator's standard rust-inhibiting primer shop paint for all steel surfaces except surfaces encased in concrete, or to receive spray-applied fireproofing.

## 054000 – COLD FORMED STEEL FRAMING

All cold-formed steel framing shall be fabricated and erected in accordance with the manufacturer's recommendations and in accordance with the latest edition of the "Specification for the Design of Cold-formed Steel Structural Members" by the American Iron and Steel Institute.

All studs, joists, tracks and other cold formed steel framing members shall be fabricated from rolled sheet steel conforming to ASTM A-1003 Type H, Grade 33 (typical) or Grade 50 for 16ga or above, and shall be galvanized G60.

All clips and other accessories to be fabricated from material conforming to ASTM A-653, zinc coated structural steel, Grade 50, with G90 galvanized coating.

Studs or joists shall not be spliced without prior approval of structural engineer.

Steel stud construction for non-bearing curtain wall systems shall have vertical slip connections as detailed. Do not attach the studs to the structure in any way that would prevent the framing from deflecting under superimposed loads.

Unless noted otherwise, provide double studs at all jambs, corners, intersections beam bearings and joist bearings. Provide double joists around all floor and roof openings which interrupt one or more members unless noted otherwise. All permanent bridging shall be installed or anchored in bearing wall construction prior to application of floor or roof dead loads.

Bridging shall be installed per manufacturer's recommendations and project specifications with the following minimum requirements:

Non bearing walls: Provide bridging equally spaced at 4'-0" o.c. maximum, and where deflection track is required, top row of bridging shall occur within 12 inches of top.
Bearing walls: Provide bridging equally spaced at 4'-0" o.c. maximum.

In addition, bridging shall be provided at roof lines, floor lines, and elsewhere as noted on drawings. Solid blocking shall be installed in lieu of bridging where noted on the drawings.

Steel stud walls shall be 18 gage at 16" o.c. unless noted otherwise on plans. steel stud wall tracks and blocking shall be the same size and gage as the studs. Track anchor bolts shall be 1/2" diameter placed not to exceed 4'-0" o.c. unless noted otherwise. Anchor bolts shall be placed within 8" of all jambs, corners, intersections and wall ends. All tracks shall have a minimum of 2 anchor bolts.

All welding shall be performed by welders experienced in light gage steel framing work.

Cold formed members are designated as follows:

600S162-54

With the above example,

"600" – section depth
"S" – section type
"162" – flange width
"54" – material thickness (mils)

| For reference only; | |
|---|---|
| mils | gauge |
| 33 | 20 (structural) |
| 43 | 18 |
| 54 | 16 |
| 68 | 14 |
| 97 | 12 |

## 061000 – ROUGH CARPENTRY (MECHANICAL CURBS)

Wood framing shall conform to IBC Chapter 23.

Framing lumber shall comply with the latest edition of the National Design Specification. All sawn lumber shall be stamped with the grade mark of a lumber grading agency certified by the American Lumber Standards Committee. Maximum moisture content shall not exceed 19%.

All exterior walls, structural floor and roof framing, and interior bearing walls shall be framed with No. 2 grade dimension lumber of one of the following species:

Hem–fir (north)
Douglas fir–larch
Douglas fir–larch (north)
Hem–fir
Douglas fir–larch (south)

All nailing not noted shall be according to Table 2304.9.1 of the International Building Code. *All connections shall have a minimum of two (2) nails,* unless noted otherwise, and nails shall be a minimum of 3 in. long and 0.131 in. diameter. All fasteners in contact with pressure preservative treated lumber or where exposed to weather shall be hot dipped galvanized per ASTM A–153/A. All fasteners in contact with fire retardant treated lumber shall be stainless steel.

Double up joists below mechanical equipment. Provide 2 x solid blocking at midspan and at supports of all joists. Provide multiple king or trimmer studs at all jambs and beam bearing locations as indicated, or if not indicated, as required by specific loading. Provide 2 x blocking at mid-height of bearing stud walls. Provide fire blocking in all concealed spaces as required by building code.

Do not notch, drill or splice joists, beams or load bearing or structural studs without prior approval of structural engineer.

Joist hangers and other miscellaneous framing anchors shall be as manufactured by the Simpson Strong-Tie Company or equivalent by other manufacturer with current ICC approval. Multiple, skewed and/or sloped hangers shall be supplied by the Contractor where necessary. All nail holes in joist hangers and miscellaneous framing anchors shall be filled with nails of the largest size shown in the manufacturer's latest catalog. All hangers or connectors in contact with pressure preservative treated lumber or where exposed to weather shall be ZMAX or HDG coated, per Simpson specifications.

Wood stud walls shall be [2 x 6 at 16" o.c.] unless noted otherwise on plans. Plate anchor bolts shall be 1/2" diameter with 7 inch minimum embedment placed not to exceed 4'-0" o.c. unless noted otherwise. Anchor bolts shall be located not more than 12 inches or less than 4 inches from all jambs, corners, intersections and wall ends. All bottom plates shall have a minimum of 2 anchor bolts. All bottom plates or sills on concrete slabs on grade, and on concrete or masonry foundations, shall be pressure treated wood stamped by an approved agency.

## 061600 – STRUCTURAL WOOD SHEATHING (MECHANICAL CURB)

All plywood shall conform to DOC PS–1 or DOC PS–2, Exposure 1, and shall bear the stamp of an approved testing agency. Lay up sheets with long dimension perpendicular to supports and stagger joints.

At roofs, use plyclips at midspan of unsupported edges for ½ inch or thinner sheathing.

All nailing shall be with common nails, unless otherwise indicated. All structural wood sheathing shall be of the following minimum thickness, span/index ratio, and shall be nailed as follows:

| Use | Thickness | Span/Index Ratio | Edge Nailing | Field Nailing |
|---|---|---|---|---|
| Roof | 19/32 | 32 / 16 | 8d @ 6" o.c. | 8d @ 12" o.c. |

In the table above, nailing indicated (8d) refers to common wire nails. 10d framing nails (3 inch x 0.131 diameter) may be substituted for the 8d common wire nails indicated.

## STRUCTURAL SUBMITTALS, TESTING AND INSPECTION FOR BUILDINGS

| | ITEM | SUBMITTALS | INSPECTIONS | TESTING |
|---|---|---|---|---|
| EARTHWORK | NATIVE SOIL (AT BEARING ELEV.) | | • OBSERVATION BY GEOTECHNICAL ENG. | • COMPACTION TESTING |
| | RECONDITIONAED NATIVE SOIL | | • INSPECTION AND APPROVAL BY GEOTECHNICAL ENG. | • COMPACTION TESTING FOR EACH LIFT |
| | IMPORTED FILL | • SOURCE AND GRADING | • PLACEMENT OBSERVATION BY GEOTECHNICAL ENG. | • COMPACTION TESTING FOR EACH LIFT |
| CONCRETE | GENERAL | • MIX DESIGN<br>• PRODUCT DATA | • NA | • SEE SPECIFICATIONS AND / OR GENERAL NOTES |
| | REINFORCING | • SHOP DRAWINGS | • ALL EMBEDDED ITEMS – NO WET SETTING PERMITTED.<br>• SPECIAL INSPECTION FOR ALL REINFORCING AND POST TENSION CABLES. | |
| | FINISHING | • SUBMIT SURFACE FINISHING PLAN TO ARCHITECT | | |
| | CURING | • STATEMENT OF CURING PROCEDURES | | |
| STEEL | STRUCTURAL STEEL | • SHOP DRAWINGS<br>• MILL TEST REPORTS | • VERIFY FRAMING SIZES, LAYOUT, BEARING, ALL DETAILS AS INDICATED BY TABLE 1704.3 IN IBC BY SPECIAL INSPECTOR.<br>• FINAL FRAMING OBSERVATION BY E.O.R. | • NA |
| | STEEL JOISTS | • SHOP DRAWINGS<br>• SEALED CALCULATIONS | | |
| | STEEL DECK | • PRODUCT DATA<br>• SHOP DRAWINGS | | |
| | WELDING | • WELDERS CERTIFICATES FOR ALL WELD TYPES ON JOB | • VISUAL ON ALL FIELD WELDS BY SPECIAL INSPECTOR. | • NON DESTRUCTIVE TEST ON ALL MOMENT CONNECTIONS |
| | BOLTING | • NA | • PER RCSC SECT. 9.1 INCLUDING INSPECTION OF FABRICATED COMPONENTS PRIOR TO ERECTION BY SPECIAL INSPECTOR | • ?A |

NOTE:
–NOT ALL SUBMITTALS, INSPECTIONS AND TESTS FOR THE PROJECT ARE NECESSARILY LISTED. REFER TO SPECIFICATIONS FOR OTHER REQUIREMENTS.
–THIS TABLE MAY NOT INCLUDE ALL STRUCTURAL INSPECTIONS AND TESTS REQUIRED BY ALL JURISDICTIONS, REFER TO THE LOCAL BUILDING OFFICIAL FOR REQUIREMENTS.

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sheet title: GENERAL NOTES

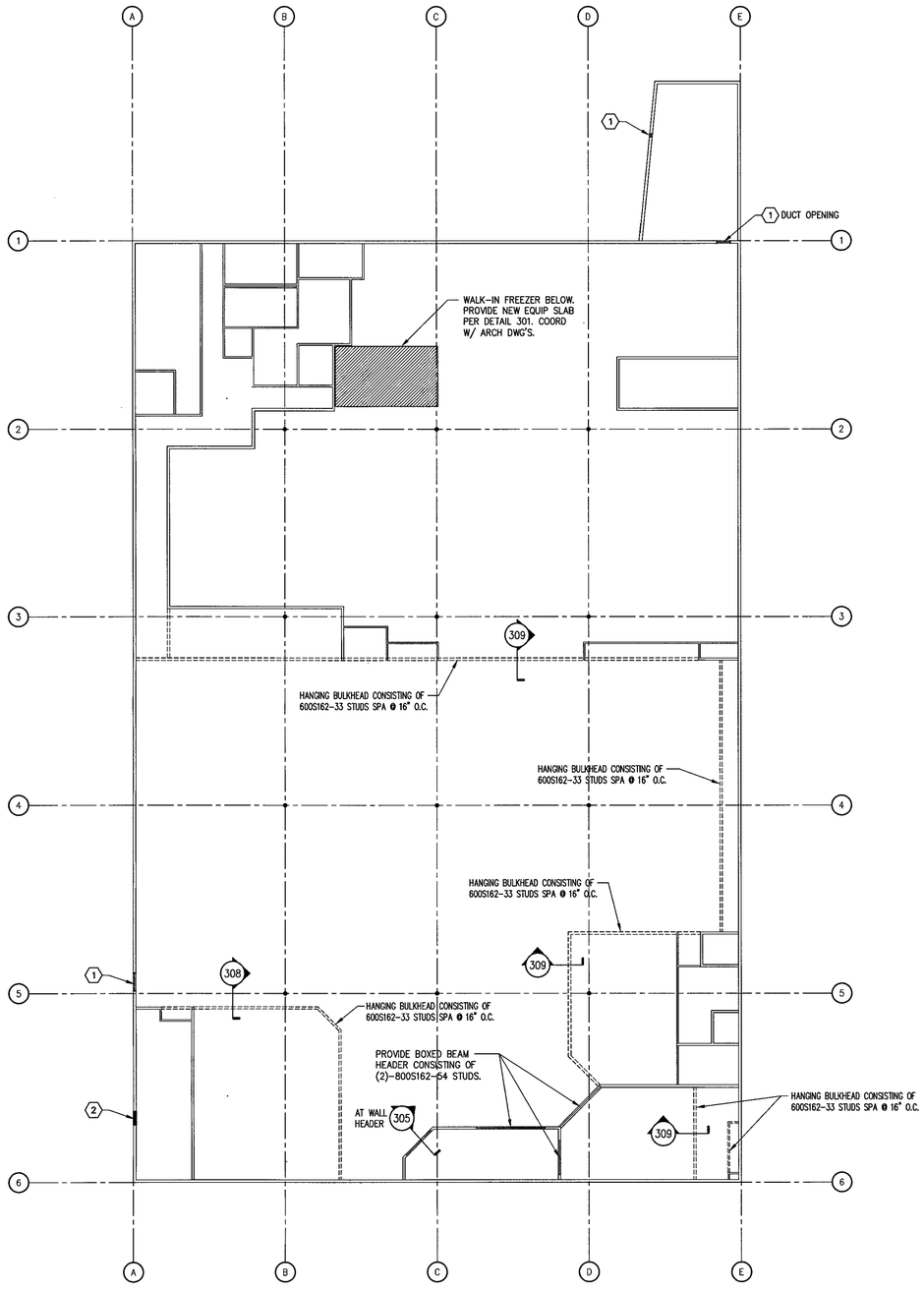
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S1.0 sheet no.

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## CEILING FRAMING PLAN

SCALE: 1/16"-1'-0"

N

PLAN NOTES:

1. COORDINATE WITH ARCHITECTURAL DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AND SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH ANY WORK. DO NOT SCALE DRAWINGS.
2. COLD-FORMED STEEL JOISTS 16ga OR THICKER SHALL CONSIST OF GRADE 50 STEEL. ALL OTHER MEMBERS SHALL BE GRADE 33 STEEL AS NOTED WITHIN GENERAL NOTES SHEET S1.0

PLAN KEYNOTES:

(1) NEW OPENING IN EXISTING CMU WALL PER DETAIL 303. COORD W/ ARCH DRAWINGS.

(2) INFILL EXISTING WALL OPENING PER DETAIL 327. COORD W/ ARCH DRAWINGS.




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sheet title: SLAB PLAN

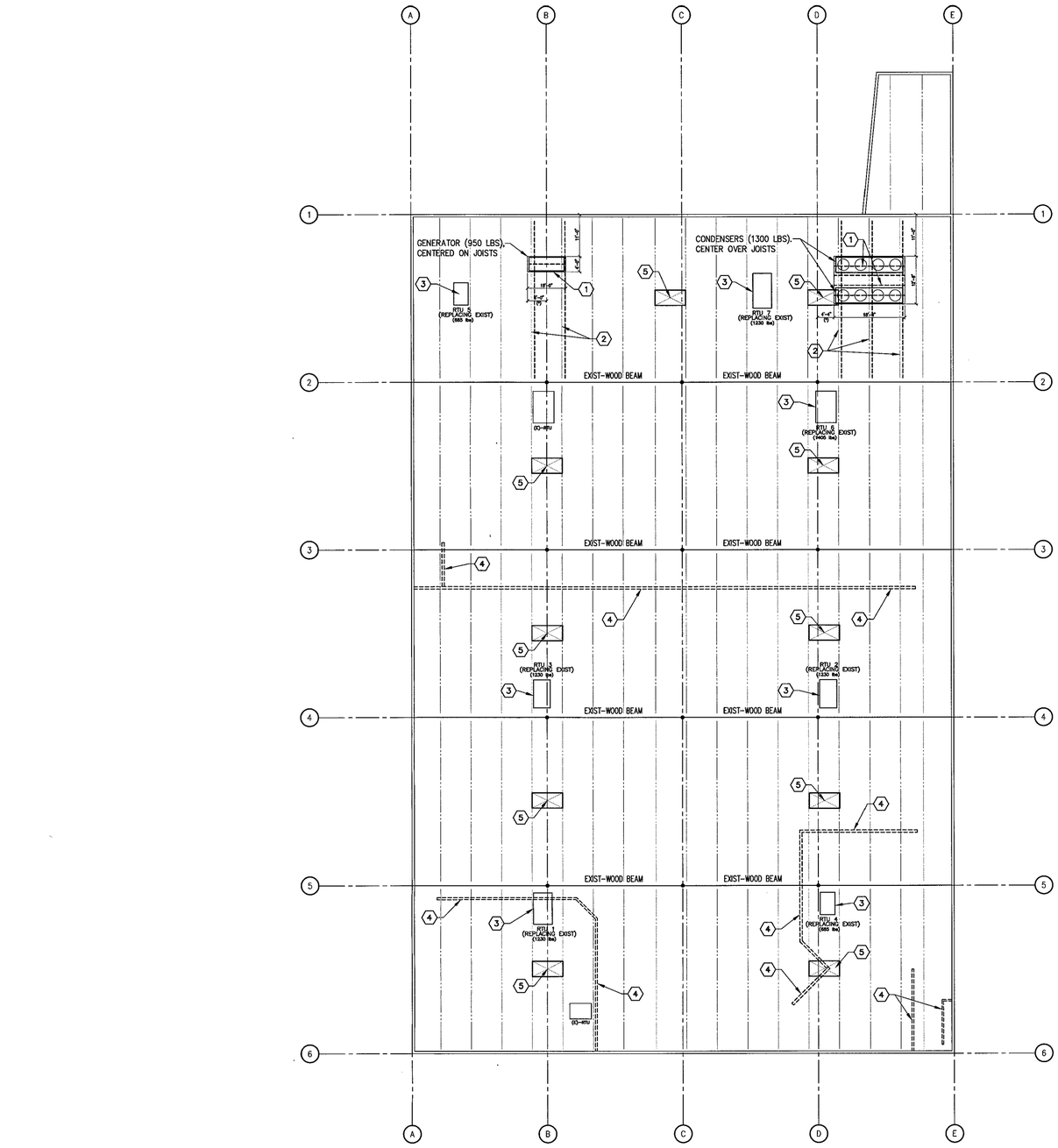
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## ROOF FRAMING PLAN

SCALE: 1/16"-1'-0"

N

PLAN NOTES:

1. COORDINATE WITH ARCHITECTURAL DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AND SHALL REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH ANY WORK. DO NOT SCALE DRAWINGS.
2. COORDINATE ALL CURB DIMENSIONS WITH MECHANICAL EQUIPMENT SHOP DRAWINGS.
3. (*) = LOCATIONS OF CONDENSERS & GENERATOR MAY NEED TO BE ADJUSTED IN THE FIELD TO BE EXACTLY CENTERED OVER EXISTING JOISTS. COORD W/ MECHANICAL DWG's.

PLAN KEYNOTES:

1. PROVIDE CURB FOR CONDENSERS & GENERATOR PER DETAIL 311. CURB FRAMING SHALL BE SPACED AT 2'-3" MAX. COORD W/ MECHANICAL & ARCHITECTURAL DWGS.
2. PROVIDE 5"x27" GLU-LAM BEAM UNDER GENERATOR/CONDENSER CURBS (TYP 5 PLACES). COORD W/ DETAIL 307.
3. NEW MECHANICAL UNIT. CONTRACTOR TO VERIFY NEW UNIT WEIGHT DOES NOT EXCEED EXISTING UNIT WEIGHTS BY MORE THATN 150 lbs. NEW CURB MAY BE REQUIRED – SEE MECHANICAL DRAWINGS.
4. HANGING BULKHEAD BELOW. SUPPORT BULKHEAD FROM NEW ROOF FRAMING AS REQUIRED PER DETAIL 309.
5. PATCH EXIST ROOF OPENING WITH 5/8" PLYWOOD SHEATHING AS REQ'D TO MATCH EXISTING ROOF CONSTRUCTION. COORD W/ ARCH DWG'S.

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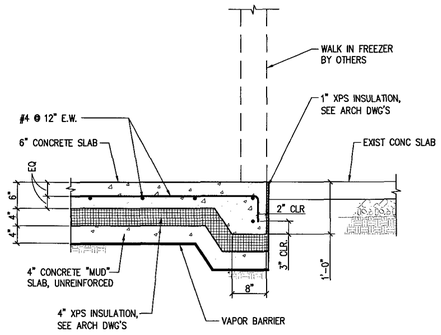
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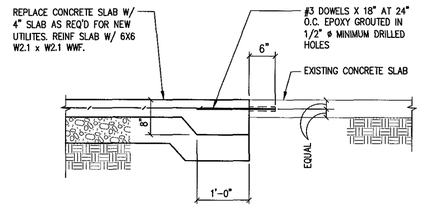
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NOTE: CONDITION OF EXISTING SUB-GRADE TO BE INSPECTED BY A QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO NEW CONSTRUCTION.

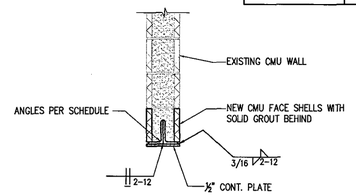
## 301 SECTION AT WALK-IN FREEZER SLAB
SCALE: 3/4"=1'-0"



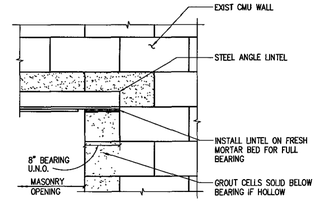

## 302 TYPICAL CONCRETE SLAB CONNECTION TO EXISTING CONCRETE SLAB
SCALE: 3/4" = 1'-0" TYPICAL DETAIL 206.02

### STEEL LINTEL SCHEDULE

| SPAN | SIZE 2 PCS. |
|---|---|
| 5'-11" MAX | (2) L6x4x¼ (LLV) |
| 6'-0" – 8'-0" | (2) L6x4x⅝ (LLV) |




NOTES:
1. GROUT ALL CELLS SOLID TO 8" ABOVE BOTTOM OF LINTEL.
2. COORDINATE W/ ARCHITECTURAL DWGS FOR SIZE AND LOCATION OF ALL NEW OPENINGS IN EXISTING CMU WALLS
3. DURING LINTEL INSTALLATION, CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT THE EXISTING STRUCTURE INCLUDING, BUT NOT LIMITED TO BRACING AND SHORING.




TYPICAL STEEL ANGLE LINTEL BEARING

## 303 STEEL LINTEL IN EXISTING CMU WALL
SCALE: 3/4" = 1'-0"




## 305 HEADER DETAIL AT AIR CURTAIN




## 306 THREADED ROD CONNECTION
SCALE: 3/4" = 1'-0"




## 307 FRAMING UNDER EQUIPMENT CURBS
SCALE: 3/4"=1'-0"




## 308 HANGING BULKHEAD DETAIL
SCALE: 1 1/2" = 1'-0"

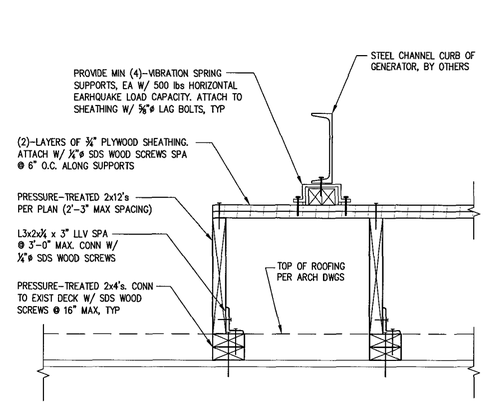



BULKHEAD PARALLEL WITH ROOF JOISTS

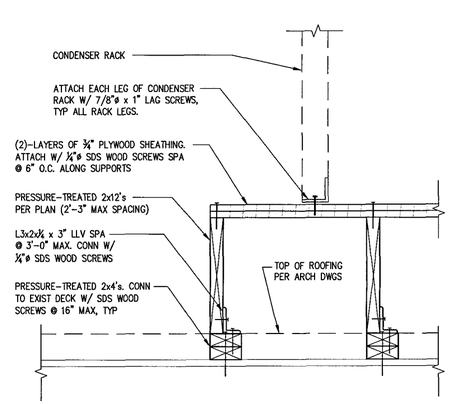



BULKHEAD PERPENDICULAR TO ROOF JOISTS

## 309 TYPICAL BULKHEAD DETAIL
SCALE: 3/4"=1'-0"




GENERATOR PLATFORM




CONDENSER PLATFORM

## 311 EQUIPMENT PLATFORM CURB DETAILS (SEISMIC DESIGN CATEGORY 'D')
SCALE: 1 1/2" = 1'-0"

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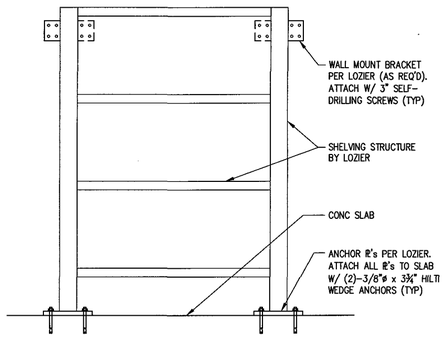
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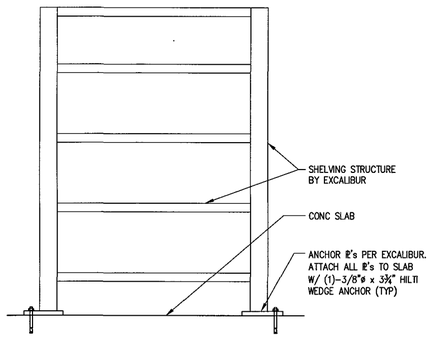
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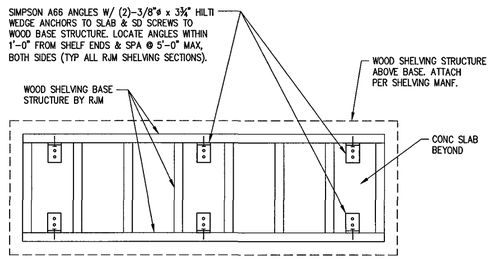



LOZIER SHELVING
(ELEVATION VIEW)



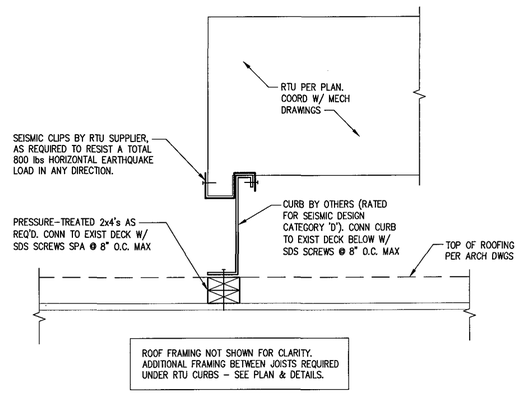

EXCALIBUR SHELVING
(ELEVATION VIEW)

NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL SHELVING SECTIONS.




RJM CABINETRY SHELVING
(PLAN VIEW)

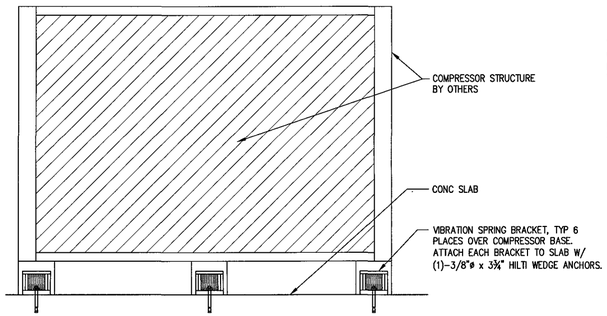
## 321 SHELVING ATTACHMENTS (SEISMIC DESIGN CATEGORY 'D')
SCALE: N.T.S.



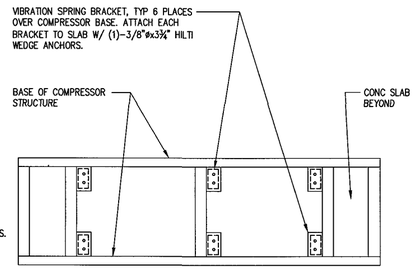

ROOF FRAMING NOT SHOWN FOR CLARITY. ADDITIONAL FRAMING BETWEEN JOISTS REQUIRED UNDER RTU CURBS - SEE PLAN & DETAILS.

## 324 RTU CURB DETAIL (SEISMIC)
SCALE: 1 1/2" = 1'-0"

NOTE: COORDINATE WITH ARCHITECTURAL DRAWINGS FOR LOCATION OF COMPRESSOR.

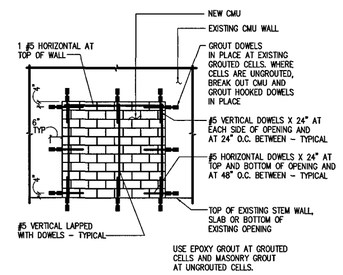



ELEVATION VIEW

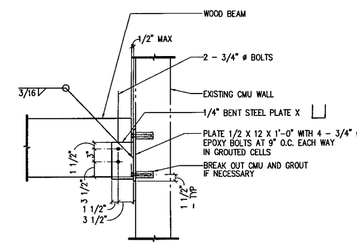



PLAN VIEW

## 325 COMPRESSOR ATTACHMENT (SEISMIC DESIGN CATEGORY 'D')
SCALE: N.T.S.




## 327 NEW CMU IN EXISTING WALL OPENING
SCALE: 3/4" = 1'-0" TYPICAL DETAIL 404.02




## 328 WOOD BEAM CONNECTION TO EXISTING CMU WALL
SCALE: 3/4" = 1'-0" TYPICAL DETAIL 631.06

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by: MEG

app: MEG

sheet no.: S3.1

## MECHANICAL SPECIFICATIONS

THIS SHEET SPECIFICATION SHALL GOVERN IN LIEU OF SEPARATE BOUND SPECIFICATIONS. UPON ISSUANCE, BOUND SPECIFICATIONS SHALL GOVERN SHOULD CONFLICTS ARISE BETWEEN THE SHEET AND THE BOUND SPECIFICATION.

1. BASIC REQUIREMENTS
   - A. MECHANICAL DESIGN SHALL CONFORM TO 2012 UNIFORM MECHANICAL CODE. PROJECT SHALL BE COORDINATED WITH THE EXISTING BUILDING SERVICES AND SHALL INCLUDE ALL ITEMS NECESSARY FOR COMPLETE AND FULLY OPERATIONAL TENANT MECHANICAL SYSTEMS. MAKE CONNECTIONS TO AND EXTEND SYSTEMS INSTALLED BY OTHERS AND/OR FURNISHED BY OTHERS. PROVIDE ACCESSORIES AND INCIDENTAL ITEMS AS REQUIRED FOR A COMPLETE AND FULLY OPERATIONAL SYSTEM WHETHER OR NOT SPECIFICALLY SPECIFIED AND/OR SHOWN ON THE PLANS.
   - B. DO NOT SCALE DRAWINGS. COORDINATE WITH OTHER TRADES FOR A COORDINATED INSTALLATION WITHIN THE AVAILABLE SPACE. WHERE CROWDED CONDITIONS EXIST, PREPARE COORDINATION DRAWINGS SHOWING ALL TRADE CONFLICTS AND SUBMIT TO THE ARCHITECT FOR APPROVAL AND DIRECTION PRIOR TO ROUGH-IN OR INSTALLATION. RELOCATION OF INLETS, OUTLETS, AND/OR APPARATUS MADE PRIOR TO ROUGH-IN OR REQUIRED BY FIELD CONDITIONS FOR COORDINATION SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER OR HIS AGENTS.
   - C. ALL WORK SHALL BE PERFORMED BY PROPERLY LICENSED MECHANICS OR UNDER THEIR DIRECT SUPERVISION. ALL MATERIALS AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE APPLICABLE STANDARDS OF UL AND SHALL BEAR THE UL LABEL AS EVIDENCE THAT THE MATERIAL AND/OR EQUIPMENT MEETS THIS REQUIREMENT.
   - D. INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS UNLESS OTHERWISE NOTED IN THESE PLANS. IF DISCREPANCIES EXIST CONTACT THE ENGINEER PRIOR TO ORDERING EQUIPMENT AND ROUGH-IN.
   - E. ALL EQUIPMENT START UP AND TESTING SHALL BE PERFORMED BY THE EQUIPMENT MANUFACTURER TRAINED SERVICE TECHNICIAN.
   - F. SUBMIT MANUFACTURER'S LITERATURE (SHOP DRAWINGS) FOR MATERIALS AND EQUIPMENT. SUBMITTAL SHALL INCLUDE EQUIPMENT PERFORMANCE DATA AT ELEVATION AND/OR LOCAL CONDITIONS. EQUIPMENT CUTSHEETS OR CATALOG COPIES ARE NOT ACCEPTABLE. SUBMITTAL SHALL BEAR THE APPROVAL OF THE GENERAL CONTRACTOR FOR COMPLIANCE WITH COORDINATION AND THESE SPECIFICATIONS PRIOR TO SUBMITTAL TO ARCHITECT AND/OR HIS AGENCIES. ANY EQUIPMENT SUBSTITUTED FOR WHAT IS SCHEDULED SHALL BE EQUAL TO THAT SCHEDULED IN CONTROLS, ACCESSORIES, AND PERFORMANCE REGARDLESS OF MANUFACTURER.
   - G. FIELD LABEL ALL MECHANICAL EQUIPMENT AND PIPING AS INDICATED ON THE PLANS PER MECHANICAL AND LOCAL CODE REQUIREMENTS. INDICATE DIRECTION OF FLOW ON PIPING.
   - H. PROVIDE 2" DEEP AUXILIARY DRAIN PAN WITH SEPARATE DRAIN LINE UNDER HEATING AND COOLING COILS (AIR HANDLING UNITS, FAN COIL UNITS, INLINE PUMPS, ETC.) WHERE CONDENSATION OR LEAKAGE CAN OCCUR.
   - I. PROVIDE EXPANSION LOOPS, SWING JOINTS, OR MECHANICAL EXPANSION COMPENSATING DEVICES AS REQUIRED TO ACCOUNT FOR THERMAL EXPANSION OF ALL PIPING SYSTEMS. EXPANSION SYSTEM SIZING SHALL BE IN ACCORDANCE WITH MATERIALS DATA SHEETS AND MANUFACTURER RECOMMENDATIONS.
   - J. PROVIDE BOILER EPO SHUTOFFS AS REQUIRED BY LOCAL CODES AND JURISDICTION.

2. BASIC MATERIALS
   - A. PROVIDE MECHANICAL SYSTEM CONTROLS, CONTROLLERS, CONTROL TRANSFORMER, DISCONNECTS, STARTERS, CONTROL WIRING, ASSOCIATED CONTROL POWER WIRING, AND ALL WORK NECESSARY FOR A COMPLETE AND OPERATIONAL MECHANICAL SYSTEM.
   - B. PROVIDE SUPPLEMENTAL STEEL AND SUPPORTS AS REQUIRED FOR INSTALLATION OF MECHANICAL MATERIALS, EQUIPMENT, AND APPARATUS.
   - C. PROVIDE VIBRATION ISOLATION ON ALL MECHANICAL EQUIPMENT. INSTALL FLEXIBLE DUCT CONNECTORS ON ALL AIR HANDLING UNIT SUPPLY OUTLET AND RETURN INLET.
   - D. ALL WORK IN FINISHED AREAS SHALL BE CONCEALED UNLESS SPECIFICALLY NOTED AS EXPOSED ON THE PLANS. PRIOR TO THE INSTALLATION OF ANY EXPOSED WORK THIS CONTRACTOR SHALL VERIFY AND OBTAIN ARCHITECTURAL. APPROVAL OF LOCATION AND EXTENT.
   - E. UTILIZE AN INDEPENDENT BALANCER WITH NEBB AND/OR AABC CERTIFICATION. MECHANICAL SYSTEM SHALL BE BALANCED TO 10% DISCREPANCY OF THE CFM INDICATED ON THE PLANS. IF THERE IS A AIR BALANCE DISCREPANCY GREATER THAN 10%, BALANCE CONTRACTOR SHALL CONTACT ENGINEER. PROVIDE MANUAL VOLUME DAMPERS ON DIRECT DRIVE UNITS AS REQUIRED TO MEET SPECIFIED AIR QUANTITIES.
   - F. CONFIRM ACTUAL VOLTAGES, PHASE AND CHARACTERISTICS OF EXISTING EQUIPMENT AND APPARATUS FURNISHED BY TENANT OTHER TRADES, AND/OR DIVISIONS. CONFIRM PRIOR TO ROUGH-IN. IF DISCREPANCIES ARE NOTED TO THE INSTRUCTIONS OF THESE PLANS AND SPECIFICATIONS, SUBMIT THE NOTED DISCREPANCIES TO THE ARCHITECT FOR DIRECTION PRIOR TO PROCEEDING.
   - G. PROVIDE DUCT SMOKE DETECTORS FOR AUTOMATIC EQUIPMENT SHUTOFF IN AIR-MOVING SYSTEMS THAT RETURN IN EXCESS OF 2000 CFM TO ENCLOSED SPACES WITHIN BUILDINGS PER MECHANICAL HAVING JURISDICTION. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE AIR HANDLING UNIT AUTOMATIC SHUT-DOWN WIRING AND DUCT/SMOKE DETECTOR WIRING WHEN REQUIRED. DETECTORS SHALL BE COMPATIBLE WITH BUILDING FIRE ALARM SYSTEM.
   - H. SMOKE, FIRE AND COMBINATION FIRE/SMOKE DAMPERS SHALL BE FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR. UNITS SHALL BE 120V AND ALL 120V WIRING SHALL BE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. SMOKE, FIRE AND COMBINATION FIRE/SMOKE DAMPERS FURNISHED SHALL BE COMPATIBLE WITH BUILDING FIRE ALARM SYSTEM.
   - I. FIRE/SMOKE DAMPERS SHALL BE FURNISHED WITH REMOTE COMMAND STATION EQUIPPED WITH TEST SWITCH, THERMAL TEST RESET SWITCH, OPEN/CLOSE PILOT LIGHT INDICATORS. FIRE/SMOKE DAMPERS FURNISHED BY MECHANICAL CONTRACTOR AND WIRED BY ELECTRICAL CONTRACTOR.
   - J. THE CONTRACTOR SHALL LOCATE AND FURNISH FOR INSTALLATION BY OTHERS, ALL ACCESS PANELS AS REQUIRED FOR ACCESS TO VALVES, DAMPERS, MOTORS, ETC. AND THE PROPER SERVICING OF EQUIPMENT AND LINES INSTALLED UNDER THIS CONTRACT.

3. PIPING
   - A. ALL HOT WATER PIPING LARGER THAN 2" SHALL BE WELDED STEEL OR GROOVED MECHANICAL COUPLINGS.
   - B. CONDENSATE DRAIN PIPING SHALL BE TYPE M COPPER WITH SOLDERED JOINTS.
   - C. FIRE STOP ALL PIPING MATERIALS PASSING THROUGH FIRE RATED STRUCTURES OR FIRE RATED ASSEMBLIES IN ACCORDANCE WITH THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. USE CURRENTLY LISTED U.L. CLASSIFIED PRODUCTS, TESTED BY ASTM E814. USE FOR ALL APPLICABLE PIPE PENETRATIONS THROUGH FIRE RATED FLOORS, WALLS, OR FLOOR CEILING ASSEMBLIES IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.

4. DUCTWORK
   - A. DUCTWORK SHALL BE GALVANIZED SHEET METAL INSTALLED IN ACCORDANCE WITH SMACNA STANDARDS. INSTALL TURNING VANES IN ALL ELBOWS. ALL SPIN-IN FITTINGS SHALL BE PROVIDED WITH MANUAL VOLUME DAMPERS. ALL EXPOSED DUCTWORK SHALL BE SPIRAL AND SUITABLE FOR FIELD PAINTING. RUNOUTS MUST BE SPIRAL ALL THE WAY TO THE GRD.
   - B. DUCT SIZES GIVEN ARE NET INSIDE FREE AREA.
   - C. EQUIPMENT FLEXIBLE DUCTWORK CONNECTION NOT TO EXCEED 10 INCHES IN LENGTH WITH A MAX. 25 FLAME/50 SMOKE INDEX.
   - D. FLEXIBLE DUCTWORK TO AIR DEVICES SHALL HAVE A MAXIMUM STRETCHED LENGTH OF 6 FEET. SUITABLE FOR RETURN AIR PLENUM.
   - E. SHEETMETAL DUCTWORK LOCATED RETURN AIR PLENUM SHALL BE SEALED WITH SMACNA SEAL CLASS "A" DUCT SEALANT.
   - F. ALL FLUE GAS DUCTWORK TO BE METALBESTOS TYPE B VENTING OR EQUAL UNLESS OTHERWISE NOTED ON PLANS.

5. INSULATION
   - A. ALL ROUND CONCEALED RIGID SUPPLY DUCTWORK SHALL BE EXTERNALLY WRAPPED WITH NOMINAL 1-1/2" THICK (MINIMUM R-5.0) FIBER GLASS INSULATION WITH FIRE RETARDANT VAPOR BARRIER.
   - B. IN DRY ENVIRONMENTS (GENERALLY 1% SUMMER DESIGN MCWB < 74 F): WHEN LOCATED IN UNCONDITIONED SPACES ALL RECTANGULAR DUCTWORK SHALL BE LINED WITH 1" THICK 2 POUND DENSITY (MINIMUM R-5.0) FIBER GLASS ACOUSTIC DUCT LINER. ALL DUCTWORK EXPOSED TO OUTDOOR AMBIENT TYPE CONDITIONS (UNCONDITIONED ATTICS, ETC) SHALL BE EXTERNALLY WRAPPED OR INTERNALLY LINED IN 2 - 2.5" NOMINAL INSULATION (MINIMUM R-8.0). ALL OUTDOOR DUCTWORK SHALL HAVE 2 - 2.5" DUCTLINER (MINIMUM R-8.0) AND THE DUCT BE SEALED WEATHERPROOF PER SMACNA GUIDELINES. RECTANGULAR DUCT WORK IN RETURN AIR PLENUM SHALL BE LINED WITH 1/2" THICK 2 POUND DENSITY (MINIMUM R2.1) MAT-LACED ACOUSTIC DUCT LINER.
   - C. IN HUMID ENVIRONMENTS (GENERALLY 1% SUMMER DESIGN MCWB > 74 F): WHEN LOCATED IN UNCONDITIONED SPACES ALL RECTANGULAR DUCTWORK SHALL BE EXTERNALLY WRAPPED WITH 1" (MINIMUM R-5.0) FIBER GLASS INSULATION WITH FIRE RETARDANT VAPOR BARRIER. ALL DUCTWORK EXPOSED TO OUTDOOR AMBIENT TYPE CONDITIONS (UNCONDITIONED ATTICS, ETC) SHALL BE EXTERNALLY WRAPPED IN 2 - 2.5" NOMINAL INSULATION (MINIMUM R-8.0). ALL OUTDOOR DUCTWORK SHALL HAVE 2 - 2.5" EXTERNAL INSULATION (MINIMUM R-8.0) AND SEALED WEATHERPROOF PER SMACNA GUIDELINES. RECTANGULAR DUCT WORK IN RETURN AIR PLENUM SHALL BE EXTERNALLY WRAPPED WITH 1/2" THICK (MINIMUM R-2.1) FIBER GLASS INSULATION WITH FIRE RETARDANT VAPOR BARRIER.
   - D. CONDENSATE DRAIN PIPING SHALL BE 1/2-INCH THICK INSULATION WITH AN ALL-SERVICE JACKET.
   - E. INSULATE REFRIGERANT SUCTION LINES WITH 1/2" FOAM PLASTIC CLOSED CELL INSULATION.
   - F. CHILLED AND HEATING WATER PIPING SHALL BE 2-INCH THICK FIBER GLASS INSULATION WITH AN ALL-SERVICE JACKET.
   - G. CHILLED AND HEATING WATER PIPING EXPOSED TO WEATHER SHALL BE 2" WEATHER PROOFED INSULATION BOUND WITH ALUMINUM WRAPPING.
   - H. RESIDENTIAL UNITS: SUPPLY DUCTWORK SHALL NOT BE LINED. RETURN AIR DUCTS SHALL HAVE 1/2" DUCTLINER IN DRY CLIMATES AND NO DUCTLINER IN HUMID CLIMATES.

6. AIR INLETS AND OUTLETS
   - A. FURNISH AND INSTALL AIR INLETS AND OUTLETS AS SCHEDULED ON THE PLANS.
   - B. OUTLETS SHALL HAVE A WHITE BAKED ENAMEL FINISH TO MATCH CEILING OR WALL.
   - C. FURNISH AND INSTALL ROOF CURBS AND BACKDRAFT DAMPERS.
   - D. ALL SUPPLY REGISTERS AND DIFFUSERS SHALL HAVE A MANUAL VOLUME DAMPER FOR BALANCING.

7. EXHAUST FANS
   - A. FURNISH AND INSTALL CENTRIFUGAL EXHAUST FANS AS SCHEDULED ON THE PLANS.
   - B. FURNISH AND INSTALL UNITS COMPLETE WITH ALL OPERATIONAL AND SAFETY CONTROL NECESSARY FOR PROPER OPERATION.

8. ROOFTOP HVAC UNITS
   - A. FURNISH AND INSTALL ROOF TOP PACKAGED ELECTRIC A/C UNITS AS SCHEDULED ON THE PLANS. ACCEPTABLE MANUFACTURERS ARE TRANE, CARRIER, OR YORK. ANY SUBSTITUTED MODELS MUST BE EQUAL IN CONTROLS, ACCESSORIES, AND PERFORMANCE TO SCHEDULED MODELS.
   - B. FURNISH AND INSTALL UNITS COMPLETE WITH ALL OPERATIONAL AND SAFETY CONTROLS FOR SATISFACTORY OPERATION. PROVIDE PHASE REVERSAL PROTECTION ON ANY UNITS WITH SCROLL COMPRESSORS.
   - C. FURNISH PROGRAMMABLE SPACE THERMOSTAT WITH NIGHT SETBACK OPERATION AND HARDWIRED REMOTE SENSOR. REFER TO ELECTRICAL PLANS FOR MOUNTING HEIGHT.
   - D. FURNISH ALL UNITS WITH 100% OUTDOOR AIR ECONOMIZER PACKAGE UNLESS OTHERWISE NOTED.
   - E. FURNISH ALL UNITS WITH 14-INCH ROOF CURBS.
   - F. FURNISH UNITS WITH 3 SETS OF FILTER CHANGES 1 FOR CONSTRUCTION 1 FOR BALANCING AND A FINAL SET WHEN BUILDING IS TURNED OVER TO THE OWNER

9. CONTROL SYSTEM
   - A. FURNISH AND INSTALL A COMPLETE SYSTEM OF ELECTRIC/ELECTRONIC CONTROL FOR THE SYSTEMS INSTALLED TO PROVIDE THE FOLLOWING SEQUENCES OF OPERATION.
   - B. SYSTEMS SHALL BE INDEPENDENT AND STAND ALONE IN OPERATION AND SEQUENCE.
   - C. SINGLE ZONE ROOFTOP UNITS
     - C.1. UNIT SHALL BE STARTED AND STOPPED FROM AN INDEPENDENT PROGRAMMABLE THERMOSTAT. ALL OPERATIONAL AND SAFETY INTERLOCKS SHALL BE WIRED INCLUDING UNIT SHUT DOWN FROM DUCT SMOKE DETECTORS FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR IN ACCORDANCE WITH LOCAL CODE JURISDICTIONS.
     - C.2. UNITS SHALL MAINTAIN LOCAL SPACE TEMPERATURE BY THE USE OF ELECTRIC REFRIGERATION, ECONOMIZER OPERATION UNITS SHALL MAINTAIN MINIMAL OUTDOOR AIR SETTINGS WHENEVER THEY ARE OPERATIONAL.
     - C.3. PROVIDE NIGHT SET BACK OPERATION TO MAINTAIN A REDUCED NIGHT OPERATION CONDITION UTILIZING THE SPACE SENSOR WHENEVER THE SYSTEM IS IN AN UNOCCUPIED PROGRAM.
   - D. EXHAUST FANS
     - D.1. EXHAUST FANS TO BE CONTROLLED AS INDICATED ON THE SCHEDULES.

END

## MECHANICAL LEGEND

| | |
|---|---|
| CHWS — CHILLED WATER SUPPLY | |
| CHWR — CHILLED WATER RETURN | |
| CDS — CONDENSER WATER SUPPLY | |
| CDR — CONDENSER WATER RETURN | |
| HWS — HOT WATER SUPPLY | |
| HWR — HOT WATER RETURN | |
| SUPPLY UP | CEILING SUPPLY DIFFUSER |
| SUPPLY DOWN | CEILING RETURN AIR REGISTER |
| RETURN UP | ROUND CEILING DIFFUSER |
| RETURN DOWN | CEILING LINEAR SUPPLY/RETURN |
| EXHAUST UP | SIDEWALL SUPPLY/RETURN REGISTER |
| EXHAUST DN | MANUAL VOLUME DAMPER |
| FLEXIBLE DUCT | FIRE DAMPER (F) |
| TAG / CFM / NECK — AIR DEVICE TAG | SMOKE DAMPER (S) |
| TAG / # — EQUIPMENT TAG | FIRE SMOKE DAMPER (FS) |
| DEMO | ROOF TOP UNIT |
| (POC) POINT OF CONNECTION | |
| (POD) POINT OF DISCONNECTION | FURNACE |
| THERMOSTAT | CONDENSING UNIIT |
| HUMIDASTAT | PARALLEL FAN POWERED VAV BOX |
| ELBOW UP | |
| ELBOW DOWN | VAV BOX |
| TEE UP | |
| TEE DOWN | |

## CODES & DESIGN CRITERIA

| | |
|---|---|
| JURISDICTION: | RENO,NEVADA |
| MECHANICAL CODE: | 2012 UMC |
| ENERGY CODE: | 2009 IECC |
| LOCAL ADDENDUMS: | YES |
| WINTER DESIGN DB: | 10 |
| SUMMER DESIGN TEMP DB / WB | 94 / 63 F |
| WB DESIGN FOR EVAP COOLING | N/A |
| DB DESIGN FOR AIR COOLED EQUIP | 95 |
| INDOOR HEATING SET POINT: | 72 F |
| INDOOR COOLING SET POINT: | 75 F |
| GARAGE HEATING SET POINT: | N/A |
| ROOF R-VALUE: | 35 |
| WALL R-VALUE: | 20 |
| GLASS SHADING COEFFICIENT: | 0.5 |
| GLASS U-VALUE: | 0.5 |
| BUILDING TYPE: | ----- |
| ELEVATION: | 4404 |
| FULLY SPRINKLERED: | YES |
| NUMBER OF FLOORS: | 1 |
| BUILDING TOTAL AREA: | ----- |

## ABBREVIATIONS

| | |
|---|---|
| (D) | DEMO |
| (E) | EXISTING |
| (N) | NEW |
| AFF | ABOVE FINISH FLOOR |
| AHU | AIR HANDLING UNIT |
| AS | AIR (DIRT) SEPARATOR |
| B | BOILER |
| BB | BASEBOARD |
| BD | BYPASS DAMPER |
| BF | BOOSTER FAN |
| BFP | BACKFLOW PREVENTER |
| BLWR | BLOWER |
| BOD | BOTTOM OF DUCT |
| BT | BATH TUB |
| BTU | BRITISH THERMAL UNIT |
| CD | CONDENSATE DRAIN |
| CDR | CONDENSER |
| CFM | CUBIC FEET PER MINUTE |
| CH | CHILLER |
| CU | CONDENSING UNIT |
| CUH | CABINET UNIT HEATER |
| DF | DRINKING FOUNTAIN |
| DIA | DIAMETER |
| EAT | ENTERING AIR TEMP |
| EAWB | ENTERING AIR WET BULB TEMP |
| EC | ELECTRICAL CONTRACTOR |
| EDH | ELECTRIC DUCT HEATER |
| EER | ENERGY EFFICIENCY RATIO |
| EF | EXHAUST FAN |
| EFF | EFFICIENCY |
| ER | EXISTING REMOVED |
| ERR | EXISTING REMOVED & RELOCATED |
| ERU | ENERGY RECOVERY UNIT |
| ESP | EXTERNAL STATIC PRESSURE |
| ET | EXPANSION TANK |
| EVC | EVAPORATIVE COOLER |
| EW | EMERGENCY EYEWASH |
| EWC | ELECTRIC WATER COOLER |
| EWH | ELECTRIC WATER HEATER |
| EWT | ENTERING WATER TEMP |
| EXH | EXHAUST AIR |
| F | FURNACE |
| FCU | FAN COIL UNIT |
| FD | FLOOR DRAIN |
| FIN | FINISH |
| FLA | FULL LOAD AMPS |
| FS | FLOOR SINK |
| G | GAS |
| GC | GENERAL CONTRACTOR |
| GUH | GAS UNIT HEATER |
| GWH | GAS WATER HEATER |
| HB | HOSE BIB |
| HP | HORSEPOWER |
| HX | HEAT EXCHANGER |
| IRH | INFRARED HEATER |
| KW | KILOWATT |
| LAT | LEAVING AIR TEMP |
| LAV | LAVATORY |
| LBS | POUNDS |
| LS | LIFT STATION |
| LWT | LEAVING WATER TEMP |
| MAU | MAKE-UP AIR UNIT |
| MAX | MAXIMUM |
| MBH | ONE THOUSAND BTU'S PER HOUR |
| MC | MECHANICAL CONTRACTOR |
| MCA | MINIMUM CIRCUIT AMPACITY |
| MFR | MANUFACTURER |
| MIN | MINIMUM |
| MOCP | MAX OVER CURRENT PROTECTION |
| NC | NOISE CRITERIA |
| NIC | NOT IN CONTRACT |
| NO | NUMBER |
| NTS | NOT TO SCALE |
| OA | OUTSIDE AIR |
| OADB | OUTSIDE AIR DRY BULB TEMP |
| OBD | OPPOSED BLADE DAMPER |
| P | PUMP |
| PC | PLUMBING CONTRACTOR |
| PF | PERFORATED FACE |
| PFT | PARALLEL FAN TERMINAL |
| PH | PHASE |
| POC | POINT OF CONNECTION |
| POD | POINT OF DISCONNECTION |
| PRV | PRESSURE REDUCING VALVE |
| RA | RETURN AIR |
| RAR | RETURN AIR REGISTER |
| RD | ROOF DRAIN |
| RE | RELOCATE EXISTING |
| RH | RADIANT HEATER |
| RTU | ROOF TOP UNIT |
| SA | SUPPLY AIR |
| SAR | SUPPLY AIR REGISTER |
| SC | SENSIBLE COOLING |
| SEER | SEASONAL ENERGY EFF RATIO |
| SF | SUPPLY FAN |
| SFT | SERIES FAN TERMINAL |
| SH | SHOWER |
| SK | SINK |
| SL | SEA LEVEL |
| SOI | SAND/OIL INTERCEPTOR |
| SP | STATIC PRESSURE |
| SS | SERVICE SINK |
| ST | STORAGE TANK |
| STG | STAGES |
| TC | TOTAL COOLING |
| TD | TRENCH DRAIN |
| TF | TRANSFER FAN |
| TSTAT | THERMOSTAT |
| TYP | TYPICAL |
| UH | UNIT HEATER |
| UR | URINAL |
| V | VOLTS |
| VAV | VARIABLE AIR VOLUME |
| VVT | VARI TRAC |
| WB | WASHER BOX |
| WC | WATER CLOSET |
| WH | WALL HYDRANT |
| WPD | WATER PRESSURE DROP |

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by: MT

app: JAG

sheet no.: M1 of 9

# ROOFTOP HVAC UNIT SCHEDULE

| PLAN MARK | MFR | MODEL NO. | CFM | MIN OA CFM | BLWR BHP | ESP (IN) | GAS NAT/ PROP | HEATING CAPACITY INPUT MBH (SL) | OUTPUT MBH (ALT) | EAT (F) | LAT (F) | EFF | STG | NET COOLING CAPACITY TOTAL MBH | SENS MBH | EADB (F) | EAWB (F) | LADB (F) | LAWB (F) | REFRIG (R410A / R22) | EFFICIENCY (STD / HI) | SEER/EER RATING | WEIGHT LBS | ELECTRICAL DATA VOLT | PH | FLA (LG MTR) | MCA | MOCP | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RTU-1 | TRANE | YHC092 – 7.5 TON DUAL | 3000 | 1010 | 1.31 | 1.0 | NAT | 164 | 131 | 43.1 | 92.7 | 80% | 2 | 81.15 | 77.58 | 83.1 | 61.4 | 55.73 | 61.4 | R-410A | HIGH | 12.6 | 1230 | 480 | 3 | 7.10 | 19.9 | 25 | (1)(2)(3)(4)(5)(6)(7)(8)(9)(10) |
| RTU-2 | TRANE | YHC092 – 7.5 TON DUAL | 3000 | 1685 | 1.31 | 1.0 | NAT | 164 | 131 | 26.6 | 76.2 | 80% | 2 | 85.1 | 82.76 | 88.7 | 62.7 | 59.31 | 52.34 | R-410A | HIGH | 12.6 | 1230 | 480 | 3 | 7.10 | 19.9 | 25 | (1)(2)(3)(4)(5)(6)(7)(8)(9)(10)(11) |
| RTU-3 | TRANE | YHC092 – 7.5 TON DUAL | 3000 | 1115 | 1.31 | 1.0 | NAT | 164 | 131 | 39.8 | 86.4 | 80% | 2 | 81.68 | 80.11 | 84.6 | 61.20 | 56.31 | 51 | R-410A | HIGH | 12.6 | 1230 | 480 | 3 | 7.10 | 19.9 | 25 | (1)(2)(3)(4)(5)(6)(7)(8)(9)(10) |
| RTU-4 | TRANE | YHC036 – 3 TON | 1200 | 330 | .6 | 1.0 | NAT | 65.6 | 52.5 | 50.2 | 99.6 | 80% | 2 | 33.87 | 27.61 | 81.7 | 62.4 | 57.55 | 52.43 | R-410A | HIGH | 15 | 685 | 480 | 3 | 5.8 | 10.3 | 15 | (1)(2)(3)(4)(6)(8)(10) |
| RTU-5 | TRANE | YHC036 – 3 TON | 1200 | 185 | .6 | 1.0 | NAT | 65.6 | 52.5 | 60.2 | 103.8 | 80% | 2 | 33.04 | 32.89 | 81 | 61.1 | 52.19 | 50.82 | R-410A | HIGH | 15 | 685 | 480 | 3 | 5.8 | 10.3 | 15 | (1)(2)(3)(4)(6)(8)(10) |
| RTU-6 | TRANE | YHC120 – 10 TON DUAL | 4000 | 825 | 2.28 | 1.0 | NAT | 164 | 131.2 | 54.7 | 92 | 80% | 2 | 101.72 | 99.08 | 81.4 | 61.2 | 55.24 | 51.78 | R-410A | HIGH | 12.5 | 1405 | 480 | 3 | 8.2 | 22.1 | 30 | (1)(2)(3)(4)(5)(6)(8)(9)(10) |
| RTU-7 | TRANE | YHC092 – 7.5 TON DUAL | 3000 | 620 | 1.31 | 1.0 | NAT | 123 | 98.4 | 54.8 | 92.1 | 80% | 2 | 79.91 | 65.22 | 81.4 | 61 | 58.44 | 51.27 | R-410A | HIGH | 12.6 | 1230 | 480 | 3 | 7.10 | 19.9 | 25 | (1)(2)(3)(4)(5)(6)(8)(9)(10) |

(1) REFERS TO COOLING CAPACITIES BASED ON NET COIL CONDITIONS LISTED @ 877' ELEVATION, AND 100F CONDENSING TEMPERATURE
IN DRY ENVIRONMENTS, PROVIDE A DIFFERENTIAL ENTHALPY ECONOMIZER IN LIEU OF THE REFERENCE ENTHALPY OPTION.
(2) (PROVIDE ADAPTER CURB.CONFIRM EXISTING RTU MODEL NUMBER WITH TRANE SEE NOTE (11) FOR EXISTING MODEL NUMBER .PROVIDE BELT DRIVE, HAIL GUARDS, MICROPROCESSOR CONTROL, OPTIONAL DISCONNECT, AND REFERENCE ENTHALPY ECONOMIZER.
SET POTENTIOMETER TO POSITION 'C' CORRESPONDING TO 23 BTU/LB OUTSIDE AIR MAXIMUM
(3) PROVIDE OPTIONAL CONVENIENCE OUTLET
(4) SEER AND EER RATING ARE RATED AT ARI CONDITIONS AND IN ACCORDANCE WITH DOE TEST PROCEDURES.
(5) PROVIDE ROOF TOP UNIT WITH SMOKE DETECTOR AND AUTOMATIC SHUT-OFF IN RETURN AIR DUCT.
(6) PROVIDE FLUE EXTENSIONS AS REQUIRED TO MEET NECESSARY CODE REQUIREMENT CLEARANCES.
(7) PROVIDE WITH CO2 SENSOR, CO2 CONTROL KIT, AND INTERLOCK WITH ECONOMIZER OPERATION TO MINIMIZE OUTSIDE AIR INTAKE. THE MECHANICAL MINIMUM LIMIT STOP SHALL BE SET TO 15% OPEN.
(8) SEE CONTROL SEQUENCE DIAGRAM FOR SEQUENCE OF OPERATIONS
(9) MIN OUTSIDE AIR LISTED IS FOR DESIGN SELECTIONS PURPOSES. ACTUAL OUTSIDE AIR WILL BE CONTROLLED BY CO2 RESET ON UNITS SO EQUIPPED.
(10) ROOF TOP UNITS WILL BE PURCHASED BY OWNER AND INSTALLED BY CONTRACTOR. SEE CONTACT INFORMATION ON THIS SHEET.
(11) PROVIDE WITH STAINLESS STEEL HEAT EXCHANGER.

# AIR DEVICE SCHEDULE

| PLAN MARK | MANUFACTURER | MODEL NUMBER | STYLE | MATERIAL | FIN | FACE PATT. | DAMPER | NC (MAX) | SIZE | INLET SIZE/ DIA | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A | PRICE | SCD | SQUARE CONE DIFFUSER | STL | WHT | LF | NONE | 35 | 24X24 | NOTED | (1) |
| B | PRICE | PDDR | PERFORATED RETURN AIR | STL | WHT | PF | NONE | 35 | 12x24 | 10X22 | |
| C | PRICE | PDDR | PERFORATED RETURN AIR | STL | WHT | PF | NONE | 35 | 24X24 | 22X22 | |
| D | PRICE | 520 | SIDEWALL SUPPLY | STL | WHT | LF | OP.BLD | 35 | NOTED | SAME | |
| E | PRICE | 530 | SIDEWALL RETURN | STL | WHT | LF | NONE | 35 | NOTED | SAME | |
| F | PRICE | 80 | EGG CRATE RETURN | STL | WHT | EC | NONE | 35 | NOTED | SAME | |
| G | PRICE | RCDA | ROUND CONE DIFFUSER | STL | WHT | LF | OP.BLD | 35 | 24X24 | NOTED | |
| H | HART&COOLEY | A500-OB | SQUARE CONE DIFFUSER | AL | WHT | LF | OP.BLD | 35 | 24X24 | NOTED | (2) |

(1) PROVIDE OPPOSED BLADE DAMPER IN ALL IN-ACCESSIBLE CEILINGS.
(2) PROVIDE SQUARE TO ROUND TRANSITION FOR COMPLETE INSTALLATION .
DESIGN VOLUME

# EXHAUST FAN SCHEDULE

| PLAN MARK | MFR | MODEL NO. | LOCATION | STYLE | CFM | ESP (IN) | SONES | WEIGHT LBS | SPD | ELECTRICAL DATA VOLT | PH | WATTS | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EF-1 | GREENHECK | GB-081 | ROOF – COMPRESSOR ROOM | ROOF DOWNBLAST | 600 | 0.5 | 10.1 | 58 | 1 | 120 | 1 | 1/6 HP | (1)(4)(5)(6) |
| EF-2 | GREENHECK | SP-B150 | SHOWER ROOM | CEILING | 150 | 0.5 | 4.5 | 15 | 1 | 115 | 1 | 129 W | (1)(2)(7) |
| EF-3 | EXISTING | EXISTING | MENS/WOMENS RESTROOM | ROOF DOWNBLAST | 450 | 0.5 | 2.5 | 84 | 1 | 115 | 1 | 1/4HP | (3) |
| EF-4 | GREENHECK | SP-B150 | IT ROOM | CEILING | 150 | 0.5 | 3.5 | 15 | 1 | 120 | 1 | 130 W | (1)(6)(8) |
| EF-5 | GREENHECK | CUE-099-VG | ROOF – DEMONSTRATION HOOD | ROOF UPBLAST | 700 | .75 | 16 | 84 | 1 | 120 | 1 | 1/4HP | (1)(4) |

(1) GREENHECK AND SOLER&PALAU ARE THE ONLY ACCEPTABLE MANUFACTURES.SELECTIONS BASED ON LOCATIONS ALTITUDE
(2) PROVIDE 6" RD DUCT THROUGH WALL TO WEATHER PROOF CAP AND BACKDRAFT DAMPER.
(3) CHECK FAN FOR OPERATION.SERVICE AS REQUIRED.
(4)PROVIDE ROOF CURB AND BACKDRAFT DAMPER
(5) PROVIDE SCR CONTROLLER.
(6) PROVIDE LINE VOLTAGE REVERSE ACTING THERMOSTAT
(7) FAN CONTROLLED VIA TIME CLOCK.
(8) PROVIDE 8" EXHAUST DUCT. FAN TO EXHAUST IN CEILING

# HEATCRAFT HEATING COIL SCHEDULE

| PLAN MARK | MANUFACTURER | MODEL NUMBER | COIL SIZE | CONNECTION SIZE | CFM | HEATING CAPACITY | REF. PD | EAT (F) | LAT (F) | APD | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| HC-1 | HEATCRAFT | 3CF1102B | 24x48 | 1.375" OD | 3000 | 48.3 | 0.5 | 68 | 95 | 0.030 | (1)(2)(3)(4) |

(1) HEATCRAFT HEATING COIL IS TO PURCHASED BY OWNER AND INSTALLED BY CONTRACTOR.
(2) INSTALL PER MANUFACTURER'S RECOMMENDATIONS FOR PROPER COIL PERFORMACE.
(3) PROVIDE DUAL CIRCUIT STACKED COIL.
(4) PROVIDE FILTER ON INLET OF COIL.SEE RTU DETAIL.

# AIR DOOR SCHEDULE

| PLAN MARK | AIR DOOR UNITS DIMENSIONS H X D X L | MANUFACTURER | MODEL NUMBER | AIRFLOW MAX FPM | AIRFLOW CFM | MOTOR DATA MOTORS | MOTOR DATA HP | MOTOR DATA SPEED | MOTOR DATA VOLT/ PH | ELECTRIC HEAT KW | ELECTRIC HEAT TEMP RISE | ELECTRIC HEAT VOLT/ PH | MOTOR MCA | MOTOR MOCP | HEATER MCA | HEATER MOCP | WEIGHT | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AD-1 | 12.25"x21.19"x99.50" | BERNER | MK23096EX3-250 | 3000 | 3792 | 3 | 1/2 | 3 | 208/1 | 19.0 | 16.0 | 480/3 | 23.4 | 25 | 22.9 | 30 | 285 | (1)(2)(3)(4)(5)(6)(7) |

(1) PROVIDE A 24 VOLT COMFORT PLUS CONTROL PACKAGE PART NUMBER 91STR208-PH-M-24
(2) DESIGNED FOR EXPOSED ABOVE THE DOOR MOUNTING. UNIT TO BE SUPPLIED WITH PROVISIONS FOR WALL MOUNTING OR THREADED ROD SUSPENSION.
(3) CLEAR ANODIZED ALUMINUM EXTERIOR COVER HOUSING W/ REMOVABLE BOTTOM ACCESS PANEL FOR MAINTENANCE AND SERVICE. BOTTOM ACCESS PANEL AND WASHABLE AIR INLET FILTER.
(4) SUPPLY EACH AIR CURTAIN WITH A FACTORY MOUNTED/ WIRED NON FUSED DISCONNECT SWITCH (ONE PER CIRCUIT)
(5) SUPPLY EACH AIR CURTAIN WITH A 1" ALUMINUM AIR INLET AIR FILTER CONCEALED ON THE BACKSIDE OF THE AIR INLET SCREEN.
(6) PROVIDE THERMOSTATIC HEATER CONTROL WITH REMOTE SENSOR AND DOOR LIMIT SWITCH. THERMOSTAT WILL BE MOUNTED IN MANAGERS OFFICE.
(7) AIRDOOR WILL BE PURCHASED BY OWNER AND INSTALLED BY CONTRACTOR. SEE CONTACT INFORMATION ON THIS SHEET.

# VENTILATION SCHEDULE

| ZONE | PER 2012 UMC AREA (SF) | Rp | Ra | # / 1000SF | # OCCUPANTS | Vbz | Ez | Voz | Ev | Vot |
|---|---|---|---|---|---|---|---|---|---|---|
| RTU-1 | | | | | | | | | | |
| SUPERMARKET | 3566 | 7.5 | 0.06 | 15 | 54 | 615 | 0.8 | 769 | 0.9 | 854 |
| COUNTING | 75 | 5 | 0.06 | 5 | 1 | 6 | 0.8 | 8 | 1 | 8 |
| IT | 60 | 5 | 0.06 | 5 | 1 | 5 | 0.8 | 6 | 1 | 6 |
| MANAGERS | 195 | 5 | 0.06 | 5 | 1 | 17 | 0.8 | 21 | 1 | 21 |
| COMMUNITY ROOM | 240 | 7.5 | 0.06 | 15 | 4 | 41 | 0.8 | 52 | 0.9 | 58 |
| PRODUCE | 260 | 7.5 | 0.06 | 15 | 4 | 45 | 0.8 | 56 | 0.9 | 62 |
| | | | | | | | | TOTAL REQUIRED | | 1009 |
| | | | | | | | | TOTAL SUPPLIED | | 1010 |
| RTU-2 | | | | | | | | | | |
| SUPERMARKET | 7035 | 7.5 | 0.06 | 15 | 106 | 1214 | 0.8 | 1517 | 0.9 | 1685 |
| | | | | | | | | TOTAL REQUIRED | | 1685 |
| | | | | | | | | TOTAL SUPPLIED | | 1685 |
| RTU-3 | | | | | | | | | | |
| SUPERMARKET | 4650 | 7.5 | 0.06 | 15 | 70 | 802 | 0.8 | 1003 | 0.9 | 1114 |
| | | | | | | | | TOTAL REQUIRED | | 1114 |
| | | | | | | | | TOTAL SUPPLIED | | 1115 |
| RTU-4 | | | | | | | | | | |
| KITCHEN | 300 | 5 | 0.06 | 5 | 2 | 28 | 0.8 | 32 | 1 | 32 |
| DISH ROOM | 175 | 5 | 0.06 | 5 | 1 | 15 | 0.8 | 19 | 1 | 19 |
| TRAINING ROOM | 715 | 5 | 0.06 | 50 | 36 | 222 | 0.8 | 277 | 1 | 277 |
| | | | | | | | | TOTAL REQUIRED | | 328 |
| | | | | | | | | TOTAL SUPPLIED | | 330 |
| RTU-5 | | | | | | | | | | |
| BUYERS | 325 | 5 | 0.06 | 5 | 2 | 28 | 0.8 | 35 | 1 | 35 |
| CORRIDOR | 900 | | 0.06 | | 0 | 54 | 0.8 | 68 | 1 | 68 |
| BREAK ROOM | 515 | 5 | 0.06 | 5 | 3 | 44 | 0.8 | 55 | 1 | 55 |
| NUTRITION | 130 | 5 | 0.06 | 5 | 1 | 11 | 0.8 | 14 | 1 | 14 |
| CLOSET 1 | 80 | 5 | 0.06 | 5 | 1 | 7 | 0.8 | 9 | 1 | 9 |
| CLOSET 2 | 50 | 5 | 0.06 | 5 | 1 | 4 | 0.8 | 5 | 1 | 5 |
| | | | | | | | | TOTAL REQUIRED | | 184 |
| | | | | | | | | TOTAL SUPPLIED | | 185 |
| RTU-6 | | | | | | | | | | |
| STOCK ROOM | 5490 | | 0.12 | | 0 | 659 | 0.8 | 824 | 1 | 824 |
| | | | | | | | | TOTAL REQUIRED | | 824 |
| | | | | | | | | TOTAL SUPPLIED | | 825 |
| RTU-7 | | | | | | | | | | |
| STOCK ROOM | 4105 | | 0.12 | | 0 | 493 | 0.8 | 616 | 1 | 616 |
| | | | | | | | | TOTAL REQUIRED | | 616 |
| | | | | | | | | TOTAL SUPPLIED | | 620 |

Vbz = Rp * Pz + Ra * Az
Rp = OUTDOOR AIRFLOW RATE PER PERSON (CFM/ PERSON)
Ra = OUTDOOR AIRFLOE RATE REQUIRED PER UNIT AREA (CFM/ SQFT)
Az = ZONE FLOOR AREA (sqft)
Pz = ZONE POPUPLATION; OCCUPANTS
Vbz (CFM) = BREATHING ZONE OUTDOOR AIR FLOW
Voz = Vbz/ Ez
Ez = ZONE AIR DISTRIBUTION EFFECTIVENESS
Voz (CFM) = ZONE OUTDOOR AIR FLOW
Vot = Vbz/ Ev
Ev = SYSTEM VENTILATION EFFICIENCY
Vot (CFM) = REQUIRED OUTDOOR AIR INTAKE FLOW

** FLOOR AREA BASED ON NET OCCUPIABLE AREA.

# OWNER PROVIDED TRANE HVAC MATERIAL PACKAGE

OWNER HAS ESTABLISHED A NATIONAL ACCOUNT AND WILL BE PURCHASING THE ROOF- TOP UNITS, AIR DOOR DIRECTLY FROM TRANE

INQUIRY AND COORDINATION INFORMATION FOR ROOFTOP UNITS AND ACCESSORY PACKAGE:
EXECUTIVE, Justin Barnes, AT TRANE NATIONAL ACCOUNTS: (800) 729-9115;
FAX: (303) 228-2828; EMAIL: jdbarnes@trane.com

OWNER PROVIDED ROOFTOP UNITS AND ACCESSORY PACKAGE:
INCLUDES ALL ROOFTOP A/C UNITS AND ACCESSORIES AS SPECIFIED ON THE PLANS AND SPECIFICATIONS.

OWNER PROVIDED WARRANTY PACKAGE:
TRANE TO PROVIDE EQUIPMENT LABOR AND PARTS WARRANTIES

MECHANICAL CONTRACTOR RESPONSIBILITY LIST

CONTRACTOR TO PROVIDE THE FOLLOWING:
1) COORDINATION OF EQUIPMENT DELIVERIES TO MAINTAIN CONSTRUCTION SCHEDULE AND INSTALLATION REQUIREMENTS.
2) INSTALLATION OF TRANE PROVIDED EQUIPMENT
3) COMPLETE INSTALLATION OF DUCTWORK DISTRIBUTION AND ASSOCIATED ACCESSORIES AS INDICATED ON DRAWINGS AND SPECIFICATIONS SPECIFICATIONS.
4) STARTUP OF TRANE EQUIPMENT PACKAGE
5) AIR BALANCE OF SYSTEMS
6) 1ST YEAR LABOR AND MATERIAL WARRANTY OF CONTRACTOR INSTALLED ITEMS.
7) COORDINATION OF ACCESSORIES,ORIENTATION,ACCESS AND CLEARANCES REQUIRED TO ACCOMMODATE FIELD CONDITIONS.
8) PROVIDE NEW CURBS CAPATIBLE WITH EQUIPMENT. PROVIDE ADAPTER CURBS IF REQUIRED.
9) CONTRACTOR TO PROVIDE FINAL FILTER CHANGE BEFORE OWNER OCCUPANCY. PROVIDE PLEATED FILTERS ONLY, INCLUDING HEATCRAFT FILTER

10) COORDINATE ALL TRACKER ELECTRICAL CONDUIT AND BOXES FOR SENSORS AND CONTROLS. CONTACT TRANE FOR INSTALL GUIDELINES

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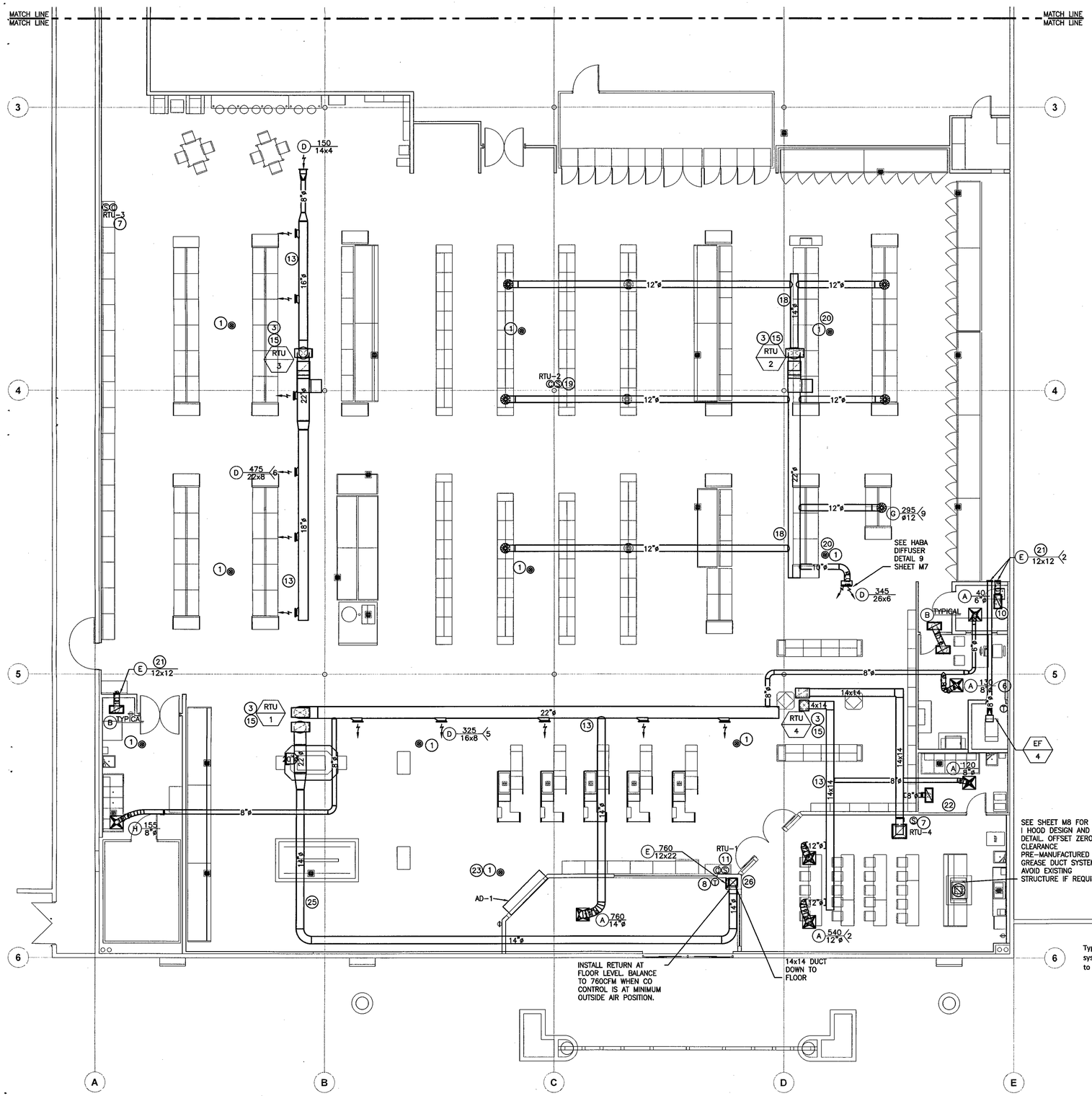
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MECHANICAL SCHEDULES

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sheet no.
M2 of 9




1 M3 FIRST FLOOR MECHANICAL PLAN

NORTH

8' 4' 0 8' 16'

1/8"=1'-0"

## GENERAL NOTES:

1. DUCTWORK INSTALLED BY CONTRACTOR WILL BE SET TO THE FOLLOWING. MAIN DUCTWORK IN RETAIL AREA IS INSTALLED 13'-0 AFF.
2. ALL EXPOSED DUCTWORK TO BE PAINTABLE ROUND SPIRAL.
3. BACK CUT RETURN AIR OPENINGS FOR RTUS. REFER TO DETAIL PAGE.
4. TIME CLOCK CONTROLLING EF-3 SHALL BE LOCATED NEAR ELECTRICAL PANELS. LABEL TIME CLOCK "FOR BATHROOM EXHAUST."
5. MOUNT HARD WIRED REMOTE TEMPERATURE SENSORS 5'-6" AFF.

## DRAWING NOTES:

1. TYPICAL AIR PEAR FAN LOCATION. PROVIDE ACT CEILING TRIM KIT. FAN TO BE PROVIDED BY OTHERS AND INSTALLED GC/SUBCONTRACTOR. THE RECEPTACLES SHALL BE SWITCHED FROM MANAGERS OFFICE AS INDICATED. REFER TO ELECTRICAL PLANS. PROVIDE CEILING INSTALLATION KIT AS REQUIRED.
2. FLUE AND COMBUSTION AIR FOR GWH-1 FIELD ROUTE TO ROOF PENETRATION LOCATION SHOWN. PROVIDE WITH MANUFACTURER'S APPROVED CONCENTRIC VENT KIT.
3. RETURN TO TERMINATE HORIZONTAL WITH THE TOP OF THE DUCT SET TO THE ELEVATION OF THE BOTTOM OF STRUCTURE OR CEILING. SEE DETAIL SHEET FOR RTU DETAIL.
4. 12X12 EXHAUST DUCT UP TO EF ON ROOF. PROVIDE WITH BACKDRAFT DAMPER AT ROOF PENETRATION.
5. MOUNT THERMOSTATS OR SENSORS ON WALL IN THIS LOCATION. SENSORS ARE WIRED BACK TO MANAGERS OFFICE.
6. UNDERCUT DOOR 2".
7. MOUNT SENSOR 5'-6" OFF FINISHED FLOOR IN THIS LOCATION
8. T-STAT LOCATION FOR AD-1 .
9. LITHIUM ION BATTERY CHARGER IN THIS LOCATION. NO EXHAUST REQUIRE PER CODE.
10. 8"ø EXHAUST DISCHARGE ABOVE CEILING AS SHOWN .
11. RTU-1 TEMP AND CO SENSOR IS MOUNTED AT 5'-6" SPACE AS SHOWN.
12. LABEL THERMOSTATS AS FOLLOWS: RTU-1 PRODUCE/REGISTER RTU-4 DEMONSTRATION RTU-3 GROCERY/VITAMIN RTU-2 GROCERY RTU-5 BREAK/BUYERS RTU-6 STOCK ROOM RTU-7 STOCK ROOM
13. DUCTWORK TO BE MOUNTED 13FT OFF OF FINISHED FLOOR.
14. OFFSET DUCT AS REQUIRED AND INSTALL DUCT TIGHT TO CROSSING BEAM.
15. PROVIDE FULL SIZE TRANSITIONS FOR FINAL CONNECTIONS TO RTU'S. WHEN TURNING HORIZONTAL HOLD DUCT TIGHT TO BOTTOM OF JOIST.
16. 12x12 OPEN ENDED DUCT WITH BIRDSCREEN. EXHAUST DUCT UP TO EF-1 ON ROOF. PROVIDE WITH BACKDRAFT DAMPER AT ROOF PENETRATION.
17. LINED 18X12 TRANSFER DUCT OUTLET SHOULD TERMINATE 6" OFF OF FINISH FLOOR IN MECHANICAL ROOM AND THE INLET SHOULD TERMINATE INSIDE JOIST SPACE TIGHT TO STRUCTURE AS SHOWN
18. TRUNK DUCT IN RETAIL SHALL BE MOUNTED AT 13 FEET. ROUND DIFFUSERS SHOULD DROP DOWN TO 10'-6" TO THE FACE.
19. SENSOR LOCATION: WIRE SENSOR BACK TO TRACKER SYSTEM IN MANAGER'S OFFICE. SENSORS IN RETAIL AREA INCLUDING CO SENSORS NOT WALL MOUNTED, SHALL BE ATTACHED TO THE COLUMN AND MOUNTED 5'-6" OFF OF FINISHED FLOOR .
20. PROVIDE AIR PEAR MODEL 45 IN THIS LOCATION.
21. PROVIDE 12X12 TRANSFER OPENING 12FT AFF.
22. REMOTE ANSUL CONTROL PANEL MOUNTED AT 6FT. PROVIDE ANSUL PIPING BETWEEN HOOD AND PANEL PER MANUFACTURES GUIDELINES.
23. PROVIDE WITH PHI AIR PURIFICATION SYSTEM OPTION.
24. PROVIDE 24X24 TRANSFER OPENING ABOVE CEILING.
25. DUCTWORK TO BE INSTALLED TIGHT TO STRUCTURE .
26. PROPOSED FIRE PULL FOR TYPE 1 HOOD IN THIS LOCATION. CONFIRM FINAL LOCATION WITH FIRE CODE OFFICIAL. CONDUIT SHALL BE RECESSED IN WALL. SURFACE MOUNTED CONDUIT IS NOT ACCEPTABLE.

**Reno Fire Department**

Type I hood requires a fire suppression system. Hood fire suppressions system to be submitted under separate permit.

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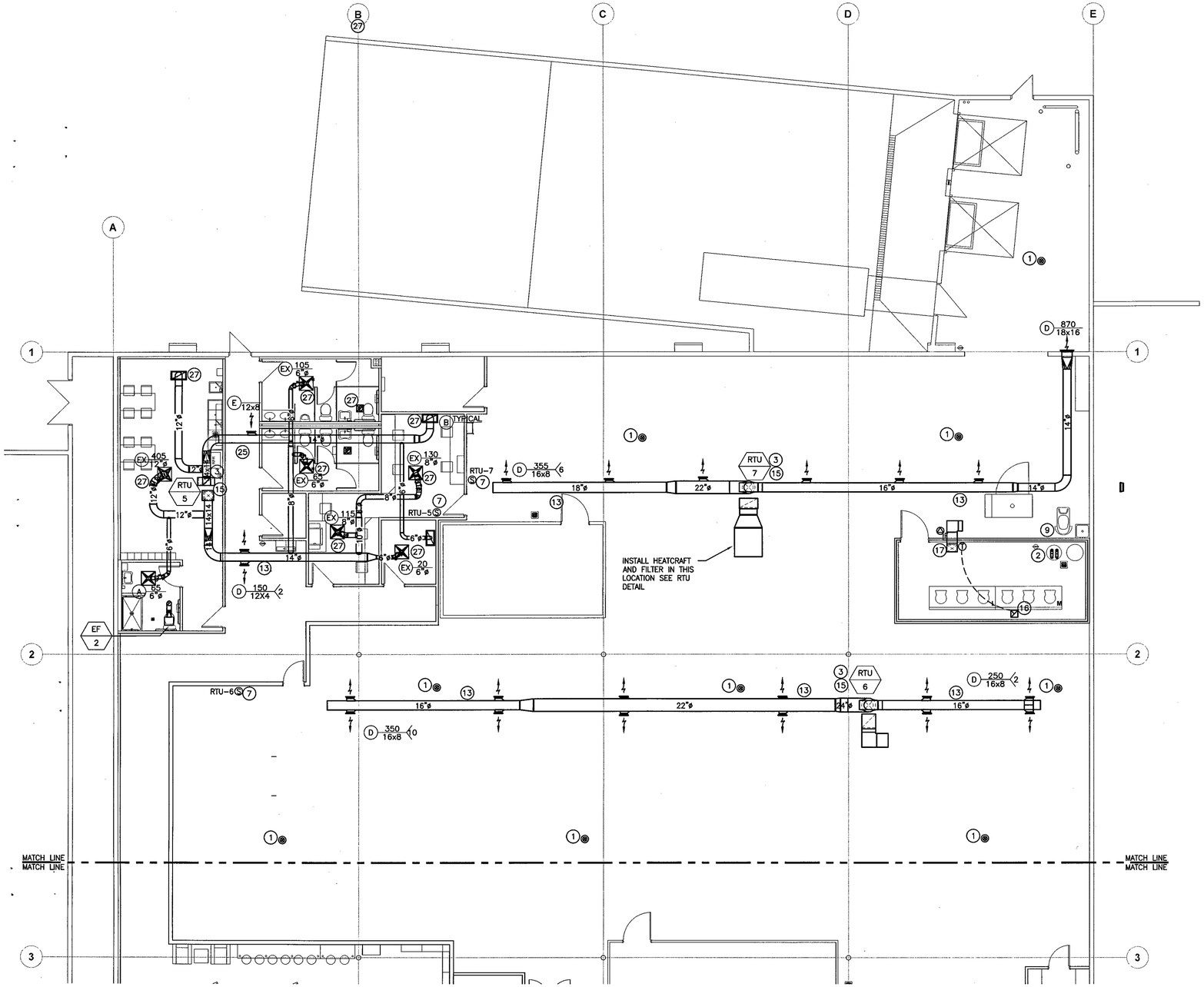
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sheet title
MECHANICAL FLOOR PLAN

by MT

app JAG

sheet no.
M3 of 9




## GENERAL NOTES:

1. DUCTWORK INSTALLED BY CONTRACTOR WILL BE SET TO THE FOLLOWING. MAIN DUCTWORK IN RETAIL AREA IS INSTALLED 13'-0 AFF.
2. ALL EXPOSED DUCTWORK TO BE PAINTABLE ROUND SPIRAL.
3. BACK CUT RETURN AIR OPENINGS FOR RTUS. REFER TO DETAIL PAGE.
4. TIME CLOCK CONTROLLING EF-3 SHALL BE LOCATED NEAR ELECTRICAL PANELS. LABEL TIME CLOCK "FOR BATHROOM EXHAUST."
5. MOUNT HARD WIRED REMOTE TEMPERATURE SENSORS 5'-6" AFF.

## DRAWING NOTES:

1. TYPICAL AIR PEAR FAN LOCATION. PROVIDE ACT CEILING TRIM KIT. FAN TO BE PROVIDED AND INSTALLED BY OTHERS. THE RECEPTACLES SHALL BE SWITCHED FROM MANAGERS OFFICE AS INDICATED. REFER TO ELECTRICAL PLANS. PROVIDE CEILING INSTALLATION KIT AS REQUIRED.
2. FLUE AND COMBUSTION AIR FOR GWH-1 FIELD ROUTE TO ROOF PENETRATION LOCATION SHOWN. PROVIDE WITH MANUFACTURER'S APPROVED CONCENTRIC VENT KIT.
3. RETURN TO TERMINATE HORIZONTAL WITH THE TOP OF THE DUCT SET TO THE ELEVATION OF THE BOTTOM OF STRUCTURE OR CEILING. SEE DETAIL SHEET FOR RTU DETAIL.
4. 12X12 EXHAUST DUCT UP TO EF ON ROOF. PROVIDE WITH BACKDRAFT DAMPER AT ROOF PENETRATION.
5. MOUNT THERMOSTATS OR SENSORS ON WALL IN THIS LOCATION. SENSORS ARE WIRED BACK TO MANAGERS OFFICE.
6. UNDERCUT DOOR 2".
7. MOUNT SENSOR 5'-6" OFF FINISHED FLOOR IN THIS LOCATION
8. T-STAT LOCATION FOR AD-1 .
9. LITHIUM ION BATTERY CHARGER IN THIS LOCATION. NO EXHAUST REQUIRE PER CODE.
10. 8"ø EXHAUST DISCHARGE ABOVE CEILING AS SHOWN .
11. RTU-1 TEMP AND CO SENSOR IS MOUNTED AT 5'-6" SPACE AS SHOWN.
12. LABEL THERMOSTATS AS FOLLOWS: RTU-1 PRODUCE/REGISTER RTU-4 DEMONSTRATION RTU-3 GROCERY/VITAMIN RTU-2 GROCERY RTU-5 BREAK/BUYERS RTU-6 STOCK ROOM RTU-7 STOCK ROOM
13. DUCTWORK TO BE MOUNTED 13FT OFF OF FINISHED FLOOR.
14. OFFSET DUCT AS REQUIRED AND INSTALL DUCT TIGHT TO CROSSING BEAM.
15. PROVIDE FULL SIZE TRANSITIONS FOR FINAL CONNECTIONS TO RTU'S. WHEN TURNING HORIZONTAL HOLD DUCT TIGHT TO BOTTOM OF JOIST.
16. 12x12 OPEN ENDED DUCT WITH BIRDSCREEN. EXHAUST DUCT UP TO EF-1 ON ROOF. PROVIDE WITH BACKDRAFT DAMPER AT ROOF PENETRATION.
17. LINED 18X12 TRANSFER DUCT OUTLET SHOULD TERMINATE 6" OFF OF FINISH FLOOR IN MECHANICAL ROOM AND THE INLET SHOULD TERMINATE INSIDE JOIST SPACE TIGHT TO STRUCTURE AS SHOWN
18. TRUNK DUCT IN RETAIL SHALL BE MOUNTED AT 13 FEET. ROUND DIFFUSERS SHOULD DROP DOWN TO 10'-6" TO THE FACE.
19. SENSOR LOCATION: WIRE SENSOR BACK TO TRACKER SYSTEM IN MANAGER'S OFFICE. SENSORS IN RETAIL AREA INCLUDING CO SENSORS NOT WALL MOUNTED, SHALL BE ATTACHED TO THE COLUMN AND MOUNTED 5'-6" OFF OF FINISHED FLOOR .
20. PROVIDE AIR PEAR MODEL 45 IN THIS LOCATION.
21. PROVIDE 12X12 TRANSFER OPENING 12FT AFF.
22. REMOTE ANSUL CONTROL PANEL MOUNTED AT 6FT. PROVIDE ANSUL PIPING BETWEEN HOOD AND PANEL PER MANUFACTURES GUIDELINES.
23. PROVIDE WITH PHI AIR PURIFICATION SYSTEM OPTION.
24. PROVIDE 24X24 TRANSFER OPENING ABOVE CEILING.
25. DUCTWORK TO BE INSTALLED TIGHT TO STRUCTURE .
26. PROPOSED FIRE PULL FOR TYPE 1 HOOD IN THIS LOCATION. CONFIRM FINAL LOCATION WITH FIRE CODE OFFICIAL. CONDUIT SHALL BE RECESSED IN WALL. SURFACE MOUNTED CONDUIT IS NOT ACCEPTABLE.
27. EXISTING AIR DEVICES TO REMAIN. RE-FEED SUPPLY AIR FROM NEW SYSTEM AS SHOWN

1 M4 FIRST FLOOR MECHANICAL PLAN

NORTH

8' 4' 0 8' 16'

1/8"=1'-0"

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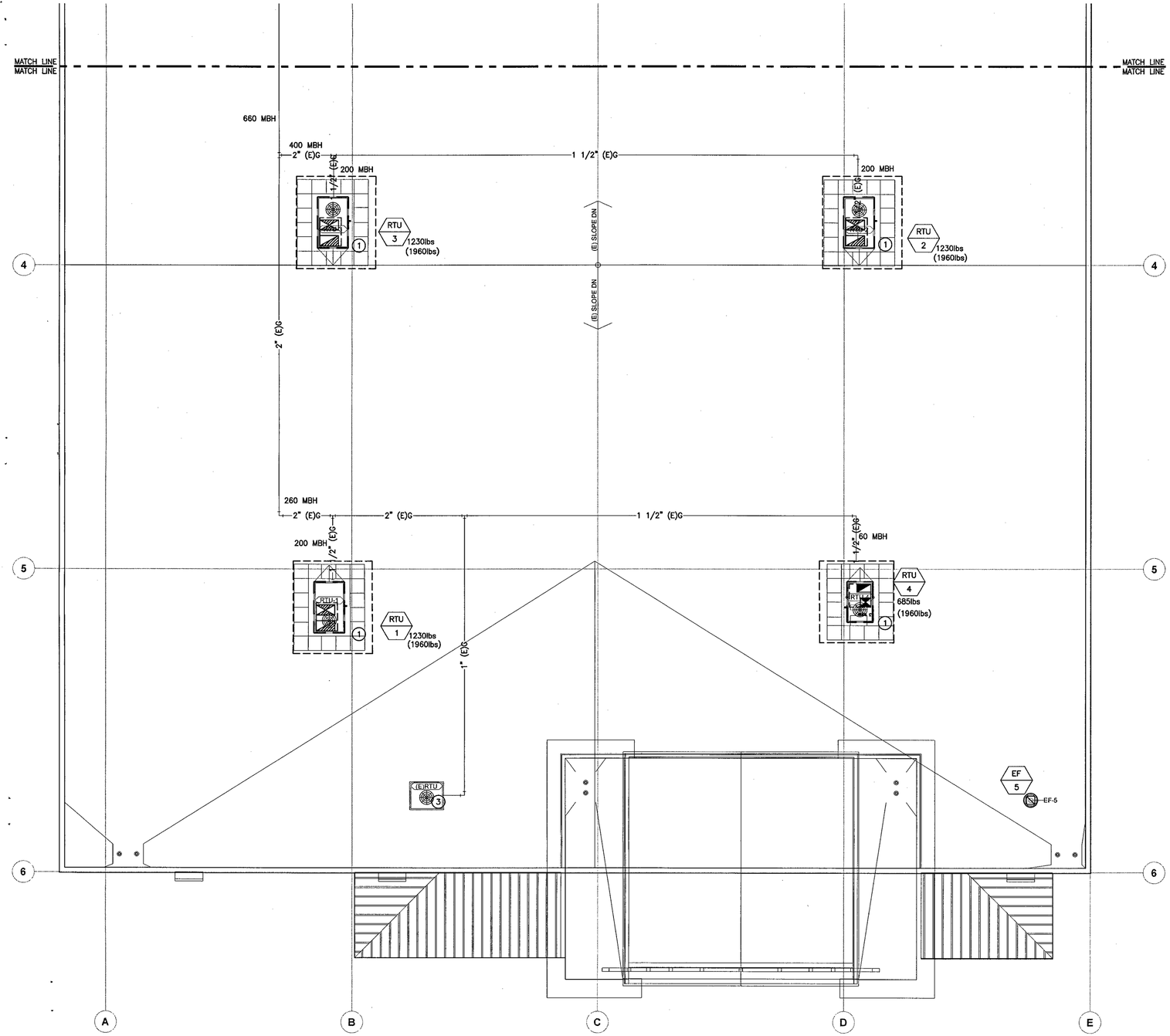
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sheet title
MECHANICAL FLOOR PLAN

by MT

app JAG

M4 of 9 sheet no.




1 M5 MECHANICAL ROOF PLAN

8' 4' 0 8' 16'

1/8"=1'-0"

NORTH

## DRAWING NOTES:

1. ROOFTOP UNIT TO BE REPLACED WITH NEW EQUIPMENT AS SCHEDULED. PROVIDE NEW ADAPTER CURB IF SO DUCT DROPS DO NOT CONFLICT WITH STRUCTURE. EXTEND EXISTING GAS PIPE AND CONDENSATE DRAIN TO NEW RTU CONNECTION .
2. INSTALL FLEXIBLE CONNECTION TO THE GENERATOR THAT IS PROVIDED WITH THE UNIT LOCATED IN THE INTERIOR COMPARTMENT OF THE GENERATOR.
3. EXISTING ROOF TOP UNIT TO REMAIN IN PLACE. CLOSE GAS VALVES AND SEAL DAMPERS.
4. CAP GAS AND REMOVE PIPING THAT SERVED REMOVED APPLIANCE.

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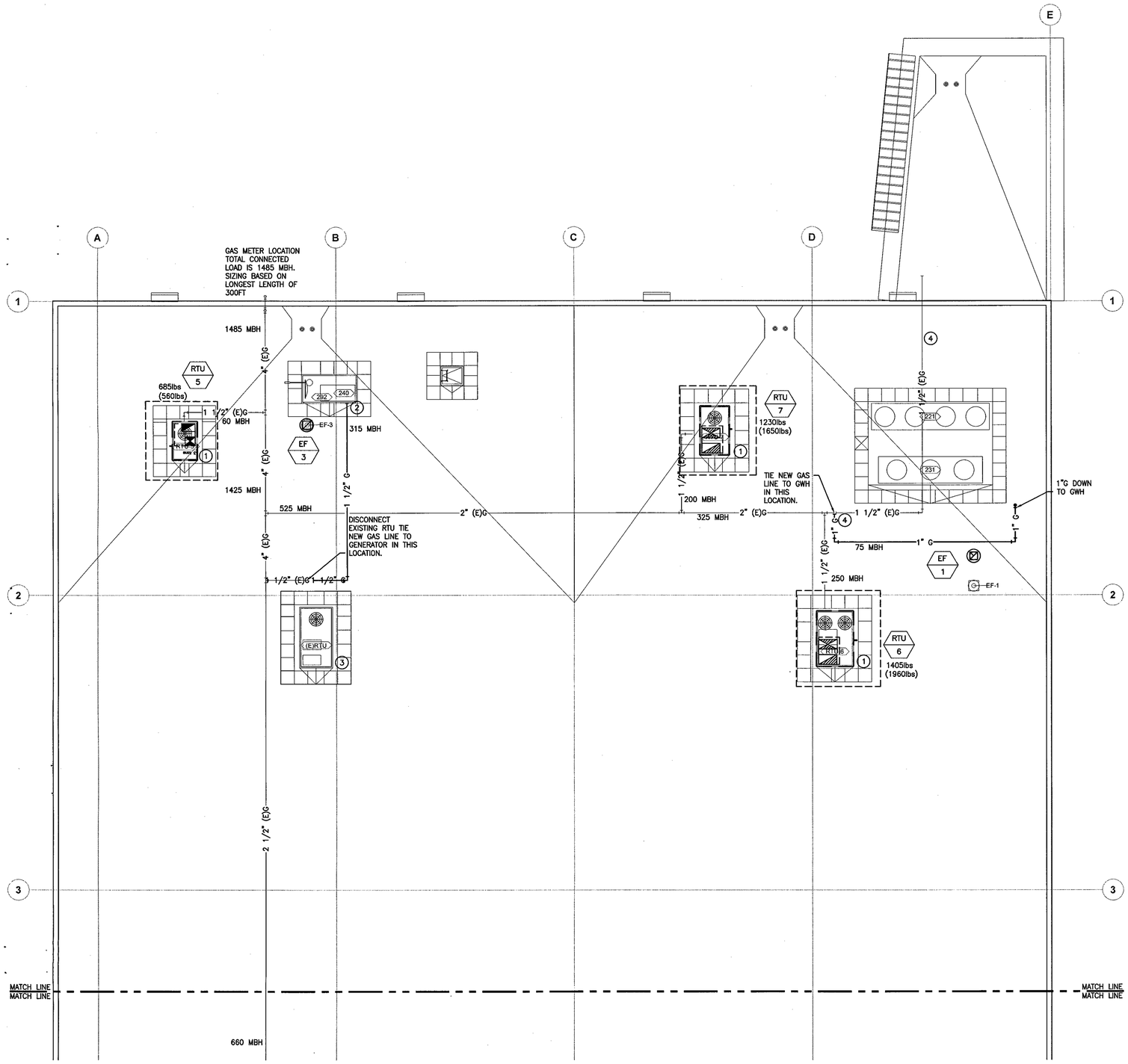
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## DRAWING NOTES:

1. ROOFTOP UNIT TO BE REPLACED WITH NEW EQUIPMENT AS SCHEDULED. PROVIDE NEW ADAPTER CURB IF SO DUCT DROPS DO NOT CONFLICT WITH STRUCTURE. EXTEND EXISTING GAS PIPE AND CONDENSATE DRAIN TO NEW RTU CONNECTION .
2. INSTALL FLEXIBLE CONNECTION TO THE GENERATOR THAT IS PROVIDED WITH THE UNIT LOCATED IN THE INTERIOR COMPARTMENT OF THE GENERATOR.
3. EXISTING ROOF TOP UNIT TO REMAIN IN PLACE. CLOSE GAS VALVES AND SEAL DAMPERS.
4. CAP GAS AND REMOVE PIPING THAT SERVED REMOVED APPLIANCE.

1 M6 MECHANICAL ROOF PLAN

8' 4' 0 8' 16'

1/8"=1'-0"

NORTH

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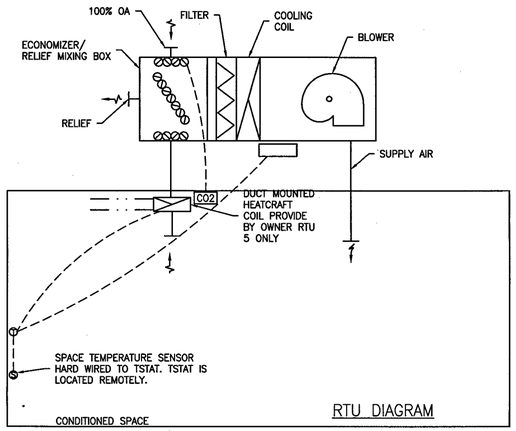
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CARBON DIOXIDE CONTROL OPERATION:

A CO2 SENSOR SHALL BE SUPPLIED BY THE RTU MANUFACTURER. IT SHALL BE INSTALLED IN THE MAIN RTU RETURN DUCT. THE SENSOR SHALL CONTROL THE MINIMUM POSITION ON THE OUTSIDE AIR DAMPER TO MAINTAIN ACCEPTABLE CO2 LEVELS IN THE SPACE. A CALL FOR ECONOMIZATION SHALL OVERRIDE THIS SETTING TO DRIVE THE DAMPER OPEN FURTHER. A CALL FOR UNOCCUPIED OR WARMUP SHALL OVERRIDE THIS SETTING TO DRIVE THE DAMPER CLOSED.




1 M7 RTU CONTROL DIAGRAM

N.T.S.

SPACE TEMPERATURE CONTROL OPERATION:

GENERAL:

CONTROL OF THE SYSTEM SHALL BE VIA TRANE TRACKER SYSTEM PROVIDER BY TRANE INSTALLATION TEAM. THE SYSTEM SHALL BE CAPABLE OF ALL SEQUENCES BELOW. THE THERMOSTAT SHALL SIGNAL THE RTU FOR COOLING AND HEATING CALLS AND OPERATION MODES (OCCUPIED AND UNOCCUPIED).

THE TRACKER SYSTEM SHALL BE PROVIDED FOR ALL RTUS INCLUDING EXISTING (IF APPLICABLE). THE TRACKER SYSTEM SHALL HAVE OCCUPIED/UNOCCUPIED 365 DAY PROGRAMMING, 3 STAGE HEAT OUTPUT, TWO-STAGE COOLING AND REMOTE HARD WIRED SENSOR.

THE MECHANICAL CONTRACTOR WILL MAKE ARRANGEMENT TO RUN UNITS WITH A TEMPORARY THERMOSTAT PROVIDED BY TRANE. THE THERMOSTAT WILL BE PLACED IN THE RETURN AIR SECTION TO ACCLIMATE THE SYSTEM. ALL RTU'S SHOULD BE INSTALLED AND STARTUP COMPLETED PRIOR TO THE TRANE TRACKER INSTALLATION TEAM ARRIVAL.

THE FOLLOWING CONTROL STRATEGIES SHALL BE EMPLOYED:

MORNING WARM-UP

IF AVAILABLE A MORNING WARM-UP SEQUENCE SHALL BE EMPLOYED. THE BLOWER SHALL RUN CONTINUOUSLY. THE OUTSIDE AIR DAMPER SHALL CLOSE. THE HEATING STAGES SHALL ENERGIZE TO PROVIDE HEAT TO THE SPACE UNTIL THE OCCUPIED SETPOINT HAS BEEN REACHED.

OCCUPIED:

THE BLOWER SHALL RUN CONTINUOUSLY.

DURING HEATING, THE HEATING STAGES SHALL ENERGIZE TO MAINTAIN COMFORT AND THE OA DAMPER SHALL BE CONTROLLED TO A MINIMUM POSITION. THE HEATING CYCLE SHALL HAVE A SAFETY TO DRIVE THE OUTSIDE AIR DAMPERS CLOSED IF THE MIXED AIR TEMPERATURES DROP BELOW 40F – WHEN THE MIXED AIR RISES ABOVE 43F THE SEQUENCE SHALL RETURN TO NORMAL.

DIFFERENTIAL ECONOMIZER COOLING, THE THERMOSTAT SHALL SIGNAL A COOLING CALL TO THE RTU. IF THE DIFFERENTIAL ENTHALPY ECONOMIZER DETERMINES OUTSIDE AIR IS THE MOST ENERGY EFFICIENT THEN ECONOMIZATION SHALL OCCUR. IF ADDITIONAL COOLING IS REQUIRED THEN THERMOSTAT CALLS FOR STAGE 1 & 2 (AS APPLICABLE – STAGE 2 MAY NOT BE AVAILABLE DUE TO STAT/RTU CONTROL INTERFACE LIMITATIONS) SHALL BE MADE AND THOSE STAGES ACTIVATED IN THE RTU.

STANDARD COOLING. IF THE OUTSIDE AIR IS NOT FAVORABLE THEN THE OUTSIDE AIR DAMPER SHALL RETURN TO ITS MINIMUM POSITION. IF COOLING IS REQUIRED THEN THERMOSTAT CALLS FOR STAGE 1 & 2 (AS APPLICABLE) SHALL BE MADE AND THOSE STAGES ACTIVATED IN THE RTU.

UNOCCUPIED:

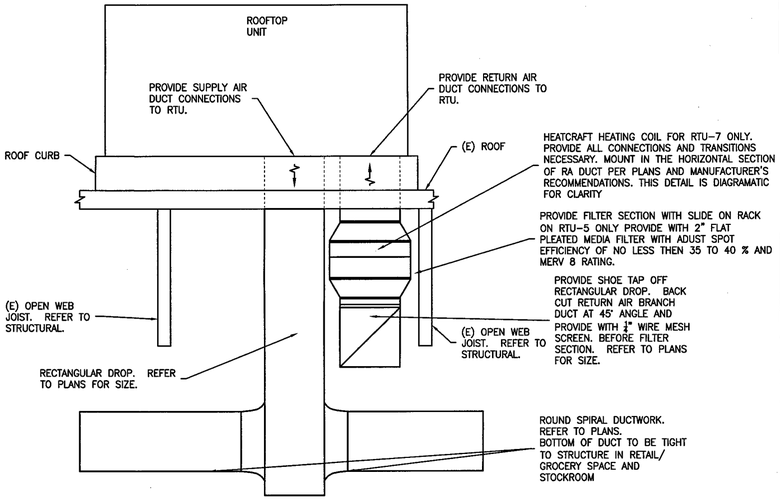
THE BLOWER SHALL BE OFF AND THE OUTSIDE AIR DAMPERS CLOSED (IF THE STAT/RTU INTERFACE DOES NOT ALLOW OUTSIDE DAMPERS TO REMAIN CLOSED THEN IT IS ACCEPTABLE). IF THE SPACE FALLS BELOW A SETBACK TEMPERATURE SETTING (CONTROLLED BY LOCAL STAT) THEN THE UNIT SHALL START TO MAINTAIN THE SETBACK TEMPERATURE. ONCE THE SETBACK TEMPERATURE HAS BEEN MET THE UNIT WILL SHUT DOWN.

HEATING SEQUENCE OF OPERATION RTU 1,2,3,4,5 & 6:

IF THE DAT FALLS BELOW SETPOINT THEN THE GAS HEATING SECTION SHALL ENERGIZE TO MAINTAIN DAT. THE UNIT CONTROLLER SHALL MODULATE GAS INPUT APPROPRIATE TO MAINTAIN DAT.

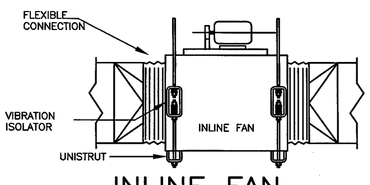
HEATING SEQUENCE OF OPERATION RTU 7:

THE FIRST STAGE OF HEAT WILL BE THE HEATCRAFT COIL IF SPACE SETPOINT IS NOT MET THEN THE GAS HEATING SECTION SHALL ENERGIZE TO MAINTAIN DAT. THE UNIT CONTROLLER SHALL MODULATE GAS INPUT APPROPRIATE TO MAINTAIN DAT.



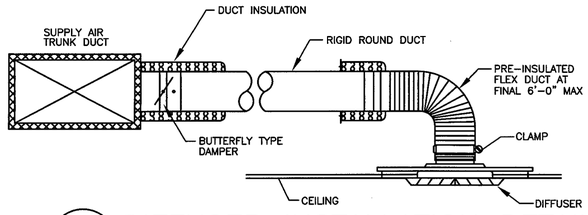

2 M7 RTU DETAIL

N.T.S.



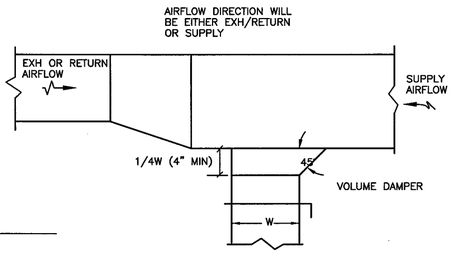

3 M7 INLINE FAN SUPPORT DETAIL

N.T.S.



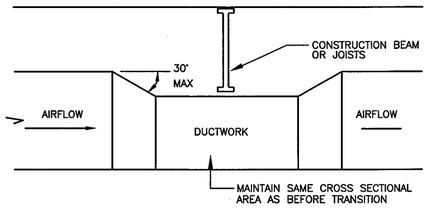

4 M7 DIFFUSER INSTALLATION DETAIL

N.T.S.



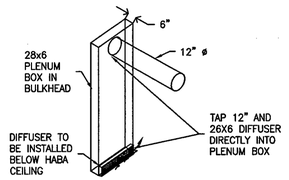

5 M7 BRANCH DUCT DETAIL

N.T.S.



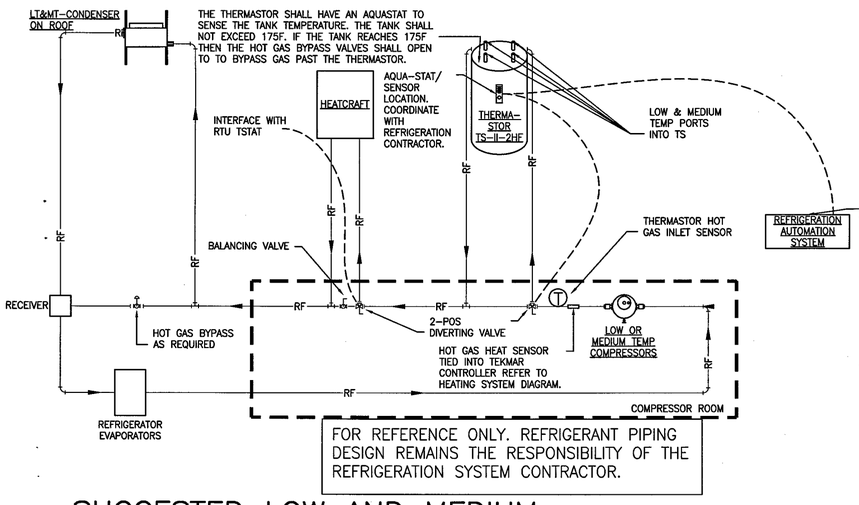

6 M7 DUCT OFFSET DETAIL

N.T.S.




9 M7 HABA DIFFUSER DETAIL

N.T.S.




FOR REFERENCE ONLY. REFRIGERANT PIPING DESIGN REMAINS THE RESPONSIBILITY OF THE REFRIGERATION SYSTEM CONTRACTOR.

REFRIGERATION AUTOMATION SYSTEM

REFRIGERATION AUTOMATION SYSTEM.

THERMASTOR SEQUENCE:

THE SYSTEM SHALL SENSE TANK TEMPERATURE AND INLET HOT GAS TEMPERATURE. IF THE TANK TEMPERATURE IS BELOW SETPOINT (175F ADJ) AND THE INLET HOT GAS TEMPERATURE IS HIGHER THAN THE TANK TEMPERATURE THEN THE DIVERTING VALVE SHALL OPEN TO SEND HOT GAS TO THE THERMASTOR.

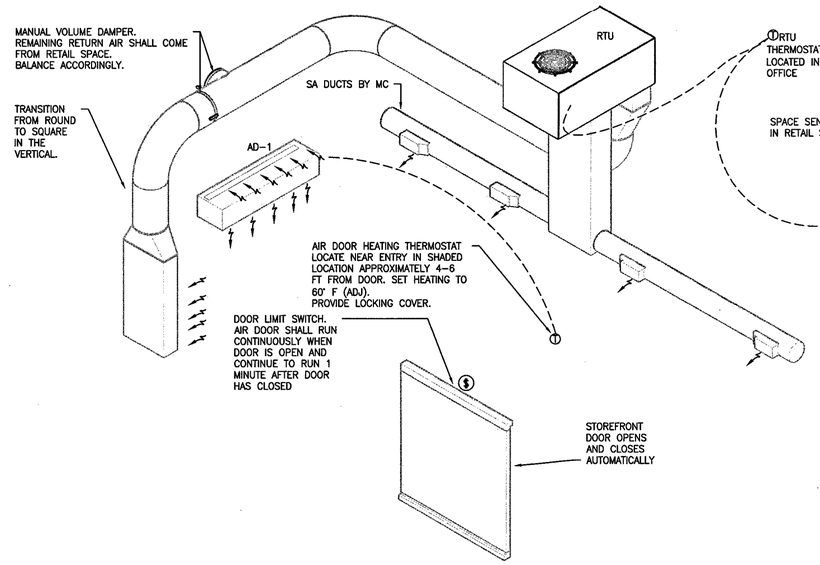
HEATCRAFT (AIR RECLAIM COIL) SEQUENCE:

THE HEATCRAFT DIVERTING VALVE SHALL BE INTERLOCKED WITH THE ROOFTOP HVAC UNIT THERMOSTAT. UPON A CALL FOR STAGE ONE HEATING FROM THE STAT THE DIVERTING VALVE SHALL OPEN AND SEND HOT GAS TO THE RECLAIM COIL. STAGE TWO HEATING CALLS SHALL ACTIVATE THE ROOFTOP HVAS UNITS INTERNAL HEATING CIRCUITS.

WHEN THEIR IS A CALL FOR HEATCRAFT HEATING OR THERMASTOR THEN THE DIVERTING VALVE FOR EITHER OR SHALL OPEN. IF BOTH PIECES OF EQUIPMENT CALL FOR HEAT THEIR VALVES SHALL OPEN WITHOUT OVERRIDING THE OTHER.

7 M7 SUGGESTED LOW AND MEDIUM REFRIGERANT DIAGRAM (IN SERIES)

N.T.S.




AIR DOOR SEQUENCE OF OPERATION

COMFORT PLUS CONTROL:

1. WHEN FAN SWITCH IS TURNED ON AND SPEED IS SET TO LOW, MED, OR HIGH THE AIR CURTAIN WILL TURN ON WHEN THE DOOR OPENS AND REMAIN ON UNTIL THE TIME DELAY ELAPSES.
2. THE THERMOSTAT TURNS THE AIR CURTAIN ON LOW WITH HEAT ON A CALL FOR HEAT AND KEEPS IT ON UNTIL THE THERMOSTAT IS SATISFIED. IF THE DOOR OPENS, THE AIR CURTAIN SWITCHED TO SPEED SET ON THE SELECTOR SWITCH.
3. WHEN THE DOOR CLOSES AND THE TIME DELAY ELAPSES. THE AIR CURTAIN RETURN TO LOW SPEED UNTIL THE THERMOSTAT IS SATISFIED. THE UNIT WILL THEN SHUT OFF.

8 M7 AIRDOOR DETAIL AND CONTROL DIAGRAM

N.T.S.

NOTE: THIS IS DIAGRAMMATIC ONLY. REFER TO PLANS FOR ACTUAL LAYOUT.

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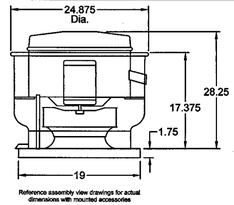
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M7 of 9




Reference assembly view drawings for actual dimensions with mounted accessories

## Model: CUE-099-VG

**Direct Drive Upblast Centrifugal Roof Exhaust Fan**

**Standard Construction Features:**

- Aluminum housing - Backward inclined aluminum wheel - Aluminum curb cap with prepunched mounting holes - Drain trough - Ball bearing motors (sizes 95-150), sleeve bearing motors (sizes 60-95) - Motor isolated on shock mounts - Corrosion resistant fasteners

**Options & Accessories:**

Motor - Vari-Green EC motor w/Mounted Potentiometer Dial
UL/cUL 762 Listed - "Power Ventilators for Rest. Exh. Appliances"
Switch, NEMA-1, Toggle, Junction Box Mounted & Wired

### Dimensional

| Qty | Weight w/o Accessories (lb) | Weight with Accessories (lb) | Roof Opening (in.) |
|---|---|---|---|
| 1 | 48 | 50 | 14.5 x 14.5 |

### Performance

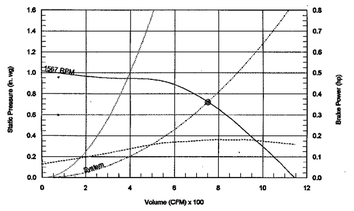
| Requested Volume (CFM) | Actual Volume (CFM) | Requested SP (in. wg) | Actual SP (in. wg) | Fan RPM | Operating Power (hp) | Elevation (ft) | Airstream Temperature (F) | Tip Speed (ft/min) | SE (%) |
|---|---|---|---|---|---|---|---|---|---|
| 750 | 750 | 0.72 | 0.72 | 1567 | 0.18 | 1,000 | 70 | 4,589 | 47 |

### Motor

| Motor Mounted | Size (hp) | V/C/P | Encl. | Motor RPM | Windings | FLA* (Amps) |
|---|---|---|---|---|---|---|
| Yes | 1/4 | 115/60/1 | ODP | 1725 | 1 | 3.9 |

### Sound Power by Octave Band

| Sound Data | 62.5 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | LwA | dBA | Sones |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Inlet | 73 | 72 | 73 | 68 | 63 | 62 | 57 | 49 | 70 | 59 | 9.3 |




**Notes:**

All dimensions shown are in units of in..
*FLA - based on tables 150 or 148 of National Electrical Code 2002. Actual motor FLA may vary, for sizing thermal overload, consult factory.
LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5.0 ft - dBA levels are not licensed by AMCA International
Sones - calculated using AMCA 301 at 5.0 ft





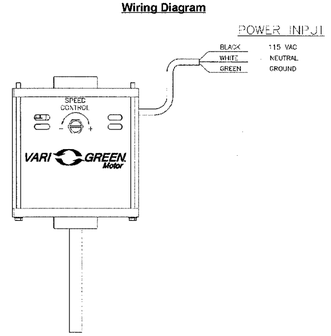
## Vari-Green

## Motor & Control Options

An EC motor that uses AC input power and internally converts it to DC power. Potentiometer (dial) mounted on the motor enclosure adjusts the speed (RPM) down 80%.

Motor Type: Dial on Motor

**Wiring Diagram**








**GHEV** Type 1, Baffle Filter Single Wall - Exhaust Only Island V-Bank

| Model | Hood Length (in.) | Width (in.) | Bottom Width (in.) | Height (in.) | | Exhaust Volume (CFM) | Exhaust SP (in. w.g.) | Double Island |
|---|---|---|---|---|---|---|---|---|
| | | | | Front | Back | | | |
| GHEV | 54 | 48 | 48 | 24 | 24 | 743 | 0.299 | No |

**Selected Options & Accessories:**

| Option or Accessory | Description |
|---|---|
| Mounting Height | 78 in. off Finished Floor. |
| Filter Type | Aluminum Baffle Filters |
| Wall Utility Cabinet | 48 in Long 12 in Wide 24 in High |

**Material:** 430 SS Where Exposed
**UL Listing:** UL 710 w/out Exhaust Fire Damper

**Features:**
Performance Enhancing Lip (PEL)
Standing Seam Construction for Superior Strength
Embossed Stainless Steel Finish for Higher Corrosion Resistance

**Section Data:**

| Section Num. | Length (in.) | Volume (CFM) | SP (in. wg) | Filter Qty 16" W | Filter Qty 20" W | Filter Ht. (in.) | Temp. Rating | Light Qty | Light Type | Foot Candles | Drain Location | Weight (lbs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 54 | 743 | 0.299 | 4 | 2 | 20 | 400 deg F | 4 | Incandescent | 46.21 | Right | 234 |

**Exhaust Collar Data:**

| Section Num. | Collar Num. | Collar Size (L x W) in. or Diameter (in.) | Pos. Off Left (in.) | Pos Off Back (in.) | Velocity (fpm) | Mounting Option |
|---|---|---|---|---|---|---|
| 1 | 1 | 10 x 7 | 27 | 24 | 1528 | Factory Mounted Exhaust Collar(s) |





**Cooking Equipment Layout, Section 1**

| Description | Fuel Type | Space (in) | Length (in) | Diameter (in) | Depth (in) | Cooking Area (ft²) | Updraft Velocity (CFM/ft²) | Contaminated Airflow (CFM) |
|---|---|---|---|---|---|---|---|---|
| Range - 4 or more burners | Electric | 6 | 42 | 0 | 30 | 8.75 | 50 | 438 |
| | | | | | | 8.75 | | 438 |

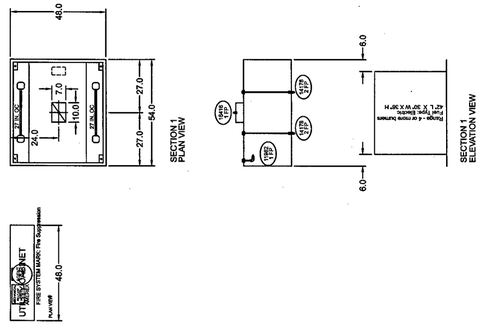
**[[Hood Capture Area(cooking area + overhang on all sides") - Total Cooking Area) X 50] + Total Contaminated Airflow] X 1.1" = Net Exhaust Airflow**

*** Calculation uses 6 inch as front overhang regardless of actual overhang.**
*** A factor of 1.1 (10% increase) is used to compensate for island hood applications.**

**Calculation Method: Section 1 =[[ 13.50 - 8.75 ) X 50 ] + 438] X 1.1 = 743**



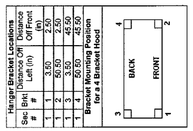


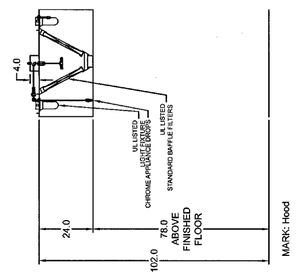







| Hanger Bracket Locations Distance from Corner | | | |
|---|---|---|---|
| Sec # | Brkt # | Left (in) | Off Front (in) |
| 1 | 1 | 3.50 | 2.50 |
| 1 | 2 | 50.50 | 2.50 |
| 1 | 3 | 3.50 | 45.50 |
| 1 | 4 | 50.50 | 45.50 |








**Amerex KP** Wet Chemical Fire Suppression System

| | |
|---|---|
| Mounting Option | Wall Mounted (includes pre-piped hood with detection and factory coordinated install) |
| System Size | 2.75 Gallon |
| Flow Points | Maximum of 8 and 6 are utilized. |
| Installation Location | The fire system tank connection tee will be on the Left. |
| | There are 2 appliance drops on this system. |

NOTE: Must maintain 8 inch clearance between top of hood and pipe connections for installation (includes piping and workspace clearance).

**Protected Hood Sections:**

| | |
|---|---|
| - | Hood Section 1 |

**Standard Construction Features:**
- Prepiping of the kitchen hood
- Fuel shut-off device
- Two single-pole, single-throw microswitch for electric appliances
- All detectors, links, release mechanism, tank, and fire suppressant agent.
- One manual pull station for remote mounting (This must be in the path of egress, at a maximum distance of 20 ft (6.1 meters) from the release mechanism).
- An Amerex® tank and release mechanism.
- Final field hook-up to be performed by a nonunion certified Amerex® distributor.
- Factory coordination of final system hook-up between jobsite contact and the assigned Amerex® distributor.

**Notes:**
- The installation of the mechanical or electrical type gas valve is the responsibility of the plumbing contractor.
- Two single-pole, single-throw microswitch is provided for use with electric appliances. This device also can be used with alarm systems, fan shut down, and electric solenoid gas valves. The wiring of this device is the responsibility of the electrical contractor.
- Two trips out to the jobsite are included.
- Permit and Pull test fees.
- This program applies only to the continental United States. For an Amerex® hook-up in Alaska, Hawaii, Canada or any International destination, please consult Manufacturer for details and pricing.

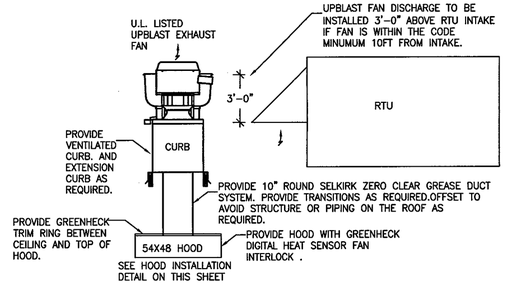
**Manufacturer HOOD MTD. FIRE CABINET HOOK-UP to consist of:**
- Hook-up of detection lines, hook-up of supply lines, mount & hook-up remote manual pull, hook-up mechanical gas valve (if Applicable), charge and tag system.

**AMEREX REMOTE MTD. FIRE CABINET HOOK-UP to consist of:**
- Hang release mechanism and additional tanks if multiple system, hook-up of detection lines hook-up of supply lines, mount & hook-up remote manual pull, hook-up mechanical gas valve (if Applicable), charge & tag system.

**The basic fire suppression system does not include the following:**
- Full dump test or system testing other than what is specified in the restaurant system installation manual or special requirements to satisfy a state or local code.
- Special classes or additional labor for access to security sensitive areas.
- More than two trips to the jobsite or special transportation or overnight lodging requirement in remote areas.
- A shut-off device (shunt-trip breaker) for electric cooking equipment.
- Installation of the gas shut-off valve.
- Special drawings required to satisfy a state or local code.
- Union Labor, Government Labor, or Prevailing wages required for the final field hook-up.
- Any and all electrical connection required to shut down fan(s), electric cooking equipment, activate an alarm system, etc.
- Any dismantling or reassembly required to gain access to the fire suppression piping located on the top of the hood.
- Plan examination fees
- Rough-in conduit for remote pull station or gas valve (for flush mounted pull station).
- Additional remote pull stations.
- Parts or labor required to correct piping due to cooking equipment changes or deviation from plans
- Any charges for missing or additional parts other than those indicated on the attached Fire Suppression Detail.

**Note:**
- The customer is responsible for and will be invoiced separately for any additional work performed in accordance with the above items.
- The Amerex® release mechanism must be mounted within 60 in of the canopy.






TYPE I HOOD FOR DEMONSTRATION KITCHEN

IN THIS STORE THERE IS A KITCHEN FOR PRODUCT DEMONSTRATIONS. AS PART OF THE ROOM THERE IS A ELECTRIC COOK TOP (30" WIDE) FOR COOKING PRODUCTS OFFERED IN THE STORE. THE PRODUCTS INCLUDE FROZEN FOODS, FRESH PRODUCE AND MEATS. THERE ARE DEMONSTRATIONS FOR BOTH EMPLOYEES AND THE PUBLIC THAT OCCUR 1 TIME PER MONTH. THE FOOD WILL NOT BE SOLD TO THE PUBLIC AND IS FOR SAMPLE ONLY.

1 / M8 TYPE I HOOD DIAGRAM
N.T.S.

Reno Fire Department
Type I hood requires a fire suppression system. Hood fire suppressions system to be submitted under separate permit.

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06.17.2014
PERMIT AND CONSTRUCTION

issue / date

JUN 17 2014




sheet title: TYPE I HOOD DETAILS
by: MT
app: JAG
sheet no.: M8 of 9

## COMcheck Software Version 3.9.3
# Mechanical Compliance Certificate

**2012 IECC**

## Section 1: Project Information

**Project Type: Alteration**
**Project Title : Natural Grocers**

**Construction Site:** Reno, NV
**Owner/Agent:**
**Designer/Contractor:**

## Section 2: General Information

**Building Location (for weather data):** Reno, Nevada
**Climate Zone:** 5b

## Section 3: Mechanical Systems List

**Quantity** **System Type & Description**

4 RTU-1,2,3 & 7 (Single Zone) :
Heating: 4 each - Duct Furnace, Gas, Capacity = 160 kBtu/h
Proposed Efficiency = 80.00% Ec, Required Efficiency = 80.00% Ec
Cooling: 4 each - Single Package DX Unit, Capacity = 90 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 12.90 EER, Required Efficiency = 11.00 EER
Fan System: None

2 RTU-4&5 (Single Zone) :
Heating: 2 each - Duct Furnace, Gas, Capacity = 80 kBtu/h
Proposed Efficiency = 80.00% Ec, Required Efficiency = 80.00% Ec
Cooling: 2 each - Single Package DX Unit, Capacity = 36 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 15.00 SEER, Required Efficiency = 13.00 SEER
Fan System: None

1 RTU-6 (Single Zone) :
Heating: 1 each - Duct Furnace, Gas, Capacity = 200 kBtu/h
Proposed Efficiency = 80.00% Ec, Required Efficiency = 80.00% Ec
Cooling: 1 each - Single Package DX Unit, Capacity = 120 kBtu/h, Air-Cooled Condenser, Air Economizer
Proposed Efficiency = 12.50 EER, Required Efficiency = 11.00 EER
Fan System: None

1 Water Heater 1:
Gas Storage Water Heater, Capacity: 75 gallons Input Rating: 75 Btu/h w/ Circulation Pump
Proposed Efficiency: 80.00 EF, Required Efficiency: 0.53 EF

## Section 5: Compliance Statement

*Compliance Statement:* The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed mechanical alteration project has been designed to meet the 2012 IECC, Chapter 8, requirements in COMcheck Version 3.9.3 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title  Signature  Date

## Section 6: Post Construction Compliance Statement



Project Title: Natural Grocers
Data filename: G:\A-jobs\VNVRE Reno, NV - 14071\Engrfile\Mech-calcs\VC Reno Com Check.cck
Report date: 05/13/14
Page 1 of 2

| Section # & Req.ID | Mechanical Rough-in Inspection | Plans Verified Value | Field Verified Value | Complies? | Comments/Assumptions |
|---|---|---|---|---|---|
| C403.3.1, C403.3.1.1 [ME62][1] | Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** M@ Rtu Schedule *See the Mechanical Systems list for values for RTU-6.* |
| C408.2.2.1 [ME53][3] | Air outlets and zone terminal devices have means for air balancing. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** M1 Specifacations |
| C403.4.2 [ME66][2] | VAV fan motors >=7.5 hp to be driven by variable speed drive, have a vane-axial fan with variable pitch blades, or have controls to limit fan motor demand. | ☐ VSD ☐ Vane axial fan ☐ Other | ☐ VSD ☐ Vane axial fan ☐ Other | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. *See the Mechanical Systems list for values for RTU-1,2,3 & 7.* |
| C403.4.2 [ME66][2] | VAV fan motors >=7.5 hp to be driven by variable speed drive, have a vane-axial fan with variable pitch blades, or have controls to limit fan motor demand. | ☐ VSD ☐ Vane axial fan ☐ Other | ☐ VSD ☐ Vane axial fan ☐ Other | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. *See the Mechanical Systems list for values for RTU-4&5.* |
| C403.4.2 [ME66][2] | VAV fan motors >=7.5 hp to be driven by variable speed drive, have a vane-axial fan with variable pitch blades, or have controls to limit fan motor demand. | ☐ VSD ☐ Vane axial fan ☐ Other | ☐ VSD ☐ Vane axial fan ☐ Other | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. *See the Mechanical Systems list for values for RTU-6.* |
| C403.4.2 [ME66][2] | VAV fan motors >=7.5 hp to be driven by variable speed drive, have a vane-axial fan with variable pitch blades, or have controls to limit fan motor demand. | ☐ VSD ☐ Vane axial fan ☐ Other | ☐ VSD ☐ Vane axial fan ☐ Other | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. *See the Mechanical Systems list for values for Water Heater 1.* |
| C403.2.6 [ME57][3] | Exhaust air energy recovery on systems meeting Table C403.2.6 | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | |
| C403.2.11 [ME71][2] | Unenclosed spaces that are heated use only radiant heat. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.4.7 [ME35][1] | Hot gas bypass limited to: <=240 kBtu/h - 50% >240 kBtu/h - 25% | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** M2 RTU Schedule *See the Mechanical Systems list for values for RTU-1,2,3 & 7.* |
| C403.4.7 [ME35][1] | Hot gas bypass limited to: <=240 kBtu/h - 50% >240 kBtu/h - 25% | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** M2 RTU Schedule *See the Mechanical Systems list for values for RTU-4&5.* |

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)



- ☐ HVAC record drawings of the actual installation and performance data for each equipment provided to the owner within 90 days after system acceptance.
- ☐ HVAC O&M documents for all mechanical equipment and system provided to the owner within 90 days after system acceptance.
- ☐ Written HVAC balancing report provided to the owner.

The above post construction requirements have been completed.

Principal Mechanical Designer-Name  Signature  Date

## COMcheck Software Version 3.9.3
# Inspection Checklist
Energy Code: 2012 IECC

Requirements: 98.0% were addressed directly in the COMcheck software
Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

| 2012 IECC | Plan Review | Complies? | Comments/Assumptions |
|---|---|---|---|
| C103.2 [PR2][1] | Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C103.2 [PR3][1] | Plans, specifications, and/or calculations provide all information with which compliance can be determined for the service water heating systems and equipment and document where exceptions to the standard are claimed. Hot water system sized per manufacturer's sizing guide. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |

**Additional Comments/Assumptions:**

| 2012 IECC | Footing / Foundation Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C403.2.4.5 [FO3][3] | Freeze protection and snow/ice melting system sensors for future connection to controls. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |

**Additional Comments/Assumptions:**

| 2012 IECC | Plumbing Rough-in Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C404.3 [PL5][3] | Temperature controls installed on service water heating systems (110 °F for dwelling units and lavatories in public restrooms and 90 °F for other occupancies.) | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** P3 Note 1 *See the Mechanical Systems list for values for Water Heater 1.* |
| C404.4 [PL3][1] | Automatic time switches installed to automatically switch off the recirculating hot-water system or heat trace. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** P1 Pump Schedule *See the Mechanical Systems list for values for Water Heater 1.* |

**Additional Comments/Assumptions:**

| Section # & Req.ID | Mechanical Rough-in Inspection | Plans Verified Value | Field Verified Value | Complies? | Comments/Assumptions |
|---|---|---|---|---|---|
| C403.4.7 [ME35][1] | Hot gas bypass limited to: <=240 kBtu/h - 50% >240 kBtu/h - 25% | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** M2 RTU Schedule *See the Mechanical Systems list for values for RTU-6.* |

**Additional Comments/Assumptions:**

| 2012 IECC | Final Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C403.2.4.2 [FI47][3] | Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** M5 Control Detail *See the Mechanical Systems list for values for RTU-1,2,3 & 7.* |
| C403.2.4.2 [FI47][3] | Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** M5 Control Detail *See the Mechanical Systems list for values for RTU-4&5.* |
| C403.2.4.2 [FI47][3] | Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** M5 Control Detail *See the Mechanical Systems list for values for RTU-6.* |
| C403.2.4.2 [FI38][3] | Thermostatic controls have a 5 °F deadband. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** M5 Control Detail |
| C403.2.4.2 [FI20][3] | Temperature controls have setpoint overlap restrictions. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** M5 Control Detail |
| C403.2.4.3 [FI39][3] | Each zone equipped with setback controls using automatic time clock or programmable control system. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** M5 Control Detail |
| C403.2.4.3 [FI40][3] | Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** M5 Control Detail |
| C408.2.5.1 [FI7][3] | Furnished HVAC as-built drawings submitted within 90 days of system acceptance. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C303.3,C408.2.5.2 [FI8][3] | Furnished O&M manuals for HVAC systems within 90 days of system acceptance. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C408.2.5.3 [FI43][3] | An air and/or hydronic system balancing report is provided for HVAC systems. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C408.2.3.2 [FI10][3] | HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C404.3 [FI11][3] | Public lavatory faucet water temperature <=110°F. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** P3 Note 1 *See the Mechanical Systems list for values for Water Heater 1.* |





| Section # & Req.ID | Mechanical Rough-in Inspection | Plans Verified Value | Field Verified Value | Complies? | Comments/Assumptions |
|---|---|---|---|---|---|
| C403.2.3 [ME55][3] | HVAC equipment efficiency verified. | Efficiency:____ | Efficiency:____ | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | *See the Mechanical Systems list for values.* |
| C403.2.5.1 [ME59][1] | Demand control ventilation provided for spaces >500 ft2 and >25 people/1,000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** M2 RTU Schedule |
| C403.2.7 [ME60][2] | HVAC ducts and plenums insulated. Where ducts or plenums are installed in or under a slab, verification may need to occur during Foundation inspection. | R-____ | R-____ | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.2.8 [ME41][3] | Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. |
| C403.2.7 [ME10][2] | Ducts and plenums sealed based on static pressure and location. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** M1 Specifacations |
| C403.2.7.1.3 [ME11][3] | Ductwork operating >3 in. water column requires air leakage testing. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. *See the Mechanical Systems list for values for RTU-1,2,3 & 7.* |
| C403.2.7.1.3 [ME11][3] | Ductwork operating >3 in. water column requires air leakage testing. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. *See the Mechanical Systems list for values for RTU-4&5.* |
| C403.2.7.1.3 [ME11][3] | Ductwork operating >3 in. water column requires air leakage testing. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Requirement does not apply. *See the Mechanical Systems list for values for RTU-6.* |
| C403.3.1, C403.3.1.1 [ME62][1] | Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** M2 RTU Schedule *See the Mechanical Systems list for values for RTU-1,2,3 & 7.* |
| C403.3.1, C403.3.1.1 [ME62][1] | Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation. | | | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** M2 RTU Schedule *See the Mechanical Systems list for values for RTU-4&5.* |

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)



| 2012 IECC | Final Inspection | Complies? | Comments/Assumptions |
|---|---|---|---|
| C404.5 [FI25][2] | All piping in circulating system insulated | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** P1 Specifacations *See the Mechanical Systems list for values for Water Heater 1.* |
| C404.6 [FI12][3] | Controls are installed that limit the operation of a recirculation pump installed to maintain temperature of a storage tank. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. **Location on plans/spec:** P5 Water heater detail *See the Mechanical Systems list for values for Water Heater 1.* |
| C403.2.2 [FI27][1] | HVAC systems and equipment capacity does not exceed calculated loads. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C408.2.1 [FI28][1] | Commissioning plan developed by registered design professional or approved agency. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C408.2.4 [FI29][1] | Preliminary commissioning report completed and certified by registered design professional or approved agency. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C408.2.5.4 [FI30][1] | Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C408.2.3.1 [FI31][1] | HVAC equipment has been tested to ensure proper operation. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | **Exception:** Unitary or packaged HVAC eqiupment without supply air economizers. |
| C408.2.3.3 [FI32][1] | Economizers have been tested to ensure proper operation. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | Requirement will be met. |
| C406 [FI34][1] | Efficient HVAC performance, efficient lighting system, or on-site supply of renewable energy consistent with what is shown the approved plans. | ☐Complies ☐Does Not ☐Not Observable ☐Not Applicable | |

**Additional Comments/Assumptions:**

1 High Impact (Tier 1) | 2 Medium Impact (Tier 2) | 3 Low Impact (Tier 3)



1 COMCHECK
M9 N.T.S.

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# PLUMBING SPECIFICATIONS

THIS SHEET SPECIFICATION SHALL GOVERN IN LIEU OF SEPARATE BOUND SPECIFICATIONS. UPON ISSUANCE, BOUND SPECIFICATIONS SHALL GOVERN SHOULD CONFLICTS ARISE BETWEEN THE SHEET AND THE BOUND SPECIFICATION.

1. BASIC REQUIREMENTS
   - A. PLUMBING DESIGN SHALL CONFORM TO 2012 INTERNATIONAL PLUMBING CODE. PROJECT SHALL BE COORDINATED WITH THE EXISTING BUILDING SERVICES AND SHALL INCLUDE ALL ITEMS NECESSARY FOR COMPLETE AND FULLY OPERATIONAL TENANT PLUMBING SYSTEMS. MAKE CONNECTIONS TO AND EXTEND SYSTEMS INSTALLED BY OTHERS AND/OR FURNISHED BY OTHERS. PROVIDE ACCESSORIES AND INCIDENTAL ITEMS AS REQUIRED FOR A COMPLETE AND FULLY OPERATIONAL SYSTEM WHETHER OR NOT SPECIFICALLY SPECIFIED AND/OR SHOWN ON THE PLANS.
   - B. DO NOT SCALE DRAWINGS. COORDINATE WITH OTHER TRADES FOR A COORDINATED INSTALLATION WITHIN THE AVAILABLE SPACE. WHERE CROWDED CONDITIONS EXIST, PREPARE COORDINATION DRAWINGS SHOWING ALL TRADE CONFLICTS AND SUBMIT TO THE ARCHITECT FOR APPROVAL AND DIRECTION PRIOR TO ROUGH-IN OR INSTALLATION. RELOCATION OF INLETS, OUTLETS, AND/OR APPARATUS MADE PRIOR TO ROUGH-IN OR REQUIRED BY FIELD CONDITIONS FOR COORDINATION SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER OR HIS AGENTS.
   - C. ALL WORK SHALL BE PERFORMED BY PROPERLY LICENSED PLUMBERS OR UNDER THEIR DIRECT SUPERVISION. ALL MATERIALS AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE APPLICABLE STANDARDS OF UL AND SHALL BEAR THE UL LABEL AS EVIDENCE THAT THE MATERIAL AND/OR EQUIPMENT MEETS THIS REQUIREMENT.
   - D. INSTALL ALL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND DETAILS UNLESS OTHERWISE NOTED IN THESE PLANS.
   - E. ALL EQUIPMENT START UP AND TESTING SHALL BE PERFORMED BY THE EQUIPMENT MANUFACTURER TRAINED SERVICE TECHNICIAN.
   - F. SUBMIT MANUFACTURER'S LITERATURE (SHOP DRAWINGS) FOR MATERIALS AND EQUIPMENT. SUBMITTAL SHALL INCLUDE EQUIPMENT PERFORMANCE DATA AT ELEVATION AND/OR LOCAL CONDITIONS. EQUIPMENT CUTSHEETS OR CATALOG COPIES ARE NOT ACCEPTABLE. SUBMITTAL SHALL BEAR THE APPROVAL OF THE GENERAL CONTRACTOR FOR COMPLIANCE WITH COORDINATION AND THESE SPECIFICATIONS PRIOR TO SUBMITTAL TO ARCHITECT AND/OR HIS AGENCIES. ANY EQUIPMENT SUBSTITUTED FOR WHAT IS SCHEDULED SHALL BE EQUAL TO THAT SCHEDULED IN CONTROLS, ACCESSORIES, AND PERFORMANCE REGARDLESS OF MANUFACTURER.
   - G. FIELD LABEL ALL PLUMBING EQUIPMENT AND PIPING AS INDICATED ON THE PLANS PER PLUMBING AND LOCAL CODE REQUIREMENTS. INDICATE DIRECTION OF FLOW ON PIPING.
   - H. TAG ALL VALVES WITH CONSECUTIVE NUMBERING ON PERMANENT HARD PLASTIC OR METAL TAB AND PROVIDE SCHEDULE LISTING ITEMS, AREA SERVED, SIZE AND VALVE TYPE. SUBMIT FINAL VALVE SCHEDULE FOR REVIEW.
   - I. PROVIDE EXPANSION LOOPS, SWING JOINTS, OR MECHANICAL EXPANSION COMPENSATING DEVICES AS REQUIRED TO ACCOUNT FOR THERMAL EXPANSION OF ALL PIPING SYSTEMS. EXPANSION SYSTEM SIZING SHALL BE IN ACCORDANCE WITH MATERIALS DATA SHEETS AND MANUFACTURER RECOMMENDATIONS.
   - J. INSTALL ALL EQUIPMENT PER MANUFACTURERS INSTRUCTIONS AND RECOMMENDATIONS. IF PLAN DIFFERS FROM THESE INSTRUCTIONS THEN NOTIFY ENGINEER PRIOR TO ROUGH-IN. MANUFACTURERS INSTRUCTIONS SHALL PREVAIL. SPECIAL ATTENTION MUST BE PAID TO GAS FIRED EQUIPMENT FLUE/CA LENGTHS, SIZES, AND MATERIAL.
   - K. PROVIDE BOILER EPO SHUTOFFS AS REQUIRED BY LOCAL CODES AND JURISDICTION.

2. BASIC MATERIALS
   - A. PROVIDE PLUMBING SYSTEM CONTROLS, CONTROLLERS, CONTROL TRANSFORMER, DISCONNECTS, STARTERS, CONTROL WIRING, ASSOCIATED CONTROL POWER WIRING, AND ALL WORK NECESSARY FOR A COMPLETE AND OPERATIONAL MECHANICAL SYSTEM.
   - B. PROVIDE SUPPLEMENTAL STEEL AND SUPPORTS AS REQUIRED FOR INSTALLATION OF PLUMBING MATERIALS, EQUIPMENT, AND APPARATUS.
   - C. ALL WORK IN FINISHED AREAS SHALL BE CONCEALED UNLESS SPECIFICALLY NOTED AS EXPOSED ON THE PLANS. PRIOR TO THE INSTALLATION OF ANY EXPOSED WORK THIS CONTRACTOR SHALL VERIFY AND OBTAIN ARCHITECTURAL APPROVAL OF LOCATION AND EXTENT.
   - D. PROVIDE PRESSURE REDUCING VALVE ASSEMBLY AT BUILDING WATER SERVICE ENTRY WHERE PRESSURE EXCEEDS 65 PSI. PRESSURE REDUCING VALVE TO BE SET TO 65 PSI.
   - E. PROVIDE SANITARY SEWER SYSTEM CLEANOUTS AS REQUIRED BY LOCAL CODES.
   - F. PROVIDE BRANCH SHUT-OFF VALVES ON ALL WATER LINES EXTENDING FROM MAINS.
   - G. THE CONTRACTOR SHALL LOCATE AND FURNISH FOR INSTALLATION BY OTHERS, ALL ACCESS PANELS AS REQUIRED FOR ACCESS TO VALVES, MOTORS, ETC. AND THE PROPER SERVICING OF EQUIPMENT AND LINES INSTALLED UNDER THIS CONTRACT.

3. PIPING
   - A. SANITARY AND VENT PIPING ABOVE GRADE SHALL BE SCHEDULE 40 PVC WITH SOCKET WELDED JOINTS. PIPING INSTALLED IN RETURN AIR PLENUM SHALL BE NOHUB CAST IRON OR MATERIAL RATED FOR SUCH INSTALLATIONS.
   - B. SANITARY PIPING BELOW GRADE SHALL BE SCHEDULE 40 PVC PIPE AND FITTINGS WITH SOCKET WELDED JOINTS INSTALLED IN ACCORDANCE WITH ASTM D2321.
   - C. DOMESTIC WATER PIPING ABOVE GRADE: ASTM B 88, TYPE L COPPER WITH SOLDERED
   - D. DOMESTIC WATER PIPING BELOW GRADE SHALL BE TYPE K COPPER WITH SILVER SOLDERED JOINTS.
   - E. CONDENSATE DRAIN PIPING SHALL BE TYPE M COPPER WITH SOLDERED JOINTS.
   - F. GAS PIPING 2 1/2" INCHES AND LARGER SHALL BE SCHEDULE 40 STEEL WITH WELDED JOINTS. GAS PIPING 2 INCHES AND SMALLER SHALL BE SCHEDULE 40 STEEL WITH MALLEABLE THREADED FITTINGS.
   - G. ANY PIPING SYSTEM LOCATED IN A RETURN AIR PLENUM SHALL BE NONCOMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NO MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84.
   - H. FIRE STOP ALL PIPING MATERIALS PASSING THROUGH FIRE RATED STRUCTURES OR FIRE RATED ASSEMBLIES IN ACCORDANCE WITH THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION. USE CURRENTLY LISTED U.L. CLASSIFIED PRODUCTS, TESTED BY ASTM E814. USE FOR ALL APPLICABLE PIPE PENETRATIONS THROUGH FIRE RATED FLOORS, WALLS, OR FLOOR CEILING ASSEMBLIES IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS.

4. INSULATION
   - A. WATER PIPING IN UNCONDITIONED SPACE AND EXTERIOR WALLS SHALL BE 2" FIBERGLASS INSULATION.
   - B. COLD WATER PIPING SHALL BE 1/2-INCH THICK FIBER GLASS INSULATION WITH AN ALL-SERVICE JACKET COLD WATER PIPING EXPOSED TO UNCONDITIONED ENVIRONMENTS SHALL BE 1 1/2" FIBERGLASS INSULATION. HOT WATER PIPING 2" OR LESS SHALL BE 1-INCH FIBERGLASS INSULATION. HOT WATER PIPING GREATER THAN 2-INCHES SHALL BE 1 1/2" FIBERGLASS INSULATION. RUNOUTS, NOT EXCEEDING 12 FEET, UP TO 2-INCHES SHALL BE 1/2-INCH THICK FIBER GLASS INSULATION WITH AN ALL-SERVICE JACKET.
   - C. CONDENSATE DRAIN PIPING SHALL BE 1/2-INCH THICK INSULATION WITH AN ALL-SERVICE JACKET.
   - D. COLD WATER PIPING MAINS ROUTED FROM BACKFLOW PREVENTER TO INDIVIDUAL UNITS SHALL BE INSULATED WITH 1/2-INCH THICK GLASS FIBER INSULATION WITH AN ALL-SERVICE JACKET.
   - E. COLD OR HOT WATER PIPING IN A WALL, CEILING, OR FLOOR THAT IS ADJACENT TO AN UNCONDITIONED SPACE SHALL HAVE 1-INCH THICK INSULATION. THE PIPING SHALL ALSO BE INSTALLED TO THE WARM SIDE OF THE BUILDING INSULATION.

5. PLUMBING FIXTURES
   - A. FURNISH AND INSTALL PLUMBING FIXTURES AS SCHEDULED ON THE PLANS.
   - B. PROVIDE CHROME PLATED ANGLE STOPS AND ESCUTCHEON PLATES ON ALL EXPOSED FIXTURE RUNOUTS
   - C. PROVIDE INSULATION AND ROUGH IN AS REQUIRED FOR COMPLIANCE WITH ADA REQUIREMENTS.
   - D. PROVIDE ALL ACCESSORIES AND SPECIALTY ITEMS AS REQUIRED FOR A COMPLETE FIXTURE INSTALLATION.

6. NATURAL GAS FIRED WATER HEATERS
   - A. FURNISH AND INSTALL NATURAL GAS FIRED, GLASS LINED WATER HEATERS AS SCHEDULED ON THE PLANS.
   - B. WATER HEATERS SHALL BE COMPLETE, SHALL BE AGA LABELED, AND MEET THE REQUIREMENTS OF LOCAL MUNICIPALITIES.

7. CIRCULATING PUMP
   - A. FURNISH AND INSTALL A DOMESTIC ALL BRONZE HOT WATER RETURN CIRCULATOR AS SCHEDULED ON THE PLANS. PROVIDE RETURN LINE AQUASTAT AND WIRE COMPLETE TO CYCLE CIRCULATOR TO PROVIDE 120 OR 140 DEGREES RETURN WATER TEMPERATURE (ADJUSTABLE).

## PLUMBING FIXTURE SCHEDULE

| PLAN MARK | WASTE /TRAP | VENT | DCW | DHW | DESCRIPTION |
|---|---|---|---|---|---|
| WC-1 | 3" | 2" | 1/2" | – | ADA WATER CLOSET: KOHLER HIGHLINE K-3519.<br>FLOOR MOUNTED, TANK TYPE, VITREOUS CHINA, ELONGATED BOWL, 17-1/8" HIGH, JETTED BOWL, 1.0 GPF,<br>FULLY GLAZED 2-1/4" TRAPWAY, 12" ROUGH-IN, ANGLE STOPS, FLEX TUBE WATER SUPPLY LINE AND<br>WALL ESCUTCHEON. PROVIDE TANK LEVER TO ACCESSIBLE SIDE OF FIXTURE.<br>TOILET SEAT: KOHLER STRONG HOLD K-4731.<br>SOLID PLASTIC, OPEN FRONT SEAT LESS COVER, STAINLESS STEEL CHECK HINGES. |
| LAV-1 | 2" | 2" | 1/2" | 1/2" | ADA WALL HUNG LAVATORY: KOHLER KINGSTON K-2007.<br>VITREOUS CHINA, 20-1/4"X18-1/8", FRONT OVERFLOW, FITTING LEDGE, SEALANT, SINGLE FAUCET HOLE.<br>PROVIDE A ZURN Z-1231 CONCEALED ARM CARRIER.<br>FAUCET: MOEN MODEL 8884 METERING FAUCET.<br>ADA LEVER HANDLE, CAST BRASS BODY, BRASS SHEELL CARTRIDGE<br>4 3/4" SPOUT, 0.5 GPM AERATOR, FLEXIBLE TUBE WATER SUPPLY LINES, LOOSE KEY<br>ANGLE STOPS, OPEN GRID DRAIN WITH 1 1/4" X 6, 18 GAGE SEAMLESS BRASS TAIL PIECE ,<br>JR SMITH MODEL 2698 TRAP EZE TAP PRIMER AND TRUEBRO TRAP WRAP OR SIMILAR. |
| SK-1 | 2" | 2" | 1/2" | 1/2" | 2-COMPARTMENT SINK: PROFLO PFT332283.<br>TWO COMPARTMENT SINK, SATIN POLISHED FINISH, STAINLESS STEEL, SELF RIMMING,<br>THOROUGHLY SOUND DEADENED,<br>FAUCET: MOEN 7365CSL FAUCET SINGLE LEVER WITH 3 HOLE ESCUTCHEON .<br>DURALAST CARTRIDGE, GOOSE NECK SPOUT, SINGLE LEVER HANDLE, 2.2 GPM AERATOR,<br>PLATE, 3 1/2" STAINLESS STEEL BASKET STRAINER, 1 1/2" 17G TUBULAR CONTINOUS WASTE ,<br>CHROME FINISH WALL ESCUTCHEON PLATE, ANGLE STOPS AND FLEXIBLE TUBE SUPPLY LINES.<br>MIXING VALVE SET TO MAXIMUM 105 DEGREES. |
| SH-1 | 2" | 2" | 1/2" | 1/2" | ADA SHOWER STALL: AQUATIC 1603BFSD.<br>34"X60"X74" WHITE ACRYLIC SHOWER BASE CENTER DRAIN, VINYL DAM , SS GRAB BAR, FOLD UP SEAT<br>SHOWER ROD & CURTAIN ,CHROME PLATED BRASS FLOOR DRAIN.<br>TRIM: MOEN 8342EP15 LOW FLOW SHOWERSYSTEM.<br>POSI-TEMP, ADJUSTABLE LIMIT STOP, VANDAL RESISTANT, 1.6GPM, 69" HOSE, 30" GRAB BAR. |
| SS-1 | 3" | 2" | 1/2" | 1/2" | SERVICE SINK: FIAT MSB-2424.<br>MOLDED STONE, STAINLESS STEEL DRAIN, DOME STRAINER STRAINER AND STAINLESS STEEL LINT BASKET,<br>STAINLESS STEEL GUARDS ON ALL SIDES.<br>FAUCET: FIAT 830AA.<br>WALL MOUNTED 24" ABOVE TOP LEDGE OF BASIN, ALL BRASS SUPPLY FAUCET, 10" SPOUT WITH WALL<br>BRACE AND PAIL HOOK, 3/4" MALE HOSE THREADED OUTLET AND VACUUM BREAKER, LEVER HANDLES,<br>INTEGRAL STOP ARMS, WALL FLANGES, 1/2" FEMALE THREADED INLETS AND ADJUSTABLE CENTERS. |
| FS | 2" | 2" | – | – | FLOOR SINK: CECO 906-2 OR ZURN Z1900-2LA<br>12"X12"X6" CAST IRON BODY WITH ACID RESISTANT ENAMELED FINISH, WHITE NO-HUB OUTLET, AND WITH ALUMINUM<br>ANTI-SPLASH INTERIOR BOTTOM DOME STRAINER, FLASHING COLLAR<br>COVER: CECO 912-2(2PIECE) OR ZURN 2LA (2 PIECE).<br>12"X12" HALF COVER TOP GRATE WITH CAST IRON BODY WITH ACID RESISTANT ENAMELED FINISH, |
| HB-1 | – | – | 3/4" | – | HOSE BIBB: WOODFORD 24-BR.<br>ANTI-SIPHON, VACUUM BREAKER, POLYCARBONATE WHEEL AND LOOSE TEE KEY, ROUGH BRASS FINISH,<br>BRONZE CASING AND INTERIOR PARTS, COMBINATION 3/4" FEMALE OR 1" STRAIGHT IP INLET.<br>PROVIDE A WATTS 007M3QT DOUBLE CHECK ASSEMBLY BEFORE HOSE BIB MOUNTED ON WALL. |
| FD | 2"<br>3"<br>4" | 2" | 1/2" | – | FLOOR DRAIN: ZURN Z415.<br>ROUND CAST IRON BODY WITH FLASHING COLLAR, 6" ROUND NICKEL BRONZE ADJUSTABLE STRAINER HEAD<br>WITH SECURED SQUARE HOLE GRATE, BOTTOM WASTE OUTLET AND TRAP PRIMER CONNECTION.<br>PROVIDE IAUTOMATIC TRAP PRIMER PPP MODEL P-1 IF TRAP EZE CANNOT BE USED. |

NOTE:
1. CONTRACTOR TO COORDINATE FINAL SELECTIONS OF ALL PLUMBING FIXTURES WITH OWNER/FRANCHISE PRIOR TO ORDERING.
2. FLOOR DRAINS SHALL BE PROVIDED WITH TRAP PRIMER USING JR SMITH MODEL 2698 TRAP EZE TAP PRIMER FROM ADJACENT SINK.
3. ALL FIXTURES AND EQUIPMENT ARE OWNER STANDARDS AND NO ALTERNATES WILL BE ACCEPTED.

## GAS WATER HEATER SCHEDULE

| PLAN MARK | MANUFACTURER | MODEL NUMBER | TANK GALLONS | THERMAL EFFICIENCY | ELEVATION | FUEL | INPUT MBH | GPH RISE | CA/FLUE SIZE (IN) | RISE (F) | ELECTRICAL VOLTS | ELECTRICAL PHASE | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GWH-1 | STATE | SDV75 70NE | 75 | 0.80 | 0 | NG | 70 | 67 | 3"/3" | 100 | 120 | 1 | (1)(2)(3)(4)(5) |

(1) BRADFORD WHITE PDX755-70FB-3N IS AN ACCEPTABLE ALTERNATE.
(2) PROVIDE 2 1/2" DRAIN PAN AND ROUTE 1 1/4" DRAIN LINE TO FLOOR DRAIN.
(3) PROVIDE CONDENSATE NEUTRALIZATION KIT.
(4) PROVIDE COMBUSTION SPRING LOADED FREEZE PROOF DAMPER
(5) CA/FLUE LENGTH 70' MAX EACH 4" DIAMETER PIPE.

## PUMP SCHEDULE

| PLAN MARK | MANUFACTURER | MODEL NO. | GPM | HEAD (FT) | RPM | HP | ELECTRICAL VOLT | ELECTRICAL PHASE | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| CP-1 | TACO | 2400-20S | 10 | 29 | 3450 | 1/16 | 115 | 1 | (1) |

(1) CONNECT TO BUILDING TIME CLOCK PROVIDED BY EC.

## PLUMBING LEGEND

- BC — BICARB
- CT — CONCENTRATE
- CND — CONDENSATE
- DCW — DOMESTIC COLD WATER
- DHW — DOMESTIC HOT WATER
- 120'R — DOMESTIC HOT WATER RECIRC
- GW — GREASE WASTE
- MCA — MEDICAL COMPRESSED AIR
- G — GAS
- O2 — OXYGEN
- RO — REVERSE OSMOSIS
- RD — ROOF DRAIN
- ORD — OVERFLOW ROOF DRAIN
- SOI — SAND OIL
- SS — SANITARY SEWER
- V — VENT
- SCA — SCAVENGER AIR
- VAC — VACUUM SUCTION
- (A)XX — TYPICAL PIPE ABOVE/ON ROOF
- (B)XX — TYPICAL PIPE BELOW/UNDERGROUND
- (E)XX — TYPICAL PIPE EXISTING

### VALVES

- BALL VALVE
- GATE VALVE
- GLOBE VALVE
- CHECK VALVE
- PRESSURE REDUCING VALVE (PRV)
- MEASURE FLOW
- TEE UP
- TEE DOWN
- ELBOW UP
- ELBOW DOWN

### MISC.

- POINT OF CONNECTION (POC)
- DEMO

### FIXTURES

- WALL CLEAN OUT
- FLOOR CLEANOUT
- AREA DRAIN
- FLOOR DRAIN
- FLOOR SINK FULL COVER
- FLOOR SINK 3/4 COVER
- FLOOR SINK 1/2 COVER
- GAS METER
- HOSE BIB
- BATH TUB/MOP SINK
- SINK
- 2-COMPARTMENT SINK
- DRINKING FOUNTAIN/URINAL
- WASHER BOX
- ICE BOX
- WATER CLOSET STACK
- WATER CLOSET

## ABBREVIATIONS

| | |
|---|---|
| (D) | DEMO |
| (E) | EXISTING |
| (N) | NEW |
| AAV | AIR ADMITTANCE VALE |
| AD | AREA DRAIN |
| AFF | ABOVE FINISH FLOOR |
| AHU | AIR HANDLING UNIT |
| B | BOILER |
| BB | BASEBOARD |
| BF | BOOSTER FAN |
| BFP | BACKFLOW PREVENTER |
| BT | BATH TUB |
| BV | BALL VALVE |
| CD | CONDENSATE DRAIN |
| CFM | CUBIC FEET PER MINUTE |
| CH | CHILLER |
| CS | CLINICAL SINK |
| CU | CONDENSING UNIT |
| CV | CHECK VALVE |
| CUH | CABINET UNIT HEATER |
| DCW | DOMESTIC COLD WATER |
| DF | DRINKING FOUNTAIN |
| DHW | DOMESTIC HOT WATER |
| DSN | DOWN SPOUT NOZZLE |
| EVC | EVAPORATIVE COOLER |
| EC | ELECTRICAL CONTRACTOR |
| ECO | END OF LINE CLEANOUT |
| EDH | ELECTRIC DUCT HEATER |
| EF | EXHAUST FAN |
| ERU | ENERGY RECOVERY UNIT |
| ER | EXISTING REMOVED |
| ERR | EXISTING REMOVED & RELOCAT |
| EW | EMERGENCY EYEWASH |
| EWC | ELECTRIC WATER COOLER |
| EWH | ELECTRIC WATER HEATER |
| F | FURNACE |
| FCO | FLOOR/GRADE CLEANOUT |
| FCU | FAN COIL UNIT |
| FD | FLOOR DRAIN |
| FS | FLOOR SINK |
| G | GAS |
| GC | GENERAL CONTRACTOR |
| GM | GAS METER |
| GPH | GALLONS PER HOUR |
| GPM | GALLONS PER MINUTE |
| GR | GAS REGULATOR |
| GUH | GAS UNIT HEATER |
| GW | GREASE WASTE |
| GWH | GAS WATER HEATER |
| HB | HOSE BIB |
| HP | HEAT PUMP |
| HX | HEAT EXCHANGER |
| IM | ICE MAKER BOX |
| L | LAVATORY |
| LS | LAUNDRY SINK |
| MAU | MAKE-UP AIR UNIT |
| MC | MECHANICAL CONTRACTOR |
| MF | MEASURE FLOW |
| NIC | NOT IN CONTRACT |
| NC | NRMALLY CLOSED |
| NO | NORMALLY OPEN |
| NTS | NOT TO SCALE |
| OA | OUTSIDE AIR |
| ORD | OVER FLOW ROOF DRAIN |
| P | PUMP |
| PC | PLUMBING CONTRACTOR |
| PFT | PARALLEL FAN TERMINAL |
| PRV | PRESSURE REDUCING VALVE |
| PSI | POUNDS PER SQUARE INCH |
| PSIG | PRESSURE GAUGE |
| RA | RETURN AIR |
| RAR | RETURN AIR REGISTER |
| RD | ROOF DRAIN |
| RE | RELOCATE EXISTING |
| RH | RADIANT HEATER |
| RTU | ROOF TOP UNIT |
| S | SINK |
| SA | SUPPLY AIR |
| SAR | SUPPLY AIR REGISTER |
| SF | SUPPLY FAN |
| SFT | SERIES FAN TERMINAL |
| SH | SHOWER |
| SOI | SAND/OIL INTERCEPTOR |
| SS | SERVICE SINK |
| T&P | TEMPERATURE & PRESSURE |
| TD | TRENCH DRAIN |
| TYP | TYPICAL |
| UR | URINAL |
| VAV | VARIABLE AIR VOLUME |
| VVT | VARI TRAC |
| WB | WASHER BOX |
| WC | WATER CLOSET/WATER COLUMN |
| WCO | WALL CLEANOUT COLUMN |
| WH | WALL HYDRANT |

## GENERAL PLUMBING NOTES:

1. ROUTE ALL CONDENSATE LINES, T&P VALVES, AND DRAIN VALVES FROM MECHANICAL EQUIPMENT, PLUMBING EQUIPMENT, AND EVAPORATORS TO LAV TAIL PIECE OR FLOOR SINK/DRAIN PER LOCAL CODE AND JURISDICTION. COORDINATE FREEZER HEAT TRACE WITH ELECTRICAL CONTRACTOR.
2. ALL DRAINAGE LINES 2-1/2" AND UNDER TO BE SLOPED AT 1/4" PER FOOT, AND 3" AND OVER TO BE SLOPED AT 1/8" PER FOOT UNLESS NOTED OTHERWISE.
3. PC TO PROVIDE VACUUM BREAKERS AT LOCATIONS WHERE HOSES AND NOZZLES ARE USE IF NOT PART OF FIXTURE, I.E. JANITOR SINKS, BEAUTY SINKS, KITCHEN SPRAYERS, DISHWASHERS, AND BATHS.
4. START TRENCHING FOR NEW SANITARY LINE AT FURTHEST FIXTURE (HIGHEST POINT IN SYSTEM) FROM CIVIL CONNECTION POINT TO BUILDING.
5. ALL RFI'S AND SUBMITTALS TO BE SUBMITTED DIRECTLY TO THE VITAMIN COTTAGE NATURAL GROCERS CONSTRUCTION MANAGER NOT THE ARCHITECT OF RECORD.
6. CONTRACTOR TO PROVIDE 1 YEAR WARRANTY FROM PERMANENT CERTIFICATE OF OCCUPANCY ON ALL WORK.
7. DIRECT REFRIGERATION CONTRACTOR TO INSTALL CONDENSATE AT CASES AS FOLLOWS: TO AVOID TRIPPING HAZARD,CONDENSATE DRAINS FROM REFRIGERATION CASES IN RETAIL SPACE SHALL BE DIRECTED AT THE FULL GRATE FLOOR SINK AT THE FACE OF THE REFRIGERATION CASE AND TURNED DOWN WITH A 45 DEGREE FITTING.

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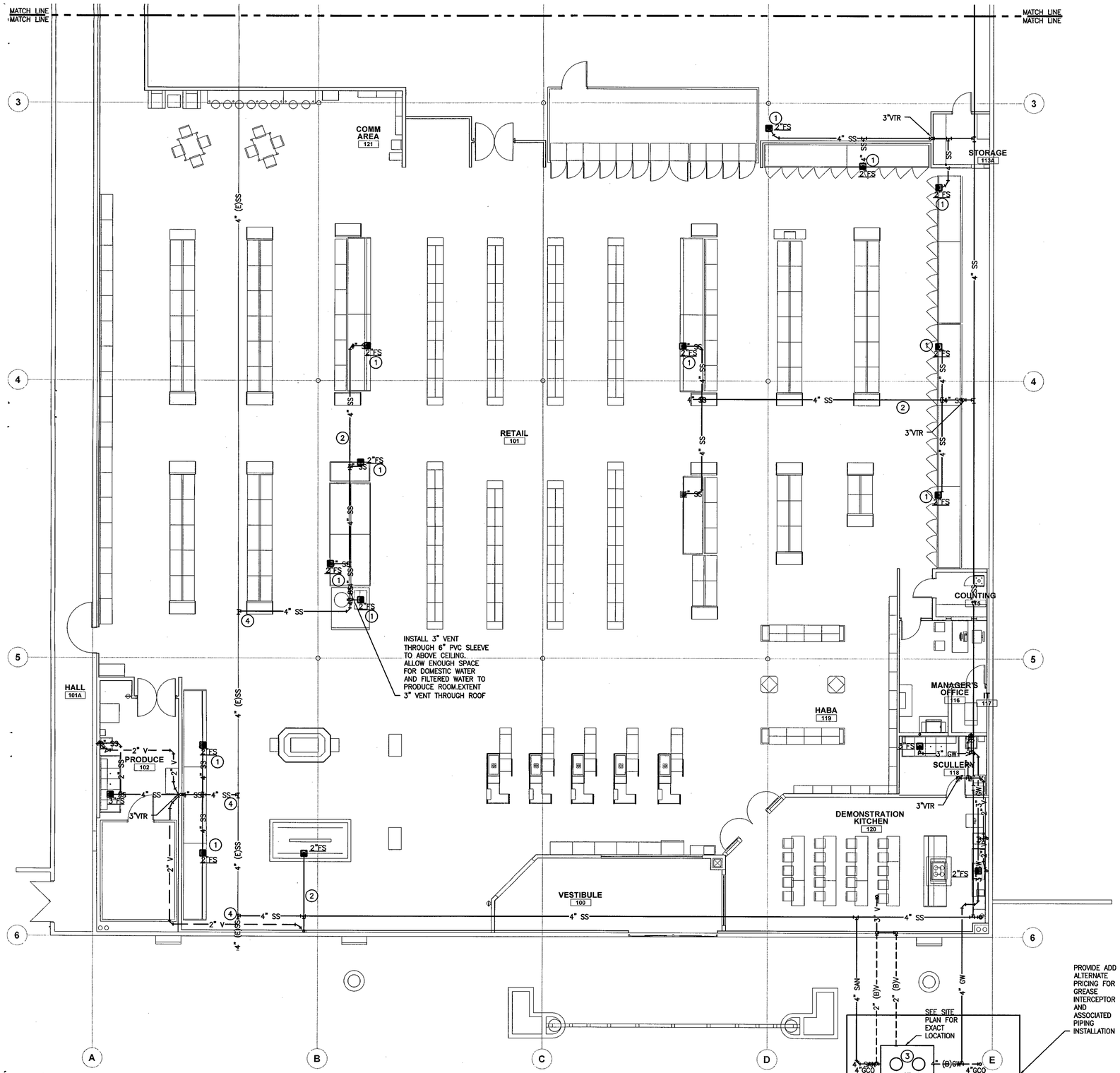



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1 P2 SANITARY & VENT PLAN

## GENERAL NOTES:

1. SANITARY TRENCH TO BE DUG SO CUT CONCRETE TO BE UNDER CASE WORK AND OUT OF SIGHT, EXCEPT WHERE SHOWN NOT UNDER CASEWORK ON PLAN.
2. ALL VENTS 2" UNLESS NOTED OTHERWISE.
3. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF FLOOR SINKS.
4. PLUMBER TO VERIFY INVERTS PRIOR TO COMMENCING WORK, NOTIFY ENGINEER OF ANY ISSUES.
5. IF PLUMBER OVER DIGS THEM P.C. MUST BACK FILL WITH PEA GRAVEL OR SAND TO HALF WAY UP THE PIPE.

## DRAWING NOTES:

1. PROVIDE A 4" TRAP AND BRANCH LINE OFF OF FLOOR SINK FOR COMBINATION WASTE AND VENT SYSTEM.
2. PROVIDE ROOM IN CHASE FOR 4" REFRIGERANT LINE WITH SANITARY LINE.
3. GT-1 SEE PLUMBING DETAIL SHEET FOR INFORMATION.
4. TIE INTO EXISTING SANITARY IN THIS LOCATION. CONFIRM EXACT LOCATION, DIRECTION OF FLOW AND THAT THE INVERT IS SUFFICIENT TO SERVE THE MOST REMOTE FIXTURE.

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by: BJE

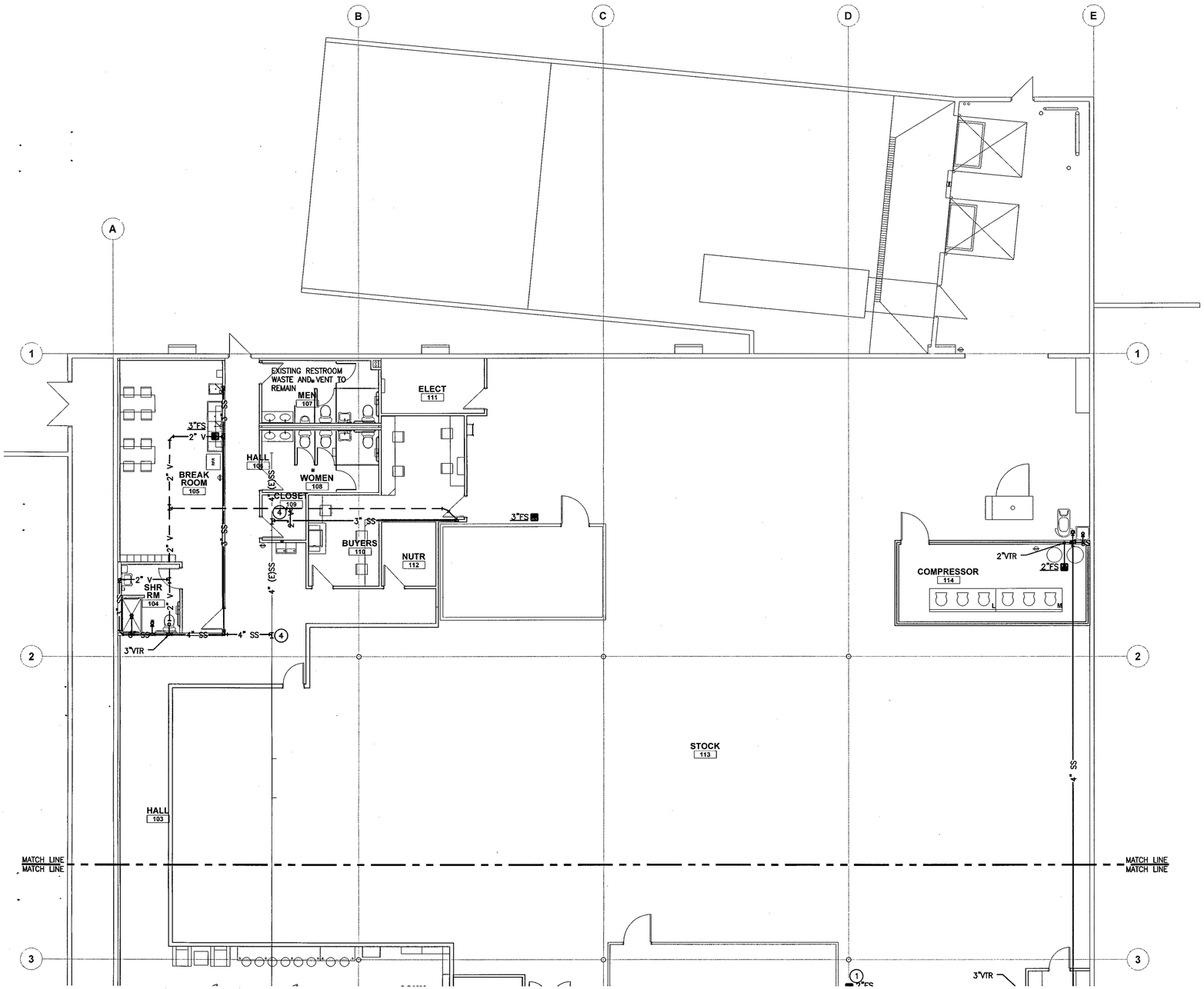
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2. ALL VENTS 2" UNLESS NOTED OTHERWISE.
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5. IF PLUMBER OVER DIGS THEM P.C. MUST BACK FILL WITH PEA GRAVEL OR SAND TO HALF WAY UP THE PIPE.

## DRAWING NOTES:

1. PROVIDE A 4" TRAP AND BRANCH LINE OFF OF FLOOR SINK FOR COMBINATION WASTE AND VENT SYSTEM.
2. PROVIDE ROOM IN CHASE FOR 4" REFRIGERANT LINE WITH SANITARY LINE.
3. GT-1 SEE PLUMBING DETAIL SHEET FOR INFORMATION. INSTALL PER MANUFACTURE INSTALLATION INSTRUCTIONS.PROVIDE ACCESS TO FLOW CONTROL. VENT FLOW CONTROL PER MANUFACTURES GUIDLINES
4. TIE INTO EXISTING SANITARY IN THIS LOCATION. CONFIRM EXACT LOCATION, DIRECTION OF FLOW AND THAT THE INVERT IS SUFFICIENT TO SERVE THE MOST REMOTE FIXTURE.

1 P3 SANITARY & VENT PLAN

NORTH

8' 4' 0 8' 16'
1/8"=1'-0"

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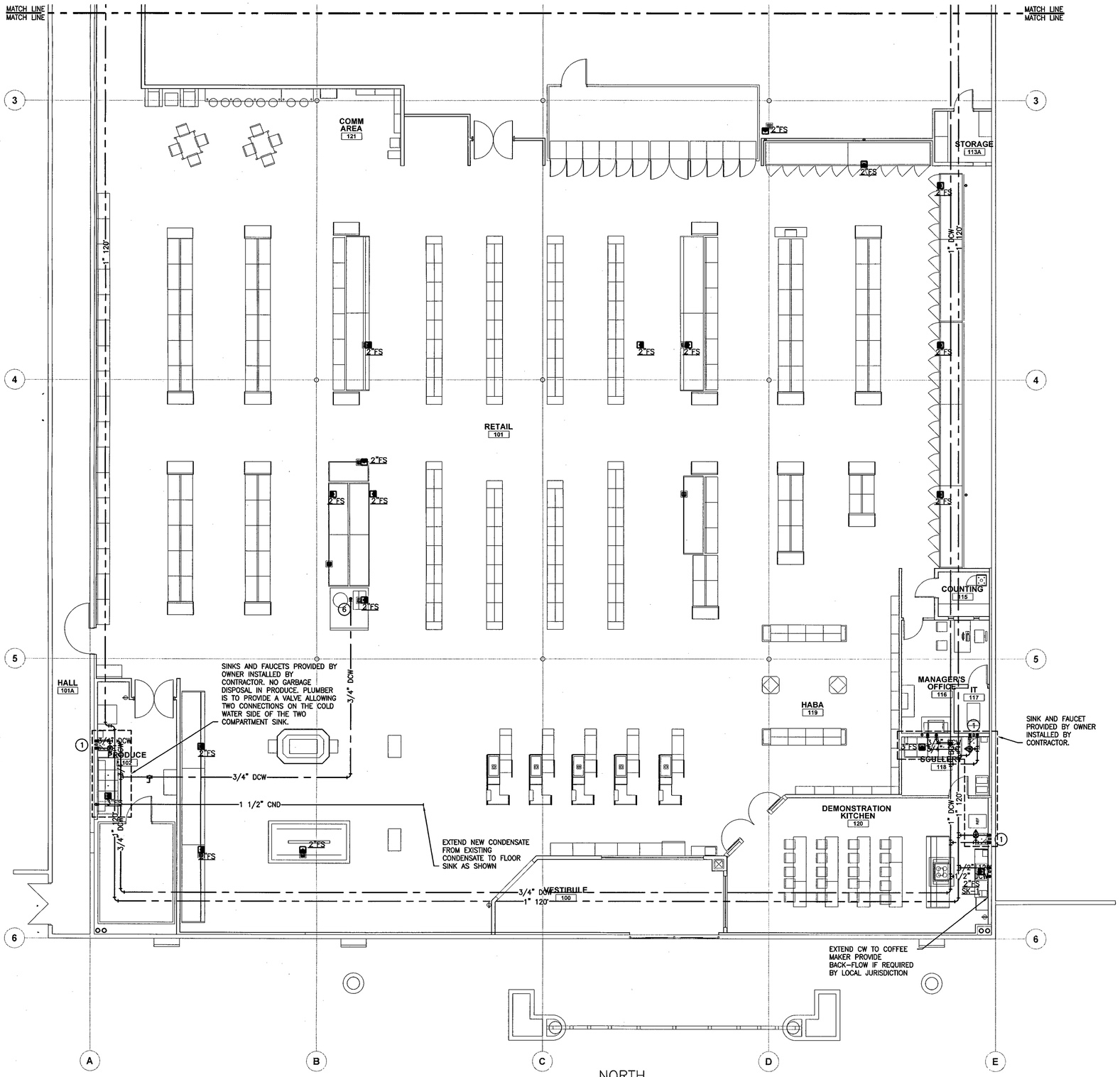
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JEFFREY A. GIVEN
Exp. 12-31-15
MECHANICAL
No. 16302

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app: JAG

sheet no.: P3 of 7




1 FIRST FLOOR WATER & GAS PLAN
P4

8' 4' 0 8' 16'
1/8"=1'-0"

NORTH

## GENERAL NOTES:

1. WATER LINES TO BE ABOVE CASE WORK ALONG WALL WHEN PASSING THROUGH SHOPPING AREA.
2. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF FLOOR SINKS.
3. ALL GAS PIPING IS ROUTED ON ROOF AND STUBBED INTO SPACE FROM ROOF.

## DRAWING NOTES:

1. PROVIDE A WATTS MMV THERMOSTATIC MIXING VALVE SET TO 110°F MAX.
2. ROUTE DOMESTIC WATER IN TRENCH WITH SANITARY
3. EXISTING GAS METER LOCATION.
4. CONNECT TO EXISTING 2" DCW IN THIS LOCATION.
5. SEE SHEET M4 FOR GAS PIPE CONTINUATION.
6. EXTEND 3/4" WATER DOWN 4" PVC CHASE TO HOSE BIB AND BACKFLOW DEVISE.

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A

1

2

SINK AND FAUCET PROVIDED BY OWNER INSTALLED BY CONTRACTOR.

BREAK ROOM 105

HALL 106

MEN 107

WOMEN 108

CLOSET 109

BUYERS 110

ELECT 111

NUTR 112

STOCK 113

COMPRESSOR 114

HALL 103

SHR RM 104

RFR

1 1/2" 120° DCW

3/4" DCW

1 1/4" DCW

1" DCW

1" 120°

1 1/2" CND

3/4" 120°

2" (E)DCW

3/4" (E)DCW

1 1/4" DCW

3/4" 120°R

1"GAS TO ROOF

GWH 75

RE DE

TRACE OUT EXISTING HOT WATER PIPING. REMOVE EXISTING HOT WATER HEATER AND TIE INTO NEW HOT WATER SYSTEM

EXTEND NEW CONDENSATE FROM EXISTING CONDENSATE TO FLOOR SINK AS SHOWN

MATCH LINE

1 P5 FIRST FLOOR WATER & GAS PLAN

NORTH

8' 4' 0 8' 16'

1/8"=1'-0"

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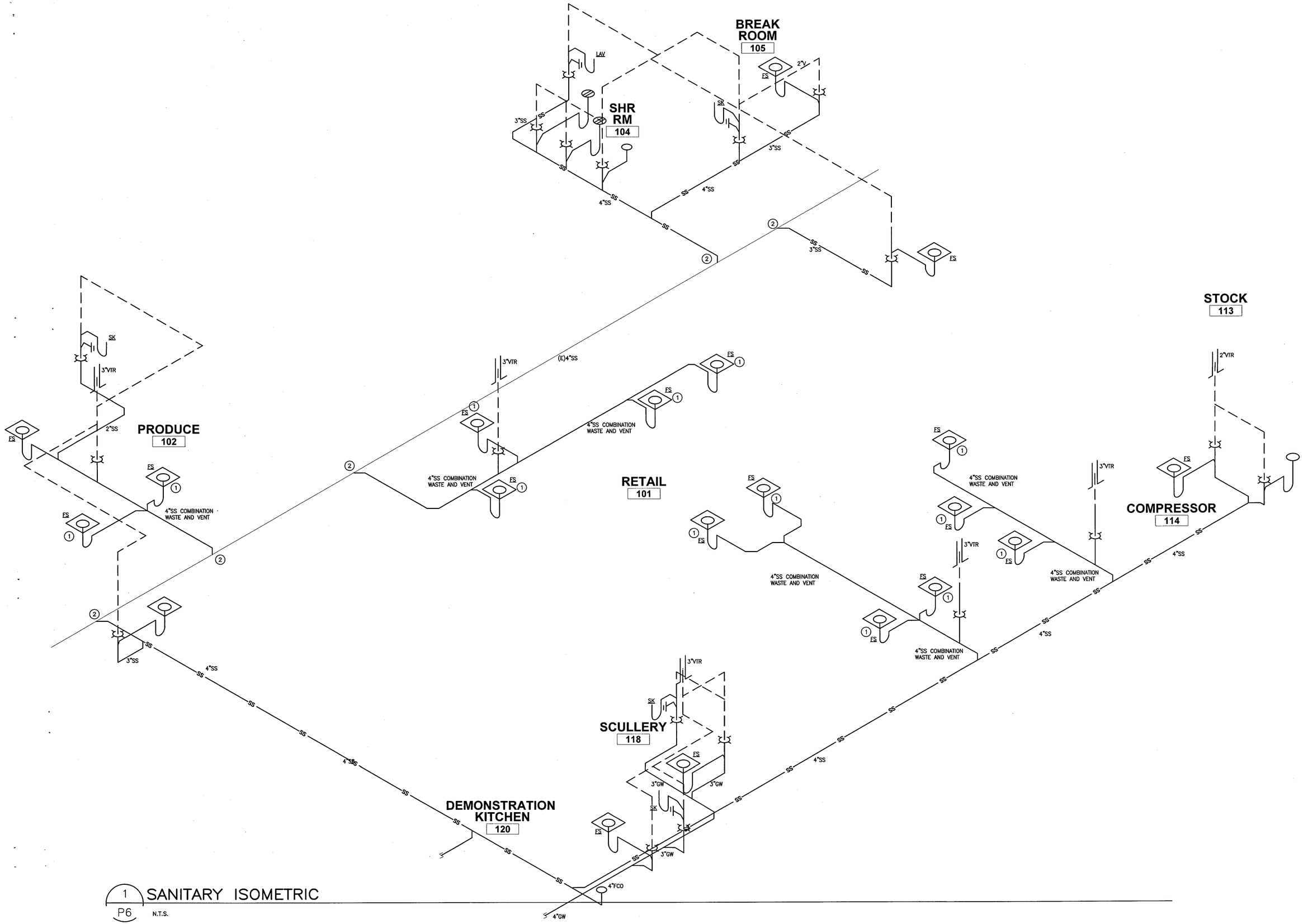
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1 SANITARY ISOMETRIC

P6 N.T.S.

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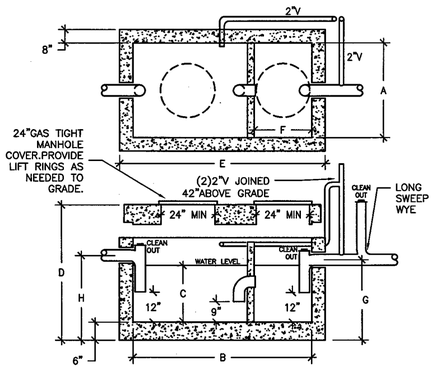
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by: BJE

app: JAG

sheet no.: P6 of 7




NOTE:
1. SECONDARY COMPARTMENT HAS VOLUME EQUAL TO 1/3 OF TOTAL CAPACITY. BAFFLE HEIGHT AND OPENING BETWEEN COMPARTMENTS ARE PER LOCAL CODE.
2. ALL PIPE AND FITTINGS MINIMUM 4" IN DIAMETER.
3. INTERCEPTOR TO COMPARTMENT CONSTRUCTION TO BE REINFORCED THROUGHOUT WITH 6X6 10/10 WIRE MESH.
4. COVERS TO BE REINFORCED LONGITUDINALLY TO MAINTAIN STRUCTURAL INTEGRITY AND COMPRESSIVE STRENGTH .
5. CLEANOUT SHALL BE AN IRON BODY FERRULE WITH BRASS PLUG. PROVIDE TWO WAY CLEANOUT AS REQUIRED BY LOCAL CODE.
6. VENT PIPE SHALL BE . 2-INCHES IN DIAMETER MINIMUM.
7. MANHOLE RING AND COVER SHALL BE NEENAH R-1706 OR EQUAL.
8. VERIFY ALL DIMENSIONS WITH SUPPLIER (COPLEND ENTERPRISE INC.).

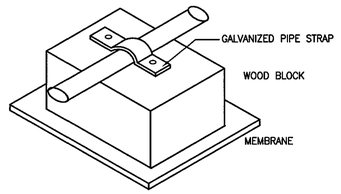
INTERCEPTOR SIZE SCHEDULE

| TYPE | VOLUME IN GALLONS | DIMENSIONS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | H |
| GW | 800 | 3'- 9" | 7'- 9" | 3'- 6" | 5'- 6" | 8'-10" | 2'- 8" | 4'-2" | 4'- 4" |

8 / P7 GT-1 GREASE INTERSEPTOR DETAIL
N.T.S.

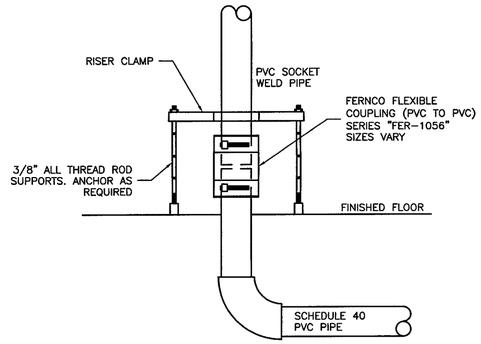
SUPPORT SHALL BE PROVIDED AT THE FOLLOWING INTERVALS

1/2" PIPE_____ 6'-0" ON CENTER
1-1/4" TO 4" PIPE _____ 10'-0" IN CENTER
3/4" TO 1" PIPE _____ 8'-0" ON CENTER

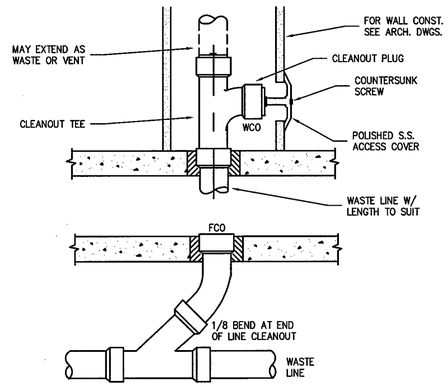



4X4 PRESSURE TREATED WOOD A MINIMUM OF 3-1/2 INCHES OFF OF ROOF. ATTACH PIPE TO BLOCKING WITH LOOSE FITTING GALVANIZED U CLAMP TO ALLOW FOR EXPANSION. PROVIDE A MEMBRANE COMPATIBLE WITH ROOFING MATERIAL TO PROTECT ROOF FROM EDGES OF THE BLOCK

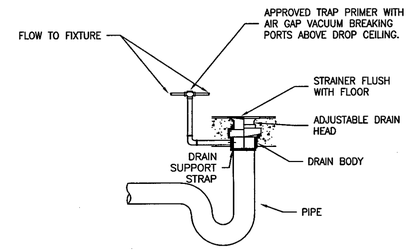
6 / P7 GAS ROOF SUPPORT DETAIL
N.T.S.




3 / P7 PVC TO PVC DETAIL
N.T.S.

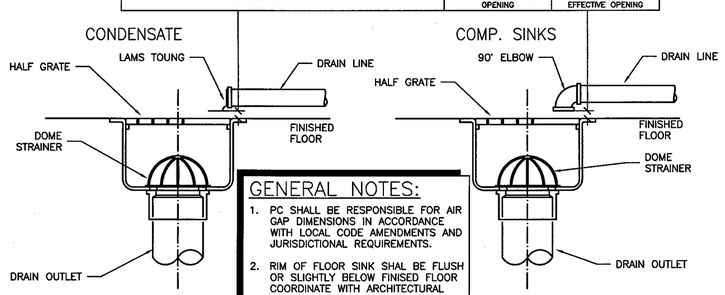



5 / P7 CLEANOUT DETAIL
N.T.S.



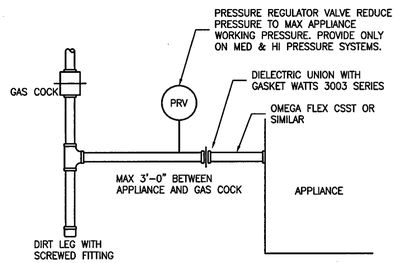

2 / P7 FLOOR DRAIN DETAIL
N.T.S.

| MINIMUM REQUIRED AIR GAPS: 2009 IPC & UPC | | |
|---|---|---|
| FIXTURE | MINIMUM AIR GAP | |
| | AWAY FROM A WALL (INCHES) | CLOSE TO A WALL (INCHES) |
| LAVATORIES AND OTHER FIXTURES WITH EFFECTIVE OPENING NOT GREATER THAN 1/2" IN DIAMETER | 1 | 1 1/2 |
| SINK, LAUNDRY TRAYS, GOOSENECK BACK FAUCETS AND OTHER FIXTURES WITH EFFECTIVE OPENINGS GREATER THAN 3/4" IN DIAMETER | 1 1/2 | 2 1/2 |
| OVER-RIM BATH FILLERS AND OTHER FIXTURES WITH EFFECTIVE OPENINGS NOT GREATER THAN 1" IN DIAMETER | 2 | 3 |
| DRINKING WATER FOUNTAINS, SINGLE ORIFICE NOT GREATER THAN 7/16" IN DIAMETER OR MULTIPLE ORIFICES WITH A TOTAL AREA OF 0.150 SQUARE INCH (AREA OF CIRCLE 7/16" IN DIAMETER | 1 | 1 1/2 |
| EFFECTIVE OPENINGS GREATER THAN 1" | TWO TIMES THE DIAMETER OF THE EFFECTIVE OPENING | THREE TIMES THE DIAMETER OF THE EFFECTIVE OPENING |

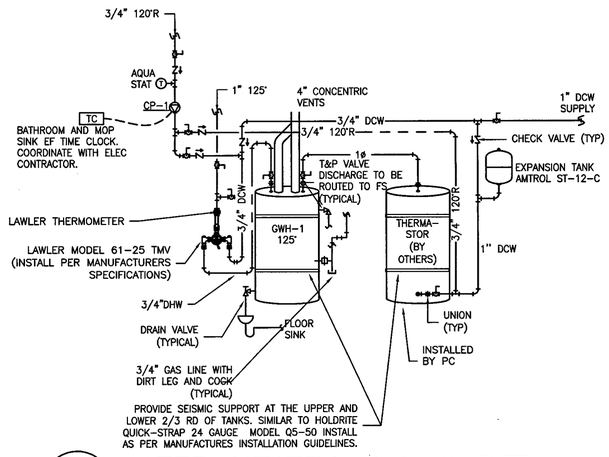



GENERAL NOTES:
1. PC SHALL BE RESPONSIBLE FOR AIR GAP DIMENSIONS IN ACCORDANCE WITH LOCAL CODE AMENDMENTS AND JURISDICTIONAL REQUIREMENTS.
2. RIM OF FLOOR SINK SHAL BE FLUSH OR SLIGHTLY BELOW FINISED FLOOR COORDINATE WITH ARCHITECTURAL AND OTHER TRADES. PC IS RESPONSIBLE TO VERIFY FLUSH MOUNTING SINK WITH LOCAL CODES AND JURISDICTION. IF FLUSH MOUNTING FLOOR SINK IS NOT ALLOWED NOTIFY ENGINEER PRIOR TO ROUGH IN.

7 / P7 FLOOR SINK DETAIL
N.T.S.




4 / P7 GAS CONNECTION DETAIL
N.T.S.




1 / P7 WATER HEATER PIPING DETAIL
N.T.S.

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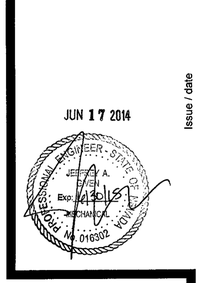
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# ELECTRICAL SPECIFICATIONS

THIS SHEET SPECIFICATION SHALL GOVERN IN LIEU OF SEPARATE BOUND SPECIFICATIONS. IF BOUND SPECIFICATIONS ARE ALSO ISSUED WITH THE JOB THEN THE MORE STRINGENT REQUIREMENT BETWEEN THE TWO SHALL PREVAIL. CONTACT ARCHITECT/ENGINEER AT TIME OF BID IF CLARIFICATION IS REQUIRED.

1. BASIC REQUIREMENTS
   - A. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT LOCAL CODES, ORDINANCES, AND REGULATIONS, NATIONAL ELECTRIC CODE, LOCAL HEALTH DEPARTMENT REGULATIONS, AND APPLICABLE NFPA CODES. PAY FOR ALL FEES AND PERMITS AS ARE NECESSARY FOR THE COMPLETE INSTALLATION OF THE ELECTRICAL SYSTEMS INCLUDING UTILITY CHARGES. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL UTILITY REQUIREMENTS.
   - B. PROJECT SHALL INCLUDE ALL ITEMS NECESSARY FOR COMPLETE AND FULLY OPERATIONAL TENANT AND BUILDING ELECTRICAL SYSTEMS. MAKE CONNECTIONS TO AND EXTEND SYSTEMS INSTALLED BY OTHERS AND/OR FURNISHED BY OTHERS. PROVIDE ACCESSORIES AND INCIDENTAL ITEMS AS REQUIRED FOR COMPLETE AND FULLY OPERATIONAL SYSTEMS WHETHER OR NOT SPECIFICALLY SPECIFIED AND/OR SHOWN ON THE PLANS.
   - C. DO NOT SCALE FROM THESE DRAWINGS. REFER TO ARCHITECTURAL OR CIVIL DRAWINGS BY OTHERS FOR DIMENSIONS AND FOR ESTIMATING DISTANCES. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS AND SPECIFICATIONS RELATING TO THE JOB WETHER OR NOT INDICATED ON THESE DRAWINGS.
   - D. ANY SCALE, DIMENSION OR QUANTITIES SHOWN ON THE DRAWINGS ARE FOR ENGINEERING CALCULATION PURPOSES ONLY. THE ELECTRICAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ESTIMATING AND DETERMINING ALL DISTANCES AND QUANTITIES RELATED TO THE PROJECT. REFER TO ARCHITECTURAL OR CIVIL DRAWINGS BY OTHERS AND VERIFY EXISTING CONDITIONS ON SITE FOR ALL ESTIMATING PURPOSES.
   - E. ALL WORK SHALL BE PERFORMED BY PROPERLY LICENSED ELECTRICIANS OR UNDER THEIR DIRECT SUPERVISION. ALL MATERIALS AND EQUIPMENT SHALL MEET THE REQUIREMENTS OF THE APPLICABLE STANDARDS OF UL AND SHALL BEAR THE UL LABEL AS EVIDENCE THAT THE MATERIAL AND/OR EQUIPMENT MEETS THIS REQUIREMENT.
   - F. SUBMIT MANUFACTURERS LITERATURE (SHOP DRAWINGS)FOR RACEWAYS AND FITTINGS, BOXES, WIRE, CABLES, WIRING DEVICES, NAME PLATES, LEGEND PLATES, LABELS, PANELBOARDS, FUSES, CIRCUIT BREAKERS, SWITCH GEAR, AND SAFETY SWITCHES. SUBMITTAL SHALL BEAR THE APPROVAL OF THE GENERAL CONTRACTOR FOR COMPLIANCE WITH COORDINATION AND THESE SPECIFICATIONS PRIOR TO SUBMITTAL TO ARCHITECT AND/OR HIS AGENCIES.
   - G. ALL SWITCH BOARDS, DISTRIBUTION BOARDS, PANELBOARDS, DISCONNECT SWITCHES, TRANSFORMERS AND SIMILAR ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH ENGRAVED PLASTIC-LAMINATE LABELS INDICATING THE EQUIPMENT NAME SPECIFIED ON THE PLANS OR THE LOAD SERVED BY THE EQUIPMENT. ALL PANELBOARDS SHALL BE PROVIDED WITH REMOVEABLE, TYPED PANEL SCHEDULES WITH CLEAR PLASTIC COVERS AFFIXED TO THE FACE OR INSIDE OF THE PANEL DOOR. PANEL SCHEDULES SHALL CLEARLY INDICATE THE SPECIFIC LOAD SERVED BY EACH INDIVIDUAL CIRCUIT BREAKER OR DISCONNECT SWITCH AND SHALL REFLECT THE FINAL, AS-BUILT CONDITIONS AT COMPLETION OF WORK. THE IDENTIFICATION SHALL INCLUDE SUFFICIENT DETAIL TO ALLOW EACH CIRCUIT TO BE DISTINGUISHED FROM ALL OTHERS. SPARE POSITIONS SHALL BE LABELED ACCORDINGLY.
   - H. CONTRACTOR SHALL THOROUGHLY REVIEW THE PLANS AND SPECIFICATIONS OF ALL DIVISIONS AND TRADES, ESPECIALLY THE ARCHITECTURAL DRAWINGS. ELECTRICAL REQUIREMENTS OF OTHER TRADES AND DIVISIONS INCLUDING PRODUCTS SPECIFIED, MOUNTING INSTRUCTIONS, AND MATERIAL SELECTIONS SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR. IF A CONFLICT EXISTS, CONTRACTOR SHALL OBTAIN A CLARIFICATION AND DIRECTIONS FROM THE ARCHITECT PRIOR TO ROUGH IN OR PROCEEDING WITH THE WORK.
   - I. FURNISHED EQUIPMENT.
     - a. MAKE FINAL CONNECTIONS TO FURNISHED EQUIPMENT AS REQUIRED.
     - b. RECEIVE AND COMPLETELY INSTALL FURNISHED EQUIPMENT, MATERIALS, AND APPARATUS FURNISHED BY OTHERS FOR INSTALLATION OF A COMPLETE ELECTRICAL SYSTEM.
     - c. REVIEW CONSTRUCTION DOCUMENTS AND INSTALLATION INSTRUCTIONS FOR MATERIALS AND EQUIPMENT FURNISHED FOR INSTALLATION BY THIS CONTRACTOR. INSTALL ALL EQUIPMENT AND APPARATUS IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS AND SUGGESTED PRACTICES, PROVIDE SUPPLEMENTAL AND INCIDENTAL MATERIALS INCLUDING CORDS, PLUGS, AND RECEPTACLES AS MAY BE REQUIRED FOR A COMPLETE AND FULLY OPERATIONAL SYSTEM.
     - d. CONFIRM ALL CONNECTION REQUIREMENTS AND ROUGH-IN CONDITIONS PRIOR TO INSTALLATION. CERTAIN DATA IS GIVEN BUT NOT GUARANTEED. PROVIDE ROUGH-IN AND FINAL TERMINATION INCLUDING APPROPRIATE PLUGS AND DISCONNECTS AS MAY BE REQUIRED. PREPARE A DETAILED ROUGH-IN DRAWING FOR APPROVAL PRIOR TO ROUGH-IN.
   - H. CONFIRM ACTUAL VOLTAGES, PHASE AND CHARACTERISTICS OF EXISTING EQUIPMENT AND APPARATUS AND EQUIPMENT AND APPARATUS FURNISHED BY TENANT, OTHER TRADES, AND/OR DIVISIONS. CONFIRM PRIOR TO ROUGH-IN. IF DISCREPANCIES ARE NOTED TO THE INSTRUCTIONS OF THESE PLANS AND SPECIFICATIONS, SUBMIT THE NOTED DISCREPANCIES TO THE ARCHITECT FOR DIRECTION PRIOR TO ROUGH-N OR PROCEEDING WITH THE WORK.
   - I. ALL WORK IN FINISHED AREAS SHALL BE CONCEALED UNLESS SPECIFICALLY NOTED AS EXPOSED ON THE PLANS. PRIOR TO INSTALLATION OF ANY EXPOSED WORK THIS CONTRACTOR SHALL VERIFY AND OBTAIN ARCHITECTURAL APPROVAL OF LOCATION AND EXTENT.
   - J. ANY DIMENSIONS OR QUANTITIES SHOWN ON THE DRAWINGS ARE FOR ENGINEERING CALCULATION PURPOSES ONLY. THE ELECTRICAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ESTIMATING AND DETERMINING ALL DISTANCES AND QUANTITIES RELATED TO THE PROJECT.
   - K. UNLESS OTHERWISE SPECIFIED ALL OUTLETS ARE 18" AFF. IF OUTLET IS SPECIFIED UNDER OR ABOVE COUNTER, CONFIRM HEIGHT WITH WITH ARCHITECT.
2. ELECTRICAL SERVICE
   - A. EXISTING 480/277 VOLT, 3 PHASE, 4 WIRE ELECTRICAL SERVICE.
   - B. E.C. TO CONTACT THE LOCAL UTILITY TO VERIFY TRANSFORMER SIZE, LOCATION, CONNECTION LOCATION AND TYPE, AND TO COORDINATE INSTALLATION OF ALL UTILITY METERING AND SERVICE ENTRANCE EQUIPMENT.
   - C. E.C. TO VERIFY SCOPE OF WORK REQUIREMENTS, INCLUDING BUT NOT LIMITED TO: CONDUIT, WIRE, CONNECTION CABINETS, PULLING OF WIRE AND HOUSE KEEPING PADS. E.C. TO PROVIDE SERVICE CO-ORDINATION AND APPLICATION.
3. DEMOLITION AND CONTINUITY OF SERVICE
   - A. ALL UNUSED ELECTRICAL RACEWAYS, DEVICES, DEVICE APPLICATIONS, WIRE AND CABLE LOCATED IN THE AREA TO BE RENOVATED SHALL BE REMOVED BACK TO THEIR EXISTING SOURCE PANELBOARD. CONTRACTOR SHALL MAINTAIN THE CONTINUITY OF ALL EXISTING BUILDING LOADS TO REMAIN.
   - B. INFORMATION ON EXISTING ELECTRICAL EQUIPMENT, PANELS, WIRING, AND DEVICES INDICATED AS BEING REUSED IN THIS PROJECT IS AS ACCURATE AS COULD BE OBTAINED FROM A CURSORY SURVEY. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED AND IS FOR THE INFORMATIONAL GUIDANCE OF THE CONTRACTOR. THIS CONTRACTOR SHALL THOROUGHLY INVESTIGATE EXISTING EQUIPMENT AND SYSTEMS BEING REUSED FOR COMPLIANCE WITH THESE SPECIFICATIONS AND LOCAL CODES. THIS CONTRACTOR SHALL MAKE NECESSARY CORRECTIONS TO EXISTING SYSTEMS AS ARE REQUIRED FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM. SHOULD INSUFFICIENT CAPACITY, CAPABILITY, OR INCOMPATIBLE ELECTRICAL TERMINATIONS BE PRESENT, THIS CONTRACTOR SHALL SUBMIT THE NOTED DISCREPANCIES TO THE ARCHITECT FOR DIRECTION PRIOR TO ROUGH-IN OR PROCEEDING WITH THE WORK.
4. BASIC MATERIALS
   - A. RACEWAYS AND FITTINGS: RACEWAYS EMBEDDED IN CONCRETE OR MASONRY WALLS SHALL BE IN IMC; IN HOLLOW NON MASONRY WALLS AND ABOVE CEILINGS SHALL BE EMT OR MC CABLE; RACEWAY EXPOSED TO SEVERE PHYSICAL DAMAGE SHALL BE RIGID GALVANIZED; RACEWAYS CONNECTING TO VIBRATING EQUIPMENT SHALL BE FLEXIBLE METALLIC CONDUIT. MC CABLE IS NOT ALLOWED FOR BRANCH CIRCUIT HOMERUN CONDUITS FROM LAST DEVICE OR JUNCTION BOX TO PANELBOARD. CONDUITS IN CONTACT WITH BARE EARTH SHALL BE SCHEDULE 40 PVC.
   - B. ALL WIRES ON THE SAME LEG OR PHASE SHALL HAVE THE SAME COLOR CODE. ALL CONDUCTORS SHALL BE RATED FOR 600 VOLTS AND SHALL BE COPPER OF NO. 12 AWG MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. COPPER CLAD CONDUCTORS ARE NOT ACCEPTABLE. ALUMINUM CONDUCTORS ARE NOT ACCEPTABLE UNLESS SPECIFICALLY NOTED AS SUCH ON THE PLANS. WHERE CONNECTIONS ARE MADE COPPER TO ALUMINUM, CONNECTIONS SHALL BE MADE WITH LOCALLY APPROVED UL LISTED COPPER TO ALUMINUM CONNECTIONS. STRUCTURE WIRING SHALL BE THHN. EXTERIOR WIRING SHALL BE XHHW. INCREASE BRANCH CIRCUIT WIRE SIZE TO MAINTAIN A MAXIMUM 3% VOLTAGE DROP TO FURTHEST OUTLET ON BRANCH CIRCUIT.
   - C. PROVIDE SEPARATE (DEDICATED) NEUTRAL CONDUCTOR FOR EACH DEDICATED EQUIPMENT CIRCUIT; SHARED NEUTRAL CONDUCTORS ARE NOT PERMITTED FOR DEDICATED CIRCUITS. WHERE PERMITTED, SHARED NEUTRAL CONDUCTORS SHALL BE COPPER NO. 10 AWG MINIMUM.
   - D. PROVIDE METALLIC OUTLET, PULL AND JUNCTION BOXES AS REQUIRED. ALL POWER, CONTROL, OR INSTRUMENTATION, WIRING GREATER THAN 24 VOLTS SHALL BE IN CONDUIT. TYPE NM, NMC, OR NMS CABLES ARE PERMITTED WHERE ALLOWED BY LOCAL AUTHORITY HAVING JURISDICTION AND APPROVED BY OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION CHANGES DUE TO THESE CABLES USE IN LIEU OF CONDUIT. LOW VOLTAGE WIRING MAY BE PLENUM RATED IN ACCESSIBLE LOCATIONS CONCEALED FROM FINISHED AREAS AS APPROVED BY LOCAL AUTHORITIES.
   - E. PROVIDE RECEPTACLES, GFI RECEPTACLES, SPECIAL PURPOSE RECEPTACLES AND SWITCHES OF ONE MANUFACTURER. ALL DEVICES SHALL BE COMMERCIAL GRADE; DEVICES AND COVERPLATES SHALL BE WHITE IN COLOR. DEVICES WITH STAB-IN CONNECTIONS ARE NOT PERMITTED. SEE ARCHITECTURAL DRAWINGS FOR SPECIAL MOUNTING LOCATIONS AND ORIENTATION. CONFIRM RECEPTACLE, SPECIAL RECEPTACLE AND SWITCH MOUNTING HEIGHT AND ORIENTATION WITH ARCHITECT PRIOR TO ROUGH-IN. WHERE NEW OUTLETS AND DEVICES ARE INSTALLED, MAINTAIN ADA MOUNTING HEIGHTS AND REQUIREMENTS UNLESS SPECIFICALLY DIRECTED OTHERWISE.
   - F. PANELBOARDS AND SAFETY SWITCHES SHALL BE OF ONE MANUFACTURER AND SHALL BE COMPLETE WITH PROTECTIVE DEVICES, ENCLOSURES, BUSSES, GROUNDS, ISOLATED GROUND BUS, AND NEUTRAL BARS AS REQUIRED.
   - G. ALL TRIM AND/OR COVER PLATES FOR ALL ELECTRICAL DEVICES SHALL BE THE COLOR WHITE UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS.
   - H. PROVIDE ARC FLASH HAZARD WARNING LABELS ON ALL ELECTRICAL EQUIPMENT PER NEC 110.16.
5. GROUNDING
   - A. PROVIDE COPPER GROUNDING CONDUCTORS AND COPPER CLAD STEEL MADE ELECTRODES IN ACCORDANCE WITH THE NEC. BARE COPPER OR GREEN INSULATED WIRE IS ACCEPTABLE.
   - B. ALL EQUIPMENT SHALL BE CONTINUOUSLY GROUNDED. AN EQUIPMENT GROUNDING CONDUCTOR IS TO BE INSTALLED IN ALL FEEDER AND BRANCH CIRCUITS.
   - C. MAIN BONDING JUMPER SHALL BE SUPPLIED BY EQUIPMENT MANUFACTURER AND CONNECTED PER NEC 250.28.
   - D. MAIN EQUIPMENT BONDING JUMPER BE SUPPLIED BY EQUIPMENT MANUFACTURER AND CONNECTED PER NEC 250.102(C).
   - E. ELECTRICAL CONTRACTOR TO CONNECT BONDING JUMPER, SIZED AND CONNECTED PER NEC 250.104(B) TO ALL MECHANICAL EQUIPMENT THAT REQUIRES ABOVE GROUND METAL GAS PIPING.
6. LIGHTING
   - A. PROVIDE ALL ACCESSORIES REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM. FOR RECESSED FIXTURES, PROVIDE PLASTER FRAMES AND FLANGES SUITABLE FOR CEILING. CLEAN AND SERVICE FIXTURES. PROVIDE ACCESSORIES AND INCIDENTAL ITEMS AS REQUIRED FOR FIXTURES FURNISHED BY OTHERS FOR INSTALLATION.
   - B. ALL BALLASTS SHALL BE ELECTRONIC HIGH EFFICIENCY TYPE.
   - C. ALL LUMINAIRES THAT UTILIZE DOUBLE ENDED LAMPS AND CONTAIN BALLASTS THAT CAN BE SERVICED IN PLACE SHALL HAVE A DISCONNECTING MEANS PER NEC 410.130(G).
   - D. PROVIDE LENSES OF SAME MANUFACTURER.
   - E. FINAL LOCATION OF ALL FIXTURES SHALL BE AS INDICATED ON ARCHITECTURAL REFLECTED CEILING PLANS AND/OR ELEVATIONS AND DETAILS.
   - F. PROVIDE FOR EACH FIXTURE A LAMP OR LAMPS OF SUITABLE TYPE, SIZE, COLOR, WATTAGE, AND VOLTAGE.
   - G. INSTALL ACCESSORIES AND MODIFY FIXTURES AS REQUIRED FOR COMPLIANCE WITH REQUIREMENTS OF LOCAL DEPARTMENT OF HEALTH. OBTAIN ARCHITECTURAL APPROVAL FOR ANY SUBSTITUTION OR MODIFICATION TO FIXTURES GIVEN.
   - H. PROVIDE TENTING OR OTHER SUITABLE MEANS TO KEEP NON-IC RATED FIXTURES A MINIMUM OF 3" (OR MANUFACTURER REQUIRED DISTANCE) FROM INSULATION.
   - I. AIRCRAFT CABLE SHALL BE USED FOR ALL HUNG OR SUSPENDED FIXTURES, USE OF CHAIN IS NOT ALLOWED. SEE ALTERNATE PRICING.
   - J. ALL EXIT SIGNS AND EMERGENCY LIGHTING UNITS SHALL BE WIRED AHEAD OF ANY CONTROL DEVICES; FED FROM AN UNSWITCHED CIRCUIT.
7. TELEPHONE/DATA, SECURITY/DOOR ACCESS, CAMERA AND SPEAKER PROVISIONS
   - A. PROVIDE AND INSTALL ALL DEVICES, CONDUIT, CABLE AND ADDITIONAL EQUIPMENT AS INDICATED ON COMMUNICATIONS PLAN.
   - B. REFER TO TENANT'S GENERAL SPECIFICATIONS AND SCOPE OF WORK DOCUMENT FOR FULL SYSTEM REQUIREMENTS.
   - C. INSTALL OUTLET BOX WITH CONCEALED CONDUIT TO ABOVE THE CEILING OR TO STRUCTURE IN AREAS WITHOUT FINISHED CEILINGS.
   - D. PROVIDE COVER PLATES FOR ALL OUTLETS. COLOR SHALL BE THE WHITE UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS. CONFIRM ALL MOUNTING HEIGHTS AND ORIENTATIONS WITH ARCHITECT PRIOR TO ROUGH-IN.
8. FIRE ALARM SYSTEM
   - A. THESE DRAWINGS ARE NOT INTENDED TO SPECIFY FIRE ALARM SYSTEM REQUIREMENTS. FIRE ALARM SYSTEM REQUIREMENTS SHALL BE DETERMINED BY OTHERS.
   - B. FIRE ALARM SYSTEM SHALL BE DESIGNED, SIGNED AND SEALED BY A FIRE ALARM PROFESSIONAL AND BE APPROVED BY THE LOCAL FIRE DISTRICT.
   - C. FIRE ALARM CONTRACTOR SHALL VERIFY THE CONDITION OF THE EXISTING FIRE ALARM CONTROL PANEL AND DETERMINE IF IT IS SUITABLE FOR REUSE.
   - D. FURNISH AND INSTALL ALL DUCT SMOKE DETECTORS AS MAY BE REQUIRED.
   - E. FURNISH AND INSTALL ALL FIRE ALARM HORNS AND LIGHTS AND STROBES AS MAY BE REQUIRED.
   - F. FIRE ALARM MONITORING SERVICES ARE NOT REQUIRED. THESE SERVICES WILL BE PROVIDED BY THE OWNER/TENANT.

END

# ABBREVIATIONS

| | |
|---|---|
| x' x" | MOUNTING HEIGHT |
| A / AMP | AMPERE |
| AC | ABOVE COUNTER |
| AFF | ABOVE FINISHED FLOOR |
| AG | ABOVE COUNTER GFI DEVICE |
| AHU | AIR HANDLING UNIT |
| AIC | FAULT CURRENT CAPACITY |
| AL | ALUMINUM |
| C | CONDUIT |
| CLG | CEILING |
| CU | COPPER |
| CKT | CIRCUIT |
| CT | CURRENT TRANSFORMER |
| DYR | DRYER |
| DW | DISHWASHER |
| (E) | EXISTING |
| E.C. | ELECTRICAL CONTRACTOR |
| EF | EXHAUST FAN |
| EM | EMERGENGY |
| EPO | EMERGENCY POWER OFF |
| EWC | WATER COOLER |
| EXP | EXPLOSION PROOF |
| G | GROUND |
| G.C. | GENERAL CONTRACTOR |
| GD | GARBAGE DISPOSER |
| GFI | GROUND FAULT INTERUPTER |
| HD | EXHAUST HOOD |
| HP | HORSEPOWER |
| LCP | LIGHTING CONTROL PANEL |
| MCR | MICROWAVE |
| MDP | MAIN DISTRIBUTION PANELBOARD |
| MFG | MANUFACTURER |
| MH | MANHOLE |
| MTD | MOUNTED |
| MW | MICROWAVE |
| OVN | OVEN |
| N | NEUTRAL |
| NL | NITE LIGHTING |
| PH | PHASE |
| REF | REFRIGERATOR |
| RNG | RANGE |
| RTU | ROOF TOP UNIT |
| TTB | TELEPHONE TERMINAL BOARD |
| SN | SOLID NEUTRAL |
| SPECS. | SPECIFICATIONS |
| UG | UNDERGROUND |
| UNO | UNLESS NOTED OTHERWISE |
| V | VOLT |
| VA | VOLT-AMPERE |
| VFD | VARIABLE FREQUENCY DRIVE |
| W | WALL |
| WG | WEATHERPROOF GFI |
| WP | WEATHERPROOF |

## CODES AND DESIGN CRITERIA

| | |
|---|---|
| JURISDICTION: | RENO, NV |
| ELECTRICAL CODE: | 2011 NEC |
| ENERGY CODE: | 2009 IECC |

# ELECTRICAL SYMBOL LEGEND

- SINGLE RECEPTACLE (WALL MTD)
- DUPLEX RECEPTACLE (WALL MTD)
- DUPLEX RECEPTACLE (FLOOR MTD)
- DUPLEX RECEPTACLE (CEILING MTD)
- DUPLEX RECEPTACLE, SWITCHED (WALL MTD)
- 4-PLEX RECEPTACLE (WALL MTD)
- 4-PLEX RECEPTACLE (FLOOR MTD)
- 4-PLEX RECEPTACLE (CEILING MTD)
- SPECIAL PURPOSE RECEPTACLE (WALL MTD)
- SPECIAL PURPOSE RECEPTACLE (FLOOR MTD)
- JUNCTION BOX (WALL MTD)
- JUNCTION BOX (FLOOR MTD)
- JUNCTION BOX (CEILING MTD)
- DATA OUTLET (WALL MTD)
- DATA OUTLET (FLOOR MTD)
- TELEPHONE OUTLET (WALL MTD)
- TELEPHONE OUTLET (FLOOR MTD)
- TELEPHONE/DATA OUTLET (WALL MTD)
- TELEPHONE/DUPLEX OUTLET (FLOOR MTD)
- TELEPHONE/DATA/DUPLEX OUTLET (FLOOR MTD)
- SWITCH
- 3-WAY SWITCH
- 4-WAY SWITCH
- DIMMER SWITCH
- THERMA OVERLOAD SWITCH
- CONTROLLING OUTLET OR FIXTURE "a"

- 8' LED FIXTURE (CABLE HUNG)
- 8' LED FIXTURE CONNECTED TO GENERATOR (CABLE HUNG)
- 4' LED FIXTURE (CABLE HUNG)
- 4' LED FIXTURE CONNECTED TO GENERATOR (CABLE HUNG)
- 2'X4' LED FIXTURE (RECESSED)
- 2'X4' LED FIXTURE CONNECTED TO GENERATOR (RECESSED)
- 2' LED FIXTURE (SURFACE MTD)
- LED DOWNLIGHT (RECESSED)
- SCONCE (WALL MTD)
- LED UNDERCABINET TASK LIGHT (SURFACE MTD)
- EMERGENCY BUGEYE (SURFACE MTD)
- EXIT SIGN (SHADE INDICATES ILLUMINATED FACE(S))

- MOTOR
- FRACTIONAL HP MOTOR WITH TOGGLE STARTER & THERMAL OVERLOAD RELAY
- DISCONNECT SWITCH (NON-FUSED)
- FUSED DISCONNECT SWITCH
- DISCONNECT STARTER
- MOTOR/MOTOR STARTER/ FUSED DISCONNECT SWITCH COMBO
- MOTOR WITH FUSED DISCONNECT
- THERMOSTAT
- "C" PANEL ("C" INDICATES PANEL NAME)
- TV TELEVISION OUTLET
- TC TIME CLOCK WITH BATTERY
- PC PHOTO CELL
- FI FIRE ALARM PULL BOX
- FARA FIRE ALARM REMOTE ANNUNCIATOR
- FACP FIRE ALARM CONTROL PANEL
- SECURITY CAMERA
- OC1 OCCUPANCY SENSOR (CEILING MTD)
- OC2 OCCUPANCY SENSOR (WALL MTD)
- NEW WORK
- EXISTING WORK
- EXISTING WORK TO BE DEMOLISHED

# GENERAL ELECTRICAL NOTES:

1. ALL RFI'S AND SUBMITTALS TO BE SUBMITTED DIRECTLY TO THE OWNER/TENANT'S CONSTRUCTION MANAGER (NOT THE ARCHITECT OF RECORD).
2. E.C. SHALL PROVIDE ALL LIGHT FIXTURES EXCEPT THE ALBEO AND GE TYPE FIXTURES WHICH SHALL BE FURNISHED BY OWNER/TENANT. E.C. SHALL INSTALL ALL LIGHT FIXTURES INCLUDING THE ALBEO AND GE TYPE FIXTURES AND PROVIDE THE AIRCRAFT CABLE FOR THE ALBEO TYPE "A1" & "A3" SUSPENDED FIXTURES.
3. GENERATOR AND AUTOMATIC TRANSFER SWITCH FOR GENERATOR SHALL BE FURNISHED BY OWNER/TENANT AND INSTALLED BY G.C./E.C.
4. LIGHT FIXTURES TYPE "A1" & "A3" SHALL BE INSTALLED AT 9'-0" A.F.F. TO BOTTOM OF FIXTURE IN RETAIL AREAS, 10'-0"A.F.F. TO BOTTOM OF FIXTURE IN STOCK ROOM AND BACK OF HOUSE AREAS, UNLESS NOTED OTHERWISE. TYPE "A1" & "A3" LIGHT FIXTURES SHALL NOT BE SUPPORTED BY THE ROOF DECK, WOOD CEILING SYSTEMS OR THE GRID IMMEDIATELY ABOVE; HANG FIXTURES FROM BAR JOISTS, STRUCTURAL STEEL OR SUPPORTS SPANNING BETWEEN STRUCTURAL MEMBERS.
5. PROVIDE ONE-YEAR WARRANTY FROM PERMANENT CERTIFICATE OF OCCUPANCY FOR ALL WORK.
6. NO EXPOSED CONDUIT BETWEEN THE TOPS OF THE REFRIGERATION CASES AND 18" BELOW ROOF DECK.
7. E.C SHALL PROVIDE ALL REQUIRED FIRE PROTECTION AND FIRE ALARM SYSTEMS (DESIGNED AND SUBMITTED BY OTHERS).
8. E.C. SHALL LABEL ALL ELECTRICAL OUTLETS WITH THE PANEL NAME AND CIRCUIT NUMBER (I.E. "A-1"). LABELS SHALL BE PRINTED WITH A MACHINE ON WHITE TAPE WITH BLACK LETTERS.
9. ALL REFRIGERATION SYSTEM WIRING (INCLUDING FANS, LIGHTS, DEFROST AND CONTROLS) SHALL BE STRANDED.

# ALTERNATE AND UNIT PRICING NOTES:

1. E.C. TO PROVIDE AN ALTERNATE PRICE (ADD OR DEDUCT) FOR THE USE OF ERICO CADDY SPEED LINK CABLE SYSTEM, PART #SLD15L5, ACCESSORIES AND SUPPLEMENTAL STEEL AS REQUIRED FOR COMPLETE INSTALLATION OF THE ALBEO TYPE "A1" & "A3" LIGHT FIXTURES (ALTERNATE TO THE STANDARD AIRCRAFT CABLE).
2. E.C. TO PROVIDE A UNIT PRICE TO RE-LAMP AND CLEAN ONE TYPE 'E1' AND 'E2' EXISTING EXTERIOR FIXTURES. NUMBER WILL BE AS DIRECTED PER OWNER'S REP. SEE NOTE #19, SHEET E9.
3. E.C. TO PROVIDE A UNIT PRICE TO RE-LAMP, CLEAN AND RE-BALLAST ONE TYPE 'E1' AND 'E2' EXISTING EXTERIOR FIXTURES. NUMBER WILL BE AS DIRECTED PER OWNER'S REP. SEE NOTE #19, SHEET E9.

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**06.17.2014**
PERMIT AND CONSTRUCTION

JUN 17 2014

STATE OF NEVADA — Exp: 12/31/14 — ELECTRICAL — No. 19777

Issue / date

sheet title: ELECTRICAL SCHEDULES LEGEND

BAB by

app JAG

E1 of 13 sheet no.

| PANEL | A | | | | TYPE: EXISTING | | | | |
|---|---|---|---|---|---|---|---|---|---|
| VOLTAGE | 480/120 | | | | MTG: SURFACE | | | | |
| PHASE | 3 | | | | AIC: 14,000 | | | | |
| WIRES | 4 | | | LARGEST MOTOR: 11,640 VA | | | | | |
| RATING | 225 A | | | | | | | | |
| MAIN BREAKER | MLO | | | | | | | | |

| CD | CKT DESCRIPTION | BKR | CKT | A | B | C | CKT | BKR | CKT DESCRIPTION | CD |
|---|---|---|---|---|---|---|---|---|---|---|
| | SPARE | 20A1P | 1 | | ---- | ---- | | | | |
| | SPARE | 20A1P | 3 | ---- | | ---- | 2 | 20A1P | SPARE | |
| | SPARE | 20A1P | 5 | ---- | ---- | ---- | 4 | 20A1P | SPARE | |
| | SPARE | 20A1P | 7 | ---- | ---- | ---- | 6 | 20A1P | SPARE | |
| | SPARE | 20A1P | 9 | ---- | ---- | ---- | 8 | 20A1P | SPARE | |
| | SPARE | 20A1P | 11 | ---- | ---- | ---- | 10 | 20A1P | SPARE | |
| | SPARE | 20A1P | 13 | ---- | ---- | ---- | 12 | 20A1P | SPARE | |
| | SPARE | 20A1P | 15 | ---- | ---- | ---- | 14 | 20A1P | SPARE | |
| | SPARE | 20A1P | 17 | ---- | ---- | ---- | 16 | 20A1P | SPARE | |
| | SPARE | 20A1P | 19 | ---- | ---- | ---- | 18 | 20A1P | SPARE | |
| | SPARE | 20A1P | 21 | ---- | ---- | ---- | 20 | 20A1P | SPARE | |
| | SPARE | 20A1P | 23 | ---- | ---- | ---- | 22 | 20A1P | SPARE | |
| | SPARE | 20A1P | 25 | ---- | ---- | ---- | 24 | 20A1P | SPARE | |
| | SPARE | 20A1P | 27 | ---- | ---- | ---- | 26 | 20A1P | SPARE | |
| | SPARE | 20A1P | 29 | ---- | ---- | ---- | 28 | 20A1P | SPARE | |
| | SPARE | 20A1P | 31 | ---- | ---- | ---- | 30 | 20A1P | SPARE | |
| | SPARE | 20A1P | 33 | ---- | ---- | ---- | 32 | 20A1P | SPARE | |
| | SPARE | 20A1P | 35 | ---- | ---- | ---- | 34 | 20A1P | SPARE | |
| 3 | (E) BAILER | 20A3P | 37 | 3880 | ---- | ---- | 36 | | SPACE | |
| 3 | | | 39 | ---- | 3880 | ---- | 38 | | SPACE | |
| 3 | | | 41 | ---- | ---- | 3880 | 40 | | SPACE | |
| | | | | | | | 42 | | SPACE | |
| | TOTAL VOLT-AMPS | | | 3880 | 3880 | 3880 | | | | |

TOTAL CONNECTED LOAD 11,639 VA 14 AMPS

| TOTAL DEMAND | | LOAD | DF | DEMAND | |
|---|---|---|---|---|---|
| LIGHTING | (1) | 0 | 1.25 | 0 | |
| RECEPTACLES | (2) | 0 | 10k+.5 | 0 | PHASE IMBALANCE [%] |
| MOTORS | (3) | 11639 | 1.25+1 | 14549 | 0.00% A/B |
| KITCHEN | (4) | 0 | 0.65 | 0 | 0.00% A/C |
| CONT. RECPT | (5) | 0 | 1.00 | 0 | 0.00% B/C |
| ELECTRIC HEAT | (6) | 0 | 1.00 | 0 | |
| ELEC. WATER HTG | (7) | 0 | 1.25 | 0 | |
| | (8) | 0 | 1.00 | 0 | |
| | (9) | 0 | 1.00 | 0 | |
| | TOTALS | 11639 | | 14549 | |

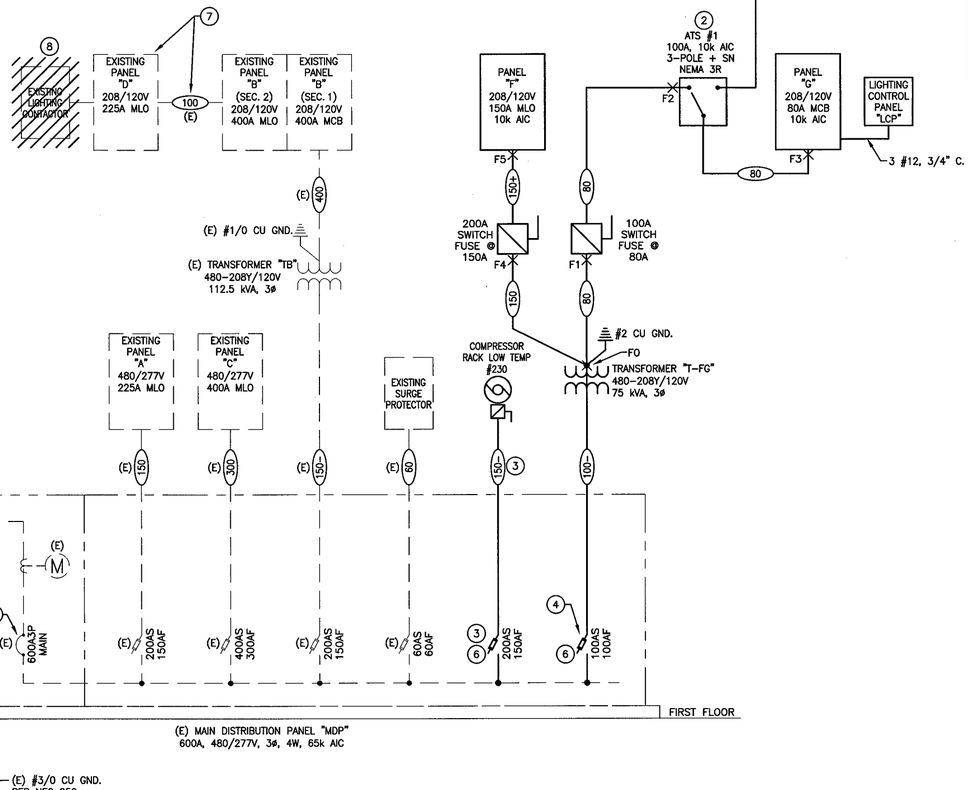
17 AMPS

| MAIN DISTRIBUTION PANEL "MDP" LOAD SUMMARY | | | |
|---|---|---|---|
| VOLTS | 480 | | |
| PHASE | 3 | | |
| LARGEST MOTOR | 14,760 VA | | |

| Load Description | Connected | DF | Demand |
|---|---|---|---|
| (1) LIGHTING | 29,530 VA | 1.25 | 36,913 VA |
| (2) RECEPTACLES | 22,741 VA | 10k + 0.5 | 16,371 VA |
| (3) MOTORS | 339,878 VA | 1 + 0.25 | 343,568 VA |
| (4) KITCHEN | 24,912 VA | 1 | 24,912 VA |
| (5) MISCELLANEOUS | 10,525 VA | 1 | 10,525 VA |
| (6) ELECTRIC HEAT | 28,388 VA | 1.25 | 35,485 VA |
| (7) ELECT. WATER HTG | 0 VA | 1.25 | 0 VA |
| (8) | 0 VA | 1 | 0 VA |
| (9) | 0 VA | 1 | 0 VA |
| TOTAL SERVICE DEMAND (VA) | | | 467,773 VA |
| TOTAL SERVICE AMPS (A) | | | 563 A |

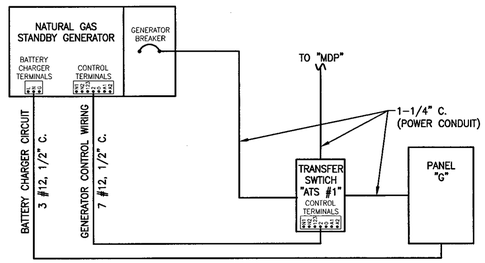
| TRANSFORMER T-FG LOAD SUMMARY (75 KVA) | | |
|---|---|---|
| PRIMARY VOLTS | 480 | |
| SECONDARY VOLTS | 208 | (208Y/120) |
| PHASE | 3 | |
| LARGEST MOTOR | 1,344 VA | |

| Load Description | Connected | DF | Demand |
|---|---|---|---|
| (1) LIGHTING | 13,259 VA | 1.25 | 16,574 VA |
| (2) RECEPTACLES | 11,225 VA | 10k + 0.5 | 10,613 VA |
| (3) MOTORS | 5,593 VA | 1 + 0.25 | 5,929 VA |
| (4) KITCHEN | 24,912 VA | 1 | 24,912 VA |
| (5) MISCELLANEOUS | 2,075 VA | 1 | 2,075 VA |
| (6) ELECTRIC HEAT | 0 VA | 1.25 | 0 VA |
| (7) ELECT. WATER HTG | 0 VA | 1.25 | 0 VA |
| (8) | 0 VA | 1 | 0 VA |
| (9) | 0 VA | 1 | 0 VA |
| TOTAL LOAD | | | 60,102 VA |
| TOTAL PRIMARY AMPS | | | 72 A |
| TOTAL SECONDARY AMPS | | | 167 A |




1 E2 ONE-LINE DIAGRAM

N.T.S.




2 E2 GENERATOR WIRING DETAIL

N.T.S.

## GENERAL NOTES:

1. E.C. SHALL NOTIFY THE LOCAL UTILITY COMPANY OF THE ADDITIONAL BUILDING LOADS AND ANY REVISIONS TO THE SERVICE EQUIPMENT. COORDINATE REQUIREMENTS AND INSTALLATION OF ANY UTILITY METERING AND SERVICE ENTRANCE EQUIPMENT WITH UTILITY COMPANY.
2. ALL EQUIDIAGONALLY HATCHED AREAS ON THE DEMOLITION ONE-LINE DIAGRAM INDICATES EXISTING EQUIPMENT TO BE REMOVED.

## DRAWING NOTES:

1. OWNER/TENANT TO PROVIDE GENERAC NATURAL GAS STANDBY GENERATOR WITH ENCLOSURE AND CRITICAL GRADE EXHAUST SILENCER. E.C. SHALL INSTALL GENERATOR, PROVIDE AND INSTALL VIBRATION ISOLATION MOUNTING, PROVIDE AND INSTALL INTERNAL BATTERY (12-VOLT, GROUP 26) AND START UP GENERATOR. GENERATOR SHALL BE STARTED WITH OWNER/TENANT'S REP PRESENT.
2. AUTOMATIC TRANSFER SWITCH IS TO BE PROVIDED BY OWNER/TENANT, INSTALLED BY E.C. E.C. SHALL TEST THE ATS AND GENERATOR BY SIMULATING A POWER OUTAGE WITH OWNER/TENANT'S REP PRESENT.
3. COMPRESSOR RACK DATA IS ESTIMATED, BASED ON PREVIOUS PROJECTS. E.C. SHALL VERIFY ACTUAL COMPRESSOR RACK ELECTRICAL DATA PRIOR TO ORDERING ANY NEW CIRCUIT BREAKERS OR WIRING EQUIPMENT WITH OWNER/TENANT'S REP AND REFRIGERATION CONSULTANT.
4. PROVIDE LABEL IN PANEL NEXT TO SWITCH THAT READS "GENERATOR TEST".
5. PROVIDE LABEL AT THE SERVICE ENTRANCE EQUIPMENT THAT INDICATES THE TYPE AND LOCATION OF STANDBY POWER SOURCE.
6. PROVIDE NEW FUSED SWITCH IN EXISTING DISTRIBUTION PANEL. MATCH PANEL AIC RATING.
7. EXISTING PANEL TO BE REMOVED AND RELOCATED TO A NEW LOCATION. REUSE EXISTING FEEDER AND RE-ROUTE TO NEW LOCATION SHOWN ON POWER PLAN E4.
8. EXISTING LIGHTING CONTACTOR TO BE REMOVED.

## FEEDER SCHEDULE

| | |
|---|---|
| 600U | 2 SETS: (4 350 KCMIL CU) 3"C. |
| 400 | (4 500 KCMIL + 1 #3 AWG G.) 3-1/2"C. |
| 300 | (4 350 KCMIL + 1 #4 AWG G.) 3"C. |
| 150+ | (4 #3/0 AWG + 1 #4 AWG G.) 2"C. (1) |
| 150 | (4 #1/0 AWG + 1 #6 AWG G.) 1-1/2"C. |
| 150- | (3 #1/0 AWG + 1 #6 AWG G.) 1-1/2"C. |
| 100 | (4 #2 AWG + 1 #8 AWG G.) 1-1/4"C. |
| 100- | (3 #2 AWG + 1 #8 AWG G.) 1-1/4"C. |
| 80 | (4 #3 AWG CU + 1 #8 AWG CU G.) 1-1/4"C. |
| 60 | (4 #6 AWG + 1 #10 AWG G.) 1"C. |

(1) CONDUCTOR SIZES INCREASED FOR VOLTAGE DROP

UTILITY CONTACT:
COMPANY: NV ENERGY
PHONE: (775) 834-4444

| SHORT CIRCUIT CALCULATIONS | |
|---|---|
| F0 | 3,439 A |
| F1 | 3,340 A |
| F2 | 3,245 A |
| F3 | 3,156 A |
| F4 | 3,385 A |
| F5 | 1,738 A |

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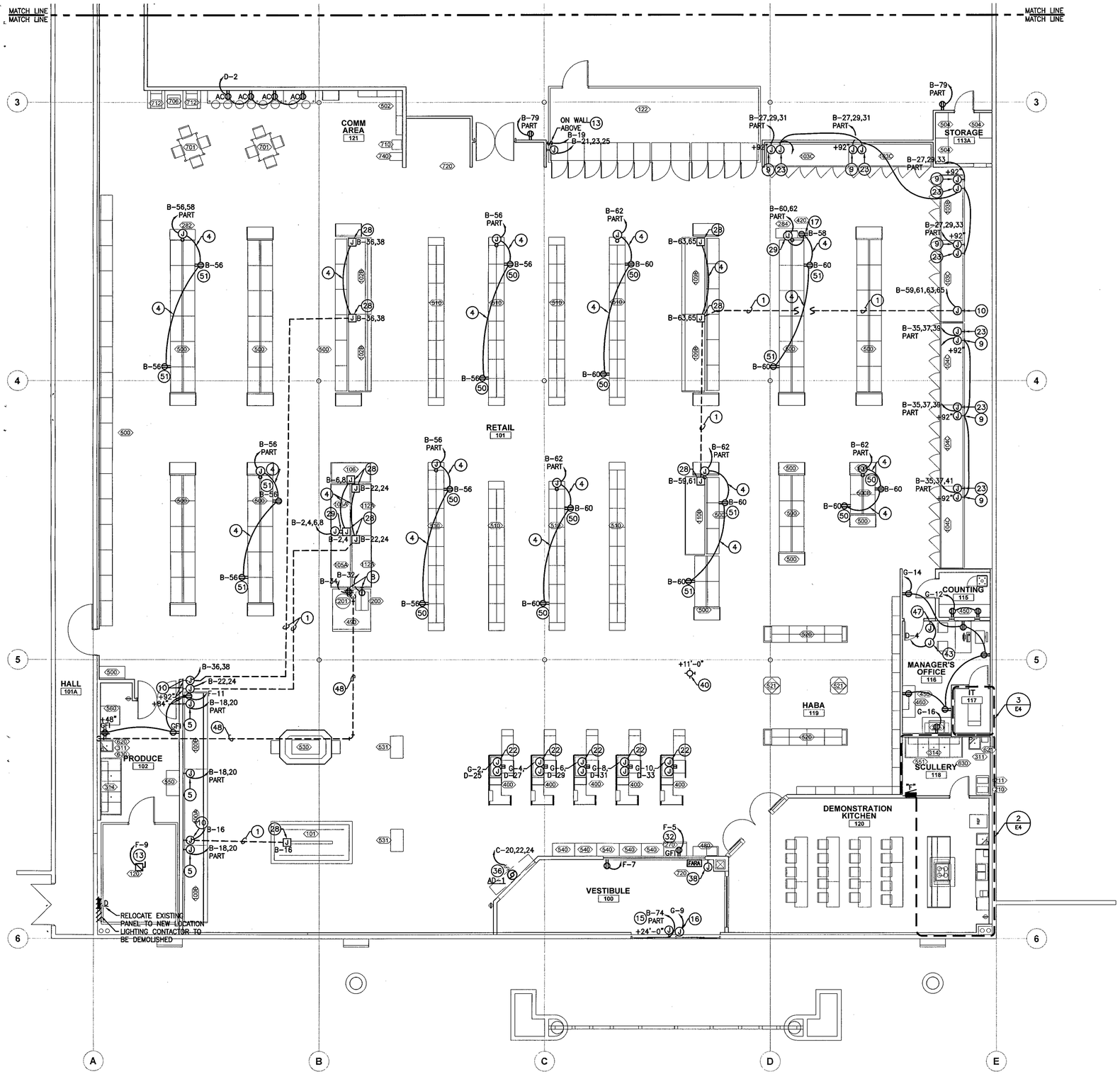
PROFESSIONAL ENGINEER — PHILIP A. GIVEN — No. 19771 — Exp. 12/31/14 — ELECTRICAL

sheet title: ONE-LINE DIAGRAM

by: BAB

app: JAG

sheet no.: E2 of 13




## GENERAL NOTES:

1. ALL EXISTING ELECTRICAL EQUIPMENT, DEVICES, CONDUIT AND WIRE TO BE REMOVED UNLESS NOTED OTHERWISE.
2. NO SURFACE MOUNTED ELECTRICAL DEVICES OR EXPOSED CONDUIT FROM FLOOR TO 18" AFF, UNLESS SPECIFICALLY APPROVED BY OWNER'S REP.
3. ALL DEVICES AND COVERPLATES SHALL BE WHITE IN COLOR INCLUDING OUTLETS FED FROM THE OPTIONAL STANDBY GENERATOR, UNLESS OTHERWISE NOTED.
4. E.C. SHALL PROVIDE JUNCTION BOXES AND CONDUIT ROUGH-IN FOR TRANE TRACKER TEMPERATURE, HUMIDITY AND CO2 SENSORS. SEE MECHANICAL DRAWINGS FOR LOCATIONS AND REFER TO DETAIL 1/E7 FOR MOUNTING HEIGHTS. COORDINATE WITH MECHANICAL CONTRACTOR FOR COMPLETE SCOPE OF WORK.
5. ALL REFRIGERATION SYSTEM WIRING (INCLUDING FANS, LIGHTS, DEFROST AND CONTROLS) SHALL BE STRANDED.

## DRAWING NOTES:

1. TRENCH ACROSS, COORDINATE WITH PLUMBING, OWNERS REP AND REFRIGERATION CONSULTANT. PROVIDE SEPARATE 3/4" PVC CONDUIT FOR POWER, CONTROL WIRING, AND DEFROST WHEN CALLED FOR ON THE COMPRESSOR SCHEDULE. REFER TO DETAIL 2/E11.
2. FUSED DISCONNECT FOR MED TEMP COMPRESSORS, SINGLE POINT CONNECTION, BY E.C. (SEE ONE-LINE)
3. FUSED DISCONNECT FOR LOW TEMP COMPRESSORS, SINGLE POINT CONNECTION, BY E.C.
4. CONDUIT TO BE CONCEALED WITHIN OR MOUNTED ABOVE EQUIPMENT CASE OR SHELVING.
5. MOUNT JUNCTION BOX @ 84". LEAVE & COIL A 4' PIGTAIL AT J-BOX. ONE HOME RUN, TWO CONNECTION POINTS, ONE PER PIECE OF EQUIPMENT. ONE CIRCUIT FOR FANS, ONE CIRCUIT FOR LIGHTS. ELECTRICIAN TO MAKE FINAL CONNECTION.
6. MOUNT JUNCTION BOX @ 92". LEAVE & COIL A 4' PIGTAIL AT J-BOX. ONE CONNECTION POINT, ONE CIRCUIT FOR FANS, ONE CIRCUIT FOR LIGHTS. ELECTRICIAN TO MAKE FINAL CONNECTION.
7. EXISTING BALLER TO REMAIN. MAINTAIN EXISTING CONNECTIONS.
8. ROUTE CONDUIT(S) BELOW SLAB AS INDICATED, THEN BACK TO ELECTRICAL PANEL OR NEAREST WALL.
9. MOUNT JUNCTION BOX @ 92". LEAVE & COIL A 4' PIGTAIL AT J-BOX. ONE CONNECTION POINT, ONE CIRCUIT FOR FANS, ONE CIRCUIT FOR LIGHTS, ONE OR TWO CIRCUITS FOR ANTI SWEAT HEATERS. ELECTRICIAN TO MAKE FINAL CONNECTION.
10. HOME RUN COLLECTION POINT FOR ALL POWER WIRING, CONTROL WIRING AND DEFROST WIRING IN TRENCH, CONTINUE CONDUITS INDIVIDUALLY. REFER TO DETAIL 2/E11.
11. NEW LOCATION OF TELEPHONE BOARD. EXTEND EXISTING SERVICE ENTRY WIRING AND CONDUIT FROM EXISTING TELEPHONE BOARD LOCATION. VERIFY IN FIELD.
12. COORDINATE SWITCH LOCATION WITH LIGHTING PLAN.
13. COORDINATE CONNECTION POINT FOR REFRIGERATORS & FREEZERS WITH OWNER/TENANT'S REP.
14. PROVIDE MOTOR RATED DISCONNECT SWITCH (30A, 240V, 1-PHASE) FOR FAN COIL POWER SUPPLY FROM COMPRESSOR RACK.
15. PROVIDE CIRCUIT FOR EXTERIOR BUILDING SIGNAGE AS INDICATED. PROVIDE 8"x8"x6" JUNCTION BOX ON INTERIOR SIDE OF WALL WITH 2 FEET OF COILED WIRE FOR CONNECTION TO LOW VOLTAGE TRANSFORMER. TRANSFORMER, LOW VOLTAGE WIRING AND CONNECTION TO SIGN WILL BE BY OTHERS. VERIFY QUANTITY, LOCATIONS AND REQUIREMENTS WITH OWNER/TENANT'S REP. PROVIDE NEW BUILDING MOUNTED PHOTOCELL TO CONTROL EXTERIOR SIGNAGE CIRCUIT.
16. PROVIDE CONNECTION TO AUTOMATIC DOORS AND ASSOCIATED CONTROLS.
17. COFFEE GRINDER RECEPTACLE, CONCEAL CONDUIT WITHIN SHELVING AND MOUNT RECEPTACLE BELOW SHELF/GONDOLA. VERIFY LOCATION AND MOUNTING HEIGHT WITH OWNER/TENANT'S REP.
18. MOUNT RECEPTACLE IN WALL ABOVE GLASS, NO MORE THAN 12" ABOVE TOP OF GLASS.
21. MICROWAVE RECEPTACLE TO BE CONCEALED IN CABINET AT APPROX. +36" IN REAR OF CABINET, CABINET BY OWNER/TENANT. VERIFY CONDUIT ROUTING, LOCATION AND MOUNTING HEIGHT WITH OWNER/TENANT'S REP.
22. PROVIDE DUAL-CHANNEL STEEL POWER POLE WITH RECTANGULAR CROSS-SECTION AND WHITE FINISH FOR ROUTING POWER AND DATA WIRING FROM 12" A.F.F. TO STRUCTURAL CEILING. VERIFY POLE HEIGHT PRIOR TO ORDERING. POWER POLE SHALL BE HAVE TWO (2) 20A, 120V DUPLEX RECEPTACLES MOUNTED BETWEEN 12" AND 24" FROM BOTTOM OF POLE. INSTALL POWER JUNCTION BOXES AT CEILING.
23. 4X4 JUNCTION BOX FOR ELECTRIC DEFROST, COORDINATE WITH COMPRESSOR RACK NOTES ON DETAILS SHEET FOR CONDUIT & WIRE SIZE.
24. PROVIDE JUNCTION BOX AND CONNECTION FOR THERMOSTAT FOR EXHAUST FAN, MOUNT JUNCTION BOX AT +48" AFF, VERIFY LOCATION WITH OWNER/TENANT'S REP.
26. PROVIDE CONNECTION TO FORKLIFT BATTERY CHARGER, E.C. TO VERIFY CONNECTION POINT & TYPE WITH MANUFACTURER. DISCONNECT SHALL BE LOCATED ADJACENT TO RECEIVING DESK AT 6'-6" AFF.
27. ROUGH IN FOR FUTURE SWITCH. PROVIDE BLANK COVERPLATE.
28. JUNCTION BOX IN CASE LEAVE AND COIL 12" PIGTAIL AT JUNCTION BOX. ONE CIRCUIT FOR FANS, ONE CIRCUIT FOR LIGHTS, ELECTRICIAN TO MAKE FINAL CONNECTION. COORDINATE ROUGH IN WITH OWNER/TENANT'S REP.
29. PROVIDE SEPARATE 1" CONDUITS FOR POWER, CONTROLS AND DEFROST WIRING FROM OVERHEAD JUNCTION BOX, CONDUITS TO BE PAINTED BY OWNER/TENANT.
32. VERIFY ELECTRICAL REQUIREMENTS AND NEMA PLUG CONFIGURATION FOR ICE MACHINE WITH OWNER/TENANT'S REP PRIOR TO ROUGH IN.
33. ELECTRICAL CONTRACTOR TO LEAVE 6' WIRE WHIP FOR INSTALLATION IN MILLWORK OF RECEPTACLES.
34. PROVIDE TIME CLOCK TO CONTROL RESTROOM EXHAUST FANS (EF-2 AND EF-3) AND CIRCULATION PUMP (CP-1). COORDINATE WITH MECHANICAL AND PLUMBING DRAWINGS.
35. SHALLOW-TYPE RECEPTACLE FOR ELECTRIC TOWEL DISPENSER TO BE RECESSED IN A 6"x6"x4" DEEP RECESSED BOX (NO COVER) SO THAT THE FRONT SURFACE OF THE RECEPTACLE IS RECESSED AT LEAST 1-1/2" BEHIND THE WALL SURFACE TO ALLOW SPACE FOR THE TOWEL DISPENSER PLUG. CENTER RECEPTACLE IN BOX. COORDINATE FINAL MOUNTING HEIGHT AND LOCATION WITH OWNER/TENANT'S REP.
36. PROVIDE CONNECTIONS TO INTEGRAL AIR DOOR TOGGLE DISCONNECT SWITCH. VERIFY ELECTRICAL REQUIREMENTS WITH MANUFACTURER PRIOR TO ROUGH-IN.
37. EXISTING FIRE ALARM PANEL TO REMAIN.
38. PROVIDE JUNCTION BOX AT +48" FOR AIR DOOR THERMOSTAT, LOCATION PER MECHANICAL PLANS.
39. PROVIDE SPECIAL PURPOSE RECEPTACLE FOR KITCHEN EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. VERIFY REQUIREMENTS PRIOR TO ROUGH-IN.
40. PILOT LIGHT FOR KITCHEN COOKING EQUIPMENT, HUBBELL-KILLARK #0023-R23C. MOUNT IN RECESSED JUNCTION BOX ABOVE SIGN BAND WITHIN SITE OF CHECK STANDS, COORDINATE FINAL LOCATION WITH OWNER/TENANT'S REP PRIOR TO INSTALLATION. ROUTE 2 #12s, 3/4"C. TO ANSUL HOOD CONTACTOR PER DETAIL 4/E4. PILOT LIGHT SHALL BE ILLUMINATED WHEN KITCHEN RANGE IS IN USE.
41. PROVIDE SWITCH WITH LOCKING COVER (MASTER LOCK #LOM496, OR EQUAL). SWITCH SHALL CONTROL THE ANSUL HOOD, KITCHEN PILOT LIGHT AND KITCHEN COOKING EQUIPMENT VIA REMOTE MOUNTED CONTACTORS LOCATED ABOVE ACCESSIBLE CEILING. SEE WIRING DIAGRAM 4/E4.
42. PROVIDE 2 #12s, 3/4"C. FROM ANSUL HOOD CONTROL PANEL TO SHUNT TRIP CIRCUIT BREAKER SUPPLYING POWER TO COOKING EQUIPMENT. VERIFY REQUIREMENTS WITH HOOD MANUFACTURER.
43. PROVIDE 4X4 SURFACE MOUNTED JUNCTION BOX ABOVE FINISHED CEILING WITH 120-24VAC TRANSFORMER FOR ROOFTOP UNIT CONTROL POWER (24V CONTROL WIRING BY OTHERS).
44. PROVIDE HARD WIRED CONNECTION FOR REFRIGERATION CONTROL PANEL.
45. PROVIDE HARD WIRED CONNECTION TO HEAT TRACE EQUIPMENT.
46. PROVIDE 2 #12s, 1/2"C. FROM ANSUL HOOD CONTROL PANEL TO WALL MOUNTED HOOD FAN CONTROLLER. VERIFY LOCATION OF CONTROLLER WITH OWNER/TENANT AND WIRING REQUIREMENTS WITH MANUFACTURER.
47. PROVIDE 4X4 FLUSH MOUNTED JUNCTION BOX AT +48" FOR BUILDING MANAGEMENT DISPLAY PANEL WITH 3/4" EMPTY CONDUIT UP TO POWER & DATA JUNCTION BOXES ABOVE FINISHED CEILING. DISPLAY PANEL TO BE PROVIDED AND INSTALLED BY OTHERS.
48. PROVIDE 2" CONDUIT BELOW SLAB WITH LONG SWEEP ELBOWS AND PULL STRING FOR WATER MACHINE TUBING BY OTHERS.
49. REFER TO ONE-LINE DIAGRAM FOR DEMOLISHED EQUIPMENT AND EQUIPMENT TO REMAIN AT EXISTING GUTTER/WIREWAY.
50. RECEPTACLE TO BE MOUNTED IN SURFACE JUNCTION BOX BELOW BOTTOM SHELF WITH SIDE MOUNTED RECEPTACLE FLUSH WITH EDGE OF SHELVING.
51. RECEPTACLE TO BE FLUSH MOUNTED IN TOE KICK SPACE.
52. EXISTING COMPACTOR TO REMAIN. MAINTAIN EXISTING CONNECTIONS.

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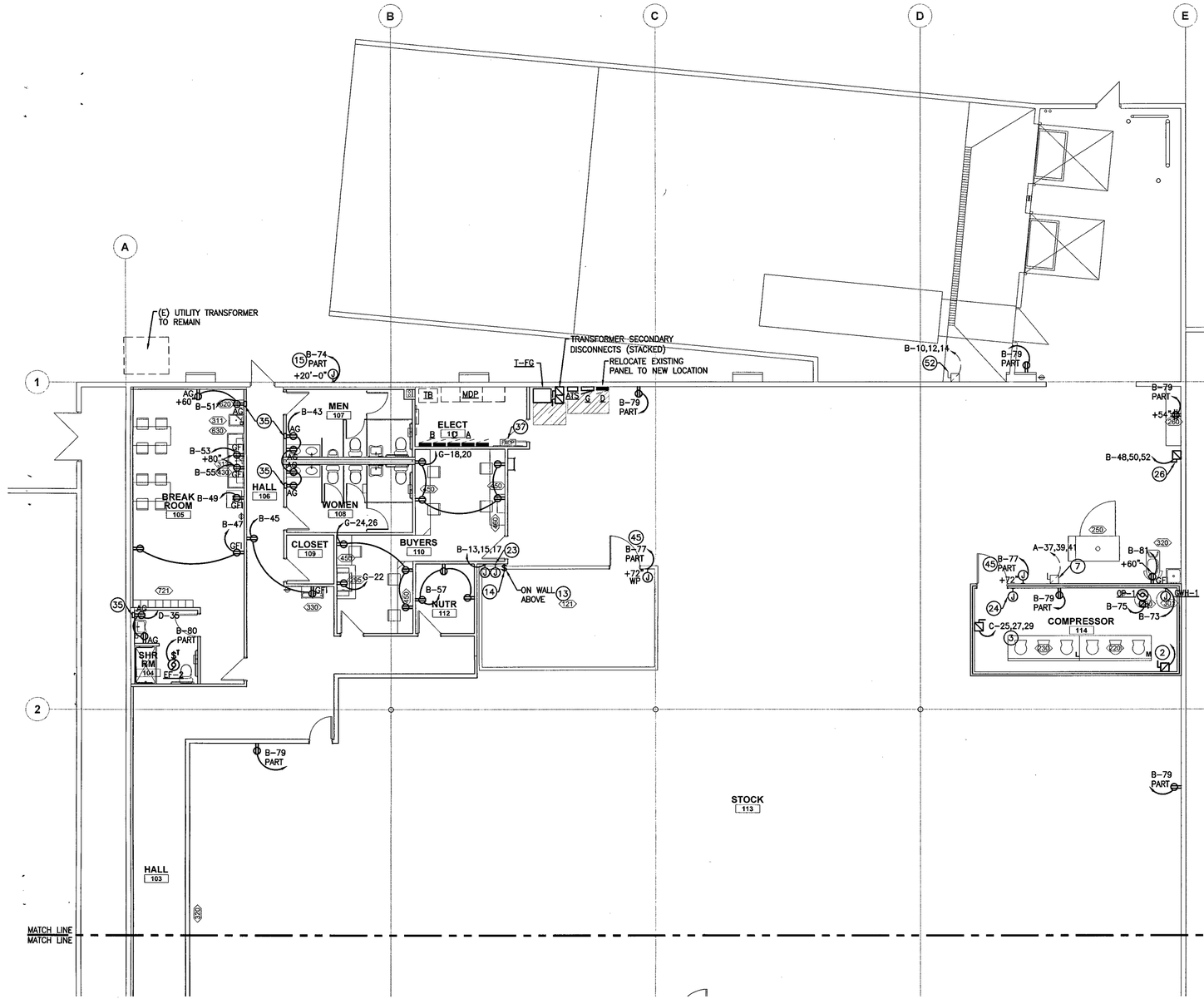
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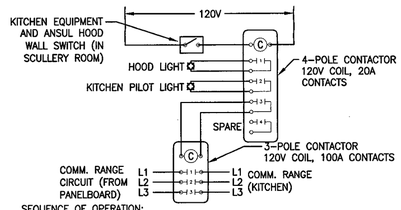



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by: BAB
app: JAG
sheet no.: E3 of 13




1 E4 POWER PLAN — NORTH

1/8"=1'-0"

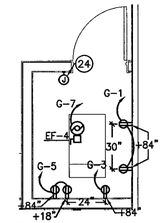



SEQUENCE OF OPERATION:
WALL SWITCH IN SCULLERY ROOM WILL ENERGIZE OR DE-ENERGIZE THE ANSUL HOOD LIGHT, KITCHEN PILOT LIGHT IN STORE AND THE COMMERCIAL RANGE COOKING EQUIPMENT VIA REMOTE MOUNTED CONTACTORS IN THE CEILING SPACE ABOVE.

FIRE ALARM SYSTEM NOTE:
UPON ACTIVATION, THE ANSUL HOOD SYSTEM CONTROL PANEL WILL SHUNT DOWN POWER TO THE COOKING EQUIPMENT INDEPENDENTLY FROM THESE CONTROLS VIA A SHUNT TRIP CIRCUIT BREAKER IN THE SOURCE PANELBOARD.

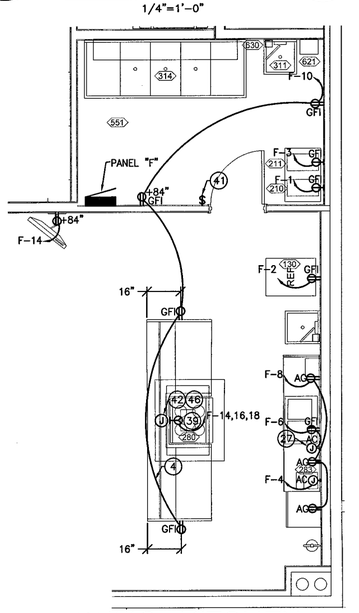
4 E4 ANSUL HOOD CONTROL DIAGRAM

N.T.S.




3 E4 IT ROOM ENLARGED PLAN — NORTH

1/4"=1'-0"




2 E4 DEMO KITCHEN ENLARGED PLAN — NORTH

1/4"=1'-0"

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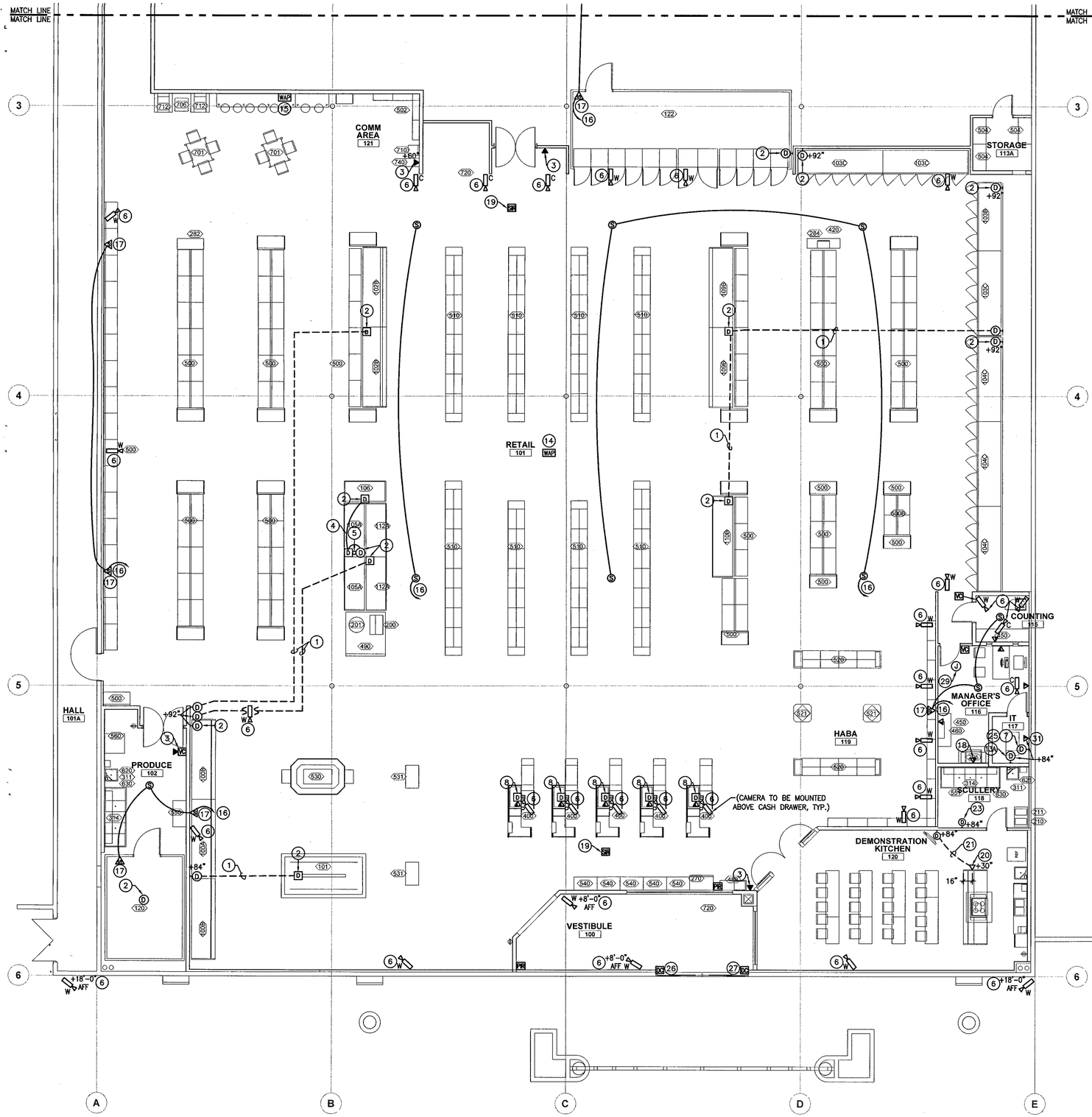
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JOHN A. WAGNER
Exp. 6/30/14
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STATE OF NEVADA

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by: BAB

app: JAG

sheet no.: E4 of 13




1 E5 COMMUNICATION PLAN

NORTH

8' 4' 0 8' 16'

1/8"=1'-0"

| CAMERA CONDUIT SCHEDULE | |
|---|---|
| # 4–PAIR CAT5e | CONDUIT SIZE |
| 1 – 4 | 3/4" |
| 5 – 7 | 1" |
| 8 – 12 | 1–1/4" |
| 13 – 16 | 1–1/2" |
| 17 – 22 | 2" |

| CAMERA LEGEND | |
|---|---|
| SYMBOL | |
| W | WALL MOUNTED CAMERA, +10'–6" AFF OR 1'–0" BELOW CEILING (WHICHEVER IS LOWER), U.N.O. |
| P | PENDANT MOUNTED, CAMERA AT +9'–0" AFF, UNLESS NOTED OTHERWISE. |
| C | CEILING MOUNTED CAMERA. |

## GENERAL NOTES:

1. ALL EXISTING TELEPHONE, DATA AND OTHER LOW VOLTAGE DEVICES, CONDUIT AND WIRE TO BE REMOVED UNLESS NOTED OTHERWISE.
2. NO SURFACE MOUNTED ELECTRICAL DEVICES OR EXPOSED CONDUIT FROM FLOOR TO 18" AFF, UNLESS SPECIFICALLY APPROVED BY OWNER'S REP.
3. ALL LOW VOLTAGE WIRING AND DEVICES SHOWN ON THIS PLAN TO BE PROVIDED AND INSTALLED BY E.C., UNLESS NOTED OTHERWISE.
4. FOR ALL TELEPHONE AND DATA OUTLETS, PROVIDE 3/4" CONDUIT STUBBED UP ABOVE ACCESSIBLE CEILING OR TIGHT TO STRUCTURE IN AREAS WHERE A FINISHED CEILING IS NOT BEING INSTALLED.
5. ALL CONTROL WIRING TO BE STRANDED, UNLESS NOTED OTHERWISE.
6. E.C. SHALL MAKE ALL CONNECTIONS AT REFRIGERATION CASES SHOWN, CONNECTIONS AT COMPRESSOR RACKS WILL BE MADE BY OTHERS.
7. DATA/CONTROL CABLING RUNS SHALL NOT EXCEED MORE THAN 8 LBS PER LINEAR FOOT.
8. PROVIDE JUNCTION BOXES, CONDUIT AND WIRE FOR CAMERAS UNLESS NOTED OTHERWISE. CAMERAS AND VIDEO RECORDING SYSTEM EQUIPMENT SHALL BE PROVIDED AND INSTALLED BY OTHERS.
9. ALL CAT5e CABLING (TELEPHONE, DATA, SECURITY, DOOR ACCESS) AND STRANDED SPEAKER CABLING SHALL BE COILED WITH 15' OF CABLE LENGTH IN IT ROOM.

| COMMUNICATION SYMBOL LEGEND | | CABLE | DEVICE |
|---|---|---|---|
| D | DATA JUNTION BOX (WALL MTD) | AS NOTED | N/A |
| D | DATA JUNTION BOX (CEILING MTD) | AS NOTED | N/A |
| D | DATA JUNTION BOX (FLOOR MTD) | AS NOTED | N/A |
| | DATA OUTLET (WALL MTD) | (1) CAT5e | STANDARD 1–PORT, CAT 5E JACK |
| | TELEPHONE OUTLET (WALL MTD) | (1) CAT5e | STANDARD 1–PORT, 8–PIN JACK |
| | TELEPHONE/DATA OUTLET (WALL MTD) | (2) CAT5e | STANDARD 2–PORT JACK |
| | DATA OUTLET (FLOOR MTD) | (1) CAT5e | STANDARD 1–PORT, CAT 5E JACK |
| | TELEPHONE OUTLET (FLOOR MTD) | (1) CAT5e | STANDARD 1–PORT, 8–PIN JACK |
| | TELEPHONE/DATA OUTLET (FLOOR MTD) | (2) CAT5e | STANDARD 2–PORT JACK |
| | CAMERA (SEE CAMERA LEGEND) | (1) CAT5e | J–BOX ONLY, DEVICE BY OTHERS |
| S | SPEAKER (CEILING MTD) | (1) 18/2 | ATLAS/SOUNDOLIER: "SM42TWH" (RETAIL AREA, WAREHOUSE, WALK COOLERS, ETC.) |
| | SPEAKER (WALL MTD) | (1) 18/2 | "FA–136" (TILED CEILING AREAS) |
| VC | VOLUME CONTROLLER (WALL MTD) | (1) 18/2 | ATLAS "AT–10" |
| WAP | WIRELESS ACCESS POINT (CEILING MTD) | (1) CAT5e | PER VCNG SPECIFICATIONS |
| KP | KEY PAD (WALL MTD) | (1) 22/4 | PER VCNG SPECIFICATIONS |
| CR | CARD READER (WALL MTD) | (1) 22/8 (SHIELDED) | PER VCNG SPECIFICATIONS |
| SR | SIREN (WALL MTD) | (1) 18/4 | PER VCNG SPECIFICATIONS |
| PIR | SECURITY SYSTEM MOTION SENSOR | (1) 22/4 | PER VCNG SPECIFICATIONS |
| DC | DOOR CONTACT | (1) 22/2 | PER VCNG SPECIFICATIONS |
| DB | DOOR BELL | (1) 22/2 | VALCOM TONE GENERATOR |
| PH | POWER DOOR HINGE | (1) 18/4 | PER VCNG SPECIFICATIONS |
| FA | FIRE ALARM DEVICE (BY OTHERS) | BY OTHERS | BY OTHERS |

## DRAWING NOTES:

1. – ROUTE 3/4" CONTROL CONDUIT BELOW SLAB IN TRENCH WITH POWER AND/OR DEFROST CONDUITS. REFER TO DETAIL 2/E7.
2. – CONTROLS JUNCTION BOX, RUN 3/4" CONDUIT AND CABLE (PER REFRIGERATION EQUIPMENT CONNECTION SCHEDULE, SHEET E7) FROM JUNCTION BOX TO COMPRESSOR RACK. ROUTE CONDUIT JUST BELOW ROOF DECK. COIL 30' OF CABLE AT JUNCTION BOX AND IN COMPRESSOR ROOM, COORDINATE TERMINATION WITH OWNER'S REP.
3. – COORDINATE PHONE LOCATION WITH OWNERS/TENANT'S REP.
4. – CONDUIT TO BE CONCEALED WITHIN OR MOUNTED ABOVE EQUIPMENT CASE OR SHELVING.
5. – PROVIDE 1" CONTROL CONDUIT FROM OVERHEAD JUNCTION BOX DOWN TO EQUIPMENT CASE WITH POWER AND/OR DEFROST CONDUITS. CONDUIT TO BE PAINTED BY OWNER.
6. – RUN CAT5e CABLE WITH 2'–0" OF COILED CABLE FOR FUTURE CAMERA (CAMERA TO BE PROVIDED AND INSTALLED BY OTHERS). MOUNT SINGLE GANG JUNCTION BOX (WEATHER PROOF FOR EXTERIOR) PER CAMERA LEGEND, THIS SHEET. CONSOLIDATE WIRING IN CONDUIT WHERE PRACTICAL AND ROUTE TO IT ROOM. SEE CONDUIT SCHEDULE, THIS SHEET.
7. – COLLECTION POINT JUNCTION BOX FOR ALL CAMERA CABLING. PROVIDE 15'–0" OF COILED CABLING WITH SINGLE CHANNEL PASSIVE CCTV BALUM JACK FOR EACH CAMERA, QUANTITY PER PLANS.
8. – JUNCTION BOX FOR CHECKOUT STAND DATA WIRING, ROUTE WIRING THROUGH DUAL CHANNEL POWER POLE (PER POWER PLAN). CONSOLIDATE ALL CHECKOUT DATA WIRING (2 CAT5e CABLES, 1/2" CONDUIT TO EACH REGISTER) AT CEILING JUNCTION BOX AND RUN IN (1) 1–1/2" CONDUIT TO IT ROOM.
9. – PROVIDE 1/2" CONTROL CONDUIT WITH (1) 22/2 SHIELDED CONTROL CABLE TO ROOFTOP CONDENSER RACK. REFER TO DETAIL 3/E7.
10. – PROVIDE (1) CAT5e CABLE AND (1) 22/2 STRANDED CABLE FROM COMPRESSOR RACK TO IT ROOM FOR CONNECTION TO REFRIGERATION CONTROL PANEL BY OTHERS. PROVIDE 15'–0" OF COILED CABLING IN EACH ROOM.
12. – PROVIDE 3/4" CONDUIT FROM J–BOX AT TELECOM SERVICE POINT OF ENTRY STUBBED OUT AT STRUCTURE ABOVE WITH (4) CAT5e CABLES TO IT ROOM. PROVIDE 2' OF COILED CABLE AT J–BOX AND 15'–0" OF COILED CABLE IN IT ROOM.
13A. – PROVIDE (1) 4X4 JUNCTION BOX WITH DOUBLE GANG MUD RING FOR SECURITY AND DOOR ACCESS WIRING, MOUNT 6" ABOVE UPPER POWER OUTLET ON SIDE OF RACK AS SHOWN. RUN CONDUITS PER NOTES #13B AND #13C AND #13D.
13B. – PROVIDE (1) 1" CONDUIT FROM JUNCTION BOX ABOVE RECEIVING DOOR TO IT ROOM. ROUTE CONDUIT TIGHT TO STRUCTURE AND TERMINATE CONDUIT AT JUNCTION BOX PER NOTE #13A. VERIFY CONDUIT ROUTING WITH OWNER/TENANT'S REP.
13C. – PROVIDE (1) 1" CONDUIT FROM JUNCTION BOX ABOVE EMPLOYEE DOOR TO IT ROOM. ROUTE CONDUIT TIGHT TO STRUCTURE AND TERMINATE CONDUIT AT JUNCTION BOX PER NOTE #13A. VERIFY CONDUIT ROUTING WITH OWNER/TENANT'S REP.
14. – WIRELESS ACCESS POINT (WAP). PROVIDE (1) CAT5e CABLE WITH RJ45 CONNECTOR AND 2' COILED CABLE AT WAP BACK TO IT ROOM. COIL 15' OF CABLE IN IT ROOM. WAP TO BE PROVIDED AND INSTALLED BY E.C.
15. – WIRELESS ACCESS "HOT SPOT". PROVIDE (2) CAT5e CABLES WITH 2' COILED CABLE AT JUNCTION BOX BACK TO IT ROOM. COIL 15' OF CABLE IN IT ROOM.
16. – PROVIDE 18/2 STRANDED CABLE BACK TO IT ROOM AND COIL 15' OF CABLE. DAISY CHAIN SPEAKERS IN GROUPS AS SHOWN AND PROVIDE 3' CABLE SERVICE LOOP AT EACH SPEAKER. CABLE TO BE RUN LOOSE AND SECURED TIGHT TO STRUCTURE OR WALLS ALONG ENTIRE RUN. CEILING MOUNTED SPEAKERS TO BE PROVIDED AND INSTALLED BY E.C.
17. – PROVIDE RESPONSE JUNCTION BOX 6" BELOW CEILING WITH 1/2" CONDUIT STUBBED UP ABOVE ACCESSIBLE CEILING OR TIGHT TO STRUCTURE IN AREAS WHERE A FINISHED CEILING IS NOT BEING INSTALLED.
18. – VERIFY LOCATION OF COPIER/FAX WITH OWNER'S REP PRIOR TO ROUGH–IN.
19. – PROVIDE (1) 18/4 CABLE IN 1/2" CONDUIT FROM EACH JOIST MOUNTED SIREN BACK TO IT ROOM, COMBINE CABLES IN SINGLE CONDUIT TO IT ROOM. SIREN TO BE PROVIDED AND INSTALLED BY E.C.
20. – PROVIDE COMBINATION DATA/VGA/HDMI/USB OUTLET MOUNTED IN BACK CHASE OF KITCHEN MILLWORK.
21. – PROVIDE 1–1/2" CONDUIT BELOW SLAB TO JUNCTION BOX IN WALL FOR CABLE ROUTING AS INDICATED. IN ADDITION TO (1) CAT5e DATA CABLE BACK TO IT ROOM, PROVIDE (1) HDMI CABLE FROM KITCHEN ISLAND OUTLET TO JUNCTION BOX AT TV LOCATION WITH 5' OF COILED CABLE AT JUNCTION BOX AND (1) USB CABLE TO CEILING MOUNTED CAMERA.
23. – PROVIDE JUNCTION BOX (ADJACENT TO POWER RECEPTACLE) WITH 3/4" CONDUIT STUBBED UP ABOVE ACCESSIBLE CEILING.
25. – E.C. SHALL TERMINATE ALL COMMUNICATION SYSTEM WIRING AT PLYWOOD BACKBOARD FOR THE FOLLOWING TENANT PROVIDED AND INSTALLED EQUIPMENT:
    A. SECURITY ALARM & DOOR ACCESS PANEL
    B. 48–PORT PATCH PANEL FOR ALL DATA, T–1 AND DSL CABLES (COORDINATE PUNCH DOWN SEQUENCE WITH OWNER/TENANT'S REP)
    C. 24–PORT PATCH PANEL FOR ALL TELEPHONE CABLES (COORDINATE PUNCH DOWN SEQUENCE WITH OWNER/TENANT'S REP)
    D. MUSIC, SOUND AND PAGING SYSTEM
26. – SECURITY DOOR CONTACT TO BE LOCATED ON OPPOSITE DOOR LEAF FROM AIR DOOR CONTACT. (WIRES PROVIDED BY EC).
27. – AIR DOOR CONTACT TO BE LOCATED ON OPPOSITE LEAF FROM SECURITY DOOR CONTACT. PROVIDE DEVICE AND LOW VOLTAGE WIRING PER AIR DOOR MANUFACTURER REQUIREMENTS.
28. – PROVIDE (3) CAT5E CABLES AT THE RECEIVING DESK.
29. – PROVIDE 4X4 SURFACE MOUNTED JUNCTION BOX ABOVE FINISHED CEILING WITH (2) CAT5e CABLES BACK TO IT ROOM. COIL 12' OF CABLE AT JUNCTION BOX AND IN IT ROOM. COORDINATE LOW VOLTAGE TERMINATIONS WITH MECHANICAL CONTROLS CONTRACTOR.
30. – EXISTING TELEPHONE SERVICE ENTRANCE TO BE RELOCATED TO NW CORNER OF BUILDING. RE–ROUTE EXISTING SERVICE ENTRANCE CONDUIT AND SERVICE EQUIPMENT TO NEW LOCATION SHOWN. COORDINATE REQUIREMENTS WITH TELEPHONE COMPANY.
31. – PROVIDE (1) BELDEN RG6 PLENUM RATED CABLE FROM SATELLITE DISH (ON ROOF) TO IT ROOM WITH 10' OF CABLE COILED AT EACH LOCATION. PROVIDE 3/4" CONDUIT WITH WEATHERHEAD THAT EXTENDS 24" ABOVE ROOF DECK AND 18" BELOW ROOF DECK FOR SATELLITE CABLING PENETRATION AT ROOF.

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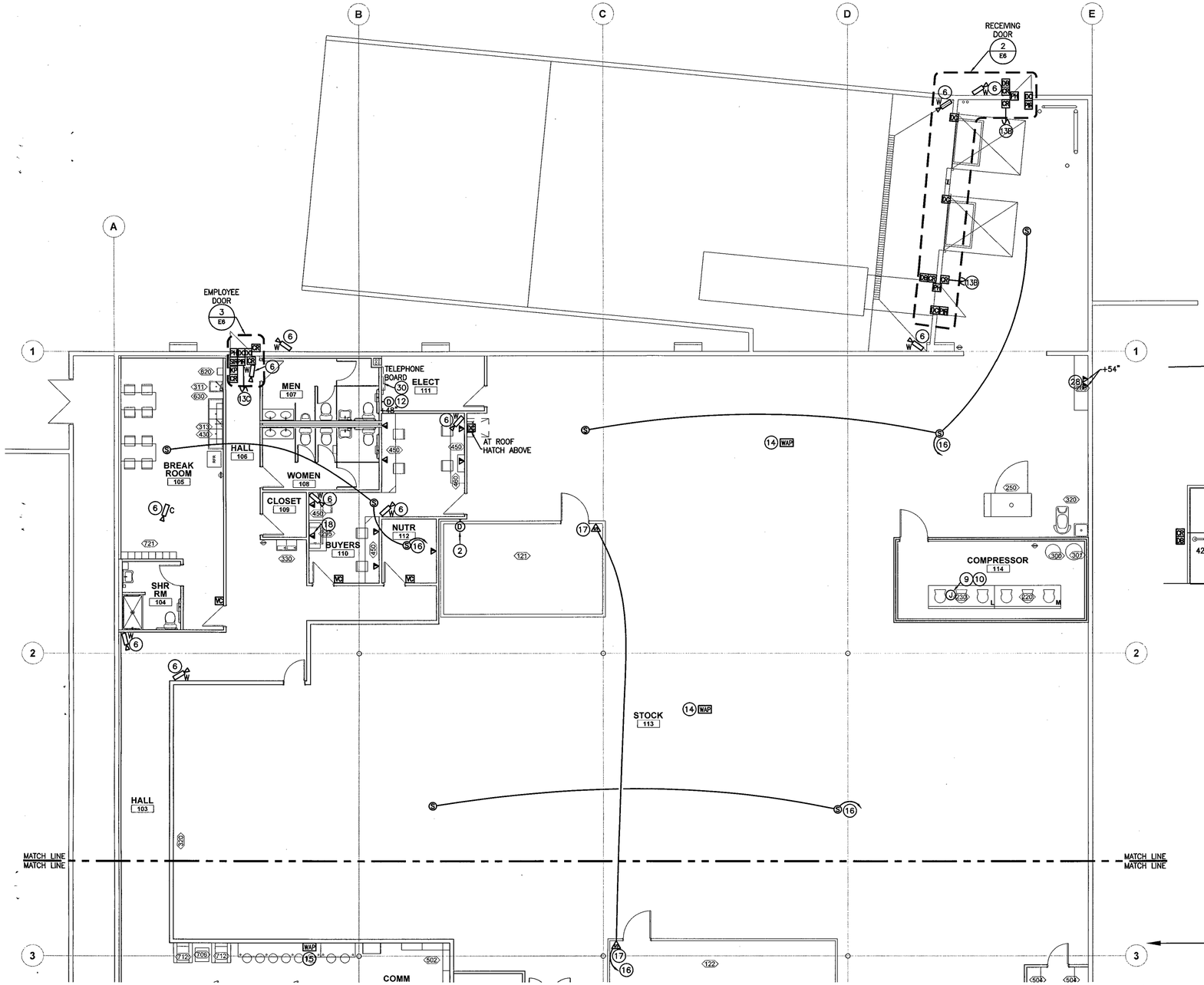
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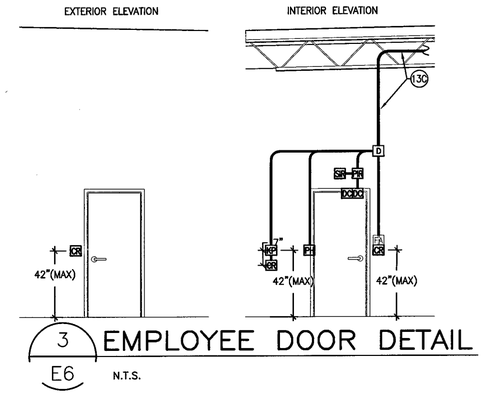
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by: BAB

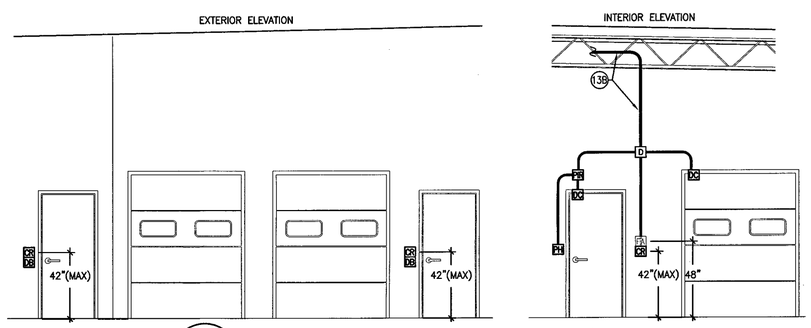
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3 EMPLOYEE DOOR DETAIL
E6 N.T.S.




2 RECEIVING DOOR DETAIL
E6 N.T.S.

1 COMMUNICATION PLAN
E6
8' 4' 0 8' 16'
1/8"=1'-0"
NORTH

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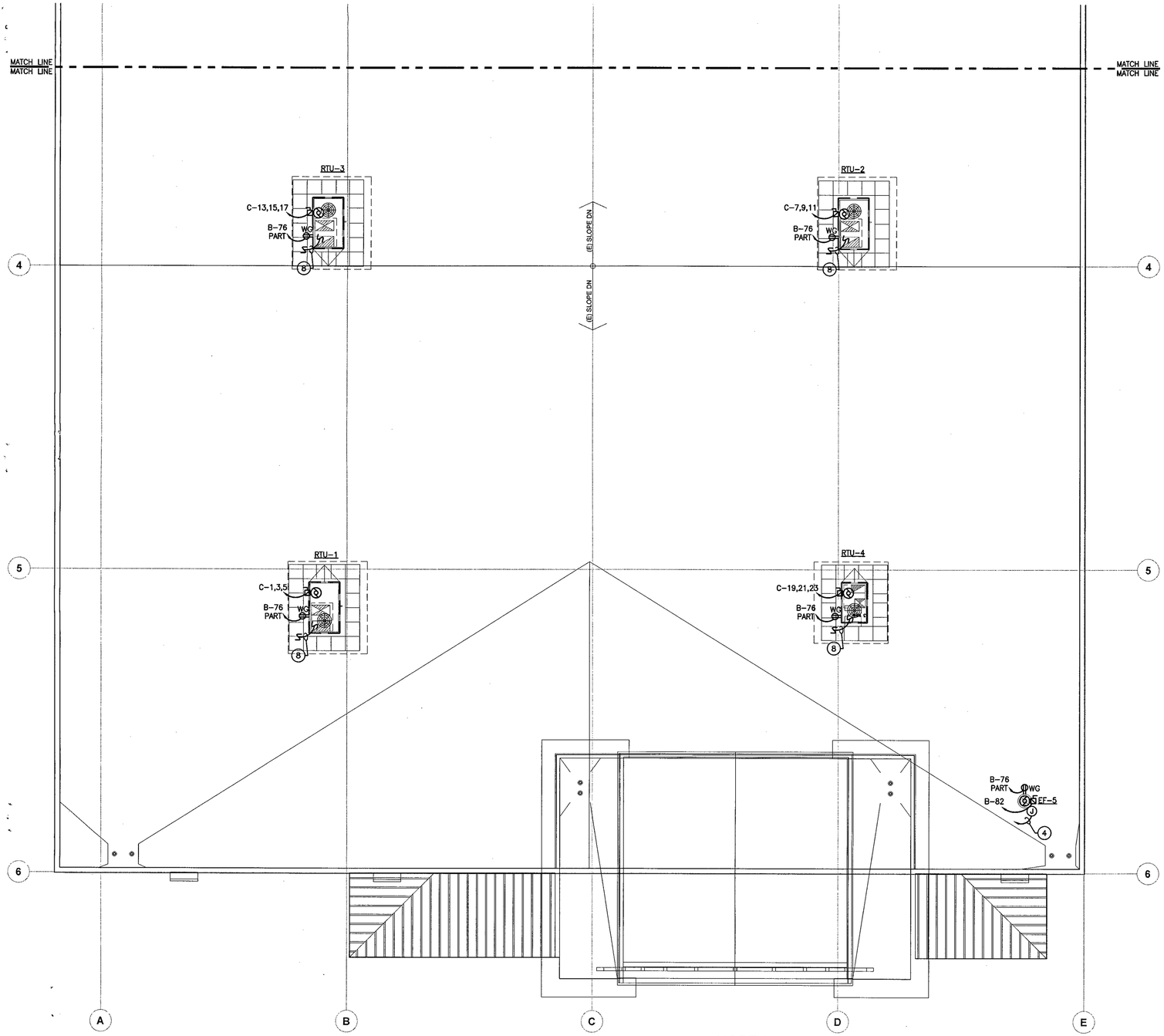
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sheet no.: E6 of 13




1 E7 ROOF POWER PLAN

NORTH

8' 4' 0 8' 16'

1/8"=1'-0"

## GENERAL NOTES:

1. ALL DISCONNECTS AND SWITCHES ON ROOF SHALL BE INSTALLED IN A NEMA 3R ENCLOSURE OR BE RATED NEMA 3R WEATHERPROOF.
2. ALL ROOFTOP EQUIPMENT SHALL BE 10' AWAY FROM WALL UNLESS BUILDING PARAPET IS 42" HIGH OR GREATER.

## DRAWING NOTES:

1. ELECTRICAL CONTRACTOR TO VERIFY CONNECTION FOR ROOFTOP CONDENSERS WITH REFRIGERATION SUPPLIER/MANUFACTURER.
2. GENERATOR BATTERY CHARGER CIRCUIT, VERIFY LOCATION AND COORDINATE WITH GENERATOR MANUFACTURER FOR CONNECTION POINT.
3. LOCATE GENERATOR TO WEST END OF PAD TO ALLOW ROOM FOR SATELLITE DISH ON EAST END.
4. PROVIDE 3/4" CONDUIT FROM EXHAUST FAN CONTROL PANEL TO 18" BELOW ROOF DECK FOR ROUTING OF LOW VOLTAGE CONTROL WIRING TO DEMONSTRATION KITCHEN HOOD BELOW. PROVIDE LOW VOLTAGE CONTROL WIRE PER HOOD MANUFACTURER'S REQUIREMENTS.
5. PROVIDE 7 #12s, 1/2"C. TO TRANSFER SWITCH IN STOCK ROOM FOR GENERATOR CONTROLS. SEE DETAIL 3/E2.
6. RTU TO BE ABANDON IN PLACE. REMOVE ASSOCIATED CONDUIT AND WIRE BACK TO SOURCE.
7. CONNECT EXISTING RTU TO NEW ELECTRICAL PANEL AS INDICATED. CONTRACTOR TO VERIFY CIRCUIT SIZE BREAKER IN THE FIELD.
8. PROVIDE (1) 3/4" CONDUIT THROUGH CEILING/STRUCTURE UP INSIDE THE ROOFTOP UNIT CURB AREA FOR MECHANICAL CONTROL WIRING BY OTHERS.
9. EXISTING RTU TO ABANDON IN PLACE. REMOVE ASSOCIATED CONDUIT AND WIRE BACK TO SOURCE.

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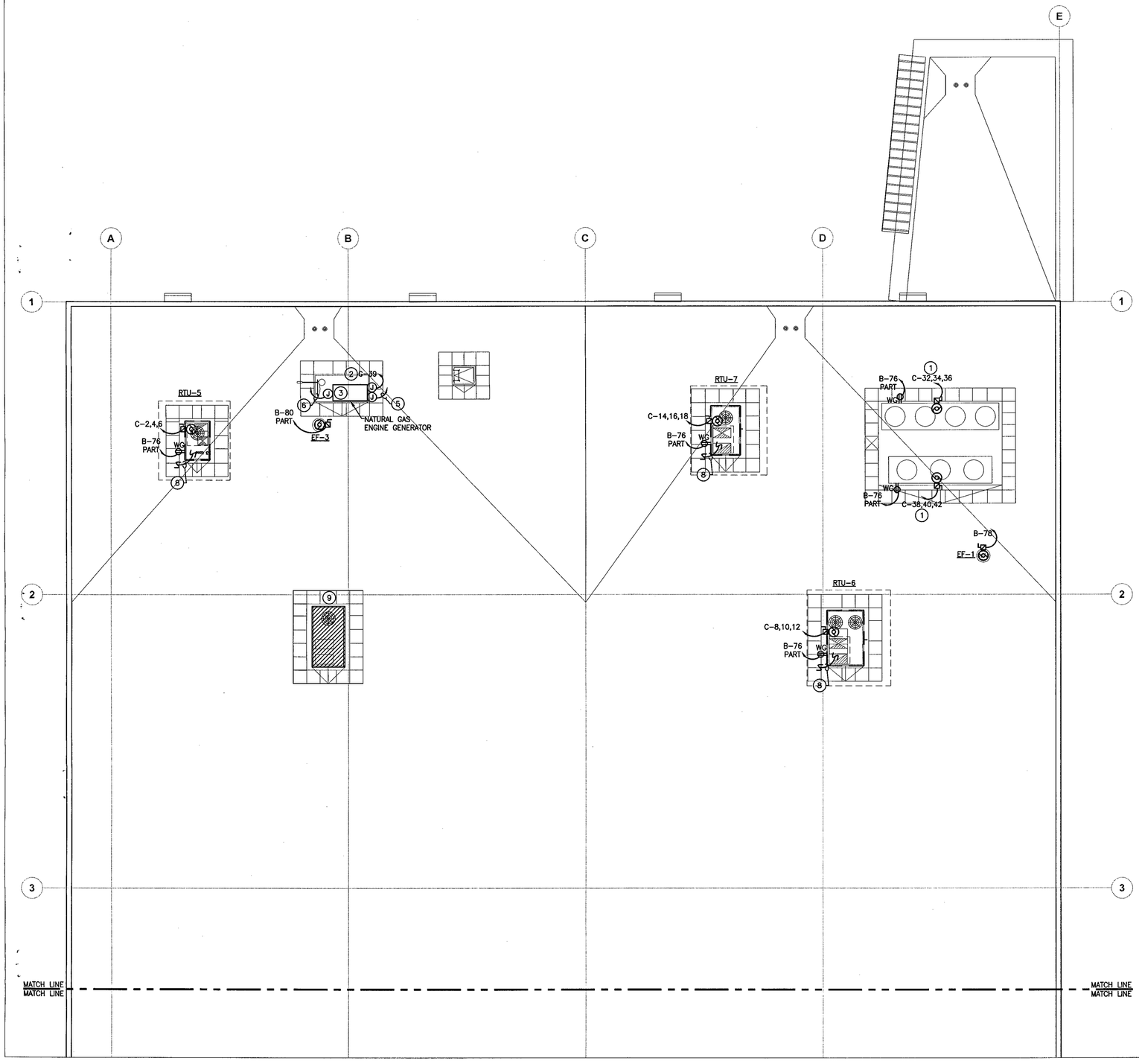
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1 E8 ROOF POWER PLAN

NORTH

8' 4' 0 8' 16'

1/8"=1'-0"

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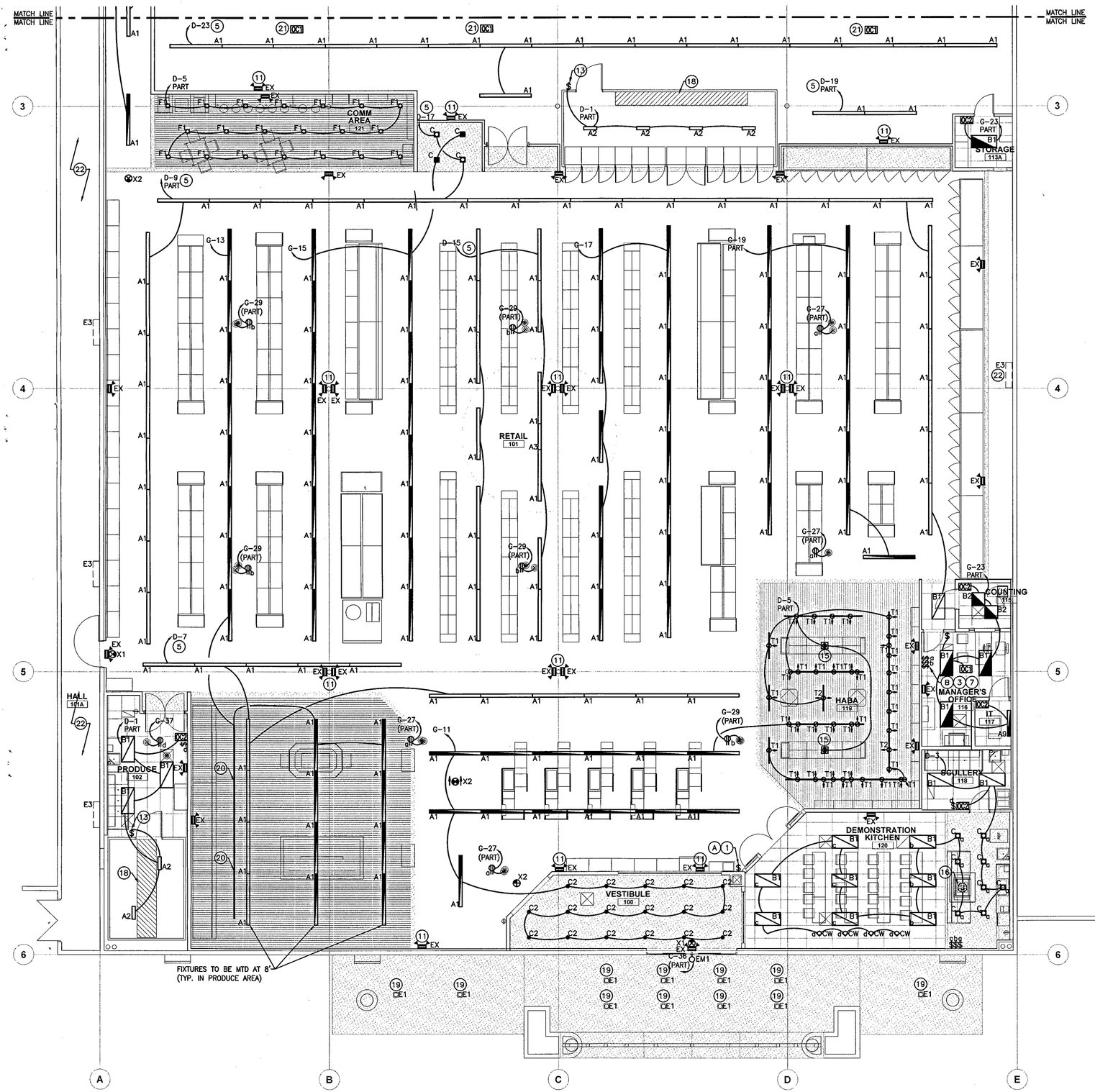
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sheet no.: E8 of 13




1 LIGHTING PLAN
E9

NORTH

8' 4' 0 8' 16'

1/8"=1'-0"

## GENERAL NOTES:

1. ALL EXIT SIGNS (TYPE 'X') AND EGRESS LIGHTS (TYPE 'EX') SHALL BE CONNECTED TO NORMAL LIGHTING CIRCUIT IN AREA AND WIRED AHEAD OF SWITCH, OCCUPANCY SENSOR OR AUTOMATIC LIGHTING CONTROLS.
2. ALL OC1 DEVICES SHALL BE CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSORS (INFRARED & ULTRASONIC). WAREHOUSE SENSORS SHALL BE PENDANT MOUNTED AT 10'-0", EVEN WITH BOTTOM OR LIGHT FIXTURES.
3. ALL OC2 DEVICES SHALL BE WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSORS (INFRARED & ULTRASONIC) WITH MANUAL OVERRIDE.
4. NO EXPOSED CONDUIT BETWEEN THE TOPS OF THE REFRIGERATION CASES AND 18" BELOW ROOF DECK.
5. LIGHT FIXTURES SHALL NOT BE ATTACHED TO ROOF DECK.
6. LIGHTING CONTACTORS SHALL NOT BE INSTALLED ABOVE 10'-0" AFF.
7. SEE SHEET E13 FOR LUMINAIRE SCHEDULE.
8. LIGHT FIXTURES TYPE "A1" & "A3" SHALL BE INSTALLED AT 9'-0" A.F.F. TO BOTTOM OF FIXTURE IN RETAIL AREAS, 10'-0" A.F.F. TO BOTTOM OF FIXTURE IN STOCK ROOM AND BACK OF HOUSE AREAS, UNLESS NOTED OTHERWISE. TYPE "A1" & "A3" LIGHT FIXTURES SHALL NOT BE ATTACHED TO ROOF DECK, WOOD CEILING SYSTEMS OR THE GRID IMMEDIATELY ABOVE; HANG FIXTURES FROM BAR JOISTS, STRUCTURAL STEEL OR SUPPORTS SPANNING BETWEEN STRUCTURAL MEMBERS.

## DRAWING NOTES:

(A) – SWITCH BANK LOCATION AT CUSTOMER SERVICE COUNTER, SEE LIGHTING CONTROL WIRING DIAGRAM, SHEET E13.

(B) – SWITCH BANK LOCATION AT MANAGERS OFFICE, SEE LIGHTING CONTROL WIRING DIAGRAM, SHEET E13.

(1) – SWITCHES FOR RETAIL AREA NON-NIGHT LIGHT CIRCUITS AND WINDOW SIGN RECEPTACLES, LOCATED AT CUSTOMER SERVICE COUNTER. SEE LIGHTING CONTROL WIRING DIAGRAM, SHEET E13. CENTER OF SWITCH BANK AT +39" AFF.

(3) – SWITCHES INDICATE WHICH AIR PEAR IS CONTROLLED PER SWITCH IN THE AREA. FOR INSTANCE, SWITCH "a" CONTROLS AIR PEARS WITH THE LETTER "a" NEXT TO THE AIR PEARS AND SWITCH "b" CONTROLS AIR PEARS WITH "b" NEXT TO FIXTURE, E.C. TO LABEL SWITCHES AS (a) COOLER FAN ZONE, (b) DRY GOODS ZONE.

(4) – PROVIDE 120V 1ø DUPLEX RECEPTACLE AT BOTTOM OF ROOF JOIST FOR AIR PEAR FAN. FAN TO BE PROVIDED BY OTHERS AND INSTALLED BY GC OR EC. SWITCH RECEPTACLES IN MANAGERS OFFICE AS INDICATED. COORDINATE CONTROL LOCATION WITH OWNERS REP. CONTROLS AND CONNECTIONS BY OWNER/TENANT.

(5) – ALL LIGHTS ON THIS CIRCUIT TO BE NIGHT-LIGHTS.

(6) – ELECTRICAL CONTRACTOR TO PROVIDE WATTSTOPPER "LP8" LIGHTING CONTROL PANEL WITH LOW VOLTAGE SWITCH(ES) PER LIGHTING CONTROL DIAGRAM AND SCHEDULE, SHEET E13. VERIFY LOCATION OF PANEL WITH OWNER'S REP PRIOR TO ROUGH-IN.

(7) – SWITCH(S) FOR NIGHT-LIGHTS AND AIR PEARS, LOCATED IN MANAGER'S OFFICE. SEE LIGHTING CONTROL WIRING DIAGRAM, SHEET E13.

(8) – PROVIDE 120V 1ø DUPLEX RECEPTACLE AT BOTTOM OF ROOF JOIST FOR AIR PEAR FAN. FAN TO BE PROVIDED BY OTHERS AND INSTALLED BY GC OR EC. SWITCH RECEPTACLES IN STOCK ROOM AT RECEIVING DESK, VERIFY EXACT LOCATION WITH OWNERS REP PRIOR TO ROUGH-IN. CONTROLS AND CONNECTIONS BY OWNER/TENANT.

(9) – SWITCH(ES) INDICATE WHICH AIR PEAR IS CONTROLLED PER SWITCH IN THE AREA. SWITCH "c" CONTROLS AIR PEARS WITH "c", E.C. TO LABEL SWITCH (c) FANS.

(11) – MOUNT EXIT SIGN(S) AT 12' AFF, VERIFY WITH OWNERS REP BEFORE ROUGH-IN.

(12) – UNDERCABINET FIXTURE FURNISHED WITH CORD AND PLUG; CONNECT TO WALL OUTLET CONCEALED WITHIN UPPER CABINET.

(13) – PROVIDE INTERMATIC MODEL EI215W TIMER SWITCH WITH TIMER RANGE OF 15/30 MINUTES OR 1/2/4 HOURS.

(15) – DUPLEX RECEPTACLE FOR SHELF LIGHTING (BY OTHERS). MOUNT RECEPTACLE TO TOP OF CABINET IN CENTER WITH 1" CONDUIT UP TO CEILING. CONDUIT TO BE PAINTED BY OWNER/TENANT.

(16) – PROVIDE 120 VOLT CONNECT TO KITCHEN HOOD LIGHT FIXTURE (BY OTHERS) AND PROVIDE MEDIUM BASE SCREW-IN LED LAMPS, VERIFY QUANTITY WITH HOOD MANUFACTURER (TYPICALLY 4). FIXTURE TO BE CONNECTED TO GENERAL LIGHTING CIRCUIT IN ROOM AS INDICATED.

(17) – PROVIDE BUILDING MOUNTED PHOTOCELL FOR CONTROL OF ALL EXTERIOR LIGHTING AND SIGNAGE CIRCUITS.

(18) – FAN COIL ZONE: COORDINATE LOCATION OF LIGHTING AND ELECTRICAL WITH WALK-IN COOLER/FREEZER INSTALLER & FIRE SPRINKLER CONTRACTOR IN FIELD.

(19) – EXISTING EXTERIOR LIGHT FIXTURE TO REMAIN. MAINTAIN EXISTING CIRCUIT. PROVIDE ALTERNATE PRICING PER ITEMS #2 AND #3 ON SHEET E1.

(20) – PROVIDE TYPE T1 WITH NO TRACK HEADS FOR FUTURE TRACK LIGHTING, LENGTH PER PLANS.

(21) – CONNECT OCCUPANCY SENSORS TOGETHER SO THERE IS A SINGLE CONTROL ZONE FOR THE ENTIRE STOCK ROOM. PROVIDE POWER PACKS AS NECESSARY TO CONTROL ALL LIGHTING CIRCUIT IN AREA.

(22) – ALL EXISTING LIGHT FIXTURES AND CONTROLS TO REMAIN IN THIS AREA.

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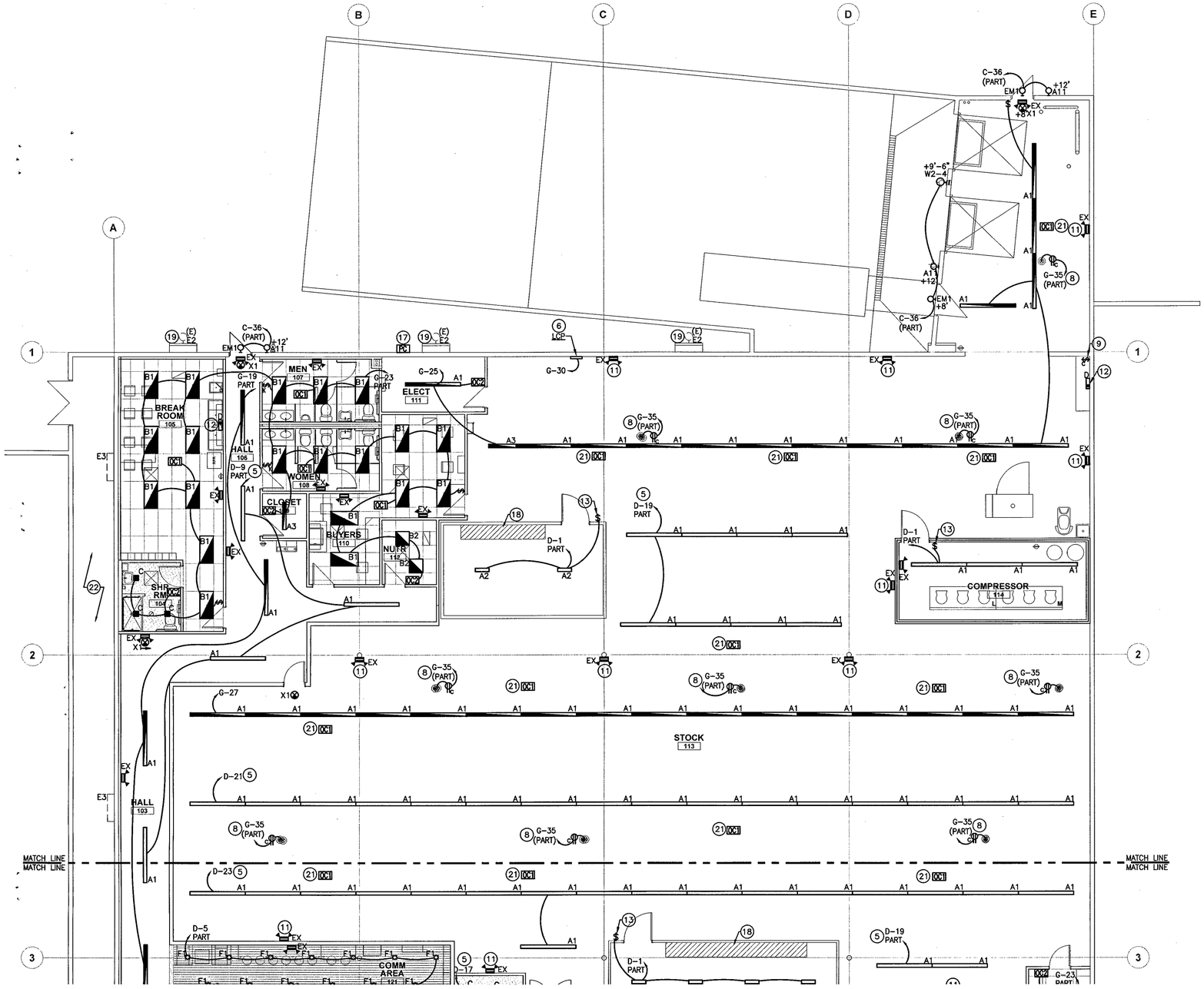
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by: BAB

app: JAG

sheet no.: E9 of 13




1 LIGHTING PLAN (E10)

NORTH

8' 4' 0 8' 16'

1/8"=1'-0"

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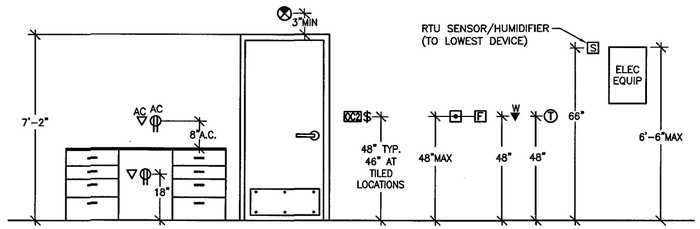
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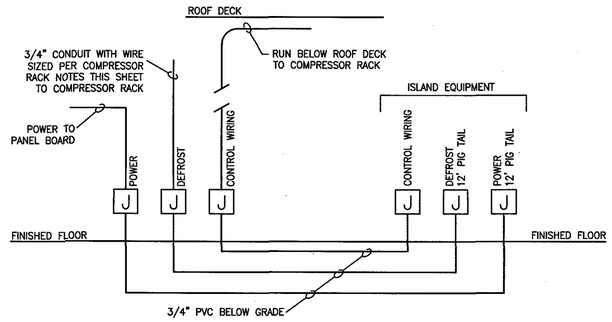
## DETAIL NOTES:

1. DIMENSIONS ARE TO CENTER OF DEVICE WITH TRIM U.O.N.
2. ALL MOUNTING HEIGHTS SHALL CONFIRM TO THE LATEST EDITION OF THE AMERICANS WITH DISABILITIES ACT (ADA).



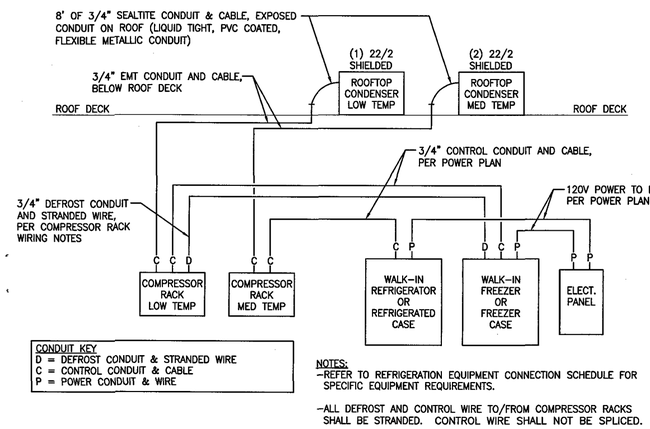

# DEVICE MOUNTING HEIGHT DETAIL (FOR REFERENCE ONLY)

1 / E11 N.T.S.




# ISLAND CONDUIT COLLECTION POINT DETAIL

2 / E11 N.T.S.




# REFRIGERATION EQUIPMENT WIRING DETAIL

3 / E11 N.T.S.

## MECHANICAL EQUIPMENT ELECTRICAL CONNECTION SCHEDULE

| TAG | DESCRIPTION | VOLT | PHASE | KW | HP | AMP | DISC. SIZE | O.C. PROTECTION CB SIZE | O.C. PROTECTION FUSE SIZE | FEEDER |
|---|---|---|---|---|---|---|---|---|---|---|
| RTU-1 | ROOFTOP UNIT | 480 | 3 | | | 19.9 | 30A | 25A 3P | PER MFGR. | 3#10AWG +1#10AWG GND 3/4"C |
| RTU-2 | ROOFTOP UNIT | 480 | 3 | | | 19.9 | 30A | 25A 3P | PER MFGR. | 3#10AWG +1#10AWG GND 3/4"C |
| RTU-3 | ROOFTOP UNIT | 480 | 3 | | | 19.9 | 30A | 25A 3P | PER MFGR. | 3#10AWG +1#10AWG GND 3/4"C |
| RTU-4 | ROOFTOP UNIT | 480 | 3 | | | 10.3 | 30A | 15A 3P | PER MFGR. | 3#12AWG +1#12AWG GND 3/4"C |
| RTU-5 | ROOFTOP UNIT | 480 | 3 | | | 10.3 | 30A | 15A 3P | PER MFGR. | 3#12AWG +1#12AWG GND 3/4"C |
| RTU-6 | ROOFTOP UNIT | 480 | 3 | | | 22.1 | 30A | 30A 3P | PER MFGR. | 3#10AWG +1#10AWG GND 3/4"C |
| RTU-7 | ROOFTOP UNIT | 480 | 3 | | | 19.9 | 30A | 25A 3P | PER MFGR. | 3#10AWG +1#10AWG GND 3/4"C |
| | | | | | | | | | | |
| EF-1 | EXHAUST FAN | 120 | 1 | | 1/6 | 4.4 | 30A | 20A 1P | PER MFGR. | 2#12AWG +1#12AWG GND 1/2"C |
| EF-2 | EXHAUST FAN | 120 | 1 | 129 W | | 1.1 | TS | 20A 1P | PER MFGR. | 2#12AWG +1#12AWG GND 1/2"C |
| EF-3 | EXHAUST FAN (EXISTING) | 120 | 1 | | 1/4 | 5.8 | TS | 20A 1P | PER MFGR. | 2#12AWG +1#12AWG GND 1/2"C |
| EF-4 | EXHAUST FAN | 120 | 1 | 130 W | | 1.1 | 30A | 20A 1P | PER MFGR. | 2#12AWG +1#12AWG GND 1/2"C |
| EF-5 | EXHAUST FAN | 120 | 1 | | 1/4 | 5.8 | 30A | 20A 1P | PER MFGR. | 2#12AWG +1#12AWG GND 1/2"C |
| | | | | | | | | | | |
| AD-1 | AIR DOOR | 480 | 3 | 19 | | 23.4 | 30A | 30A 3P | PER MFGR. | 4#10AWG +1#10AWG GND 3/4"C |
| GWH-1 | GAS WATER HEATER | 120 | 1 | 200W | | | 30A | 20A 1P | PER MFGR. | 2#12AWG +1#12AWG GND 1/2"C |
| EWC-1 | ELECTRIC WATER COOLER | 120 | 1 | | | 4.6 | NEMA 5-20R | 20A 1P | PER MFGR. | 2#12AWG +1#12AWG GND 1/2"C |
| CP-1 | CIRCULATING PUMP | 120 | 1 | | 1/40 | | 30A | 20A 1P | PER MFGR. | 2#12AWG +1#12AWG GND 1/2"C |

## REFRIGERATION EQUIPMENT ELECTRICAL CONNECTION SCHEDULE

| TAG | DESCRIPTION | VOLT | PHASE | AMPS | DISC. SIZE | O.C. PROTECTION CB SIZE | O.C. PROTECTION FUSE SIZE | FEEDER (4) | DEFROST (1) | CONTROL WIRING (6) (7) |
|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 32' PRODUCE CASE (2-12 FOOT, 1-8 FOOT) | | | | | | | | | YES - (3) 22/2 |
| | LIGHTS | 120 | 1 | 6.25 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| | COIL FANS | 120 | 1 | 3.60 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| 101 | 6'x8' PRODUCE ISLAND | | | | | | | | | YES - (1) 22/2 |
| | COIL FANS | 120 | 1 | 5.44 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| 102 | 24' MEAT CASE (2-12 FOOT) | | | | | | | | | YES - (2) 22/2 |
| | LIGHTS | 120 | 1 | 3.00 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| | COIL FANS | 120 | 1 | 1.12 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| 103 | 19-DOOR ICECREAM CASE (3-5 DOOR, 1-4 DOOR) | | | | | | | | YES | YES - (6) 22/2 |
| | LIGHTS | 120 | 1 | 10.69 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| | COIL FANS | 120 | 1 | 4.18 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| | ANTI SWEAT HEATERS (2-5 DOOR) | 120 | 1 | 15.38 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| | ANTI SWEAT HEATERS (1-5 DOOR, 1-4 DOOR) | 120 | 1 | 13.82 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| 104 | 15-DOOR FROZEN FOOD CASE (3-5 DOOR) | | | | | | | | YES | YES - (4) 22/2 |
| | LIGHTS | 120 | 1 | 8.37 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| | COIL FANS | 120 | 1 | 3.30 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| | ANTI SWEAT HEATERS (2-5 DOOR) | 120 | 1 | 15.38 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| | ANTI SWEAT HEATERS (1-5 DOOR) | 120 | 1 | 7.69 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| 105 | MEAT CASE, LOW PROFILE (2 LOCATIONS) | | | | | | | | | YES - (1) 22/2 |
| | LIGHTS | 120 | 1 | 1.00 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | (2 TOTAL) |
| | COIL FANS | 120 | 1 | 1.40 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| 106 | COLD DRINK REFRIGERATOR | | | | | | | | | YES - (1) 22/2 |
| | LIGHTS | 120 | 1 | 2.20 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| | COIL FANS | 120 | 1 | 0.40 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| 109 | 24' DAIRY CASE (2-12 FOOT) | | | | | | | | | YES - (2) 22/2 |
| | LIGHTS | 120 | 1 | 4.50 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| | COIL FANS | 120 | 1 | 4.48 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| 110 | 12' REF. VITAMINS (1-12 FOOT) | | | | | | | | | YES - (1) 22/2 |
| | LIGHTS | 120 | 1 | 2.25 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| | COIL FANS | 120 | 1 | 2.24 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| 112 | SHOP AROUND | | | | | | | | | YES - (1) 22/2 |
| | LIGHTS | 120 | 1 | 1.91 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| | COIL FANS | 120 | 1 | 1.06 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| 120 | PRODUCE WALK-IN REFRIGERATOR | | | | | | | | | YES - (1) 22/2 |
| | LED LIGHTS & COIL FANS | 120 | 1 | 9.20 | 30A | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| 121 | WALK-IN FREEZER | | | | | | | | YES | YES - (1) 22/2 |
| | COIL FANS - POWER FROM COMPRESSOR RACK | | | | | | | | | |
| | GLASS DOOR LIGHTS | 120 | 1 | 5.33 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| | GLASS DOOR HEATERS | 120 | 1 | 19.27 | INTEGRAL | 30A 1P | | 2#10AWG +1#10AWG GND 3/4"C | | |
| | LED LIGHTING | 120 | 1 | 9.60 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| 122 | DAIRY WALK-IN REFRIGERATOR | | | | | | | | | YES - (1) 22/2 |
| | COIL FANS | 120 | 1 | 12.00 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| | GLASS DOOR LIGHTS | 120 | 1 | 8.20 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| | GLASS DOOR HEATERS | 120 | 1 | 9.10 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |
| | LED LIGHTING | 120 | 1 | 11.80 | INTEGRAL | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C | | |

## EQUIPMENT ELECTRICAL CONNECTION SCHEDULE

| TAG | DESCRIPTION | VOLT | PHASE | KW | HP | AMP | DISC. SIZE | O.C. PROTECTION CB SIZE | O.C. PROTECTION FUSE SIZE | FEEDER (4) |
|---|---|---|---|---|---|---|---|---|---|---|
| 130 | REFRIGERATOR | 120 | 1 | 1.8 | | 15.0 | NEMA 5-20R | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C |
| 200 | WATER MACHINE (2 CIRCUITS) | 120 | 1 | | | 15 ea. | NEMA 5-20R | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C |
| 210 | ALMOND BUTTER MACHINE | 120 | 1 | | | 20 | NEMA 5-20R | 20A 1P | | 2#12AWG + 1#12AWG GND 1/2"C |
| 211 | PEANUT BUTTER MACHINE | 120 | 1 | | | 20 | NEMA 5-20R | 20A 1P | | 2#12AWG + 1#12AWG GND 1/2"C |
| 220 | COMPRESSOR RACK-MEDIUM TEMP. | 480 | 3 | | | 70.7 | VERIFY 100A | 100A 3P | PER MFGR. | 3#1AWG + 1#8AWG GND 1-1/4"C |
| (2) | CONTROL CIRCUIT (INTEGRAL) | | | | | | | | | |
| 221 | ROOF TOP CONDENSOR-MEDIUM TEMP. | 480 | 3 | | | 9.1 | 30A | 20A 3P | PER MFGR. | 3#12AWG +1#12AWG GND 3/4"C |
| 230 | COMPRESSOR RACK-LOW TEMP. | 480 | 3 | | | 146.0 | VERIFY 200A | 150A 3P | PER MFGR. | SEE ONE-LINE DIAGRAM |
| (2) | CONTROL CIRCUIT (INTEGRAL) | | | | | | | | | |
| 231 | ROOF TOP CONDENSOR-LOW TEMP. | 480 | 3 | | | 12.2 | 30A | 20A 3P | PER MFGR. | 3#12AWG +1#12AWG GND 3/4"C |
| 250 | CARDBOARD BAILER (EXISTING) | 480 | 3 | | | 32 | 60A | 40A 3P | PER MFGR. | 4#8AWG +1#10AWG GND 1"C |
| 260 | FORK LIFT BATTERY CHARGER | 208 | 3 | | | 26 | 60A | 40A 3P | | 4#8AWG +1#10AWG GND 1"C |
| 270 | ICE MERCHANDISER | 120 | 1 | | | 10 | NEMA 5-20R | 20A 1P | (5) | 3#8AWG +1#10AWG GND 3/4"C (3) |
| 280 | COMMERCIAL RANGE | 208 | 3 | | | 69.2 | 100A | 70A 3P | | 4#4AWG +1#8AWG GND 1-1/4"C |
| 282 | COFFEE GRINDER | 120 | 1 | | | 1.5 | NEMA 5-20R | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C |
| 283 | COFFEE MAKER | 120 | 1 | | | 14.9 | NEMA 5-20R | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C |
| 284 | MICROWAVE | 120 | 1 | | | 10 | NEMA 5-20R | 20A 1P | | 2#12AWG +1#12AWG GND 1/2"C |

## REFRIGERATION EQUIPMENT DEFROST WIRING NOTES:

GENERAL: THE FOLLOWING DEFROST WIRING SHALL BE STRANDED TYPE. E.C. TO PROVIDE CONDUIT AND STRANDED WIRE FOR REFRIGERATION DEFROST WIRING FOR EACH ITEM LISTED BELOW.

1. RUN ONE (1) 3/4" CONDUIT WITH (3 #8 AWG + 1 #10 GND) FROM COMPRESSOR RACK TO "ICE CREAM CASE" (#103). EXTEND DEFROST WIRING AND CONDUIT FROM JUNCTION BOX AT FIRST CASE TO EACH ADDITIONAL CASE AS SHOWN ON PLANS. VERIFY ENDING LOCATIONS WITH OWNER/TENANT'S REP.
2. RUN ONE (1) 3/4" CONDUIT WITH (3 #8 AWG + 1 #10 GND) FROM COMPRESSOR RACK TO "FROZEN FOOD CASE" (#104) EXTEND DEFROST WIRING AND CONDUIT FROM JUNCTION BOX AT FIRST CASE TO EACH ADDITIONAL CASE AS SHOWN ON PLANS. VERIFY ENDING LOCATIONS WITH OWNER/TENANT'S REP.
3. RUN ONE (1) 3/4" CONDUIT WITH (2 #8 AWG (DEFROST) + 2 #10 AWG (FANS) + 1 #10 GND) FROM COMPRESSOR RACK TO "WALK-IN FREEZER" (#121). VERIFY ENDING LOCATIONS WITH OWNER/TENANT'S REP.

## GENERAL NOTES:

1. E.C. SHALL VERIFY VOLTAGE DROP ON ALL DEDICATED EQUIPMENT CIRCUITS AND UPSIZE CIRCUIT CONDUCTORS (INCLUDING GROUND) TO LIMIT BRANCH CIRCUIT VOLTAGE DROP TO 3% PER SPEC SECTION 4.B ON SHEET E1.

## DRAWING NOTES:

(1) - SEE COMPRESSOR RACK NOTES THIS SHEET

(2) - COMPRESSOR RACK AND CONDENSER DATA IS ESTIMATED, BASED ON PREVIOUS PROJECTS. CONTRACTOR TO VERIFY ACTUAL COMPRESSOR RACK AND CONDENSER ELECTRICAL DATA PRIOR TO ORDERING ANY NEW CIRCUIT BREAKERS OR WIRING EQUIPMENT WITH OWNERS REP AND REFRIGERATION CONSULTANT.

(3) - WIRES ARE INTENTIONALLY OVERSIZED TO PROVIDE FLEXIBILITY FOR FUTURE EQUIPMENT.

(4) - UNDERGROUND CONDUITS MAY CHANGE IN SIZE AND MATERIAL, PER PLANS.

(5) - E.C. TO VERIFY ELECTRICAL PLUG CONFIGURATION WITH OWNER'S REP PRIOR TO ROUGH-IN.

(6) - CONTROL CONDUIT AND CABLE PROVIDED AND INSTALLED BY E.C. ALL CABLE DENOTED "22/2" SHALL BE (2) #22 AWG (STRANDED) SHIELDED CABLE. E.C. SHALL PULL CABLE AND COIL 30' AT EACH END OF CONDUIT. CONTROL WIRE SHALL NOT BE SPLICED. COORDINATE TERMINATIONS WITH OWNER'S REP.

(7) - E.C. SHALL LABEL EACH END OF EACH CONTROL CABLE WITH A UNIQUE CABLE DESIGNATION REPRESENTING IT'S RESPECTIVE REFRIGERATION CASE (I.E. "101-A", "101-B", "101-C", ETC.).

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ELECTRICAL
No. 19777
STATE OF NEVADA

Issue / date

sheet title: ELECTRICAL SCHEDULES

by: BAB

app: JAG

sheet no.: E11 of 13

| PANEL | C | | TYPE | EXISTING |
|---|---|---|---|---|
| VOLTAGE | 480 /120 | | MTG | SURFACE |
| PHASE | 3 | | AIC: | 14,000 |
| WIRES | 4 | LARGEST MOTOR | 14,760 | VA |
| RATING | 400 A | | | |
| MAIN BREAKER | MLO | | | |

| CD | CKT DESCRIPTION | BKR | CKT | A | B | C | CKT | BKR | CKT DESCRIPTION | CD |
|---|---|---|---|---|---|---|---|---|---|---|
| (2) 3 | RTU-1 | 20A3P | 1 | 5512 | ----- | ----- | | | | |
| | | | | 2853 | ----- | ----- | 2 | 15A3P | RTU-5 | 3 (2) |
| 3 | | | 3 | ----- | 5512 | ----- | | | | |
| | | | | ----- | 2853 | ----- | 4 | | | 3 |
| 3 | | | 5 | ----- | ----- | 5512 | | | | |
| | | | | ----- | ----- | 2853 | 6 | | | 3 |
| (2) 3 | RTU-2 | 20A3P | 7 | 5512 | ----- | ----- | | | | |
| | | | | 6122 | ----- | ----- | 8 | 30A3P | RTU-6 | 3 |
| 3 | | | 9 | ----- | 5512 | ----- | | | | |
| | | | | ----- | 6122 | ----- | 10 | | | 3 |
| 3 | | | 11 | ----- | ----- | 5512 | | | | |
| | | | | ----- | ----- | 8122 | 12 | | | 3 |
| (2) 3 | RTU-3 | 20A3P | 13 | 5512 | ----- | ----- | | | | |
| | | | | 5512 | ----- | ----- | 14 | 20A3P | RTU-7 | 3 (2) |
| 3 | | | 15 | ----- | 5512 | ----- | | | | |
| | | | | ----- | 5512 | ----- | 16 | | | 3 |
| 3 | | | 17 | ----- | ----- | 5512 | | | | |
| | | | | ----- | ----- | 5512 | 18 | | | 3 |
| (2) 3 | RTU-4 | 15A3P | 19 | 2853 | ----- | ----- | | | | |
| | | | | 6482 | ----- | ----- | 20 | 30A3P | AIR DOOR AD-1 | 6 |
| 3 | | | 21 | ----- | 2853 | ----- | | | | |
| | | | | ----- | 6482 | ----- | 22 | | | 6 |
| 3 | | | 23 | ----- | ----- | 2853 | | | | |
| | | | | ----- | ----- | 6482 | 24 | | | 6 |
| (2) 3 | COMPRESSOR RACK #220 MEDIUM TEMP | 100A3P (1) | 25 | 19584 | ----- | ----- | | | | |
| | | | | ----- | ----- | ----- | 26 | 30A3P | (E) PHASE MONITOR | |
| 3 | | | 27 | ----- | 19584 | ----- | | | | |
| | | | | ----- | ----- | ----- | 28 | | | |
| 3 | | | 29 | ----- | ----- | 19584 | | | | |
| | | | | ----- | ----- | ----- | 30 | | | |
| | SPACE | | 31 | ----- | ----- | ----- | | | | |
| | | | | 2519 | ----- | ----- | 32 | 20A3P | CONDENSER #221 MEDIUM TEMP | 3 (2) |
| | SPACE | | 33 | ----- | ----- | ----- | | (1) | | |
| | | | | ----- | 2519 | ----- | 34 | | | 3 |
| | SPACE | | 35 | ----- | ----- | ----- | | | | |
| | | | | ----- | ----- | 2519 | 36 | | | 3 |
| | SPACE | | 37 | ----- | ----- | ----- | | | | |
| | | | | 3377 | ----- | ----- | 38 | 20A3P | CONDENSER #231 LOW TEMP | 3 (2) |
| | SPACE | | 39 | ----- | ----- | ----- | | (1) | | |
| | | | | ----- | 3377 | ----- | 40 | | | 3 |
| | SPACE | | 41 | ----- | ----- | ----- | | | | |
| | | | | ----- | ----- | 3377 | 42 | | | 3 |
| | TOTAL VOLT-AMPS | | | 65838 | 65838 | 65838 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| TOTAL CONNECTED LOAD | 197,514 | VA | | | 238 AMPS |
| TOTAL DEMAND | | LOAD | DF | DEMAND | |
| LIGHTING | (1) | 0 | 1.25 | 0 | |
| RECEPTACLES | (2) | 0 | 10k+.5 | 0 | PHASE IMBALANCE (%) |
| MOTORS | (3) | 178068 | 1.25+1 | 181758 | 0.00% A/B |
| KITCHEN | (4) | 0 | 1.00 | 0 | 0.00% A/C |
| CONT. RECPT | (5) | 0 | 1.00 | 0 | 0.00% B/C |
| ELECTRIC HEAT | (6) | 19446 | 0.00 | 0 | NON-COINCIDENT ELECTRIC HEAT |
| ELEC. WATER HTG | (7) | 0 | 1.25 | 0 | |
| | (8) | 0 | 1.00 | 0 | |
| | (9) | 0 | 1.00 | 0 | |
| | TOTALS | 197514 | | 181758 | |
| | | | | 219 | AMPS |

| PANEL | B (SEC 1) | | TYPE | EXISTING |
|---|---|---|---|---|
| VOLTAGE | 208 /120 | | MTG | SURFACE |
| PHASE | 3 | | AIC: | 10,000 |
| WIRES | 4 | LARGEST MOTOR | 4,576 | VA |
| RATING | 400 A | | | |
| MAIN BREAKER | 400 A | | | |

| CD | CKT DESCRIPTION | BKR | CKT | A | B | C | CKT | BKR | CKT DESCRIPTION | CD |
|---|---|---|---|---|---|---|---|---|---|---|
| | PANEL "D" | 100A3P | 1 | 7562 | ----- | ----- | | | | |
| | | | | 480 | ----- | ----- | 2 | 20A1P | MEAT ISLAND #105 LIGHTS | 1 |
| | | | 3 | ----- | 8921 | ----- | | | | |
| | | | | ----- | 672 | ----- | 4 | 20A1P | MEAT ISLAND #105 FANS | 3 |
| | | | 5 | ----- | ----- | 8208 | | | | |
| | | | | ----- | ----- | 264 | 6 | 20A1P | COLD DRINK REF #106 LIGHTS | 1 |
| | SPARE | 20A1P | 7 | ----- | ----- | ----- | | | | |
| | | | | ----- | ----- | ----- | 8 | 20A1P | COLD DRINK REF #106 FANS | 3 |
| 2 | (E)TEL RECEPT | 50A2P | 9 | ----- | 3980 | ----- | | | | |
| | | | | ----- | 4800 | ----- | 10 | 60A3P | (E)COMPACTOR | 3 |
| 2 | | | 11 | ----- | ----- | 3980 | | | | |
| | | | | ----- | ----- | 4800 | 12 | | | 3 |
| 1 | WALK-IN FREEZER #121 DOOR LIGHTS | 20A1P | 13 | 640 | ----- | ----- | | | | |
| | | | | 4800 | ----- | ----- | 14 | | | 3 |
| (2) 6 | WALK-IN FREEZER #121 DOOR HEATERS | 30A1P | 15 | ----- | 2312 | ----- | | | | |
| | | | | ----- | 653 | ----- | 16 | 20A1P | PRODUCE ISLAND #101 FANS | 3 |
| 1 | WALK-IN FREEZER #121 LIGHTS | 20A1P | 17 | ----- | ----- | 1152 | | | | |
| | | | | ----- | ----- | 750 | 18 | 20A1P | PRODUCE CASE #100 LIGHTS | 1 |
| 3 | DAIRY WALK-IN #122 COIL FANS | 20A1P | 19 | 1440 | ----- | ----- | | | | |
| | | | | 432 | ----- | ----- | 20 | 20A1P | PRODUCE CASE #100 FANS | 3 |
| 1 | DAIRY WALK-IN #122 DOOR LIGHTS | 20A1P | 21 | ----- | 984 | ----- | | | | |
| | | | | ----- | 229 | ----- | 22 | 20A1P | SHOP AROUND CASE #112 LIGHTS | 1 |
| 6 | DAIRY WALK-IN #122 DOOR HEATER | 20A1P | 23 | ----- | ----- | 1092 | | | | |
| | | | | ----- | ----- | 127 | 24 | 20A1P | SHOP AROUND CASE #112 FANS | 3 |
| 1 | DAIRY WALK-IN #122 HO FLUOR LIGHTS | 20A1P | 25 | 1416 | ----- | ----- | | | | |
| | | | | ----- | ----- | ----- | 26 | 20A1P | SPARE | |
| 1 | ICE CREAM CASE #103 LIGHTS | 20A1P | 27 | ----- | 1283 | ----- | | | | |
| | | | | ----- | ----- | ----- | 28 | 20A1P | SPARE | |
| 3 | ICE CREAM CASE #103 FANS | 20A1P | 29 | ----- | ----- | 502 | | | | |
| | | | | ----- | ----- | ----- | 30 | 20A1P | SPARE | |
| 6 | ICE CREAM CASE #103 ANTI SWEAT HEATERS | 20A1P | 31 | 1846 | ----- | ----- | | | | |
| | | | | 1800 | ----- | ----- | 32 | 20A1P | WATER MACHINE #200 | 3 |
| 6 | ICE CREAM CASE #103 ANTI SWEAT HEATERS | 20A1P | 33 | ----- | 1659 | ----- | | | | |
| | | | | 1800 | ----- | ----- | 34 | 20A1P | WATER MACHINE #200 | 3 |
| 1 | FROZEN FOOD CASE #104 LIGHTS | 20A1P | 35 | ----- | ----- | 1005 | | | | |
| | | | | ----- | ----- | 300 | 36 | 20A1P | MEAT CASE #102 LIGHTS | 3 |
| 3 | FROZEN FOOD CASE #104 FANS | 20A1P | 37 | 396 | ----- | ----- | | | | |
| | | | | 336 | ----- | ----- | 38 | 20A1P | MEAT CASE #102 FANS | 3 |
| 6 | FROZEN FOOD CASE #104 ANTI SWEAT HEATERS | 20A1P | 39 | ----- | 1848 | ----- | | | | |
| | | | | ----- | ----- | ----- | 40 | 20A1P | SPARE | |
| 6 | FROZEN FOOD CASE #104 ANTI SWEAT HEATERS | 20A1P | 41 | ----- | ----- | 923 | | | | |
| | | | | ----- | ----- | ----- | 42 | 20A1P | SPARE | |
| | TOTAL VOLT-AMPS | | | 21196 | 29139 | 23103 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| TOTAL CONNECTED LOAD | 73,438 | VA | | | 204 AMPS |
| TOTAL DEMAND | | LOAD | DF | DEMAND | |
| LIGHTING | (1) | 23101 | 1.25 | 28876 | |
| RECEPTACLES | (2) | 20306 | 10k+.5 | 15153 | PHASE IMBALANCE (%) |
| MOTORS | (3) | 38662 | 1.25+1 | 39806 | 31.56% A/B |
| KITCHEN | (4) | 0 | 0.65 | 0 | 8.61% A/C |
| CONT. RECPT | (5) | 9910 | 1.00 | 9910 | 23.11% B/C |
| ELECTRIC HEAT | (6) | 12030 | 1.00 | 12030 | |
| ELEC. WATER HTG | (7) | 0 | 1.25 | 0 | |
| | (8) | 0 | 1.00 | 0 | |
| | (9) | 0 | 1.00 | 0 | |
| | TOTALS | 104009 | | 105775 | |
| | | | | 294 | AMPS |

(1) TOTALS INLCUDE LOADS FROM BOTH SECTIONS OF PANEL "B" AND SUB-FEED PANEL "D"

| PANEL | F | | TYPE: | NEMA 1 |
|---|---|---|---|---|
| VOLTAGE | 208 /120 | | MTG: | SURFACE |
| PHASE | 3 | | AIC: | 10,000 |
| WIRES | 4 | LARGEST MOTOR: | 1,344 | VA |
| RATING | 150 A | | | |
| MAIN BREAKER | MLO | | | |

| CD | CKT DESCRIPTION | BKR | CKT | A | B | C | CKT | BKR | CKT DESCRIPTION | CD |
|---|---|---|---|---|---|---|---|---|---|---|
| 3 | SCULLERY RM | 20A1P | 1 | 1344 | ----- | ----- | | | | |
| | ALMOND BUTTER MACHINE #210 | | | 1800 | ----- | ----- | 2 | 20A1P | KITCHEN REFRIGERATOR #130 | 2 |
| 3 | SCULLERY RM | 20A1P | 3 | ----- | 1344 | ----- | | | | |
| | PEANUT BUTTER MACHINE #211 | | | ----- | 750 | ----- | 4 | 20A1P | KITCHEN COFFEE MAKER #283 | 3 |
| 2 | ICE MERCHANDISER #270 | 20A1P | 5 | ----- | ----- | 1200 | | | KITCHEN | |
| | | | | ----- | ----- | 1250 | 6 | 20A1P | DISPOSAL (FUTURE) | 2 |
| 2 | ENTRY VESTIBULE & | 20A1P | 7 | 180 | ----- | ----- | | | KITCHEN | |
| | PRODUCE RECEPT | | | 540 | ----- | ----- | 8 | 20A1P | COUNTER RECEPTS | 2 |
| 3 | PRODUCE WALK-IN #120 | 20A1P | 9 | ----- | 1329 | ----- | | | KITCHEN ISLAND | |
| | | | | ----- | 1080 | ----- | 10 | 20A1P | & SCULLERY RECEPTS | 2 |
| 2 | PRODUCE RECEPTS | 20A1P | 11 | ----- | ----- | 720 | | | KITCHEN | |
| | | | | ----- | ----- | 180 | 12 | 20A1P | CLG TV RECEPT | 2 |
| | SPARE | 20A1P | 13 | | ----- | ----- | | | | |
| | | | | 8304 | ----- | ----- | 14 | 70A3P SHUNT TRIP | COMMERCIAL RANGE #280 | 4 |
| | SPARE | 20A1P | 15 | ----- | | ----- | | | | |
| | | | | ----- | 8304 | ----- | 16 | | | 4 |
| | SPARE | 20A1P | 17 | ----- | ----- | ----- | | | | |
| | | | | ----- | ----- | 8304 | 18 | | | 4 |
| | SPARE | 20A1P | 19 | | ----- | ----- | | | | |
| | | | | ----- | ----- | ----- | 20 | | SPACE FOR SHUNT TRIP | |
| | SPARE | 20A1P | 21 | ----- | | ----- | | | | |
| | | | | ----- | ----- | | 22 | 20A1P | SPARE | |
| | SPARE | 20A1P | 23 | ----- | ----- | | | | | |
| | | | | ----- | ----- | ----- | 24 | 20A1P | SPARE | |
| | SPARE | 20A1P | 25 | ----- | | ----- | | | | |
| | | | | ----- | ----- | ----- | 26 | 20A1P | SPARE | |
| | SPARE | 20A1P | 27 | ----- | ----- | | | | | |
| | | | | ----- | ----- | ----- | 28 | 20A1P | SPARE | |
| | SPARE | 20A1P | 29 | ----- | ----- | ----- | | | | |
| | | | | ----- | ----- | ----- | 30 | 20A1P | SPARE | |
| | SPARE | 20A1P | 31 | ----- | ----- | ----- | | | | |
| | | | | ----- | ----- | ----- | 32 | 20A1P | SPARE | |
| | SPARE | 20A1P | 33 | ----- | ----- | | | | | |
| | | | | ----- | ----- | ----- | 34 | 20A1P | SPARE | |
| | SPARE | 20A1P | 35 | ----- | ----- | ----- | | | | |
| | | | | ----- | ----- | ----- | 36 | 20A1P | SPARE | |
| | SPARE | 20A1P | 37 | | ----- | ----- | | | | |
| | | | | ----- | ----- | ----- | 38 | 20A1P | SPARE | |
| | SPARE | 20A1P | 39 | ----- | ----- | ----- | | | | |
| | | | | ----- | ----- | ----- | 40 | 20A1P | SPARE | |
| | SPARE | 20A1P | 41 | ----- | ----- | ----- | | | | |
| | | | | ----- | ----- | ----- | 42 | 20A1P | SPARE | |
| | TOTAL VOLT-AMPS | | | 12168 | 12807 | 11654 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| TOTAL CONNECTED LOAD | 36,629 | VA | | | 102 AMPS |
| TOTAL DEMAND | | LOAD | DF | DEMAND | |
| LIGHTING | (1) | 0 | 1.25 | 0 | |
| RECEPTACLES | (2) | 6950 | 10k+.5 | 6950 | PHASE IMBALANCE (%) |
| MOTORS | (3) | 4767 | 1.25+1 | 5103 | 5.12% A/B |
| KITCHEN | (4) | 24912 | 1.00 | 24912 | 4.32% A/C |
| CONT. RECPT | (5) | 0 | 1.00 | 0 | 9.43% B/C |
| ELECTRIC HEAT | (6) | 0 | 1.00 | 0 | |
| ELEC. WATER HTG | (7) | 0 | 1.25 | 0 | |
| | (8) | 0 | 1.00 | 0 | |
| | (9) | 0 | 1.00 | 0 | |
| | TOTALS | 36629 | | 36965 | |
| | | | | 103 | AMPS |

| PANEL | B (SEC 2) | | TYPE | EXISTING |
|---|---|---|---|---|
| VOLTAGE | 208 /120 | | MTG | SURFACE |
| PHASE | 3 | | AIC: | 10,000 |
| WIRES | 4 | LARGEST MOTOR | 11,520 | VA |
| RATING | 400 A | | | |
| MAIN BREAKER | MLO | | | |

| CD | CKT DESCRIPTION | BKR | CKT | A | B | C | CKT | BKR | CKT DESCRIPTION | CD |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 | WOMEN'S, MEN'S RESTROOM | 20A1P | 43 | 720 | ----- | ----- | | | | |
| | RECEPTS | | | 500 | ----- | ----- | 44 | 20A1P | (E)E.M.S. POWER | 5 |
| 2 | DRINKING FOUNTAIN | 20A1P | 45 | ----- | 360 | ----- | | | | |
| | & HALLWAY RECEPT | | | ----- | 350 | ----- | 46 | 20A1P | (E)EX FANS | 3 |
| 3 | BREAK ROOM | 20A1P | 47 | ----- | ----- | 540 | | | FORKLIFT BATTERY | |
| | RECEPTS | | | ----- | ----- | 3120 | 48 | 40A3P | CHARGER | 3 |
| 2 | BREAK ROOM | 20A1P | 49 | 1200 | ----- | ----- | | | | |
| | REFRIGERATOR | | | 3120 | ----- | ----- | 50 | | | 3 |
| 2 | BREAK ROOM | 20A1P | 51 | ----- | 360 | ----- | | | | |
| | SINK & TOWEL DISP. | | | ----- | 3120 | ----- | 52 | | | 3 |
| 2 | BREAK ROOM | 20A1P | 53 | ----- | ----- | 1226 | | | | |
| | MICROWAVE & UC LIGHT | | | ----- | ----- | 350 | 54 | 20A1P | (E)EX FAN ELECTRIC RM | 3 |
| 2 | BREAK ROOM | 20A1P | 55 | 750 | ----- | ----- | | | | |
| | COFFEE MACHINE | | | 1440 | ----- | ----- | 56 | 20A1P | TOE KICK RECEPTS | 2 |
| 2 | NUTRITIONIST | 20A1P | 57 | ----- | 540 | ----- | | | | |
| | RECEPTS | | | ----- | ----- | 750 | 58 | 20A1P | MICROWAVE #282 | 2 |
| 1 | REF. VITAMINS #110 | 20A1P | 59 | ----- | ----- | 229 | | | | |
| | LIGHTS | | | ----- | ----- | 180 | 60 | 20A1P | COFFEE GRINDER #284 | 2 |
| 3 | REF. VITAMINS #110 | 20A1P | 61 | 269 | ----- | ----- | | | | |
| | FANS | | | 1800 | ----- | ----- | 62 | 20A1P | TOE KICK RECEPTS | 2 |
| 1 | DAIRY CASE'S #109 | 20A1P | 63 | ----- | 530 | ----- | | | | |
| | LIGHTS | | | ----- | | ----- | 64 | 20A1P | SPARE | |
| 3 | DAIRY CASE'S #109 | 20A1P | 65 | ----- | ----- | 538 | | | | |
| | FANS | | | ----- | ----- | | 66 | 20A1P | SPARE | |
| | SPARE | 20A1P | 67 | | ----- | ----- | | | | |
| | | | | | ----- | ----- | 68 | 20A1P | SPARE | |
| | SPARE | 20A1P | 69 | ----- | | ----- | | | | |
| | | | | ----- | ----- | ----- | 70 | 20A1P | SPARE | |
| | SPARE | 20A1P | 71 | ----- | ----- | | | | | |
| | | | | ----- | ----- | | 72 | 20A1P | SPARE | |
| 5 | H2O HEATER GWH-1 | 20A1P | 73 | 200 | ----- | ----- | | | | |
| | | | | 1500 | ----- | ----- | 74 | 20A1P | EXTERIOR SIGN CIRCUIT | 5 |
| 3 | CIRC PUMP CP-1 | 20A1P | 75 | ----- | 400 | ----- | | | | |
| | | | | ----- | 1800 | ----- | 76 | 20A1P | ROOF RECEPTS | 3 |
| 5 | FREEZER HEAT TRACE & | 20A1P | 77 | ----- | ----- | 360 | | | | |
| | ALARM PANEL | | | ----- | ----- | 528 | 78 | 20A1P | EF-1 (ROOF) | 3 |
| 2 | COMP ROOM & | 20A1P | 79 | 1620 | ----- | ----- | | | | |
| | STOCK ROOM RECEPTS | | | 825 | ----- | ----- | 80 | 20A1P | EF-2 & EF-3 (ROOF) | 3 |
| 2 | ZAMBONI CHARGER | 20A1P | 81 | ----- | 500 | ----- | | | | |
| | | | | ----- | 696 | ----- | 82 | 20A1P | EF-5 (ROOF) | 3 |
| 5 | FIRE ALARM PANEL | 20A1P | 83 | ----- | ----- | 150 | | | | |
| | | | | ----- | ----- | ----- | 84 | 20A1P | SPARE | |
| | TOTAL VOLT-AMPS | | | 13944 | 9406 | 7221 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| TOTAL CONNECTED LOAD | 30,571 | VA | | | 85 AMPS |
| TOTAL DEMAND | | LOAD | DF | DEMAND | |
| LIGHTING | (1) | 14898 | 1.25 | 18623 | |
| RECEPTACLES | (2) | 12346 | 10k+.5 | 11173 | PHASE IMBALANCE (%) |
| MOTORS | (3) | 15756 | 1.25+1 | 18636 | 38.87% A/B |
| KITCHEN | (4) | 0 | 0.65 | 0 | 63.53% A/C |
| CONT. RECPT | (5) | 9910 | 1.00 | 9910 | 26.28% B/C |
| ELECTRIC HEAT | (6) | 2352 | 1.00 | 2352 | |
| ELEC. WATER HTG | (7) | 0 | 1.25 | 0 | |
| | (8) | 0 | 1.00 | 0 | |
| | (9) | 0 | 1.00 | 0 | |
| | TOTALS | 55262 | | 60694 | |
| | | | | 168 | AMPS |

(1) TOTALS INCLUDE LOADS FROM SUB-FEED PANEL "D".

| PANEL | G | | TYPE: | NEMA 1 |
|---|---|---|---|---|
| VOLTAGE | 208 /120 | | MTG: | SURFACE |
| PHASE | 3 | | AIC: | 10,000 |
| WIRES | 4 | LARGEST MOTOR: | 696 | VA |
| RATING | 100 A | | | |
| MAIN BREAKER | 80 A | | | |

| CD | CKT DESCRIPTION | BKR | CKT | A | B | C | CKT | BKR | CKT DESCRIPTION | CD |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 | IT ROOM | 20A1P | 1 | 360 | ----- | ----- | | | | |
| | RECEPT | | | 375 | ----- | ----- | 2 | 20A1P | CHECKOUT STAND POS | 5 |
| 2 | IT ROOM | 20A1P | 3 | ----- | 360 | ----- | | | | |
| | RECEPT | | | ----- | 375 | ----- | 4 | 20A1P | CHECKOUT STAND POS | 5 |
| 2 | IT ROOM | 20A1P | 5 | ----- | ----- | 180 | | | | |
| | RECEPT | | | ----- | ----- | 375 | 6 | 20A1P | CHECKOUT STAND POS | 5 |
| 3 | IT ROOM | 20A1P | 7 | 130 | ----- | ----- | | | | |
| | EF-4 | | | 375 | ----- | ----- | 8 | 20A1P | CHECKOUT STAND POS | 5 |
| 3 | FRONT DOOR POWER | 20A1P | 9 | ----- | 696 | ----- | | | | |
| | | | | ----- | 375 | ----- | 10 | 20A1P | CHECKOUT STAND POS | 5 |
| 1 | VESTIBULE, CHECKOUT & | 20A1P | 11 | ----- | ----- | 1266 | | | | |
| | PRODUCE LTG. | | | ----- | ----- | 360 | 12 | 20A1P | COUNTING RECEPTS | 2 |
| 1 | RETAIL | 20A1P | 13 | 1728 | ----- | ----- | | | MANAGER OFFICE | |
| | LTG. | | | 720 | ----- | ----- | 14 | 20A1P | RECEPTS | 2 |
| 1 | RETAIL | 20A1P | 15 | ----- | 1728 | ----- | | | MANAGER'S COPIER | |
| | LTG. | | | ----- | 180 | ----- | 16 | 20A1P | RECEPT | 2 |
| 1 | RETAIL | 20A1P | 17 | ----- | ----- | 1620 | | | | |
| | LTG. | | | ----- | ----- | 360 | 18 | 20A1P | BUYERS RECEPT | 2 |
| 1 | RETAIL & HALL | 20A1P | 19 | 1836 | ----- | ----- | | | | |
| | LTG. | | | ----- | 180 | ----- | 20 | 20A1P | BUYERS RECEPT | 2 |
| | SPARE | 20A1P | 21 | ----- | | ----- | | | | |
| | | | | ----- | 180 | ----- | 22 | 20A1P | BUYERS COPIER RECEPT | 2 |
| 1 | OFFICES, BREAK, RESTRM | 20A1P | 23 | ----- | ----- | 1567 | | | | |
| | LTG. | | | ----- | ----- | 180 | 24 | 20A1P | BUYERS RECEPT | 2 |
| 1 | STOCK ROOM | 20A1P | 25 | 1678 | ----- | ----- | | | | |
| | LTG. | | | 180 | ----- | ----- | 26 | 20A1P | BUYERS RECEPT | 2 |
| 1 | STOCK ROOM | 20A1P | 27 | ----- | 1728 | ----- | | | | |
| | LTG. | | | ----- | ----- | ----- | 28 | 20A1P | SPARE | |
| | SPARE | 20A1P | 29 | ----- | ----- | ----- | | | | |
| | | | | ----- | ----- | 100 | 30 | 20A1P | LIGHTING CONTROL PANEL | 5 |
| 2 | AIR PEARS ZONE A | 20A1P | 31 | 180 | ----- | ----- | | | | |
| | | | | ----- | ----- | ----- | 32 | 20A1P | SPARE | |
| 2 | AIR PEARS ZONE B | 20A1P | 33 | ----- | 225 | ----- | | | | |
| | | | | ----- | ----- | ----- | 34 | 20A1P | SPARE | |
| 2 | AIR PEARS ZONE C | 20A1P | 35 | ----- | ----- | 405 | | | | |
| | | | | ----- | ----- | ----- | 36 | 20A1P | SPARE | |
| 2 | AIR PEAR ZONE D | 20A1P | 37 | 45 | ----- | ----- | | | | |
| | PRODUCE RM | | | ----- | ----- | ----- | 38 | 20A1P | SPARE | |
| 5 | GENERATOR | 20A1P | 39 | ----- | 100 | ----- | | | | |
| | BATTERY CHARGER | | | ----- | | ----- | 40 | 20A1P | SPARE | |
| | SPARE | 20A1P | 41 | ----- | ----- | | | | | |
| | | | | ----- | ----- | ----- | 42 | 20A1P | SPARE | |
| | TOTAL VOLT-AMPS | | | 7787 | 5947 | 6413 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| TOTAL CONNECTED LOAD | 20,147 | VA | | | 56 AMPS |
| TOTAL DEMAND | | LOAD | DF | DEMAND | |
| LIGHTING | (1) | 13151 | 1.25 | 16439 | |
| RECEPTACLES | (2) | 4095 | 10k+.5 | 4095 | PHASE IMBALANCE (%) |
| MOTORS | (3) | 826 | 1.25+1 | 1000 | 26.79% A/B |
| KITCHEN | (4) | 0 | 0.65 | 0 | 19.35% A/C |
| CONT. RECPT | (5) | 2075 | 1.00 | 2075 | 7.54% B/C |
| ELECTRIC HEAT | (6) | 0 | 1.00 | 0 | |
| ELEC. WATER HTG | (7) | 0 | 1.25 | 0 | |
| | (8) | 0 | 1.00 | 0 | |
| | (9) | 0 | 1.00 | 0 | |
| | TOTALS | 20147 | | 23609 | |
| | | | | 66 | AMPS |

| PANEL | D | | TYPE | EXISTING |
|---|---|---|---|---|
| VOLTAGE | 208 /120 | | MTG | SURFACE |
| PHASE | 3 | | AIC: | 10,000 |
| WIRES | 4 | LARGEST MOTOR | 1,800 | VA |
| RATING | 225 A | | | |
| MAIN BREAKER | MLO | | | |

| CD | CKT DESCRIPTION | BKR | CKT | A | B | C | CKT | BKR | CKT DESCRIPTION | CD |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | COOLERS, PRODUCE, | 20A1P | 1 | 806 | ----- | ----- | | | | |
| | & COMP RM LTG. | | | 540 | ----- | ----- | 2 | 20A1P | COMMUNITY RM RECEPTS | 2 |
| 1 | DEMO KITCHEN | 20A1P | 3 | ----- | 915 | ----- | | | | |
| | LTG. | | | ----- | 100 | ----- | 4 | 20A1P | MECHANICAL CONTROLS | 3 |
| 1 | HABA/COMM. AREA | 20A1P | 5 | ----- | ----- | 1668 | | | | |
| | LTG. | | | ----- | ----- | ----- | 6 | 20A1P | SPARE | |
| 1 | RETAIL | 20A1P | 7 | 1080 | ----- | ----- | | | | |
| | NITE LIGHTS | | | ----- | ----- | ----- | 8 | 20A1P | SPARE | |
| 1 | RETAIL & HALL | 20A1P | 9 | ----- | 1836 | ----- | | | | |
| | NITE LIGHTS | | | ----- | ----- | ----- | 10 | 20A1P | SPARE | |
| 6 | (E)DOOR OPENER | 20A1P | 11 | ----- | ----- | 1176 | | | | |
| | | | | ----- | ----- | ----- | 12 | 20A1P | SPARE | |
| 6 | (E)DOOR OPENER | 20A1P | 13 | 1176 | ----- | ----- | | | | |
| | | | | ----- | ----- | ----- | 14 | 20A1P | SPARE | |
| 1 | RETAIL | 20A1P | 15 | ----- | 1462 | ----- | | | | |
| | NITE LIGHTS | | | ----- | ----- | ----- | 16 | 20A1P | SPARE | |
| 1 | RETAIL | 20A1P | 17 | ----- | ----- | 1728 | | | | |
| | NITE LIGHTS | | | ----- | ----- | ----- | 18 | 20A1P | SPARE | |
| 1 | STOCK RM | 20A1P | 19 | 1080 | ----- | ----- | | | | |
| | NITE LIGHTS | | | ----- | ----- | ----- | 20 | 20A1P | SPARE | |
| 1 | STOCK RM | 20A1P | 21 | ----- | 1728 | ----- | | | | |
| | NITE LIGHTS | | | ----- | ----- | ----- | 22 | 20A1P | SPARE | |
| 1 | STOCK RM | 20A1P | 23 | ----- | ----- | 1836 | | | | |
| | NITE LIGHTS | | | ----- | ----- | ----- | 24 | 20A1P | SPARE | |
| 5 | CHECKOUT STAND | 20A1P | 25 | 1440 | ----- | ----- | | | | |
| | BELTS & OUTLETS | | | ----- | ----- | ----- | 26 | 20A1P | SPARE | |
| 5 | CHECKOUT STAND | 20A1P | 27 | ----- | 1440 | ----- | | | | |
| | BELTS & OUTLETS | | | ----- | ----- | ----- | 28 | 20A1P | SPARE | |
| 5 | CHECKOUT STAND | 20A1P | 29 | ----- | ----- | 1440 | | | | |
| | BELTS & OUTLETS | | | ----- | ----- | ----- | 30 | 20A1P | SPARE | |
| 5 | CHECKOUT STAND | 20A1P | 31 | 1440 | ----- | ----- | | | | |
| | BELTS & OUTLETS | | | ----- | ----- | ----- | 32 | 20A1P | SPARE | |
| 5 | CHECKOUT STAND | 20A1P | 33 | ----- | 1440 | ----- | | | | |
| | BELTS & OUTLETS | | | ----- | ----- | ----- | 34 | 20A1P | SPARE | |
| 2 | SHOWER ROOM | 20A1P | 35 | ----- | ----- | 360 | | | | |
| | RECEPTS | | | ----- | ----- | ----- | 36 | 20A1P | SPARE | |
| | SPARE | 20A1P | 37 | ----- | ----- | ----- | | | | |
| | | | | ----- | ----- | ----- | 38 | 20A1P | SPARE | |
| | SPARE | 20A1P | 39 | ----- | ----- | ----- | | | | |
| | | | | ----- | ----- | ----- | 40 | 20A1P | SPARE | |
| | SPARE | 20A1P | 41 | ----- | ----- | ----- | | | | |
| | | | | ----- | ----- | ----- | 42 | 20A1P | SPARE | |
| | TOTAL VOLT-AMPS | | | 7562 | 8921 | 8208 | | | | |

| | | | | | |
|---|---|---|---|---|---|
| TOTAL CONNECTED LOAD | 24,691 | VA | | | 69 AMPS |
| TOTAL DEMAND | | LOAD | DF | DEMAND | |
| LIGHTING | (1) | 14139 | 1.25 | 17674 | |
| RECEPTACLES | (2) | 900 | 10k+.5 | 900 | PHASE IMBALANCE (%) |
| MOTORS | (3) | 100 | 1.25+1 | 550 | 16.49% A/B |
| KITCHEN | (4) | 0 | 0.65 | 0 | 8.19% A/C |
| CONT. RECPT | (5) | 7200 | 1.00 | 7200 | 8.33% B/C |
| ELECTRIC HEAT | (6) | 2352 | 1.00 | 2352 | |
| ELEC. WATER HTG | (7) | 0 | 1.25 | 0 | |
| | (8) | 0 | 1.00 | 0 | |
| | (9) | 0 | 1.00 | 0 | |
| | TOTALS | 24691 | | 28676 | |
| | | | | 80 | AMPS |

## DRAWING NOTES:

(1) - COMPRESSOR RACK AND CONDENSER DATA IS ESTIMATED, BASED ON PREVIOUS PROJECTS. E.C. TO VERIFY ACTUAL COMPRESSOR RACK AND CONDENSER ELECTRICAL DATA PRIOR TO ORDERING ANY NEW CIRCUIT BREAKERS OR WIRING EQUIPMENT WITH OWNERS REP AND REFRIGERATION CONSULTANT.

(2) - PROVIDE NEW CIRCUIT BREAKER OF SIZE AND TYPE SHOWN. VERIFY AND MATCH PANEL AIC RATING.

## GENERAL NOTES:

1. ALL CIRCUIT BREAKERS IN EXISTING PANELS SHALL BE CONSIDERED EXISTING UNLESS NOTED OTHERWISE.
2. ALL NEW CIRCUIT BREAKERS SHALL MATCH THE AIC RATING OF THE EXISTING PANEL.
3. E.C. SHALL PROVIDE UPDATED PANEL SCHEDULES FOR ALL LOADS ON EXISTING PANELS.

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06.17.2014
PERMIT AND CONSTRUCTION

issue / date
JUN 17 2014




sheet title
ELECTRICAL PANEL SCHEDULES

by
BAB

app
JAG

sheet no.
E12 of 13

| Lighting Control Panel Schedule | | | | |
|---|---|---|---|---|
| LCP Name: | LCP-1 | | | |
| Location: | STOCK ROOM | | | |
| Surface/Flush: | SURFACE | | | |
| Power Circuit: | PER PLAN | | | |
| Relay # | Circuit | Description | LV Switch/Sensor | Channel |
| 1 | G-21 | Retail lighting | LVS-1 (Cust. Serv) | A |
| 2 | G-23 | Retail lighting | LVS-1 (Cust. Serv) | A |
| 3 | SPARE | SPARE | | |
| 4 | MA CONTACTOR | Retail lighting | LVS-1 (Cust. Serv) | A |
| 5 | MA CONTACTOR | Retail lighting | LVS-1 (Cust. Serv) | A |
| 6 | MA CONTACTOR | Refrigeration Case Lights | LVS-1 (Cust. Serv) | A |
| 7 | MA CONTACTOR | Refrigeration Case Lights | LVS-1 (Cust. Serv) | A |
| 8 | MA CONTACTOR | Refrigeration Case Lights | LVS-1 (Cust. Serv) | A |

| LCP Channel Automation Schedule | | | | |
|---|---|---|---|---|
| Channel | Scenario | Scenario Times | Blink | Time Delay |
| A | Manual On/Sched Off | M-SAT: 7am-10pm (07:00-22:00)<br>SUN: 8am-8pm (08:00-20:00) | NO | 3hrs (180 min.) |

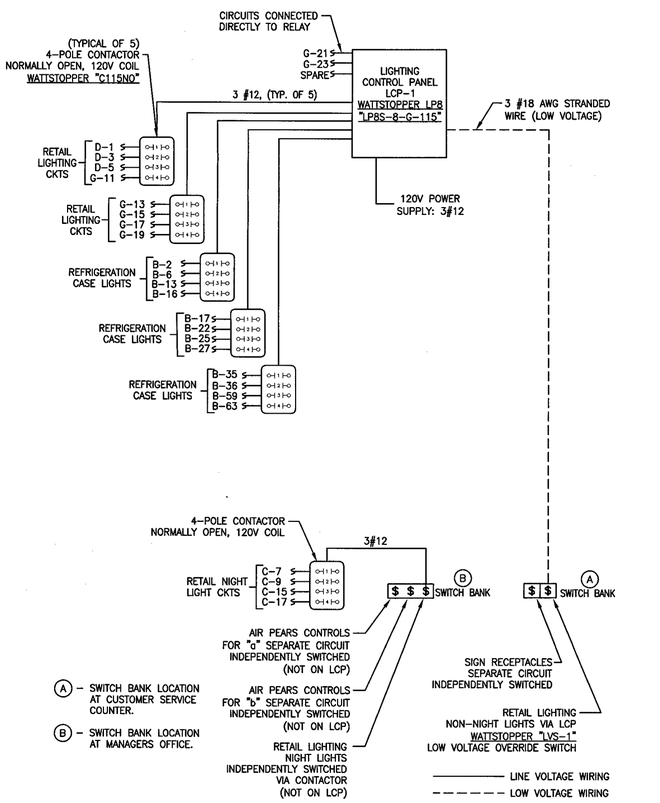
* HOLIDAY PROGRAMMING IS NOT REQUIRED; "MANUAL ON" CONTROLS WILL ENSURE THAT INTERIOR LIGHTS DO NOT AUTOMATICALLY COME ON WHEN THE STORE IS CLOSED.

LIGHTING CONTROL NOTES:

1. BACK OF HOUSE LIGHTING EXCEPT HALL (STOCK ROOM, OFFICES, RESTROOMS & BREAKROOM) TO BE CONTROLLED BY LOCAL OCCUPANCY SENSOR, DO NOT ROUTE CIRCUITS THROUGH LCP.
2. RETAIL AREA NIGHT LIGHT CIRCUITS TO REMAIN ON 24/7. DO NOT ROUTE CIRCUITS THROUGH LCP. PROVIDE 4-POLE CONTACTOR TO ALLOW MULTIPLE CIRCUITS TO BE CONTROLLED BY A SINGLE SWITCH (SEE LIGHTING CONTROL WIRING DIAGRAM).
3. EXTERIOR LIGHTING TO BE CONTROLLED BY INDEPENDANT EXTERIOR PHOTOCELL. DO NOT ROUTE CIRCUITS THROUGH LIGHTING CONTROL PANEL.

## 1 LIGHTING CONTROL PANEL SCHEDULE

E13 N.T.S.




## 2 LIGHTING CONTROL WIRING DIAGRAM

E13 N.T.S.

# LUMINAIRE SCHEDULE

| | ID | KEY | MOUNTING | DESCRIPTION | MANUFACTURE | CATALOG NUMBER | FIXTURE DATA TYPE | FIXTURE DATA WATTS | Volts | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| * | A1 | | CABLE HUNG | 8' LED STRIP | GE LIGHTING | ALC3-0-1-H-48-7-8-N-N-ST-K-P | LED | 108W | 120 | HIGH CRI LED'S |
| * | A1 | | CABLE HUNG | 8' LED STRIP | GE LIGHTING | ALC3-0-1-H-48-7-8-N-N-ST-K-P | LED | 108W | 120 | HIGH CRI LED'S ON GENERATOR |
| | A11 | | WALL | SCONCE | LITHONIA | OFLR-9LC-120-MO-BZ | LED | 12W | 120 | WITH INTEGRAL MOTION SENSOR |
| | A2 | | SURFACE | 2' LED SURFACE WRAP | GE LIGHTING | ALM1-0-2-T-47-W-D-N-2-ST-K-W | LED | 40W | 120 | HIGH CRI LED'S |
| * | A3 | | CABLE HUNG | 4' LED STRIP | GE LIGHTING | ALC3-0-1-H-48-7-4-N-N-ST-K-P | LED | 58W | 120 | HIGH CRI LED'S |
| * | A3 | | CABLE HUNG | 4' LED STRIP | GE LIGHTING | ALC3-0-1-H-48-7-4-N-N-ST-K-P | LED | 58W | 120 | HIGH CRI LED'S ON GENERATOR |
| | A9 | | SURFACE | 4' LED SURFACE WRAP | GE LIGHTING | ALM1-0-2-T-47-W-D-4-N-ST-K-W | LED | 80W | 120 | HIGH CRI LED'S ON GENERATOR |
| | B1 | | RECESSED | 2'X4' TROFFER | GE LIGHTING | ET-24-0-C3-A-V-WHTE | LED | 54W | 120 | ON GENERATOR |
| | B1 | | RECESSED | 2'X4' TROFFER | GE LIGHTING | ET-24-0-C3-A-V-WHTE | LED | 54W | 120 | |
| | B2 | | RECESSED | 2'X2' TROFFER | ALBEO | TR-V225-110GD-ROB | LED | 29W | 120 | HIGH CRI LED'S ON GENERATOR |
| | C | | RECESSED | 6" DOWNLIGHT | PORTFOLIO | LD6-15-D010-ERW6-830-6LW0-WMH | LED | 25W | 120 | 3000K COLOR TEMP |
| | C | | RECESSED | 6" DOWNLIGHT | PORTFOLIO | LD6-15-D010-ERW6-830-6LW0-WMH | LED | 25W | 120 | 3000K COLOR TEMP |
| | C2 | | SURFACE | 6" DOWNLIGHT | HALO | RL560WH6830 | LED | 10W | 120 | WITH HALO H2750ICAT 6" INCANDESCENT HOUSING (3000K) |
| | CW | | RECESSED | 6" WALL WASH | PORTFOLIO | LD6-15-D010-ERW6-830-6LW111-WMH | LED | 25W | 120 | 3000K COLOR TEMP |
| | D | | SURFACE | UNDER CABINET | ALBEO | TP-450DP-AACD-C93 | LED | 13W | 120 | W/ (1) PWS-212D-220A |
| | E1 | | RECESSED | 6" DOWNLIGHT | EXISTING | | VERIFY | VERIFY | 120 | |
| | E2 | | WALL | SCONCE | EXISTING | | VERIFY | VERIFY | 120 | |
| | E3 | | WALL MOUNT | 4' STRIP | EXISTING | | 2-F32T8 | 64W | 120 | |
| | EM1 | | WALL | SCONCE | LUMINAIRE LIGHTING | AEL12-10W-120-DP-BKH-EMB20R | LED | 10W | 120 | REMOTE INVERTER, 90 MIN. BATTERY BACKUP |
| | EX | | WALL | EGRESS LIGHT | LITHONIA | ELM2 | KRYPTON | 12W | 120 | 90 MIN BATTERY BACKUP |
| | F1 | | PENDANT | SHADE PENDANT | SEA GULL LIGHTING | 6519-98 (BRUSHED STAINLESS) | LED | 15W | 120 | 4000K, MEDIUM BASE, SCREW-IN A19 LED LAMP BY E.C. |
| | T1 | | TRACK SYSTEM | SINGLE TRACK HEAD | INTENSE LIGHTING | MBS-1600-309-SV-FL50 | LED | 28W | 120 | PROVIDE SINGLE TRACK HEAD ASSEMBLY (SILVER), 3000K 92CRI |
| | T2 | | TRACK SYSTEM | DOUBLE TRACK HEAD | INTENSE LIGHTING | MBSX2-1600-309-SV-FL50 | LED | 56W | 120 | PROVIDE SINGLE CIRCUIT TRACK ASSEMBLY (SILVER), 3000K, 92CRI |
| | W2-4 | | WALL | WALL PACK | GE LIGHTING | EWSW-0-B4-N-40-A-1-N-DKBZ | LED | 63W | 120 | FORWARD THROW |
| | X1 | | RECESSED | EXIT SIGN | LITHONIA | LRP-1-(RC/GC)-120/277-EL N | LED | 3W | 120 | RED, UNLESS GREEN IS REQUIRED PER AHJ, 90 MIN BATTERY BACKUP |
| | X1 | | RECESSED | EXIT SIGN | LITHONIA | LRP-1-(RC/GC)-RA-120/277-EL N | LED | 10W | 120 | RED, UNLESS GREEN IS REQUIRED PER AHJ, 90 MIN BATTERY BACKUP |
| | X2 | | PENDANT / SURFACE | EXIT SIGN | LITHONIA | EDG-2-(R/G)-120/277-EL | LED | 3W | 120 | RED, UNLESS GREEN IS REQUIRED PER AHJ, 90 MIN BATTERY BACKUP |
| | X2 | | PENDANT / SURFACE | EXIT SIGN | LITHONIA | EDG-1-(R/G)-120/277-EL | LED | 3W | 120 | RED, UNLESS GREEN IS REQUIRED PER AHJ, 90 MIN BATTERY BACKUP |

NOTE: ALL ALBEO AND GE LIGHT FIXTURES SHALL BE PROVIDED BY OWNER/TENANT AND INSTALLED BY E.C.
*SEE ALTERNATE PRICING ON SHEET E1.

**COMcheck Software Version 3.9.3**

## Interior Lighting Compliance Certificate

**2009 IECC**

### Section 1: Project Information

Project Type: **Alteration**
Project Title : Vitamin Cottage - Specialty Retailer

Construction Site:
4819 Kietze Lane
Reno, NV 89509

Owner/Agent:

Designer/Contractor:
Given & Associates
735 S. Xenon Ct, Suite 201
Denver, CO 80228
303-716-1270

### Section 2: Interior Lighting and Power Calculation

| A Area Category | B Floor Area (ft2) | C Allowed Watts / ft2 | D Allowed Watts (B x C) |
|---|---|---|---|
| Grocery Store (Retail) | 31484 | 1.5 | 47226 |
| | | Total Allowed Watts = | 47226 |

### Section 3: Interior Lighting Fixture Schedule

| A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast | B Lamps/ Fixture | C # of Fixtures | D Fixture Watt. | E (C X D) |
|---|---|---|---|---|
| Grocery Store ( Retail 31484 sq.ft.) | | | | |
| LED 1: A1: LED Linear Pendant - 8': Other: Electronic: | 1 | 215 | 108 | 23220 |
| LED 2: A2: LED Surface Downlight: Other: Electronic: | 1 | 8 | 40 | 320 |
| LED 3: A3: LED Linear Pendant - 4': Other: Electronic: | 1 | 3 | 58 | 174 |
| LED 4: A9: LED Linear Pendant - 4': Other: Electronic: | 1 | 1 | 80 | 80 |
| LED 5: B1: LED Recessed Troffer - 2'x4': Other: Electronic: | 1 | 38 | 54 | 2052 |
| LED 6: B2: LED Recessed Troffer - 2'x2': Other: Electronic: | 1 | 4 | 28 | 112 |
| LED 7: C: LED Recessed Downlight: Other: Electronic: | 1 | 15 | 25 | 375 |
| LED 8: C2: LED Recessed Downlight: Other: Electronic: | 1 | 17 | 25 | 425 |
| LED 9: CW: LED Recessed Downlight: Other: Electronic: | 1 | 4 | 25 | 100 |
| LED 10: D: LED Undercabinet: Other: Electronic: | 1 | 2 | 13 | 26 |
| LED 11: F1: LED Pendant: Other: Electronic: | 1 | 20 | 15 | 300 |
| LED 12: T1: LED Single Track head: Other: Electronic: | 1 | 38 | 28 | 1064 |
| LED 13: T2: LED Double Track head: Other: Electronic: | 1 | 2 | 56 | 112 |
| | | | Total Proposed Watts = | 28360 |

### Section 4: Requirements Checklist

Interior Lighting PASSES

**Lighting Wattage:**

☐ 1. Total proposed watts must be less than or equal to total allowed watts.

| Allowed Watts | Proposed Watts | Complies |
|---|---|---|
| 47226 | 28360 | Passes |

**Controls, Switching, and Wiring:**



☐ 2. Daylight zones under skylights more than 15 feet from the perimeter have lighting controls separate from daylight zones adjacent to vertical fenestration.
☐ 3. Daylight zones have individual lighting controls independent from that of the general area lighting.

*Exceptions:*

☐ Contiguous daylight zones spanning no more than two orientations are allowed to be controlled by a single controlling device.
☐ Daylight spaces enclosed by walls or ceiling height partitions and containing two or fewer light fixtures are not required to have a separate switch for general area lighting.

☐ 4. Independent controls for each space (switch/occupancy sensor).

*Exceptions:*

☐ Areas designated as security or emergency areas that must be continuously illuminated.
☐ Lighting in stairways or corridors that are elements of the means of egress.

☐ 5. Master switch at entry to hotel/motel guest room.
☐ 6. Individual dwelling units separately metered.
☐ 7. Medical task lighting or art/history display lighting claimed to be exempt from compliance has a control device independent of the control of the nonexempt lighting.
☐ 8. Each space required to have a manual control also allows for reducing the connected lighting load by at least 50 percent by either controlling all luminaires, dual switching of alternate rows of luminaires, alternate luminaires, or alternate lamps, switching the middle lamp luminaires independently of other lamps, or switching each luminaire or each lamp.

*Exceptions:*

☐ Only one luminaire in space.
☐ An occupant-sensing device controls the area.
☐ The area is a corridor, storeroom, restroom, public lobby or sleeping unit.
☐ Areas that use less than 0.6 Watts/sq.ft.

☐ 9. Automatic lighting shutoff control in buildings larger than 5,000 sq.ft.

*Exceptions:*

☐ Sleeping units, patient care areas; and spaces where automatic shutoff would endanger safety or security.

☐ 10. Photocell/astronomical time switch on exterior lights.

*Exceptions:*

☐ Lighting intended for 24 hour use.

☐ 11. Tandem wired one-lamp and three-lamp ballasted luminaires (No single-lamp ballasts).

*Exceptions:*

☐ Electronic high-frequency ballasts; Luminaires on emergency circuits or with no available pair.

### Section 5: Compliance Statement

*Compliance Statement:* The proposed lighting alteration project represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting alteration project has been designed to meet the 2009 IECC, Chapter 8, requirements in COMcheck Version 3.9.3 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title _____ Signature _____ Date _____




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architecture llc
1335 elati st, unit a
denver, co 80204
t: 303.872.0487
c: 720.841.7301
f: 480.275.3797


# SPECIALTY RETAILER

VNVRN
4819 KIETZKE LANE
RENO, NEVADA 89509

06.17.2014
PERMIT AND CONSTRUCTION

issue / date

JUN 17 2014




sheet title: ELECTRICAL DETAILS AND COMCHECK

by: BAB

app: JAG

sheet no.: E13 of 13

# BUILDING PERMIT APPLICATION

Rev 06/2012

City of Reno
Community Development Department
1 E. First Street – P.O. Box 1900, Reno, NV 89505
(775) 334-2063 ☐ www.reno.gov
Fax (775) 334-2043

**COMMERCIAL**

Case No.:

Rec'd By:

BLD14-07033

Parcel Number: 024-055-33 Address: 4819 KIETZKE LANE, RENO, NV 89509 Bldg#/Suite #

Description of Work:

TENANT FINISH OF EXISTING BUILDING. EXTERIOR MODIFICATIONS LIMITED TO PAINTING. STRUCTURAL MODIFICATIONS LIMITED TO REINFORCEMENT OF ROOF JOISTS AND EXISTING BEARING WALL.

RECEIVED
JUN 18 2014
CITY OF RENO
Community Development Dept.

Business/Tenant Information: First tenant ☐ Change of use ☒

Tenant Name: SPECIALTY RETAILER Phone No.:

Description of Business GROCERY Hours of Operation 8:50AM-8:04PM

Address: Email:

Property Owners Name Phone No.:

Corporate Office Address: Fax No.:

Contractor Information:

General Contractor: TBD Contact Name:

Address:

Phone No.: Fax No.:

Nevada License # required: City Bus.Lic #:

Email :

Plumbing Contractor: TBD Phone No.:

Nevada License # required: City Bus.Lic #:

Mechanical Contractor: TBD Phone No.:

Nevada License # required: City Bus.Lic #:

Electrical Contractor: TBD Phone No.:

Nevada License # required City Bus.Lic #:

Design Professional Information:

Architect's Name: ~~DAVID~~ GROOMS Phone No.: 303.872.0487

E-Mail Address: DAVID@VEGAARCHITECTURE.COM Fax. No 720.682.3822

Engineer's Name: JEFF GIVEN Phone No.: 303.710.1270

E-mail Address: JEFFG@GIVENANDASSOCIATES.COM Fax. No 303.710.1272

Person to Contact Regarding this project:

Name and Company ROB FORSLUND – VEGA ARCHITECTURE Phone No.: 303.872.0487

E-Mail Address ROB@VEGAARCHITECTURE.COM Fax No.: 720.682.3822

Role or Title ARCHITECT

Project Information – Please fill out other side →

## Project Information: page 2

Valuation: $ 1040,000 Zoning: AC | ARTERIAL COMM. Lot : 4827

No. of Stories 1 No. of Units 1

Building Height: 44'-6" Project Sq. Footage: 31,948 SF (TENANT)

Planning Case No.: Mass Grading Permit No.:

Site Improvement Permit No.: Demolition Permit No.:

Retaining Wall Permit No.: Fire Demo Permit No.;

Affordable Housing? Yes ☐ No ☒

Fire Sprinkler System Existing ?: Yes ☒ No ☐ Will be added for this project on separate submittal ☐

Fire Alarm System Existing ? Yes ☒ No ☐ Will be added for this project on separate submittal ☐

Septic Tank? Yes ☐ No ☒

Grease or Sand/Oil Interceptor? Existing ☐ New ☒ Not Applicable ☐

## Building Code Information:

Edition of Code: 2012 Building Code Used: INTERNATIONAL BUILDING CODE

Type of Construction: VB Occupancy Use: MIXED NON-SEPERATED Occupancy Group: M Sq ft 16,435

Type of Construction: VB Occupancy Use: " Occupancy Group: S-2 Sq ft 12,070

Type of Construction: VB Occupancy Use: " Occupancy Group: B Sq ft 1,309

Comments:

Applicant (print) DAVID GROOMS (sign)

Role or Title: ARCHITECT, PRINCIPAL

ALL plumbing fixtures must be illustrated on plans. All Existing, to be removed and to be added must be clearly marked. Complete and attach Plumbing Count sheet to Application.

# APPENDIX B

# Rent Roll

Firecreek Crossing (7808-nv) (7808-nv )
December 2021



| Suite No. | Tenant Name | Square Feet | Term | Security Deposit | Current Monthly Charges | | | Base Rent Inc. CPI or Step Up | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Chg Code | Amount | Amount PSF | Date | Rate | |
| 4801 | Boston Market #1588 | 3,200 | 12/17/96 to 12/31/26 | $0.00 | cam | 182.62 | 0.06 | 1/1/17 | $10,320.36 | |
| | | | *Original Lease 12/17/96 to 12/31/16* | | insuranc | 29.71 | 0.01 | 1/1/22 | $11,478.27 | |
| | | | *Renewal 01/01/17 to 12/31/21* | | rent | 10,320.36 | 3.23 | | | |
| 4805 | Apple Nevada LLC | 5,500 | 12/17/96 to 12/31/26 | $0.00 | cam | 200.00 | 0.04 | 1/1/17 | $8,333.33 | |
| | | | *Original Lease 12/17/96 to 12/31/16* | | rent | 8,333.33 | 1.52 | 1/1/22 | $9,166.67 | |
| | | | *Renewal 01/01/17 to 12/31/26* | | | | | | | |
| 4809A | Starbucks Corporation | 1,454 | 07/01/13 to 06/30/23 | $0.00 | cam | 456.17 | 0.31 | 7/1/18 | $3,853.00 | |
| | | | *Renewal 07/01/18 to 06/30/23* | | insuranc | 32.84 | 0.02 | | | |
| | | | | | realtax | 175.01 | 0.12 | | | |
| | | | | | rent | 3,853.00 | 2.65 | | | |
| | | | | | wateport | 320.28 | 0.22 | | | |
| 4809B | Toys N More, L.L.C. | 8,555 | 10/05/20 to 11/30/23 | $16,877.94 | cam | 1,899.29 | 0.22 | 11/23/21 | $6,531.74 | |
| | Toys N More | | *Original Lease 10/05/20 to 11/30/23* | | insuranc | 190.73 | 0.02 | 5/23/22 | $10,000.00 | |
| | | | | | realtax | 1,029.70 | 0.12 | 1/23/23 | $13,455.94 | |
| | | | | | rent | 6,531.74 | 0.76 | | | |
| | | | | | wateport | 135.72 | 0.02 | | | |
| 4809D | Cha Ching, Inc. dba Great Clips | 1,400 | 05/01/16 to 04/30/26 | $2,800.00 | cam | 347.98 | 0.25 | 10/1/21 | $3,878.00 | |
| | Great Clips | | *Renewal 05/01/21 to 04/30/26* | | insuranc | 31.21 | 0.02 | 5/1/23 | $4,113.67 | |
| | | | | | realtax | 168.51 | 0.12 | 5/1/25 | $4,237.33 | |
| | | | | | rent | 3,878.00 | 2.77 | | | |
| | | | | | wateport | 108.57 | 0.08 | | | |
| 4819 | Vitamin Cottage Natural Food Markets, Inc. | 31,850 | 08/06/14 to 12/31/24 | $0.00 | cam | 2,759.92 | 0.09 | 1/1/20 | $23,356.67 | |
| | | | *Original Lease 08/06/14 to 12/31/24* | | insuranc | 719.43 | 0.02 | | | |
| | | | | | realtax | 3,833.53 | 0.12 | | | |
| | | | | | rent | 23,356.67 | 0.73 | | | |
| 4821 | The TJX Companies, Inc. | 45,500 | 02/01/14 to 01/31/29 | $0.00 | cam | 3,478.36 | 0.08 | 2/1/19 | $47,395.83 | |
| | | | *Original Lease 02/01/14 to 01/31/19* | | insuranc | 421.08 | 0.01 | 2/1/22 | $49,291.67 | |
| | | | *Renewal 02/01/19 to 01/31/29* | | rent | 47,395.83 | 1.04 | 2/1/25 | $51,187.50 | |

# Rent Roll

Firecreek Crossing (7808-nv) (7808-nv )
December 2021



| Suite No. | Tenant Name | Square Feet | Term | Security Deposit | Current Monthly Charges | | | Base Rent Inc. CPI or Step Up | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Chg Code | Amount | Amount PSF | Date | Rate | |
| 4823 | Floor and Decor Outlets of America, Inc. | 55,269 | 04/21/14 to 04/30/24 | $0.00 | cam | 3,818.99 | 0.07 | 5/1/19 | $41,451.75 | |
| | | | *Original Lease 04/21/14 to 04/30/24* | | insuranc | 1,248.42 | 0.02 | | | |
| | | | | | realtax | 6,156.72 | 0.11 | | | |
| | | | | | rent | 41,451.75 | 0.75 | | | |
| 4825 | Ross Dress For Less, Inc. | 30,000 | 02/01/12 to 01/31/27 | $0.00 | cam | 1,707.94 | 0.06 | 2/1/17 | $38,275.00 | |
| | | | *Original Lease 02/01/12 to 01/31/22* | | insuranc | 278.54 | 0.01 | 2/1/22 | $42,100.00 | |
| | | | | | rent | 38,275.00 | 1.28 | | | |
| 4827 | Office Depot, Inc. | 17,891 | 03/10/14 to 03/31/24 | $0.00 | cam | 1,088.28 | 0.06 | 7/1/19 | $23,780.12 | |
| | | | *Original Lease 03/10/14 to 03/31/24* | | insuranc | 404.12 | 0.02 | | | |
| | | | | | rent | 23,780.12 | 1.33 | | | |
| 4855 | Walmart Stores | 0 | 07/06/93 to | $0.00 | cam | 148.59 | #Error | | | |
| | | | *Original Lease 07/06/93 to* | | | | | | | |
| 4869 | Silver State 2831 LLC | 0 | 09/18/18 to | $0.00 | cam | 2,017.62 | #Error | | | |
| | Scandinavian Designs Inc | | *Original Lease 09/18/18 to* | | insuranc | 277.43 | #Error | | | |
| 4871 | Michaels Stores, Inc. | 24,295 | 06/01/15 to 01/31/26 | $0.00 | cam | 1,548.19 | 0.06 | 6/1/20 | $31,482.27 | |
| | | | *Original Lease 06/01/15 to 05/31/20* | | insuranc | 548.78 | 0.02 | | | |
| | | | *Renewal 06/01/20 to 01/31/26* | | rent | 31,482.27 | 1.30 | | | |
| 4875A | Shark, LTD dba Sola Salons | 5,000 | 10/17/14 to 10/31/24 | $7,700.00 | cam | 643.27 | 0.13 | 11/1/21 | $6,566.67 | |
| | Sola Salons | | *Original Lease 10/17/14 to 10/31/24* | | insuranc | 111.47 | 0.02 | 11/1/22 | $6,762.50 | |
| | | | | | realtax | 601.81 | 0.12 | 11/1/23 | $6,966.67 | |
| | | | | | rent | 6,566.67 | 1.31 | | | |
| | | | | | wateport | 172.41 | 0.03 | | | |
| 4875B | Affordable Care, LLC | 4,000 | 03/14/18 to 09/30/23 | $0.00 | cam | 574.15 | 0.14 | 9/10/18 | $6,750.00 | |
| | | | *Original Lease 03/14/18 to 09/30/23* | | insuranc | 89.18 | 0.02 | | | |
| | | | | | realtax | 481.45 | 0.12 | | | |
| | | | | | rent | 6,750.00 | 1.69 | | | |
| | | | | | wateport | 25.25 | 0.01 | | | |

# Rent Roll

Firecreek Crossing (7808-nv) (7808-nv )
December 2021



| Suite No. | Tenant Name | Square Feet | Term | Security Deposit | Current Monthly Charges | | | Base Rent Inc. CPI or Step Up | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Chg Code | Amount | Amount PSF | Date | Rate | |
| 4875C, 4875D | Ultimate Fitness Concepts, LLC dba UFC Gym<br>UFC Gym | 11,000 | 03/15/17 to 07/31/28<br>*Original Lease 03/15/17 to 07/31/27* | $17,930.00 | cam | 1,723.34 | 0.16 | 8/1/18 | $13,200.00 | |
| | | | | | insuranc | 245.24 | 0.02 | 8/1/22 | $14,250.00 | |
| | | | | | realtax | 1,323.98 | 0.12 | 8/1/27 | $5,834.17 | |
| | | | | | rent | 13,200.00 | 1.20 | 8/1/27 | $14,250.00 | |
| | | | | | wateport | 57.32 | 0.01 | 7/1/28 | $5,834.13 | |
| 4879 | SSL Property Management, LLC | 0 | 10/28/02 to<br>*Original Lease 10/28/02 to* | $0.00 | cam | 241.43 | #Error | | | |
| | | | | | insuranc | 34.81 | #Error | | | |
| 4891 | Ulta Salon, Cosmetics & Fragrance, Inc. | 14,041 | 05/22/16 to 05/31/26<br>*Original Lease 05/22/16 to 05/31/26* | $0.00 | cam | 2,491.11 | 0.18 | 6/1/21 | $22,196.48 | |
| | | | | | insuranc | 312.13 | 0.02 | | | |
| | | | | | realtax | 1,685.07 | 0.12 | | | |
| | | | | | rent | 22,196.48 | 1.58 | | | |
| 4811 | VACANT | 45,524 | | $0.00 | | | | | $0.00 | |
| 4813 | VACANT | 43,500 | | $0.00 | | | | | $0.00 | |
| LOT | VACANT | 0 | | $0.00 | | | | | $0.00 | |
| **Totals for Firecreek Crossing (7808-nv):** | | 347,979 | | $45,307.94 | | | | | | |
| | **Vacant:** | 89,024 | 25.58 % | | | | | | | |
| | **Occupied:** | 258,955 | 74.42 % | | | | | | | |

| Current Monthly Charges | |
|---|---|
| cam | 25,327.25 |
| insuranc | 4,975.12 |
| realtax | 15,455.78 |
| rent | 287,371.22 |
| wateport | 819.55 |

**AllWest Environmental**
**Due Diligence Questionnaire**

**Firecreek Shopping Center, Reno NV**
**Please return by: ASAP**

AllWest

| General Information | | |
|---|---|---|
| Property Name | Firecreek Shopping Center | |
| Property Owner | SCGIF II - Firecreek Owner, LLC, & Smythe Firecreek Owner, LLC | |
| Address | 4889 Kietzke LN | |
| City, State, Zip | Reno, NV 89509 | |
| Site Contact | Leslie Simmons, Property Manager, Colliers | |
| Building Information | | |
| Construction Date (year) | 1976 | |
| Building sq ft | 351,787 | Gross (per the offering memorandum) |

| Service Providers | | | |
|---|---|---|---|
| **Maintenance:** | | | |
| Landscape | Town & Country Landscape | Contact Number: | |
| HVAC | Custom-Aire | Contact Number: | |
| Roof | D&D Roofing | Contact Number: | |
| **Utilities:** | | | |
| Electrical | NV Energy | Adequate? | Yes No |
| Gas | NV Energy | Adequate? | Yes No |
| Water | Truckee Meadows Water Authority | Adequate? | Yes No |
| Sewer | City of Reno - Sewer Dept | Adequate? | Yes No |

| Property Condition | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Site:** | | | | | | | | |
| Asphalt sealing | | Year replaced: | Yes | 2019 | Cost: | $980,665 | | |
| Irrigation System | | (Yes) No | | | | | | |
| **Building Envelope:** | | | | | | | | |
| Roof Type: | Built up Roof system | Year replaced: | | 2017 | Cost: $579,140 | Current leaks? | None | |
| Structural (cracks, settlement) | | Yes (No) | | | | | | |
| Seismic Retrofit: | | Yes (No) | | | Year: | | | |
| | Shear walls | Yes No | Shear frames | Yes No | | Plywood sheathing | Yes No | |
| Window Systems | | | | | | Current leaks? | Yes (No) | |
| Wall Systems | | | | | | Current leaks? | Yes (No) | |
| Ceiling Systems | Is there any evidence of water intrusion on ceilings or ceiling systems? | | | | | | Yes (No) | |
| **Mechanical Systems:** | | | | | | | | |
| HVAC | | Year replaced: | | | | | | |

**Known Deficiencies** (water infiltration, plumbing, HVAC, electrical deficiencies, deferred maintenance)

N/A

**Current Building Condition Reports** (water infiltration, HVAC, roofing systems, etc.)

Attached

**Recent major replacement costs:**

N/A

| Documentation | | | | | |
|---|---|---|---|---|---|
| **Lists/Reports:** | | | | | |
| Previous Property Reports | (Yes) No | | PDF? (Yes) No | | |
| Brochures | Yes (No) | | PDF? Yes No | | |
| Warranties | Yes (No) | | PDF? Yes No | | |
| Rent Roll | | | PDF? Yes No | | |
| **Testing Reports:** | | | | | |
| Backflow Preventer | (Yes) No | | | | |
| Fire Sprinkler | 1 Year (Yes) No | | 5 year (Yes) No | | |
| Fire Alarm | (Yes) No | | | | |
| Elevator | NONE | Current license expiration date: | | 5 year load test date: | |
| Drawings: | | | | | |
| ALTA survey | | | PDF? (Yes) No | | |
| Original Construction Docs | | | PDF? Yes (No) | | |
| Site Plan | | | PDF? (Yes) No | | |
| Tenant Improvement Docs | | | PDF? (Yes) No | | |

Prepared By: M. Wyatt Pinheiro Date: 5/3/21 Contact # 949.285.5759

Questions for Firecreek Shopping Center, Reno, NV

1. Can an invoice for the 2019 asphalt paving work ($980,665) be provided to me? Upon ownership directive
2. Is domestic or recycled water used for irrigation? Domestic
3. Based on building permit information and satellite photos, I have come up with the following ages and roof types:

| | |
|---|---|
| Bldg 4801: | 25 (1997), BUR, original roof |
| Bldg 4805: | 25 (1997), TPO, original roof |
| Bldg 4809: | 25 (1997), BUR, original roof |
| Bldg 4811 (Space 4811): | 25 (1997), MB/Ballast, original roof |
| Bldg 4811 (Space 4813): | 25 (1997), BUR, original roof |
| Bldg 4819 (all spaces): | 5 (2017), TPO overlay over original BUR roof |
| Bldg 4871: | 4 (2018), TPO overlay over original BUR roof |
| Bldg 4875: | 5 (2017), TPO overlay over original BUR roof |
| Bldg 4891: | 5 (2017), TPO overlay over original BUR roof |

   Please make any needed corrections. (BUR = built-up roofing; TPO = thermoplastic polyolefin: MB = modified bitumen with gravel ballast.)

4. Is roof maintenance provided on a regular, scheduled basis? Or is it just scheduled as-needed? Annually
5. Are there any known, current leaks though the roofing systems or skylights (if installed) at any building? As of today, all reported leaks have been addressed.
6. Are there any known, current leaks though the window/wall systems at any building? As of today, all reported leaks have been addressed.
7. When was the last time that the building exteriors were repainted?

   Bldg 4801 Unknown – Boston Market

   Bldg 4805 Unknown - Applebees

   Bldg 4809 2016

   Bldg 4811 2016

   Bldg 4813 2016

Bldg 4819 2017

Bldg 4821 2017

Bldg 4823 2017

Bldg 4825 2017

Bldg 4827 2017

Bldg 4871 2016

Bldg 4875 2016

Bldg 4891 unknown

8. Are there any issues of differential settlement of slabs or soils subsidence at the property? Unknown
9. What type of leases—such as triple net—are typical? Yes
10. Have seismic structural upgrades been performed at any building? Unknown
11. Who is responsible for the installation and maintenance of HVAC equipment? For occupied spaces, the Tenants are directly responsible for their HVAC. For the vacant units, ownership.
12. Have there ever been any underground sewer line leaks or sewer line replacements? Unknown
13. Have there ever been any issues with sewer line blockages? Unknown
14. Have there ever been any underground natural gas line leaks or gas line replacements? Unknown
15. Is there a history of flooding into the interior of the buildings? None known
16. Has an ADA survey been conducted for the property? Yes, 2020
17. If yes to above, can a copy of the report be provided to me? On ownership directive
18. Have there been any ADA related complaints, fines, or lawsuits? Unknown
19. Is the site located on artificial fill? Unknown
20. Can a geotechnical report or soils reports be provided to me? Unknown
21. Satellite photos indicate that the parking area closest to Bldgs 4805, 4809, and 4811 (NE part of site) was not resealed and restriped in 2019. Is that correct? Unable to determine

# APPENDIX C

Job # 22074.60

# MECHANICAL EQUIPMENT TABLE

## Firecreek Crossing, Reno, NV - Building 4801 - Boston Market

AllWest

PACKAGED HEATING AND AIR COOLING UNITS

| Equipment | Mark | Brand/ Refrig | Model/Serial Number | Cooling (tons) / Heating Size | Replace | Manf | Age | EUL | RUL |
|---|---|---|---|---|---|---|---|---|---|
| Packaged gas-fired heating & air cooling | #1 | Bryant | 580JP09 | 8.5 125,000 IN/103,000 OUT | N | 2014 | 8 | 20 | 12 |
| | | R-410A | 1914P43369 | ** | | | | | |
| Packaged gas-fired heating & air cooling | | York | ZF180 | 15 300,000 IN | N | 2009 | 13 | 20 | 7 |
| | | R-410A | N0L9246737 | ** | | | | | |
| | | | | | | | | | |
| Total Cooling Capacity | | | | 23.5 TONS | | | | | |

Job # 22074.60

# MECHANICAL EQUIPMENT TABLE

## Firecreek Crossing, Reno, NV - Building 4805 - Applebee's

AllWest

PACKAGED HEATING AND AIR COOLING UNITS

| Equipment | Mark | Brand/ Refrig | Model/Serial Number | Cooling (tons) / Heating Size | Replace | Manf | Age | EUL | RUL |
|---|---|---|---|---|---|---|---|---|---|
| Packaged gas-fired heating & air cooling | Unit 4 | Carrier | 48HJ008 | 7.5 125,000 IN/102,500 OUT | Y | 1996 | 26 | 20 | -6 |
| | | R-22 | 4396G30201 | ** | | | | | |
| Packaged gas-fired heating & air cooling | | Carrier | 48HJD012 | 10 160,000 IN/147,600 OUT | Y | 1996 | 26 | 20 | -6 |
| | | R-22 | 4396G30603 | ** | | | | | |
| Packaged gas-fired heating & air cooling | | Carrier | 48HJD012 | 10 160,000 IN/147,600 OUT | Y | 1996 | 26 | 20 | -6 |
| | | R-22 | 4396G30604 | ** | | | | | |
| Packaged gas-fired heating & air cooling | | Lennox | LGA060 | 5 125,000 IN/100,000 OUT | Y | 2007 | 15 | 20 | 5 |
| | | R-22 | 5607E01281 | ** | | | | | |
| Packaged gas-fired heating & air cooling | | Lennox | LGA090 | 7.5 180,000 IN/144,000 OUT | Y | 2007 | 15 | 20 | 5 |
| | | R-22 | 5607E00950 | | | | | | |
| Total Cooling Capacity | | | | 40 TONS | | | | | |

Job # 22074.60

# MECHANICAL EQUIPMENT TABLE

## Firecreek Crossing, Reno, NV - Building 4809A - Starbucks

AllWest

PACKAGED HEATING AND AIR COOLING UNITS

| Equipment | Mark | Brand/ Refrig | Model/Serial Number | Cooling (tons) / Heating Size | Replace | Manf | Age | EUL | RUL |
|---|---|---|---|---|---|---|---|---|---|
| Packaged gas-fired heating & air cooling | | Trane | YSC060 | 5 60,000 IN/48,000 OUT | N | 2013 | 9 | 20 | 11 |
| | | R-410A | 131912406L | | | | | | |
| Packaged gas-fired heating & air cooling | #6 | Trane | YSC060 | 5 60,000 IN/48,000 OUT | N | 2013 | 9 | 20 | 11 |
| | | R-410A | 131110699L | | | | | | |
| Total Cooling Capacity | | | | 10 TONS | | | | | |

Job # 22074.60

# MECHANICAL EQUIPMENT TABLE

## Firecreek Crossing, Reno, NV - Building 4809B&C - Toys & More

AllWest

PACKAGED HEATING AND AIR COOLING UNITS

| Equipment | Mark | Brand/ Refrig | Model/Serial Number | Cooling (tons) / Heating Size | Replace | Manf | Age | EUL | RUL |
|---|---|---|---|---|---|---|---|---|---|
| Packaged gas-fired heating & air cooling | #2 | Carrier | 48HJD012 | 10 180,000 IN/147,600 OUT | Y | 1998 | 24 | 20 | -4 |
| | | R-22 | 0798G30676 | | | | | | |
| Packaged gas-fired heating & air cooling | | Carrier | 48HJD012 | 10 180,000 IN/147,600 OUT | Y | 1998 | 24 | 20 | -4 |
| | | R-22 | 0798G30677 | | | | | | |
| Packaged gas-fired heating & air cooling | | Rheem | 48TMD016 | 13 205,000 IN/166,050 OUT | N | 2020 | 2 | 20 | 18 |
| | | R-410A | F432001009 | | | | | | |
| | | | | | | | | | |
| Total Cooling Capacity | | | | 33 TONS | | | | | |

Job # 22074.60

# MECHANICAL EQUIPMENT TABLE

## Firecreek Crossing, Reno, NV - Building 4809D - Great Clips

AllWest

PACKAGED HEATING AND AIR COOLING UNITS

| Equipment | Mark | Brand/ Refrig | Model/Serial Number | Cooling (tons) / Heating Size | Replace | Manf | Age | EUL | RUL |
|---|---|---|---|---|---|---|---|---|---|
| Packaged gas-fired heating & air cooling | #1 | Carrier<br>R-22 | 48HJE007<br>0798G20563 | 6 115,000 IN/93,150 OUT | Y | 1998 | 24 | 20 | -4 |
| | | | | | | | | | |
| Total Cooling Capacity | | | | 6 TONS | | | | | |

Job # 22074.60

# MECHANICAL EQUIPMENT TABLE

## Firecreek Crossing, Reno, NV - Space 4811 - Vacant

AllWest

**PACKAGED HEATING AND AIR COOLING UNITS**

| Equipment | Mark | Brand/ Refrig | Model/Serial Number | Cooling (tons) / Heating Size | Replace | Manf | Age | EUL | RUL |
|---|---|---|---|---|---|---|---|---|---|
| Packaged gas-fired heating & air cooling | RTU-1 | York | LGA240 | 20 260,000 IN | Y | 1996 | 26 | 20 | -6 |
| | | R-22 | 5696A01143 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-2 | York | LGA240 | 20 260,000 IN | Y | 1996 | 26 | 20 | -6 |
| | | R-22 | 5696A01142 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-3 | York | LGA240 | 20 260,000 IN | Y | 1996 | 26 | 20 | -6 |
| | | R-22 | 5696A01141 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-4 | York | LGA240 | 20 260,000 IN | Y | 1996 | 26 | 20 | -6 |
| | | R-22 | 5696A01144 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-5 | York | LGA300 | 25 260,000 IN | Y | 1996 | 26 | 20 | -6 |
| | | R-22 | 5696D00977 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-6 | York | GCS24-1353 | 13 270,000 IN/216,000 OUT | Y | 1996 | 26 | 20 | -6 |
| | | R-22 | 5696A01467 | ** | | | | | |
| Total Cooling Capacity | | | | 118 TONS | | | | | |

Job # 22074.60

# MECHANICAL EQUIPMENT TABLE

## Firecreek Crossing, Reno, NV - Space 4813 - Vacant

AllWest

PACKAGED HEATING AND AIR COOLING UNITS

| Equipment | Mark | Brand/ Refrig | Model/Serial Number | Cooling (tons) / Heating Size | Replace | Manf | Age | EUL | RUL |
|---|---|---|---|---|---|---|---|---|---|
| Packaged gas-fired heating & air cooling | #1 | Trane | YCD301 | 25 400,000 IN/324,000 OUT | Y | 1997 | 25 | 20 | -5 |
| | | R-22 | M36102612D | ** | | | | | |
| Packaged gas-fired heating & air cooling | #2 | Trane | YCD301 | 25 400,000 IN/324,000 OUT | Y | 1997 | 25 | 20 | -5 |
| | | R-22 | M36102610D | ** | | | | | |
| Packaged gas-fired heating & air cooling | #3 | Trane | YCD301 | 25 400,000 IN/324,000 OUT | Y | 1997 | 25 | 20 | -5 |
| | | R-22 | M36102609D | ** | | | | | |
| Packaged gas-fired heating & air cooling | #4 | Trane | YCD301 | 25 400,000 IN/324,000 OUT | Y | 1997 | 25 | 20 | -5 |
| | | R-22 | M36102611D | ** | | | | | |
| Packaged gas-fired heating & air cooling | #5 | Trane | YCD061 | 5 120,000 IN/97,200 OUT | Y | 1997 | 25 | 20 | -5 |
| | | R-22 | M34102027D | ** | | | | | |
| Total Cooling Capacity | | | | 105 TONS | | | | | |

Notes: ** Hard piped natural gas connection

Job # 22074.60

# MECHANICAL EQUIPMENT TABLE

## Firecreek Crossing, Reno, NV - Space 4819 - Natural Grocers

AllWest

PACKAGED HEATING AND AIR COOLING UNITS

| Equipment | Mark | Brand/ Refrig | Model/Serial Number | Cooling (tons) / Heating Size | Replace | Manf | Age | EUL | RUL |
|---|---|---|---|---|---|---|---|---|---|
| Packaged gas-fired heating & air cooling unit | RTU-1 | Trane | YHC092 | 7.5 200,000 IN/160,000 OUT | N | 2014 | 8 | 20 | 12 |
| | | R-410A | 143211922L | ** | | | | | |
| Packaged gas-fired heating & air cooling unit | RTU-2 | Trane | YHC092 | 7.5 200,000 IN/160,000 OUT | N | 2014 | 8 | 20 | 12 |
| | | R-410A | 143212441L | ** | | | | | |
| Packaged gas-fired heating & air cooling unit | RTU-3 | Trane | YHC092 | 7.5 200,000 IN/160,000 OUT | N | 2014 | 8 | 20 | 12 |
| | | R-410A | 143211926L | ** | | | | | |
| Packaged gas-fired heating & air cooling unit | RTU-4 | Trane | YHC036 | 3 80,000 IN/64,000 OUT | N | 2014 | 8 | 20 | 12 |
| | | R-410A | 143313381L | ** | | | | | |
| Packaged gas-fired heating & air cooling unit | RTU-5 | Trane | YHC036 | 3 80,000 IN/64,000 OUT | N | 2014 | 8 | 20 | 12 |
| | | R-410A | 143313363L | ** | | | | | |
| Packaged gas-fired heating & air cooling unit | RTU-6 | Trane | YHC120 | 10 200,000 IN/160,000 OUT | N | 2014 | 8 | 20 | 12 |
| | | R-410A | 143212424L | ** | | | | | |
| Packaged gas-fired heating & air cooling unit | RTU-7 | Trane | YHC092 | 7.5 150,000 IN/120,000 OUT | N | 2014 | 8 | 20 | 12 |
| | | R-410A | 143211948L | ** | | | | | |
| Total Cooling Capacity | | | | 46 TONS | | | | | |

Notes: ** Hard piped natural gas connection

Job # 22074.60

# MECHANICAL EQUIPMENT TABLE

## Firecreek Crossing, Reno, NV - Space 4821 - TJ Maxx Home Goods

AllWest

### PACKAGED HEATING AND AIR COOLING UNITS

| Equipment | Mark | Brand/ Refrig | Model/Serial Number | Cooling (tons) / Heating Size | Replace | Manf | Age | EUL | RUL |
|---|---|---|---|---|---|---|---|---|---|
| Packaged gas-fired heating & air cooling | #1 | Carrier | 48HJF006 | 5 150,000 IN/120,000 OUT | Y | 2003 | 19 | 20 | 1 |
| | | R-22 | 1103G60841 | ** | | | | | |
| Packaged gas-fired heating & air cooling | #2 | York | ZJ180 | 15 300,000 IN | N | 2013 | 9 | 20 | 11 |
| | | R-22 | N1K3067297 | ** | | | | | |
| Packaged gas-fired heating & air cooling | #3 | York | ZJ210 | 17.5 300,000 IN | N | 2013 | 9 | 20 | 11 |
| | | R-22 | N1K3071693 | ** | | | | | |
| Packaged gas-fired heating & air cooling | #4 | Carrier | 48HJF006 | 5 150,000 IN/120,000 OUT | Y | 2003 | 19 | 20 | 1 |
| | | R-22 | 1103G60842 | ** | | | | | |
| Packaged gas-fired heating & air cooling | #5 | York | ZJ180 | 15 300,000 IN | N | 2013 | 9 | 20 | 11 |
| | | R-22 | N1K3067295 | ** | | | | | |
| Packaged gas-fired heating & air cooling | #6 | York | ZJ180 | 15 300,000 IN | N | 2013 | 9 | 20 | 11 |
| | | R-22 | N1K3067294 | ** | | | | | |
| Packaged gas-fired heating & air cooling | #7 | York | ZJ180 | 15 300,000 IN | N | 2013 | 9 | 20 | 11 |
| | | R-22 | N1K3067296 | ** | | | | | |
| Packaged gas-fired heating & air cooling | #8 | Carrier | 48HJD006 | 5 72,000 IN/59,040 OUT | Y | 2003 | 19 | 20 | 1 |
| | | R-22 | 0703G10077 | Flexible gas line connection | | | | | |
| Packaged gas-fired heating & air cooling | #9 | York | ZJ210 | 17.5 300,000 IN | N | 2013 | 9 | 20 | 11 |
| | | R-22 | N1K3071694 | ** | | | | | |
| Packaged gas-fired heating & air cooling | #10 | York | ZJ210 | 17.5 300,000 IN | N | 2013 | 9 | 20 | 11 |
| | | R-22 | N1K3071695 | ** | | | | | |
| Total Cooling Capacity | | | | 127.5 TONS | | | | | |

Job # 22074.60

# MECHANICAL EQUIPMENT TABLE

## Firecreek Crossing, Reno, NV - Space 4823 - Floor & Décor

AllWest

PACKAGED HEATING AND AIR COOLING UNITS

| Equipment | Mark | Brand/ Refrig | Model/Serial Number | Cooling (tons) / Heating Size | Replace | Manf | Age | EUL | RUL |
|---|---|---|---|---|---|---|---|---|---|
| Packaged gas-fired heating & air cooling | RTU-1-EF | Trane | SFHLF754 | 75 N/A | N | 2013 | 9 | 30 | 21 |
| | | R-410A | C13M07249 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-2 | Trane | YHC048 | 4 120,000 BTUH IN/ 96,000 BTUH OUT | N | 2014 | 8 | 20 | 12 |
| | | R-410A | 14C410044L | ** | | | | | |
| Total Cooling Capacity | | | | 79 TONS | | | | | |

Job # 22074.60

# MECHANICAL EQUIPMENT TABLE

## Firecreek Crossing, Reno, NV - Space 4825 - Ross

AllWest

PACKAGED HEATING AND AIR COOLING UNITS

| Equipment | Mark | Brand/ Refrig | Model/Serial Number | Cooling (tons) / Heating Size | Replace* | Manf | Age | EUL | RUL |
|---|---|---|---|---|---|---|---|---|---|
| Packaged gas-fired heating & air cooling | RTU-1 | Lennox | GSC20-513 | 5 75,000 IN/60,000 OUT | Y | 1996 | 26 | 20 | -6 |
| | | R-22 | 5696D02727 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-2 | Lennox | LGA210 | 17.5 N/A | Y | 1996 | 26 | 20 | -6 |
| | | R-22 | 5696D01976 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-3 | Lennox | GCS20-653 | 6 75,000 IN/60,000 OUT | Y | 1996 | 26 | 20 | -6 |
| | | R-22 | 5596D03787 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-4 | Lennox | LGA210 | 17.5 N/A | Y | 1996 | 26 | 20 | -6 |
| | | R-22 | 5596D01975 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-5 | Lennox | LGA210 | 17.5 N/A | Y | 1996 | 26 | 20 | -6 |
| | | R-22 | 5696D01977 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-6 | Lennox | Illegible | 5 N/A | Y* | 1996 | 26 | 20 | -6 |
| | | R-22 | Illegible | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-7 | Lennox | GCS24-953 | 7.5 200,000 IN/160,000 OUT | Y | 1996 | 26 | 20 | -6 |
| | | R-22 | 5696K02210 | ** | | | | | |
| Total Cooling Capacity | | | | 76 TONS | * Age and capacities presumed. | | | | |

Notes: Notes: ** Hard piped natural gas connection.

Job # 22074.60

# MECHANICAL EQUIPMENT TABLE

## Firecreek Crossing, Reno, NV - Space 4827 - Office Depot

AllWest

PACKAGED HEATING AND AIR COOLING UNITS

| Equipment | Mark | Brand/ Refrig | Model/Serial Number | Cooling (tons) / Heating Size | Replace | Manf | Age | EUL | RUL |
|---|---|---|---|---|---|---|---|---|---|
| Packaged gas-fired heating & air cooling | RTU-1 | Lennox | LGH120 | 10 240,000 IN/192,000 OUT | N | 2014 | 8 | 20 | 12 |
| | | R-410A | 5614B07676 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-2 | Lennox | LGH120 | 10 240,000 IN/192,000 OUT | N | 2014 | 8 | 20 | 12 |
| | | R-410A | 5614B07675 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-3 | Lennox | LGH120 | 10 240,000 IN/192,000 OUT | N | 2014 | 8 | 20 | 12 |
| | | R-410A | 5614B07678 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-4 | Lennox | LGH120 | 10 240,000 IN/192,000 OUT | N | 2014 | 8 | 20 | 12 |
| | | R-410A | 5614B07677 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-5 | Lennox | LGH092 | 7.5 180,000 IN/144,000 OUT | N | 2014 | 8 | 20 | 12 |
| | | R-410A | 5614B07679 | ** | | | | | |
| Total Cooling Capacity | | | | 47.5 TONS | | | | | |

Job # 22074.60

# MECHANICAL EQUIPMENT TABLE

## Firecreek Crossing, Reno, NV - Building 4871 - Michaels

AllWest

PACKAGED HEATING AND AIR COOLING UNITS

| Equipment | Mark | Brand/ Refrig | Model/Serial Number | Cooling (tons) / Heating Size | Replace | Manf | Age | EUL | RUL |
|---|---|---|---|---|---|---|---|---|---|
| Packaged gas-fired heating & air cooling | RTU-1 | Lennox | LGC180 | 15 N/A | Y | 2004 | 18 | 20 | 2 |
| | | R-22 | 5604L08615 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-2 | Lennox | LGC180 | 15 N/A | Y | 2004 | 18 | 20 | 2 |
| | | R-22 | 5604L08611 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-3 | Lennox | LGC180 | 15 N/A | Y | 2004 | 18 | 20 | 2 |
| | | R-22 | 5604L08608 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-4 | Lennox | LGC180 | 15 N/A | Y | 2004 | 18 | 20 | 2 |
| | | R-22 | 5604L08609 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-5 | Lennox | LGA090 | 7.5 N/A | Y | 2004 | 18 | 20 | 2 |
| | | R-22 | 5604M00620 | ** | | | | | |
| Packaged gas-fired heating & air cooling | RTU-6 | Lennox | LGA060 | 5 N/A | Y | 2004 | 18 | 20 | 2 |
| | | R-22 | N/A | ** | | | | | |
| | | | | | | | | | |
| Total Cooling Capacity | | | | 72.5 TONS | | | | | |

Job # 22074.60

# MECHANICAL EQUIPMENT TABLE

## Firecreek Crossing, Reno, NV - Building 4875A - Sola Salon

AllWest

PACKAGED HEATING AND AIR COOLING UNITS

| Equipment | Mark | Brand/ Refrig | Model/Serial Number | Cooling (tons) / Heating Size | Replace | Manf | Age | EUL | RUL |
|---|---|---|---|---|---|---|---|---|---|
| Packaged gas-fired heating & air cooling | | Carrier | 48HJD006 | 5 72,000 IN/59,040 OUT | Y | 2002 | 20 | 20 | 0 |
| | | R-22 | 2302G30327 | ** | | | | | |
| Packaged gas-fired heating & air cooling | | Carrier | 48HJD006 | 5 72,000 IN/59,040 OUT | Y | 2002 | 20 | 20 | 0 |
| | | R-22 | 2302G30330 | ** | | | | | |
| Packaged gas-fired heating & air cooling | | Carrier | 48HJD006 | 5 72,000 IN/59,040 OUT | Y | 2002 | 20 | 20 | 0 |
| | | R-22 | 2302G30331 | ** | | | | | |
| Packaged gas-fired heating & air cooling | | Carrier | 48HJD006 | 5 72,000 IN/59,040 OUT | Y | 2002 | 20 | 20 | 0 |
| | | R-22 | 2302G30332 | ** | | | | | |
| | | | | | | | | | |
| Total Cooling Capacity | | | | 20 TONS | | | | | |

Notes: ** Hard piped natural gas connection.

Job # 22074.60

# MECHANICAL EQUIPMENT TABLE

## Firecreek Crossing, Reno, NV - Building 4875B - Affordable Dentures

AllWest

PACKAGED HEATING AND AIR COOLING UNITS

| Equipment | Mark | Brand/ Refrig | Model/Serial Number | Cooling (tons) / Heating Size | Replace | Manf | Age | EUL | RUL |
|---|---|---|---|---|---|---|---|---|---|
| Packaged gas-fired heating & air cooling | | Ruud | RKPN-A048 | 4 80,000 IN/64,800 OUT | N | 2018 | 4 | 20 | 16 |
| | | R-410A | F201800256 | | | | | | |
| Packaged gas-fired heating & air cooling | | Ruud | RKPN-A048 | 4 80,000 IN/64,800 OUT | N | 2018 | 4 | 20 | 16 |
| | | R-410A | F201800257 | | | | | | |
| Packaged gas-fired heating & air cooling | | Ruud | RKPN-A048 | 4 80,000 IN/64,800 OUT | N | 2018 | 4 | 20 | 16 |
| | | R-410A | F201800258 | | | | | | |
| Packaged gas-fired heating & air cooling | | Ruud | RKPN-A060 | 5 100,000 IN/81,000 OUT | N | 2018 | 4 | 20 | 16 |
| | | R-410A | F211800233 | | | | | | |
| | | | | | | | | | |
| Total Cooling Capacity | | | | 17 TONS | | | | | |

Job # 22074.60

# MECHANICAL EQUIPMENT TABLE

## Firecreek Crossing, Reno, NV - Building 4875C&D - UFC Gym

AllWest

PACKAGED HEATING AND AIR COOLING UNITS

| Equipment | Mark | Brand/ Refrig | Model/Serial Number | Cooling (tons) / Heating Size | Replace | Manf | Age | EUL | RUL |
|---|---|---|---|---|---|---|---|---|---|
| Packaged gas-fired heating & air cooling | #9 | Carrier | 48HJD006 | 5 72,000 IN/59,050 OUT | Y | 2002 | 20 | 20 | 0 |
| | | R-22 | 2302G30322 | ** | | | | | |
| Packaged gas-fired heating & air cooling | #10 | Carrier | 48HJD006 | 5 72,000 IN/59,050 OUT | Y | 2002 | 20 | 20 | 0 |
| | | R-22 | 2402G20426 | ** | | | | | |
| Packaged gas-fired heating & air cooling | #11 | Carrier | 48HJD006 | 5 72,000 IN/59,050 OUT | Y | 2002 | 20 | 20 | 0 |
| | | R-22 | 2302G30323 | ** | | | | | |
| Packaged gas-fired heating & air cooling | #12 | Carrier | 48HJD006 | 5 72,000 IN/59,050 OUT | Y | 2002 | 20 | 20 | 0 |
| | | R-22 | 2402G20422 | ** | | | | | |
| Packaged gas-fired heating & air cooling | #13 | Carrier | 48HJD006 | 5 72,000 IN/59,050 OUT | Y | 2002 | 20 | 20 | 0 |
| | | R-22 | 2402G20423 | ** | | | | | |
| Packaged gas-fired heating & air cooling | #14 | Carrier | 48HJD006 | 5 72,000 IN/59,050 OUT | Y | 2002 | 20 | 20 | 0 |
| | | R-22 | 2402G20424 | ** | | | | | |
| Packaged gas-fired heating & air cooling | #15 | Carrier | 48HJD006 | 5 72,000 IN/59,050 OUT | Y | 2002 | 20 | 20 | 0 |
| | | R-22 | 2302G30328 | ** | | | | | |
| Packaged gas-fired heating & air cooling | #16 | Carrier | 48HJD006 | 5 72,000 IN/59,050 OUT | Y | 2002 | 20 | 20 | 0 |
| | | R-22 | 2402G20425 | ** | | | | | |
| Total Cooling Capacity | | | | 40 TONS | | | | | |

Note: ** Hard piped natural gas connection.

Job # 22074.60

# MECHANICAL EQUIPMENT TABLE

## Firecreek Crossing, Reno, NV - Building 4891 - ULTA Beauty

AllWest

PACKAGED HEATING AND AIR COOLING UNITS

| Equipment | Mark | Brand/ Refrig | Model/Serial Number | Cooling (tons) / Heating Size | Replace | Manf | Age | EUL | RUL |
|---|---|---|---|---|---|---|---|---|---|
| Packaged gas-fired heating & air cooling | #1 | Lennox | LGH156 | 13 260,000 IN/208,000 OUT | N | 2016 | 6 | 20 | 14 |
| | | R-410A | 5616A01629 | ** | | | | | |
| Packaged gas-fired heating & air cooling | #2 | Lennox | LGH120 | 10 130,000 IN/104,000 OUT | N | 2016 | 6 | 20 | 14 |
| | | R-410A | 5616A00562 | | | | | | |
| Packaged gas-fired heating & air cooling | #3 | Lennox | LGH120 | 10 130,000 IN/104,000 OUT | N | 2016 | 6 | 20 | 14 |
| | | R-410A | 5616A00561 | | | | | | |
| Packaged gas-fired heating & air cooling | #4 | Lennox | LGH092 | 7.5 130,000 IN/104,000 OUT | N | 2016 | 6 | 20 | 14 |
| | | R-410A | 5615M03189 | | | | | | |
| | | | | | | | | | |
| Total Cooling Capacity | | | | 40.5 TONS | | | | | |

Notes: ** Hard piped natural gas connection.

Job # 22074.60

# MECHANICAL EQUIPMENT TABLE

## Firecreek Crossing, Reno, NV - Building 4891A - Mattress Land

AllWest

PACKAGED HEATING AND AIR COOLING UNITS

| Equipment | Mark | Brand/ Refrig | Model/Serial Number | Cooling (tons) / Heating Size | Replace | Manf | Age | EUL | RUL |
|---|---|---|---|---|---|---|---|---|---|
| Packaged gas-fired heating & air cooling | #2 | York<br>R-22 | D3CG120<br>NCFM035401 | 10 204,000 IN/161,500 OUT | Y | 1997 | 25 | 20 | -5 |
| Total Cooling Capacity | | | | 10 TONS | | | | | |

Notes:

# APPENDIX D

# APPLICATION FOR AUTHORIZATION TO USE

**REPORT TITLE:** **PROPERTY CONDITION ASSESSMENT**

Firecreek Crossing Shopping Center
4823 Kietzke Lane
Reno, Nevada 89509

**PROJECT NUMBER:** 22074.60

To: AllWest Environmental, Inc.
2141 Mission Street, Suite 100
San Francisco, CA 94110

From (Applicant): _____

_____

_____

*(Please clearly identify name and address of person/entity applying for permission to use or copy this document)*

Ladies and Gentlemen:

Applicant states they have thoroughly reviewed the report and had the opportunity to discuss with AllWest the report's methodology, findings and conclusion(s).

Applicant hereby applies for permission to rely upon AllWest's work product, as described above, for the purpose of (state here the purpose for which you wish to rely upon the work product):

Applicant only can accept and rely upon AllWest work product under the strict understanding that Applicant is bound by all provisions in the General Conditions to the Work Authorization Agreement provided below. Every report, recommendation, finding, or conclusion issued by AllWest shall be subject to the limitations stated in the Agreement and subject report(s). If this is agreeable, please sign below and return one copy of this letter to us along with the applicable fees. Upon receipt and if acceptable, our signed letter will be returned. AllWest may withhold permission at its sole discretion or require additional re-use fees or terms.

**FEES:** A $1,950 coordination and reliance fee, payable in advance, will apply. If desired, for an additional $250 report reproduction fee, we will reissue the report in the name of the Applicant; the report date, however, will remain the same. All checks will be returned if your request for reliance is not approved.

| **REQUESTED BY** | **APPROVED BY** |
|---|---|
| _____ | **AllWest Environmental, Inc.** |
| Applicant Company | |
| _____ | _____ |
| Print Name and Title | Print Name and Title |
| _____ | _____ |
| Signature and Date | Signature and Date |

# GENERAL CONDITIONS TO THE WORK AUTHORIZATION AGREEMENT

It is hereby agreed that the Client retains AllWest to provide services as set forth in the Work Authorization attached hereto (the "Work"). This contract shall be controlled by the following terms and conditions, and these terms and conditions shall also control any further assignments performed pursuant to this Work Authorization. Client's signature on this Work Authorization constitutes Client's agreement to the all terms to this contract, including these General Conditions.

## FEES AND COSTS

1. AllWest shall charge for work performed by its personnel at the rates identified in the Work Authorization. These rates are subject to reasonable increases by AllWest upon giving Client 30 days advance notice. Reimbursable Costs will be charged to the Client in addition to the fees for the basic services under this Agreement and all Additional Services (defined below) under the Agreement. Reimbursable Costs include, but are not limited to, expenses for travel, including transportation, meals, lodging, long distance telephone and other related expenses, as well as the costs of reproduction of all drawings for the Client's use, costs for specifications and type-written reports, permit and approval fees, automobile travel reimbursement, costs and fees of subcontractors, and soil and other materials testing. No overtime is accrued for time spent in travel. All costs incurred which relate to the services or materials provided by a contractor or subcontractor to AllWest shall be invoiced by AllWest on the basis of cost plus twenty percent (20%). Automobile travel reimbursement shall be at the rate of fifty- eight cents ($0.58) per mile. All other reimbursable costs shall be invoiced and billed by AllWest at the rate of 1.1 times the direct cost to AllWest. Reimbursable costs will be charged to the client only as outlined in the Work Authorization if the scope of work is for Phase I Environmental Site Assessment, Property Condition Assessment, Seismic Assessment or ALTA survey. Invoices for work performed shall be submitted monthly. Payment will be due upon receipt of invoice. Client shall pay interest on the balance of unpaid invoices which are overdue by more than 30 days, at a rate of 18% per annum as well as all attorney fees and costs incurred by AllWest to secure payment of unpaid invoices. AllWest may waive such fees at its sole discretion.

## STANDARD OF CARE

2. AllWest will perform its work in accordance with the standard of care of its industry, as it is at the time of the work being performed, and applicable in the locale of the work being performed. AllWest makes no other warranties, express or implied regarding its work.

## LIMITATION OF REMEDIES

3. Client expressly agrees that to the fullest extent permitted by law, Client's remedies for any liability incurred by AllWest, and/or its employees or agents, for any and all claims arising from AllWest's services, shall be $50,000 or its fees, whichever is greater.

Client may request a higher limitation of remedies, but must do so in writing. Upon such written request, AllWest may agree to increase this limit in exchange for a mutually negotiated higher fee commensurate with the increased risk to AllWest. Any such agreed increase in fee and limitation of remedies amount must be memorialized by written agreement which expressly amends the terms of this clause.

As used in this section, the term "limitation of remedies" shall apply to claims of any kind, including, but not limited to, claims brought in contract, tort, strict liability, or otherwise, for any and all injuries, claims, losses, expenses, or damages whatsoever arising out of or in any way related to AllWest's services or the services of AllWest's subcontractors, consultants, agents, officers, directors, and employees from any cause(s). AllWest shall not be liable for any claims of loss of profits or any other indirect, incidental, or consequential damages of any nature whatsoever. Client & AllWest have specifically negotiated this limitation.

## INDEMNIFICATION

4. Notwithstanding any other provision of this Agreement, Client agrees, to the fullest extent permitted by law, to waive any claim against, release from any liability or responsibility for, and indemnify and hold harmless AllWest, its employees, agents and sub-consultants (collectively, Consultant) from and against any and all damages, liabilities, claims, actions or costs of any kind, including reasonable attorney's fees and defense costs, arising or alleged to arise out of or to be in any way connected with the Project or the performance or non-performance of Consultant of any services under this Agreement, except to the extent any such liabilities are determined by a court or other forum of competent jurisdiction to have been caused by the negligence or willful misconduct of Consultant.

Client further agrees to indemnify Consultant for any liability Consultant suffers to a third person to the extent that liability exceeds the limitation of liability amounts stated in Limitation of Remedies paragraph. This provision shall be in addition to any rights of indemnity Consultant may have under the law and shall survive and remain in effect following the termination of this Agreement for any reason. Should any part of this provision be determined to be unenforceable, AllWest and Client agree the rest of the provision shall apply to the maximum extent permitted by law. The Client's duty to defend AllWest shall arise immediately upon tender of any matter potentially covered by the above obligations to indemnify and hold harmless.

AllWest agrees to indemnify and hold harmless CLIENT, its officers, directors, partners, employees, and any other entity or person for which AllWest is legally liable, from and against any damages, losses, liabilities, judgments, settlements, expenses, and costs (including reasonable attorneys' fees, costs and expenses recoverable under applicable law), that CLIENT incurs from claims by third parties, to the extent caused by negligent acts, errors or omissions or willful misconduct of AllWest in the performance of professional services under this Agreement and any other entity or person for which AllWest is legally liable.

Notwithstanding the foregoing, if AllWest's obligation to defend, indemnify, and/or hold harmless arises out of AllWest's performance of "design professional" services (as that term is defined under California Civil Code Section 2782.8), AllWest's obligations shall be as stated in California Civil Code Section 2782.8, which is fully incorporated herein as it was in effect as of the date of this Agreement. AllWest's indemnification obligation shall be limited to claims to the extent caused by the negligence, recklessness, or willful misconduct of AllWest, and, upon AllWest obtaining a final adjudication by a court of competent jurisdiction, AllWest's liability for such claim, including the cost to defend, shall not exceed AllWest's proportionate percentage of fault. AllWest is not obligated to indemnify and hold harmless CLIENT for CLIENT'S active or sole negligence, or willful misconduct.

## MEDIATION & JUDICIAL REFERENCE

5. In an effort to resolve any conflicts or disputes that arise regarding the performance of this agreement, the Client & AllWest agree that all such disputes shall be submitted to non-binding mediation, using a mutually agreed upon mediation service experienced in the resolution of construction disputes. Unless the parties mutually agree otherwise, such mediation shall be a condition precedent to the initiation of any other adjudicative proceedings. It is further agreed that any dispute that is not settled pursuant to such mediation shall be adjudicated by a court appointed referee in accordance with the Judicial Reference procedures as set forth in California Code of Civil Procedure Section 638 et seq. The parties hereby mutually agree to waive any right to a trial by jury regarding any dispute arising out of this agreement.

The parties further agree to include a similar mediation, Judicial Reference & waiver of jury trial provision in their agreements with other independent contractors & consultants retained for the project and require them to similarly agree to these dispute resolution procedures. The cost of said Mediation shall be split equally between the parties. This agreement to mediate shall be specifically enforceable under the prevailing law of the jurisdiction in which this agreement was signed.

## HAZARDOUS WASTE

6. Client acknowledges that AllWest and its sub-contractors have played no part in the creation of any hazardous waste, pollution sources, nuisance, or chemical or industrial disposal problem, which may exist, and that AllWest has been retained for the sole purpose of performing the services set out in the scope of work within this Agreement, which may include, but is not necessarily limited to such services as assisting the Client in assessing any problem which may exist and in assisting the Client in formulating a remedial program. Client acknowledges that while necessary for investigations, commonly used exploration methods employed by AllWest may penetrate through contaminated materials and serve as a connecting passageway between the contaminated material and an uncontaminated aquifer or groundwater, possibly inducing cross contamination. While back-filling with grout or other means, according to a state of practice design is intended to provide a seal against such passageway, it is recognized that such a seal may be imperfect and that there is an inherent risk in drilling borings of performing other exploration methods in a hazardous waste site.

AllWest will not sign or execute hazardous waste manifests or other waste tracking documents on behalf of Client unless Client specifically establishes AllWest as an express agent of Client under a written agency agreement approved by AllWest. In addition, Client agrees that AllWest shall not be required to sign any documents, no matter requested by whom, that would have the effect of AllWest providing any form of certification, guarantee, or warranty as to any matter or to opine on conditions for which the existence AllWest cannot ascertain. Client also agrees that it shall never seek or otherwise attempt to have AllWest provide any form of such certification, guarantee or warranty in exchange for resolution of any disputes between Client and AllWest, or as a condition precedent to making payment to AllWest for fees and costs owing under this Agreement.

Client understands and agrees that AllWest is not, and has no responsibility as, a generator, operator, treater, storer, transporter , arranger or disposer of hazardous or toxic substances found or identified at the site, including investigation-derived waste. The Client shall undertake and arrange for the removal, treatment, storage, disposal and/or treatment of hazardous material and investigation derived waste (such as drill cuttings) and further, assumes full responsibility for such wastes to the complete exclusion of any responsibility, duty or obligation upon AllWest. AllWest's responsibilities shall be limited to recommendations regarding such matters and assistance with appropriate arrangements if authorized by Client.

## FORCE MAJUERE

7. Neither party shall be responsible for damages or delays in performance under this Agreement caused by acts of God, strikes, lockouts, accidents or other events or condition (other than financial inability ) beyond the other Party’s reasonable control.

## TERMINATION

8. This Agreement may be terminated by either party upon ten (10) days' written notice should the other party substantially fail to perform in accordance with its duties and responsibilities as set forth in this Agreement and such failure to perform is through no fault of the party initiating the termination. Client agrees that if it chooses to terminate AllWest for convenience, and AllWest has otherwise satisfactorily performed its obligations under this Agreement to that point, AllWest shall be paid no less than eighty percent (80%) of the contract price, provided, however, that if AllWest shall have completed more than eighty percent of the Work at the time of said termination, AllWest shall be compensated as provided in the Work Authorization for all services performed prior to the termination date which fall within the scope of work described in the Work Authorization and may as well, at its sole discretion and in accordance with said Schedule of Fees, charge Client, and Client agrees to pay AllWest’s reasonable costs and labor in winding up its files and removing equipment and other materials from the Project.

Upon notice of termination by Client to AllWest, AllWest may issue notice of such termination to other consultants, contractors, subcontractors and to governing agencies having jurisdiction over the Project, and take such other actions as are reasonably necessary in order to give notice that AllWest is no longer associated with the Project and to protect AllWest from claims of liability from the work of others.

## DOCUMENTS

9. Any documents prepared by AllWest, including, but not limited to proposals, project specifications, drawings, calculations, plans and maps, and any ideas and designs incorporated therein, as well as any reproduction of the above are instruments of service and shall remain the property of AllWest and AllWest retains copyrights to these instruments of service. AllWest grants to Client a non-exclusive license to use these instruments of service for the purpose of completing and maintaining the Project. The Client shall be permitted to retain a copy of any instruments of service, but Client expressly agrees and acknowledges that the instruments of service may not be used by the Client on other projects, or for any other purpose, except the project for which they were prepared, unless Client first obtains a written agreement expanding the license to such use from AllWest, and with appropriate compensation to AllWest. Client further agrees that such instruments of service shall not be provided to any third parties without the express written permission of AllWest.

Client shall furnish, or cause to be furnished to AllWest all documents and information known to Client that relate to the identity, location, quantity, nature, or characteristics of any asbestos, PCBs, or any other hazardous materials or waste at, on or under the site. In addition, Client will furnish or

cause to be furnished such reports, data, studies, plans, specifications, documents and other information on surface or subsurface site conditions, e.g., underground tanks, pipelines and buried utilities, required by AllWest for proper performance of its services. IF Client fails to provide AllWest with all hazardous material subject matter reports including geotechnical assessments in its possession during the period that AllWest is actively providing its services (including up to 30 days after its final invoice), Client shall release AllWest from any and all liability for risks and damages the Client incurs resulting from its reliance on AllWest's professional opinion. AllWest shall be entitled to rely upon Client - provided documents and information in performing the services required in this Agreement; however, AllWest assumes no responsibility or liability for the accuracy or completeness of Client-provided documents. Client-provided documents will remain the property of the Client.

## ACCESS TO PROJECT

10. Client grants to AllWest the right of access and entry to the Project at all times necessary for AllWest to perform the Work. If Client is not the owner of the Project, then Client represents that Client has full authority to grant access and right of entry to AllWest for the purpose of AllWest's performance of the Work. This right of access and entry extends fully to any agents, employees, contractors or subcontractors of AllWest upon reasonable proof of association with AllWest. Client's failure to provide such timely access and permission shall constitute a material breach of this Agreement excusing AllWest from performance of its duties under this Agreement.

## CONFIDENTIAL INFORMATION

11. Both Client and AllWest understand that in conjunction with AllWest's performance of the Work on the project, both Client and AllWest may receive or be exposed to Proprietary Information of the other. As used herein, the term "Proprietary Information" refers to any and all information of a confidential, proprietary or secret nature which may be either applicable to, or relate in any way to: (a) the personal, financial or other affairs of the business of each of the Parties, or (b) the research and development or investigations of each of the Parties. Proprietary Information includes, for example and without limitation, trade secrets, processes, formulas, data, know-how, improvements, inventions, techniques, software technical data, developments, research projects, plans for future development, marketing plans and strategies. Each of the Parties agrees that all Proprietary Information of the other party is and shall remain exclusively the property of that other party. The parties further acknowledge that the Proprietary Information of the other party is a special, valuable and unique asset of that party, and each of the Parties agrees that at all times during the terms of this Agreement and thereafter to keep in confidence and trust all Proprietary Information of the other party, whether such Proprietary Information was obtained or developed by the other party before, during or after the term of this Agreement. Each of the Parties agrees not to sell, distribute, disclose or use in any other unauthorized manner the Proprietary Information of the other party. AllWest further agrees that it will not sell, distribute or disclose information or the results of any testing obtained by AllWest during the performance of the Work without the prior written approval of Client unless required to do so by federal, state or local statute, ordinance or regulation.

## INDEPENDENT CONTRACTOR

12. Both Client and AllWest agree that AllWest is an independent contractor in the performance of the Work under this Agreement. All persons or parties employed by AllWest in connection with the Work are the agents, employees or subcontractors of AllWest and not of Client. Accordingly, AllWest shall be responsible for payment of all taxes arising out of AllWest's activities in performing the Work under this Agreement.

## ENTIRE AGREEMENT

13. This Agreement contains the entire agreement between the Parties pertaining to the subject matter contained in it and supersedes and replaces in its entirety all prior and contemporaneous proposals, agreements, representations and understandings of the Parties. The Parties have carefully read and understand the contents of this Agreement and sign their names to the same as their own free act.

## INTEGRATION

14. This is a fully integrated Agreement. The terms of this Agreement may be modified only by a writing signed by both Parties. The terms of this Agreement were fully negotiated by the Parties and shall not be construed for or against the Client or AllWest but shall be interpreted in accordance with the general meaning of the language in an effort to reach the intended result.

## MODIFICATION / WAIVER / PARTIAL INVALIDITY

15. Failure on the part of either party to complain of any act or omission of the other, or to declare the other party in default, shall not constitute a waiver by such party of its rights hereunder. If any provision of this Agreement or its application be unenforceable to any extent, the Parties agree that the remainder of this Agreement shall not be affected and shall be enforced to the greatest extent permitted by law.

## INUREMENT / TITLES

16. Subject to any restrictions on transfers, assignments and encumbrances set forth herein, this Agreement shall inure to the benefit of and be binding upon the undersigned Parties and their respective heirs, executors, legal representatives, successors and assigns. Paragraph titles or captions contained in this Agreement are inserted only as a matter of convenience, and for reference only, and in no way limit, define or extend the provisions of any paragraph. , et al., incurred in that action or proceeding, in addition to any other relief to which it or they may be entitled.

## AUTHORITY

17. Each of the persons executing this Agreement on behalf of a corporation does hereby covenant and warrant that the corporation is duly authorized and existing under the laws of its respective state of incorporation, that the corporation has and is qualified to do business in its respective state of incorporation, that the corporation has the full right and authority to enter into this Agreement, and that each person signing on behalf of the corporation is authorized to do so. If the Client is a joint venture, limited liability company or a partnership, the signatories below warrant that said entity is properly

and duly organized and existing under the laws of the state of its formation and pursuant to the organizational and operating document of the entity, and the laws of the state of its formation, said signatory has authority act on behalf of and commit the entity to this Agreement.

## COUNTERPARTS

18. This Agreement may be signed in counterparts by each of the Parties hereto and, taken together, the signed counterparts shall constitute a single document.

## THIRD PARTY BENEFICIARIES / CONTROLLING LAW

19. There are no intended third party beneficiaries of this Agreement. The services, data & opinions expressed by AllWest are for the sole use of the client, are for a particular project and may not be relied upon by anyone other than the client. This Agreement shall be controlled by the laws of the State of California and any action by either party to enforce this Agreement shall be brought in San Francisco County, California.

## TIME BAR TO LEGAL ACTION

20. Any legal actions by either party against the other related to this Agreement, shall be barred after one year has passed from the time the claimant knew or should have known of its claim, and under no circumstances shall be initiated after two years have passed from the date by which AllWest completes its services.