

Bryant Planning Commission Meeting

Boswell Municipal Complex - City Hall Court Room

210 SW 3rd Street

YouTube: https://www.youtube.com/c/bryantarkansas

Date: December 12, 2022 - Time: 5:00 PM

Call to Order

Approval of Minutes

1. Approval of Minutes for 11/14/2022 Planning Commission Meeting • 2022-11-14 Planning Commission Minutes.pdf

Announcements

Director's Report

DRC Report

2. 2008 Johnswood Road - Rezoning From R-E to R-2

Sergio Martinez - Requesting Approval for Rezoning from R-E to R-2 - Recommended Approval

3. Lots 6&7 Pikewood Subdivision II - CUP for Duplexes

Kannon Porter - Requesting Approval for Conditional Use Permits to Build Duplexes on Lots - Recommended Approval

4. 2303 & 2209 Ridgecrest - Rezoning From R-M to C-2

Hope Consulting - Requesting Rezoning from R-M to C-2 - No Recommendation

5. Hester 3 Lot Subdivision - Springdale Road and Kelley Lane

Joe Hester - Requesting Final Plat Approval - Recommended Approval, Contingent upon Submittal of BOA and Letter Requesting Waiver on Half-Street Improvements

6. Cool Springs Mobile Home Community - Special Sign Permit

Cool Springs MHC - Requesting Approval for Special Sign Permit for Additional Signage - No Recommendation

7. Saline Dental - 3001 Horizon Street - Parking Lot Changes

Charlie Best - Requesting Approval for Changes to Site Plan - Approved, Contingent upon \$500 Stormwater In-lieu-of fee being paid

• <u>0622-PLN-01.pdf</u>

8. Domino's - 3415 HWY 5 - Facade Changes

Tom Whitehead - Requesting Approval for Facade Changes - Approved, Contingent upon Staff Approving Siding Fastener

Concealers

- <u>0623-PLN-03.pdf</u>
- <u>0623-PLN-02.pdf</u>
- 0623-PLN-01.pdf

9. Scooter's Coffee - 1816 Reynold's Road - Monument Sign

Springfield Sign - Requesting Approval for Monument Sign - Approved, Contingent upon verification that the sign does not go over the waterline.

• <u>0619-APP-02.pdf</u>

10. The Office - 205 Progress Way Ste 200 & 500 - Sign Permit

L Graphics - Requesting Sign Permit Approval - STAFF APPROVED

- <u>0620-APP-01.pdf</u>
- <u>0621-APP-01.pdf</u>

11. Five Star Fireworks - Temporary Business Permits

Mark Bradford - Requesting Approval for Temporary Business Permits for Fireworks Tents at 5407 HWY 5 & 23395 I-30 - APPROVED

- <u>0626-APP-01.pdf</u>
- <u>0627-APP-01.pdf</u>

Public Hearing

12. 2008 Johnswood Rd - Rezoning from R-E to R-2

Sergio Martinez - Requesting Approval for Rezoning from R-E to R-2

- <u>0609-LTR-01.pdf</u>
- <u>0609-APP-02.pdf</u>
- <u>0609-SRVY-01.pdf</u>
- <u>0609-APP-01.pdf</u>

13. Lots 6 & 7 Pikewood Subdivision II - CUP for Duplexes

Kannon Porter - Requesting Approval for Conditional Use Permits to Build Duplexes on Lots

- <u>0618-APP-01.pdf</u>
- 0618-APP-02.pdf

14. 2303 & 2209 Ridgecrest - Rezoning from R-M to C-2

Hope Consulting - Requesting Rezoning from R-M to C-2

- <u>0625-LTR-01.pdf</u>
- <u>0625-APP-01.pdf</u>
- <u>0625-PLN-01.png</u>

Old Business

New Business

- 15. Hester 3 Lot Subdivision Springdale Rd and Kelley Lane
 - Joe Hester Requesting Final Plat Approval and Modification from Code for Waiver on Half-Street Improvements
 - <u>0624-PLN-01.pdf</u>

16. Cool Springs Mobile Home Community - Special Sign Permit

Cool Springs MHC - Requesting Approval for Speical Sign Permit for Additional signage.

- <u>0600-APP-02.pdf</u>
- <u>0600-APP-01.pdf</u>

17. City of Bryant New Sign Code Proposal

Truett Smith - Requesting Approval for New Sign Code Proposal

• Updated Sign Code.docx.pdf

18. 2023 Development Calendar

Requesting Approval for 2023 Development Meeting Dates

• Planning Commission Deadlines and Dates 2023.pdf

19. Nomination of 2023 Chair and Vice-Chair of Planning Commission

Nominating Committee Report and Proposal

Adjournments



Bryant Planning Commission Meeting Minutes Monday, November 14, 2022 Boswell Municipal Complex – City Hall Courtroom 6:00 PM

Agenda

CALL TO ORDER

- Chairman Rick Johnson calls the meeting to order.
- Commissioners Present: Johnson, Burgess, Statton, Hooten, Edwards, Arey
- Commissioners Absent: Penfield

ANNOUNCEMENTS

Hilltop Landing PUD has been removed from the agenda at the request of the applicant.

APPROVAL OF MINUTES

1. Planning Commission Meeting Minutes 10/10/2022

Motion to Approve Minutes made by Commissioner Statton, Seconded by Commissioner Arey. Voice Vote, 6 Yays, 0 nays. 2 Absent.

Vice-Chairman Burgess read the DRC Report.

DRC REPORT

2. Hilltop Landing PUD - PUD Zoning Plan and Rezoning

Hope Consulting - Requesting Recommendation for Approval of PUD Zoning Plan and Rezoning - NO RECOMMENDATION

3. 6133 Creekside Drive - Conditional Use Permit

Parham - Requesting Recommendation for Approval of Conditional Use for Accessory Structures - NO RECOMMENDATION

4. 406 NW 3rd Street - Replat

GarNat Engineering - Requesting Recommendation for Approval of Replat -RECOMMENDED APPROVAL

5. Marketplace II Subdivision Phase 2 - Final Plat

GarNat Engineering - Requesting Recommendation for Approval of Final Plat -RECOMMENDED APPROVAL, contingent upon

As-builts and BOA being submitted

6. Custom Advertising - New Site Plan - 23738 I-30

GarNat Engineering - Requesting Recommendation for Site Plan Approval -RECOMMENDED APPROVAL, Contingent upon

remaining comments being addressed

7. Scooter's Coffee - 1816 N Reynolds Road - Commercial Plat

Sherill Associates - Requesting Recommendation for Commercial Plat Approval -RECOMMENDED APPROVAL, Contingent upon

SW In-Lieu-of fee being paid

8. Scooter's Coffee - 1816 N Reynolds Road - Sign Variance

Springfield Sign - Requesting Recommendation for Sign Variance Approval -RECOMMENDED APPROVAL

9. Target - 7377 Alcoa Road - Exterior and Parking Lot Changes

Kimley Horn - Requesting Recommendation for Site Plan Approval - RECOMMENDED APPROVAL

10. Target - 7377 Alcoa Road - Special Sign Permit

Kimley Horn - Requesting Recommendation for Special Sign Permit Approval - RECOMMENDED APPROVAL

11. Scooter's Coffee - 1816 N Reynolds Road - Site Plan

Sherill Associates - Requesting Site Plan Approval - APPROVED

12. Hamilton Family Dentistry - 2422 Springhill Road - Sign Permit

Siez Sign Company - Requesting Sign Permit Approval - APPROVED

13. McAlister's Deli - 7401 Alcoa Road - Sign Permit Arkansas Sign and Neon - Requesting Sign Permit Approval - APPROVED

14. Baxley Penfield Moudy Realty - Tenant Spaces - Sign Permit Custom Advertising - Requesting Sign Permit Approval - APPROVED

15. America's Carmart - 3200 N Reynolds RD - Sign Permit Ken's Signs - Requesting Sign Permit Approval - APPROVED

16. TaMolly's - 206 W Commerce - Sign Permit Whatley Industries - Requesting Sign Permit Approval - APPROVED

17. Exxon - 22755 I-30 - Sign Permit Arkansas Sign and Neon - Requesting Sign Permit Approval - APPROVED

PUBLIC HEARING

 Hilltop Landing PUD - PUD Zoning Plan and Rezoning Hope Consulting - Requesting approval for PUD Zoning Plan and Rezoning

Item was pulled from the agenda by request of the applicant. Several attendees voiced their concern about any future plans to rezone the property in question in the future. Colton Leonard explained that the process would have to start from the beginning of the process.

2. 6133 Creekwater Drive - Conditional Use Permit Reginald Parham Sr - Requesting approval for conditional use permit for accessory structures over allotted square footage. Seeing no members of the public coming forward to speak, Chairman Johnson Called for a Roll Call Vote on the conditional use. 6 Yays, 0 Nays. Arey, Penfield Absent. Conditional Use Permit was Approved.

Motion to Close Public Hearing made by Commissioner Arey, Seconded by Commissioner Edwards. Voice Vote, 6 Yays, 0 nays. Penfield Absent.

NEW BUSINESS

20. 406 NW 3rd Street - Replat

GarNat Engineering - Requesting Approval for Replat

After brief discussion on the item, Chairman Johnson Called for a roll call vote to approve. 6 yays, 0 nays, Penfield absent

21. Marketplace II Subdivision Phase 2 - Final Plat

GarNat Engineering - Requesting Final Plat Approval

Vernon Williams spoke on behalf of GarNat Engineering. He said they had added language to the Bill of Assurance to include dumpsters. They are waiting on ARDOT to widen the road to make sure of the location of the Right of Way.

Chairman Johnson called for a roll call vote to approve.

6 yays, 0 nays, Penfield absent

22. Custom Advertising - 23738 I-30 - Site Plan

GarNat Engineering - Requesting Site Plan Approval and Non-Standard Building Approval

After a brief discussion on the item, Chairman Johnson called for a roll call vote to approve.

6 yays, 0 nays, Penfield absent

23. Scooter's Coffee -1816 N Reynolds - Commercial Plat

Sherill Associates - Requesting Commercial Plat Approval

Shawn LaMontia and Heather LaMontia spoke on behalf of Scooter's. They verified the location of the business, that it was a drive around only, no sit down. The drive will hold 12 cars. The patio will be used only for employees entering and exiting the building.

After a brief discussion on the item, Chairman Johnson called for a roll call vote to approve.

6 yays, 0 nays, Penfield absent

24. Scooter's Coffee -1816 N Reynolds - Sign Variance

Springfield Sign - Requesting Sign Variance Approval

Shawn LaMontia and Heather LaMontia spoke on behalf of Scooter's. Colton Leonard stated the combined square footage of all 3 signs was 199 sq feet. The allotted square footage is 300 square feet. Shawn said that Scooter's requires signage on all 3 sides of the building. Scooter's is a franchise and has over 500 US wide. The sign by the road is much smaller and could be hard to see. The monument signs are 48 inches top to bottom and would be much more visible for travelers along Reynolds Rd.

Chairman Johnson called for a roll call vote at this time.

5 yays, 1 nay, Penfield absent

25. Target - 7377 Alcoa Road - Exterior and Parking Lot Changes

Kimley Horn - Requesting Site Plan Approval

Christian Jones was on Zoom representing Target.

He stated Target was wanting to 'dress up' their parking lot with more mature trees and shrubbery.

After a brief discussion on the item, Chairman Johnson called for a roll call vote to approve.

6 yays, 0 nays, Penfield absent

26. Target - 7377 Alcoa Road - Special Sign Permit

Kimley Horn - Requesting Special Sign Permit Approval

Target is asking for 502 square feet of signage. Code allows 400 square feet. The commission felt that signs are critical and that the signage requested was not out of proportion.

After a brief discussion on the item, Chairman Johnson called for a roll call vote to approve.

6 yays, 0 nays, Penfield absent

27. Coral Ridge - Final Plat

Hope Consulting - Requesting Final Plat Approval

Johnathan Hope spoke on behalf of Hope Consulting. He said this would be a 30 lot subdivision zoned R2. The lots would be 9000 square feet, 75 feet wide. The easement for the sewer has already been obtained. There was a discussion pertaining to the sewer impact. Mr Hope said there was a forced main to the lift station. The grinder pumps were operating at 54% at this time. Home owners will be given the phone number for grinder pump repairs required after taking possession of property after closing.

After a brief discussion on the item, Chairman Johnson called for a roll call vote to approve.

6 yays, 0 nays, Penfield absent

28. 2023 Nominating Committee

Creation of Nominating Committee for Nominating 2023 Chairman and Vice-Chairman

Hooten and Penfield volunteered to the Nominating Committee.

After brief discussion on the item, Chairman Johnson Called for a roll call vote to approve. 6 yays, 0 nays, Penfield, Arey Absent.

DIRECTOR'S REPORT

Colton Leonard told the Commision of sign changes coming in the future.

- 1. Reorganizing the sign code. Making it more user friendly.
- 2. How to measure a sign, square and rectangle.
- *3.* Number of facade signs to any cross access parking lot or that abuts commercial lots.
- 4. Height of pole sign, especially along I30
- 5. *Line of sight verbiage changes.*

He also informed the Commision that we would be 'going live' with the new software the Monday following Thanksgiving.

ADJOURNMENT

Motion to Adjourn made by Commissioner Statton, Seconded by Commissioner Burgess. Voice Vote, 6 Yays, 0 nays. Penfield Absent. Meeting was adjourned. Chairman, Rick Johnson

Date

Secretary, Tracy Picanco

Date



REMOVE TRRE, CURB AND CREATE 2- CONC. PAVRU (D)PARKING SPACES (2) REMOUR TERRICURB AND CREATE 2-CONC. PAULO PANNING SPACES. (3) PLANT Z-NEW TREES.

The application and detail drawings in this manual are strictly for illustration purposes and may not be applicable to all building designs or product installations. All projects should conform to applicable building codes for that particular area. It is recommended to follow all building regulations and standard industry practices.

Metal Sales Manufacturing Corporation is not responsible for the performance of the wall system if it is not installed in accordance with the suggested instructions referenced in this manual. If there is a conflict between this manual and the actual erection drawings, the erection drawings are to take precedence.

Prior to ordering and installing materials, all dimensions should be verified by field measurements.

Metal Sales reserves the right to modify, without notice, any details, recommendations or suggestions. Any questions you may have regarding proper installation of these Concealed Fastened Wall Panel systems should be directed to your local Metal Sales representative (see pages 2 and 3).

Oil canning is not a cause for rejection. Oil canning can be described as the amount of waviness found in the flat areas of metal panels. Oil canning is an inherent characteristic of light gauge cold formed metal products, particularly those with broad flat areas. There are many factors which may contribute to oil canning that Metal Sales is not able to control. These factors include: misalignment of the support system, over driving of fasteners used on the panels, stress (whether inherent in the panel or induced), thermal expansion and contraction of the panel, improper material handling, width, gauge, length, color of panels and improper installation (reference Metal Construction Association "Oil Canning Position Paper"- Appendix A).

Consult your local Metal Sales Branch for any additional information not outlined in this manual.

This manual is designed to be utilized as a guide when installing a Concealed Fastened Wall Panel system. It is the responsibility of the erector to ensure the safe installation of this product system.

SAFETY

STUDY APPLICABLE OSHA AND OTHER SAFETY REQUIREMENTS BEFORE FOLLOWING THESE INSTRUCTIONS.

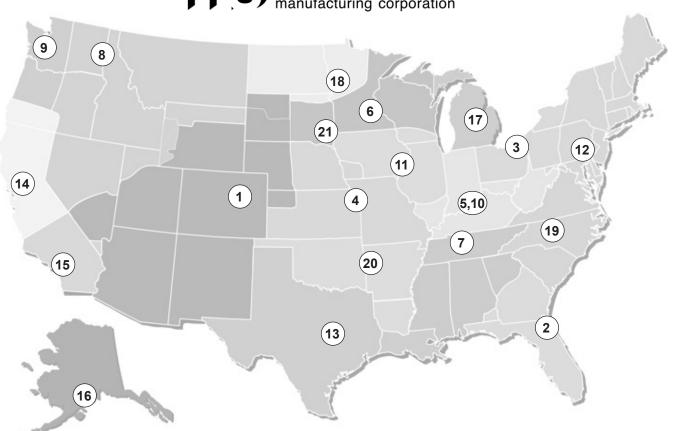
The installation of metal wall systems is a dangerous procedure and should be supervised by trained knowledgeable erectors. USE EXTREME CARE WHILE INSTALLING WALL PANELS. It is not possible for Metal Sales to be aware of all the possible job site situations that could cause an unsafe condition to exist. The erector of the wall system is responsible for reading these instructions and determining the safest way to install the wall system.

These instructions are provided only as a guide to show a knowledgeable, trained erector the correct relationship of parts to one another. If following any of the installation steps would endanger a worker, the erector should stop work and decide upon a corrective action.

Fall protection for workers installing wall panels must be provided.

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TTS metal sales[™] manufacturing corporation



NOTE: Shaded areas represent territories served by each location.

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'H' indicates horizontal panels, 'V' indicates vertical panels

1. DENVER

7990 East I-25 Frontage Road Longmont, CO 80504 303.702.5440 800.289.7663 800.289.1617 Fax

2. JACKSONVILLE

7110 Stuart Avenue Jacksonville, FL 32254 904.783.3660 800.394.4419 904.783.9175 Fax 800.413.3292 Fax

3. JEFFERSON

352 East Erie Street Jefferson, OH 44047 440.576.9070 800.321.5833 440.576.9242 Fax 800.233.5719 Fax

4. INDEPENDENCE

1306 South Powell Road Independence, MO 64057 816.796.0900 800.747.0012 816.796.0906 Fax

5. SELLERSBURG

7800 State Road 60 Sellersburg, IN 47172 812.246.1866 800.999.7777 812.246.0893 Fax 800.477.9318 Fax

6. ROGERS

22651 Industrial Boulevard Rogers, MN 55374 763.428.8080 800.328.9316 763.428.8525 Fax 800.938.9119 Fax

7. NASHVILLE

4314 Hurricane Creek Boulevard Antioch, TN 37013 615.641.7100 800.251.8508 615.641.7118 Fax 800.419.4372 Fax

8. SPOKANE

2727 East Trent Avenue Spokane, WA 99202 509.536.6000 800.572.6565 509.534.4427 Fax

9. SEATTLE

20213 84th Avenue, South Kent, WA 98032 253.872.5750 800.431.3470 (Outside WA) 800.742.7900 (Inside WA) 253.872.2008 Fax

10. NEW ALBANY

999 Park Place New Albany, IN 47150 812.944.2733 812.944.1418 Fax

11. ROCK ISLAND

8111 West 29th Street Rock Island, IL 61201 309.787.1200 800.747.1206 309.787.1833 Fax

12. DEER LAKE

29 Pinedale Industrial Road Orwigsburg, PA 17961 570.366.2020 800.544.2577 570.366.1648 Fax 800.544.2574 Fax

13. TEMPLE

3838 North General Bruce Drive Temple, TX 76501 254.791.6650 800.543.4415 254.791.6655 Fax 800.543.4473 Fax

14. WOODLAND

1326 Paddock Place Woodland, CA 95776 530.668.5690 800.759.6019 530.668.0901 Fax

Branch Locations

15. FONTANA

14213 Whittram Avenue Fontana, CA 92335 909.829.8618 800.782.7953 909.829.9083 Fax

16. ANCHORAGE

4637 Old Seward Highway Anchorage, AK 99503 907.646.7663 866.640.7663 907.646.7664 Fax

17. BAY CITY

5209 Mackinaw Road Bay City, MI 48706 989.686.5879 888.777.7640 989.686.5870 Fax 888.777.0112 Fax

18. DETROIT LAKES

1435 Egret Avenue Detroit Lakes, MN 56501 218.847.2988 888.594.1394 218.847.4835 Fax 888.594.1454 Fax

19. MOCKSVILLE

188 Quality Drive Mocksville, NC 27028 336.751.6381 800.228.6119 336.751.6301 Fax 800.228.7916 Fax

20. FORT SMITH

7510 Ball Road Fort Smith, AR 72908 479.646.1176 877.452.3915 479.646.5204 Fax

21. SIOUX FALLS

2700 West 3rd Street, Suite 4 Sioux Falls, SD 57104 605.335.2745 888.299.0024

TECHNICAL SUPPORT

TECHNICAL SERVICES 545 South 3rd Street, Suite 200 Louisville, KY 40202 502.855.4300 800.406.7387 800.944.6884 Fax

Safety

Use proper safety gear, safe equipment and safe processes. Safety gear includes gloves, arm guards, safety goggles and fall protection. Safe equipment includes maintained screw gun, saw, snips and folder. Safe processes include being aware of dangers and taking appropriate measures to avoid them.

Material Availability

Panels are available in 24 ga, 22 ga and 20 ga steel and 0.032" aluminum. Flashings are available in 24 ga and 22 ga steel and 0.032" aluminum. Only 24 ga panel and flashing materials, in standard colors, are stocked. Custom 24 ga colors, all 22 ga, all 20 ga and all 0.032" materials are secured per project and require minimum order quantities.

Material Receipt

Upon receipt of material, confirm all parts have been delivered and that there is no damage. Any shortages should be reported to the Metal Sales contact. Transit damage should be noted on the bill of lading.

Material Storage

Material not used right away, should be stored inside, out of the elements. If inside storage is not available, tarp the material such that air can circulate. Elevate the crates off the ground and slope so that water will run off.

Handling

Transport panels in the crates to the installation site. Adequate support for individual panels every 6' to 8' is necessary. Grasp a panel by one side and let the other side hang down.

Wall Condition

Before installing panels, ensure the wall support material is plumb, square and true. Variance from in-plane should not exceed 1/4" in 10'.

Wall Assembly

Cover building envelope sheathing with a moisture barrier, such as peel-and-stick underlayment or synthetic building wrap for resistance to air and water penetration through the wall assembly. Install the moisture barrier horizontally from the bottom upward, overlapping each run over the previous, lower run.

Spacers

Spacers with a minimum depth of 1/4" are recommended at clips and trims to hold the wall assembly off of the wall line and allow water to drain. Spacers may be shims, hat channels or furring strips installed to not hold water.

Plan the Work

Before installing panels on a wall section, plan for alignment with adjacent wall sections. Decide if the first panel will be a full or partial panel. Consider the locations of wall penetrations and openings.

Clip Fasteners

Do not overtighten the panel clip fasteners. The fasteners should be brought just to firm contact between the support material, panel and clip. Overtightening the clip fasteners can make installation of the next panel difficult. The panel must be capable of sliding along its length after the clips are installed. The number of fasteners per clip can be either one or two, depending on the support material and the design load requirements.

Installation Practice

For horizontal panels, start at the bottom of the wall and work up the wall toward the top. Always 'shingle' panels and trims so that water will run down off of one member on to the next. Ensure every surface has adequate slope to permit water to run off and not collect on any surface. When installing panels, give effort to stay on module by checking the coverage of each panel.

Strippable Film

Panels and trim are typically provided with strippable film as protection against minor fabrication, transit and handling damage. The strippable film must be removed just before installation. Waiting until after panel installation to remove the strippable film or after significant exposure to sunlight or heat can make removal very difficult.

Panel Profiles

EM1-1212 Box Rib

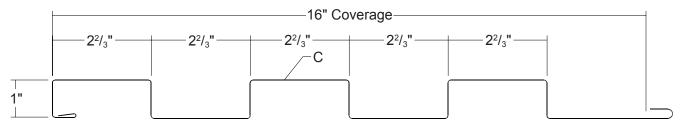
	-2²/3"	
1"		

C	
	\square

Panel can be produced in lengths from 5' to 30'.

Pr	oduct No.	Coverage	Description	Thick	Finish
:	2774541	12"	1 rib	24 ga	Galvalume® (ACG)
2	27745XX	12"	1 rib	24 ga	PVDF Painted
:	2974541	12"	1 rib	22 ga	Galvalume [®] (ACG)
2	29745XX	12"	1 rib	22 ga	PVDF Painted
3	30745XX	12"	1 rib	20 ga	PVDF Painted
2	7745XXA	12"	1 rib	0.032"	PVDF Painted Aluminum

EM1-1653 Box Rib

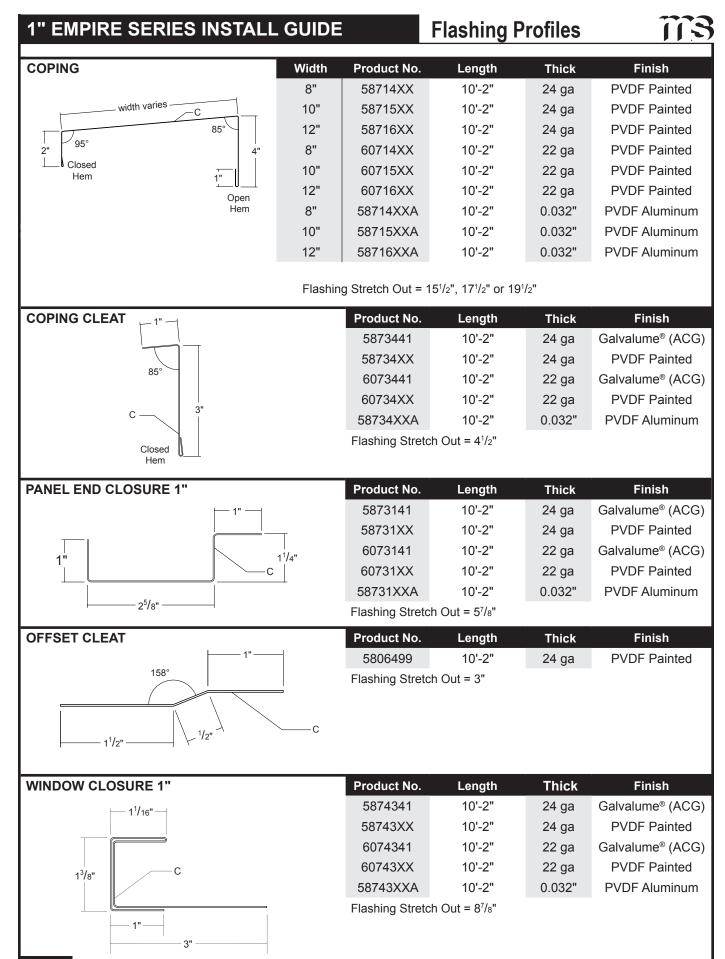


Panel can be produced in lengths from 5' to 30'.

Product No.	Coverage	Description	Thick	Finish
2775041	16"	3 ribs	24 ga	Galvalume® (ACG)
27750XX	16"	3 ribs	24 ga	PVDF Painted
2975041	16"	3 ribs	22 ga	Galvalume® (ACG)
29750XX	16"	3 ribs	22 ga	PVDF Painted
30750XX	16"	3 ribs	20 ga	PVDF Painted
27750XXA	16"	3 ribs	0.032"	PVDF Painted Aluminum

1" EMPIRE SERIES INSTALL GUIDE		Flashing P	rofiles	
BASE TRIM 1" —	Product No.	Length	Thick	Finish
	5870741	10'-2"	24 ga	Galvalume® (AC
c – c	58707XX	10'-2"	24 ga	PVDF Painted
2 ⁵ /8"	6070741	10'-2"	22 ga	Galvalume® (AC
	60707XX	10'-2"	22 ga	PVDF Painted
95°	58707XXA	10'-2"	0.032"	PVDF Aluminur
-1 ¹ /2" Closed Hem	Flashing Stret	ch Out = 5¹/₄"		
C-CLOSURE 1"	Product No.	Length	Thick	Finish
L 1"	5871141	10'-2"	24 ga	Galvalume® (AC
	58711XX	10'-2"	24 ga	PVDF Painted
1 ¹ /4" C	6071141	10'-2"	22 ga	Galvalume® (AC
	60711XX	10'-2"	22 ga	PVDF Painted
	58711XXA	10'-2"	0.032"	PVDF Aluminu
2 ³ /4"	Flashing Stret	ch Out = 5"		
Z-CLOSURE 1"	Product No.	Length	Thick	Finish
<u>∤</u> 1"}	5872741	10'-2"	24 ga	Galvalume® (AC
	58727XX	10'-2"	24 ga	PVDF Painted
	6072741	10'-2"	22 ga	Galvalume® (AC
11/4"	60727XX	10'-2"	22 ga	PVDF Painted
	58727XXA	10'-2"	0.032"	PVDF Aluminu
<u>/</u> ──1" ── /	Flashing Stret	ch Out = $3^{1}/_{4}$ "		
his Flashing can be used as an alternate to C-Closure.				
OUTSIDE CORNER	Product No.	Length	Thick	Finish
3" C	5872441	10'-2"	24 ga	Galvalume® (AC
Open	58724XX	10'-2"	24 ga	PVDF Painted
	6072441	10'-2"	22 ga	Galvalume® (AC
·	60724XX	10'-2"	22 ga	PVDF Paintec
3"	58724XXA	10'-2"	0.032"	PVDF Aluminur
1" Den Hem	Flashing Stret	ch Out = 8¹/8"		
NSIDE CORNER	Product No.	Length	Thick	Finish
, Sıı,	5872641	10'-2"	24 ga	Galvalume [®] (AC
	58726XX	10'-2"	24 ga	PVDF Painted
Open	6072641	10'-2"	22 ga	Galvalume® (AC
Hem C	60726XX	10'-2"	22 ga	PVDF Painted
	58726XXA	10'-2"	0.032"	PVDF Aluminui
3"	Flashing Stret		0.002	
Open				

1" EMPIRE SERIES INSTALL GUID	Ε	Flashing P	rofiles	TIS
PANEL STARTER	Product No.	Length	Thick	Finish
	5872841	10'-2"	24 ga	Galvalume® (ACG)
	58728XX	10'-2"	24 ga	PVDF Painted
2 ⁵ /8" Closed	6072841	10'-2"	22 ga	Galvalume® (ACG)
2'78" Hem	60728XX	10'-2"	22 ga	PVDF Painted
1 ¹ /8"	58728XXA	10'-2"	0.032"	PVDF Aluminum
C — Hem	Flashing Stret	ch Out = 4³/ଃ"		
TRANSITION 1"	Product No.	Length	Thick	Finish
Γk	5873741	10'-2"	24 ga	Galvalume® (ACG)
2" C	58737XX	10'-2"	24 ga	PVDF Painted
95°	6073741	10'-2"	22 ga	Galvalume® (ACG)
95°	60737XX	10'-2"	22 ga	PVDF Painted
11/4" 21/2"	58737XXA	10'-2"	0.032"	PVDF Aluminum
J [−] í [−]	Flashing Stret			
Closed <u> </u> Hem				
REVEAL	Product No.	Length	Thick	Finish
	5874041	10'-2"	24 ga	Galvalume [®] (ACG)
L	58740XX	10'-2"	24 ga	PVDF Painted
	6074041	10'-2"	22 ga	Galvalume [®] (ACG)
Open Hem Open	60740XX	10'-2"	g∝ 22 ga	PVDF Painted
Hem	58740XXA	10'-2"	0.032"	PVDF Aluminum
3"	Flashing Stret	ch Out = 5¹/ଃ"		
SILL/JAMB TRIM	Product No.	Length	Thick	Finish
A".	5871841	10'-2"	24 ga	Galvalume® (ACG)
+	58718XX	10'-2"	24 ga	PVDF Painted
1/2" >	6071841	10'-2"	22 ga	Galvalume® (ACG)
X	60718XX	10'-2"	22 ga	PVDF Painted
2 ¹ /2"	58718XXA	10'-2"	0.032"	PVDF Aluminum
1" Open	Flashing Stret X= 95° for Sill	ch Out = 8" or 90° for Jamb		
Hem C	Product No.	Length	Thick	Finish
\Box	5872141	10'-2"	24 ga	Galvalume® (ACG)
 2 ¹ /2"	58721XX	10'-2"	24 ga	PVDF Painted
2 / 2 95°	6072141	10'-2"	22 ga	Galvalume® (ACG)
	60721XX	10'-2"	22 ga	PVDF Painted
95°	58721XXA	10'-2"	0.032"	PVDF Aluminum
^{11/4} ⁻¹ 2 ¹ /2"	Flashing Stret	ch Out = 10³/4"		
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CONCEALED FASTENED CLIP	Product No.	Size	WT/200	Finish
	4934200	2 ¹ /4" x 1 ³ /4" x ³ /4"	30.00 lbs	G90
				Galvanized
UNIVERSAL CLOSURE	Product No.	Description	WT/Ea	Туре
	6411100	1" x 1 ¹ /2" x 50'	4.00 lbs	Foam
	6411199	1" x 1 ¹ /2" x 10'	0.80 lbs	Foam
1.5"				
DOUBLE BEAD TAPE SEALANT	Product No.	Description	WT/Ctn.	Туре
	6403899	⁷ /8" x ³ /16" x 25'	40.00 lbs	Butyl
		20 Rolls per Carton		
TUBE SEALANT	Product No.	Description	WT/Ea	Color
	6402800	Acrylic Tube Sealant	3.31 lbs	Clear
PERMATU	64028XX	Tube Sealant	3.31 lbs	Color Mato
PERMATHANE				
POP RIVET	Product No.	Description	WT/250	Finish
	8240201	1/8" x 3/8" Pop Rivet	0.75 lbs	Bare
u	82402XX	¹ /8" x ³ /8" Pop Rivet	0.75 lbs	Painted
PANCAKE HEAD WOOD SCREW	Product No.	Description	WT/250	Finish
Anteristation .	8243100	#10-12 x 1" PH Wood Screw	1.90 lbs	Plated
PANCAKE HEAD DRILLER	Product No.	Description	WT/250	Finish
	8242100	#10-16 x 1" PH Driller	1.90 lbs	Plated
LOW PROFILE WOOD SCREW	Product No.	Description	WT/250	Finish
<u> </u>	8244100	#12-11 x 11/2" LP Wood Screw	2.75 lbs	Painted
WOOD SCREW XL	Product No.	Description	WT/250	Finish
	8212300	#10-14 x 11/2" Wood Screw XL	3.75 lbs	Plated
	82123XX	#10-14 x 11/2" Wood Screw XL	3.75 lbs	Painted
SELF DRILLER XL	Product No.	Description	WT/250	Finish
	8235300	#12-14 x 11/4" Self Driller XL	3.75 lbs	Plated
	82353XX	#12-14 x 1 ¹ /4" Self Driller XL	3.75 lbs	Painted

1" EMPIRE SERIES INSTALL GUIDE Design Information EM1-1212 Box Rib **FASTENING INFORMATION** • Concealed Fastened Clip is 2¹/4" x 1³/4" x ³/4", from 16 ga, G90 material with 2 fastener holes. • Clip Fastener(s) should be driven just to contact between fastener head / clip / panel / support. Beyond contact, PANEL ATTACHMENT the clip can crush the open hem of the panel and make engagement of the next panel difficult. Overdriven fasteners will cause panel distortions. • Fasteners should extend ¹/₂" or more past the inside face of the support material for steel and wood sheathing support materials. • Clip Fasteners: Concealed Attaching to Wood: Fastened Clip #12-11 x 11/2" Low Profile Wood Screw Attaching to Steel: Clip Fastener < 18 ga: 1/4"-13 Deck Screw ≥ 18 ga, ≤ 12 ga: #10-16 Pancake Head Driller > 12 ga: 1/4"-14 Self Driller, No Washer INSTALLATION DIRECTION

Horizontally-oriented panels must be installed from the bottom to the top.

Vertically-oriented panels may be installed from the right-to-left or left-to-right.

STEEL SECTION PROPERTIES									ALL						DADS ings	· · ·	f		
		Viald	Mainht		npression	Bottom In C	ompression	sion Inward Load						Out	ward I	heo			
Ga	Width in	Yield ksi	Weight psf	Ixx	Sxx	Ixx	Sxx												
				por	psi		in⁴/ft	in³/ft	in⁴/ft	in³/ft	2'	3'	4'	5'	6'	2'	3'	4'	5'
24	12	50	1.25	0.0297	0.0355	0.0291	0.0574	120	97	69	44	23	70	58	45	33	21		
22	12	50	1.66	0.0442	0.0538	0.0410	0.0783	120	97	71	47	23	70	58	45	33	21		
20	12	33	2.00	0.0635	0.0799	0.0550	0.0966	120	97	71	47	23	70	58	45	33	21		

1. Theoretical section properties have been calculated per AISI 2012 'North American Specification for the Design of Cold-Formed Steel Structural Members'. Ixx and Sxx are effective section properties for deflection and bending.

2. Allowable loads are calculated in accordance with AISI 2012 specifications considering bending, shear, combined bending and shear, deflection, load testing on 16 ga girts and load testing of comparable profiles. Allowable loads consider the 3 or more equal spans condition. Panel weight is not considered.

3. Deflection consideration is limited by a maximum deflection ratio of L/180 of span.

4. Allowable loads do not include a 1/3 stress increase for wind.

ALUMINUM SECTION PROPERTIES							AL						RM L spa		DS, Js	psf		
Thick	Width	Yield	Weight	Ι	S_{τορ} in³/ft	S _{Bottom}		Inward Load						Οι	itwai	d Lo	ad	
in	in	ksi	psf	in⁴/ft	in ³ /ft	э_{воttom} in³/ft	2'	2.5'	3'	4'	5'	6'	2'	2.5'	3'	4'	5'	6'
0.032	12	17	0.60	0.0720	0.0950	0.2969	100	89	78	33	17	10	60	55	51	33	17	10

1. Section properties have been calculated per 2010 Aluminum Design Manual. I and S are section properties for deflection and bending.

2. Allowable load is calculated in accordance with 2010 Aluminum Design Manual specifications considering bending, shear, combined bending and shear, deflection, load testing on 16 ga girts and load testing of comparable profiles. Allowable load does not address web crippling or other fasteners or support materials. Allowable loads consider the 3 or more equal spans condition. Panel weight is not considered.

3. Deflection consideration is limited by a maximum deflection ratio of L/180 of span.

4. Allowable loads do not include a 1/3 stress increase in wind.

Fastener Guide

EM1-1212 Box Rib

EM1-1212 on 16 ga Girts Wall Fastener Spacing (feet)

Wind Speed (mph) Exposure Category	20 ft, Mean Roof Height	40 ft, Mean Roof Height	60 ft, Mean Roof Height
	Field Edge Thickness -15.1 psf -18.6 psf	Field Edge Thickness -17.4 psf -21.5 psf	Field Edge Thickness -19 psf -23.4 psf
4000	24 ga 6.00 6.00	24 ga 6.00 5.50	24 ga 6.00 5.50
100C	22 ga 6.00 6.00	22 ga 6.00 5.50	22 ga 6.00 5.50
	20 ga 6.00 6.00 0.032" 6.00 6.00	20 ga 6.00 5.50 0.032" 6.00 6.00	20 ga 6.00 5.50 0.032" 6.00 5.50
	Field Edge	Eiold Edge	Field Edge
	Field Edge Thickness -18.2 psf -22.5 psf	Field Edge Thickness -21.1 psf -26 psf	Field Edge Thickness -23 psf -28.4 psf
110C	24 ga 6.00 5.50	24 ga 5.50 5.50	24 ga 5.50 5.00
	22 ga 6.00 5.50 20 ga 6.00 5.50	22 ga 5.50 5.50 20 ga 5.50 5.50	22 ga 5.50 5.00 20 ga 5.50 5.00
	0.032" 6.00 5.50	0.032" 6.00 5.50	0.032" 5.50 5.00
	Field Edge	Field Edge	Field Edge
	Thickness -21.7 psf -26.8 psf	Thickness -25.1 psf -31 psf	Thickness -27.4 psf -33.8 psf
120C	24 ga 5.50 5.50 22 ga 5.50 5.50	24 ga 5.50 5.00 22 ga 5.50 5.00	24 ga 5.00 4.50 22 ga 5.00 4.50
	20 ga 5.50 5.50	20 ga 5.50 5.00	20 ga 5.00 4.50
	0.032" 6.00 5.00	0.032" 5.50 5.00	0.032" 5.00 4.50
	Field Edge	Field Edge	Field Edge
	Thickness -25.5 psf -31.4 psf	Thickness -29.5 psf -36.4 psf	Thickness -32.1 psf -39.6 psf
130C	24 ga 5.50 5.00 22 ga 5.50 5.00	24 ga 5.00 4.50 22 ga 5.00 4.50	24 ga 5.00 4.00 22 ga 5.00 4.00
	20 ga 5.50 5.00	20 ga 5.00 4.50	20 ga 5.00 4.00
	0.032" 5.50 5.00	0.032" 5.00 4.00	0.032" 4.50 4.00
	Field Edge	Field Edge	Field Edge
	Thickness -29.5 psf -36.5 psf 24 ga 5.00 4.50	Thickness -34.2 psf -42.2 psf 24 ga 4.50 4.00	Thickness -37.2 psf -46 psf 24 ga 4.50 3.50
140C	22 ga 5.00 4.50	22 ga 4.50 4.00	22 ga 4.50 3.50
	20 ga 5.00 4.50	20 ga 4.50 4.00	20 ga 4.50 3.50
	0.032" 5.00 4.00	0.032" 4.50 3.50	0.032" 4.00 3.00
	Field Edge	Field Edge Thickness -39.2 psf -48.4 psf	Field Edge Thickness -42.7 psf -52.8 psf
1 - 0 0	Thickness -33.9 psf -41.9 psf 24 ga 4.50 4.00	Thickness -39.2 psf -48.4 psf 24 ga 4.50 3.50	Thickness -42.7 psf -52.8 psf 24 ga 4.00 3.00
150C	22 ga 4.50 4.00	22 ga 4.50 3.50	22 ga 4.00 3.00
1000	20 ga 4.50 4.00 0.032" 4.50 3.50	20 ga 4.50 3.50 0.032" 4.00 3.00	20 ga 4.00 3.00 0.032" 3.50 2.50
			Field Edge
	Field Edge Thickness -38.6 psf -47.6 psf	Field Edge Thickness -44.6 psf -55.1 psf	Field Edge Thickness -48.6 psf -60 psf
1600	24 ga 4.50 3.50	24 ga 4.00 3.00	24 ga 3.50 2.50
160C	22 ga 4.50 3.50 20 ga 4.50 3.50	22 ga 4.00 3.00 20 ga 4.00 3.00	22 ga 3.50 2.50 20 ga 3.50 2.50
	0.032" 4.00 3.00	0.032" 3.50 2.50	0.032" N.G. N.G.
	Field Edge	Field Edge	Field Edge
	Thickness -43.6 psf -53.8 psf	Thickness -50.4 psf -62.2 psf	Thickness -54.9 psf -67.8 psf
170C	24 ga 4.00 3.00 22 ga 4.00 3.00	24 ga 3.50 2.50 22 ga 3.50 2.50	24 ga 3.00 2.00 22 ga 3.00 2.00
	22 ga 4.00 3.00 20 ga 4.00 3.00	22 ga 3.50 2.50 20 ga 3.50 2.50	22 ga 3.00 2.00 20 ga 3.00 2.00
	0.032" 3.50 2.50	0.032" N.G. N.G.	0.032" N.G. N.G.
Notes:			
	sed on capacities determined in	(4) - FIELD a - LH	EAST OF 10% MINIMUM
	n Specification for the Design of Cold- DM 2010, Aluminum Design Manual.	BU EDGE BU	JILDING WIDTH OR 40%
	, j		F MEAN ROOF HEIGHT JT NOT LESS THAN 3'.
	sed on an applied load determined usin beeds and Wind Exposures tabulated.	ng	
	outary area of 10 square feet, an Enclos	sed	
building, a Topographic Fa	actor of 1.0 and	·	
panel bearing length of 2.	b inches.		$\sim \times$
	termined using the IBC 2015		
suction and pressure, the	combination is 0.6W.	5	5 h
4. Testing is the basis for	the load carrying capacity.		4
			D.
		~	a>
		7	-

1" EMPIRE SERIES INSTALL GUIDE Design Information EM1-1653 Box Rib **FASTENING INFORMATION** • Concealed Fastened Clip is 2¹/4" x 1³/4" x ³/4", from 16 ga, G90 material with 2 fastener holes. • Clip Fastener(s) should be driven just to contact between fastener head / clip / panel / support. Beyond contact, PANEL ATTACHMENT the clip can crush the open hem of the panel and make engagement of the next panel difficult. Overdriven fasteners will cause panel distortions. • Fasteners should extend 1/2" or more past the inside face of the support material for steel and wood sheathing support materials. • Clip Fasteners: Concealed Attaching to Wood: Fastened Clip #12-11 x 11/2" Low Profile Wood Screw Attaching to Steel: Clip Fastener < 18 ga: 1/4"-13 Deck Screw ≥ 18 ga, ≤ 12 ga: #10-16 Pancake Head Driller > 12 ga: 1/4"-14 Self Driller, No Washer INSTALLATION DIRECTION

Horizontally-oriented panels must be installed from the bottom to the top.

Vertically-oriented panels may be installed from the right-to-left or left-to-right.

	STEEL SECTION PROPERTIES								ALLO)ADS ings	· · ·	f					
			Mainht		mpression	Bottom In C	ompression		Inw	ard L	heo			Out	ward I	heo						
Ga	Width in	Yield ksi	Weight psf	Ixx	Sxx	lxx	Sxx															
	111	1.01							in⁴/ft	in³/ft	in⁴/ft	in³/ft	2'	3'	4'	5'	6'	2'	3'	4'	5'	6'
24	16	50	1.39	0.0495	0.0729	0.0533	0.0911	120	97	71	47	23	70	58	45	33	21					
22	16	50	1.81	0.0713	0.1094	0.0750	0.1340	120	97	71	47	23	70	58	45	33	21					
20	16	33	2.21	0.1005	0.1658	0.1020	0.1967	120	97	71	47	23	70	58	45	33	21					

1. Theoretical section properties have been calculated per AISI 2012 'North American Specification for the Design of Cold-Formed Steel Structural Members'. Ixx and Sxx are effective section properties for deflection and bending.

2. Allowable loads are calculated in accordance with AISI 2012 specifications considering bending, shear, combined bending and shear, deflection, load testing on 16 ga girts and load testing of comparable profiles. Allowable loads consider the 3 or more equal spans condition. Panel weight is not considered.

3. Deflection consideration is limited by a maximum deflection ratio of L/180 of span.

4. Allowable loads do not include a 1/3 stress increase for wind.

ALUMINUM SECTION PROPERTIES					ALLOWABLE UNIFORM LOADS, psf For various clip spacings													
Thick	Width	Yield	Weight	I	S _{Top}	S _{Bottom}	Inward Load			Outward Load								
in	in	ksi	psf	in⁴/ft	in ³ /ft	in ³ /ft	2'	2.5'	3'	4'	5'	6'	2'	2.5'	3'	4'	5'	6'
0.032	16	17	0.67	0.1080	0.1977	0.2369	100	89	79	57	36	14	63	58	53	43	33	23

1. Section properties have been calculated per 2010 Aluminum Design Manual. I and S are section properties for deflection and bending.

2. Allowable load is calculated in accordance with 2010 Aluminum Design Manual specifications considering bending, shear, combined bending and shear, deflection, load testing on 16 ga girts and load testing of comparable profiles. Allowable load does not address web crippling or other fasteners or support materials. Allowable loads consider the 3 or more equal spans condition. Panel weight is not considered.

3. Deflection consideration is limited by a maximum deflection ratio of L/180 of span.

4. Allowable loads do not include a 1/3 stress increase in wind.

Fastener Guide

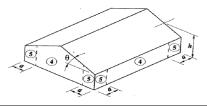
EM1-1653 Box Rib

> EM1-1653 on 16 ga Girts

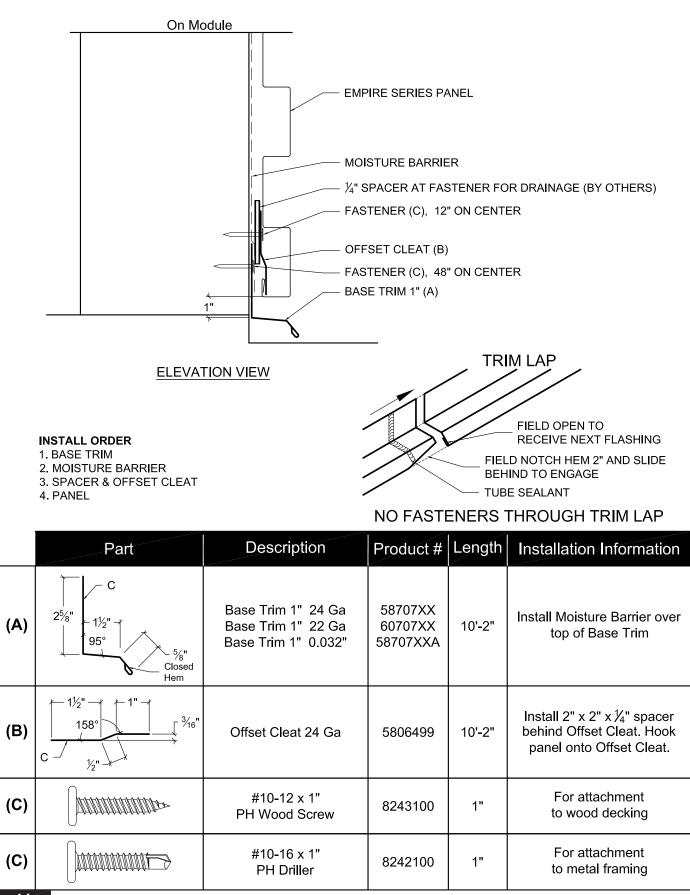
Wall Fastener Spacing (feet)

Wind Speed (mph) Exposure Category	- 20 ft, Mean Roof Height	40 ft, Mean Roof Height	60 ft, Mean Roof Height					
	Field Edge Thickness -15.1 psf -18.6 psf	Field Edge Thickness -17.4 psf -21.5 psf	Field Edge Thickness -19 psf -23.4 psf					
4000	24 ga 6.00 6.00	24 ga 6.00 5.50	24 ga 6.00 5.50					
100C	22 ga 6.00 6.00	22 ga 6.00 5.50	22 ga 6.00 5.50					
	20 ga 6.00 6.00 0.032" 6.00 6.00	20 ga 6.00 5.50 0.032" 6.00 6.00	20 ga 6.00 5.50					
	0.032" 6.00 6.00	0.032" 6.00 6.00	0.032" 6.00 5.50					
	Field Edge	Field Edge	Field Edge					
	Thickness -18.2 psf -22.5 psf	Thickness -21.1 psf -26 psf	Thickness -23 psf -28.4 psf					
4400	24 ga 6.00 5.50	24 ga 5.50 5.50	24 ga 5.50 5.00					
110C	22 ga 6.00 5.50	22 ga 5.50 5.50	22 ga 5.50 5.00					
	20 ga 6.00 5.50 0.032" 6.00 5.50	20 ga 5.50 5.50 0.032" 6.00 5.50	20 ga 5.50 5.00 0.032" 5.50 5.00					
	Field Edge Thickness -21.7 psf -26.8 psf	Field Edge Thickness -25.1 psf -31 psf	Field Edge Thickness -27.4 psf -33.8 psf					
1000	24 ga 5.50 5.50	24 ga 5.50 5.00	24 ga 5.00 4.50					
120C	22 ga 5.50 5.50	22 ga 5.50 5.00	22 ga 5.00 4.50					
	20 ga 5.50 5.50	20 ga 5.50 5.00	20 ga 5.00 4.50					
	0.032" 6.00 5.50	0.032" 5.50 5.00	0.032" 5.50 4.50					
	Field Edge	Field Edge	Field Edge					
	Thickness -25.5 psf -31.4 psf	Thickness -29.5 psf -36.4 psf	Thickness -32.1 psf -39.6 psf					
	24 ga 5.50 5.00	24 ga 5.00 4.50	24 ga 5.00 4.00					
130C	22 ga 5.50 5.00	22 ga 5.00 4.50	22 ga 5.00 4.00					
	20 ga 5.50 5.00	20 ga 5.00 4.50	20 ga 5.00 4.00					
	0.032" 5.50 5.00	0.032" 5.00 4.50	0.032" 5.00 4.00					
	Field Edge	Field Edge	Field Edge					
	Thickness -29.5 psf -36.5 psf	Thickness -34.2 psf -42.2 psf	Thickness -37.2 psf -46 psf					
1100	24 ga 5.00 4.50	24 ga 4.50 4.00	24 ga 4.50 3.50					
140C	22 ga 5.00 4.50	22 ga 4.50 4.00	22 ga 4.50 3.50					
	20 ga 5.00 4.50	20 ga 4.50 4.00	20 ga 4.50 3.50					
	0.032" 5.00 4.50	0.032" 4.50 4.00	0.032" 4.50 3.50					
	Field Edge	Field Edge	Field Edge					
	Thickness -33.9 psf -41.9 psf	Thickness -39.2 psf -48.4 psf	Thickness -42.7 psf -52.8 psf					
1 5 0 0	24 ga 4.50 4.00	24 ga 4.50 3.50	24 ga 4.00 3.00					
150C	22 ga 4.50 4.00 20 ga 4.50 4.00	22 ga 4.50 3.50 20 ga 4.50 3.50	22 ga 4.00 3.00 20 ga 4.00 3.00					
	20 ga 4.50 4.00 0.032" 4.50 4.00	0.032" 4.00 3.00	20 ga 4.00 3.00 0.032" 4.00 3.00					
	Field Edge	Field Edge	- Field - Educ					
	Field Edge Thickness -38.6 psf -47.6 psf	Field Edge Thickness -44.6 psf -55.1 psf	Field Edge Thickness -48.6 psf -60 psf					
4000	24 ga 4.50 3.50	24 ga 4.00 3.00	24 ga 3.50 2.50					
16001	22 ga 4.50 3.50	22 ga 4.00 3.00	22 ga 3.50 2.50					
160C	20 ga 4.50 3.50	20 ga 4.00 3.00	20 ga 3.50 2.50					
	0.032" 4.00 3.50	0.032" 3.50 2.50	0.032" 3.00 2.00					
	Field Edge	Field Edge	Field Edge					
	Thickness -43.6 psf -53.8 psf	Thickness -50.4 psf -62.2 psf	Thickness -54.9 psf -67.8 psf					
	24 ga 4.00 3.00	24 ga 3.50 2.50	24 ga 3.00 2.00					
170C	22 ga 4.00 3.00	22 ga 3.50 2.50	22 ga 3.00 2.00					
	20 ga 4.00 3.00	20 ga 3.50 2.50	20 ga 3.00 2.00					
	0.032" 3.50 2.50	0.032" 3.00 2.00	0.032" N.G. N.G.					
Notes:								
	ased on capacities determined in		AST OF 10% MINIMUM					
	an Specification for the Design of Cold-	U ILLD "BI	JILDING WIDTH OR 40%					
Structural Members and	ADM 2010, Aluminum Design Manual.		MEAN ROOF HEIGHT					
2 Allowable appains in h	asad an an applied load determined with	DI	JT NOT LESS THAN 3'.					
	pased on an applied load determined usir speeds and Wind Exposures tabulated.	9						
	ibutary area of 10 square feet, an Enclos	ed						
Assumptions include a tr building, a Topographic I		eu						
panel bearing length of 2								
			\sim \times					
	letermined using the IBC 2015							
suction and pressure, the	e combination is 0.6W.	S OF						
4 Testing is the basis for	r the load carrying capacity	× • •×						

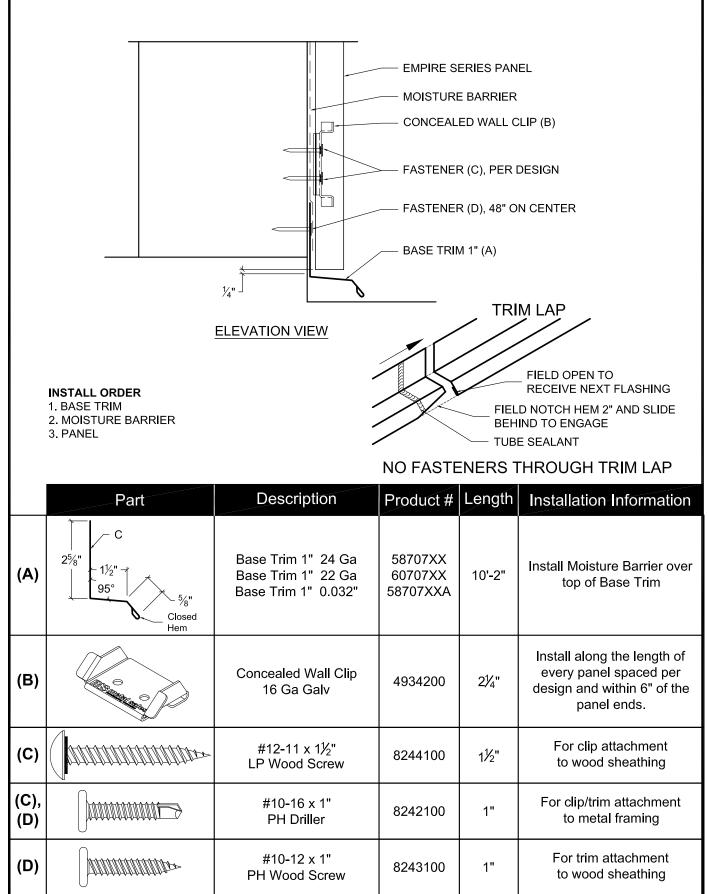
Testing is the basis for the load carrying capacity.

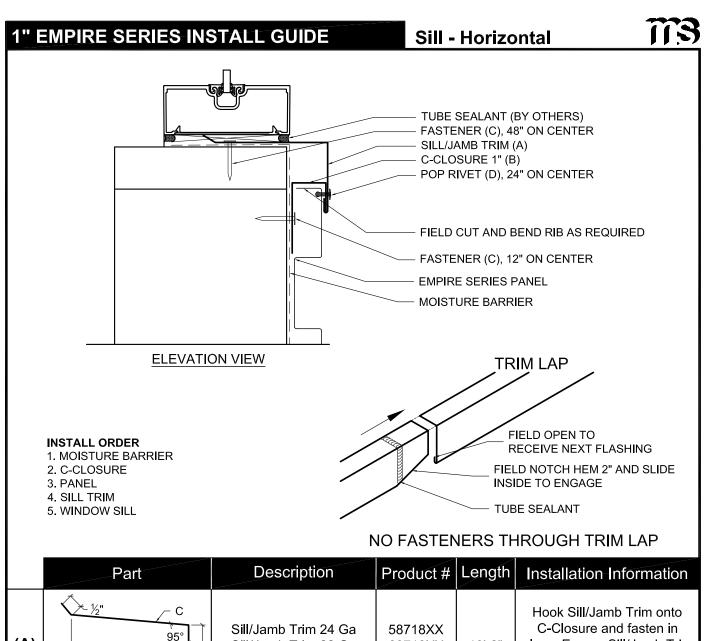


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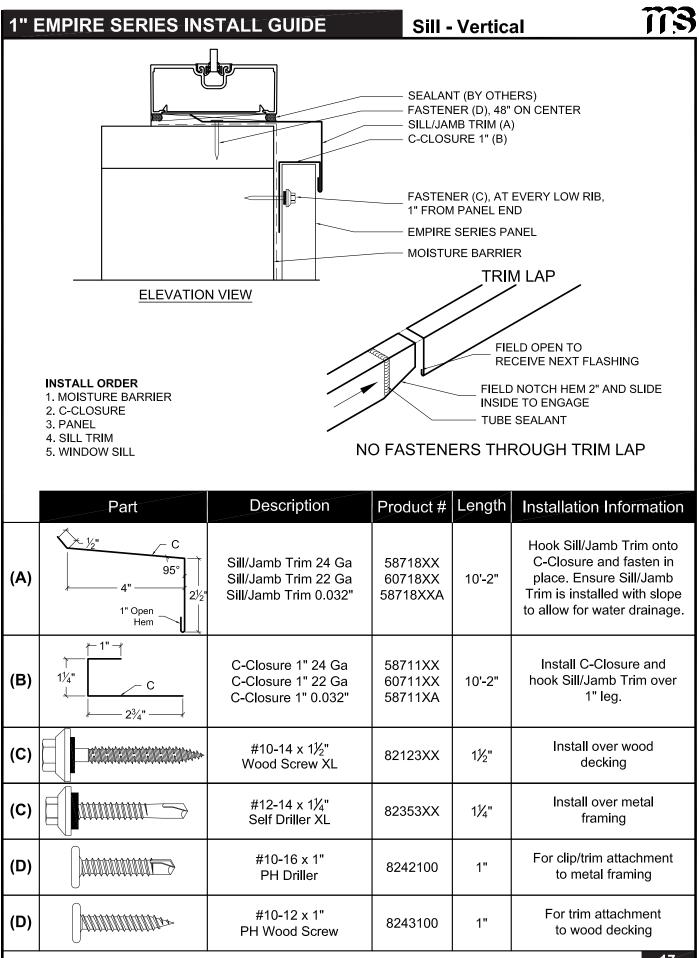
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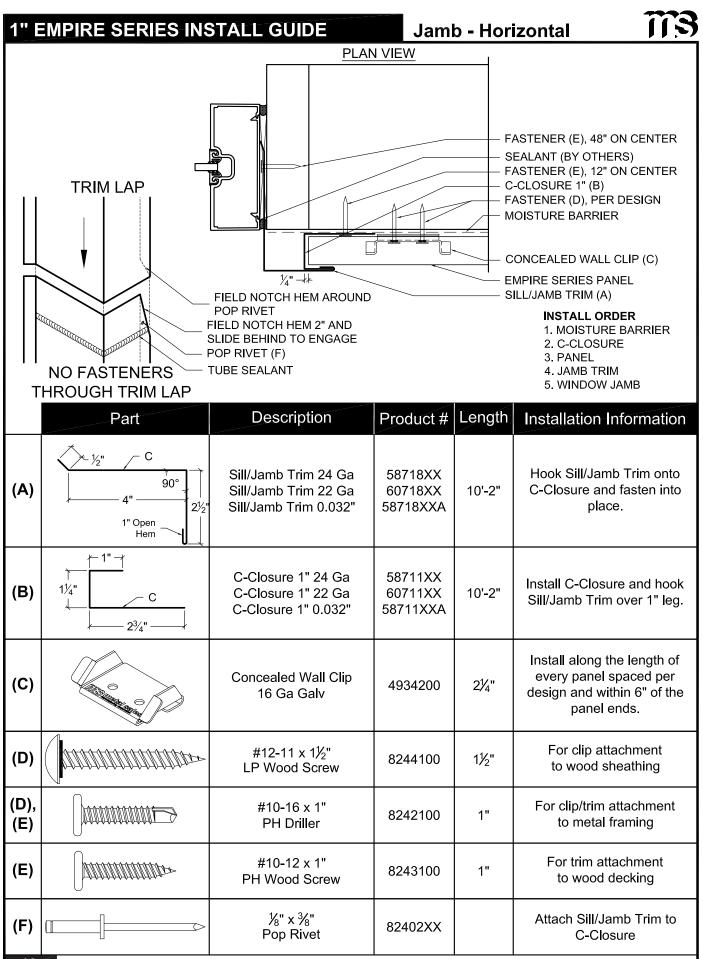




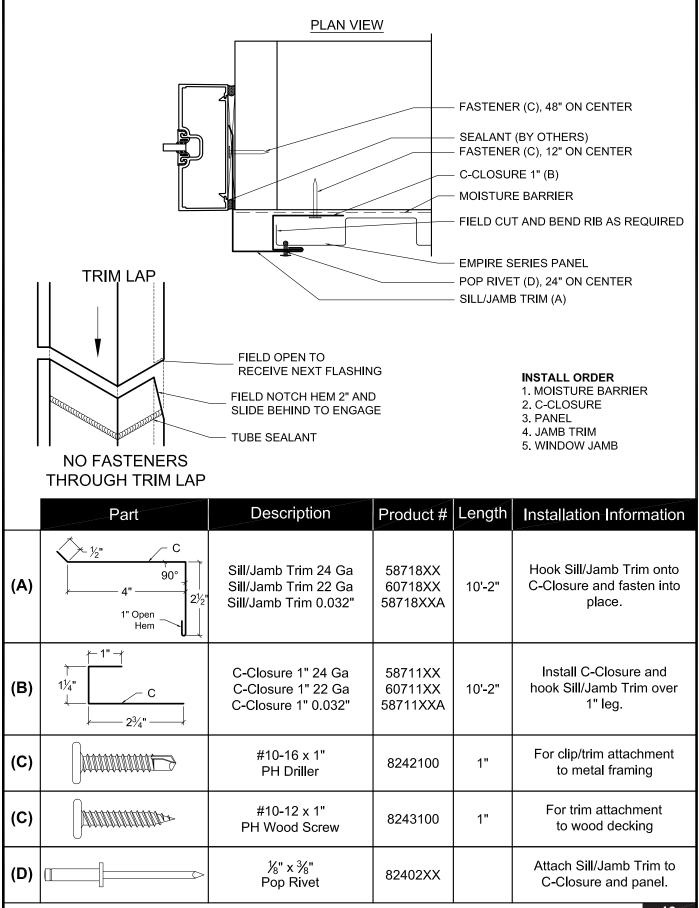
(A)	4" 1" Open Hem	Sill/Jamb Trim 24 Ga Sill/Jamb Trim 22 Ga Sill/Jamb Trim 0.032"	58718XX 60718XX 58718XXA	10'-2"	Hook Sill/Jamb Trim onto C-Closure and fasten in place. Ensure Sill/Jamb Trim is installed with slope to allow for water drainage.
(B)	$ \begin{array}{c} $	C-Closure 1" 24 Ga C-Closure 1" 22 Ga C-Closure 1" 0.032"	58711XX 60711XX 58711XXA	10'-2"	Install C-Closure and hook Sill/Jamb Trim over 1" leg.
(C)		#10-16 x 1" PH Driller	8242100	1"	For clip/trim attachment to metal framing
(C)	() ANNUNNNNN 1117222	#10-12 x 1" PH Wood Screw	8243100	1"	For trim attachment to wood decking
(D)		౫́" x ⅔" Pop Rivet	82402XX		Attach Sill/Jamb Trim to C-Closure and panel.

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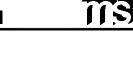




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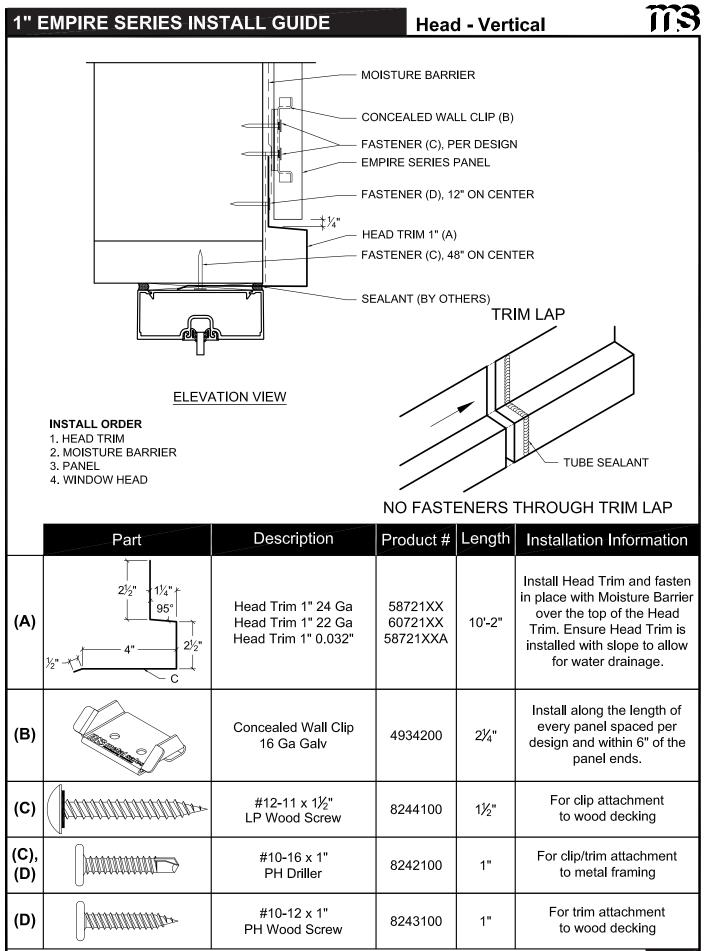


Head - Horizontal

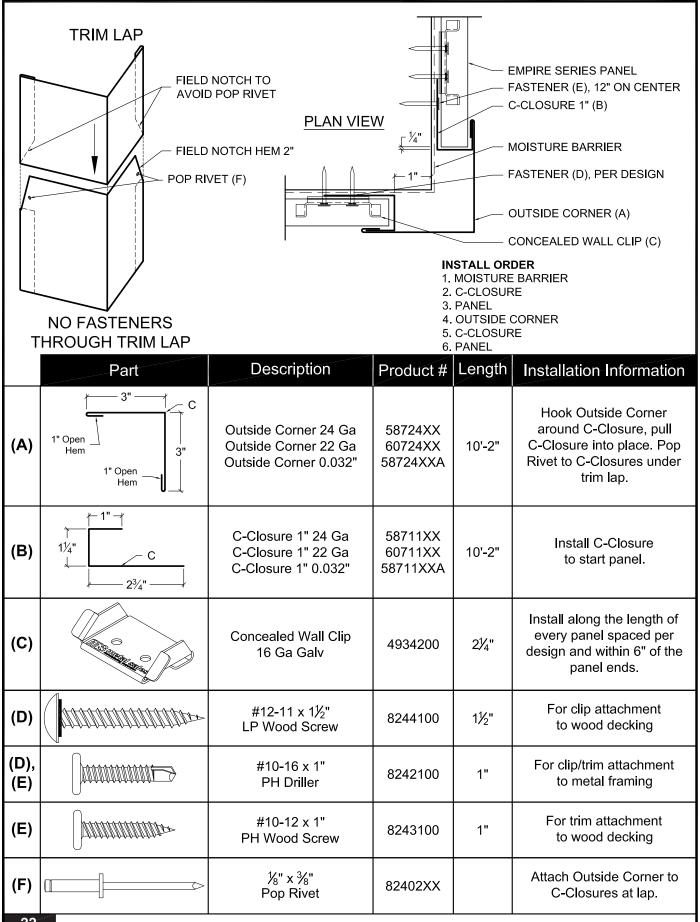


1/4" SPACER AT FASTENER FOR DRAINAGE (BY OTHERS) FASTENER (C), 12" ON CENTER EMPIRE SERIES PANEL OFFSET CLEAT (B) FASTENER (C), 12" ON CENTER 1" MOISTURE BARRIER HEAD TRIM 1" (A) FASTENER (C), 48" ON CENTER SEALANT (BY OTHERS) **TRIM LAP ELEVATION VIEW INSTALL ORDER** 1. HEAD TRIM 2. MOISTURE BARRIER TUBE SEALANT 2. SPACER & OFFSET CLEAT 3. PANEL 4. WINDOW HEAD NO FASTENERS THROUGH TRIM LAP Description Length Product # Installation Information Part Install Moisture Barrier over 2½" ′1¼″∤ top of Head Trim and fasten Head Trim 1" 24 Ga 58721XX 95°

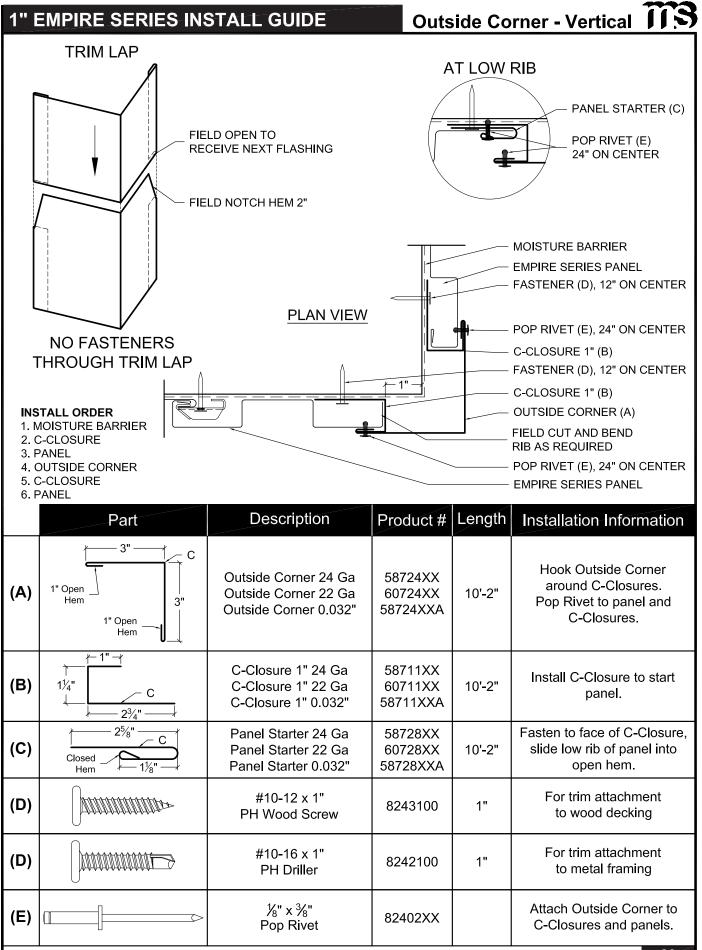
(A)		Head Trim 1" 22 Ga Head Trim 1" 0.032"	60721XX 58721XXA	10'-2"	in place. Ensure Head Trim is installed with slope to allow for water drainage.
(B)	$C = \frac{1\frac{1}{2}}{\frac{158^{\circ}}{\frac{1}{\frac{1}{2}}}}$	Offset Cleat 24 Ga	5806499	10'-2"	Install 2" x 2" x ¼" spacer behind Offset Cleat. Hook panel onto Offset Cleat.
(C)	UNUMUMUMP>>	#10-12 x 1" PH Wood Screw	8243100	1"	For attachment to wood decking
(C)		#10-16 x 1" PH Driller	8242100	1"	For attachment to metal framing
20					

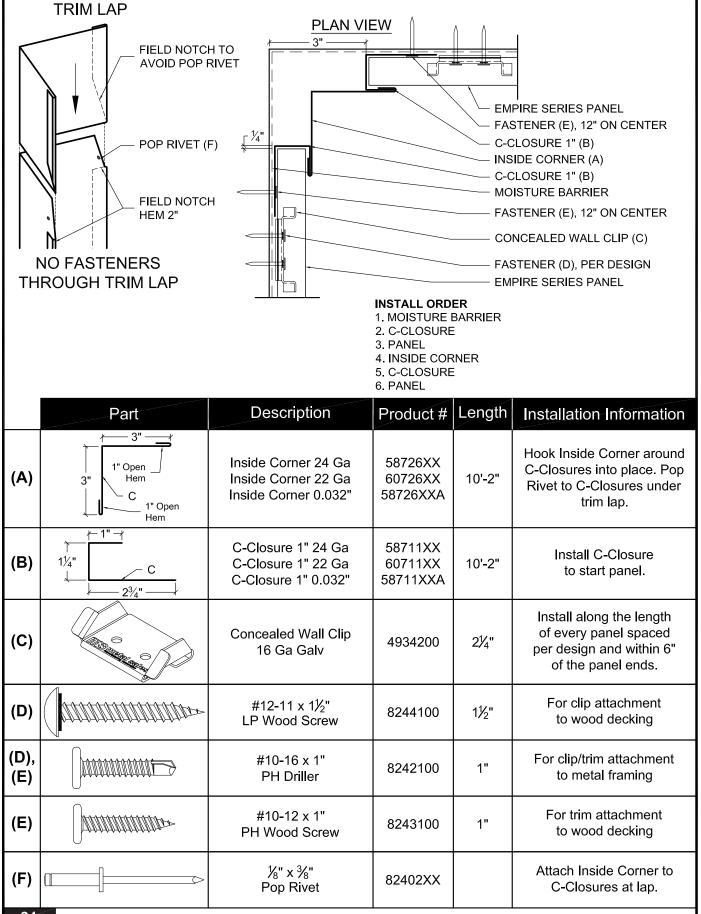


Outside Corner-Horizontal



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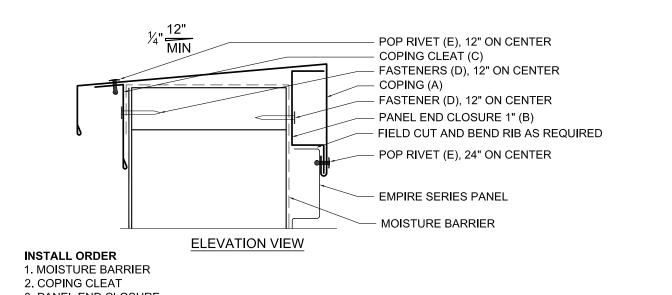


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<	AT LOW RIB	PLAN VIEW EMPIRE SERIES PA FASTENER (D), 12" FIELD CUT AND BE POP RIVET (E), 24" C-CLOSURE 1" (B) INSIDE CORNER (A POP RIVET (E), 24" C-CLOSURE 1" (B) FASTENER (D), 12" EMPIRE SERIES PA MOISTURE BARRIE	ON CENTER END RIB AS REC ON CENTER ON CENTER ON CENTER	QUIRED	TRIM LAP FIELD OPEN TO RECEIVE NEXT FLASHING FIELD NOTCH HEM 2"
		POP RIVET (E), 1. MO 24" ON CENTER 3. PAI 4. INS	DE CORNER	R THF	O FASTENERS ROUGH TRIM LAP
(A)	3" 3" 4" 3" 4" 4" 4" 4 4 4 4 4 4 4 4 4 4 4 4 4	Inside Corner 24 Ga Inside Corner 22 Ga Inside Corner 0.032"	58726XX 60726XX 58726XXA	10'-2"	Hook Intside Corner Trim around C-Closures. Pop Rivet to closure trims and panel 24" on center.
(B)	$ \begin{array}{c} \uparrow & 1 \\ \uparrow & 1 \\ \downarrow \\ \downarrow$	C-Closure 1" 24 Ga C-Closure 1" 22 Ga C-Closure 1" 0.032"	58711XX 60711XX 58711XXA	10'-2"	Install C-Closure on each side of corner.
(C)	2 ⁵ / ₈ "C	Panel Starter 24 Ga Panel Starter 22 Ga	58728XX 60728XX	10'-2"	Fasten to face of C-Closure, slide low rib of
	Closed	Panel Starter 0.032"	58728XXA		panel into open hem.
(D)				1"	panel into open hem. For trim attachment to wood decking
		Panel Starter 0.032" #10-12 x 1"	58728XXA		For trim attachment

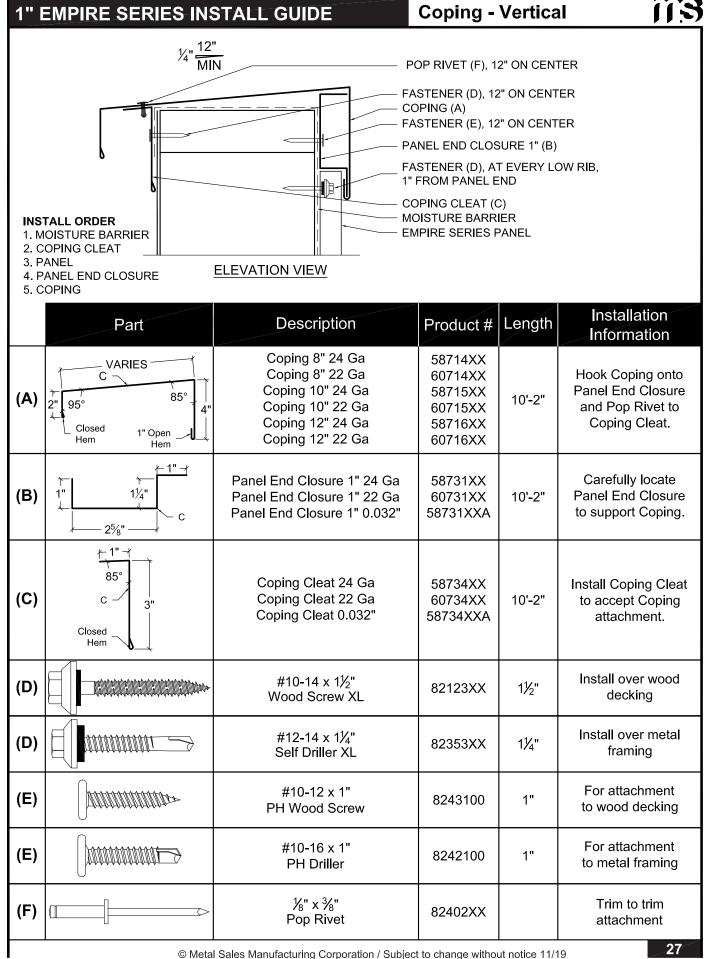
<u> 773</u>



- 3. PANEL END CLOSURE
- 4. COPING
- 5. PANEL

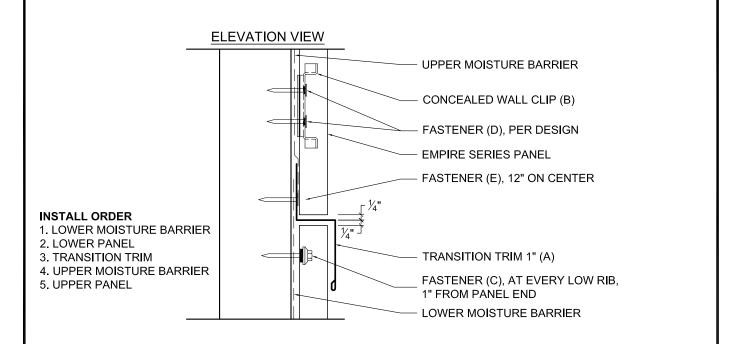
	Part	Description	Product #	Length	Installation Information
(A)	VARIES C 2" 95° 85° 4" Closed Hem 1" Open Hem	Coping 8" 24 Ga Coping 8" 22 Ga Coping 10" 24 Ga Coping 10" 22 Ga Coping 12" 24 Ga Coping 12" 22 Ga	58714XX 60714XX 58715XX 60715XX 58716XX 60716XX	10'-2"	Hook Coping onto Panel End Closure and Pop Rivet to Coping Cleat.
(B)	$\begin{array}{c} & & & & & \\ 1 \\ 1 \\ 1 \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\$	Panel End Closure 1" 24 Ga Panel End Closure 1" 22 Ga Panel End Closure 1" 0.032"	58731XX 60731XX 58731XXA	10'-2"	Carefully locate Panel End Closure to support Coping.
(C)	Closed Hem	Coping Cleat 24 Ga Coping Cleat 22 Ga Coping Cleat 0.032"	58734XX 60734XX 58734XXA	10'-2"	Install Coping Cleat to accept Coping attachment.
(D)		#10-16 x 1" PH Driller	8242100	1"	For clip/trim attachment to metal framing
(D)		#10-12 x 1" PH Wood Screw	8243100	1"	For trim attachment to wood decking
(E)		⅓" x ⅔" Pop Rivet	82402XX		Trim to trim attachment

Coping - Vertical



113

TR	Field Notch T Avoid Pop Riv Field Notch H POP Rivet (F)	et /		CON FAS FAS C-CI REV C-CI	STURE BARRIER ICEALED WALL CLIP (C) TENER (D), PER DESIGN TENER (E), 12" ON CENTER LOSURE 1" (B) EAL (A) LOSURE 1" (B) IRE SERIES PANEL
	O FASTENERS ROUGH TRIM LAP	INSTALL ORDE 1. MOISTURE B/ 2. C-CLOSURE 3. PANEL 4. REVEAL			
	Part	Description	Product #	Length	Installation Information
(A)	3" C 1" Open Hem	Reveal 24 Ga Reveal 22 Ga Reveal 0.032"	58740XX 60740XX 58740XXA	10'-2"	Hook Reveal to C-Closures. Pop Rivet to C-Closure under trim lap.
(B)	$ \begin{array}{c} $	C-Closure 1" 24 Ga C-Closure 1" 22 Ga C-Closure 1" 0.032"	58711XX 60711XX 58711XXA	10'-2"	Install C-Closure to restrain Reveal. Leave ¼" gap between end of panels and back of C-Closures.
(C)		Concealed Wall Clip 16 Ga Galv	4934200	21⁄4"	Install along the length of every panel spaced per design and within 6" of the panel ends.
(D)		#12-11 x 1½" LP Wood Screw	8244100	1½"	For clip attachment to wood decking
(D), (E)		#10-16 x 1" PH Driller	8242100	1"	For clip/trim attachment to metal framing
(E)		#10-12 x 1" PH Wood Screw	8243100	1"	For trim attachment to wood decking
(F)		ૠ" x ૠ" Pop Rivet	82402XX		Attach Reveal to C-Closures at trim lap.
28	@ Matal	Sales Manufacturing Corporation	/ Subject to oben	no without no	Hipp 11/10



	Part	Description	Product #	Length	Installation Information
(A)	$ \begin{array}{c} $	Transition Trim 1" 24 Ga Transition Trim 1" 22 Ga Transition Trim 1" 0.032"	58737XX 60737XX 58737XXA	10'-2"	Install Transition Trim over lower panels. Install Moisture Barrier over top of Transition Trim
(B)		Concealed Wall Clip 16 Ga Galv	4934200	21⁄4"	Install along the length of every panel spaced per design and within 6" of the panel ends.
(C)		#10-14 x 1½" Wood Screw XL	82123XX	1½"	Install over wood decking
(C)		#12-14 x 1¼" Self Driller XL	82353XX	11⁄4"	Install over metal framing
(D)	() UTUTUTUTUTUTU	#12-11 x 1½" LP Wood Screw	8244100	1½"	For clip attachment to wood sheathing
(D), (E)		#10-16 x 1" PH Driller	8242100	1"	For clip/trim attachment to metal framing
(E)	OVIUUUUUUU	#10-12 x 1" PH Wood Screw	8243100	1"	For trim attachment to wood decking
	© Meta	I Sales Manufacturing Corporation / Su	bject to change w	vithout notice	11/19 29

Though factory-applied pre-painted finishes are very durable and will last many years, eventually it may be desirable to thoroughly clean or repaint them.

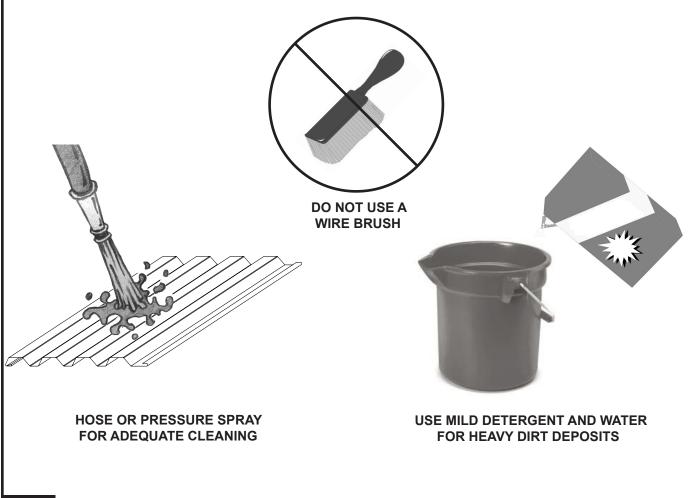
Dirt pickup may cause apparent discoloration of the paint when it has been exposed in some dirt-laden atmospheres for long periods of time. In areas of strong sunlight, slight chalking may cause some change in appearance. A good cleaning will often restore the appearance of these buildings and render repainting unnecessary. An occasional light cleaning will help maintain a good appearance.

In many cases, simply washing the building with plain water using a hose or pressure sprayer will be adequate. In areas where heavy dirt deposits dull the surface, a cloth or soft bristle brush and solution of water and detergent ($^{1}/_{3}$ cup of laundry detergent per gallon of water for example) may be used. This should be followed by an adequate rinse of water. Do not use wire brushes, abrasives, or cleaning tools which will scratch the coating surface.

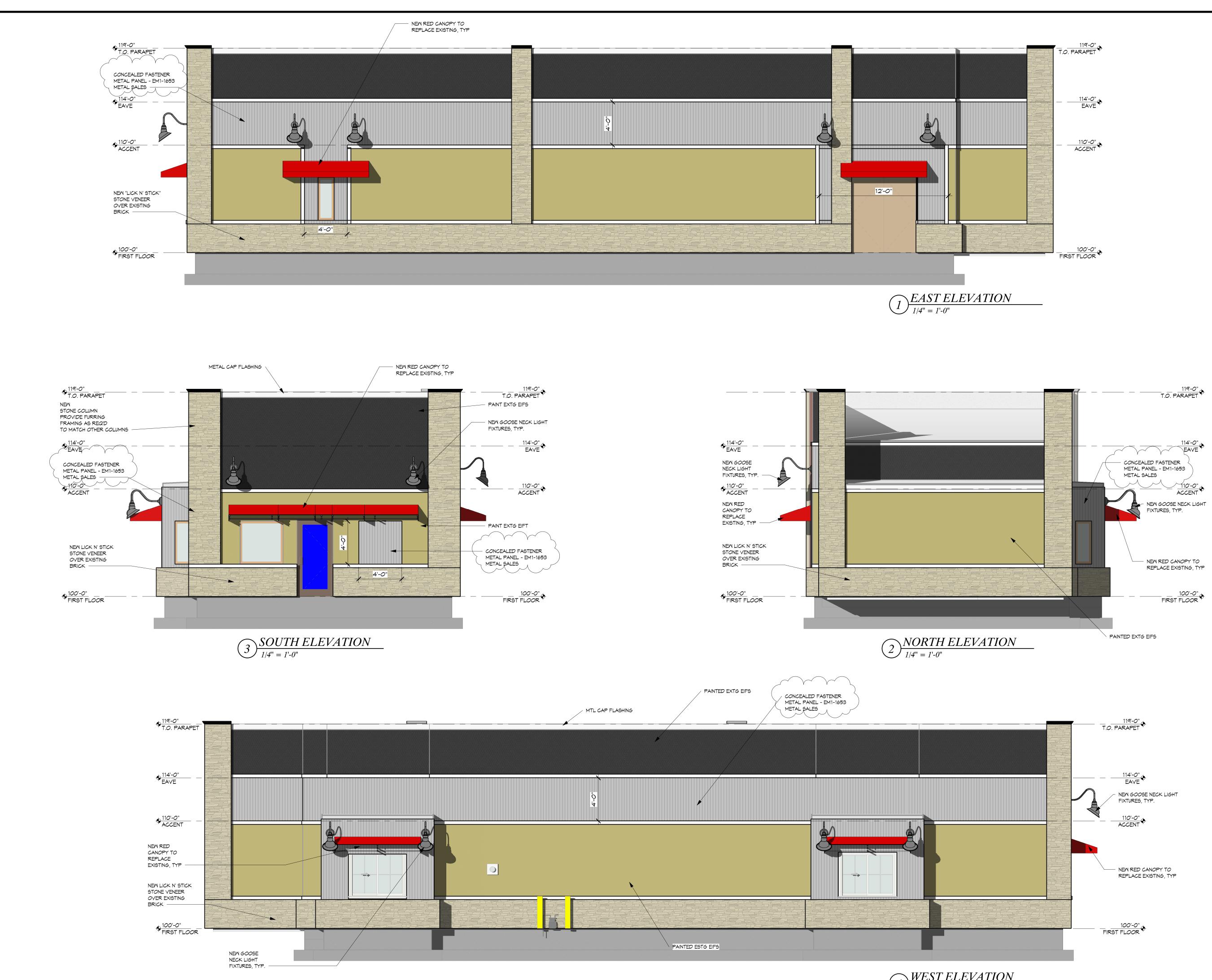
Mildew may occur in areas subject to high humidity but is not normally a problem due to the high inherent mildew resistance of the baked finish that is used. However, mildew can grow on dirt and spore deposits in some cases. To remove mildew along with the dirt, the following solution is recommended.

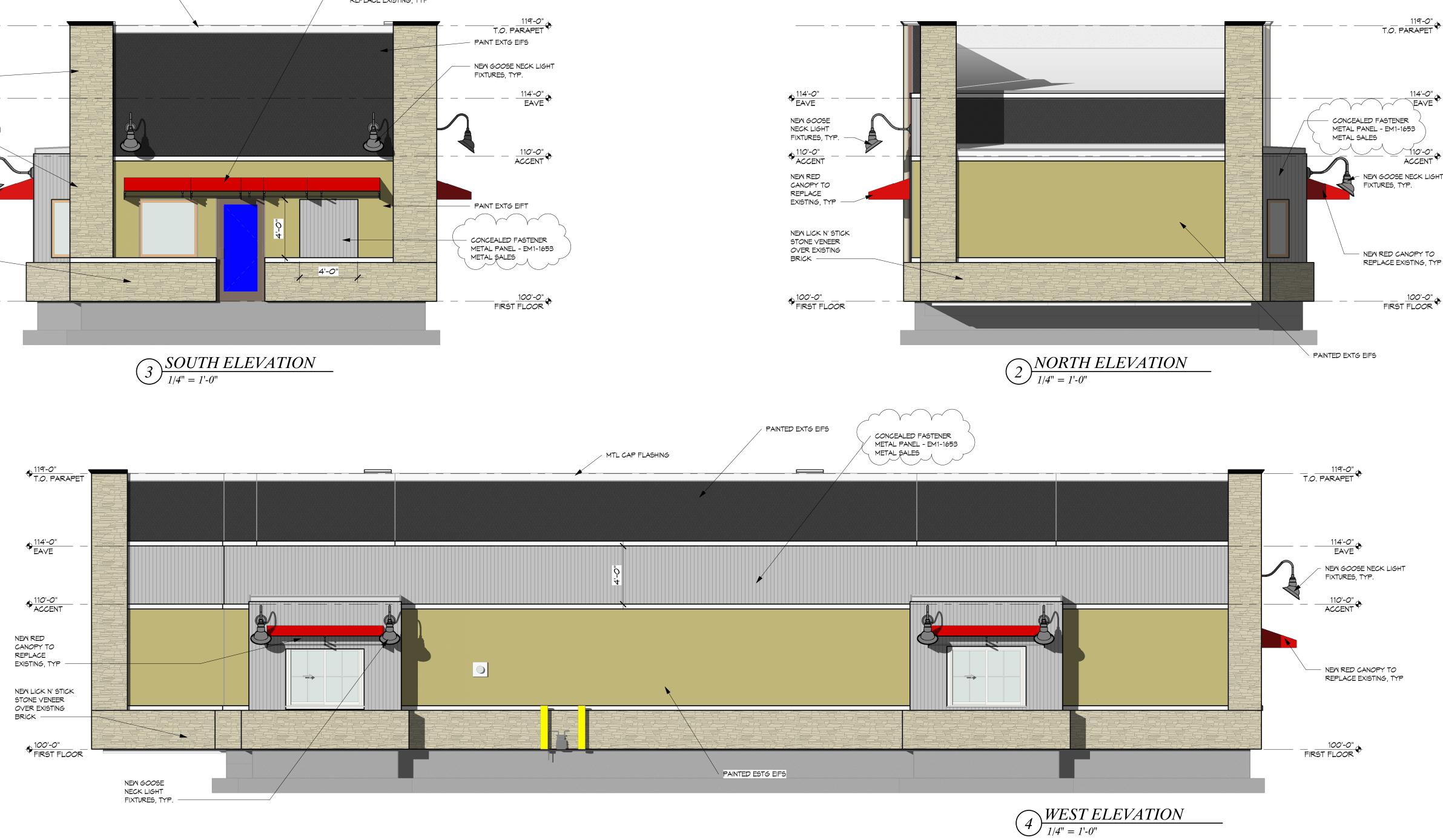
¹/₃ cup detergent (Tide[®] or equivalent)
²/₃ cup trisodium phosphate (Solex[®] or equivalent)
1 quart of 5% sodium hypochlorite solution (Clorox[®] or equivalent)
3 quarts of water

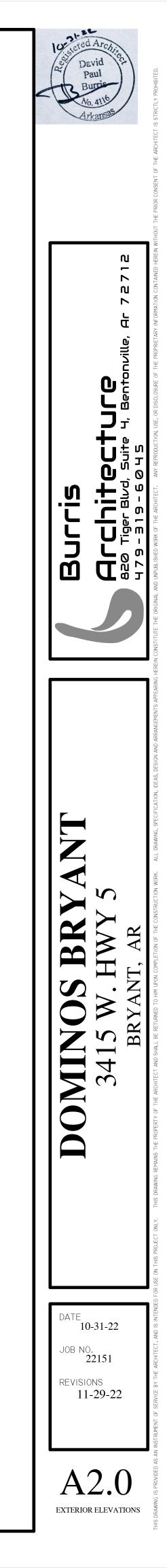
Strong solvents and abrasive type cleaners should be avoided. Most organic solvents are flammable and toxic, and must be handled accordingly. When using a solvent, consult maintenance professionals and label instructions for proper handling and disposal of washings. If required, a mild solvent such as mineral spirits can be used to remove caulking compounds, oil, grease, tars, wax and similar substances. Use a cloth dampened with mineral spirits and apply only to areas which are contaminated. Follow up the use of this mild solvent with detergent cleaning and rinsing.



1"	EMI	PIR	ES	SER	RIES	S IN	IST	ALI	L G	UID	E		Not	es				ĩ	13







DOMINOS BRYANT

PROJECT TEAM



I HEREBY CERTIFY THAT THESE PLANS AND SPECIFICATION HAVE BEEN PREPARED BY ME, OR UNDER MY SUPERVISION. I FURTHER CERTIFY THAT TO THE BEST OF MY KNOWLEDGE THESE PLANS AND SPECIFICATIONS ARE AS REQUIRED BY LAW AND IN COMPLIANCE WITH THE ARKANSAS FIRE PREVENTION CODE FOR THE STATE OF ARKANSAS.

MEP

HP ENGINEERING 5214 M. VILLAGE PKMY SUITE 120 ROGERS, AR 72758 (479) 899-6370

3415 W. HWY 5

BRYANT, AR

		GEN	VERAL NOTES:			
		1.	CONTRACTOR IS TO INSPECT EXISTING CO UNDERGROUND WATER MAINS, SEWER, TE INDICATED ON DRAWINGS FOR DIAGRAMI OR COMPLETENESS OF SUCH INFORMATIC COMPLETENESS IS DISCLAIMED. THE CON UNDERGROUND INSTALLATIONS PRIOR TO	LEPHONE, AND ELECT MATIC PURPOSES. NO DN. RESPONSIBILITY F TRACTOR IS SOLELY	RIC. WORK HERE UNDE GUARANTEE AS TO TI OR SUCH ACCURACY A	HE ACCURACY AND
		2.	ALL DIMENSIONS ARE FROM FACE OF STU OTHERWISE. DRAWINGS ARE NOT TO BE ONLY. VERIFY DIMENSIONS PRIOR TO WO DESIGN SHALL BE BROUGHT TO THE ATTE RESOLUTION.	SCALED, DIMENSIONS RK. ALTERATIONS IN	SHALL BE IN WRITTEN DIMENSIONS AFFECTIN	INFORMATION IG THE
		З.	NOT ALL MATERIALS AND ASSEMBLIES HA NON-SPECIFIED ITEMS WITH OWNER & ARC THESE ITEMS.			
		4.	IT IS THE CONTRACTORS RESPONSIBILITY CONTRACT DOCUMENTS TO THE ARCHITED HOLD THE ARCHITECTS AND CONSULTING	CT FOR APPROVAL, N	NON-APPROVED DEVIA	
		5.	ALL WORK TO CONFORM TO APPLICABLE DISCREPANCIES IN CODE AND CONTRACT ATTENTION IMMEDIATELY AND RESOLVED	DOCUMENTS SHALL	BE BROUGHT TO THE A	
		6.	ALL MATERIALS ARE TO BE INSTALLED IN SPECIFICATIONS AND AS SUCH ALL SUBCC MANUFACTURER'S WARRANTIES WILL BE H	ONTRACTORS ARE TO		
		٦.	ALL SUBCONTRACTORS ARE RESPONSIBL PERSONNEL ON THE JOB SITE AT ALL TIM COMPENSATION AND LIABILITY INSURANCE SUBCONTRACTORS AND THEIR EMPLOYEE FOLLOW ALL OSHA RULES AND REGULATI	ES. THEY SHALL CARF E FOR THEMSELVES A ES SHALL BE PERSON	RY WORKMAN'S ND THEIR EMPLOYEES	L.
		8.	GENERAL CONTRACTOR IS TO COORDINA PROVIDE NECESSARY CONSTRUCTION TO BLOCKING, ROUGH OPENING ETC.			RTS,
		٩.	IT IS THE RESPONSIBILITY OF THE GENERAL DRAWINGS BEFORE INSTALLATION OF ME NOTIFY ARCHITECT IMMEDIATELY FOR AN CONFLICT WITH THE CONTRACT DOCUMEN CONTRACTOR AT NO EXPENSE TO THE OW	CH, ELECT OR SYSTEM Y DISCREPANCIES. AN ITS SHALL BE CORRE	YS INSTALLATION, AND IDY WORK INSTALLED CTED BY THE GENERA	9 SHALL IN
		10.	ALL DRAWINGS, SPECIFICATIONS AND DES PROVIDED BY OTHERS AS REQUIRED. OM SEPARATE CONTRACTS.			
			A. CIVIL ENGINEERING B MECHANICAL EN	IGINEERING C. ELECTR	RICAL ENGINEERING	
			SHEET IN	DEX		
					Current	
#			SHEET NAME	DATE	Description	REVISION
101	STANDAR			10-31-22	1	1
	CODE & D		LAN	10-31-22		
					1	
A1.0	FIRST FLC			10-31-22		
A1.1 A1.2	FIRST FLC		FLECTED CEILING PLAN	10-31-22		
A1.2	DETAILS			10-31-22		
A1.4	DETAILS			10-31-22		
A1.5	FINISH PL/	۹N		10-31-22		
A2.0	EXTERIOR		TIONS	10-31-22		
P1.0	PLUMBING	LEGEN	ND, NOTES, AND SCHEDULES	10-31-22		
P2.0	EXISTING I			10-31-22		

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P3.0 NEW PLUMBING PLAN

M2.0 MECHANICAL PLANS

E1.1 POWER PLAN

E2.1 LIGHTING PLAN

E1.2 FIRE ALARM PLAN

P5.0 PLUMBING SPECIFICATIONS

P5.1 PLUMBING SPECIFICATIONS

M1.0 MECHANICAL SCHEDULES AND NOTES

M1.1 MECHANICAL LEGEND AND DETAILS

M2.1 MECHANICAL AXONOMETRIC PLAN

E1.0 ELECTRICAL NOTES AND LEGENDS

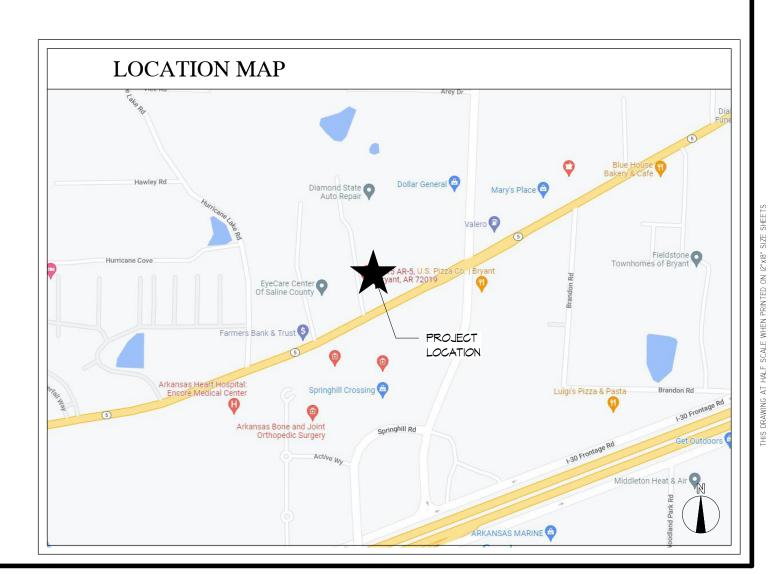
M3.0 MECHANICAL SPECIFICATIONS

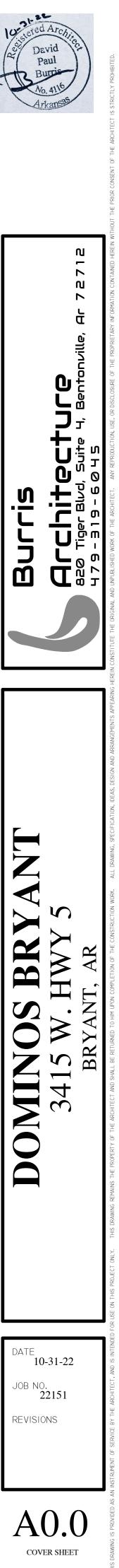
M3.1 MECHANICAL SPECIFICATIONS

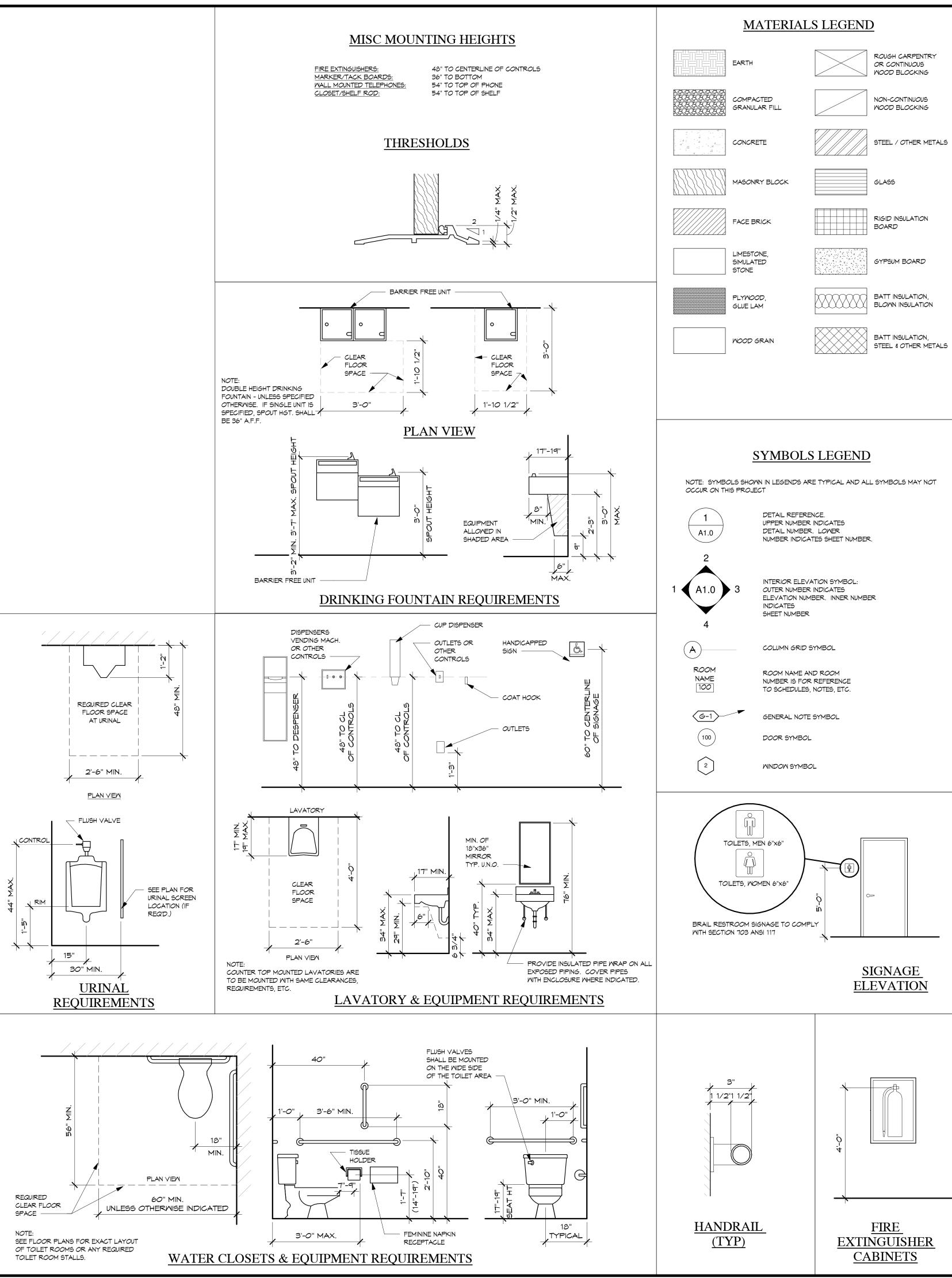
E3.1 ELECTRICAL SPECIFICATIONS

E3.2 ELECTRICAL SPECIFICATIONS

E3.3 ELECTRICAL SPECIFICATIONS







STEEL & OTHER METALS

ABBREVIATIONS

DP

ΕA

EΜ

EL. E.M.C. EQUIP.

ELEV.

HT.

HC HM

I.D.

INV.

IHM

TCL

КO

LAM LAV

LH

LWC LTL

LVR

MAS

MATL

MAX.

MSNT.

MH

PP

Q.T.

REF.

REINF. RCP

RA

RM

RH

REV

ROW

RD

RO

SQ SUSP. SS STA

SD SYM

TEMP.

UNFIN. U.O.N. UGE

V.C.P. VEST. VERT. VOL. V.T.R.

VCT VB. VWC

MSCT MH MC

MIN. M.M.F. M.P.

WT.

WS W/ W/O

ND

ĹΡ

ANCHOR BOLT AIR CONDITIONING ACOUSTICAL TILE ADHESIVE ABOVE FINISH FLOOR AGGREGATE ANODIZED ADJUSTABLE ALUMINUM ALTERNATE ARCHITECT AREA DRAIN ASPHALT AT

A.B. A/C AC.T. ADH A.F.F. AGOD ALUT ALUT ARCH. ADPH.

@

BSMT BRG. BD. BIT

BII BLDG. BLK. BLK'G. BM. B.M. BOT. BS BRK BRZ B.U.

CPT CAB. CB CEM. CER(T) CIR CLG. C.O.

EXIST. EXP.

EJ EXT.

EB

EQ ELEC. EP EMER. EIFS

FLR.

FND FFE FE FEC FTG. FLASH F.CO. FD

FLUOR.

GA.

GВ

GALV G.C.

G.I.

GL. GYP GNB G.S.

HDM HBD HDF

HМ

IHM

MANUF. MSNT. MO MECH. MTL. MISC. MOD BI MP

MIN. MB MTD.

MULL MEP.

MK.

NOM. N.T.S. NIC.

O.C. O.D. OHE OPNG.

PNL. PVMT PERF. PLAS. LAM

PL. PLBG. PLYWD. P.P.

PR. P.V.C. PSF PSI PREFAB PRE FIN

COL. CONC. CLR COMP CONST. CMU CONT.R. CONT. CTR CJ CT

CM CMP CPP

2.

FIN

BASEMENT BEARING BOARD BITUMINOUS BUILDING BLOCK BLOCKING BEAM BENCH MARK BOTTOM BOTH SIDES BREAK BRONZE BUILT-UP

CARPET CABINET CATCH BASIN CEMENT CERAMIC (TILE) CIRCLE CEILING CLEAN OUT

EXISTING

GRAB BAR

GALVANIZED

EXPOSED EXPANSION JOINT EXTERIOR/EXTENSION EXPANSION BOLT ELECTRIC(AL) ELECTRICAL PANELBOARD EMERGENCY EXTERIOR INSULATION FINISH SYSTEM FINISH(ED) FOUNDATION FINISHED FLOOR ELEVATION FIRE EXTINGUISHER FIRE EXTINGUISHER CABINET FOOTING FLASHING FLOOR CLEAN OUT FLOOR DRAIN FLUORESCENT

GENERAL CONTRACTOR GALVANIZED IRON GYPSUM GYPSUM WALL BOARD GRAVEL STOP HARDWARE HARDBOARD HANDICAPPED DRINKING HOLLOW METAL INSULATED HOLLOW METAL MANUFACTURED(ER) MASONITE MASONRY OPENING MECHANIC(AL) METAL MISCELLANEOUS MODIFIED BITUMEN METAL PANEL(S) MINIMUM MOISTURE BARRIER MOUNTED MULLION MECHANICAL, ELECTRICAL & PLUMBING NOMINAL NOT TO SCALE NOT IN CONTRACT

OVER HEAD ELECTRIC OPENING PANEL PAVEMENT PERFORATE(D) PLASTIC LAMINATE PLATE/PROPERTY LINE PLUMBING PLYWOOD POWER POLE PAIR POLYVINYL CHLORIDE POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH PREFABRICATE(D) PRE FINISHED

ON CENTER OUTSIDE DIAMETER

COLUMN CONCRETE CLEAR (ANCE) COMPOSITION CONSTRUCTION CONC. MASONRY UNIT CONTRACTOR CONTINUOUS OR CONTINUE COUNTER CONTROL JOINT CURTAIN TRACK CENTER LINE COLD WATER

CORRUGATED METAL PIPE CORRUGATED PLASTIC PIPE

GENERAL NOTES

SHOWN MAY OR MAY NOT APPEAR ON THIS PROJECT.

ON FINISH FLOOR SURFACE OF INTERIOR RAMPS.

DOMINANT DIRECTION OF TRAVEL.

FIXTURE AND ACCESSORIES MOUNTING DETAILS AND REQUIREMENTS ARE TYPICAL AND APPLY TO REQUIRED ACCESSIBLE INSTALLATIONS ONLY. REFER TO PLANS FOR LOCATIONS AND TYPES OF LAYOUTS. EQUIPMENT

PROVIDE SOLID BLOCKING FOR ALL ACCESSORIES WHICH IS CAPABLE OF

ALL EXTERIOR RAMPS SHALL HAVE A NONSKID FINISH AS SPECIFIED. ALL

INTERIOR RAMPS SHALL HAVE FLOORING OF NONSKID MATERIAL. IF NO FINISH IS INDICATED ON THE DRAWINGS - PROVIDE RUBBER RADIAL TILE

ANY METAL FLOOR GRATINGS OR DRAINAGE GRATINGS IN AN ACCESSIBLE

WITHSTANDING 250 LB. FORCE. (SHEAR AND BENDING). GRAB BARS SHALL NOT ROTATE. FASTENERS SHALL BE OF A TYPE TO WITHSTAND

REQUIRED FORCE AND TO BE APPROPRIATE FOR WALL TYPE.

PATH SHALL HAVE SPACES NO GREATER THAN 1/2" WIDE IN ONE

DIRECTION. LONG DIMENSION SHALL BE PERPENDICULAR TO THE

DAMP PROOFING DIAGONAL DISPENSER DIAG DISP



EACH EACH WAY ELEVATION ELECTRIC WATER COOLER EQUIPMENT ELEVATOR

HORIZ. HORIZONTAL HIGH HEIGHT HTG. HTR. HEATING HEATER HOT WATER

HM HD HDR HEAD HEADER HOLLOW CORE HOLLOW METAL HB HVAC HOSE BIBB HEATING, VENTILARTION & AIR : DIAMETER INSUL. INT.

CONDITIONING INTERIOR INVERT INSULATED HOLLOW METAL JOINT

JOIST KNOCKOUT LAMINATE(D) LAVATORY LEFT HAND

> LIGHTWEIGHT CONCRETE LINTEL LOUVER LENGTH LIGHT POLE

MASONRY MATERIAL MAXIMUM MAN HOLE MASONITE POWER POLE

QUARRY TILE RADIUS REFERENCE REINFORCE REINFORCED CONC. PIPE

REQ'D. REQ'D. REQUIRED RETURN AIR REVISION(S) RIGHT HAND RIGHT OF WAY ROOF DRAIN

ROUGH OPENING

SAN. SCHED. S.C. SECT. SHT. SIM. SPEC. STD. STL. STOR. STRUCT. SANITARY SCHEDULE SOLID CORE SECTION SHEET SIMILAR SPECIFICATION STANDARD STEEL STORAGE STRUCTURE SQUARE SUSPENDED STAINLESS STEEL STATION

STORM DRAIN SYMMETRY(ICAL) TEMPERATURE/TEMPORARY

TEL TEMP TH. TLT. T & G TOW TOS TOM TYP. TELEPHONE TEMPERED THICKNESS TOILET TONGUE AND GROOVE TOP OF WALL TOP OF STEEL TOP OF MASONRY TYPICAL

> UNFINISHED UNLESS OTHERWISE NOTED UNDERGROUND ELECTRIC VITRIFIED-CLAY-PIPE

VOLUME VENT-THRU-ROOF VINYL COMPOSITION TILE VINYL WALL COVERING

WALL HUNG WATER CLOSET MINDOM WEIGHT WATER STOP WITH WITHOUT WOOD WIDTH



WELDED WIRE FABRIC WEATHER PROOF



10-31-22 JOB NO. 22151

REVISIONS



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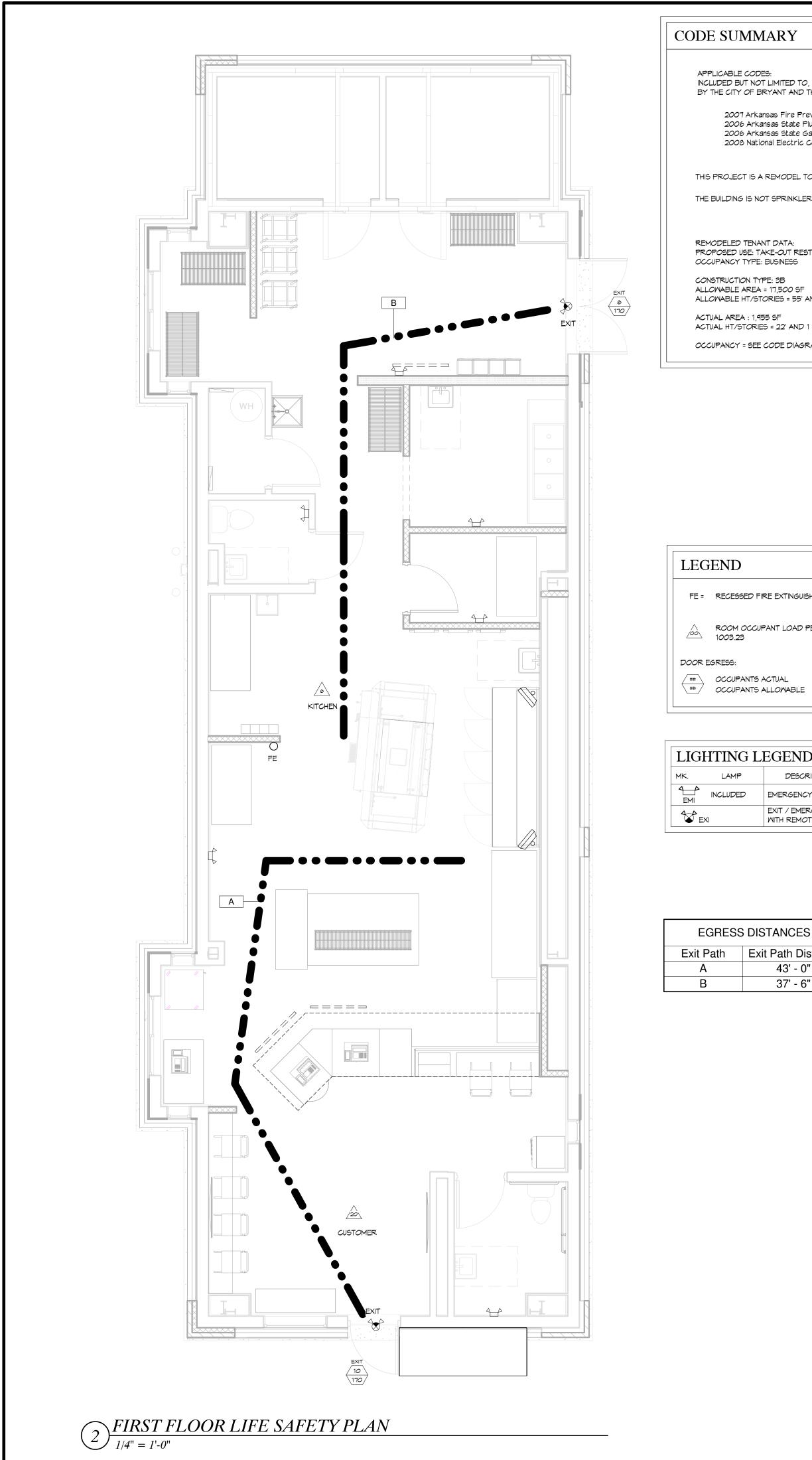
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CODE SUMMARY

APPLICABLE CODES: INCLUDED BUT NOT LIMITED TO, THE LATEST ADOPTED ADDITIONS OF THESE CODES AS AMENDED BY THE CITY OF BRYANT AND THE STATE OF ARKANSAS

2007 Arkansas Fire Prevention Code 2006 Arkansas State Plumbing Code 2006 Arkansas State Gas and Fuel Code 2008 National Electric Code

THIS PROJECT IS A REMODEL TO AN EXISTING BUILDING.

THE BUILDING IS NOT SPRINKLERED.

REMODELED TENANT DATA: PROPOSED USE: TAKE-OUT RESTAURANT OCCUPANCY TYPE: BUSINESS

CONSTRUCTION TYPE: 3B ALLOWABLE AREA = 17,500 SF ALLOWABLE HT/STORIES = 55' AND 3 STORY

ACTUAL AREA : 1,955 SF ACTUAL HT/STORIES = 22' AND 1 STORY

OCCUPANCY = SEE CODE DIAGRAM

FE = RECESSED FIRE EXTINGUISHER CABINET

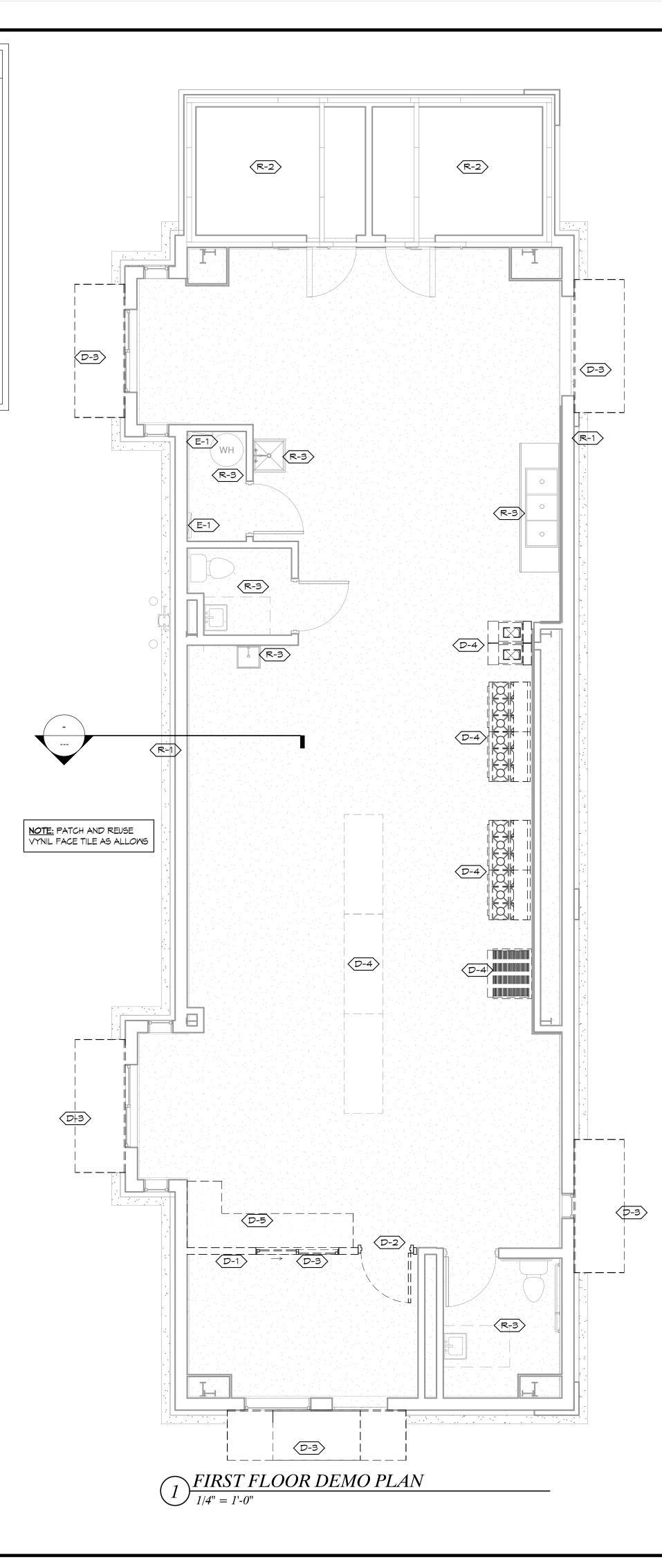
 ROOM OCCUPANT LOAD PER TABLE

 1003.23

LIGHTING LEGEND

LAMP	DESCRIPTION	NOTES	
NCLUDED	EMERGENCY LIGHT		
	EXIT / EMERGENCY LIGHT WITH REMOTE HEAD		

RESS	RESS DISTANCES						
th	Exit Path Distance						
	43' - 0"						
	37' - 6"						



GENERAL DEMO NOTES

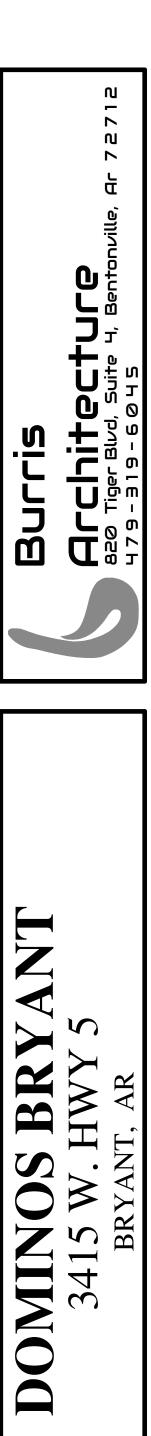
- NOT ALL DEMOLITION IS DETAILED ON THIS SHEET, COORDINATE W/ ARCHITECT AND CONTACT UPON DISCOVERY OF EXISTING FEATURES NEEDING REMOVAL PRIOR TO BUILD BACK
- CUT AND PATCH WITH CARE TO AVOID DAMAGE TO WORK, 2. SAFETY HAZARDS, VIOLATION OF WARRANTY REQUIREMENTS, BUILDING CODE VIOLATIONS, OR MAINTENANCE PROBLEMS
- SUB-CONTRACTORS TO INSPECT FIELD CONDITIONS TO З. IDENTIFY ALL WORK REQUIRED.
- COORDINATE REMOVAL OF ITEMS WITH BUILD BACK PLAN FOR ALL DIMENSIONS AND LAYOUTS. 4.
- GC TO INSPECT ROOF, AND CAP FLASHING, AND TO MAKE 5. REPAIRS AS REQ'D, PROVIDE WRITTEN DESCRIPTION OF WORK TO OWNER PRIOR TO COMMENCING THE REPAIRS.
- GC TO REMOVE ALL GRAVITY ROOF EXHAUST. PATCH 6. ROOF, & PREPARE FOR NEW INSULATION.

DEMO KEYNOTES

(R-1)	EXISTING BUILDING SHELL
(R-2)	EXISTING COOLER TO REMAIN
(R-3)	EXISTING PLUMBING TO REMAIN
(D-1)	DEMO PORTION OF EXISTING WALL AS REQUIRED
(D-2)	REMOVE EXISTING DOOR
(D-3)	EXISTING CANOPY TO BE RECOVERED OR REPLACED W/ NEW DOMINOS RED
$\overline{D-4}$	REMOVE EXISTING EQUIPMENT, CAP AS REQUIRED
(D-5)	REMOVE EXISTING CASEWORK
E-1	EXISTING POWER/ DATA TO REMAIN

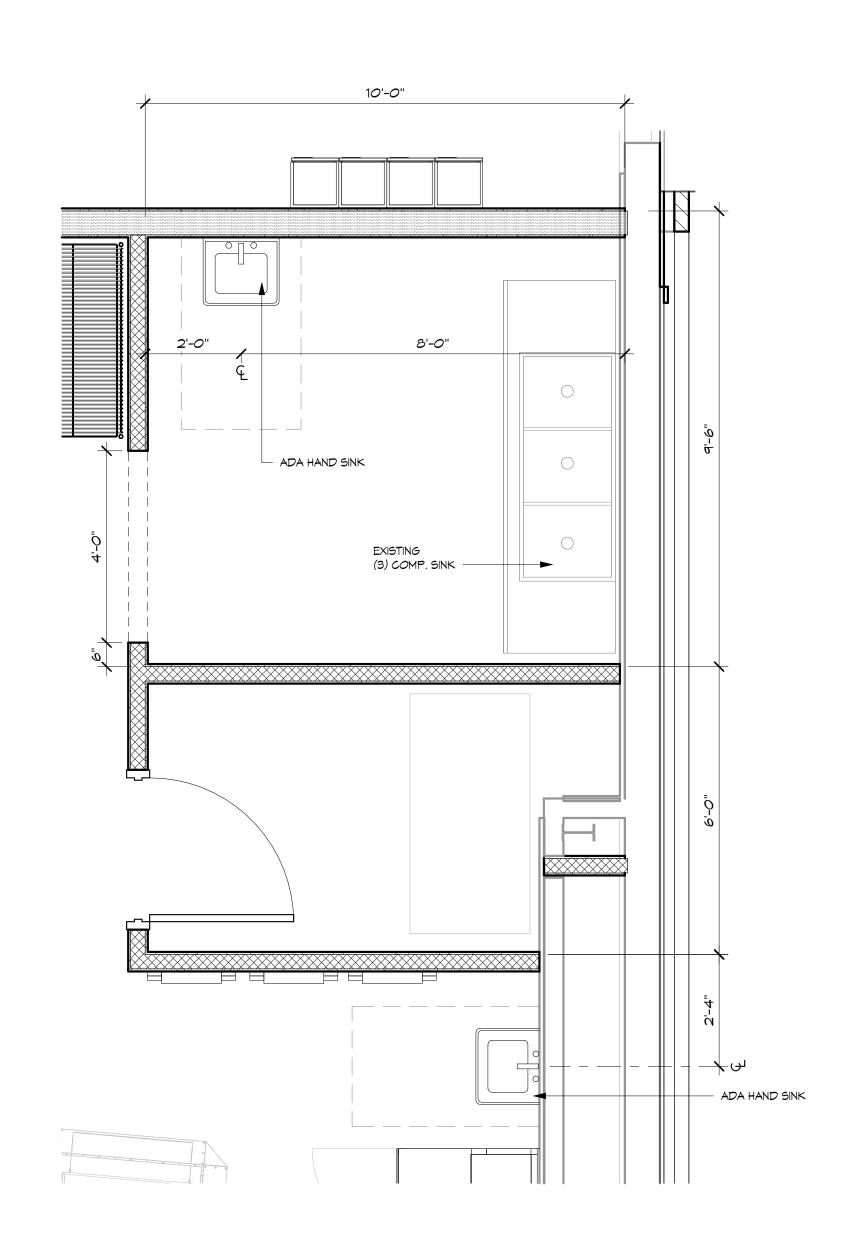
LEGEND

EXISTING TO REMAIN TO BE MOVED OR RELOCATED



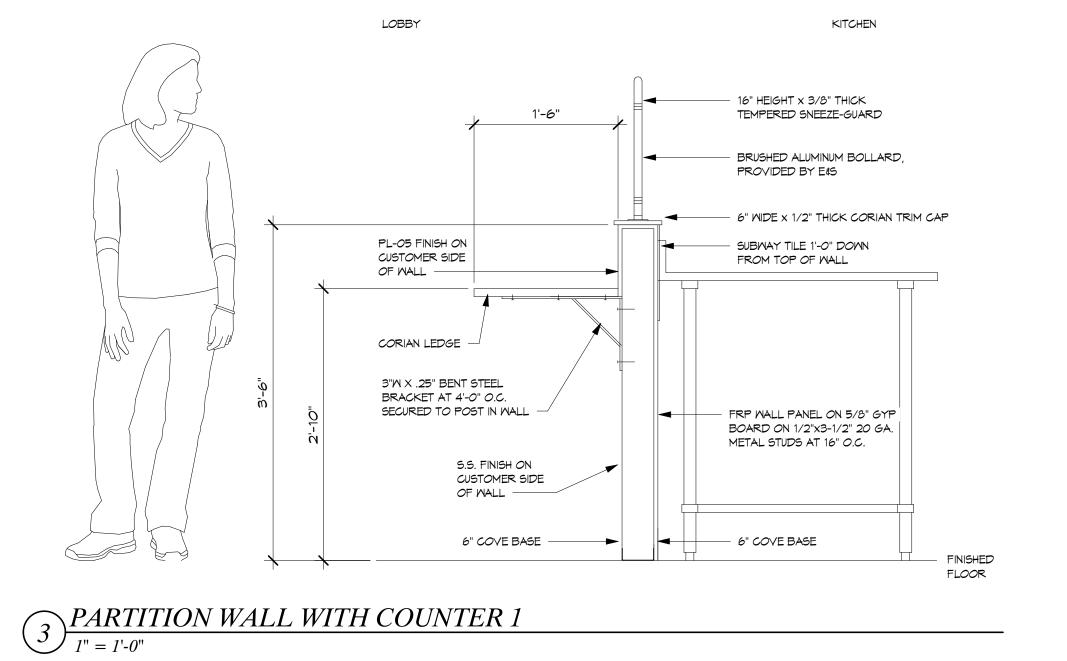
DATE 10-31-22 JOB NO. 22151 REVISIONS

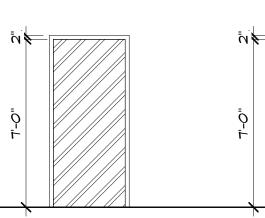




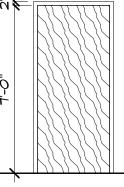


LOCK SETS:	
SET 1 - KEYED, PUSH PAD EXIT DEVICE, CLOSER, HC ALUM. THRESHOLD	MARK
SET 2 - KEYED	100 EXIST
	101 EXIST
SET 3 - PRIVACY	103
SET 4 - PASSAGE	104 EXIST
	105 EXIST
SET 5 - OHD HARDWARE PROVIDED BY OHD MANUFACTURER	107 EXIST
	COOLER A
SET 6 - KEYED, PUSH PAD EXIT DEVICE, 1 LEAF. TOP & BOTTOM INSET BOLT W/ NO HARDWARE 2ND LEAF. CLOSER.	COOLER B
SET 7 - KEYED, DEADBOLT	
NOTES:	
1. ALL HARDWARE TO BE LEVER ACTION W/ A BRUSHED CHROME FINISH - 2. ALL CLOSERS TO MEET ADA REQUIREMENTS 3. ALL ALUM. DOOR FRAMES ARE TO BE ANODIZED ALUM. FINISH	





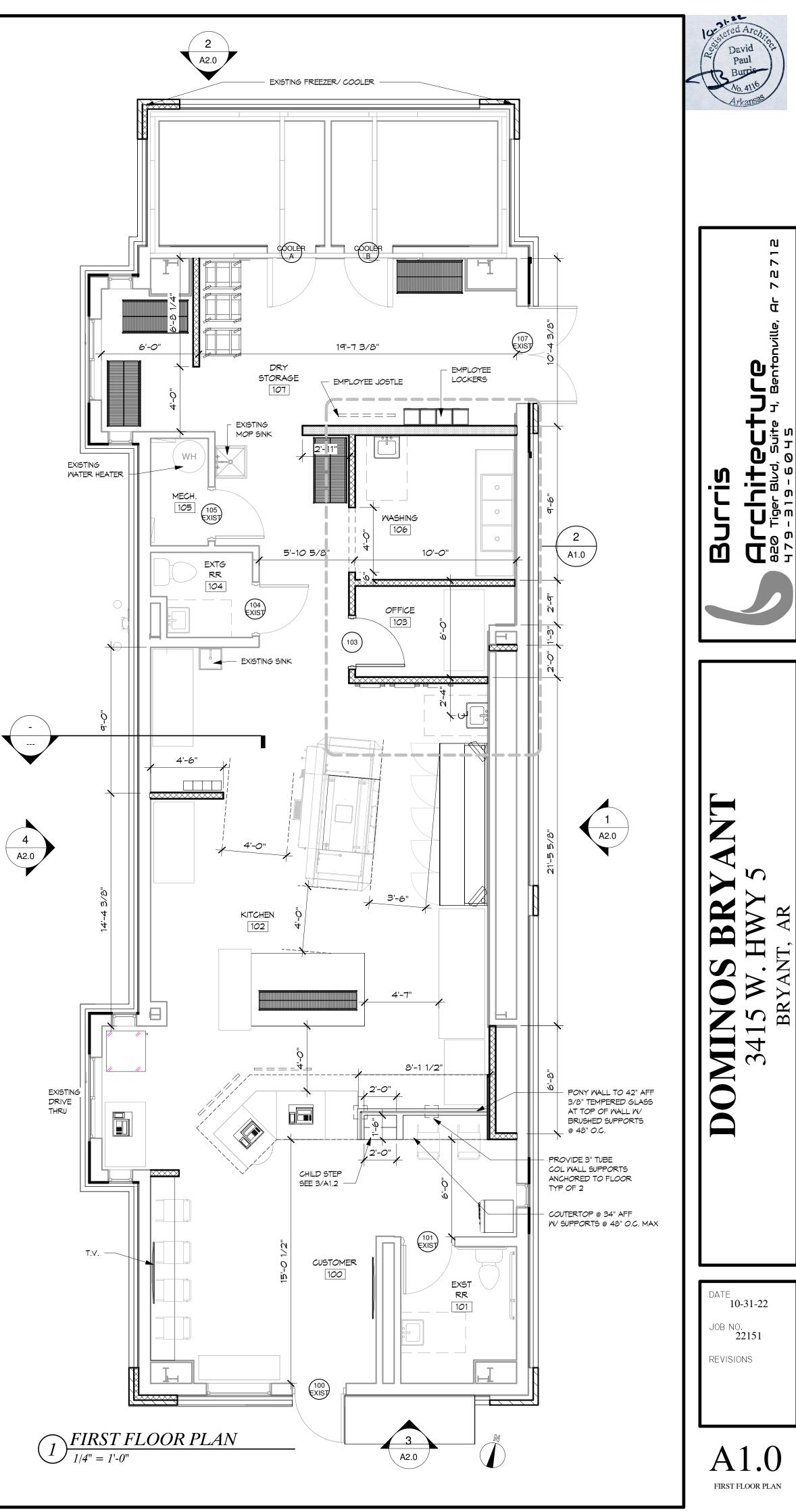
Door Type 1 INSULATED HOLLOW METAL DOOR IN HOLLOW METAL FRAME

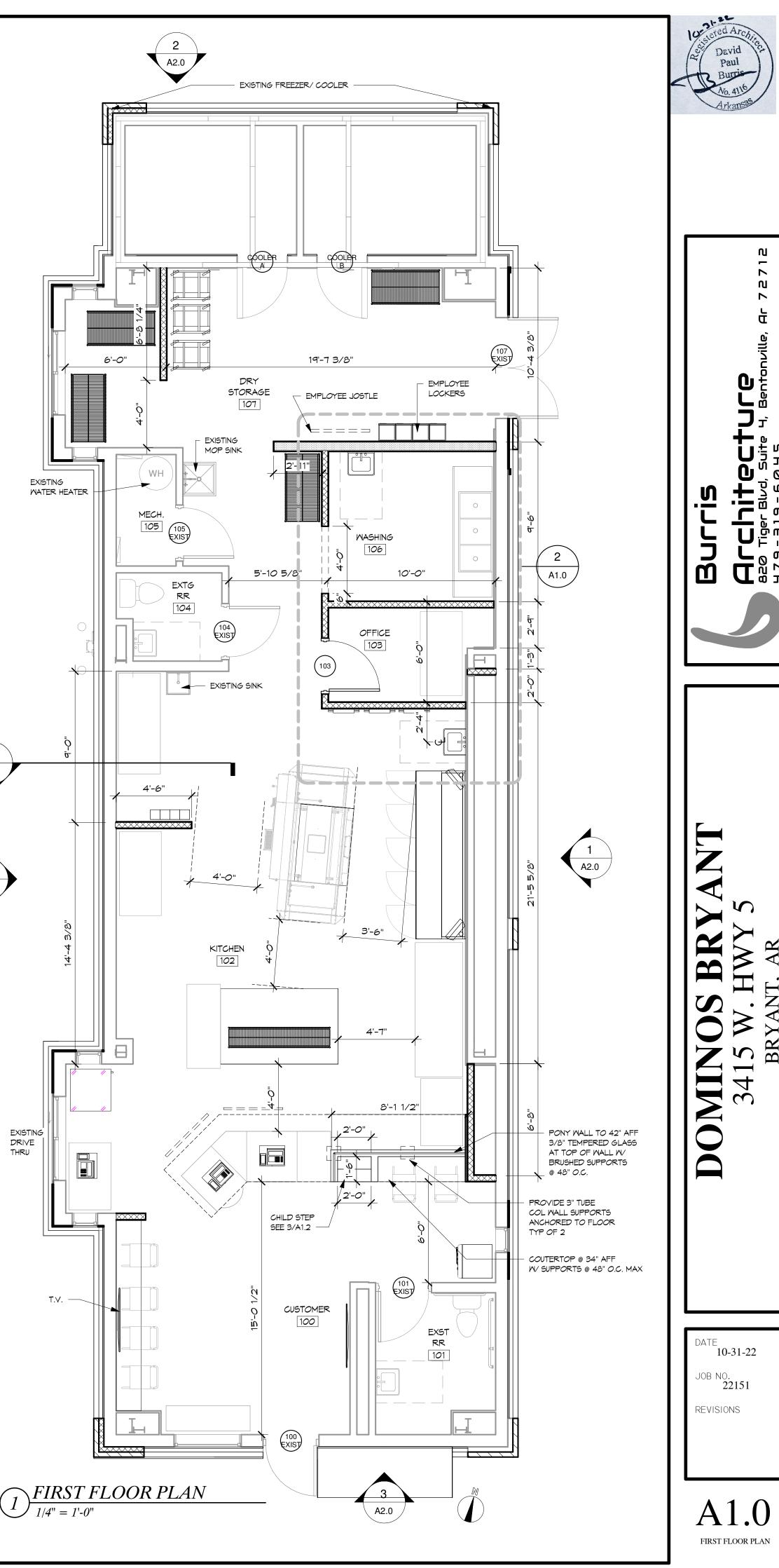


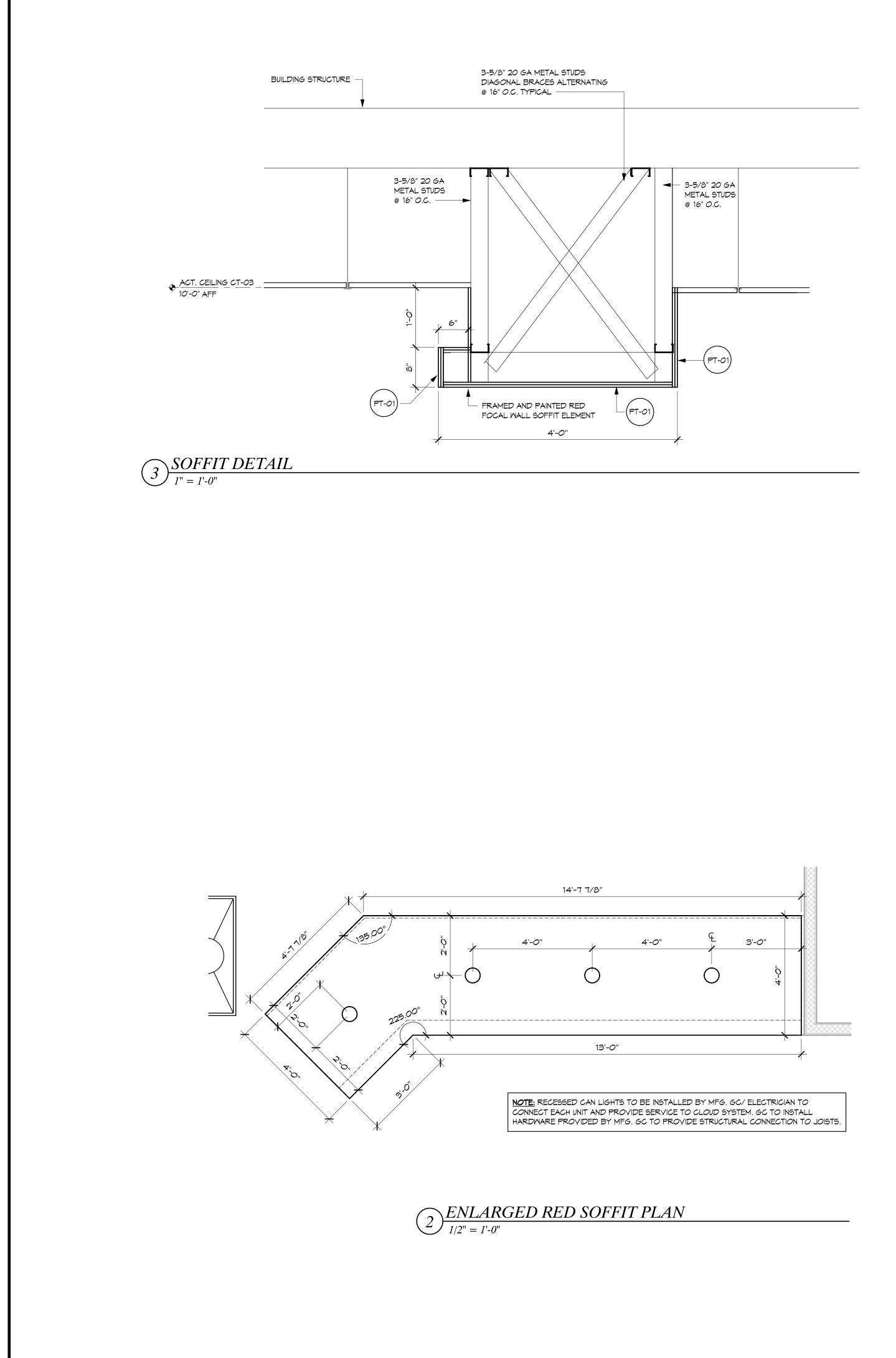
Door Type 2 PAINT GRADE SOLID CORE WOOD DOOR IN HM FRAME. SEE A1.5 FOR FINISHES

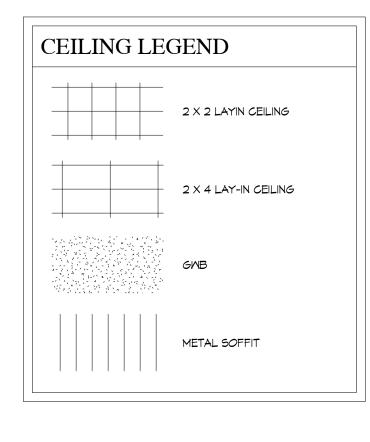


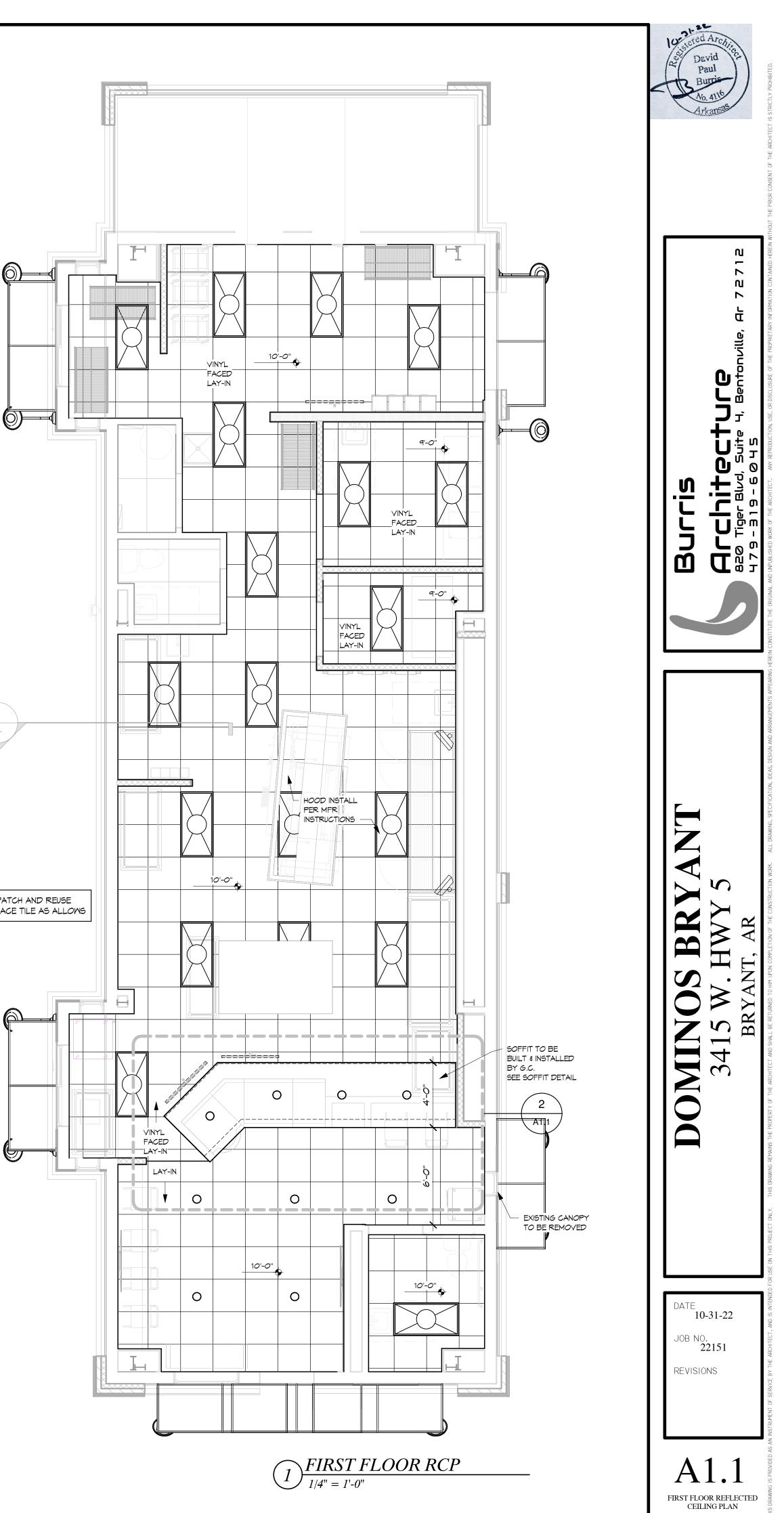
				Door S	chedule		
	DOOR			DOC	OR		
	DOOR WIDTH	DOOR HEIGHT	ELEVATION	FRAME TYPE	DOOR TYPE	HARDWARE SET	NOTES
•	3'-0"	7'-0"					
	3'-0"	7'-0"					
	3'-0"	7'-0"					
	3'-0"	7'-0"					
	3'-0"	7'-0"					
	6'-0"	7'-0"					
•	3'-0"	7'-0"					
3	3'-0"	7'-0"					

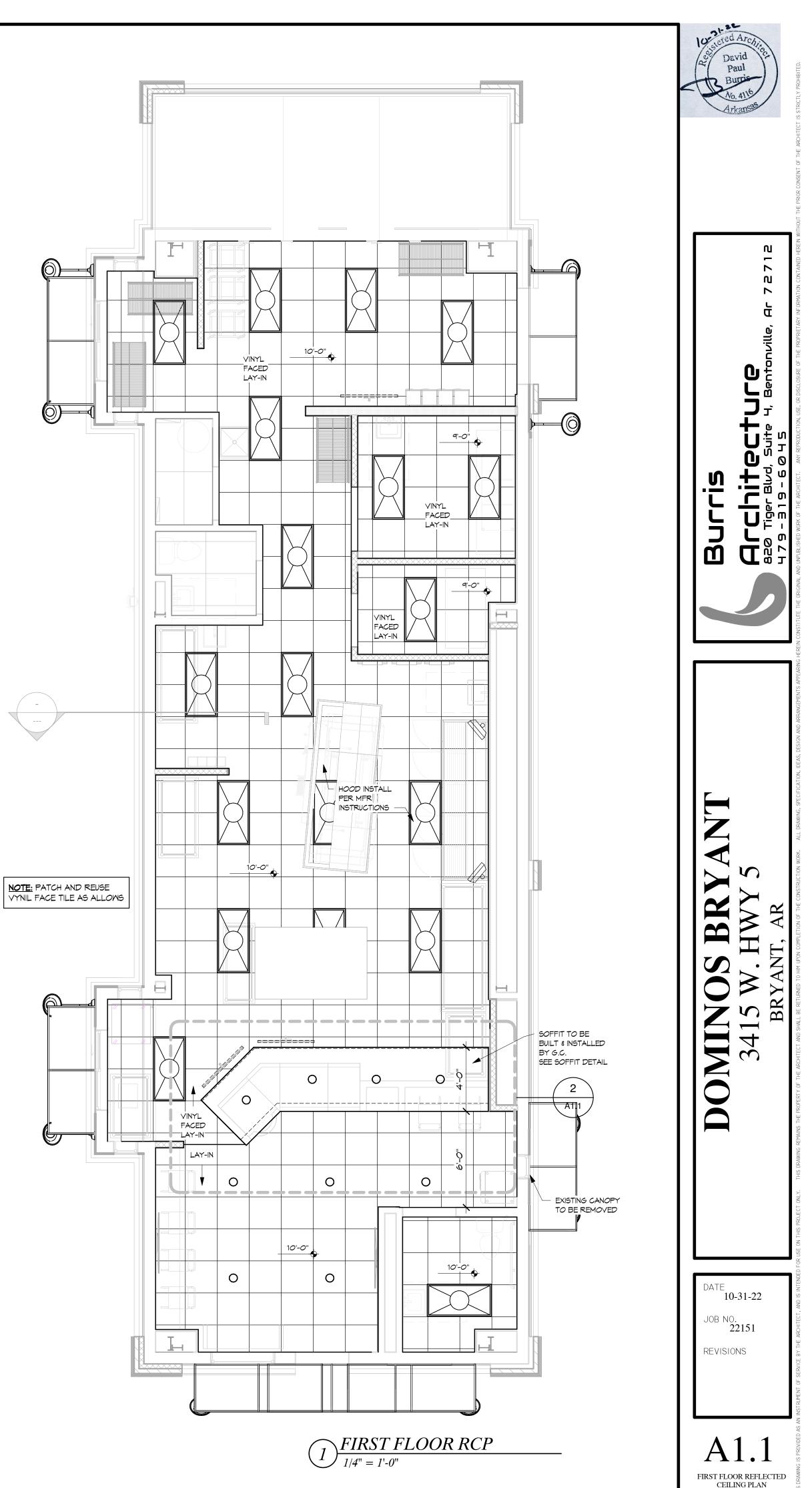


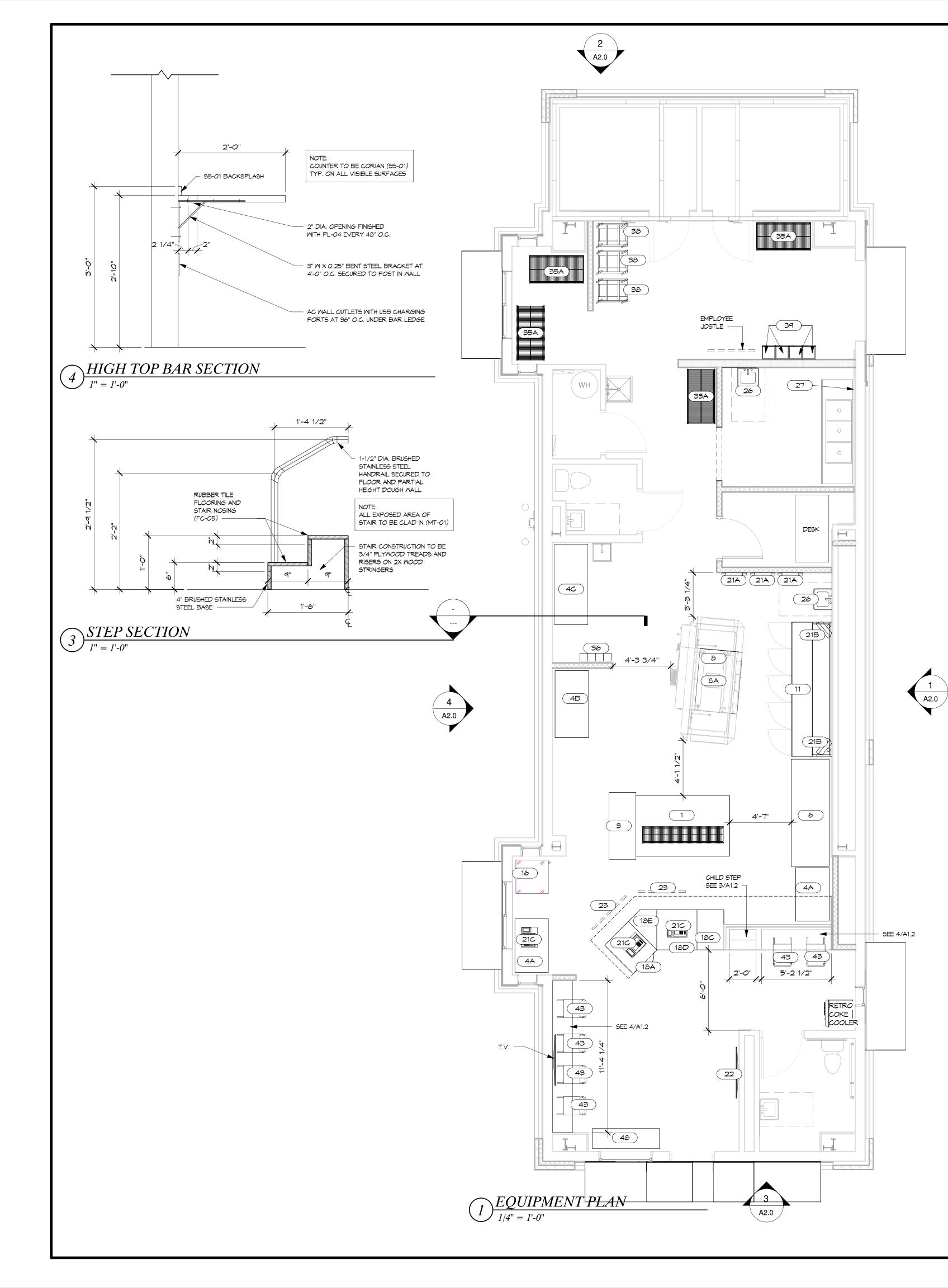






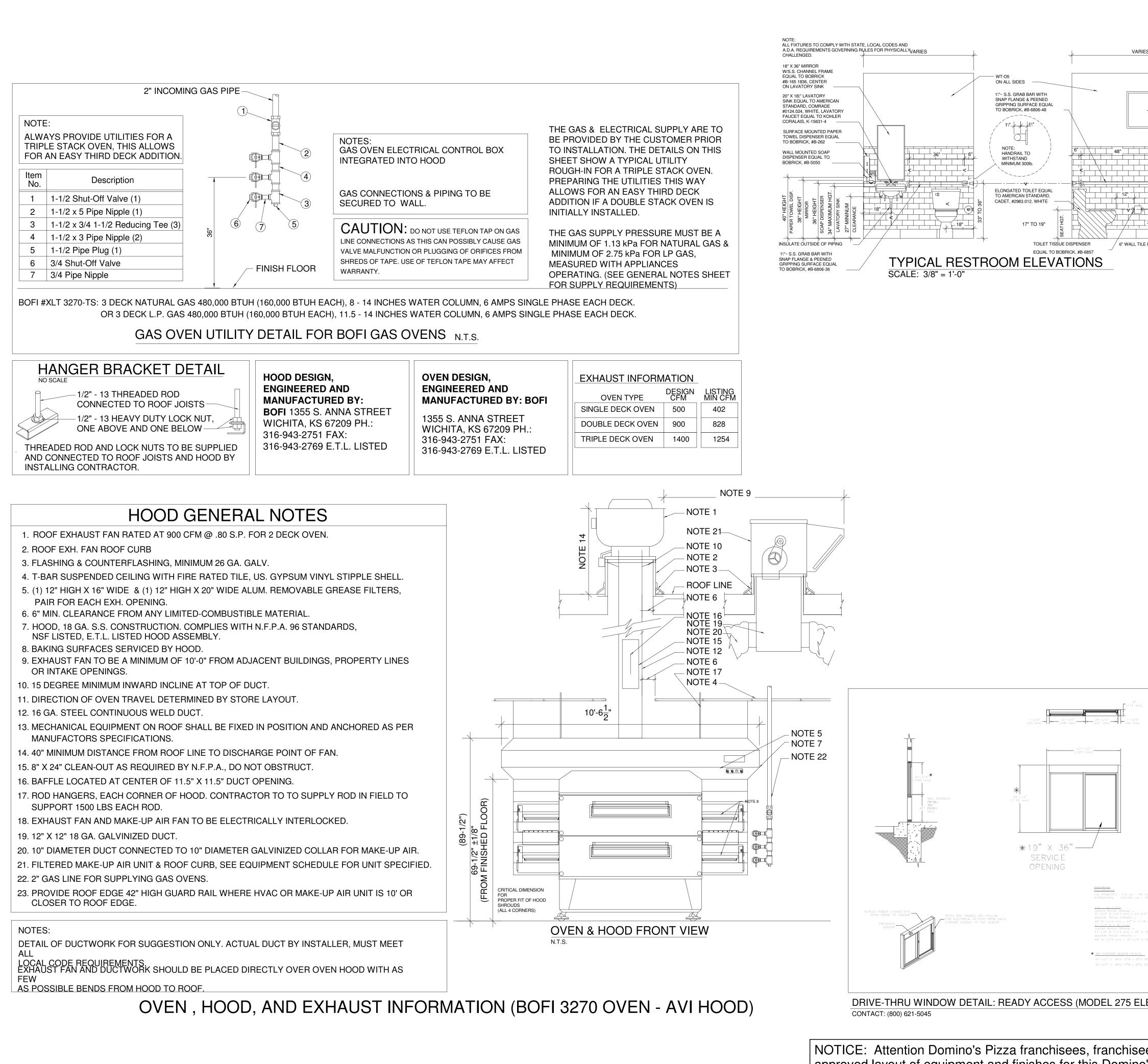




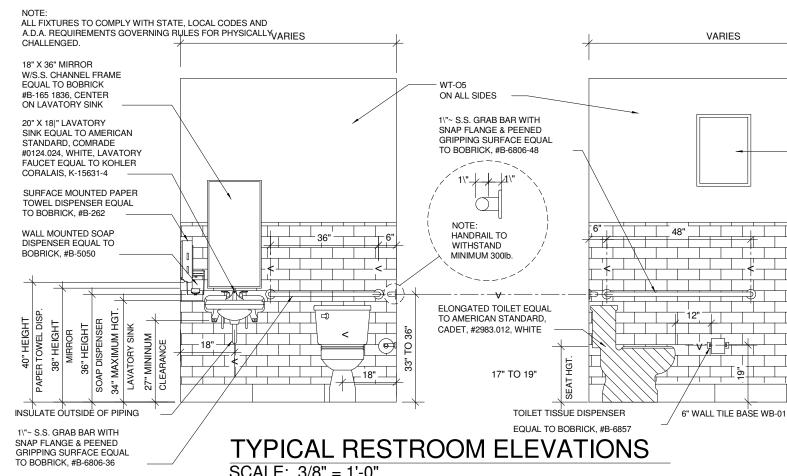


	MENT SCHEDULE		MENT CALLOUT		(5									
					EXISTING		e , e -							
ΙΤΕΜ QUANTITY				DΒY			ELECTRIC	CAL REQUIRE	MENTS	;	PLUM	BING REQUIREM	IENTS	_
aUA				FURNISHED	INSTALLED		Ś		L F		ATER	DRAIN	GAS	
-EM	DESCRIPTION	DIMENSIONS	MODEL NO.	URN	INSTALLE RELOCAT		MATT HP	VOLTS	<u> </u>				BTU'S	
	SCHEDULE			Ĺ	≤ ¯	∀ ™	AW HP	VOLTS				DIRECT IND.	6010	
	7' CUSTOM CUT TABLE W/ OVERSHELF	84"L x 32"D x 36"H	312-25SS, TDSS-MOD	E&S	GC									
-	CUSTOM CUT TABLE ACCESSORY CABINET	36"L x 16"D x 36"H	309-25SS	E&S										
-	CUSTOM CUT TABLE ACCESSORY CABINET	24"L x 16"D x 36"H	308-25SS											
1	48" ROUTE STAND W/ (3) 54" HEAT LAMPS	48"L x 18"D x 86"H	PC320-810	E&S	GC									
2 1	48" STAINLESS STEEL WORK TABLE 60" STAINLESS STEEL WORK TABLE	48"L x 30"D x 35 1/2"H 60"L x 30"D x 35 1/2"H	PC326031 PC22289	E&S	GC									
1	72" STAINLESS STEEL WORK TABLE	72"L x 30"D x 35 1/2"H	SEE E&S											
-	45 DEGREE S.S. DOUGH ROLLTABLE		SEE E&S	E&S										
-	CORNER S.S. DOUGH COUNTER W/ LEGS	34"W x 34"D x 36"H	PC22139N	E&S										
-	STRETCH TABLE 48" x 24" DRIVERS TABLE	96"L x 36"D x 36"H 48"L x 24"D x -"H	SEE E&S PC345310	E&S	GC									
-	36" x 24" DRIVERS TABLE	36"L x 24"D x -"H	PC345310											
EN	AND REFRIGERATION SCHEI	DULE		I		1				<u> </u>				
1	BOFI-GAS CONVEYOR OVEN [3 DECK]		XLT-3270-TS3	E&S	GC	12	1440	120V 1						12 AMPS & 160,000 BTUH PER DECK
1	HOOD SYSTEM [XLT-3270-TS3]	THREE DECK												HIGH HEAT SUPPLY FAN
- EXIST	HATCO FLAV-R-SAVOR HEATED DISPLAY CASE 10' x14' NOMINAL WALK-IN COOLER W/O FLOOR	34 1/2"W x 27 3/4"D x 31 3/4"H 10' W x 14' D x 7'-9" H	FSCD-2PD	E&S E&S	GC GC	15 25	1.8 5904 1.5	120V 208/240 3	8 X	14-20P	_	3/4"		184 LBS.
EXIST					GC		100							
1	RANDELL 120" MAKELINE (RIGHT SIDE COMP.)	120"W x 34"D x 51 1/2"H	PC338615	E&S	GC	13	3/4	120V		5-20P				(3) 27" DOORS
-	RANDELL GRAB-N-GO REFRIGERATED DISP.	36"W x 34"D x 46 1/2"H	SSAC-36SSC	E&S	GC	8.6	3/8	120V		5-15P				STAINLESS STEEL, 20 OZ. R-134A
-		48"W x 32 1/2"D x 36"H	9301-7			5.5	1/4	120V		5-15P				DOUBLE SIDE DOORS
-	DELFIELD SINGLE DOOR SS REFRIGERATOR SINGLE DOOR VISI COOLER	25 1/2"W x 32 1/2"D x 79 1/2"H 30"W x 29"D x 78 1/4"H	PC345310 GMD-41	COKE	GC	12 7.2	1/3	120V 120V		5-15P				
1	COKE COOLER GDM-7	24"W x 24"D x 39 3/4"H	GDM-7	E&S		+								
-	SS NARROW BODY FULL HT. HOLDING CAB.													
ON	COUNTER SCHEDULE													
1	TRANSACTION COUNTER	30"W x 39 3/16"D x 34"H	S13-0608-POS18 LA	E&S										RELOC. ELECTRICAL
-	18" POS FILLER CABINET	18"W x 33 1/2"D x 34"H	S13-0608-POS18 LA	E&S										
1	24" POS FILLER CABINET 36" POS FILLER CABINET	24"W x 33 1/2"D x 34"H 36"W x 33 1/2"D x 34"H	S13-0608-POS24 LA S13-0608-POS36 LA	E&S E&S										RELOC. ELECTRICAL RELOC. ELECTRICAL
1	WEDGE CABINET	W (varies) x 33 1/2"D x 34"H	S13-0608-WDG LA	E&S]								RELOC. ELECTRICAL
-	HOT HOLD CABINET	36"W x 33 1/4"D x 24"H	S13-0608-HHC LA	E&S							_			RELOC. ELECTRICAL
1	METAL CASH DRAWER W/ REMOVABLE TILL	19 1/2"W x 16 3/8"D x 4"H	PC312661	E&S	GC									MTL. BRACKET KIT REQ'DPC312662
		19"W x 22"D x 20"H	PC381811	E&S	GC									290 LBS., 1/2" STEEL BODY AND DOOR
3 3					PULSE									
2	PULSE TEL./ORDER STATION-WALL MOUNTED PULSE TEL./ORDER STATION-MAKELINE WALL			FULSE	FULSE									
3	PULSE TEL./ORDER STATION-POS COUNTER			PULSE	PULSE									
3	MOUNTING POST		PC273114	E&S	GC									
-	PULSE TEL./ORDER STATION-SUSPENDED AB.				PULSE									
1	PIZZA TRACKER 37" MONITOR		SEE PULSE	PULSE										
2 -	PULSE DIGITAL 42" MENU BOARDS PULSE TELEPHONE EQUIPMENT BOX	48"W x 18"D x 48"H	SEE PULSE SEE E&S	PULSE E&S						PULSE				PWD W/ WHITE P.LAM
FFI	T SYSTEM SCHEDULE		1					<u> </u>						1
-	60" SOFFIT UNIT	60"W x 48"D x 8"H		E&S	GC									RELOC. ELECTRICAL
-	48" SOFFIT UNIT	48"W x 48"D x 8"H		E&S										RELOC. ELECTRICAL
-	36" SOFFIT UNIT	60"W x 48"D x 8"H		E&S							_			
-	24" SOFFIT UNIT WEDGE UNIT	24"W x 48"D x 8"H W (varies) x 48"D x 8"H		E&S E&S										RELOC. ELECTRICAL RELOC. ELECTRICAL
-	48" CORNER UNIT	48"W x 48"D x 8"H		E&S										RELOC. ELECTRICAL
-	48" CORNER UNIT	48"W x 48"D x 8"H		E&S	GC									RELOC. ELECTRICAL
	BING SCHEDULE		1			1								1
2 3	STAINLESS STEEL HAND SINK	14"L x 10"D x 5"H	PC383101	E&S						1/2"	1/2"	X		TWO WRIST HANDLES/ BACKSPLASH
3 3	LIQUID SOAP DISPENSERS HAND SANITIZER DISPENSERS	ACCESSORY ACCESSORY	PC244006 PC244004	E&S E&S										
3	C FOLD PAPER TOWEL DISPENSERS	ACCESSORY	PC277647	E&S		+								
1	SINK WALL STORAGE UNIT	36"L x 30"H	PC411956	E&S	GC									
-	S.S. THREE COMPARTMENT SINK	87 1/4"L x 27 1/2"D x 39 1/2"H	PC28102	E&S										
-	3 COMPARTMENT SINK, WASTE LEVER	ACCESSORY	PC383050	E&S E&S										
-	ECONOMY SPRAYER W/ ADD-ON FAUCET WALL BRACKET FOR ECONOMY SPRAYER	ACCESSORY ACCESSORY	PC383011 PC28108	E&S E&S										
-	MOLDED STONE MOP SINK	24"L x 24"D x 10"H	PC28096	E&S					_	1/2"	1/2"	X		
-	RINNI WALL MOUNTED WATER-HEATER		R94LSi	GC	GC					1"	1"	x		
-	ALL IN ONE WASHER/DRYER	27"L x 25 1/2"D x 43"H	PC27006						_	1/2"	1/2"	X		SEARS KENMORE
- =		27"L x 25 1/2"D x 43"H	PC26995	E&S	GC									
⊑∟V -	VING AND STORAGE SCHEDU 24" x 24" WIRE SHELF SYSTEM		SEE E&S											
-	24" x 24" CHEMICAL RACK		SEE E&S			+								
-	18" x 48" CLEAN SMALL WARES RACK		SEE E&S											
4	24" x 48" HEAVY DUTY DUNNAGE RACK	24"L x 48"D x 12"H	PC462451	E&S										
-	24" x 36" HEAVY DUTY DUNNAGE RACK	24"L x 36"D x 12"H	PC462450	E&S	GC									
-	18" x 48" HD DUNN. RACK W/ 6" BACKSPLASH 24" x 48" HEAVY DUTY DUNNAGE RACK	18"L x 48"D x 6"H 24"L x 80"D x 12"H	SEE E&S SEE E&S	_							_			
4	MODULAR METAL DROPBOX	7"W x 7"D x 23"H	PC8610A	E&S	GC	+								4 BAYS TO BE ATTACHED TOGETHER
-	27 GALLON CORNMEAL BIN W/ LID (PC0.0287)	27 1/2"H	PC203699	E&S	GC									
З	STEEL DOUGH DOLLY W/ 3" SWIVEL CASTER	25 7/8"W x 17 7/8"D x -"H	PC460005	E&S	GC									900 LB. CAPACITY
4	DOUGH TRAYS (SET OF 100)	-"W x -"D x -"H	PC258050	E&S	GC									
-	12" x 12" EMPLOYEE LOCKER - TRIPLE TIER 16 COMPARTMENT LOCKER	A=3 WIDE B=1 WIDE 72"W x 18"D x 78"H	SEE E&S PC26610	_										
-	WALL MOUNTED BIKE RACK		SEE E&S	_										
-	TRASH CAN W/ LID (PC3071)	ACCESSORY	PC7030	E&S	GC									
RNI	TURE SCHEDULE		MENT CALLOUT											
	. DESCRIPTION	DIMENSIONS	MANUFACTURER			MO	DEL NO.			CO	OR			COMMENTS
QTY	DINING CHAIR	31.5"H x 16.25"W x 15"D x 18.25"S⊦		E&S			18022					HROME LEGS		DINING ROOM
-	COUNTER STOOL	30"H x 16.25"W x 15"D x 24"SH	PROVIDED BY E&S	E&S E&S			18023					HROME LEGS		
QTY - 6 -	DINING TARI E TOP (TOP ONLY)	24" x 36"	PROVIDED BY E&S PROVIDED BY E&S	E&S E&S			18206				PL-04	N		DINING ROOM DINING ROOM
-	DINING TABLE TOP-(TOP ONLY) DINING TABLE BASE	FOR 24" x 36" TOP & 36" RND. TOP			· ·									1
-		FOR 24" x 36" TOP & 36" RND. TOF 36" x 48"	PROVIDED BY E&S	E&S	GC	PC31	18028			TOP:	PL-04			DINING ROOM
-	DINING TABLE BASE						18028 18029				PL-04	N		DINING ROOM DINING ROOM
-	DINING TABLE BASE DINING TABLE TOP-(TOP ONLY)	36" x 48"	PROVIDED BY E&S	E&S	GC GC	PC31 E&S				BASE E&S	: Cast Iron To provide			

U _ N て . **PCC** © Tiger J D ANT **BRY** S HW S DOMIN 3415 Β DATE 10-31-22 JOB NO. 22151 REVISIONS A1.2 EQUIPMENT PLAN

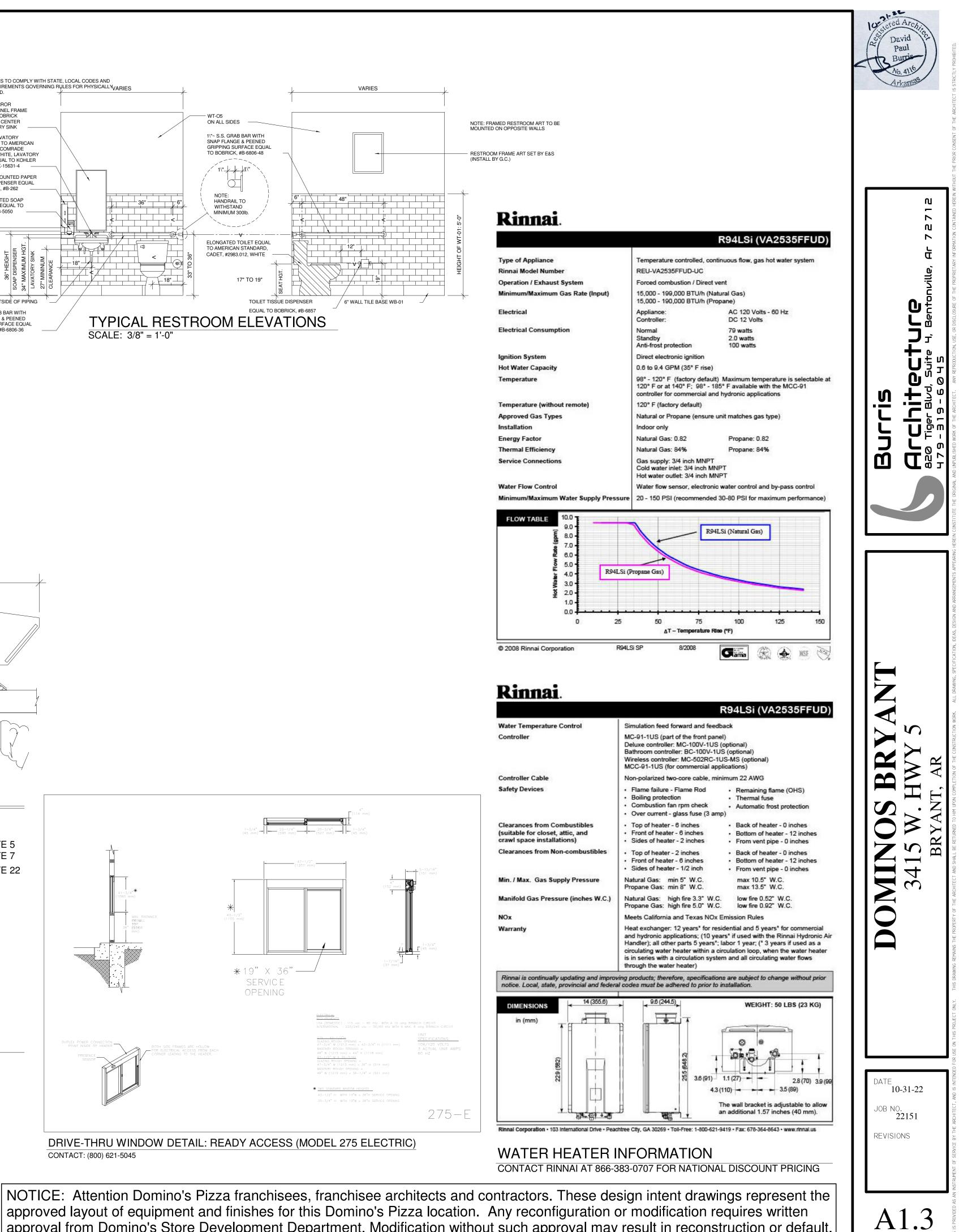


OVEN TYPE	DESIGN CFM	LISTING MIN CFM
SINGLE DECK OVEN	500	402
DOUBLE DECK OVEN	900	828
TRIPLE DECK OVEN	1400	1254

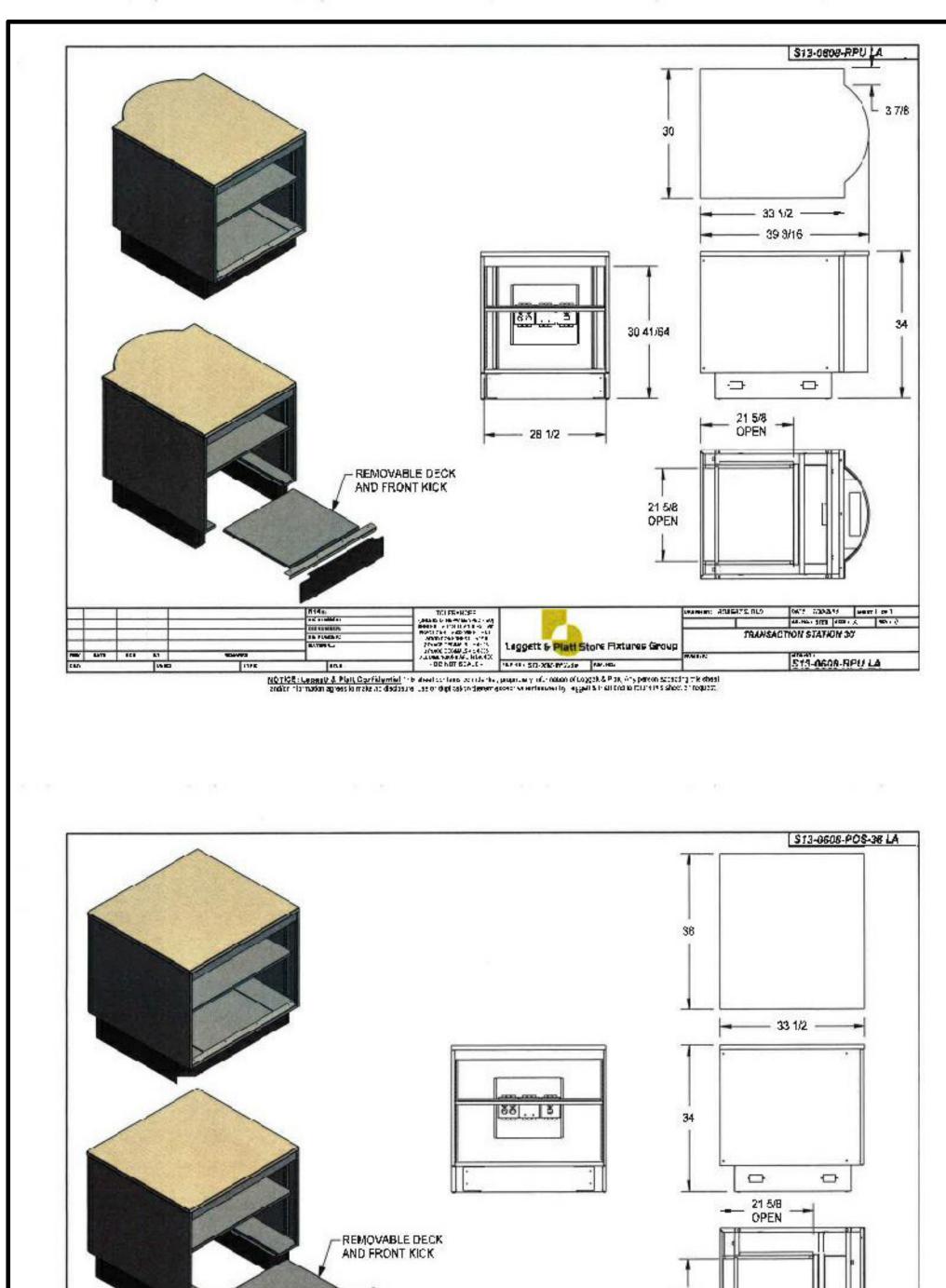


DRIVE-THRU WINDOW DETAIL: READY ACCESS (MODEL 275 ELECTRIC)

approval from Domino's Store Development Department. Modification without such approval may result in reconstruction or default.



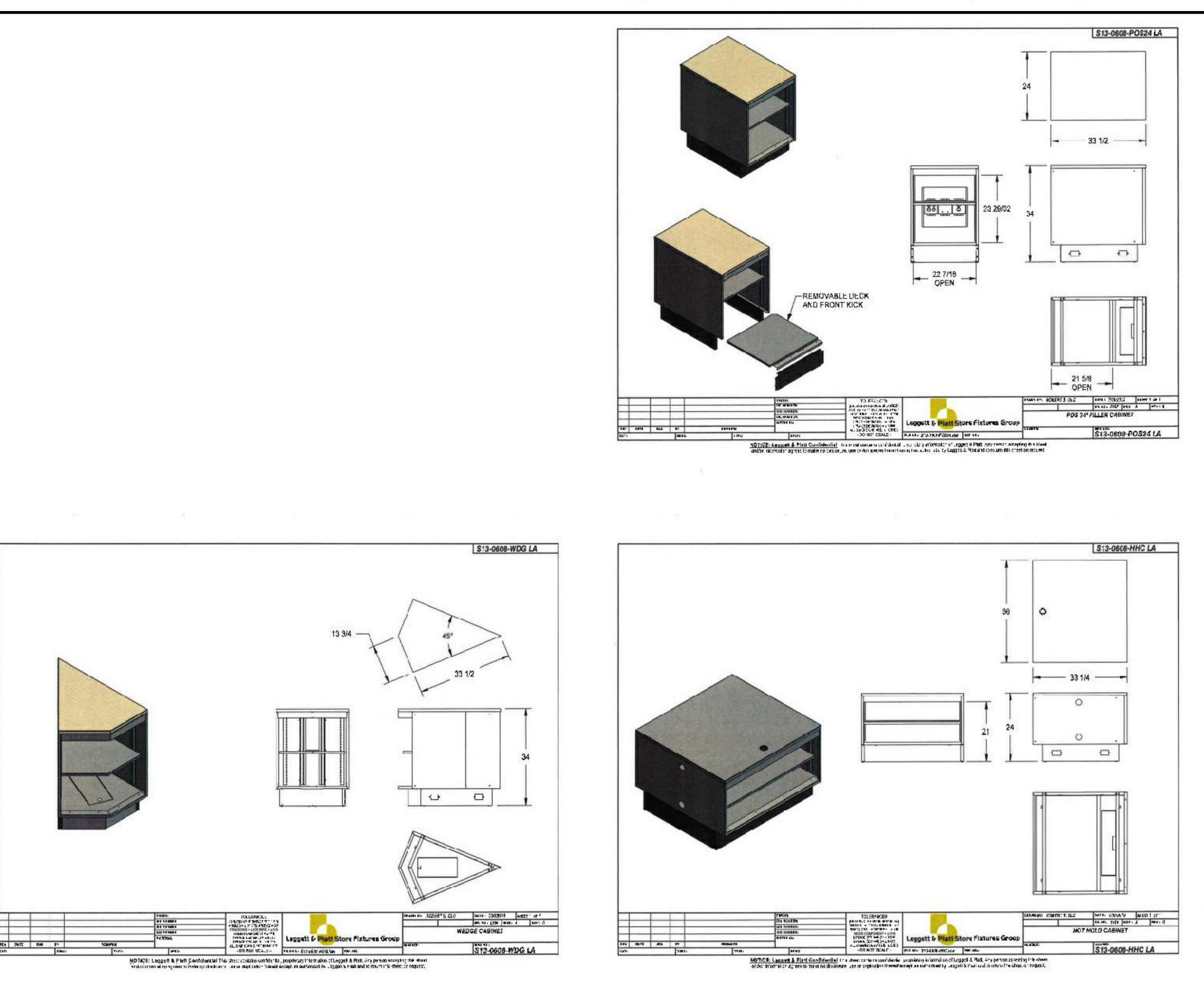
DETAILS



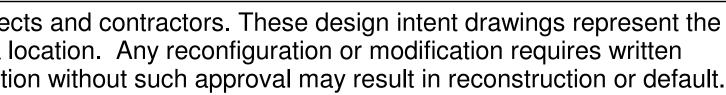
513-0608-POS-36 LA ugeth & Plaji Coof dentiaj file annel contribution for het propretary microation of Loop. It & Fuel. Any puison accepting this sol

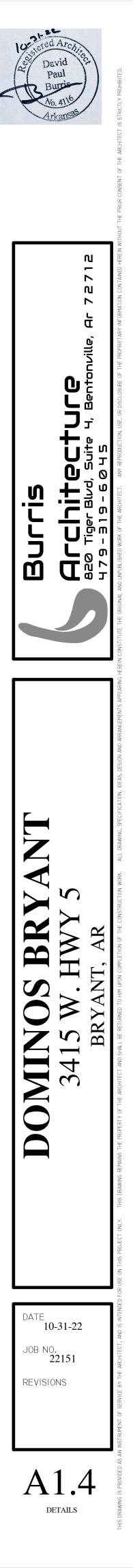
CASHWRAP STATIONS W/ RELOC ELECTRICAL CONTACT E&S FOR INSTALL MANUALS

ELECTRICAL CONNECTION S TO BUILDING WIRING NOTE: Each Cabinet that contains 120 volt electrical outlets has a manufactured wiring Power Tee (PT) connected to each receptacle assembly (orange or white). The cabinets are electrically connected by plugging PTs together for adjoining cabinets, or Cable Extenders (CE) for passing through non-powered cabinets. Provided Circuit Distributor (CD) cables plug into a PT or CE to connect the cabinets to a junction box that is part of the building wiring (see Site Architectural Electrical Plan). White receptacles are intended for general purpose use and are to be connected via CD cables to a typical 120 volt AC circuit with overcurrent protection of no more than 20 amperes. Connect Black wire to the Hot conductor, White wire to Neutral, and Bare or Green to Ground. There may also be an unused Red Spare wire to be capped off. Orange receptacles are intended for electronic component use and are to be connected via CD cables to an Isolated Ground Wire 120 volt AC circuit with overcurrent protection of no more than 20 amperes. Connect Black wire to the Hot conductor, White to Neutral, Bare or Green to Ground and the Green with Yellow Stripe to the Isolated Ground Wire conductor. There may also be an unused Red Spare wire to be capped off. Manufactured wiring components used for the White receptacles are different than the Orange receptacles. The connection points are keyed and mechanically cannot be interconnected. Open side of Power Tees must be sealed with supplied Cover Caps.

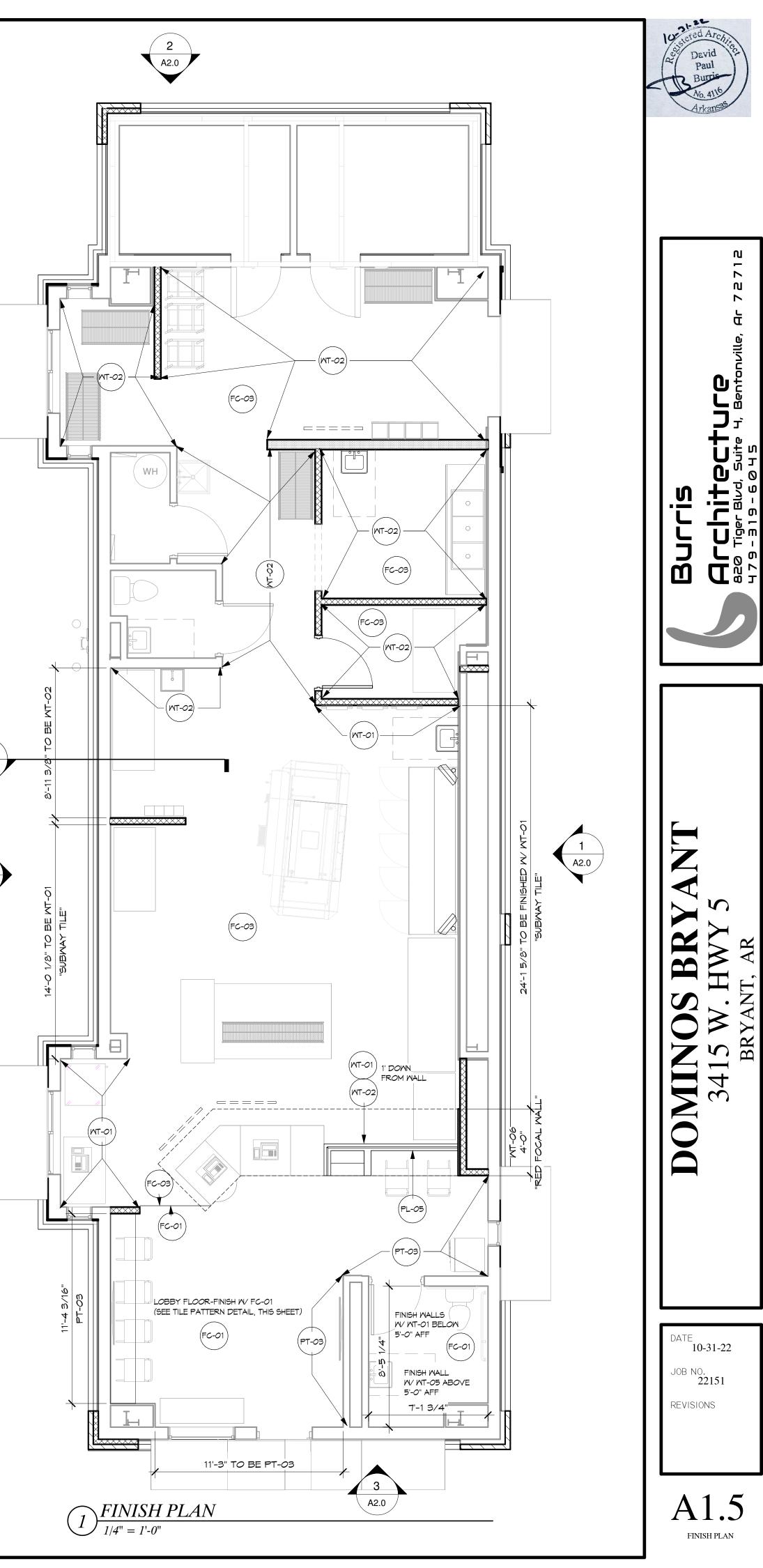


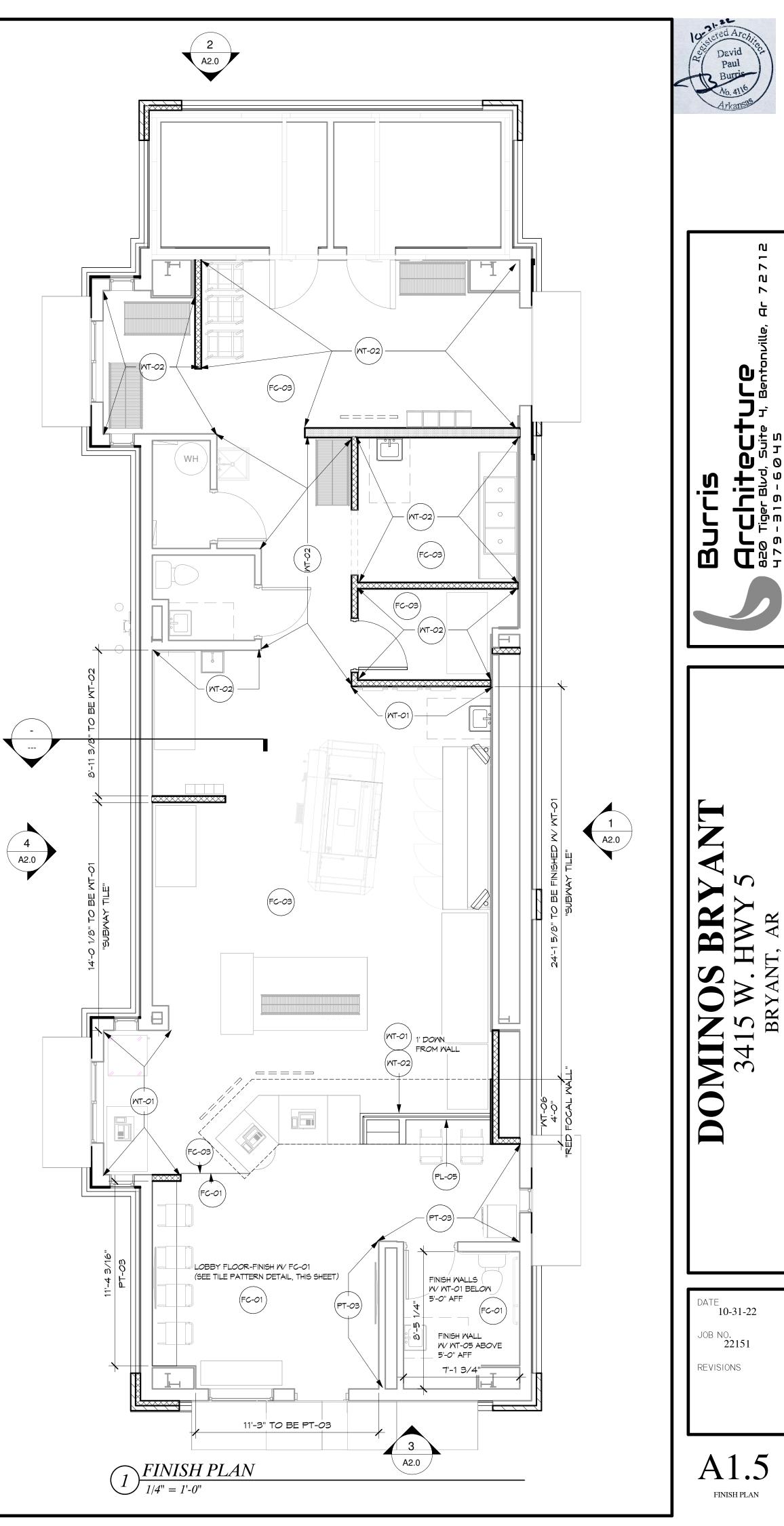
NOTICE: Attention Domino's Pizza franchisees, franchisee architects and contractors. These design intent drawings represent the approved layout of equipment and finishes for this Domino's Pizza location. Any reconfiguration or modification requires written approval from Domino's Store Development Department. Modification without such approval may result in reconstruction or default.

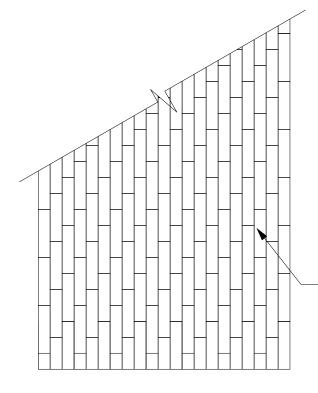




DOMINO'S PIZZA THEA	TER FINISH SCHEDULE
FLOOR COVERING	WALL TILE
FC-01 RETAIL FLOOR AND RESTROOMS 6" X 24" PORCELAIN TILE ON ⅓ OFFSET, OLYMPIA TILE ARBOR SELECTION "MOKA" OL.AR.MKA.0624 ¾6" GROUT JOINT: CUSTOM BUILDING PRODUCT #60 CHARCOAL. CONTACT: KURT von KOSS (248) 790-2197 KURT@BEAVERTILE.COM	WT-01 WT-01: WHITE SUBWAY TILE INTERCERAMIC "100 ULTRA WHITE" 3 X 6 W/ WHITE GROUT LOCATION: KITCHEN VISIBLE TO CUSTOMER CONTACT: MEES DISTRIBUTORS (614) 844-5830 WWW.INTERCERAMIC.COM
FC-02 ALTERNATE RETAIL FLOOR AND RESTROOMS 6" X 24" PORCELAIN TILE ON ¹ / ₃ OFFSET, DALTILE YACHT CLUB PORCELAIN "COCKPIT" YCOL	WT-02 FRP WALL PANEL (LOCATION: KITCHEN AREA NOT VISIBLE TO CUSTOMER) MARLITE "P-100"/ TEXTURE: PEBBLE SURFACE/ COLOR: WHITE CONTACT: TOM PINNOW (330) 260-7631 TPINNOW@MARLITE.COM
3/16" GROUT JOINT: CUSTOM BUILDING PRODUCT #60 CHARCOAL. CONTACT: KURT von KOSS (248) 790-2197 KURT@BEAVERTILE.COM FC-03 KITCHEN/ BACK OF HOUSE	WT-03 FRP WALL PANEL MARLITE "P-106"/ TEXTURE: PEBBLE SURFACE/ COLOR: BEIGE LOCATION: AS REQUIRED, REIMAGE CHAIR RAIL, VESTIBULE) CONTACT: TOM PINNOW (330) 260-7631 TPINNOW@MARLITE.COM
6" X 6" QUARRY TILE QUARRY BASICS "507 PURITAN GRAY" ¾6" GROUT JOINT: CUSTOM BUILDING PRODUCT #60 CHARCOAL. CONTACT: KURT von KOSS (248) 790-2197 KURT@BEAVERTILE.COM	WT-04 FRP WALL PANEL CRANE COMPOSITES "STC"/ TEXTURE:SANDSTONE/ COLOR: 731 RED LOCATION: AS REQUIRED, REIMAGE CHAIR RAIL, VESTIBULE) CONTACT: TOM PINNOW (330) 260-7631 TPINNOW@MARLITE.COM
FC-04ALTERNATE KITCHEN/ BACK OF HOUSE8" X 8" QUARRY TILEDALTILE QUARRY TEXTURES "0T03 ASHEN GRAY" $\frac{3}{16}$ " GROUT JOINT: CUSTOM BUILDING PRODUCT #60 CHARCOAL.CONTACT: 877-556-5728 (ASK FOR DPZ NATIONAL PRICING PROGRAM)	WT-05 WT-05: BLUE SUBWAY TILE RITTENHOUSE SQUARE "COBALT" 3 X 6 SKU#DM1436MOD1P2 LOCATION: RESTROOM WALLS ABOVE 5' AFF CONTACT: DALTILE (CAN ALSO BE SOURCED FROM BEAVER TILE)
FC-05 CHILD "STEP-UP" AT DOUGH FEATURE 24" X 24" X ¹ / ₈ " RUBBER TILE FLOOR (VINYL STAR NOSING: #VIRCN-20-B) JOHNSONITE (RUBBER TILE FLOORING-TEXTURES) "RT RAISED ROUND" (COLOR: 20 CHARCOAL) CONTACT: LAURIE BAATZ (440) 313-8238 LAURIE.BAATZ@JOHNSONITE.COM	WT-06 WT-06: RED SUBWAY TILE
FC-06 ENTRY INSET ENTRY FLOOR WALK-OFF MAT	MISCELLANEOUS INTERIOR FINISHES
ULTRA ENTRY SYSTEM (RECYCLED BLACK VINYL W/ NYLON INSETS) NEW YORK COLLECTION-BROWN (SIZE: CUSTOM PER LOCATION) USE W/ T-2 CONTACT: MARK SADAUSKAS (614) 743-7146 MSADAUSKAS@MATSINC.COM NOTE: MAT CAN BE LOCALLY SOURCED IF IT IS AN "AS EQUAL" PRODUCT	WS-01 SOLAR WINDOW SHADES MECHO SHADES "THERMOVEIL BASKET WEAVES" FOR WINDOWS PRODUCT#: 1304/ COLOR: BLACK/BROWN/ OPENNESS: 5%/ STOCKED: 63" & 96" NOTE: SINGLE BRACKET, MANUAL DRIVE SYSTEM
WALL BASE AND FLOOR ACCESSORIES	CONTACT: KMA & ASSOCIATES/ DEB MAK :(614) 563-0569 DMAK@KMA.BZ
WB-01 RETAIL FLOOR AND RESTROOMS 6" X 24" PORCELAIN TILE , OLYMPIA TILE ARBOR SELECTION "MOKA" OL.AR.MKA.0624 W/ ³ / ₁₆ " GROUT JOINT: CUSTOM BUILDING PRODUCT #52 TOBACCO BROWN.	WS-02 SOLAR WINDOW SHADES MECHO SHADES "THERMOVEIL BASKET WEAVES" FOR WINDOWS PRODUCT#: 1317/ COLOR: STRAW/ OPENNESS: 5%/ STOCKED: 63" AND 96" NOTE: SINGLE BRACKET, MANUAL DRIVE SYSTEM CONTACT: KMA & ASSOCIATES/ DEB MAK :(614) 563-0569 DMAK@KMA.BZ
CONTACT: KURT von KOSS (248) 790-2197 KURT@BEAVERTILE.COM WB-02 ALTERNATE RETAIL FLOOR AND RESTROOMS 6" X 24" PORCELAIN TILE ON ½ OFFSET, DALTILE YACHT CLUB PORCELAIN "COCKPIT" YCOL	CG-01 INTERIOR WALL CORNER GUARDS TO BE PROVIDED BY GENERAL CONTRACTOR OR EQUAL 2" X 2" FLANGE STAINLESS STEEL CORNER GUARDS/ HEIGHT: 48" FINISH: BRUSHED STAINLESS STEEL/ LOCATE AT HIGH TRAFFIC CORNERS
3/6" GROUT JOINT: CUSTOM BUILDING PRODUCT #52 TOBACCO BROWN. CONTACT: KURT von KOSS (248) 790-2197 KURT@BEAVERTILE.COM	SS-01 RETAIL COUNTERTOPS CORIAN BY DUPONT TEM: SOLID SURFACE/ "COTTAGE LANE" ³ / ₄ " THICKNESS
TS-01 TRANSITION STRIP: PORCELAIN TILE TO QUARRY TILE TRANSITION STRIP FROM FRONT OF HOUSE TO BACK OF HOUSE JOHNSONITE "CE-76-C WITH METAL TRACK (TRACK:MT-00-A) TRANSITION (76 CINNAMON) FROM %" THICK RETAIL PORCELAIN AREA TILE TO ½ " THICK QUARRY KITCHEN TILE	LOCATE: DOUGH COUNTERTOPS AND CUSTOMER LEDGE AT DOUGH FEATURE, POS COUNTERTOPS CONTACT: DAVE GREENING (614) 975-6700 DAVE.GREENING@OVSCO.COM
CONTACT: LAURIE BAATZ (440) 313-8238 LAURIE.BAATZ@JOHNSONITE.COM	
TS-02 TRANSITION STRIP FROM ENTRY WALK-OFF MAT TO PORCELAIN TILE SCHLUTER "SCHIENE" STAINLESS STEEL CONTACT: (800) 667-8746 WWW.SCHLUTER.COM	PL-01 WILSONART LAMINATE COLOR: FROSTY WHITE/ NUMBER: 1573-60 FINISH: MATTE/ LOCATION: AS REQUIRED CONTACT: LESLIE HUMPHREY (614) 893-6853 HUMPHRL@WILSONART.COM
	PL-02 NEVAMAR LAMINATE COLOR: LIBERTY RED/ NUMBER: S1027T FINISH: TEXTURED/ LOCATION: RED ELEMENT, AS REQUIRED,
CT-01KITCHEN/ BACK OF HOUSE 24" X 24" SCRUBBABLE CEILING TILE USG CEILINGS SHEETROCK LAY-IN CEILING PANEL (CLIMAPLUS, VINYL) "3260" COLOR: WHITE/ EDGE: SQUARE CONTACT: ERIN GOSENDE (513) 828-9686 EGOSENDE@USG.COM	REIMAGE CHAIR RAIL, VESTIBULE CONTACT: TOM CARTWRIGHT (937) 477-7837 TOM_CARTWRIGHT@PANOLAM.COM
CT-02AS REQUIRED: CAN BE PAINTED WITH PT-04 WHEN CT-03 IS NOT ALLOWED 24" X 24" X 5%" ACOUSTICAL CEILING TILE USG CEILINGS (OLYMPIA MICRO CLIMAPLUS) "4211" COLOR: WHITE/ EDGE:SQUARE/ PROFILE: EDGE GRID PROFILE DONN CX	COLOR: CAFE/ NUMBER: 1903-58 FINISH: MATTE/ LOCATION: AS REQUIRED, REIMAGE CHAIR RAIL, VEATIBULE CONTACT: (800) 367-6422 PL-04 WILSONART LAMINATE COLOR: TAN ECHO/ NUMBER: 7941K-18
CONTACT: ERIN GOSENDE (513) 828-9686 EGOSENDE@USG.COM	FINISH: LINEARITY/ LOCATION: STANDING/ DINING LEDGES, TABLETOPS CONTACT: LESLIE HUMPHREY (614) 893-6853 HUMPHRL@WILSONART.COM
24" X 24" X ³ / ₄ " ACOUSTICAL CEILING TILE USG CEILINGS (FROST CLIMAPLUS) "4211" COLOR: 565 SIENNA/ EDGE:SQUARE/ PROFILE: EDGE GRID PROFILE DONN CX-COLOR TO MATCH 565 SIENNA CONTACT: ERIN GOSENDE (513) 828-9686 EGOSENDE@USG.COM	PL-05 WILSONART LAMINATE COLOR: SATIN STAINLESS/ NUMBER: 4830K-18 FINISH: (18) LINEARITY/ LOCATION: MAKELINE/ DOUGH WALLS FASCIA ON CUSTOMER SIDE. CONTACT: LESLIE HUMPHREY (614) 893-6853 HUMPHRL@WILSONART.COM
PAINT	
PT-01 SHERWIN-WILLIAMS "REAL RED" PMS 186C (SW6868) FINISH: EGGSHELL (INTERIOR WALLS), SATIN (EXTERIOR TRIM, RESTROOM DOOR AND FRAME/ INTERIOR WALLS AS NOTED) CONTACT: (800) 321-8194 WWW.SHERWIN-WILLIAMS.COM	
PT-02 BENJAMIN MOORE "CALIFORNIA BLUE" PMS 7692C (2060-20) FINISH: EGGSHELL (INTERIOR WALLS), SATIN (EXTERIOR AND TRIM) CONTACT: (866) 708-9181 WWW.BENJAMINMOORE.COM	CORION WINDOW SILLS
PT-03 SHERWIN-WILLIAMS "CRUST PAINT" PMS 465C (SW6123) FINISH: EGGSHELL (INTERIOR WALLS), SATIN (EXTERIOR TRIM, STOREFRONT AND BUILDING SIDES) CONTACT: (800) 321-8194 WWW.SHERWIN-WILLIAMS.COM	
PT-04 SHERWIN-WILLIAMS "JAVA" PMS 7582C (SW6090) FINISH: MATTE CEILING PAINT CONTACT: (800) 321-8194 WWW.SHERWIN-WILLIAMS.COM	
PT-05 BENJAMIN MOORE "GREY CHALKBOARD PAINT" (307-80) FINISH: USE A PRIMER WITH A HARDENER ADDITIVE CONTACT: (866) 708-9181 WWW.BENJAMINMOORE.COM	
PT-06 IFS COATINGS, INC. POWDER COATED PAINT (SILVER SPARKLE "PRSS 90708" LOCATION: DINING LEDGE LEGS AND BASE PLATE, POS FASCIA CONTACT: BRANDON PHILLIPS (866) 437-2864 BPHILLIPS@IFSCOS.COM	
INTERIOR AND EXTERIOR FABRICS	
EXTERIOR AWNING FABRIC COLOR: LOGO RED STYLE: 4666/ SIZE:46"/ 100% SOLUTION DYED ACRYLIC CONTACT: GLEN RAVEN CUSTOM FABRICS LLC. (336) 221-2211	
FB-02 ALTERNATE: COOLEY SIGN AND AWNING PRODUCTS EXTERIOR AWNING FABRIC COLOR: #0132 BRIGHT RED PRODUCT: COOLEY BRITE CONTACT: (800) 992-0072 WWW.COOLEYGROUP.COM	
1. ALL WORK SHALL CONFORM TO ALL FEDERAL, STATE AND MUNICIPAL CODES	7. OVEN TO BE SET IN PLACE PRIOR TO INSTALLATION OF COUNTERS.
HAVING JURISDICTION OVER THIS PROJECT.2. CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONTRACT TO VERIFY EXISTING FIELD CONDITIONS. ALL EXISTING DIMENSIONS SHALL BE VERIFIED AND/OR GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SAME.	9. WALL PARTITION KEY: TYP. INTERIOR PARTITION WALL, 1/2" GYPSUM BOARD EACH SIDE OF 1 1/2" x 3 1/2" 20 GA. METAL STUDS AT 16" O.C. WITH INDICATED FINISH.
 ANY VARIATIONS OF THE DRAWINGS TO BE APPROVED BY DOMINO'S STORE DEVELOPMENT DEPARTMENT. 	EXISTING WALL
 FRANCHISEE TO RECEIVE, UNLOAD AND INSTALL ALL KITCHEN EQUIPMENT, SIGNAGE AND OPERATIONAL EQUIPMENT. 	EXISTING WALL TO BE REMOVED [SHOWN DASHED]
 GENERAL CONTRACTOR TO PROVIDE A MINIMUM OF ONE FIRE EXTINGUISHER IN COMPLIANCE WITH THE LOCAL FIRE MARSHAL. LOCATION & QUANTITY OF FIRE EXTINGUISHER(S) TO BE DETERMINED BY THE FIRE MARSHAL. 	10. — EQUIPMENT INDICATOR
6. PROVIDE NON COMBUSTIBLE PLYWOOD BACKING IN LIEU OF GYPSUM BOARD AS BACKING FOR WALL MOUNTED WIRE SHELVES FROM 42" A.F.F. TO 90" A.F.F. SEE FLOOR/EQUIPMENT PLAN FOR SHELF LOCATIONS & WALL FINISH.	11. ✓ INDICATES PHONE LOCATION ON FLOOR/EQUIPMENT PLAN.



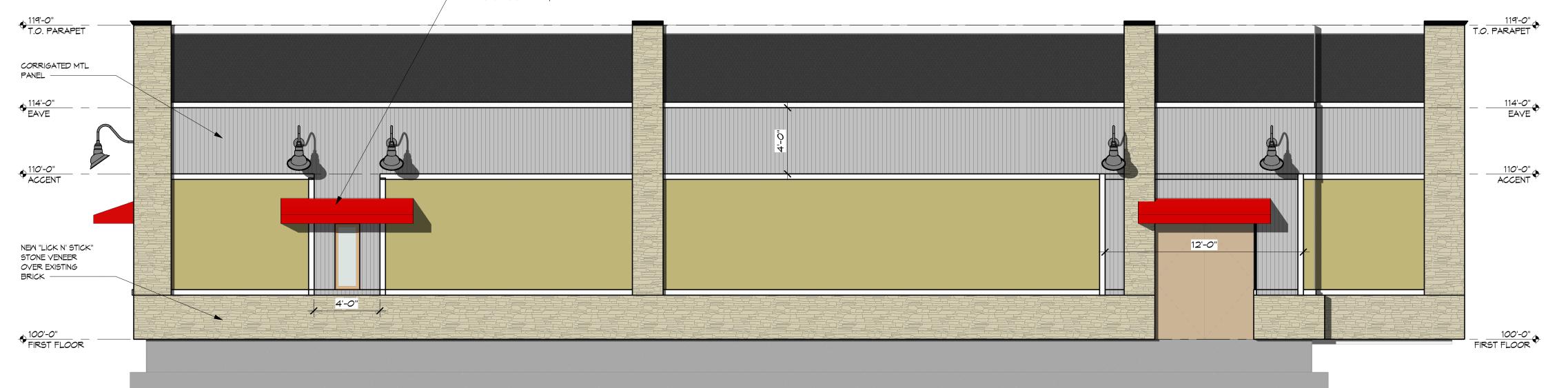


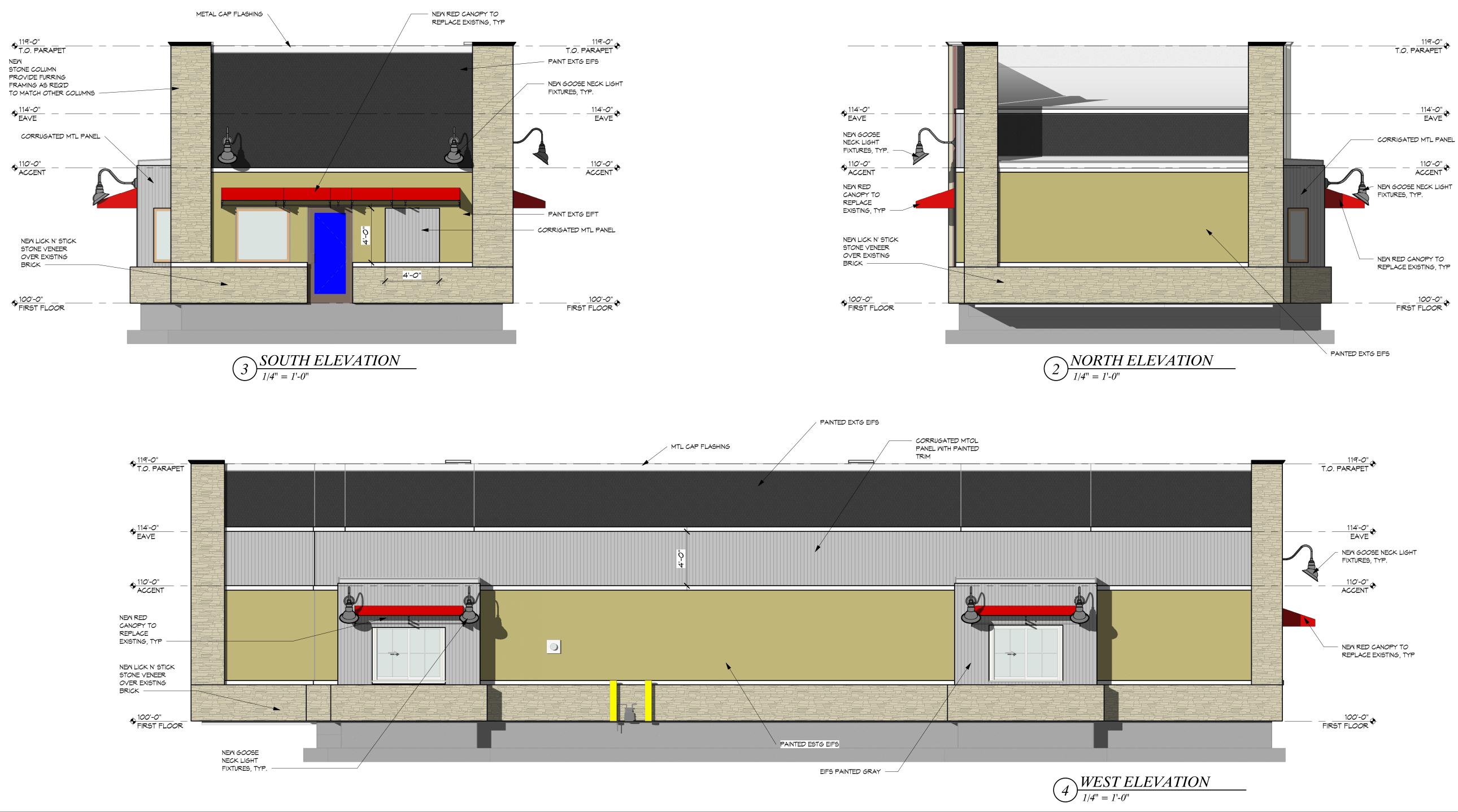


NOTE: INSTALLER TO MAINTAIN 8" INCREMENT W/ TILE INSTALLATION

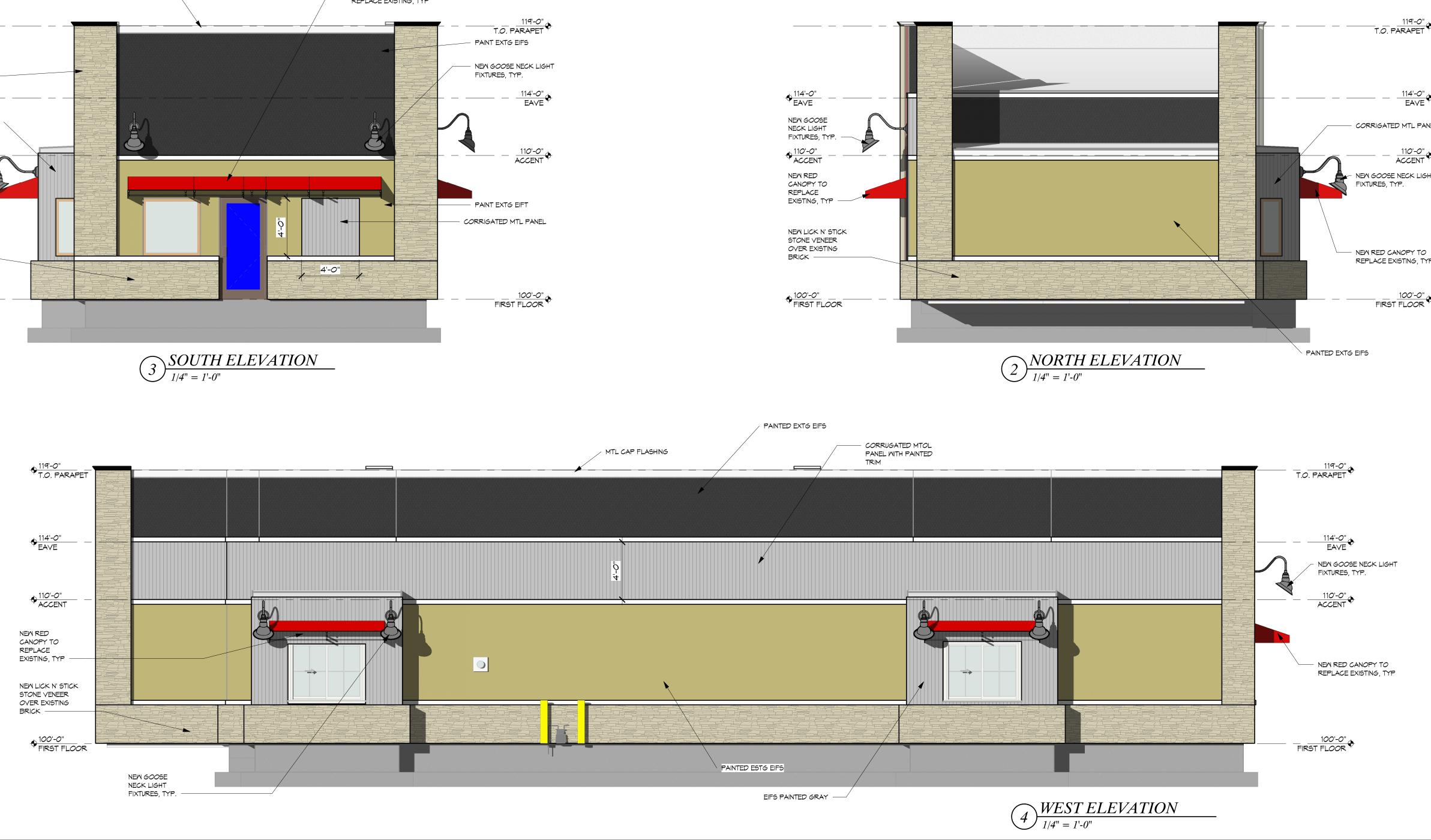
CONTRACTOR TO CLEAN & SEAL PORCELAIN FLOORING WHERE MANDATED BY CODE.

— OLYMPIA TILE/ ARBOR COLLECTION, MOKA OL.AR.MKA.0624 W/ 3/16" GROUT LINES CUSTOM BUILDING PRODUCTS- #60 CHARCOAL, LAY TILE W/ 8" OFFSET

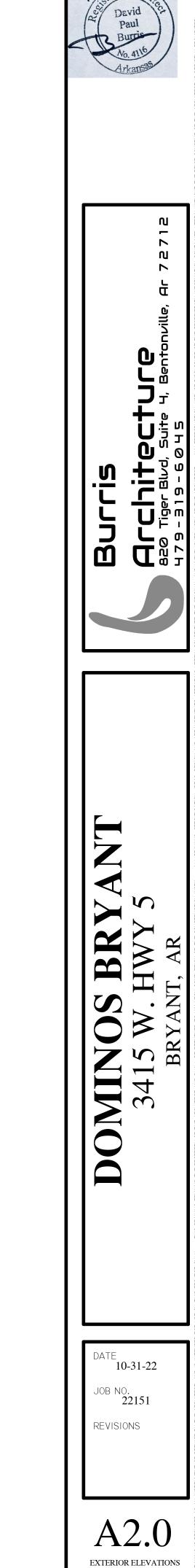








 $\underbrace{1}_{1/4" = 1'-0"} EAST ELEVATION$



PIP	ING MATERIAL SCHEDULE
DESCRIPTION	MATERIAL
ABOVE GROUND GAS	SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON FITTINGS OR WELDED JOINTS WITH BUTT WELD FITTINGS. PROVIDE CORROSION-RESISTANT MATERIAL ON PIPING EXPOSED TO ATMOSPHERE OR IN CONTACT WITH MATERIAL EXERTING A CORROSIVE ACTION
ABOVE GROUND SANITARY SEWER AND VENT	PVC SCHEDULE 40 PIPE AND FITTINGS EXCEPT IN PLENUM RETURN AREAS. IN PLENUM RETUR AREAS WRAP PVC WITH 1" FIRE WRAP.
FLEXIBLE GAS PIPING INSIDE BUILDING	FOR FINAL CONNECTION TO EQUIPMENT ONLY. CORRUGATED STAINLESS STEEL GAS LINE WI POLYETHYLENE JACKET AND FITTINGS BY MFG. MUST MEET ANSI, NFPA, FACTORY MUTUAL C AND LISTINGS AS AN ACCEPTABLE GAS PIPING MATERIAL, ALL STATE AND LOCAL CODE APPROVALS. PROVIDE PIPING EQUAL TO TRACPIPE BY OMEGA FLEX. SIZE PER MANUFACTUR INSTALLATION INSTRUCTIONS.
UNDERGROUND SANITARY SEWER AND VENT PIPING INSIDE BUILDING AND OUTSIDE BUILDING	PVC SCHEDULE 40 PIPE AND FITTINGS.
WATER DISTRIBUTION PIPE	WATER DISTRIBUTION PIPE SHALL CONFORM TO NSF 61 AND SHALL BE COPPER AND CONFOR TO THE STANDARDS LISTED IN TABLE 605.4 OF THE I.P.C

ROUGH-IN AND MOUNTING HEIGHT SCHEDULE

NOTES: 1. ALL VENT LINE SIZES SHOWN ARE MINIMUM UNLESS SHOWN LARGER ON RISER DIAGRAMS.

2. SIZES SHOWN FOR WASTE ARE FOR RISERS ONLY. 3. ALL DRAIN AND VENT LINES BELOW SLAB SHALL BE 2" OR LARGER.

4. VENT LINES SHALL RISE 6" ABOVE FLOOD LEVEL RIM BEFORE OFFSETTING HORIZONTALLY, EXCEPT FOR INTERCEPTORS LOCATED OUTDOORS 5. SIZES SHOWN APPLY UNLESS NOTED DIFFERENTLY ON PLANS

5. SIZES SHOWIN APPLY UNLESS NOTED DIFFEREN		NO.			
	WASTE	VENT	COLD	HOT	
FIXTURE	WASTE		WATER	WATER	HEIGHT OF INSTALLATION
FLOOR DRAINS/SINKS	3"	1-1/2"			
LAVATORIES AND SINKS, WALL MOUNTED	(1-1/2")	1-1/4"	1/2"	1/2"	NON-ADA 31" TO TOP OF RIM ADA 34" TO TOP OF RIM

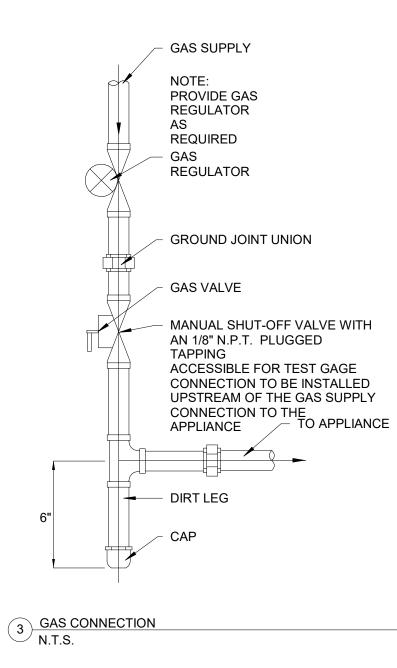
NOTES: () INDICATE INDIRECT WASTE.

PLUMBING PIPING INSULATION SCHEDULE

			INSU	LATION THICKNE	ESS	
			NC	MINAL PIPE SIZ	Ξ	
DESCRIPTION	INSULATION TYPE	<1	1 TO <1-1/2	1-1/2 TO <4	4 TO <8	≥{
DOMESTIC COLD WATER, HOT WATER, AND HOT WATER RETURN PIPING ABOVE GRADE	ELASTOMERIC, ADD ASTM E84 COMPLIANT JACKET IN AIR PLENUM SPACES	1	1	1.5	1.5	1.5

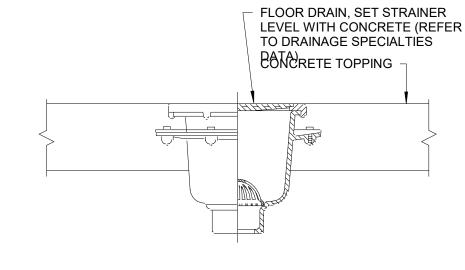
PLUMBING EQUIPMENT SCHEDULE

FIXTURE TAG	DESCRIPTION	MANUFACTURER	TRIM	ELECTRICAL REQUIREMENTS
BV-1	BALL VALVE	APOLLO INTERNATIONAL 94ALF-A	LEAD FREE BALL VALVE, FULL PORT, BLOWOUT-PROOF, PRESSURE RETAINING, ADJUSTABLE STEM PACKING NUT	
FS-1	FLOOR SINK 12-1/2" CAST IRON RECEPTOR, 8" DEEP	J. R. SMITH 3150	CAST IRON FLANGED RECEPTOR, SEEPAGE HOLES, ACID RESISTANT COATED INTERIOR, NICKEL BRONZE RIM, LOOSE GRATE, ALUMINUM DOME BOTTOM STRAINER, GRATE, MIFAB TRAP GUARD	
S-1	SINK- COMMERCIAL SINGLE COMPARTMENT, WALL MOUNT	ADVANCE TABCO 7-PS-60	FAUCET INCLUDED, 3-1/2" OPENING DRAIN. McGUIRE 151M HEAVY DUTY BRASS BASKET & STRAINER, 1 1/2", CHROME PLATED TAILPIECE. McGUIRE 8912 1 1/2" x 1 1/2" HEAVY DUTY CHROME PLATED CAST BRASS P-TRAP W/ CLEANOUT PLUG, McGUIRE 170LK CHROME PLATED SOLID BRASS ANGLE STOPS W/ 5" CHROME PLATED COPPER EXTENSION TUBE & LOOSE KEYS, FLEXIBLE CHROME PLATED COPPER RISERS, McGUIRE 111C SERIES 1 1/2" END OUTLET CONTINUOUS WASTE, PROVIDE TWO FAUCET HOLES ON DECK	
TMV-1	THERMOSTATIC MIXING VALVE - POINT OF USE	LEONARD 270-LF	LEAD FREE, INTEGRAL CHECK VALVE AND STRAINER, PROVIDE, TEMPERATURE CONTROL SET AT 110°	



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MECHANICAL PIPING LEGEND

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ADJ.

ISOLATION VALVE

PRESSURE RELIEF

VALVE

BALL VALVE

CALIBRATED

BALANCING VALVE

BUTTERFLY VALVE

3-WAY CONTROL

VALVE

2-WAY CONTROL

VALVE

MANUAL SYSTEM

BYPASS VALVE

PRESSURE GAUGE

PORT

PRESSURE GAUGE

CONTINUATION

SYMBOL

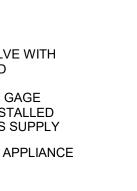
NORMALLY CLOSED

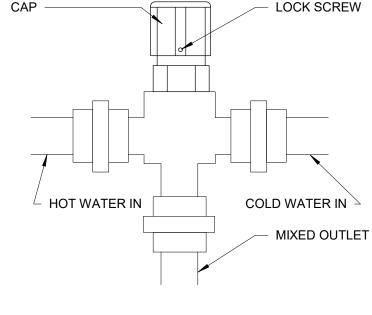
ADJUSTABLE



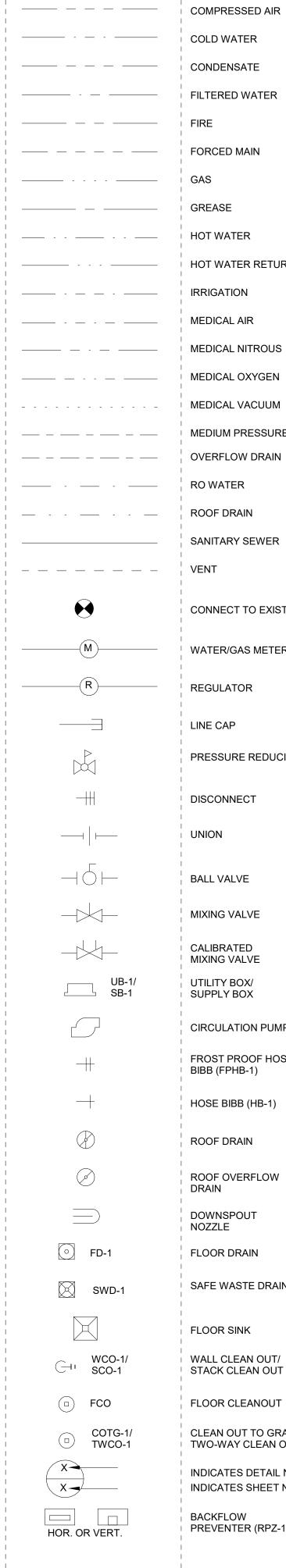
TEMPERATURE

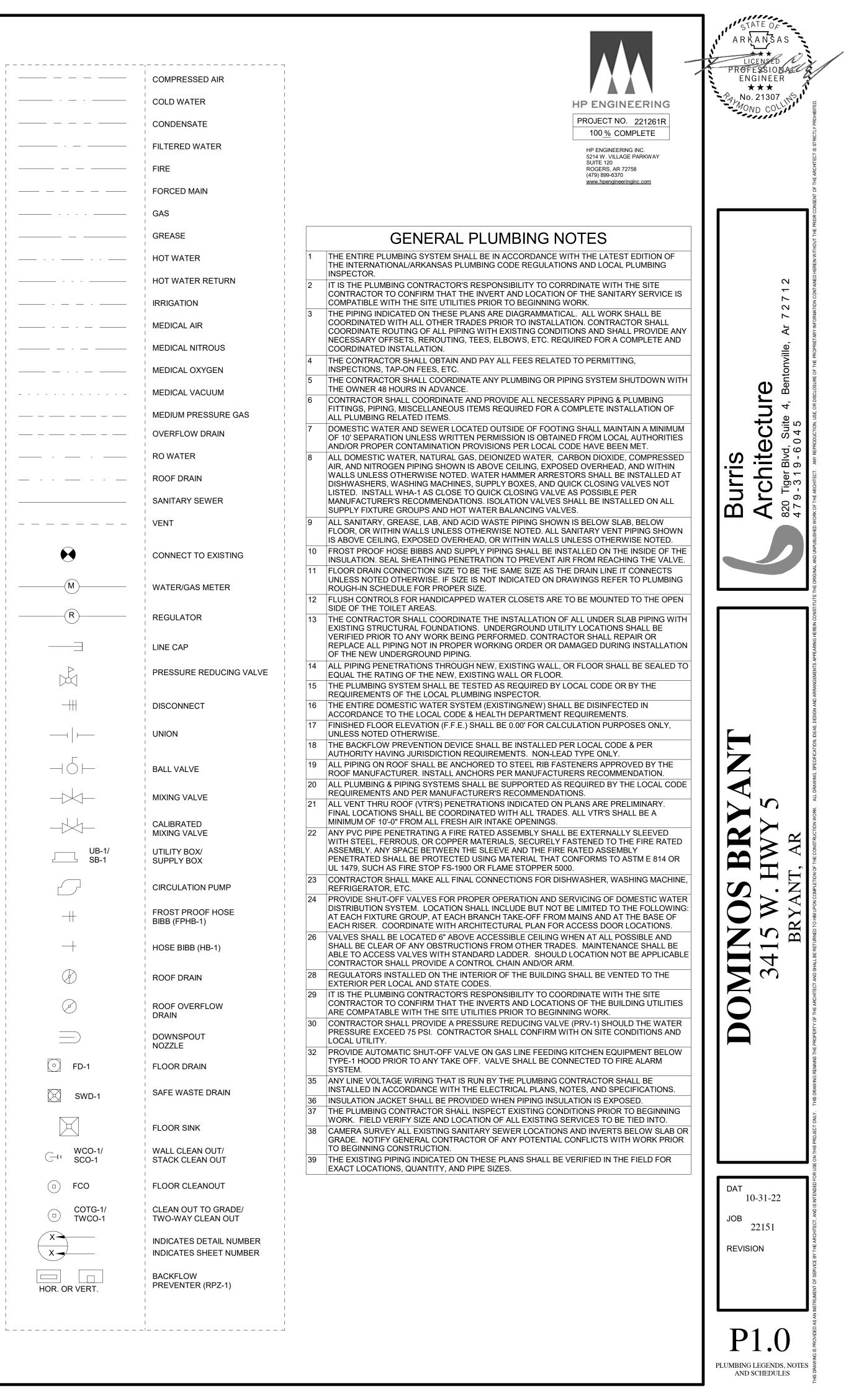
ADJUSTMENT

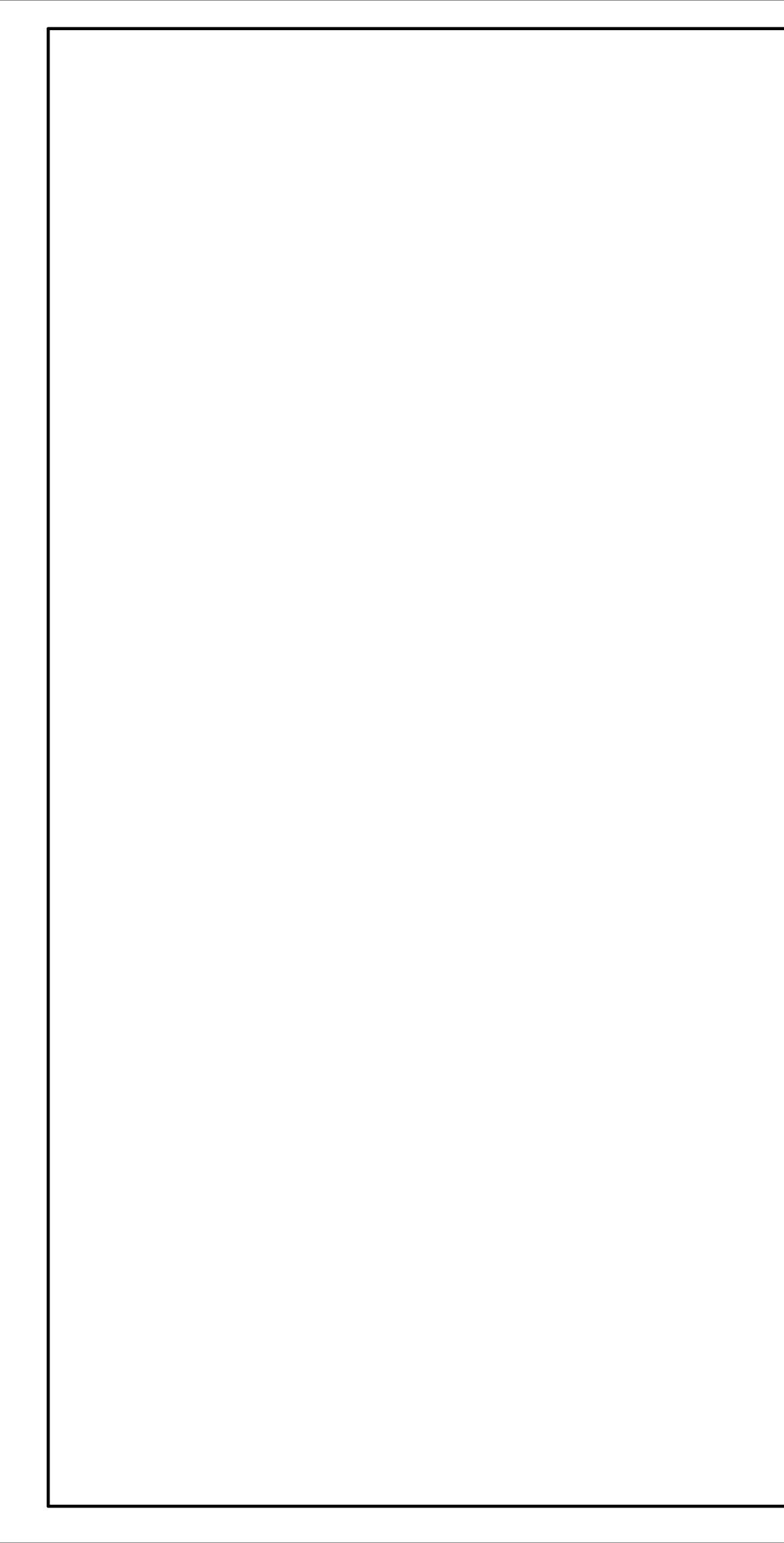


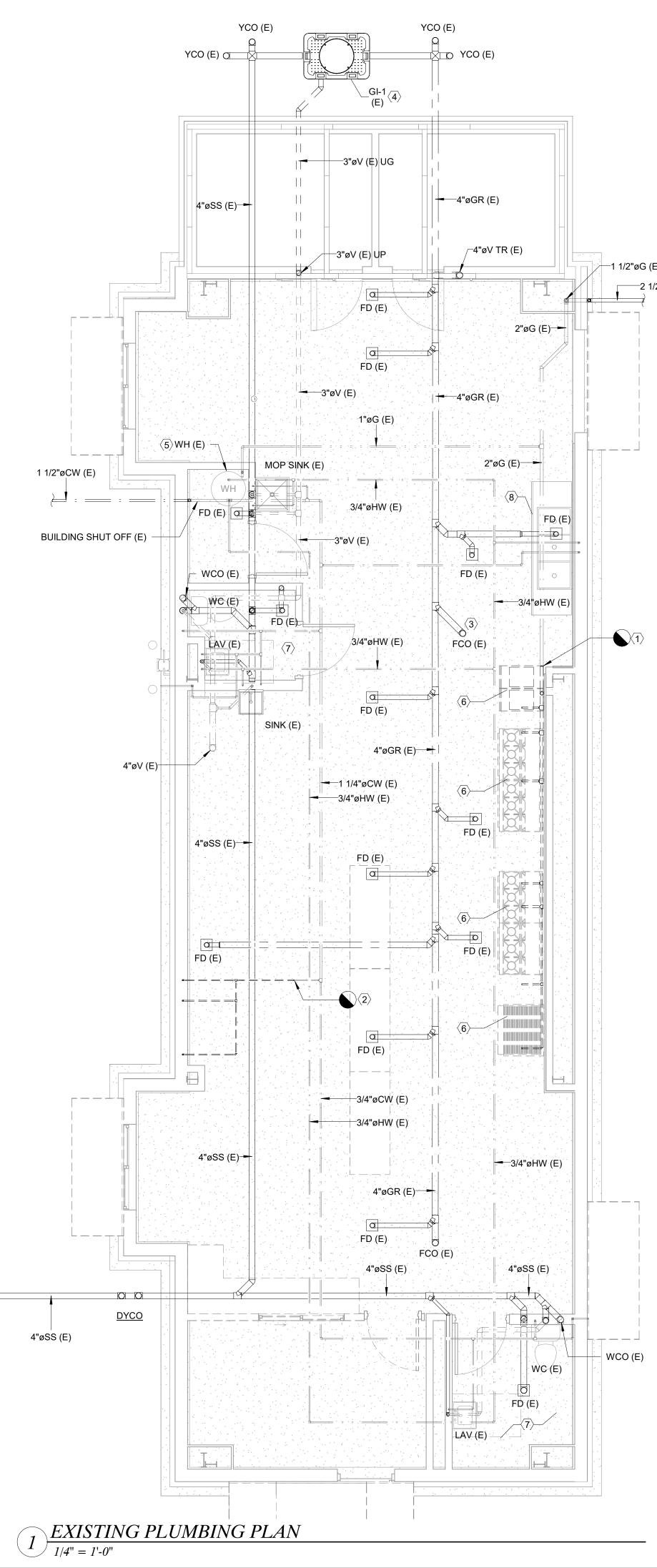














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EXISTING PLUMBING PLAN

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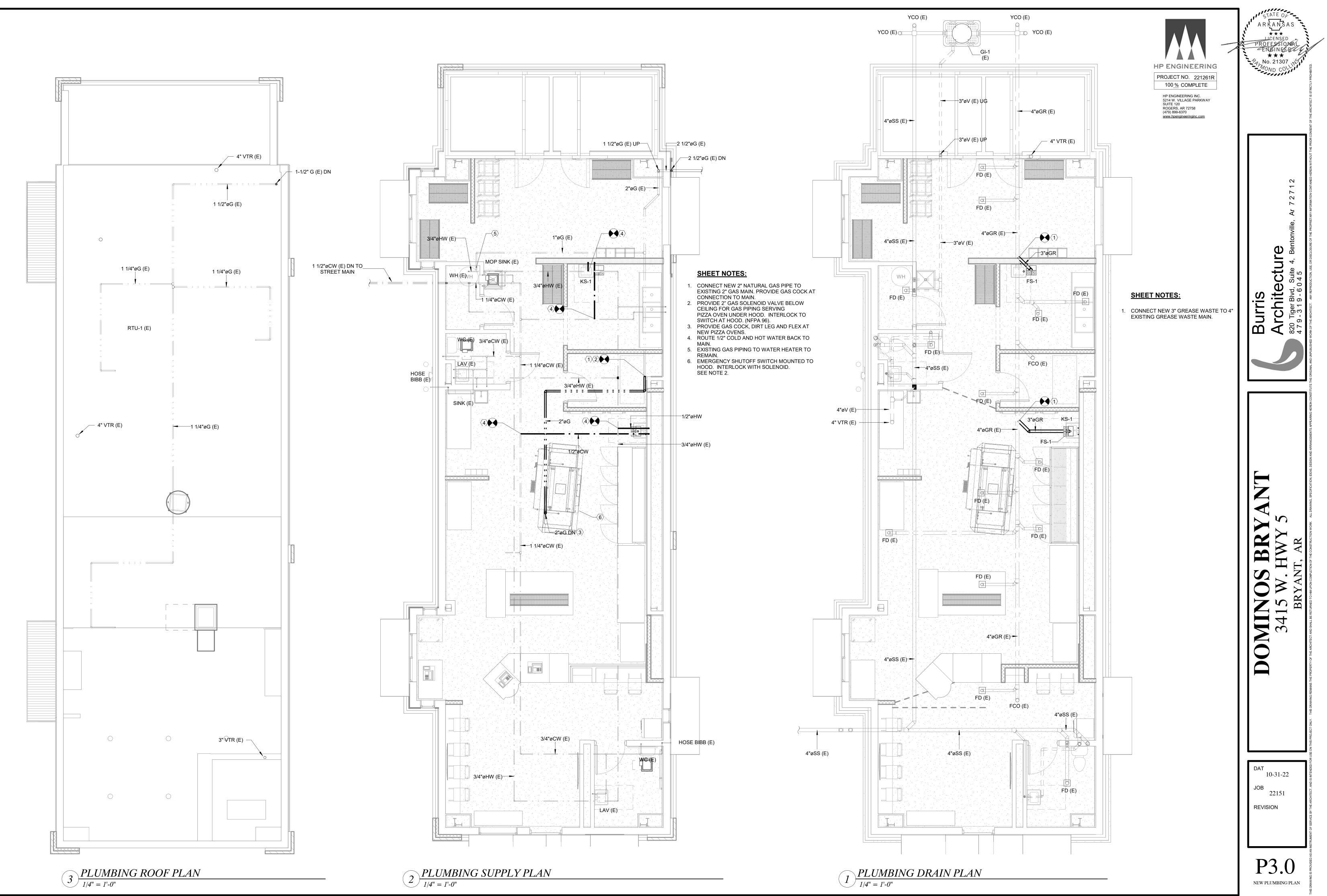
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HP ENGINEERING INC. 5214 W. VILLAGE PARKWAY SUITE 120 ROGERS, AR 72758 (479) 899-6370 www.hpengineeringinc.com

SHEET NOTES:

- 1. DEMO EXISTING 2" NATURAL GAS LINE DOWNSTREAM OF EXISTING SOLENOID VALVE. CONTRACTOR TO FIELD VERIFY EXISTING PIPE LOCATION, SIZE AND WORKING CONDITION.
- DEMO EXISTING 1/2" CW LINE BACK TO MAIN AND CAP.
 EXISTING BUILDING GAS SHUT OFF AND REGULATOR. INLET PRESSURE @ 5 PSI,
- OUTLET PRESSURE @ 11 IN. WC. ESTIMATED EXISTING LOAD 1,939 MBH. 4. EXISTING GREASE INTERCEPTOR SCHIER GB-250 @ 100 GPM. CONTRACTOR VERIFY LOCATION AND EXISTING WORKING CONDITIONS.
- 5. EXISTING GAS WATER HEATER. A.O. SMITH BTH-199. CONTRACTOR TO VERIFY LOCATION AND WORKING CONDITIONS. 6. DEMO EXISTING EQUIPMENT AND ASSOCIATED PIPING AND CAP BEFORE SOLENOID
- VALVE.
- 7. EXISTING PLUMBING FIXTURES AND PIPING TO REMAIN. CONTRACTOR TO FIELD VERIFY EXISTING FIXTURES AND PLUMBING PIPING WORKING CONDITIONS.
 8. EXISTING 3-COMP. SINK TO REMAIN. CONTRACTOR TO FIELD VERIFY EXISTING FIXTURES AND PLUMBING PIPING WORKING CONDITIONS.

1 1/2"øG (E) UP TO ROOF _____2 1/2"øG (E){3}



22A PLUMBING rev – 20150529

22A 1 GENERAL INSTRUCTIONS

22A 1-1 GENERAL REQUIREMENTS

Requirements under Division 1 and the general and supplementary conditions of these specifications apply to this section and division. Where the requirements of this section and division exceed those of Division 1, this section and division take precedence. Become thoroughly familiar with all their contents as to requirements that affect this division, section or both. The work required under this section includes material, equipment, appliances, transportation, services, and labor required to complete the entire system as required by the drawings and specifications, or reasonably inferred to be necessary to facilitate each system's functioning as implied by the design and the equipment specified.

The specifications and drawings for the project are complementary, and portions of the work described in one, shall be provided as if described in both. In the event of discrepancies, notify the engineer and request clarification prior to proceeding with the work involved.

Drawings are graphic representations of the work upon which the contract is based. They show the materials and their relationship to one another, including sizes, shapes, locations, and connections. They also convey the scope of work, indicating the intended general arrangement of the equipment and other materials without showing all of the exact details as to elevations, offsets, control lines, and other installation requirements. Use the drawings as a guide when laying out the work and to verify that materials and equipment will fit into the designated spaces, and which, when installed per manufacturers' requirements, will ensure a complete, coordinated, satisfactory and properly operating system. Determine exact locations by job measurements, by checking the requirements of other trades, and by reviewing all contract documents. Correct errors that could have been avoided by proper checking and inspection, at no additional cost to the owner.

Specifications define the qualitative requirements for products, materials, and workmanship upon which the contract is based.

22A 1-2 DEFINITIONS

Whenever used in these specifications or drawings, the following terms shall have the indicated meanings:

Furnish: "to supply and deliver to the project site, ready for unloading, unpacking, assembling, installing, and similar operations."

Install: "to perform all operations at the project site, including, but not limited to, and as required: unloading, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, testing, commissioning, starting up and similar operations, complete, and ready for the intended use."

Provide: "to furnish and install complete, and ready for the intended use."

Furnished by owner (or owner-furnished) or furnished by others: "an item furnished by the owner or under other divisions or contracts, and installed under the requirements of this division, complete, and ready for the intended use, including all items and services incidental to the work necessary for proper installation and operation. Include the installation under the warranty required by this division.

Engineer: where referenced in this division, "engineer" is the engineer of record and the design professional for the work under this division, and is a consultant to, and an authorized representative of, the architect, as defined in the general and/or supplementary conditions. When used in this division, it means increased involvement by, and obligations to, the engineer, in addition to involvement by, and obligations to, the "architect".

AHJ: the local code and/or inspection agency (authority) having jurisdiction over the work.

NRTL: nationally recognized testing laboratory, as defined and listed by OSHA in 29 CFR 1910.7 (e.g., UL, ETL, CSA), and acceptable to the AHJ over this project.

The terms "equivalent", "equivalent", or "equal" are used synonymously and shall mean "accepted by or acceptable to the engineer as equivalent to the item or manufacturer specified". The term "approved" shall mean labeled, listed, certified, or all three, by an NRTL, and acceptable to the AHJ over this project.

22A 1-3 PRE-BID SITE VISIT

Prior to submitting bid, visit the site of the proposed work and become fully informed as to the conditions under which the work is to be done. Failure to do so will not be considered sufficient justification to request or obtain extra compensation over and above the contract price.

22A 1-4 MATERIAL AND WORKMANSHIP

Provide all material and equipment new and in first class condition. Provide markings or a nameplate for all material and equipment identifying the manufacturer and providing sufficient reference to establish quality, size and capacity. In general, provide the following quality grade(s) for all materials and equipment: Commercial Specification Grade

Pipe, pipe fittings, pipe specialties and valves shall be manufactured in plants located in the United States.

Work performed under this contract shall provide a neat and "workmanlike" appearance when completed, to the satisfaction of the architect and engineer. Workmanship shall be the finest possible by experienced mechanics of the proper trade.

The complete installation shall function as designed and intended with respect to efficiency, capacity, noise level, etc. Abnormal or excessive noise from equipment, devices or other system components will not be acceptable.

Remove from the premises waste material present as a result of work. Clean equipment installed under this contract to present a neat and clean installation at the termination of the work.

Repair or replace public and private property damaged as a result of work performed under this contract to the satisfaction of authorities and regulations having jurisdiction

22A 1-5 MANUFACTURERS

In other articles where lists of manufacturers are introduced, subject to compliance with requirements, provide products by one of the manufacturers specified.

Where a list is provided, manufacturers listed are not in accordance with any ranking or preference.

Where manufacturers are not listed, provide products subject to compliance with requirements from manufacturers that have been actively involved in manufacturing the specified product for no less than 5 years. 22A 1-6 COORDINATION

Coordinate all work with other divisions and trades so that the various components of the systems will be installed at the proper time, fit the available space, and will allow proper service access to those items requiring maintenance. Refer to all other division's drawings, and to relevant equipment submittals and shop drawings to determine the extent of clear spaces. Components which are installed without regard to the above shall be relocated at no additional cost to the owner.

Unless otherwise indicated, the general contractor will provide chases and openings in building construction required for installation of the systems specified herein. Contractor shall furnish the general contractor with information where chases and openings are required. Make all offsets required to clear equipment, beams and other structural members, and to facilitate concealing system components in the manner anticipated in the design. Keep informed as to the work of other trades engaged in the construction of the project, and execute work in a manner as to not interfere with or delay the work of other trades.

Figured dimensions shall be taken in preference to scale dimensions. Contractor shall take his own measurements at the building, as variations may occur. Contractor will be held responsible for errors that could have been avoided by proper checking and inspection

Provide materials with trim that will properly fit the types of ceiling, wall, or floor finishes actually installed. Model numbers listed in the construction documents are not necessarily intended to designate the required trim.

22A 1-7 ORDINANCES, CODES, AND STANDARDS

Work performed under this contract shall, at a minimum, be in conformance with applicable national, state and local codes having jurisdiction. Equipment furnished and associated installation work performed under this contract shall be in strict compliance with current applicable codes adopted by the local AHJ including any amendments and standards as set forth by the National Fire Protection Association (NFPA), Underwriters Laboratories (UL), Occupational Safety and Health Administration (OSHA), American Society of Mechanical Engineers (ASME), American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE), American National Standards Institute (ANSI), American Society of Testing Materials (ASTM) and other national standards and codes where applicable. Additionally, comply with rules and regulations of public utilities and municipal departments affected by connection of services. Where the contract documents exceed the requirements of the referenced codes, standards, etc., the contract documents shall

take precedence.

Promptly bring all conflicts observed between codes, ordinances, rules, regulations, referenced standards, and these documents to the engineer's attention for final resolution. Contractor will be held responsible for any violation of the law.

Procure and pay for permits and licenses required for the accomplishment of the work herein described. Where required, obtain, pay for and furnish certificates of inspection to owner. Contractor will be held responsible for violations of the law.

22A 1-8 PROTECTION OF EQUIPMENT AND MATERIAL

Store and protect from damage equipment and materials delivered to job site, in accordance with manufacturers' recommendations. For materials and equipment susceptible to changing weather conditions, dampness, or temperature variations, store inside in conditioned spaces. For materials and equipment not susceptible to these conditions, cover with waterproof, tear-resistant, heavy tarp or polyethylene plastic as required to protect from plaster, dirt, paint, water, or physical damage. Equipment and material that has been damaged by construction activities will be rejected, and contractor shall furnish new equipment and material as required at no additional cost to the owner.

Keep premises broom clean from foreign material created during work performed under this contract. Piping, equipment, etc. shall have a neat and clean appearance at the termination of the work.

Plug or cap open ends of piping systems while stored and installed during construction when not in use to prevent the entrance of debris into the systems. Keep the manufacturer-provided protective coverings on floor drains, floor sinks and trench drains during construction. Remove coverings at the termination of the work and polish exposed surfaces

22A 1-9 SUBSTITUTIONS

Include in the base bid the products specifically named in these specifications or on the drawings. Submit, in the form of alternates, with bid, products of any other manufacturers for similar use, provided the differences in cost, if any, are included for each proposed alternate.

No substitutions will be considered with receipt of Bids, unless the Architect and Engineer have received from the Bidder a written request for approval to bid a substitution at least ten calendar days prior to the date for receipt of Bids, and have approved the substitution request. Include, with each such request, the name of the material or equipment for which substitution is being requested, and a complete description of the proposed substitution, including drawings, cut sheets, performance and test data, and all other information necessary for an evaluation. Include also a statement setting forth changes in other materials, equipment or other work that would be required to incorporate the substitution. The burden of proof of the merit of the proposed substitute is upon the proposer. The proposer of any substitutions shall compensate the Engineer at a rate of \$150.00 per hour for time spent evaluating proposed substitutions and or the subsequent revisions to the design required to utilize the substitution.

The Architect's or Engineer's decision to approve or disapprove a substitution in a Bid is final.

rely upon approvals made in any other manner, including verbal.

22A 1-10 SUBMITTALS

Assemble and submit to the architect, for engineer's review, manufacturers' product literature for material and equipment to be furnished, installed, or both, under this division, including shop drawings, manufacturers' product data and performance sheets, samples, and other submittals required by this division. Highlight, mark, list or indicate the materials, performance criteria and accessories that are being proposed. Provide the number of submittals required by division 1; however, at a minimum, submit two (2) sets. Before submitting, verify that all materials and equipment submitted are mutually compatible and suitable for the intended use, fit the available spaces, and allow ample and code-required room for access and maintenance. Submittals shall contain the following information. Submittals not so identified will be returned to the contractor without action:

The project name. The applicable specification section and paragraph. The submittal date.

Submittals and shop drawings shall not contain HP Engineering's firm name or logo, nor shall it contain the HP Engineering's engineers' seal and signature. They shall not be copies of HP Engineering's work product.

Transmit submittals as early as required to support the project schedule. Allow for two weeks engineer review time, plus mailing time, plus a duplication of this time for re-submittals, if required. The engineer's submittal reviews will not relieve the contractor from responsibility for errors in dimensions, details, size of members, or quantities; or for omitting components or fittings; or for not coordinating items with actual building conditions.

Refer to division 1 for acceptance of electronic submittals for this project. For electronic submittals, contractor shall submit the documents in accordance with the procedures specified in division 1. Contractor shall notify the architect and engineer that the shop drawings have been posted. If electronic submittal procedures are not defined in division 1, contractor shall include the website, user name and password information needed to access the submittals. For submittals sent by e-mail, contractor shall copy the architect and engineer's designated representatives. Contractor shall allow the engineer review time as specified above in the construction schedule. Contractor shall submit only the documents required to purchase the materials and/or equipment in the electronic submittal and shall clearly indicate the materials, performance criteria and accessories being proposed. General product catalog data not specifically noted to be part of the specified product will be rejected and returned without review.

22A 1-11 ELECTRONIC DRAWINGS

In preparation of shop drawings or record drawings, contractor may, as an option, obtain electronic drawing files in Revit, AutoCAD, or DXF format from the engineer for a fee of \$200 for the first sheet and \$100 per sheet for each additional sheet. Contact the architect for written authorization; and, contact the engineer to obtain the necessary release agreement form and to indicate the desired shipping method and drawing format. In addition to payment, architect's written authorization and engineer's release agreement form must be received before electronic drawing files will be sent. 22A 1-12 OPERATION AND MAINTENANCE INSTRUCTIONS

Submit to the architect, for engineer's review, copies each of operations and maintenance instruction manuals, appropriately bound into manual form including approved copies of the following, revised if necessary to show system and equipment as actually installed. Paper clips, staples, rubber bands, and mailing envelopes are not considered approved binders. Provide the number of submittals required by Division 1; however, at a minimum, submit two (2) sets, and include, at a minimum, the following information:

Cover sheet that lists the project name, date, owner, architect, consulting engineer, general contractor, sub-contractor, and an index of contents. Manufacturers' catalogs and product data sheets

Wiring diagrams Operation and Maintenance instructions

Parts lists

the architect and engineer.

Approved shop drawings Test reports as defined for the systems and equipment provided or furnished or installed under this contract. Names, addresses, telephone numbers, and e-mail addresses of local contacts for warranty services and spare parts.

Submit manuals prior to requesting the final punch list and before any requests for substantial completion. Final approval of this division's systems installed under this contract will be withheld until this equipment brochure is received and deemed complete by

Provide "as-built" drawings (see Division 1 and general conditions).

22A 1-13 TRAINING

representative to train owner's designated personnel on the operation and maintenance of the equipment provided for this project.

Provide training to include but not be limited to an overview of the system and/or equipment as it relates to the facility as a whole; operation and maintenance procedures and schedules related to startup and shutdown, troubleshooting, servicing, preventive maintenance and appropriate operator intervention; and review of data included in the operation and maintenance manuals.

Submit a certification letter to the architect stating that the owner's designated representative has been trained as specified herein. Letter shall include date, time, attendees and subject of training. The contractor and the owner's representative shall sign the certification letter indicating agreement that the training has been provided.

Schedule owner training with at least 7 days' advance notice.

22A 1-14 WARRANTIES

Warrant each system and each element thereof against all defects due to faulty workmanship, design or material for a period of 12 months from date of substantial completion, unless specific items are noted to carry a longer warranty in the construction documents or manufacturer's standard warranty exceeds this duration. Warranties shall include labor and material. Remedy all defects, occurring within the warranty period(s), as stated in the general conditions and Division 1 without any additional costs to the owner.

Perform any required remedial work promptly, upon written notice from the engineer or owner.

At the time of substantial completion, deliver to the owner all warranties, in writing and properly executed, including term limits for warranties extending beyond the required period, each warranty instrument being addressed to the owner and stating the commencement date and term

If the proposed substitution is approved prior to receipt of Bids, such approval will be stated in an Addendum. Bidders shall not

No substitutions will be considered after receipt of Bids and before award of the Contract.

No substitutions will be considered after the Contract is awarded unless specifically provided in the Contract Documents.

The contractor's stamp, which shall certify that the stamped drawings have been checked by the contractor, comply with the drawings and specifications, and have been coordinated with other trades.

At a time mutually agreed upon between the owner and contractor, provide the services of a factory trained and authorized

22A 1-15 EXCAVATION AND BACKFILLING

Perform excavation and backfill required for installation of underground work under this contract. Trenches shall be of sufficient width. Crib or brace trenches to prevent cave-in or settlement. Do not excavate trenches close to columns and walls of building without prior consultation with the architect. Use pumping equipment if required to keep trenches free of water. Backfill trenches in maximum 6" layers of well-tamped dry earth in a manner to prevent future settlement.

Excavation as herein specified shall be classified as common excavation. Common excavation shall comprise the satisfactory removal and disposition of material of whatever substances and of every description encountered, including rock, if any, within the limits of the work as specified and shown on the drawings. Excavation shall be performed to the lines and grades indicated on the drawings. Excavated materials which are considered unsuitable for backfill, and surplus of excavated material which is not required for backfill, shall be disposed of by the contractor at his own expense and responsibility, and to the satisfaction of the architect.

22A 1-16 COINCIDENTAL DAMAGE

Repair all streets, sidewalks, drives, paving, walls, finishes, and other facilities damaged in the course of this work. Repair materials shall match existing construction. All backfilling and repairing shall meet all requirements of the owner, city and others having jurisdiction. Repair work shall be thoroughly first class. Conform to all requirements of Division 2 of these specifications. 22A 1-17 CUTTING AND PATCHING

Following the requirements in Division 1, cut walls, floors, ceilings, and other portions of the facility as required to perform work under this division. Obtain permission of the architect, owner, or both, before doing any cutting. Cut all holes as small as possible. Patch walls, floors, and other portions of the facility as required by work under this division. All patching shall be thoroughly first class and shall match the original material and construction, including fire ratings if applicable in a manner satisfactory to the architect. 22A 1-18 ROUGH-IN

Coordinate without delay all roughing-in with other divisions. Conceal all piping and rough-in except in unfinished areas and where otherwise indicated in the construction documents. 22A 1-19 CONCRETE BASES

Provide concrete bases for equipment where indicated on the drawings. Concrete bases shall have chamfered edges. Size of pad shall be a minimum of 4" greater than the footprint of the equipment that it is supporting.

Construct equipment bases and housekeeping pads of a minimum 28 day, 4000 psi concrete conforming to American Concrete Institute standard building code for reinforced concrete (ACI 318-99) and the latest applicable recommendations of the ACI standard practice manual. Concrete shall be composed of cement conforming to ASTM C 150 Type I, aggregate conforming to ASTM C33, and potable water. Exposed exterior concrete shall contain 5 to 7 percent air entrainment.

Unless otherwise specified or shown on the structural drawings, reinforce equipment bases and housekeeping pads with No. 4 reinforcing bars conforming to ASTM A 615 or 6x6 – W2.9 x W2.9 welded wire mesh conforming to ASTM A185. Place reinforcing bars 24" on center with a minimum of two bars each direction.

Provide galvanized anchor bolts for equipment placed on concrete equipment bases and housekeeping pads or on concrete slabs. Anchor bolts size, number and placement shall be as recommended by the manufacturer of the equipment.

Concrete equipment bases shall have minimum heights in accordance with the following: for water heaters, water softeners and other equipment not listed, minimum height is 4". For water heaters over 200 gallons capacity and domestic water booster pumps, minimum height is 6". Height of equipment bases applies to equipment installed on slab-on-grade. For equipment installed on floors above grade and on the roof, refer to the drawings.

22A 1-20 STRUCTURAL STEEL

Structural steel used for pipe supports, equipment supports, etc., shall be new and clean, and shall conform to ASTM designation

Support plumbing equipment and piping from the building structure. Do not support plumbing equipment and piping from ceilings, other mechanical or electrical components, and other non-structural elements.

22A 1-21 ACCESS DOORS

Provide access doors in ceilings and walls where indicated or required for access to concealed valves and equipment installed under this section. Provide concealed hinges, screwdriver-type lock, anchor straps; manufactured by Milcor, Zurn, Titus, or equal. Obtain architect's approval of type, size, location, and color before ordering. 22A 1-22 PENETRATIONS

Provide sleeves for pipes passing through above grade concrete or masonry walls, concrete floor or roof slabs. Sleeves are not required for core drilled holes in existing masonry walls, concrete floors or roofs. Provide 10 gauge galvanized steel sleeves for sleeves 6" and smaller. Provide galvanized sheet metal sleeves for larger than 6". Schedule 40 PVC sleeves are acceptable for installation in areas without return air plenums.

Seal elevated floor, exterior wall and roof penetrations watertight and weathertight with non-shrink, non-hardening commercial sealant. Pack with mineral wool and seal both ends with minimum of $\frac{1}{2}$ of sealant.

Seal around penetrations of fire rated assemblies. Coordinate fire ratings and locations with the architectural drawings. Refer to architectural specifications for fire stoppings. Provide a product schedule for UL listing, location, wall or floor rating and installation drawing for each penetration fire stop system.

Extend pipe insulation for insulated pipe through floor, wall and roof penetrations, including fire rated walls and floors. The vapor barrier shall be maintained. Size sleeve for a minimum of 1" annular clear space between inside of sleeve and outside of insulation.

Seal concrete or masonry exterior wall penetrations below grade with "wall pipes" and mechanical sleeve seals. Provide cast iron "wall pipes" with integral waterstop ring manufactured by Josam, Jay R. Smith, Wade, Watts or Zurn. Provide modular mechanical sleeve seals, manufactured by Thunderline / Link Seal, Calpico, Inc., and Metraflex.

Seal elevated concrete slab with water proof membrane penetrations with "wall pipes" and water proof sealant. Secure waterproof membrane flashing between "wall pipe" clamping flange and clamping ring. Provide cast iron "wall pipes" with integral waterstop ring manufactured by Josam, Jay R. Smith, Wade, Watts or Zurn.

Provide sleeves for horizontal pipe passing through or under foundation. Sleeves shall be cast iron soil pipe two nominal pipe sizes larger than the pipe served.

Provide Schedule 40 PVC pipe sleeves for vertical pressure pipe passing through concrete slab on grade. Sleeves shall be one nominal pipe size larger than the pipe served and two pipe sizes larger than pipe served for ductile iron pipes with restraining rods. Seal water-tight with silicone caulk.

Provide 1/2" thick cellular foam insulation around perimeter of non-pressure pipe passing thru concrete slab on grade. Insulation shall extend to 2" above and below the concrete slab.

22A 1-24 ELECTRICAL WIRING

Line Voltage control and interlock wiring shall be provided by the Division 26 contractor. Low Voltage control wiring shall be provided by the Division 23 contractor. Required conduit and rough-ins for low Voltage control wiring shall be provided by the Division 26 contractor. Furnish wiring diagrams to the Division 26 contractor as required for proper equipment hookup. Coordinate with the Division 26 contractor the actual wire sizing amps for the equipment (from the equipment nameplate) to ensure proper installation.

22A 1-25 EQUIPMENT FURNISHED BY OTHERS

Furnish and install roughed-in wastes, vents and water services. Provide final connection to kitchen equipment, furnished by others, in locations as indicated on the drawings. Provide accessory items that are required but not furnished with the equipment, including traps, stop valves, PRV's, indirect drain from equipment to floor drains, and accessory items indicated or required for the proper operation of the complete system at the termination of the work.

Contractor shall be responsible for correct rough-in dimensions, and shall verify same with architect and/or equipment supplier prior to service installations.

22A 1-26 ALTERNATES

Refer to the architectural portion of the specification for list of alternates. Applicable sections of the base specifications shall apply to all work required by the alternate unless otherwise specified. Determine whether or not and how each alternate affects work. Include labor, materials, equipment and transportation services necessary for and incidental to the completion of work under each particular alternate. Furnish separate bid for each alternate applicable to work, stating the amount to be added or deducted from the base bid.

22A 1-27 EXTERIOR UTILITY CONNECTIONS Terminate domestic water, storm, and sewer lines at a point approximately five feet from the building wall, or as shown on the drawings. Make connection to the various services provided by others and coordinate connection requirements with civil engineer. Verify that installation will tie into the various services provided by others at the indicated invert elevation point prior to installation. If the installation will not tie into the indicated invert elevation point while maintaining proper fall, notify architect and civil engineer so that an alternative may be determined.

Provide service piping and accessories required to complete utility connections that are not furnished by the serving utility.



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Coordinate with the local gas service company to provide a new gas service, including gas meter, shut-off valves, and regulator as indicated on the drawings. Installation shall be in complete conformance with the requirements of the local gas service company

22A 1-29 BUILDING OPERATION

Comply with the schedule of operations as outlined in the architectural portions of this specification. Building shall be in continuous operation. Accomplish work that requires interruption of building operation at a time when the building is not in operation, and only with written approval of building owner and/or tenant. Coordinate interruption of building operation with the owner and/or tenant a minimum of 7 days in advance of work.

22A 1-30 SYSTEM TESTING AND ADJUSTING

Upon completion of each phase of the installation, test each system in conformance with local code requirements and as noted below. Furnish labor and equipment required to test plumbing work installed under this contract, and assume costs involved in making the tests, and repairing and/or replacing damage resulting therefrom.

Notify the architect and the authority having jurisdiction, three (3) working days prior to making plumbing system tests. Leave concealed work uncovered until the required tests have been completed, but if necessary due to construction procedure, tests on portions of the work may be made, and when satisfactory, the work may be concealed. Test piping before insulation is installed, and before backfill. Pipes, joints, flanges, valve stems, etc., shall be leak tight. Repair or replace system defects with new materials. Caulking of defective joints, cracks or holes will not be permitted. Repeat tests after defects have been eliminated. Make tests in the presence of the administrative authority and/or the owner's authorized representative.

Upon completion of the systems installation, and prior to acceptance by the architect and engineer, make general operating tests to demonstrate that equipment and systems are in proper working order, and are functioning in conformance with the intent of the drawings and specifications. As a part of these tests, open every water outlet to ensure complete system flushing, remove and clean faucet aerators, clean strainers, light pilot lights, and operate every piece of equipment furnished under this contract to demonstrate proper functioning.

Test the drainage and vent system by plugging openings with test plugs, except those at the top of the stacks. Fill the system with water; test results will be satisfactory if the water level remains stationary for not less than one (1) hour. Subject the drainage and vent system to a pressure of at least ten (10) feet of water. If leaks develop, repair them and repeat the test.

Test the domestic water system by filling it with water and then isolating the system from its source. Keep the system closed for a period of twenty-four hours, with no fixture being used. The pressure differential for this test period shall not exceed 10 psig. Test water piping to a 125 psi hydrostatic pressure.

For low pressure natural gas systems, subject the pipe to 10 psig air pressure for a period of one hour. The resultant pressure differential for this period shall be 0 psig. Test per gas company requirements where required.

22A 2 PLUMBING PIPING

22A 2-1 PIPING MATERIALS

Materials specified or noted on the drawings are subject to the approval of local code authorities. Verify approval before installing any material or joining method.

Domestic Water (cold, hot and hot water recirculation): Domestic water piping installed above the floor slab inside the building shall be type "L" hard temper copper tube with wrought copper fittings and soldered connections made up with 95/5 solder. Brazed mechanically formed tee connections (T-drill) may be used in copper lines where approved by code; connection shall be made with brazed silver solder (Silfos) joints in conformance with manufacturer's instructions.

Underground domestic water piping 2" and smaller shall be type "K" soft temper copper tubing with flared copper alloy fittings and connections, or type "K" hard temper copper tubing with conventional wrought copper fittings and silver solder (Silfos) joints. Install as few underground copper piping joints as possible. At building service entrance, no joints shall be installed under or within 5 feet of the building. Install domestic water piping below grade outside building at adequate depth to prevent freezing.

Underground domestic water piping 3" and larger shall be Class 52 ductile iron meeting the requirements of ANSI / AWWA Standard C151/A21.51. Piping shall be double cement lined in accordance with ANSI / AWWA Standard C104/A21.4. Fittings shall have mechanical joints. At contractor's option, pipe joints in straight runs (not at fittings) and not installed under or within 5 feet of the building slab may be push-on joints. Joints shall conform to the requirements of ANSI 21.11.

Interior Waste and Vent Below Slab: Waste and vent pipe below slab inside building shall be service weight cast iron soil pipe with hub and spigot fittings with neoprene gasket joints, meeting ASTM A74, manufactured by AB & I Foundry, Charlotte or Tyler Pipe and bearing the trademark of the CISPI and NSF. Hubless waste and vent pipe is not permitted below base slab. PVC Schedule 40 DWV ASTM D2665 pipe with PVC meeting ASTM B1784, "solid wall" cell Class 12454-B with ASTM 2665 socket fittings with solvent weld joints is also permitted where approved by code.

Interior Waste and Vent Above Slab: Waste and vent pipe above slab inside building shall be hubless cast iron soil pipe and fittings, meeting ASTM A888 and CISPI 301, manufactured by AB & I Foundry, Charlotte or Tyler Pipe and bearing the trademark of the CISPI and NSF. PVC Schedule 40 DWV ASTM D2665 pipe with PVC meeting ASTM B1784, "solid wall" cell class 12454-B with ASTM 2665 socket fittings with solvent weld joints is also permitted where approved by code, Natural Gas: Gas piping above ground shall be Schedule 40 black steel with malleable iron screwed fittings, or standard welded fittings.

Connections To Plumbing Fixtures And Equipment: 1-1/4" and larger waste connections from fixture traps to cast iron pipe shall be "DWV" copper with wrought copper drainage pattern fittings with copper sweat or compression joints at fixture trap connections and threaded joints at connections to cast iron pipe.

Indirect and Condensate Drain Inside Building: Indirect and condensate drain pipe installed inside the building shall be Type "M" hard copper with wrought copper fittings for 1" and smaller and "DWV" copper with wrought copper drainage pattern fittings for 1-1/4" and larger Install cleanouts at elbows greater than 45 degrees.

Indirect and Condensate Drain Outside Building: Indirect and condensate drain pipe installed outside the building above ground shall be Type "M" for 1" and smaller and "DWV" for 1-1/4" and larger Terminate at nearest roof drain, gutter or other location as shown drawings. Install cleanouts at elbows greater than 45 degrees.

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PLUMBING SPECIFICATIONS

22A 2-2 PIPING AND EQUIPMENT INSULATION

Domestic cold water, hot water, indirect and condensate drain pipe (within building) Refer to pipe insulation schedule on drawings for insulation details. Provide with self-sealing lap to provide a continuous vapor barrier by Certainteed, Owens-Corning or Armstrong. For hot piping, provide pipe hangers and riser clamps sized for the outside diameter of piping. Butt insulation to hanger or riser clamp for vertical pipe. Seal exposed insulation with insulation sealer. Exception for vertical piping: provide clamps sized for the outside diameter of the vertical pipe and extend clamp through insulation. Seal penetrations of insulation and vapor barrier with wet coat of vapor barrier lap cement. For cold piping at hangers provide 8" long sections of high density, high temperature calcium silicate by Johns-Manville, fiberglass by Knauf, or 8" long styrofoam billets by Dow or flexible unicellular piping insulation meeting ASTM C 534-01, Type I with integral high density pipe supports and encased in steel insulation shield by Cooper B-Line / Armacell or equivalent. Insulation shall be continuous along the pipe surface, except at valves, unions, and where piping is exposed at fixtures. Provide insulation on vent piping within six feet of vent through the roof. Provide insulation on domestic cold and hot water pipes installed in walls and chases.

Provide insulation protection shield at each hanger for insulated piping.

Cover fittings with Zeston, Knauf, or equal one-piece PVC pre-molded insulating covers. Fitting covers, jackets and adhesives shall not exceed flame spread rating of 25 and smoke development rating of 50 per ASTM E84. At all elbows and tees, fill voids between covers and piping with fiberglass insulation and tape joints. Install pipe insulation in compliance with manufacturer's recommendations. Where pre-molded insulating fittings are not approved by local authorities, miter insulation at fittings. Provide 2" fiberglass thick insulation for water, sanitary, waste or grease waste piping in unheated spaces where indicated on the drawings. 22A 2-3 PIPING JOINTS

Copper Tubing: Joints in hard temper tubing shall be soldered joints using lead-free 95/5 solder except where tubing is installed below grade or below the base slab, in which case joints shall be soldered with silver solder (Silfos). Joints in soft temper copper tubing shall be of the flared type installed in compliance with the fitting manufacturer's recommendations.

Threaded Steel Pipe: Threaded joints shall be full and clean, cut with not more than three (3) threads exposed beyond the fittings. Make joints tight with graphite base pipe joint compound and paint exposed threads of ferrous pipe with acid-resisting paint after piping has been tested and proven tight. No caulking, lamp-wick or other material will be permitted for correction of defective joints.

Welded Steel Pipe: Welded joints shall be of the butt welded single "vee" type. Bevel pipe at a 45 degree angle to within 1/16" of the inside wall, and build up the weld to one fourth greater depth than the pipe wall thickness. Welding shall be either electric or oxy-acetylene, performed in conformance with the ASME code for pressure pipe welding, and only by experienced certified welders.

Cast Iron Pipe Below Grade: Joints in bell and spigot cast iron waste and vent pipe shall be neoprene compression gaskets, Tyseal or equal.

Cast Iron Pipe Above Grade: Joints in hubless pipe shall be standard CISPI 310 domestically manufactured by Anaco, AB & I Foundry, Charlotte, Husky, Ideal, Tyler, Mission or Fernco.

PVC Pipe: Clean joints free from debris and moisture. Apply PVC primer meeting ASTM F656 to each joint. Apply solvent cement meeting ASTM D2564 and make joint while wet and in accordance with ASTM D2855.

Pipe Adapters: Make connection of new waste pipe to new or existing dissimilar waste pipe using adapter couplings. Provide Fernco, Proflex 3000 series or Mission Flexseal MR56 series with neoprene adapter gasket with stainless steel shield and hose clamps for connecting dissimilar pipes above grade. Provide Fernco, 1056 series or Mission sewer couplings with neoprene adapter gasket and hose clamps for connecting dissimilar pipes below grade and coat stainless steel bands with mastic 22A 2-4 PIPING INSTALLATION

General: Clean pipe thoroughly prior to installation. Ream ends of pipe to remove burrs. Cut pipe accurately to measurements taken on the job. Install with adequate clearance for installation of coverings where required. Pipe shall not be sprung or bent. Neatly align pipe, connect it securely, and support it from the building structure with hangers as specified below. Provide chrome-plated escutcheons on pipes passing through ceilings, floors or walls of finished spaces. Run pipes freely through floor and wall penetrations using pipe sleeves. Do not grout in place unless required for structural fire integrity. Install pipe concealed in finished spaces wherever possible. Use a dielectric union where ferrous and copper pipe connect. Dielectric union shall have a zinc-plated steel body, a threaded nylon insert, and insulating pressure gasket. No ferrous metal-to-copper connection made without insulating unions will be allowed.

Hanger & Supports: Pipe hangers shall be as described in the specifications by B-Line or equal by Anvil, Michigan, Truscon, or Unistrut. Connect hangers to the structure with side beam connectors and all thread hanger rods. Provide engineered support struts between joists and other structural members as required to provide a rigid hanging installation. Do not hang pipes from other pipes, conduit or ductwork. Provide hanger rods and space hangers at intervals as specified in "hanger spacing". Provide support within 1' of each elbow and tee. Provide supports within 1' of each equipment connection. Provide two nuts on threaded supports to securely fasten the support. Install hanger types or supports for various piping as follows:

Copper Tube: Adjustable band hangers for bare copper tube 3" and smaller shall be B-Line #B3170 CT copper plated adjustable band swivel ring type. Adjustable band hangers for insulated copper tube and 3" smaller shall be B-Line #B3170 NF adjustable band swivel ring type. Clevis hangers for insulated copper tube 4" and larger shall be B-Line #B3100 galvanized steel clevis type. Support exposed copper tube 2" and smaller to walls or in chases with B-Line #B3198 RCT copper coated extension split ring pipe clamps, 3/8" threaded rod and B-Line #B3199 CT ceiling flanges. Support copper tube in chases and walls at plumbing fixtures with plastic or copper brackets secured to structure and u-bolts sized to bare on the pipe. Riser clamps to support vertical copper tube shall be B-Line #B3373 CT copper coated steel, cut insulation, seal vapor barrier, and attach to bare tube.

Steel Pipe: Adjustable band hangers for 2" and smaller shall be B-Line #B3170 NF adjustable band swivel ring type. Clevis hangers for 2-1/2" and larger shall be B-Line #B3100 galvanized steel clevis type. Riser clamps to support vertical pipe shall be B-Line #B3373 galvanized steel.

Cast Iron Pipe: Adjustable band hangers for 2" and smaller shall be B-Line #B3170 NF adjustable band swivel ring type. Clevis hangers for 3" and larger shall be B-Line #B3100 galvanized steel clevis type. Riser clamps to support vertical pipe shall be B-Line #B3373 galvanized steel.

PVC Pipe: Adjustable band hangers for 3" and smaller shall be B-Line #B3170 NF adjustable band swivel ring type. Clevis hangers for 4" and larger shall be B-Line #B3100 galvanized steel clevis type. Riser clamps to support vertical pipe shall be B-Line #B3373 galvanized steel.

Insulation Protection Shields: B-Line #B3151 of 18 gauge galvanized sheet metal. Shield shall cover half of the circumference of the pipe and shall be of length indicated by manufacturer for pipe size and thickness of insulation.

Hanger Spacing, Rod Sizes & Connectors: Connect rods to steel beams or joists with B-Line #B3031 or #B3033 beam clamps as required. Connect rods to concrete with B-Line #B3014 malleable iron single type inserts with malleable iron nut. Connect rods in wood construction with B-Line #B3058 side beam connectors. Hang and support piping with spacing and rod sizes as follows:

Copper Tube: 1-1/2" and smaller - every 6' with 3/8" hanger rods; 2" every 10' with 3/8" hanger rods; 2-1/2" every 10' with 3/8" hanger rods; 3" every 10' with 1/2" rods; 4" every 10' with 5/8" hanger rods. Support vertical copper tube every 10'.

Steel Pipe: 1" and smaller - every 8' with 3/8" hanger rods; 1-1/4" to 2" every 10' with 3/8" hanger rods; 2-1/2" and 3" every 10' with ¹/₂" hanger rods; 4" every 10' with 5/8" hanger rods. Support vertical steel pipe every 10'.

Cast Iron Pipe: Every 10' and within 1' of each joint. 2" and smaller with 3/8" hanger rods; 3" with 1/2" hanger rods; 4" with 5/8" hanger rods; 6" with 3/4" hanger rods; 8" and larger with 7/8" hanger rods. Support vertical cast iron pipe every 15'.

PVC Pipe: Support all pipes sizes every 4'. 1-1/2" and smaller with 3/8" hanger rods; 2" with 1/2"hanger rods; 2-1/2" and 3" with 1/2" hanger rods; 4" and larger with 5/8" hanger rods. Support vertical PVC pipe every 4'.

Supports on roof: Support piping on roof with 4" x 4" x 12" long CCA rot-proof wood blocks. Set wood blocks on 18" x 18" x 3/16" thick roof walkway material. Connect pipe to wood blocks with galvanized steel pipe clamp and 1/4" x 1-1/2" long cadmium plated lag screws. Stack blocks and nail them together as required and support pipe as required to change pipe elevation. Support pipe with spacing as described above at a minimum 7" above the roof. Set blocks on 18" x 18" x 3/16" thick roof walkway material compatible with actual roof material.

Supports On Floor: Support piping from the floor where required for ferrous pipe or insulated copper tube, shall be B-Line #B3093 galvanized steel with pipe saddle, threaded shank for height adjustment and floor stand secured to the floor. Below Ground Installation For Soil, Waste And Storm: Install soil and waste piping to a uniform slope of not less than 1/8" per foot for piping 3" or larger, and not less than 1/4" per foot for piping 2-1/2" or smaller.

Above Ground Installation For Soil, Waste And Storm: Install piping to a uniform slope of not less than 1/8" per foot for piping 3" or larger, and not less than 1/4" per foot for piping 2-1/2" or smaller. Lay pipe at uniform slope free from sags. Support pipe within 12" of each joint. Make changes in direction from horizontal to vertical, at fixture branches and other branch connections with sanitary "tees" or short sweep "ells". Make changes in direction from vertical to horizontal or horizontal to horizontal with long radius fittings, long sweeping "ells", combination "y and 1/8 bend" fittings, or 45 degree "ells" (1/8 bend fittings), 1/6 bend or 1/16 bend and "y" fittings. Provide a smooth and uniform invert in the system. Drilling or tapping of soil and waste lines, and saddle hubs and bands are not permitted. Locate and install soil and waste lines as indicated on the drawings. Determine exact locations in such a manner as to maintain proper clearance.

PLUMBING VENT: Connect plumbing vent pipes to fixture drain pipes as indicated on the drawings or as required by the installation practices adopted and enforced by local codes official, and extend vent pipes full size through the roof line. Grade pipe to a uniform slope so as to drain back by gravity to the drainage piping system. Vents passing through the roof shall be minimum 3" size except in tropical climates, per local codes. Turn flashing down into stacks at least 2", and extend flashing 24" in all directions from the pipe at the roof line. Apply white lead pipe dope on male steel pipe threads. Vent lines shall be air and water tight. Vent floor drains individually or connect them to a horizontally vented line as shown on the drawings.

DOMESTIC WATER: Arrange cold, hot, and hot water recirculation piping to drain at the lowest point in each system. Install at least one pipe union adjacent to all shutoff valves, at connection points of each piece of equipment, and elsewhere in the system where required to allow proper maintenance. Provide unions of the ground joint type. Make allowance for expansion and contraction where required by the installation. Where water piping occurs in exterior walls, hold pipe as close as possible to the interior face of wall and install insulation batt or other insulation (minimum R-8) between piping and the exterior wall face.

NATURAL GAS: Pitch natural gas piping, and provide accessible dirt legs at the low points. Take branch pipes off the top or sides of main pipes, to prevent accumulation of water in the branches. Install gas piping valves and unions only in accessible locations. Do not install gas pipe below the base slab. 22A 2-5 PIPING SANITIZATION

Sanitize the entire domestic water piping system (cold, hot, and hot water return) with a solution containing not less than 50 ppm available chlorine. Keep solution in the system for a minimum of 24 hours, with each valve being operated several times during the period. After completion, flush system with city water until chlorine residual is lowered to incoming city water level. 22A 2-6 PIPE AND VALVE MARKERS

Provide manufacturer's standard pre-printed, semi-rigid snap-on or permanent adhesive, pressure-sensitive vinyl pipe markers. Pipe markers shall be color-coded complying with ANSI A13.1.

Install pipe markers on each plumbing piping system and include arrows to show normal direction of flow.

Locate pipe markers and color bands wherever piping is exposed to view in occupied spaces, machine rooms, accessible maintenance spaces (shafts, tunnels, plenums) and exterior non-concealed locations.

Provide plastic laminate or brass valve tag on every valve, cock and control device in each plumbing piping system; exclude check valves, valves within factory-fabricated equipment units, plumbing fixture faucets, convenience and lawn-watering hose bibbs, and shut-off valves at plumbing fixtures and similar rough-in connections of end-use fixtures and units. 22A 2-9 AIR ADMITTANCE VALVES

Provide air admittance valves where indicated on drawings. Air admittance valves shall meet ASSE 1050 or 1051 where applicable by Studor or equal, by Oatey, Proset, or Rectorseal. Install per code and manufacturer requirements. 22A 3 PLUMBING SPECIALTIES

22A 3-1 WATER HAMMER ARRESTORS, AND TRAPSProvide water hammer arrestors at valves or batteries of fixtures as indicated on the drawings to prevent water hammer. Arrestors shall be Josam, Jay R. Smith, Precision Plumbing Products, Lavatory drains shall be grid type chrome plated 17 gauge brass open grid with 1-1/4" x 6" long seamless brass tailpiece and brass locknut with heavy rubber basin washer and fiber friction washer. Proflo, Sioux Chief, Wade, Watts, or Zurn, stainless steel bellows type, or o-ring sealed and lubricated acetal piston. Install water hammer arrestors per the Plumbing and Drainage Institute PDI WH-201 installation instructions. Installation of arrestors at batteries of fixtures precludes the requirement for individual air chambers at each battery fixture. Air chambers are not Provide shower valves as scheduled on drawings. acceptable as a substitute for water hammer arrestors.

Provide water-seal traps on floor drains, fixtures and equipment with drain connections, including traps not furnished in combination with fixtures and equipment. Place trap as close to the fixture or drain as possible. Exposed traps in finished spaces shall be chrome-plated brass.

Provide conventional "p" type trap, water-sealed self-cleaning design. Full "s" traps or trap standards shall be used only where specifically called for on the drawings or elsewhere in this specification. Trap water seals shall not be less than 2", and deep seal traps shall be provided where specified or indicated. Each trap not integral with the fixture or floor drain or installed below the base slab shall be provided with an accessible cleanout of adequate size. Provide trap primers where required by code and where indicated on the drawings.

Cleanouts, floor drains and roof drains shall be by one manufacturer if possible. Acceptable manufacturers are Josam, Jay R.

Instantaneous gas water heater shall be of capacity as scheduled on the drawings by Navien, Noritz, Rinnai, Rheem, Takagi or Smith, Wade, Watts, Mifab, and Zurn. equivalent. Furnish with pressure relief valve. Water heater shall be UL listed and meet ASHRAE 90.1B standards for thermal Provide long sweep fittings for cleanout extensions; short sweeps at start of runs or change in direction and combination wye and efficiency and standby heat loss. Provide factory start-up of water heating system installation by a trained factory representative. eighth bend fittings in horizontal runs. Install cleanouts with a minimum of 18" clear all around, consult local codes for other Provide the architect with a certificate of a properly installed and functioning water heating system. requirements, for easy system maintenance. Install plug with teflon joint compound. END OF SECTION 22A

FLOOR DRAINS: Shall be as scheduled on the drawings, manufactured by Zurn or equivalent by ABT, Inc., Polydrain, Quazite, Mifab, Jay R. Smith – ACO or NDS.

TRENCH DRAINS: Shall be as scheduled on the drawings, manufactured by Zurn or equivalent by ABT, Inc., Polydrain, Quazite, Mifab, Jay R. Smith – ACO or NDS.

FLOOR CLEANOUTS: Shall be as scheduled on the drawings. Install cleanouts at points as noted on the drawings, at the building exit; at a minimum of every 50 feet in horizontal soil and waste lines; and at turns of pipe greater than 45 degrees cleanouts shall be full size of the pipe up to 4", and 4" size for pipes larger than 4". Determine the type of floor covering to be used at each floor cleanout location and provide top with variations suitable for floor covering (carpet markers, recessed for tile and scoriated for unfinished floor). Rough-in and install each floor cleanout flush with the finished floor construction.

EXTERIOR CLEANOUTS: Shall be as scheduled on the drawings. Install cleanouts at points as noted on the drawings, at the building exit; at a minimum of every 100 feet in horizontal soil, waste and storm service lines. Embed each exterior cleanout in a block of concrete, flush with finished grade. Coordinate size of block with construction documents.

WALL CLEANOUTS: Shall be as scheduled on the drawings. Install wall cleanouts at points as noted on the drawings; at the foot of each soil, waste or interior downspout stack; at horizontal soil and waste branches longer than five feet not served by a floor cleanout; consult local codes for installation at specific fixture types. Install wall cleanouts above the flood rim of the fixture served within four feet of the floor and install extensions from the cleanout tee to the wall to locate the plug within 2" of the wall where required. Install cleanouts on urinals and sinks where required by code.

ROOF DRAINS: Shall be as scheduled on the drawings. Provide with roof sump receiver, extension, secondary flashing clamps and underdeck clamp as required; provide expansion joints where required. Provide overflow roof drains where indicated on the drawings with inlet flow line 2" above the primary roof drain inlet.

BACKWATER VALVES - removable flapper type: Shall be as scheduled on the drawings by Cleancheck or equal, by Mainline Backflow Products or Spears.

22A 3-3 VALVES, STRAINERS, HOSE BIBBS, AND UNIONS

Plumbing system valves shall be Crane Company or Nibco of models herein specified, or equivalent by Hammond, Milwaukee, Stockham or Mueller Valves. Valves shall be of the best quality, designed for 125 psi steam working pressure. Install valves on the hot and cold water lines at the water heater connections and other items of equipment, at branches from mains serving groups of fixtures, and at other places indicated or required by the installation to allow ease of future maintenance GATE VALVES: Class 125, size 2" and smaller shall be Nibco #S-113-LF non-rising stem, soldered lead free bronze body and parts, with wedge disc. Gate valves 2-1/2" and larger shall be Crane #465-1/2 or Nibco #617-0, OS&Y, iron body flanged wedge gate with brass seats and stem.

BALL VALVES (may be used in lieu of gate valves up to 2"): 2" and smaller, Nibco #S-685-80-LF; two piece lead free bronze body, with soldered ends, chrome plated bronze ball with conventional port, 600 psi, blow-out proof stem.

GLOBE VALVES: Globe valves shall be Class 125. Globe valves 2" and smaller shall be Milwaukee #UP1502, screwed lead free bronze body and brass disc. Globe valves 2-1/2" and larger shall be Crane #351 iron body flanged valve with brass trim.

CHECK VALVES: Check valves shall be Class 125. Check valves for installation in horizontal pipe runs shall be of the "swing disc" design. Horizontal check valves 2" and smaller shall be Milwaukee #UP1509 or Nibco #S-413-Y-LF with soldered lead free bronze body and bronze disc. Horizontal check valves 2-1/2" and larger shall be Crane #373 or Nibco F-918 iron body flanged valve with brass trim. Check valves for installation in vertical pipe runs shall be of the "vertical lift" spring loaded design. Vertical check valves 2" and smaller shall be Milwaukee #UP1548T or Nibco #S-480-Y-LF with soldered lead free bronze body and bronze disc. Vertical check valves 3" and larger shall be center guided.

GAS COCKS: Gas cocks 2" and smaller shall be Homestead #611, screwed iron body with brass trim and flat head. Gas cocks 2-1/2" and larger shall be Homestead #612 flanged semi-steel body with iron trim and square head. Equivalent are Flowserve-Nordstrom or RM Energy Systems "Hercules". THERMOSTATIC MIXING VALVES: Thermostatic mixing valves shall be Powers as described on the drawings or equal Armstrong, Bradley, Leonard, Lawler, Symmons or Watts meeting ASSE 1070 with brass body, non-corrosive internal parts, tamper resistant temperature adjustment, union inlets and check stops with strainers. Set temperature at 110 deg. F for hand washing.

22A 3-2 CLEANOUTS, FLOOR DRAINS AND ROOF DRAINS

GAS LINE PRESSURE REGULATORS: Gas line pressure regulators shall be by American Meter Company, Fisher, Itron, Maxitrol or Sensus with capacities as scheduled on the drawings. Regulators shall be single stage, steel jacketed, corrosion-resistant type with interstitial relief valve with atmospheric vent, elevation compensator; with threaded ends, for inlet and outlet.

STRAINERS: Strainers 2" and smaller shall be Watts #S777SI or Watts #LFS777SI with soldered lead free bronze, brass cap and Monel 40 mesh screen. Strainers 2-1/2" and larger shall be Watts #77F-DI-FDA-125 with flanged iron body with fused FDA epoxy coating, bolted iron cap and stainless steel screen with 1/16" perforations. Strainers size 2-1/2" and larger shall have a 1" blow-off line with a 1" gate valve connected to the blow-off connection and shall be extended to the nearest floor drain. 22A 3-5 WATER SERVICE ENTRANCE: PRESSURE REDUCING VALVE AND BACKFLOW PREVENTER

Provide a backflow preventer (BFP) of type required by local code, and a pressure reducing valve (PRV) if required by water pressure greater than 80 psi, on the domestic water service immediately downstream of the BFP at the water service entry. Set the PRV as indicated on the drawings. Provide a pressure gauge and hose bibb with isolation valve downstream of the BFP and/or PRV for system drain down.

For water services 2" and smaller provide a Type "K" soft copper tube that runs continuously from five feet outside the building with sweeping bend to 12" above the floor slab. Provide a shutoff valve at 12" above the floor. There shall be no fittings under the floor slab. Provide a PVC sleeve two pipe sizes larger than the water pipe served and seal with caulk. For water services 3" and larger provide ductile iron pipe and fittings from five feet outside the building to 12" above the floor. Provide a shutoff valve at 12" above the floor. Provide a PVC sleeve two pipe sizes larger than the water pipe served and seal

with caulk.

22A 4 PLUMBING FIXTURES AND EQUIPMENT

22A 4-1 PLUMBING FIXTURES

Provide china fixtures as scheduled by American-Standard or equivalent by Crane, Eljer, Gerber, Kohler, Toto-kiki or Zurn. Provide stainless steel sinks as scheduled by Elkay or equal by Just. Provide electric water coolers as scheduled by Elkay or equivalent by Acorn / Aqua, Halsey Taylor or Haws. Provide mop sinks as scheduled by Stern-Williams or equal by Acorn Engineering Co., Fiat or Florestone. Provide fixtures of same manufacturer where possible.

Fixtures shown on the drawings or specified herein shall be furnished and installed, set firm and true, connected to required piping services, thoroughly cleaned, left clean and ready for use. Exposed fittings and piping at the fixtures shall be chrome-plated, and water supply piping shall be valved at each fixture.

Vitreous china fixtures shall be of the best grade vitreous ware, without pit holes or blemishes, and the outlines shall be generally true. The engineer reserves the right to reject any pieces which, in his opinion, are faulty. Fixtures set against walls shall have ground backs and shall be caulked with silicone sealant of a matching color.

Faucets and trim in contact with drinking water shall meet or exceed the safe water drinking act (SWDA) lead-free standards of ANSI/NSF Standard 61, Section 9.

Provide faucets as scheduled on drawings.

22A 4-2 PLUMBING FIXTURE TRIM

Provide single lever handle faucets as scheduled on drawings.

Fixture p-traps shall be 17 gauge brass body with cleanout, 17 gauge seamless tubular wall bend with cast brass slip nut, shallow steel flange, all chrome plated.

Lavatory, sink and water closet supplies shall be solid brass angle or straight type with full turn brass stem, wheel handle or loose key types as noted on drawings, shallow steel flange, 3/8" copper riser flange, all chrome plated, final connection as required.

Sink drains shall be basket type with chrome plated forged brass basket strainer and strainer body with 1-1/2" x 4" long seamless brass tailpiece and cast brass lock and coupling nuts.

Provide handicap insulation kits for lavatories and sinks on exposed water and waste pipes and fittings, including offset drain and continuous waste covers where required.

Provide flush valves as specified on drawings: Sloan or equivalent with chrome plated brass body, chloramine resistant diaphragm with protected orifice, screw driver angle stop, non-hold open feature and sweat adapter kit. Provide ADA handles on ADA compliant fixtures. Provide solid pipe ring supports for urinal flush tubes anchored securely to wall where indicated on the drawings. Provide low consumption type valves with 1.28 gallons per flush for water closets and 0.125 gallons per flush for urinals.

22A 4-3 WATER HEATER

ARKANSAS ARKANSAS PROFESSIONAL ENCINEER No. 21307 NOND COLLING
DETERMINED IN TARABURIS PACINAL AD UNPULSIED MARKET AN REPRODUCTION, USE, OR DESCRIPTION OF THE ROPORTIES AND NOTABLE MARKET AN REPRODUCTION, USE, OR DESCRIPTION OF THE ROPORTIES AND NOTABLE MARKET AND REPRODUCTION, USE, OR DESCRIPTION OF THE ROPORTIES AND REPRODUCTION USE AND REPROD
DOMINOS BRYANT Buris 3415 W. HWY 5 3415 W. Struck BRYANT, AR 820 Tiger Blvd, Suite 4, Bentonille, Ar 72712
DAT 10-31-22 JOB 22151 REVISION B55.1 Plumbing specifications
Plumbing specifications

HP ENGINEERING

HP ENGINEERING INC. 5214 W. VILLAGE PARKWAY SUITE 120 ROGERS, AR 72758

www.hpengineeringinc.com

PROJECT NO. 221261R 100 % COMPLETE

					EXHA	UST FAN	SCHED	ULE		
							MOTOR		VOLTS /	
MARK	DESCRIPTION	MFR	MODEL	DRIVE	FLOW	ESP	HP	RPM	PH	sor
EF-1	CEILING FAN	GREENHECK	SP-110-VG	2	110 CFM	.2	0.125	920	120 / 1	1
EF-2	CEILING FAN	GREENHECK	SP-110-VG		110 CFM	.2	0.125	920	120 / 1	1
EF-3	CEILING FAN	GREENHECK	SP-110-VG		110 CFM	.2	0.125	920	120 / 1	1
EF-4	UPBLAST EXHAUST		CUBE-160	BELT	1500 CFM	1	0.75	1500	120 / 1	11
	FAN ES APPLICABLE TO A									
 PROVIDE VA PROVIDE BE PROVIDE W/ MOUNT FAN 	RE-WIRED FACTORY RIABLE SPEED CON LT TENSIONER ON A ALL SLEEVE, FAN GU SPEED CONTROLLE OOF CURB TO MATCH	TROLLER (FACT(ALL BELT DRIVE F IARD, EXTERIOR R IN ACCESSIBLI	DRY INSTALLED ANS. WEATHER HOO E LOCATION AB	IF AVAILABÈE) D AND MOTORI OVE CEILING UI	ON ALL DIRECT	DRIVE FANS FOR			TED PROPEL	LER FAN
B PROVIDE M/C PROVIDE M/D PROVIDE IS	ACKDRAFT DAMPER. ANUFACTURER'S WA ANUFACTURER'S WH OLATOR KIT. REASE COLLECTION	LL CAP. IITE ALUMINUM (GRILLE.							
			AI		CE SCHE	DULE				
				MED	MODEL		FRAME SIZE			
TAG		ESCRIPTION		MFR	MODEL	FACE SIZE	SIZE	NECK SIZE	IVIAIERIA	
	EGGCRATE RETURN			TITUS	50F OMNI-AA					
DUCTS, OR DU	ONS LISTED ON DRA AL WALL DIMENSION D DUCT IN KITCHEN	IS. DUCTS SHALL	BE CONSTRUC	TED TO INCLUE	DE INSULATION F	REQUIREMENTS A	ND MAINTAIN /	AIRFLOW DIMEN		
07		-1								T I II OI (1
	RVICE		DUCT TYPE			INSULATIO	NIYPE		ULATION	-
VOLUME SUPPI	SURE CONSTANT LY AIR DUCT FROM DR PACKAGED UNIT	ROUND OR REC PLANS.	CTANGULAR, AS	INDICATED ON	FIBERGLASS W	VRAP		2" W	RAP, R VALUE	E=6.0
ALL LOW PRES DUCT FROM AII PACKAGED UN		ROUND OR REC PLANS.	CTANGULAR, AS	INDICATED ON	FIBERGLASS W	VRAP	2" W	2" WRAP, R VALUE=6.0		
ALL RUNOUTS DIFFUSERS AN GRILLES CONC CEILINGS	D RETURN	ROUND OR RECTANGULAR, AS INDICATED ON PLANS.		FIBERGLASS WRAP				2" WRAP, R VALUE=6.0		
SPACE)	T EXPOSED TO	N/A			FIBERGLASS W	VRAP			rap, r value	
FRESH AIR EXH	AUST DUCT	ROUND OR RECTANGULAR, AS INDICATED ON PLANS.		LINER, AS INDI UNCONDITION	CATED ON PLANS ED SPACE	VALU	2" WRAP OR 1-1/2" LINER, VALUE=6.0			
FRESH AIR SUF	PPLY DUCT	ROUND OR REC PLANS.	ROUND OR RECTANGULAR, AS INDICATED ON PLANS.		FIBERGLASS WRAP OR MATTE FACED FIBERGLASS LINER, AS INDICATED ON PLANS. N/A IF IN UNCONDITIONED SPACE				2" WRAP OR 1-1/2" LINER, VALUE=6.0	
GREASE DUCT		TIGHT AT ALL J MECHANICAL F PENETRATE DU		.MS. .LL NOT	ZERO CLEARA	AMICS FIREMAST	TIBLES			
RESTROOM EX	HAUST DUCT	ROUND OR RECTANGULAR, AS INDICATED ON I PLANS.				VRAP OR MATTE			RAP OR 1-1/2' JE=6.0	LINER, I

MAKE-UP AIR UNIT SCHEDULE

				FAN		VOLTS /			WEIGHT	
TAG	MFR	MODEL	DRIVE	CFM	ESP	PHASE	AMPS	WATTS	(LBS)	NOTE
MUA-1	GREENHECK	KSFD-80-H08		1400	0.5	115 / 1	8.32	830	887	A

GENERAL NOTES APPLICABLE TO ALL UNITS: 1. PROVIDE INTAKE HOOD WITH MERV 8 FILTER

2. PROVIDE GRAVITY BACKDRAFT DAMPER

3. DOWN DISCHARGE; 12" ROOF CURB 4. INTEGRAL DISCONNECT SWITCH

NOTES

A MAKEUP AIR UNIT IS TO BE INTERLOCKED WITH KITCHEN HOOD

ONES	CONTROL TYPE	ACCESSORIES
1.4	WALL SWITCH	ABCD
1.4	WALL SWITCH	ABCD
1.4	CONTINUOUS OPERATION	ABCD
11.6	SWITCH ON HOOD	A E
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CONTRACTOR TO COORDINATE EQUPMENT SIZE AND ORIENTATION WITH SPACE REQUIREMENTS PRIOR TO ORDERING EQUIPMENT.

- PRIOR TO BID. SCHEDULE. REVIEW AND REFERENCE. INSTALLATION. EVERY ITEM MAY NOT BE INDICATED. NOISE OR VIBRATION. ELECTRICAL DEVICES. WALL OR FLOOR. WORK.
- REQUIRED.
- STOPPER 5000.

GENERAL MECHANICAL NOTES

SUBMISSION OF PROPOSAL IN CONNECTION WITH THIS WORK SHALL IMPLY THAT THE BIDDER HAS EXAMINED THE JOB SITE UNDER WHICH HE WILL BE OBLIGATED TO OPERATE SHOULD HE BE AWARDED THE WORK UNDER THIS CONTRACT. NO EXTRA CHARGE WILL BE ALLOWED FOR FAILURE OF ANY BIDDER TO EXAMINE THE SITE

DUCT DIMENSIONS LISTED ON DRAWINGS REPRESENT THE AIRFLOW FREE AREAS AND DO NOT HAVE ALLOWANCES FOR INSULATION LINER, WHERE APPLICABLE, INSIDE THE DUCTS, OR DUAL WALL DIMENSIONS. DUCTS SHALL BE CONSTRUCTED TO INCLUDE INSULATION REQUIREMENTS AND MAINTAIN AIRFLOW DIMENSIONS INDICATED ON PLANS. FOR CLASH COORDINATION INCLUDE INSULATION THICKNESS PER

ALL WORK SHALL CONFORM TO STATE AND LOCAL CODES, RULES, REGULATIONS, AND ORDINANCES WHICH SHALL TAKE PRECEDENCE OVER THE PLANS IF CONFLICTS EXIST BETWEEN THEM. THE DRAWINGS INDICATE THE GENERAL LAYOUT REQUIREMENTS FOR EQUIPMENT, FIXTURES, PIPING,

DUCTWORK, ETC. FINAL LAYOUT SHALL BE MODIFIED TO FIT ACTUAL SITE CONDITIONS. ALL REQUIRED REVISIONS SHALL BE RECORDED ON A DESIGNATED HARD COPY SET OF REDLINE PLANS TO BE KEPT CURRENT TO JOBSITE PROGRESS. AT MINIMUM, THIS DOCUMENT SHALL BE UPDATED WEEKLY AND REDILY AVAILABLE FOR COORDINATE ALL WORK WITH THE OWNER AND ALL OTHER CONTRACTORS. CONTRACTOR SHALL BE

RESPONSIBLE FOR ALL RIGGING, HANDLING, AND PROTECTION OF MATERIALS. PROVIDE LABOR TO RECEIVE UNLOAD, STORE, PROTECT, AND TRANSFER TO POINT OF INSTALLATION OF ANY OWNER-FURNISHED ITEMS. IN CASES OF EQUIPMENT SUBSTITUTION, CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT ALL SYSTEMS AND COMPONENTS WILL FIT PROPERLY PRIOR TO FABRICATION OR ORDERING. INSTALLED DUCTS MAY BE RESIZED BY THE CONTRACTOR TO FIT FIELD CONDITIONS AS LONG AS THE INSTALLED DUCTS SHALL HAVE EQUAL FRICTION LOSS TO THOSE SHOWN. RECTANGULAR DUCTS SHALL NOT BE CHANGED TO ROUND DUCTS. PROVIDE COMPLETE SHEET METAL SHOP DRAWINGS TO ENGINEER SHOWING ACTUAL DUCT SIZES, ARRANGEMENTS, AND UNIT LOCATIONS TO BE INSTALLED. THIS SHALL BE DONE PRIOR TO FABRICATION OR

INSTALL ACOUSTIC TURNING VANES IN ELBOWS IN RECTANGULAR DUCTS 20" AND LARGER. INSTALL RADIUS TYPE ELBOWS IN RECTANGULAR DUCTS SMALLER THAN 20". USE 45 DEGREE TAKE-OFF FITTINGS AT ALL ROUND SUPPLY BRANCH TAKEOFFS. PROVIDE BALANCE DAMPERS

AT ALL SUPPLY DUCT RUNOUTS TO GRILLES. LOCATE AS FAR AS POSSIBLE FROM GRILLES IN AN ACCESSIBLE LOCATION. PROVIDE ACCESS PANELS IN SOLID WALLS AND CEILINGS FOR BALANCING DAMPERS. USE FLEX DUCTS FOR FINAL CONNECTION TO ALL CEILING DIFFUSERS, AND WHERE NECESSARY, SIDEWALL DIFFUSERS, AND LIMIT TO 6' MAX. LENGTHS.

10 PROVIDE A COMPLETE AND OPERATING MECHANICAL SYSTEM, INCLUDING ALL INCIDENTAL ITEMS AND CONNECTIONS NECESSARY FOR PROPER OPERATION OR CUSTOMARILY INCLUDED, EVEN THOUGH EACH AND

THE MECHANICAL INSTALLATION SHALL BE SAFE, RELIABLE, ENERGY EFFICIENT AND EASILY MAINTAINED WITH ADEQUATE PROVISIONS ALLOWED FOR ACCESS TO EQUIPMENT. 12 THE MECHANICAL SYSTEM SHALL OPERATE QUIETLY WITH NOISE LEVELS BELOW THE CRITERIA RECOMMENDED

FOR THE APPLICATION BY ASHRAE. PROVIDE CORRECTIVE ACTION AS REQUIRED TO REDUCE OBJECTIONABLE

13 UNDERCUT DOORS 3/4 INCH WHERE NO RETURN NOR EXHAUST GRILLE IS SHOWN TO ALLOW FOR AIR TRANSFER (DO NOT UNDERCUT FIREDOORS.) 14 REFER TO ARCH. PLANS AND DETAILS FOR EXACT LOCATION OF ALL WALL AND CEILING MOUNTED DEVICES.

ADJUST LOCATION OF SIDEWALL DEVICES AS NECESSARY TO AVOID INTERFERENCE WITH MOLDING OR OTHER WHERE CONDUIT, CABLES, DUCTWORK OR PIPING PASSES THROUGH FIRE-RATED FLOORS OR WALLS, THE

SLEEVES SHALL BE COMPLETELY SEALED WITH A FIRE STOP MATERIAL THAT IS ULLISTED AND ACCEPTED BY LOCAL AUTHORITIES HAVING JURISDICTION (AHJ) AS BEING SUITABLE FOR THIS SERVICE SUCH AS DOWN CORNING CORP "SILICONE ELASTOMER, RTV FOÁM, OR SIMILAR MATERIAL TO MAINTAIN FIRE RATING OF THE

16 CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CORING AND BEAM PENETRATIONS AS IT RELATES TO HIS

CONTRACTOR SHALL NOT INSTALL ANY MAINTENANCE ITEMS ABOVE HARD CEILINGS. THIS SHALL INCLUDE VALVES, DAMPERS, OR ANY OTHER ITEMS THAT REQUIRE ACCESS AFTER CONSTRUCTION IS COMPLETED. IF INSTALLATION ABOVE A HARD CEILING OF THESE ITEMS CANNOT BE AVOIDED, THEN PROVIDE CEILING ACCESS DOORS EQUAL TO ACUDOR MODEL FW-505 WHERE REQUIRED. AT FIRE-RATED WALLS, USE EQUIVALENT OF ACUDOR MODEL FB-5060. MINIMUM SIZE SHALL BE 12"x12". USE 18"x18" WHEN PERSONNEL ACCESS IS

18 PROVIDE AN INSULATED BACK ON ALL THERMOSTATS AND TEMPERATURE SENSORS THAT ARE MOUNTED ON CMU OR HOLLOW WALLS. PROVIDE SHALLOW DEVICE EXTENSION BOX BEHIND T-STATS AND SENSORS ON MASONRY WALLS IN COMMERCIAL / RETAIL SPACES.

19 PROVIDE FIRE DAMPERS AT ALL FIRE-RATED WALLS AND FLOOR PENETRATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE BARRIER WALLS AND CEILINGS.

20 IF A CENTRAL FIRE ALARM SYSTEM IS REQUIRED FOR THIS PROJECT, MECHANICAL CONTRACTOR SHALL INSTALL DUCT MOUNTED SMOKE DETECTORS PROVIDED BY FIRE ALARM CONTRACTOR. REFER TO ELECTRICAL NOTES FOR EXACT REQUIREMENTS. MECHANICAL CONTRACTOR SHALL IDENTIFY A SET OF TERMINALS FOR EQUIPMENT SHUTDOWN ON ALL FAN POWERED EQUIPMENT REQUIRING SHUTDOWN CONTROLS. FIRE ALARM CONTRACTOR SHALL WIRE FROM DUCT MOUNTED SMOKE DETECTOR TO SHUTDOWN TERMINALS TO SHUT DOWN FAN OPERATION WHEN SMOKE IS DETECTED.

AT PENETRATIONS THROUGH FIRE WALLS: ANY NON-METALLIC PIPE OR DUCT SHOULD BE EXTERNALLY SLEEVED WITH STEEL, FERROUS, OR COPPER MATERIALS, SECURELY FASTENED TO THE FIRE RATED ASSEMBLY, AND ANY SPACE BETWEEN THE SLEEVE AND THE ASSEMBLY PENETRATED SHALL BE PROTECTED USING MATERIAL THAT CONFORMS TO ASTM E 814 OR UL 1479, SUCH AS FIRE STOP FS-1900, OR FLAME

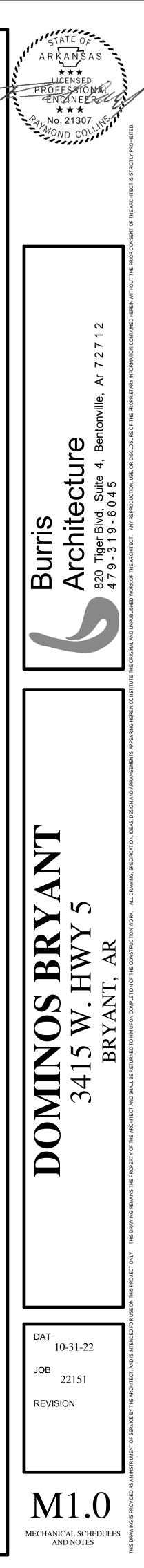
22 REFER TO ELECTRICAL DRAWINGS FOR SMOKE DAMPER AND FIRE/SMOKE DAMPER DETAIL. MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL DAMPERS WITH MOTORIZED ACTUATORS AND INSTALL SMOKE DETECTORS AND PROVIDE WIRING FOR FAN SHUTDOWN CONTROLS. COORDINATE WITH ELECTRICAL CONTRACTOR AND PROVIDE DAMPER ACTUATOR COMPATIBLE WITH ELECTRICAL WIRING PROVIDED. PROVIDE ANY WIRING OR COMPONENTS NOT PROVIDED BY THE ELECTRICAL CONTRACTOR THAT ARE REQUIRED TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.

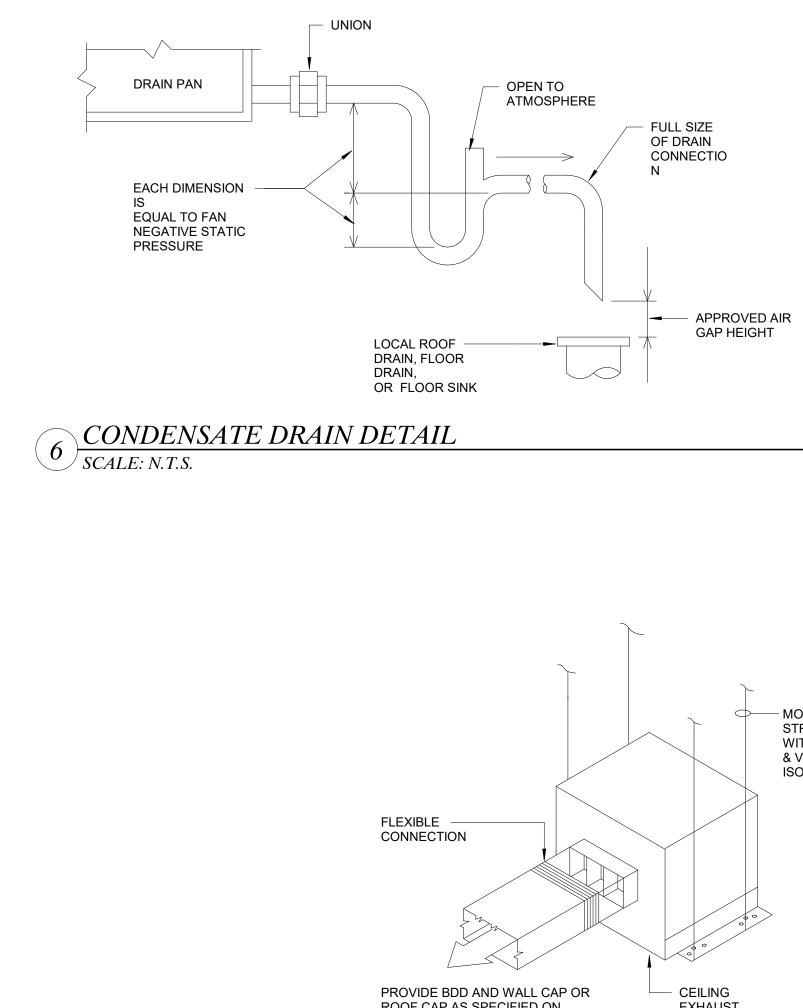
ANY LINE VOLTAGE WIRING THAT IS RUN BY THE MECHANICAL CONTRACTOR SHALL BE INSTALLED IN ACCORDANCE WITH THE ELECTRICAL PLANS, NOTES, AND SPECIFICATIONS.



HP ENGINEERING PROJECT NO. 221261R 100 % COMPLETE HP ENGINEERING INC.

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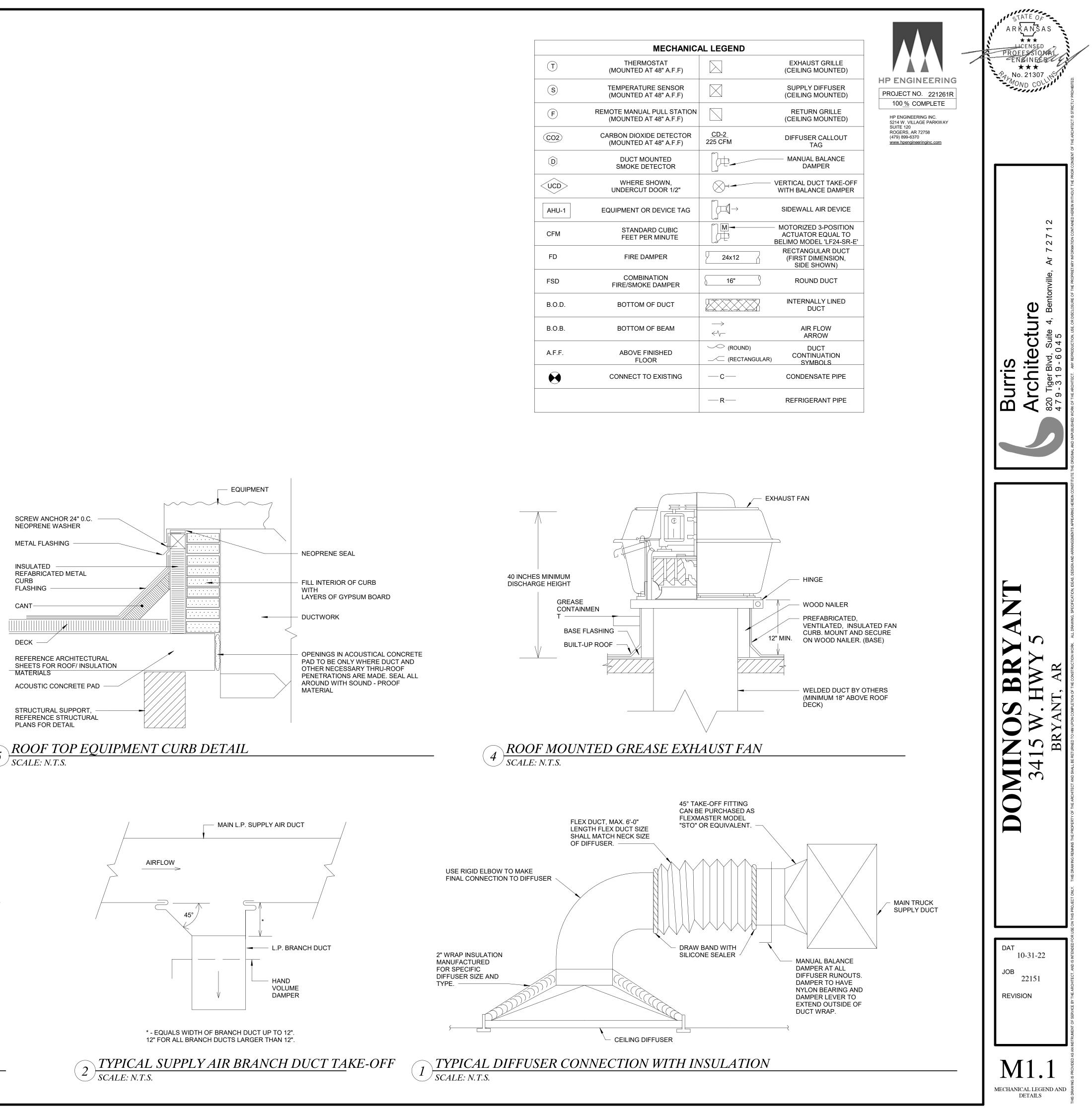


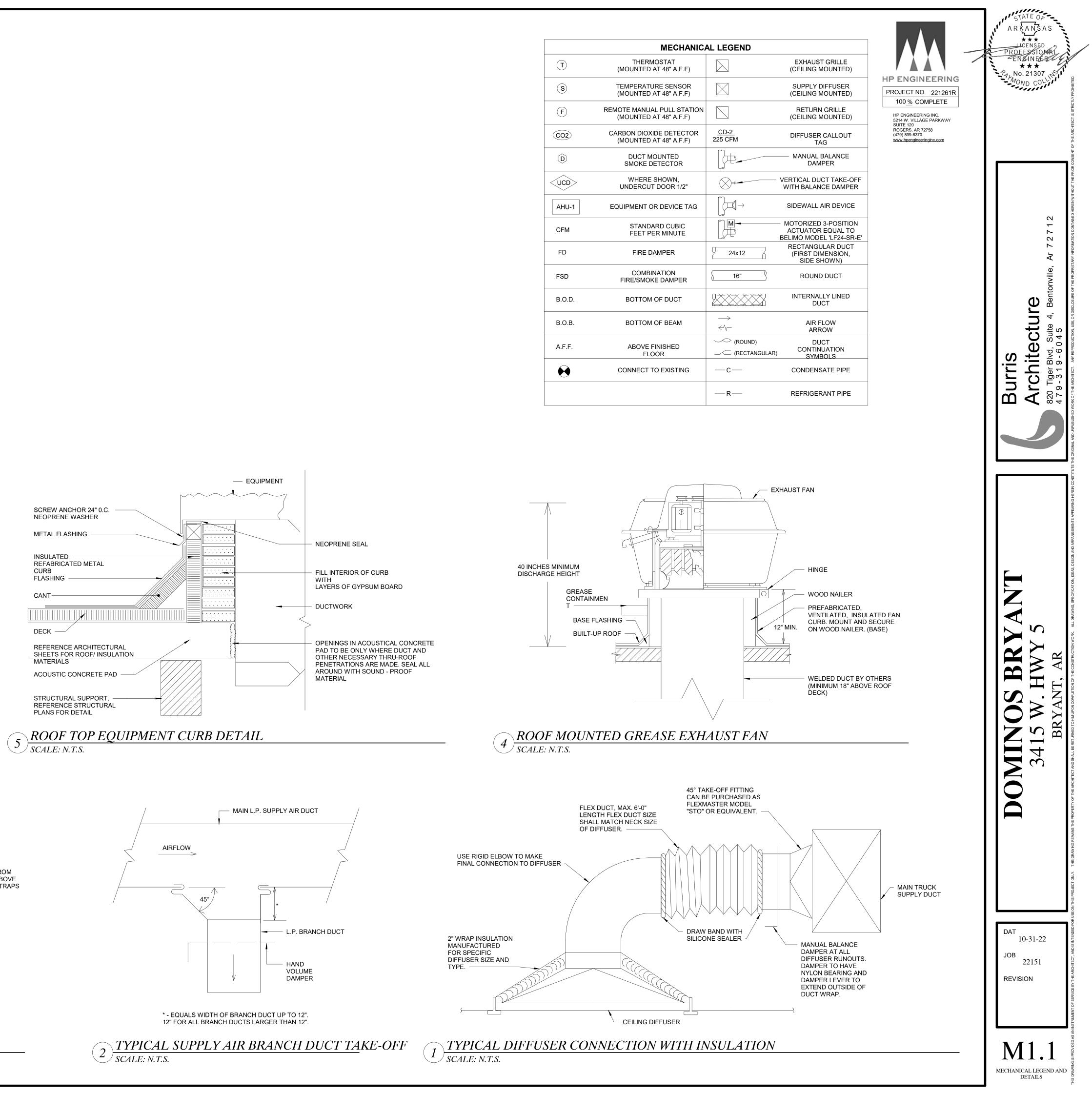


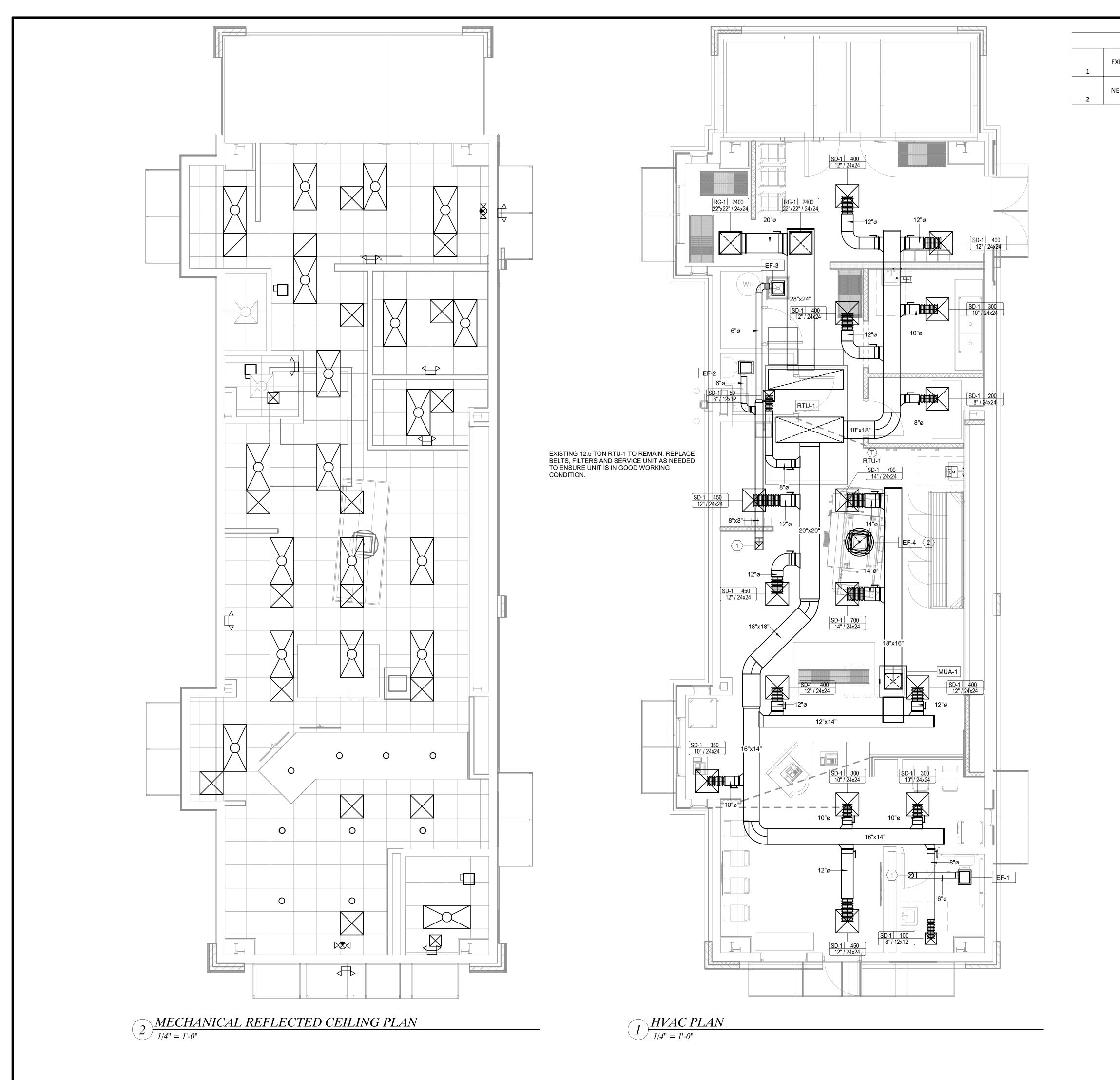
- MOUNT FAN FROM STRUCTURE ABOVE WITH METAL STRAPS & VIBRATION ISOLATION PROVIDE BDD AND WALL CAP OR ROOF CAP AS SPECIFIED ON EXHAUST PLANS REGISTER CEILING EXHAUST FAN DETAIL

3 SCALE: N.T.S.









KEYNOTES

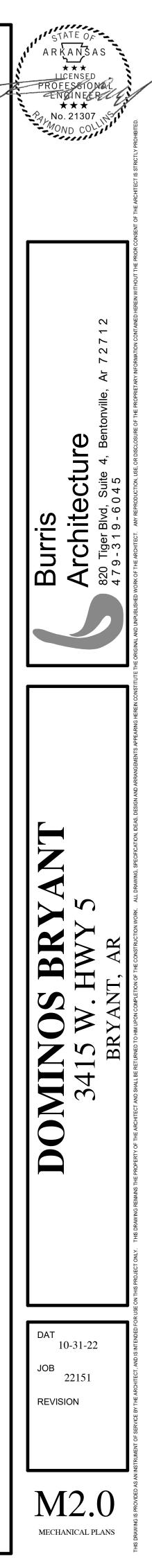
EXHAUST DUCT UP TO GREENHECK MODEL "GR" ROOF CAP. PROVIDE BACKDRAFT DAMPERS FOR EXHAUST FANS.

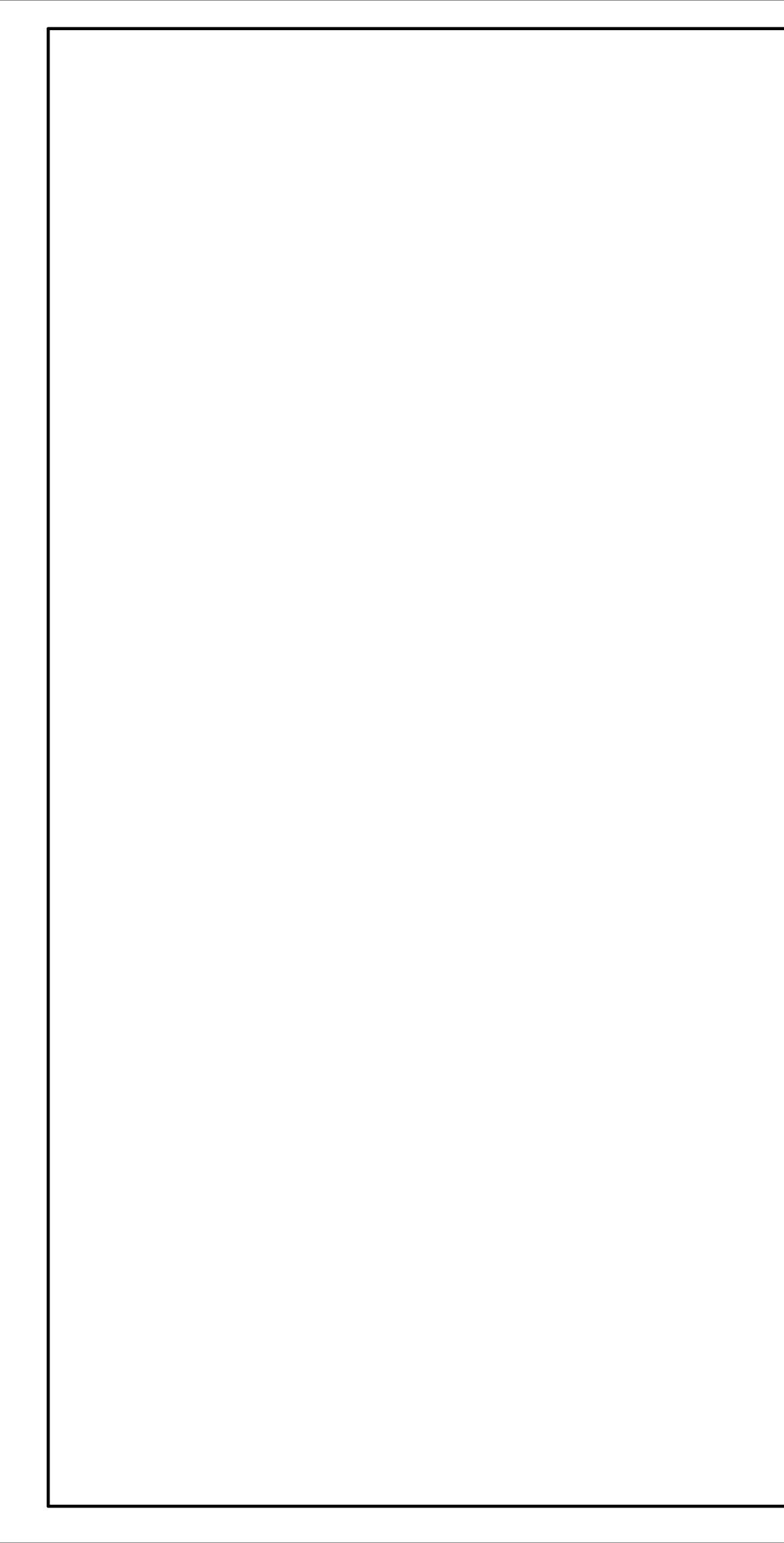
NEW EF-4 SIZED FOR AVI HOOD MODEL 3270 ONLY. PROVIDE ROOF CURB WITH VENTILATED CURB EXTENSION. CONNECT TO OWNER PROVIDED KITCHEN HOOD.

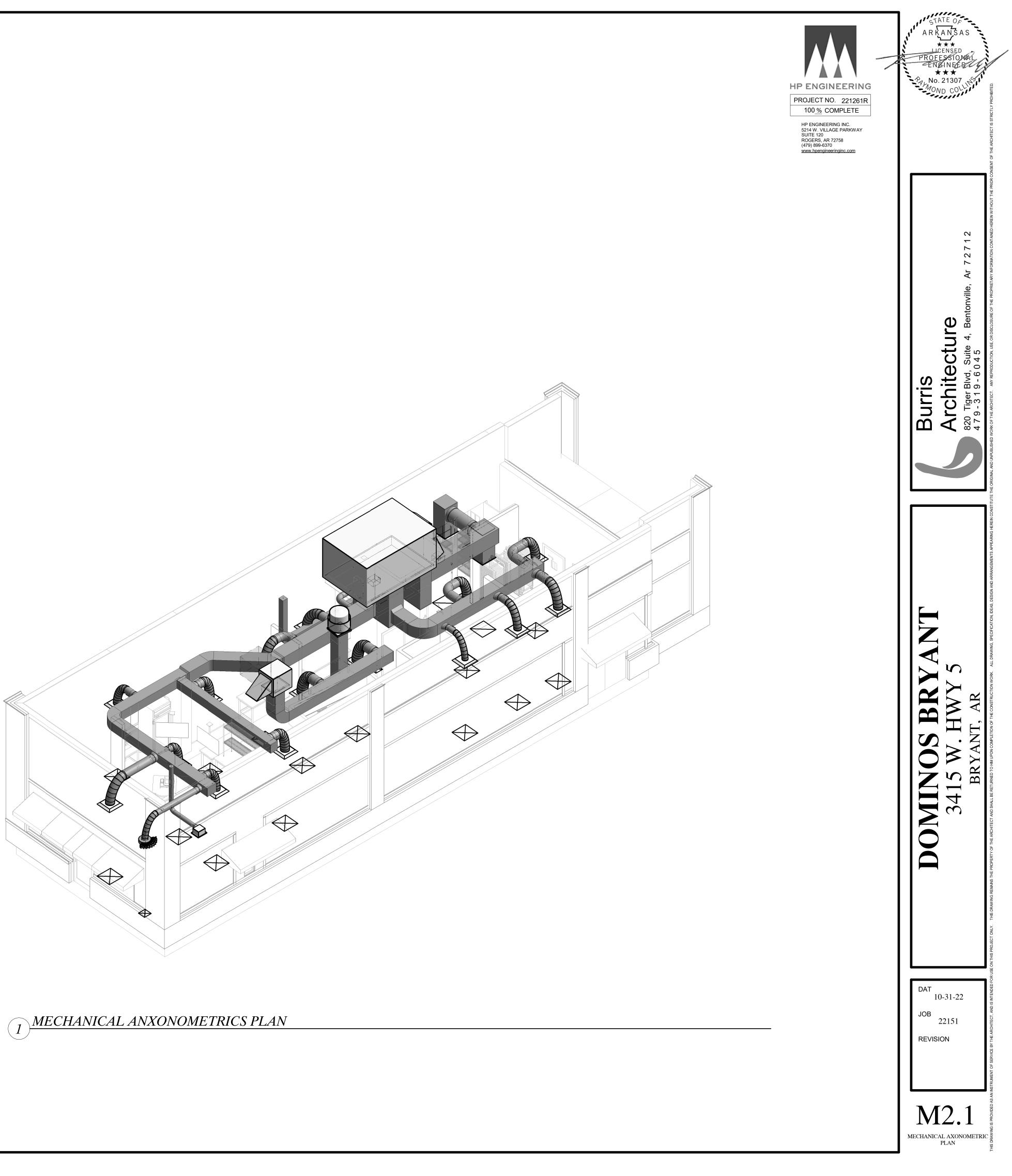


PROJECT NO. 221261R 100 <u>%</u> COMPLETE

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23A HEATING, VENTILATING, AND AIR CONDITIONING rev – 20150529

23A 1 GENERAL INSTRUCTIONS

23A 1-1 GENERAL REQUIREMENTS

Requirements under Division 1 and the general and supplementary conditions of these specifications apply to this section and division. Where the requirements of this section and division exceed those of Division 1, this section and division take precedence. Become thoroughly familiar with all their contents as to requirements that affect this division, section or both. The work required under this section includes material, equipment, appliances, transportation, services, and labor required to complete the entire system as required by the drawings and specifications, or reasonably inferred to be necessary to facilitate each system's functioning as implied by the design and the equipment specified.

The specifications and drawings for the project are complementary, and portions of the work described in one, shall be provided as if described in both. In the event of discrepancies, notify the engineer and request clarification prior to proceeding with the work involved.

Drawings are graphic representations of the work upon which the contract is based. They show the materials and their relationship to one another, including sizes, shapes, locations, and connections. They also convey the scope of work, indicating the intended general arrangement of the equipment and other materials without showing all of the exact details as to elevations, offsets, control lines, and other installation requirements. Use the drawings as a guide when laying out the work and to verify that materials and equipment will fit into the designated spaces, and which, when installed per manufacturers' requirements, will ensure a complete, coordinated, satisfactory and properly operating system. Determine exact locations by job measurements, by checking the requirements of other trades, and by reviewing all contract documents. Correct errors that could have been avoided by proper checking and inspection, at no additional cost to the owner

Specifications define the qualitative requirements for products, materials, and workmanship upon which the contract is based.

23A 1-2 DEFINITIONS

Whenever used in these specifications or drawings, the following terms shall have the indicated meanings:

Furnish: "to supply and deliver to the project site, ready for unloading, unpacking, assembling, installing, and similar operations.

Install: "to perform all operations at the project site, including, but not limited to, and as required: unloading, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, testing, commissioning, starting up and similar operations, complete, and ready for the intended use."

Provide: "to furnish and install complete, and ready for the intended use."

Furnished by owner (or owner-furnished) or furnished by others: "an item furnished by the owner or under other divisions or contracts, and installed under the requirements of this division, complete, and ready for the intended use, including all items and services incidental to the work necessary for proper installation and operation. Include the installation under the warranty required by this division.

Engineer: where referenced in this division, "engineer" is the engineer of record and the design professional for the work under this division, and is a consultant to, and an authorized representative of, the architect, as defined in the general and/or supplementary conditions. When used in this division, it means increased involvement by, and obligations to, the engineer, in addition to involvement by, and obligations to, the "architect".

AHJ: the local code and/or inspection agency (authority) having jurisdiction over the work.

NRTL: nationally recognized testing laboratory, as defined and listed by OSHA in 29 CFR 1910.7 (e.g., UL, ETL, CSA), and acceptable to the AHJ over this project.

The terms "approved equal", "equivalent", or "equal" are used synonymously and shall mean "accepted by or acceptable to the engineer as equivalent to the item or manufacturer specified". The term "approved" shall mean labeled, listed, certified, or all three, by an NRTL, and acceptable to the AHJ over this project.

23A 1-3 PRE-BID SITE VISIT

Prior to submitting bid, visit the site of the proposed work and become fully informed as to the conditions under which the work is to be done. Failure to do so will not be considered sufficient justification to request or obtain extra compensation over and above the contract price.

23A 1-4 MATERIAL AND WORKMANSHIP

Provide all material and equipment new and in first class condition. Provide markings or a nameplate for all material and equipment identifying the manufacturer and providing sufficient reference to establish quality, size and capacity. In general, provide the following quality grade(s) for all materials and equipment: **Commercial Specification Grade**

Light Duty and Residential Grade

Pipe, pipe fittings, pipe specialties and valves shall be manufactured in plants located in the United States.

Work performed under this contract shall provide a neat and "workmanlike" appearance when completed, to the satisfaction of the architect and engineer. Workmanship shall be the finest possible by experienced mechanics of the proper trade.

The complete installation shall function as designed and intended with respect to efficiency, capacity, noise level, etc. Abnormal or excessive noise from equipment, devices or other system components will not be acceptable.

Remove from the premises waste material present as a result of work. Clean equipment installed under this contract to present a neat and clean installation at the termination of the work.

Repair or replace public and private property damaged as a result of work performed under this contract to the satisfaction of authorities and regulations having jurisdiction.

23A 1-5 MANUFACTURERS

In other articles where lists of manufacturers are introduced, subject to compliance with requirements, provide products by one of the manufacturers specified.

Where a list is provided, manufacturers listed are not in accordance with any ranking or preference.

Where manufacturers are not listed, provide products subject to compliance with requirements from manufacturers that have been actively involved in manufacturing the specified product for no less than 5 years. 23A 1-6 COORDINATION

Coordinate all work with other divisions and trades so that the various components of the systems will be installed at the proper time, fit the available space, and will allow proper service access to those items requiring maintenance. Refer to all other division's drawings, and to relevant equipment submittals and shop drawings to determine the extent of clear spaces. Components which are installed without regard to the above shall be relocated at no additional cost to the owner.

Unless otherwise indicated, the general contractor will provide chases and openings in building construction required for installation of the systems specified herein. Contractor shall furnish the general contractor with information where chases and openings are required. Make all offsets required to clear equipment, beams and other structural members, and to facilitate concealing system components in the manner anticipated in the design. Keep informed as to the work of other trades engaged in the construction of the project, and execute work in a manner as to not interfere with or delay the work of other trades.

Figured dimensions shall be taken in preference to scale dimensions. Contractor shall take his own measurements at the building, as variations may occur. Contractor will be held responsible for errors that could have been avoided by proper checking and inspection

Provide materials with trim that will properly fit the types of ceiling, wall, or floor finishes actually installed. Model numbers listed in the construction documents are not necessarily intended to designate the required trim.

23A 1-7 ORDINANCES, CODES, AND STANDARDS

Work performed under this contract shall, at a minimum, be in conformance with applicable national, state and local codes having jurisdiction. Equipment furnished and associated installation work performed under this contract shall be in strict compliance with current applicable codes adopted by the local AHJ including any amendments and standards as set forth by the National Fire Protection Association (NFPA), Underwriters Laboratories (UL), Occupational Safety and Health Administration (OSHA), American Society of Mechanical Engineers (ASME), American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE), American National Standards Institute (ANSI), American Society of Testing Materials (ASTM) and other national standards and codes where applicable. Additionally, comply with rules and regulations of public utilities and municipal departments affected by connection of services. Where the contract documents exceed the requirements of the referenced codes, standards, etc., the contract documents shall take precedence.

Promptly bring all conflicts observed between codes, ordinances, rules, regulations, referenced standards, and these documents to the engineer's attention for final resolution. Contractor will be held responsible for any violation of the law.

Procure and pay for permits and licenses required for the accomplishment of the work herein described. Where required, obtain, pay for and furnish certificates of inspection to owner. Contractor will be held responsible for violations of the law. 23A 1-8 PROTECTION OF EQUIPMENT AND MATERIALS

Store and protect from damage equipment and materials delivered to job site, in accordance with manufacturers' recommendations. For materials and equipment susceptible to changing weather conditions, dampness, or temperature variations, store inside in conditioned spaces. For materials and equipment not susceptible to these conditions, cover with waterproof, tear-resistant, heavy tarp or polyethylene plastic as required to protect from plaster, dirt, paint, water, or physical damage. Equipment and material that has been damaged by construction activities will be rejected, and contractor shall furnish new equipment and material as required at no additional cost to the owner.

Keep premises broom clean from foreign material created during work performed under this contract. Piping, equipment, etc. shall have a neat and clean appearance at the termination of the work.

Plug or cap open ends of ductwork and piping systems while stored and installed during construction when not in use to prevent the entrance of debris into the systems.

23A 1-9 SUBSTITUTIONS

Include in the base bid the products specifically named in these specifications or on the drawings. Submit, in the form of alternates, with bid, products of any other manufacturers for similar use, provided the differences in cost, if any, are included for each proposed alternate.

No substitutions will be considered with receipt of Bids, unless the Architect and Engineer have received from the Bidder a written request for approval to bid a substitution at least ten calendar days prior to the date for receipt of Bids, and have approved the substitution request. Include, with each such request, the name of the material or equipment for which substitution is being requested, and a complete description of the proposed substitution, including drawings, cut sheets, performance and test data, and all other information necessary for an evaluation. Include also a statement setting forth changes in other materials, equipment or other work that would be required to incorporate the substitution. The burden of proof of the merit of the proposed substitute is upon the proposer. The proposer of any substitutions shall compensate the Engineer at a rate of \$150.00 per hour for time spent evaluating proposed substitutions and or the subsequent revisions to the design required to utilize the substitution.

The Architect's or Engineer's decision to approve or disapprove a substitution in a Bid is final.

If the proposed substitution is approved prior to receipt of Bids, such approval will be stated in an Addendum. Bidders shall not rely upon approvals made in any other manner, including verbal.

No substitutions will be considered after receipt of Bids and before award of the Contract.

No substitutions will be considered after the Contract is awarded unless specifically provided in the Contract Documents.

23A 1-10 SUBMITTALS

Assemble and submit to the architect, for engineer's review, manufacturers' product literature for material and equipment to be furnished, installed, or both, under this division, including shop drawings, manufacturers' product data and performance sheets, samples, and other submittals required by this division. Highlight, mark, list or indicate the materials, performance criteria and accessories that are being proposed. Provide the number of submittals required by division 1; however, at a minimum, submit two (2) sets. Before submitting, verify that all materials and equipment submitted are mutually compatible and suitable for the intended use, fit the available spaces, and allow ample and code-required room for access and maintenance. Submittals shall contain the following information. Submittals not so identified will be returned to the contractor without action:

The project name. The applicable specification section and paragraph.

The submittal date.

The contractor's stamp, which shall certify that the stamped drawings have been checked by the contractor, comply with the drawings and specifications, and have been coordinated with other trades.

Submittals and shop drawings shall not contain HP Engineering's firm name or logo, nor shall it contain the HP Engineering's engineers' seal and signature. They shall not be copies of HP Engineering's work product.

Transmit submittals as early as required to support the project schedule. Allow for two weeks engineer review time, plus mailing time, plus a duplication of this time for re-submittals, if required. The engineer's submittal reviews will not relieve the contractor from responsibility for errors in dimensions, details, size of members, or quantities; or for omitting components or fittings; or for not coordinating items with actual building conditions.

Refer to division 1 for acceptance of electronic submittals for this project. For electronic submittals, contractor shall submit the documents in accordance with the procedures specified in division 1. Contractor shall notify the architect and engineer that the shop drawings have been posted. If electronic submittal procedures are not defined in division 1, contractor shall include the website, user name and password information needed to access the submittals. For submittals sent by e-mail, contractor shall copy the architect and engineer's designated representatives. Contractor shall allow the engineer review time as specified above in the construction schedule. Contractor shall submit only the documents required to purchase the materials and/or equipment in the electronic submittal and shall clearly indicate the materials, performance criteria and accessories being proposed. General product catalog data not specifically noted to be part of the specified product will be rejected and returned without review.

23A 1-11 ELECTRONIC DRAWING FILES

In preparation of shop drawings or record drawings, contractor may, as an option, obtain electronic drawing files in Revit, AutoCAD, or DXF format from the engineer for a fee of \$200 for the first sheet and \$100 per sheet for each additional sheet. Contact the architect for written authorization; and, contact the engineer to obtain the necessary release agreement form and to indicate the desired shipping method and drawing format. In addition to payment, architect's written authorization and engineer's release agreement form must be received before electronic drawing files will be sent. 23A 1-12 OPERATION AND MAINTENANCE MANUALS

Submit to the architect, for engineer's review, copies each of operations and maintenance instruction manuals, appropriately bound into manual form including approved copies of the following, revised if necessary to show system and equipment as actually installed. Paper clips, staples, rubber bands, and mailing envelopes are not considered approved binders. Provide the number of submittals required by Division 1; however, at a minimum, submit two (2) sets, and include, at a minimum, the following information:

Cover sheet that lists the project name, date, owner, architect, consulting engineer, general contractor, sub-contractor, and an index of contents.

Manufacturers' catalogs and product data sheets Wiring diagrams

Operation and Maintenance instructions Parts lists

Approved shop drawings Test reports as defined for the systems and equipment provided or furnished or installed under this contract. Names, addresses, telephone numbers, and e-mail addresses of local contacts for warranty services and spare parts.

Submit manuals prior to requesting the final punch list and before any requests for substantial completion. Final approval of this division's systems installed under this contract will be withheld until this equipment brochure is received and deemed complete by the architect and engineer.

Provide "as-built" drawings (see Division 1 and general conditions).

23A 1-13 TRAINING

At a time mutually agreed upon between the owner and contractor, provide the services of a factory trained and authorized representative to train owner's designated personnel on the operation and maintenance of the equipment provided for this project.

Provide training to include but not be limited to an overview of the system and/or equipment as it relates to the facility as a whole: operation and maintenance procedures and schedules related to startup and shutdown, troubleshooting, servicing, preventive maintenance and appropriate operator intervention; and review of data included in the operation and maintenance manuals.

Submit a certification letter to the architect stating that the owner's designated representative has been trained as specified herein. Letter shall include date, time, attendees and subject of training. The contractor and the owner's representative shall sign the certification letter indicating agreement that the training has been provided.

Schedule owner training with at least 7 days' advance notice. 23A 1-14 WARRANTIES

Warrant each system and each element thereof against all defects due to faulty workmanship, design or material for a period of 12 months from date of substantial completion, unless specific items are noted to carry a longer warranty in the construction documents or manufacturer's standard warranty exceeds this duration. Warranties shall include labor and material. Remedy all defects, occurring within the warranty period(s), as stated in the general conditions and Division 1 without any additional costs to the owner.

Perform any required remedial work promptly, upon written notice from the engineer or owner.

At the time of substantial completion, deliver to the owner all warranties, in writing and properly executed, including term limits for warranties extending beyond the required period, each warranty instrument being addressed to the owner and stating the commencement date and term.

23A 1-15 CUTTING AND PATCHING

Perform cutting of walls, floors, ceilings, etc. as required to install work under this section. Obtain permission from the architect prior to cutting. Do not cut or disturb structural members without prior approval from the architect. Cut holes as small as possible. General contractor shall patch walls, floors, etc. as required by work under this section. Patching shall match the original material and construction. Repair and refinish areas disturbed by work to the condition of adjoining surfaces in a manner satisfactory to the architect. 23A 1-16 ROUGH-IN

Coordinate without delay roughing-in with general construction. Conceal piping and conduit rough-in except in unfinished areas and where otherwise shown.

23A 1-17 CONCRETE BASES

Provide concrete bases for equipment where indicated on the drawings and as specified herein. Concrete bases shall have chamfered edges. Size of pad shall be a minimum of 4" greater than the footprint of the equipment that it is supporting and shall have a minimum height of 3-1/2".

Construct equipment bases and housekeeping pads shall be of a minimum 28 day, 4000 psi concrete conforming to American Concrete Institute standard building code for reinforced concrete (ACI 318-99) and the latest applicable recommendations of the ACI standard practice manual. Concrete shall be composed of cement conforming to ASTM C 150 Type I, aggregate conforming to ASTM C33, and potable water. Exposed exterior concrete shall contain 5 to 7 percent air entrainment

Unless otherwise specified or shown on the structural drawings, reinforce equipment bases and housekeeping pads with No. 4 reinforcing bars conforming to ASTM A 615 or 6x6 - W2.9 x W2.9 welded wire mesh conforming to ASTM A185. Place reinforcing bars 24" on center with a minimum of two bars each direction.

Provide galvanized anchor bolts for equipment placed on concrete equipment bases and housekeeping pads or on concrete slabs. Anchor bolts size, number and placement shall be as recommended by the manufacturer of the equipment.

23A 1-18 STRUCTURAL STEEL

Structural steel used for support of equipment, ductwork and piping shall be new, clean, and conform to ASTM designation A-36.

Support mechanical components from the building structure. Do not support mechanical components from ceilings, other mechanical or electrical components, and other non-structural elements. 23A 1-19 ACCESS DOORS

Provide access doors in ceilings, walls, etc. where indicated or required for access or maintenance to concealed valves and equipment installed under this section. Provide concealed hinges, screwdriver-type lock, anchor straps, manufactured by Milcor, Zurn, Titus, or equal. Obtain architect's approval of type, size, location and color before ordering. 23A 1-20 PENETRATIONS

Provide sleeves for pipes passing through above grade concrete or masonry walls, concrete floor or roof slabs. Sleeves are not required for core drilled holes in existing masonry walls, concrete floors or roofs. Provide 10 gauge galvanized steel sleeves for sleeves 6" and smaller. Provide galvanized sheet metal sleeves for larger than 6". Schedule 40 PVC sleeves are acceptable for installation in areas without return air plenums.

Seal elevated floor, exterior wall and roof penetrations watertight and weathertight with non-shrink, non-hardening commercial sealant. Pack with mineral wool and seal both ends with minimum of 1/2" of sealant.

Seal around penetrations of fire rated assemblies. Coordinate fire ratings and locations with the architectural drawings. Refer to architectural specifications for fire stoppings. Provide a product schedule for UL listing, location, wall or floor rating and installation drawing for each penetration fire stop system.

Extend pipe insulation for insulated pipe through floor, wall and roof penetrations, including fire rated walls and floors. The vapor barrier shall be maintained. Size sleeve for a minimum of 1" annular clear space between inside of sleeve and outside of insulation.

Provide prefabricated roof curbs manufactured by Custom Curb, Inc., Pate Company, Thycurb or approved equal. Provide roof curb with factory installed wood nailer; welded, 18 gauge galvanized steel shell, base plate and flashing; 1-1/2" thick, 3 pound rigid insulation; fully mitered 3-inch raised cant; cover of weather-resistant, weather-proof material and pipe collar of weather-resistant material with stainless steel pipe clamps.

Provide box frames for rectangular openings welded 12 gauge galvanized steel attached to forms and of a maximum dimension established by the architect. Notify the general contractor or architect before installing any box openings not shown on the architectural or structural drawings.

Seal concrete or masonry exterior wall penetrations below grade with "wall pipes" and mechanical sleeve seals. Provide cast iron "wall pipes" with integral waterstop ring manufactured by Josam, Jay R. Smith, Wade, Watts or Zurn. Provide modular mechanical sleeve seals, manufactured by Thunderline / Link Seal, Calpico, Inc. and Metraflex.

Seal elevated concrete slab with water proof membrane penetrations with "wall pipes" and water proof sealant. Secure waterproof membrane flashing between "wall pipe" clamping flange and clamping ring. Provide cast iron "wall pipes" with integral waterstop ring manufactured by Josam, Jay R. Smith, Wade, Watts or Zurn.

Provide sleeves for horizontal pipe passing through or under foundation. Sleeves shall be cast iron soil pipe two nominal pipe sizes larger than the pipe served.

Provide Schedule 40 PVC pipe sleeves for vertical pressure pipe passing through concrete slab on grade. Sleeves shall be one nominal pipe size larger than the pipe served and two pipe sizes larger than pipe served for ductile iron pipes with restraining rods. Seal water-tight with silicone caulk.

Provide 1/2" thick cellular foam insulation around perimeter of non-pressure pipe passing thru concrete slab on grade. Insulation shall extend to 2" above and below the concrete slab.

23A 1-21 AIR FILTERS

Provide MERV 8 pleated, throwaway type filters, unless otherwise indicated. Air units shall have new filters installed when they are operated before final acceptance. Filters shall be manufactured by American Air Filter, Farr, Flanders, or approved

If HVAC equipment is used during the construction period, contractor shall provide one set of filters when the unit is started and replace filters when needed, but not less than every month. Install new filters prior to testing, adjusting, and balancing work. On the day of substantial completion, the contractor shall clean the unit and provide a new set of filters in the unit before turning system over to owner.

Furnish to owner, with receipt, One set of spare filters of each type required for each unit.

23A 1-22 MOTORS AND STARTERS

Provide motors and starting equipment where not furnished with the equipment package. Motors shall have copper windings, Class B insulation, and be standard squirrel cage with starting torque characteristics suitable for the equipment served. Motors for air handling equipment shall be selected for quiet operation. Each motor shall be checked for proper rotation after electrical connection has been completed. Provide drip-proof enclosure for locations protected from weather and not in air stream of fan; and totally enclosed fan cooled enclosure for motors exposed to weather. Motors shall be manufactured by Century, General Electric, Westinghouse, Louis Allis, or approved equal.

Furnish to owner, with receipt, one complete set of belts for each relative motor utilizing a belt drive.

Provide every motor, except fractional horsepower single phase motors with an approved type of "built-in" thermal overload protection, with a motor starter. Each starter shall be provided with overload heaters sized to the motor rating, and every three phase motor starter shall have overload heaters in each phase. Ambient compensated heaters shall be installed wherever necessary. Unless noted otherwise, motor starters shall be furnished by this Divisions contractor for installation and connection by the Division 26 contractor. Starters shall be Allen-Bradley, Clark, Furnas, Square D, or approved equal. 23A 1-23 ELECTRICAL WIRING

Line Voltage control and interlock wiring shall be provided by the Division 26 contractor. Low Voltage control wiring shall be provided by the Division 23 contractor. Required conduit and rough-ins for low Voltage control wiring shall be provided by the Division 26 contractor. Furnish wiring diagrams to the Division 26 contractor as required for proper equipment hookup. Coordinate with the Division 26 contractor the actual wire sizing amps for the equipment (from the equipment nameplate) to ensure proper installation.

23A 1-24 REFRIGERANT AND OIL

Provide full refrigerant and oil charge in new air conditioning refrigeration systems, and maintain it for full term of the guarantee.

23A 1-25 FINAL TESTING AND ADJUSTMENTS

Final system testing, balancing and adjustments shall be performed by a contractor certified by the National Environmental Balancing Bureau (NEBB), Associated Air Balance Council (AABC) or other approved agency. Perform test readings on fans, units, coils, etc. and adjust equipment to deliver specified amounts of air.

Prepare testing and balancing report log showing air supply quantities, air entering and leaving temperatures and pressures.

fan and unit test readings, motor voltage and amp draws, etc., and submit six copies of the final compilation of data to the architect for evaluation and approval before final inspection of the project. Balance air systems to within plus or minus 10 percent for terminal devices and branch lines and plus or minus 5 percent for main ducts and air handling equipment of the amount of air shown on the drawings. Further adjustments shall be made to obtain uniform temperature in spaces. Adjust equipment to operate as intended by the specification. Align bearings and replace bearings that have dirt or foreign material in them with new bearings without additional cost to the owner. Balance contractor shall include in the report any improperly installed or missing balancing devices that would negatively impact the system operation.

Adjust thermostats and control devices to operate as intended. Adjust burners, pumps, fans, etc. for proper and efficient operation. Certify to architect that adjustments have been made and that system is operating satisfactorily. Further adjustments shall be made to obtain uniform temperature in spaces. Calibrate, set, and adjust automatic temperature controls. Check proper sequencing of interlock systems, and operation of safety controls. 23A 1-26 EQUIPMENT FURNISHED BY OTHERS

Provide necessary equipment and accessories that are not provided by the equipment supplier or owner to complete installation of cooking equipment, washing equipment, etc., furnished by others, in locations as indicated on the drawings and/or described in the general notes to this contractor. Equipment and accessories not provided by the equipment supplier may include flues, vents, intakes, associated roof jacks and caps to outdoors, dampers, in-line fans, roof fans, control interlocks, etc. as required for proper operation of the complete system in accordance with the manufacturer's instructions.

Contractor shall be responsible for correct rough-in dimensions, and shall verify same with architect and/or equipment supplier prior to service installations.

Manufacturers: Provide vibration isolation equipment and materials by a single manufacturer. Approved manufacturers provided their systems are in compliance with the specified design and performance requirements include Amber Booth, Kinetics Noise Control, Mason Industries, Inc., Vibration Eliminator Co., Inc., and Vibration Mounting and Controls.

General requirements: Select vibration isolators by the weight distribution to produce uniform deflection. Vibration isolators shall have either known un-deflected heights or calibration markings so that, after adjustment, the static deflection can be verified, thus determining that the load is within the proper range of the isolator. Isolators shall operate in the linear portion of their load versus deflection curves. Spring isolators shall have 50 percent excess capacity without becoming coil bound. Coat vibration isolators with factory-applied paint. Coat vibration isolators exposed to weather and other corrosive environments with factory-applied corrosion resistance protection. Install and adjust vibration isolators in accordance with manufacturers written instructions.

Pipe connections: Provide flexible connectors for piping system connections on equipment side of shutoff valves for all pumps, mechanical equipment supported or suspended by spring isolators, and where indicated on drawings. Fabricate flexible piping connectors from stainless steel, bronze or rubber materials as suitable for system fluid. Flexible piping connectors shall be bellows, spherical or braided hose type as recommended by the manufacturer for the application.

Isolator types:

Type WP (waffle pads): Provide 5/16" thick neoprene pads ribbed or waffled on both sides. Manufacture pads with bridge bearing quality neoprene, and select for a maximum durometer of 50 and designed for 15 percent strain. Incorporate steel load-spreading plates where required between the equipment and the neoprene pad. If the isolator is bolted to the structure, install a neoprene vibration isolation washer and sleeve (Uniroyal Type 620/660 or as approved) shall be installed under the bolt head between the steel washer and the base plate. Provide Mason Industries Type W or equal.

Type SPNH (spring and neoprene hangers): Provide a steel spring in series with a neoprene isolating element. The spring shall have a minimum additional travel to solid equal to 50 percent of the specified deflection. The neoprene element shall have a static deflection of not less than 0.3" with a strain not exceeding 15 percent. Unless otherwise specified, the static deflection of SPNH hangers shall be 2". Spring diameter and hanger box hole size shall be large enough to permit the hanger rod to swing through a 30 degree arc. Provide neoprene sleeve where the lower hanger rod passes through the steel hanger box, such that the hanger rod cannot contact the steel hanger. The diameter of the clear hole in the hanger box shall be at least 3/4 inch larger than the diameter of the hanger rod. When installed, do not cock the spring element and do not allow the hanger box to rotate through a full 360 degree arc without encountering obstructions. Provide Mason Industries Type 30N or equal.

Type SPNM (spring and neoprene mounts): Provide free-standing and laterally stable steel spring without a housing. Design springs so the ratio of the horizontal to vertical spring constant is between one and two. The spring diameter shall be not less than 80% of the compressed height of the spring at rated load. Loaded springs shall have a minimum additional travel to solid equal to 50% of the specified static deflection. Unless otherwise specified, the minimum static deflection of SPNM isolators for equipment mounted on grade slabs shall be 1", and the minimum static deflection for equipment mounted above grade level shall be 2". Bond two Type WP isolation pads sandwiching a 16 gauge stainless or galvanized steel separator plate to the isolator baseplate. Unless otherwise specified, isolators need not be bolted to the floor for indoor installations. If the base plates are bolted to the structure, install a neoprene vibration isolation washer and sleeve (Uniroyal Type 620/660 or as approved) under the bolt head between the steel washer and the base plate. Provide Mason Industries Type SLFH or equal.

Type CMB (curb mounted base): Curb mounted base for roof-mounted equipment shall be a structural steel base mounted directly to the structure with an upper floating section on adjustable steel springs. The upper frame shall provide continuous support for the equipment. Steel springs shall rest on 1/4" min. thickness neoprene pads and shall have a minimum static deflection of 2" unless otherwise specified. All-directional snubber bushings shall be 1/4" minimum thickness neoprene. All hardware shall be cadmium or zinc electroplated to provide a rust resistant finish. Weather proofing shall consist of a continuous galvanized flexible counterflashing nailed over the lower curb's waterproofing and joined at the corners by EPDM bellows. All spring locations shall have access ports with removable waterproof covers to allow for adjustment or replacement of springs. Lower curbs shall have provision for 2" insulation. Duct connections shall be made using a length of flexible duct dimensioned to match the equipment opening, using a foam rubber gasket to seal against the unit bottom. Provide Mason Industries Type RSC or equal.

Seismic protection for seismic concerns of all building systems including but not limited to mechanical, plumbing, and electrical must meet minimum requirements of all applicable codes for buildings' classified seismic use group and seismic design category. Any requirements for seismic protection measures to be applied shall be installed in strict accordance with all applicable local, state, and/or federal codes and with manufacturer's requirements, the most stringent shall apply.

Seismic restraints, isolators, and isolation materials shall be of the same manufacturer, and shall be certified by the manufacturer. Restraining devices shall have a pre-approval number from California OSHPD or other recognized government agency showing maximum restraint ratings.

23A 2 INSULATION AND SHEET METAL WORK 23A 2-1 DUCT INSULATION Cover concealed rigid round supply and return air ductwork, round and rectangular outside air ductwork, and round and rectangular exhaust and relief air ductwork in unconditioned spaces and within 10 feet of exterior discharge outlets with 2 1/4" thick, 3/4 pound density, minimum R-6.0 duct wrap, Certainteed or equivalent Owens-Corning or Knauf with heavy-duty foil-scrim-kraft facing, and with joints taped with 3" wide foil tape. Where contractor has the option to provide duct liner, in lieu of duct wrap, in rectangular supply and return air ductwork. Liner shall be 2-pound density fiberglass, minimum R-6.0 CertainTeed Corp. "ToughGard" or equivalent Owens-Corning or Knauf long textile fiber duct liner. Liner surface shall serve as a barrier against infiltration of dust and dirt, shall meet ASTM C 1338 for fungi resistance and shall be cleanable using duct cleaning methods and equipment outlined by North American Insulation Manufacturers Association (NAIMA) duct cleaning guide. Install with liner adhesive and mechanical fasteners in accordance with manufacturer's instructions and recommendations. Duct dimensions listed on drawings represent the airflow free areas and do not have allowances for insulation liner, where applicable, inside the ducts, or dual wall

dimensions. Ducts shall be constructed to include insulation requirements and maintain airflow dimensions indicated on

For ductwork that is located exterior to the building, insulate with 2" (minimum R-8.0) thick fibrous board insulation and provide minimum 20 gauge aluminum jacket sealed with approved weatherproof sealant. Insulating materials, adhesives, coatings, etc., shall not exceed flame spread rating of 25 and smoke developed rating of 50 per ASTM E 84. Containers for mastics and adhesives shall have UL label.

23A 1-28 BUILDING OPERATION

Comply with the schedule of operations as outlined in the architectural portions of this specification. Building shall be in continuous operation. Accomplish work requiring interruption of building operation at a time when the building is not in operation, and only with written approval of building owner and/or tenant. Coordinate interruption of building operation with the owner and/or tenant a minimum of seven days in advance of work. 23A 1-29 VIBRATION ISOLATION

23A 1-30 MECHANICAL IDENTIFICATION

Provide manufacturer's standard pre-printed, semi-rigid snap-on or permanent adhesive, pressure-sensitive vinyl pipe markers. Color code pipe markers to comply with ANSI A13.1.

Install pipe markers on each HVAC piping system and include arrows to show normal direction of flow.

Locate pipe markers and color bands wherever piping is exposed to view in occupied spaces, machine rooms, accessible maintenance spaces (shafts, tunnels, plenums) and exterior non-concealed locations.

Provide plastic laminate or brass valve tag on every valve, cock and control device in each HVAC piping system; exclude check valves, valves within factory fabricated equipment units, and shut-off valves at HVAC terminal devices and similar rough-in connections of end-use fixtures and units.

Provide manufacturer's standard laminated plastic, color coded equipment markers. Conform to the following color code: green for cooling; yellow for heating; yellow/green for combination cooling and heating; brown for energy reclamation; blue for other equipment types. Conform to ANSI A13.1 for hazardous equipment.

Provide stenciled signs for equipment identification at contractor's option or where distance of required identification requires lettering larger than 1" height. Stencil paint shall be exterior type, oil-based, alkyd enamel, minimum 1-1/4" height or greater as required for long distance identification, white or black color for best contrast.

Provide duct markers or provide stenciled signs and arrows indicating ductwork service and flow direction in black or white lettering for best contrast with duct or insulation color. Locate markers maximum 50 feet along each duct side and within 5 feet of all control and balancing dampers or branch ducts more than 25 feet length and within 5 feet on each side of wall, floor, and ceiling penetrations. Provide additional markers in congested areas or at multiple duct runs as required for clarity.

23A 1-31 SEISMIC REQUIREMENTS

The contractor shall be responsible for determining the type and location of seismic restraints required for the various system's elements contained in the construction documents based on the related seismic code criteria, the size and weight of the supported element and the distance from structure that the element will be installed. If required by local, state, federal codes and/or other authority having jurisdiction the contractor shall submit descriptive catalog data of seismic restraints, shop drawings showing the types, locations and installation details of seismic restraints and calculations showing that the seismic restraints meet the seismic requirements to the local authority having jurisdiction for review and approval. Calculations shall be signed and sealed by a registered professional engineer, licensed in the state of the project location and employed by the manufacturer of the seismic restraint products. Calculations shall include dead loads, static seismic loads and capacity of materials utilized for connections to equipment and structure.

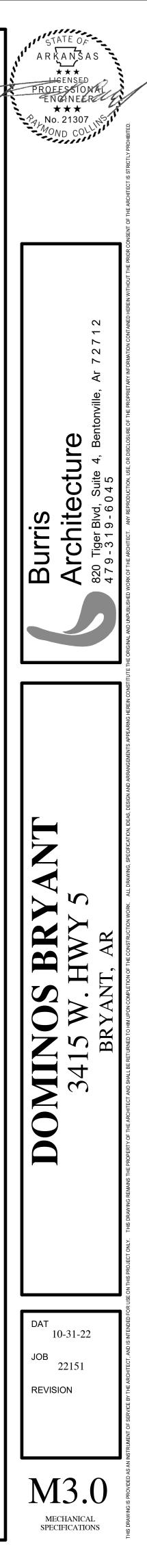
Insulating materials, adhesives, coatings, etc., shall not exceed flame spread rating of 25 and smoke developed rating of 50 per ASTM E 84. Containers for mastics and adhesives shall have UL label.

For ductwork that is located exterior to the building, insulate with 2" (minimum R-8.0) thick fibrous board insulation and provide minimum 20 gauge aluminum jacket sealed with approved weatherproof sealant.



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23A 2-2 DUCTWORK

Provide galvanized steel ductwork and housings as shown on drawings. Construct ductwork including fittings and transitions in conformance with current SMACNA standards relative to gauge, bracing, joints, etc. Minimum thickness of duct shall be 26-gauge sheet metal. Reinforce housings and ductwork over 30" with 1-1/4" angles not less than 5'-6" on centers, and closer if required for sufficient rigidity to prevent vibration. Support horizontal runs of duct from strap iron hangers on centers not to exceed 8'-0". Do not support ceiling grid, conduits, pipes, equipment, etc. from ductwork. Coordinate routing of ductwork with other contractors such that piping, electrical conduit, and associated supports are not routed through the ductwork.

Construct supply ducts to meet SMACNA positive pressure of 3" w.g. Construct return, outdoor and exhaust ductwork upstream of fans to meet SMACNA negative pressure of 2" w.g. Construct exhaust ductwork downstream of fans to meet SMACNA positive pressure of 2" w.g

Provide mill phosphatized or galvanealed finish for exposed ductwork to be field painted. Shop treated sheet metal shall have galvanized metal primer applied in the shop after fabrication and prior to shipping. Ductwork above roof or otherwise exterior to building shall be minimum #18 gauge with longitudinal and transverse joints welded.

Seal ductwork with heavy liquid sealant, Hardcast Irongrip 601, Design Polymer DP 1010, United McGill duct sealer or approved equal, applied according to sealant manufacturer's instructions. For ducts with pressure classification of 2" w.g. and greater seal longitudinal and transverse ductwork joints airtight to meet SMACNA Class B. For ducts with pressure classification less than 2" w.g. seal transverse joints airtight to meet SMACNA Class C. Tapes and mastics shall be listed and labeled in accordance with UL 181A.

Provide radius elbows, turns, and offsets with a minimum centerline radius of 1-1/2 times the duct width. Where space does not permit full radius elbows, provide short radius elbows with a minimum of two continuous splitter vanes. Vanes shall be the entire length of the bend. Provide mitered elbows where space does not permit radius elbows, where shown on the drawings, or at the option of the contractor with the engineer's approval. Mitered elbows less than 45 degrees shall not require turning vanes. Mitered elbows 45-degrees and greater shall have single thickness turning vanes of same gauge as ductwork, rigidly fastened with guide strips in ductwork. Vanes for mitered elbows shall be provided in all supply and exhaust ductwork and in return and outside air ductwork that has an air velocity exceeding 1000 fpm. Do not install vanes in grease ductwork.

Ducts shall be connected to fans, fan casings and fan plenums by means of flexible connectors. Flexible connectors shall be neoprene coated glass cloth canvas connections, Duro-Dyne, Elgen, Ventfabric or equal. Flexible connectors shall have a flame spread of 25 or less and smoke developed rating not higher than 50. Make airtight joints and install with minimum 1-1/2" slack.

Provide balancing dampers, manufactured by Ruskin, Greenheck, Nailor Industries, Cesco, Louvers & Dampers, Pottorff or approved equal, where shown on drawings and wherever necessary for complete control of air flow. Splitter dampers shall be controlled by locking quadrants; provide Young's Regulator or Ventlok end bearings for the damper rod. Rectangular volume dampers shall be opposed blade interlocking type. Round volume dampers shall be butterfly type consisting of circular blade mounted to a solid shaft. Damper leakage for outside air dampers shall not exceed 6.5 cfm/square foot in full closed position at 4" wg pressure differential across damper. Reference manufacturer and model number for outside air dampers is Ruskin model CD-50

Provide Flexmaster model STO or equal 45 degree rectangular/round side takeoff fitting with model SLBO double bearing damper with insulation build out for round ductwork branch takeoffs to individual air devices. Omit damper at takeoff fitting when damper is located downstream of takeoff.

Where access to dampers through a hard ceiling is required, provide a Metropolitan Air Technology model RT-250 or equal by Young's Regulator concealed, cable operated volume damper with remote operator. Damper shall be adjustable through the diffuser face or frame with standard 1/4" nutdriver or flat screwdriver. Cable assembly shall attach to damper as one piece with no linkage adjustment. Positive, direct, two-way damper control shall be provided with no sleeves, springs or screw adjustments to come loose after installation. Support cable assembly to avoid bends and kinks in cable.

Where approved by architect, a ceiling cup with cover plate can be used for access to cable operator

Round or oval ductwork shall be Semco, United, Wesco or equal, sheetmetal, with smooth interior surface, with low pressure (duct pressure class up to and including 2" w.g.) round ductwork gauges per the following table (reference SMACNA HVAC duct construction standards for gauges when pressures exceed 2" w.g.):

Size	Duct gauge	Fitting gauge
14" & under	26	24
15" thru 26"	24	22
28" thru 36"	22	20
38" thru 50"	20	20
52" thru 60"	18	18

Provide double wall insulated round ductwork where exposed or as otherwise indicated. Fabricate double-wall insulated ducts and fittings with an outer shell, insulation, and an inner liner as specified below. At dual wall ducts, the dimension shown is the outside metal duct size and already has allowances for the insulation thickness. Outer shell shall be 2" longer than inner shell and insulation and shall be gauge as specified for single wall duct.

nside dimensions. Outer shell shall be 2" longer than inner shell and insulation and shall be gauge as specified for single wall

Insulation shall be fiberglass with thickness as required for thermal resistance of R-6. Perforated inner liner shall be 24 gauge up to 34 inches, 22 gauge from 35 to 58 inches, and 20 gauge above 60 inches. Provide 3/32" perforations with an overall open area of 23 percent.

Maintain concentricity of liner to outer shell by mechanical means. Retain insulation from dislocation by mechanical means. Lindab Spirosafe, Lewis & Lambert or approved equal factory manufactured round ductwork and fittings may be substituted for specified round branch ductwork, at contractor's option. Heavy liquid joint sealant may be omitted on factory-manufactured round ductwork.

Low pressure (duct pressure class up to and including 2" w.g.) fittings 24" in diameter and less shall be prefabricated, spotwelded and internally sealed. Continuously weld fittings larger than 24" in diameter. Fitting gauge shall be 22 gauge for 36" fittings and under, 20 gauge for larger sizes. 90 degree tee's shall be conical type. Seal longitudinal and transverse ductwork joints airtight with heavy liquid sealant applied according to manufacturer's instructions. Provide gauge thickness in medium pressure (duct pressure class 3" to 6" w.g.) Ductwork as recommended by SMACNA.

At contractor's option, provide Ductmate, Gripple, or approved equal wire rope duct hanging system. Provide Ductmate WR10 through WR40 or gripple No. 1 through No. 5 wire rope using 7x7 or 7x19 aircraft quality zinc coated cable or galvanized steel wire rope. Secure wire rope to duct using Ductmate Clutcher or Gripple Hang Fast adjustable rope attachment. Where applicable for upper attachment, provide Ductmate EZ-Lock wire rope beam clamp with locking nut adjustment or Gripple ceiling, beam, or purlin clips. Wire rope, adjustable duct attachment, and upper attachment to structure shall each have minimum 5 to 1 load safety factor.

23A 2-3 FLEXIBLE DUCT

Low pressure (duct pressure class up to and including 2" w.g.) and medium pressure (duct pressure class 3" to 6" w.g.) flexible duct shall be Flexmaster Type 8B, Thermaflex Type G-KM, M-KE, or equal (fire retardant polyethylene) protective vapor barrier, UL181 Class 1,

acoustical insulated duct, R-6.0 fiberglass insulation. Provide CPE liner with steel wire helix mechanically locked or permanently bonded to the liner.

High pressure (duct pressure class over 6" w.g.) flexible duct shall be Flexmaster Type 4B, Thermaflex Type M-KC, or equal (fire retardant polyethylene) protective vapor barrier, UL181 Class 1, acoustical insulated duct, steel wire helix core, mechanical lock construction, R-6.0 fiberglass insulation. Connect each end with stainless steel screw operated metal draw bands. Flexible duct runs shall not exceed 5 feet in length, and shall be installed fully extended and straight as possible avoiding tight

turns. Install flexible duct in accordance with manufacturer's instructions. Support flexible duct at maximum 5 feet on center and within 6 inches of bends. Bends shall not exceed a centerline radius of one duct diameter. Duct sag shall not exceed 1/2". Supporting material in direct contact with the duct shall not be less than 1-1/2" in width.

Connect flexible duct to rigid metal duct or air devices as recommended by the manufacturer. At a minimum, install two wraps of duct tape around the inner core connection and a metallic or non-metallic clamp over the tape and two wraps of duct tape or a clamp over the outer jacket. Duct clamps shall be labeled in accordance with UL-181b and marked 181b-c. Duct tape shall be labeled in accordance with UL 181b and marked 181b-fx. 23A 2-4 FLUES

Where flues are indicated on the drawings, provide Selkirk Metalbestos model QC or RV or equal by Metal-Fab, Simpson or Van-Packer, Type "B" double wall gas vent flues from the various items of gas-fired equipment up to flue caps above the roof. Single wall flues are unacceptable. Flues shall be complete with necessary fittings, connectors, flashing cone, storm collar, thimble supports, guy wires, and other accessories, and shall be installed as recommended by the manufacturer, and in conformance with applicable codes. Flash flues watertight at the roof line. 23A 2-5 SPECIAL GAS FLUES

Where special gas flues are indicated on the drawings, provide Selkirk Metalbestos model DCV double wall or equal by Heat-Fab Type 29-4c stainless steel special gas vent. Flues shall be complete with necessary fittings, connectors, flashing cone, storm collar, thimble supports, guy wire, and other accessories, and shall be installed as recommended by the manufacturer, and in compliance with applicable codes.

23A 2-6 CONDENSING GAS FURNACE AND APPLIANCE VENT

Vents and combustion air ducts for condensing type appliances shall be Schedule 40 PVC, DWV, meeting ASTM D1784 Grade 1, Type 1, with dimensions meeting ASTM D2665. Fittings shall be DWV, PVC meeting ASTM D2665 with solvent cement socket joints. Solvent used for joints shall meet ASTM D2564.

23A 2-7 AIR DEVICES

Provide air devices as scheduled on drawings, manufactured by Carnes, Price, Krueger, Nailor Industries, Titus, or Tuttle & Bailey. Select air devices to limit room noise level to no higher than NC-30 unless otherwise shown. Provide devices with a soft plastic gasket to make an airtight seal against the mounting surface. Coordinate final location, frame, and mounting type of air devices with architectural reflected ceiling plans.

Submit complete shop drawings including information on noise level, pressure drop, throw, cfm for each air device, styles, borders, etc. clearly marked with specified equipment number. Submit samples of each air device as requested by the engineer.

Provide wall supply air registers with double deflection blades and opposed blade dampers unless indicated otherwise. Provide wall return air grilles and exhaust air registers with horizontal 35 or 45 degree angle vision-proof bars. Provide concealed fasteners for wall mounted registers and grilles.

as indicated on drawings.

Provide opposed blade dampers for supply air registers and exhaust air registers unless indicated otherwise.

Provide ceiling supply air diffusers and return air grilles of lay-in or surface mounted type as required to be compatible with ceiling construction. Provide ceiling diffusers and grilles with white enamel finish unless noted otherwise. Provide linear slot diffusers of standard one-piece lengths up to 6-feet and furnish in multiple sections greater than 6-feet. Join multiple sections together end-to-end with alignment pins to form a continuous slot appearance. Provide alignment components by the manufacturer. Provide plenums by the slot diffuser manufacturer. Provide drop box diffusers with minimum 22 gauge galvanized steel construction, factory assembled and welded, and provided with standard duct connections and mounting brackets for field installation. Diffusers shall have double deflection grilles or drum louvers that are individually adjustable to customize horizontal and vertical throws and factory installed air diverters or turning vanes. Insulate diffusers with 1" thick, 1.5 lb duct liner insulation. Provide factory primed and painted diffusers, color as selected by the architect. Provide drop box diffusers as manufactured by AES Industries, Can Fab, Custom Curb, Inc. or Plenums, Inc. 23A 2-8 FIRE DAMPERS

Provide fire dampers where shown on drawings, and as required by code enforcing authority. Damper ratings shall be as required to maintain the fire and/or smoke ratings noted on the architectural drawings. Provide fire dampers conforming to NFPA-90a and UBC standard 43-7 with recommended steel sleeves of length as required to meet the installed location, 165 degrees Fahrenheit fusible link, spring catches and non-corrosive bearings. Dampers shall be UL listed, manufactured by Ruskin, Greenheck, Air Balance, Cesco, United Air or Nailor Industries.

Provide access door, sized per SMACNA with minimum size of 10" by 10", in duct for inspection and service to fire damper and fusible link. Provide duct access door(s) within 12 inches of the device to allow for testing and maintenance. Label each door (with minimum 1" lettering) indicating which damper type is served. Door should be capable of being fully opened or provide removable door. Provide removable section of duct where duct size is too small for 10" by 10" access door. Provide access door in ceiling or wall as required to access damper. 23A 2-9 COMBINATION FIRE/SMOKE DAMPERS

Provide combination fire/smoke dampers where shown on drawings and as required by code enforcing authority with fire/smoke ratings as required to maintain the fire rating noted on the architectural drawings. Dampers shall meet UL 555 classification for fire rating and UL 555s classification of leakage class ii smoke damper; damper shall bear a UL label attesting to these classifications.

Provide fire damper with a 165 degrees Fahrenheit resettable temperature device. Rate fire/smoke dampers for a minimum velocity of 2,000 fpm and pressure of 4" w.g. Provide manufacturer recommended steel sleeve of length as required to meet the installed location

Provide a qualified 24 volt electric actuator installed by the manufacturer at time of damper fabrication. Actuators shall be rated for a minimum of 20,000 cycles of operation, shall comply with the locally adopted building code and shall open in 15 seconds or less and close in 15 seconds or less after alarm or smoke detection has occurred. Provide stainless steel spring loaded leakage seals in sides of casing, and

Provide access door, sized per SMACNA with minimum size of 10" by 10", in duct for inspection and service to fire damper and fusible link. Provide duct access door(s) within 12 inches of the device to allow for testing and maintenance. Label each door (with minimum 1" lettering) indicating which damper type is served. Door should be capable of being fully opened or provide removable door. Provide removable section of duct where duct size is too small for 10" by 10" access door. Provide access door in ceiling or wall as required to access damper. 23A 2-10 LOUVERS, PLENUMS, SCREENS

Provide intake and exhaust air louvers by Ruskin model ELF375DX or equal Greenheck, American Warming & Ventilating, Cesco, Industrial Louvers or Louvers & Dampers as scheduled on the drawings. Coordinate exact size and location with architectural drawings. Louvers shall be stationary, with mill finish. Louvers shall have extruded aluminum blades, 0.080" wall thickness, 45 degree blade angle, blades on 5" centers; frame shall be extruded aluminum, 0.080" wall thickness; with expanded flattened aluminum insect screen. Provide louvers with a minimum free area of 45 percent, with a maximum air pressure drop of 0.1" at scheduled airflow.

Construct plenums with galvanized steel framing members and galvanized sheetmetal, braced with galvanized angles. Gauges and bracing shall conform to SMACNA recommendations for ductwork of like sizes. Where access doors are shown, provide hinged doors with #202 Ventlok latch. Make watertight connections to louvers, sloping bottom of plenum to drain water to weepholes in bottom of louver.

Provide screens on louvers, ducts, hoods, fans, and openings to the outdoors as scheduled and/or noted on the drawings. Insect screens shall be 0.009 thickness, 1/4" mesh, stainless steel wire. Bird screens shall be 0.047-inch, 1/2" mesh stainless steel wire.

23A 2-11 DUCT SILENCERS

Provide duct silencers as scheduled on drawings, manufactured by I.A.C., Aerosonics, Dynasonics or Vibro-Acoustics. Silencers shall be rated for low frequency attenuation and low air pressure drop. 23A 2-12 ROOF MOUNTED INTAKE AIR AND RELIEF AIR HOODS

Provide air intake and relief hoods as scheduled on drawings. Hoods shall be low silhouette, aluminum, square curb cap, with birdscreen, roof curb, and barometric or motorized backdraft damper as scheduled. Manufactured by Cook, Greenheck, Acme, Carnes, Cesco or equal. 23A 2-13 EXHAUST AIR SYSTEMS

Provide roof mounted exhaust fans as scheduled on the drawings, or equal manufactured by Cook, Greenheck, Carnes, Twin City Fans, Acme or Penn-Barry complete with aluminum housing, aluminum centrifugal wheel, motor with integral thermal overload protection, disconnect switch mounted inside the housing, birdscreen, backdraft damper, and pate prefabricated roof curb with minimum height of 12" inches for roofs with no insulation, 15" for roofs with insulation or as scheduled on the drawings. Three phase fans shall be furnished with magnetic starters with push button station.

Provide roof mounted upblast exhaust fans as scheduled on the drawings, or equal manufactured by Cook, Greenheck, Carnes, Twin City Fans, Acme or Penn-Barry complete with aluminum housing, aluminum centrifugal wheel, motor with integral thermal overload protection, disconnect switch mounted inside the housing, drain trough, birdscreen and pate prefabricated roof curb with minimum height of 12" inches for roofs with no insulation, 15" for roofs with insulation or as scheduled on the drawings. Exhaust fans serving Type I kitchen exhaust hoods shall discharge a minimum of 40" above the roof surface, shall have hinged access including access for blade inspection and cleaning per NFPA 96, grease drain trough with cup and insulated curb, and shall be installed in accordance with NFPA 96 and local codes.

Provide wall mounted exhaust fans as scheduled on the drawings, or equal manufactured by Cook, Greenheck, Carnes, Twin City Fans, Acme or Penn-Barry heavy-duty wall-mounted propeller fans, complete with belt drive with minimum of two belts, ball bearing supported fan shaft, ball bearing motor, magnetic starter, inlet screen, and motor-operated shutter. Inlet louvers shall be Ruskin ELF81 with heavy duty motor operated damper, Ruskin CD35 with parallel blades and Honeywell M-445 damper motor. Provide transformer for damper motors if different voltage.

Provide ceiling mounted exhaust fans as scheduled on the drawings, or equal manufactured by Cook, Greenheck, Carnes, Twin City Fans, Acme or Penn-Barry complete with isolated blower unit and ceiling grille. Provide disconnect switch, backdraft damper, discharge duct,

wall louver, and neoprene vibration isolators with all-thread hanging rods. Provide in-line (duct) mounted exhaust fans as scheduled on the drawings, or equal manufactured by Cook, Greenheck, Carnes, Twin City Fans, Acme or Penn-Barry complete with isolated blower unit and ceiling grille. Provide backdraft damper, discharge duct,

wall louver, and vibration isolation as scheduled or shown on the drawings. 23A 3 HVAC EQUIPMENT

Provide UL listed smoke detectors as required by code to shut down rooftop unit upon detection of smoke. Division 28 contractor shall provide and wire UL listed duct type smoke detectors as required by code to shut down rooftop unit upon detection of smoke

Provide ceiling supply air registers of aluminum curved blade type with blades parallel to long dimension and with throw pattern

Damper shall be manufactured by Ruskin, Air Balance, Greenheck, Cesco, United Air or Nailor Industries.

23A 4 TEMPERATURE CONTROLS

23A 4-1 GENERAL REQUIREMENTS

Provide a system of temperature controls including thermostats, control panels, time switches, override timers, damper motors, and relays required to provide the desired sequence of operation. Contract with Building Owner's Building Automation System contractor for new devices, programming, and interconnection with the existing BAS system. Provide integrated wiring diagrams showing interconnections between field installed equipment and package wiring furnished with the HVAC equipment.

Provide supervision and on-job checkout service as required to ensure that installation meets requirements of the specification. The system shall be guaranteed for a period of one year following the acceptance of the system by the architect/engineer. Correct defects occurring during this period at no additional cost to the owner. 23A 4-2 EQUIPMENT

Manufacturers and model numbers are listed for reference as to quality and features required for the control devices. Provide control devices by Barber-Colman, Alerton, Honeywell, Johnson Controls, Carrier, Trane or White Rodgers with quality and features as indicated.

Low voltage type non-programmable heating and cooling thermostats shall be Honeywell series T FocusPro 5000 or equal with integral subbase.

23A 6 ALTERNATES

23A 6-1 DESCRIPTION

Provide all work contemplated under the different alternates to include labor, materials, equipment and services necessary for and incidental to the completion of work under each particular alternate. Furnish separate bids for each alternate applicable to contractor's proposal, stating the amount to be added or deducted from the base bid in case the alternate is accepted. Comply with applicable sections of the base specifications for work required by the alternate unless otherwise specified. Refer to the architectural portion of the specification. END OF SECTION 23A

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MECHANICAL SPECIFICATIONS

HP ENGINEERING PROJECT NO. 221261R 100 % COMPLETE

HP ENGINEERING INC. 5214 W. VILLAGE PARKWAY SUITE 120 ROGERS, AR 72758 (479) 899-6370 www.hpengineeringinc.com

	GENERAL POWER NOTES	
1 2	ALL RECEPTACLES SHALL BE GROUNDING TYPE. ALL RECEPTACLES INSTALLED IN BATHROOMS, OUTDOORS AND KITCHENS SHALL HAVE GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION AS	
3	REQUIRED BY THE NATIONAL ELECTRIC CODE. COORDINATE MECHANICAL EQUIPMENT CONNECTION REQUIREMENTS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. LOCATE FEEDERS,	
	DISCONNECTS AND MAINTENANCE RECEPTACLES SO THAT THEY WILL NOT INTERFERE WITH OPERATION OR MAINTENANCE OF MECHANICAL EQUIPMENT.	
4	PROVIDE POWER TO MECHANICAL, PLUMBING, AND ALL OTHER EQUIPMENT AS REQUIRED FOR PROPER OPERATION, COORDINATE AND VERIFY EACH PIECE OF EQUIPMENTS POWER/CONTROL REQUIRMENTS PRIOR TO ORDERING RELATED ELECTRICAL EQUIPMENT. REFER TO RELATED MECHANICAL, PLUMBING, AND OTHER RELATED DOCUMENTS FOR LOCATIONS OF EQUIPMENT AND REQUIRED CLEARANCES AROUND EQUIPMENT.	
5	COORDINATE EXACT MOUNTING HEIGHT OF EACH ABOVE COUNTER RECEPTACLE WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN. ALL OUTLETS LOCATED IN AREAS REQUIRING GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION PER NEC-210 SHALL CONSIST OF A GFCI	
	PROTECTED DEVICE, EVEN IF NOT SPECIFICALLY INDICATED IN THE DRAWINGS. THE GROUND-FAULT CIRCUIT INTERRUPTER SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION AS DEFINED IN THE NEC. ALL RECEPTACLES SUPPLIED THROUGH A GROUND-FAULT CIRCUIT INTERRUPTER SHALL BE MARKED "GFCI PROTECTED."	
7	COORDINATE EXACT LOCATION OF ALL FLOOR BOXES WITH ARCHITECT AND OWNER PRIOR TO ROUGH-IN. VERIFY EACH TYPE OF FLOOR BOX WITH INTENDED USE AND INSTALLATION, COORDINATE THIS WITH THE CONSTRUCTION OF FLOOR TYPE TO BE INSTALLED IN PRIOR TO ROUGH-IN SO AS TO ENSURE A CLEAN AND PROPER INSTALLATION. FOR INSTALLATIONS IN CONTRETE SLAB WITH OVERLAY OF CARPET, WOOD, AND/OR OTHER SIMILAR MATERIALS. LEAVE A 48"X48" BLOCK OUT WHEN FLOOR IS POURED SO THAT FINAL LOCATION OF FLOOR BOX MAY BE DETERMINED IN THE FIELD.	
3	PROVIDE TAMPER RESISTANT RECEPTACLES AS REQUIRED BY THE 2014 NEC. PROVIDE AFCI PROTECTION AND COMBINATION-TYPE ARC/GFI PROTECTION AS REQUIRED BY 2014 NEC INCLUDING KITCHEN AND LAUNDRY AREAS.	
	GENERAL LIGHTING NOTES	
1	WHERE RECESSED LIGHTING FIXTURES ARE INDICATED IN A FIRE RATED CEILING, PROVIDE A ONE HOUR RATED "TENT" FOR FIXTURE	
2	PROVIDE ALL MOUNTING AND SUPPORT HARDWARE FOR LIGHT FIXTURES TO MEET SPECIFIED MOUNTING HEIGHTS, REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT MOUNTING HEIGHTS OF FIXTURES.	
3	CONNECT "UN-SWITCHED" HOT CONDUCTOR FROM CIRCUIT SERVING SPACE LIGHTING TO EACH EXIT SIGN, EMERGENCY LIGHT, AND ANY FIXTURE DESIGNATED AS NIGHT LIGHT SERVING THE SPACE.	
4	COORDINATE ALL DEVICES AND WALL-MOUNTED LIGHT FIXTURE LOCATIONS WITH THE ARCHITECTURAL WALL FINISHES AND ELEVATIONS. SPECIAL ATTENTION AND COORDINATION OF WALL TYPES AND FINISHES IS REQUIRED PRIOR TO ROUGH-IN. EXACT LOCATION OF DEVICES SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO ROUGH-IN TO AVOID INSTALLATION ON SPECIAL ARCHITCTURAL WALL FINISHES. DEVICES NOT PROPERLY COORDINATED WITH THE SPECIAL WALL FINISHES INDICATED IN	
	THE CONSTRUCTION DOCUMENTS PRIOR TO ROUGH-IN SHALL BE RELOCATED AT NO ADDITIONAL COST TO THE OWNER.	
5 6	ELECTRICAL CONTRACTOR SHALL VERIFY CHEVRON DIRECTIONS OF ALL EXIT SIGNS PRIOR TO ORDERING. FOR BATTERY FED EMERGENCY LIGHTS: PROVIDE EMERGENCY BALLAST.	
7	PROVIDE "HOT" WIRE TO EMERGENCY BALLAST. SWITCH FIXTURE AS INDICATED ON PLANS. COORDINATE AND PROVIDE DIMMER SWITCHES RATED FOR AND	
7	COORDINATE AND PROVIDE DIMMER SWITCHES RATED FOR AND COMPATABLE WITH INTENDED LIGHT FIXTURE(S) TO BE CONTROLLED. CIRCUITS CONTROLLED WITH LINE-VOLTAGE DIMMER SWITCHES SHALL NOT SHARE NEUTRAL CONDUCTORS.	
	GENERAL LOW VOLTAGE NOTES	
1	PROVIDE 4'WIDE X 4'TALL X 3/4" FIRE RATED, PAINTED CDX PLYWOOD BACKBOARD WHERE SHOWN ON DRAWINGS OR AS REQUIRED FOR TELEPHONE, CATV, ALARM SYSTEM EQUIPMENT, ECT. COORDINATE EXACT LOCATION(S) WITH RESPONSIBLE CONTRACTOR(S).	
2	PROVIDE (1) 1/2" CONDUIT, AND 4" SQUARE BOX WITH SINGLE GANG DEVICE RING FOR ALL THERMOSTAT LOCATIONS INDICATED ON THE MECHANICAL DRAWINGS. ROUTE CONDUIT FROM BOX TO ACCESSIBLE CEILING CAVITY. PROVIDE PLASTIC BUSHINGS ON EXPOSED CONDUIT ENDS. PROVIDE PULL STRING IN ALL EMPTY CONDUIT SYSTEMS. COORDINATE EXACT LOCATIONS AND MOUNTING HEIGHTS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.	
3	PROVIDE CABLE HOOKS ABOVE CEILING ON 6' CENTERS IN ALL CORRIDORS. MOUNT 6 INCHES ABOVE CEILING.	
1	PROVIDE ROUGH-IN OF ALL BACK BOXES, CONDUITS (WITH BUSHINGS AND PULL STRINGS) AND OTHER WIRE WAYS AS REQUIRED FOR LOW VOLTAGE SYSTEMS, COORDINATE ALL REQUIRED LOCATIONS WITH OWNER AND RESPONSIBLE CONTRACTOR(S).	
5	FURNISH AND INSTALL A TELEPHONE SERVICE CONDUIT(S) PER TELEHONE SERVICE PROVIDER SPECIFICATIONS. STUB UP AT DESIGNATED EQUIPMENT BOARD.	
3	FURNISH AND INSTALL ONE #6 COPPER INSULATED GROUND WIRE FROM THE ELECTRICAL SERVICE GROUND TO THE TELEPHONE EQUIPMENT BOARD. LEAVE 36" EXTRA WIRE AT FREE END.	
7	FURNISH AND INSTALL A CABLE TV SERVICE PER CABLE TV PROVIDER SPECIFICATIONS. STUB UP AT DESIGNATED LOCATION.	
8	PROVIDE BACK BOX AND CONDUIT TO ABOVE THE ACCESSIBLE CEILING AS REQUIRED FOR THE HVAC BUILDING AUTOMATION SYSTEM DEVICES. COORDINATE EXACT LOCATIONS AND OTHER REQUIREMENTS WITH RELATIVE MEP DRAWINGS AND THE CONTROLS CONTRACTOR PRIOR TO	
	ROUGH-IN. THERMOSTATS, TEMPERATURE SENSORS, STATIC PRESSURE SENSORS, HUMIDISTATS, ETC. SHALL BE INSTALLED AT THE SAME ELEVATION AS THE LIGHT SWITCHES UNLESS REQUIRED OTHERWISE.	

GENERAL ELECTRICAL NOTES

DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. REVIEW ALL GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS.

SPECIAL ATTENTION SHALL BE GIVEN TO ALL RACEWAYS WITHIN FINISHED AREAS WITHOUT CEILINGS AND EXPOSED TO STRUCTURE. IN GENERAL, ALL RACEWAYS SHALL BE CONCEALED WITHIN WALLS, ABOVE STRUCTURE FINISH, OR BELOW FLOOR SLABS WHEN SPECIFIED. WHERE EXPOSED CONDITIONS ARE NECESSARY OR UNAVOIDABLE DUE TO OTHER CONDITIONS, THE BID SHALL INCLUDE ANY REASONABLE MEANS TO

MINIMIZE THE AMOUNT OF SURFACE MOUNTED EQUIPMENT. PRIOR TO ROUGH-IN, COORDINATE ALL EXPOSED RACEWAY AND BOX CONDITIONS WITH ARCHITECT PRIOR TO CONSTRUCTION OF WALLS, ROOF DECK, OR FLOOR SLABS. ATTACHMENT TO ROOF DECK OR JOIST WEBBINGS IS NOT ALLOWED, MAINTAIN A MINIMUM SPACING OF 1-1/2" FROM CONDUIT TO ROOF DECK. IN AREAS WHERE EXPOSED RACEWAYS ARE REQUIRED,

INSTALL SYSTEMS SQUARE AND TIGHT TO STRUCTURE AND PAINT TO MATCH THE STRUCTURE PER ARCHITECT AND/OR OWNER SPECIFICATIONS. FAILURE TO PROPERLY COORDINATE THE ROUTING OF EXPOSED RACEWAYS MAY RESULT IN RELOCATION OF SUCH RACEWAYS AT NO ADDITIONAL COST TO THE OWNER.

OPENINGS AROUND ELECTRICAL PENETRATIONS THROUGH FIRE-RESISTANT-RATED WALLS, PARTITIONS, FLOORS OR CEILINGS SHALL BE FIRESTOPPED USING APPROVED METHODS TO MAINTAIN THE FIRE RESISTANCE RATING. PROVIDE PENETRATION FIRE STOPPING WITH RATINGS DETERMINED PER ASTM E 814 OR UL 1479. FIRE STOPPING SHALL NOT BE LESS THAN FIRE RESISTANCE RATING OF CONSTRUCTED PENETRATIONS.

FIELD MOUNTED DEVICES SUCH AS SWITCHES, MOTOR STARTERS, RECEPTACLES, ETC., ARE SHOWN IN THEIR APPROXIMATE LOCATION. SWITCH MOUNTING HEIGHT SHALL BE 48" ABOVE FINISHED FLOOR AND RECEPTACLE MOUNTING HEIGHT SHALL BE 18" ABOVE FINISHED FLOOR UON. REFER TO THE TYPICAL MOUNTING HEIGHT DETAIL.

INSTALL EQUIPMENT IN A MANNER TO REMAIN ACCESSIBLE WITH REASONABLE MEANS BY THE OWNER FOLLOWING COMPLETION OF WORK. SPECIAL ATTENTION AND ADDITIONAL COORDINATION IS EXPECTED IN AREAS OF THE BUILDING WHERE THE CEILING AND STRUCTURE HEIGHTS HAVE SIGNIFICANT DIFFERENT ELEVATIONS. EQUIPMENT REQUIRING POSSIBLE FUTURE ACCESS SHALL BE INSTALLED SUCH THAT IT MAY BE SAFELY ACCESSED FROM A STANDARD STEP LADDER OR PERSONNEL LIFT SUITABLE FOR THE LOCATION AND CEILING HEIGHT, WITHOUT REMOVING OR DAMAGING THE CEILING GRID STRUCTURE.

COORDINATE ALL CEILING MOUNTED ELECTRICAL ITEMS WITH OTHER DISCIPLINES, WITH CEILING, AND STRUCTURE. REFER TO ARCHITECTURAL REFLECTED CEILING PLAN.

FIELD VERIFY LOCATIONS OF EXISTING ELECTRICAL EQUIPMENT, INCLUDING POWER POLES, TELEPHONE PEDESTALS, OVERHEAD AND UNDERGROUND FEEDERS, METERS, PANELS, DEVICES, ETC. PROVIDE FOR

COORDINATION WITH EXISTING EQUIPMENT. ROOM NAMES/NUMBERS SHOWN IN PANELBOARD SCHEDULES ARE PER ARCHITECTURAL FLOOR PLANS. CONTRACTOR SHALL PROVIDE FINALIZED PANELBOARD SCHEDULES AT COMPLETION OF PROJECT WITH OWNER

PROVIDED ROOM NAMES/NUMBERS CONDUCTORS FOR BRANCH CIRCUITS AS DEFINED IN ARTICLE 100, SHALL BE SIZED TO PREVENT A VOLTAGE DROP EXCEEDING 3% AT THE FARTHEST LOAD, AND WHERE THE MAXIMUM TOTAL VOLTAGE DROP ON BOTH FEEDERS AND BRANCH CIRCUITS TO THE FARTHEST LOAD DOES NOT EXCEED 5%.

ALL WORK IS TO BE PERFORMED IN STRICT COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE, STATE LAWS, ALL AUTHORITIES HAVING JUISDICTION, AND ALL OTHER REGULATIONS GOVERNING WORK OF THIS NATURE.

THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIAL, AND LABOR TO SATISFY A COMPLETE AND WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.

CONTRACTOR TO CONFIRM EXACT LOCATION OF EXISTING AND NEW EQUIPMENT THE CONTRACTOR SHALL FURNISH AND INSTALL ALL GROUNDING SYSTEMS (AS REQUIRED) IN ACCORDANCE WITH THE NATIONAL ELECTRIC

ALL ELECTRIC MATERIALS AND EQUIPMENT FOR THE PROJECT SHALL BE NEW AND U.L. OR EQUALLY LISTED.

CODE

SUBMIT TO THE OWNER CERTIFICATES OF INSPECTIONS IN DUPLICATE FROM AN APPROVED INSPECTION AGENCY UPON COMPLETION. THE CONTRACTOR SHALL SECURE ALL PERMITS OR APPLICATIONS AND PAY ANY AND ALL FEES AS REQUIRED,

THE CONTRACTOR SHALL FURNISH ALL INSTRUMENTS AND QUALIFIED PERSONNEL OR FIRM TO PERFORM ALL REQUIRED TESTS.

GENERAL ELECTRICAL NOTES

- NO EQUIPMENT SHALL BE ENERGIZED UNTIL ALL TEST AND ADJUSTMENTS 18 HAVE BEEN MADE. THREE COPIES OF ALL TEST RESULTS SHALL BE DELIVERED TO THE OWNER
- ALL ELECTRICAL WORK SHALL BE COORDINATED WITH THE MECHANICAL WORK AS CALLED FOR IN MECHANICAL SPECIFICATIONS AND PLANS.
- JUNCTION BOXES LOCATED ABOVE GRID CEILINGS SHALL BE LOCATED NO GREATER THAN 4-FEET ABOVE THE CEILING IN A LOCATION ACCESSIBLE VIA A LADDER FROM THE ROOM BELOW. ALL WIRING DEVICE COVERPLATES SHALL INDICATE PANELBOARD AND
- CIRCUIT SERVING THE DEVICE. UTILIZE CLEAR VINYL (BLACK LETTERING) IDENTIFICATION LABLES MANUFACTURED BY 3M COMPANY (OR APPROVED EQUIVALENT).
- THE TYPE OF CONDUIT SHALL BE AS FOLLOWS FOR ALL FEEDERS AND DISTRIBUTION CIRCUITS, UNLESS OTHERWISE SPECIFIED. APPLICATION - TYPE OF CONDUIT

BURIED IN CONCRETE OR OUTDOORS - PVC WITH RIGID GALVANIZED

STEEL ELBOWS SERVICE ENTRANCE - GALVANIZED RIGID STEEL OR SERVICE UTILITY

- SPECIFICATIONS.
- UNLESS NOTED OTHERWISE PROVIDE MINIMUM #8 AWG CONDUCTORS IN 23 1" CONDUIT(S) FOR ALL UNDERGROUND SITE POWER AND LIGHTING CIRCUITS. INCREASE CONDUCTOR AND RELATED CONDUIT SIZE AS NOTED OR OTHERWISE REQUIRED TO LIMIT VOLTAGE DROP TO LESS THAN 5% FOR THE ENTIRE LENGTH OF SYSTEM.
- UNDERGROUND UTILITIES/FEEDERS/BRANCH CIRCUITS/ETC. SHALL NOT BE ROUTED THROUGH OR WITHIN 25 FEET OF ANY AREAS DEDICATED FOR FUTURE BUILDING ADDITION.
- DESIGNATED SPARE CIRCUIT BREAKERS SHALL BE PLACED IN THE OFF 25 POSITION
- PROVIDE SPD AS REQUIRED FOR OWNER PROVIDED EQUIPMENT, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: ACCESS CONTROL SYSTEM, COMMUNICATION SYSTEM, DATA SYSTEM, SECURITY SYSTEM.

EXISTING ELECTRICAL AND DEMOLITION NOTES

- PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE FACILITY AND RELATED SITE. REVIEW THE GENERAL NOTES AND ALL OTHER TRADE DRAWINGS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER OR OWNER, AS SPECIFIED, OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMITTING BID.
- ANY EXISTING CONDITIONS REFLECTED WERE TAKEN FROM ORIGINAL DRAWINGS AND SITE VISITS AND MAY NOT REFLECT EXACT "AS-BUILT" CONDITIONS. FIELD VERIFY ALL EXISTING CONDITIONS AND CAREFULLY COORDINATE NEW WORK AND DEMOLITION WITH ALL OTHER DISCIPLINES AND EXISTING CONDITIONS.
- PROVIDE ALL DEMOLITION OF EXISTING ELECTRICAL SYSTEMS AND NEW ELECTRICAL SYSTEM MODIFICATIONS REQUIRED BECAUSE OF BUILDING REMODELING, AS NOTED ON THE DRAWINGS, OR NECESSARY FOR PROPER OPERATION AND NEW CONSTRUCTION. REMOVE ALL ABANDONED CABLES AND WIRING ABOVE ACCESSIBLE CEILINGS AND VENTILATION SHAFTS.
- COORDINATE INTERUPTION OF ALL BUILDING SERVICES INCLUDING BUT NOT LIMITED TO BRANCH CIRCUITS, DATA, TELEPHONE, ETC WITH BUILDING OWNER PRIOR TO INTERUPTION. PROVIDE LABOR AND MATERIALS AS REQUIRED TO REDUCE INTERUPTIONS IN ORDER TO MAINTAIN EXISTING OPERATION.
- PAY SPECIAL ATTENTION NOT TO DAMAGE THE FINISH OF EXISTING WALLS AND CEILINGS THAT ARE TO REMAIN WHEN REMOVING OR REPLACING LIGHT FIXTURES AND OTHER ELECTRICAL DEVICES. REPAIR ANY DAMAGE CAUSED DURING WORK AT NO EXTRA COST TO THE OWNER. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- RELOCATE ALL EXISTING ELECTRICAL, FIRE ALARM, AND OTHER LOW-VOLTAGE SYSTEMS REQUIRED TO BE IN OPERATION AT SUBSTANTIAL COMPLETION OF THE CONTRACT, IF REQUIRED, AS A RESULT OF WORK INCLUDED UNDER THIS CONTRACT, EVEN IF NOT SPECIFICALLY INDICATED IN THE DRAWINGS OR SPECIFICATIONS.
- SEAL ALL PENETRATIONS THROUGH FLOORS, WALLS, CEILINGS, AND ROOF WHERE ELECTRICAL COMPONENTS ARE REMOVED AND WHERE THE EXISTING PENETRATION IS NOT USED FOR THE NEW INSTALLATION. REPAIR DAMAGED SURFACES TO MATCH ADJACENT AREAS OR AS DIRECTED BY THE OWNER.
- UNLESS NOTED OTHERWISE, ABANDONED CONDUIT ASSEMBLIES SERVING DEMOLISHED DEVICES SHALL BE REMOVED BACK TO NEAREST JUNCTION BOX OUTSIDE OF AREA OF DEMOLITION AND LABLED AS REQUIRED FOR FUTURE USE. ASSOCIATED WIRING SHALL BE REMOVED BACK TO SERVING PANELBOARD, UPDATE PANELBOARD CIRCUIT DIRECTORY AS REQUIRED TO INDICATE RELATED CIRCUIT(S) AS "SPARE".
- ANY PANELBOARD CIRCUIT DISCRIPTIONS SHOWN AS "existing" OR IN OTHER LOWER CASE LETTERING IS INTENDED TO REFLECT AN EXISTING CIRCUIT TO REMAIN UNLESS OTHERWISE IDENTIFIED DIFFERENTLY THRU THE COURSE OF CONSTRUCTION.
- ALL CIRCUIT BREAKERS SERVING BRANCH CIRCUITS TO BE REMOVED SHALL REMAIN IN RESPECTIVE PANELBOARD FOR FUTURE USE UNLESS NOTED OTHERWISE.
- 11 EXISTING DEVICES ARE SHOWN LIGHT. NEW DEVICES ARE SHOWN BOLD.

CB CIRCUIT BREAKER EXISTING EC ELECTRICAL CONT EP EXPLOSION PROOF GFI GROUND FAULT CI GR GROUND HP HORSE POWER WIRING CON IS NUMBER EXPOSED R ---→ UNDERGRO ARRANGEM \$* SWITCH MOUNT LOWER CASE LE ABBREVIATION DOUBLE F 3-WAY SWI 4-WAY SWI DIMMER SV FAN SWITC KEYED SW MOTOR RA OS DUAL TECH VOLUME C CEILING MOUNT ⇔os DRY CONTACTS DUPLEX RECEP DUPLEX RECEP 8" ABOVE COUN Φ_{II} (ALL RECEPTAC GFI DUPLEX REG GFI DUPLEX RE MOUNTED 8" AB QUADRUPLEX F SPECIAL RECEF **₽∇TV** TELEVISION: PR CONDUIT FOR TO ACCESSIBL COAX, AND HDN PRIOR TO ROUG SINGLE RECEP Φ SPLIT WIRED DU DIRECT EQUIPM MANUFACTURE FLOOR BOX: HU ACCESSIBLE SP

LIGHT OR POWE

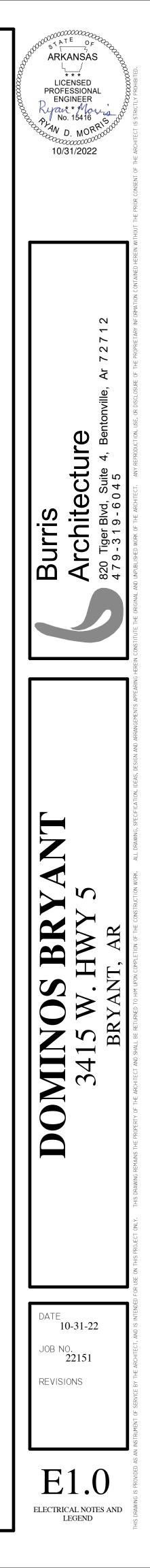
\overline{v}	TELEVISION: PROV
<u> </u>	STRINGS) ROUTED
	RING WITH BLANK
	ROUGH-IN.

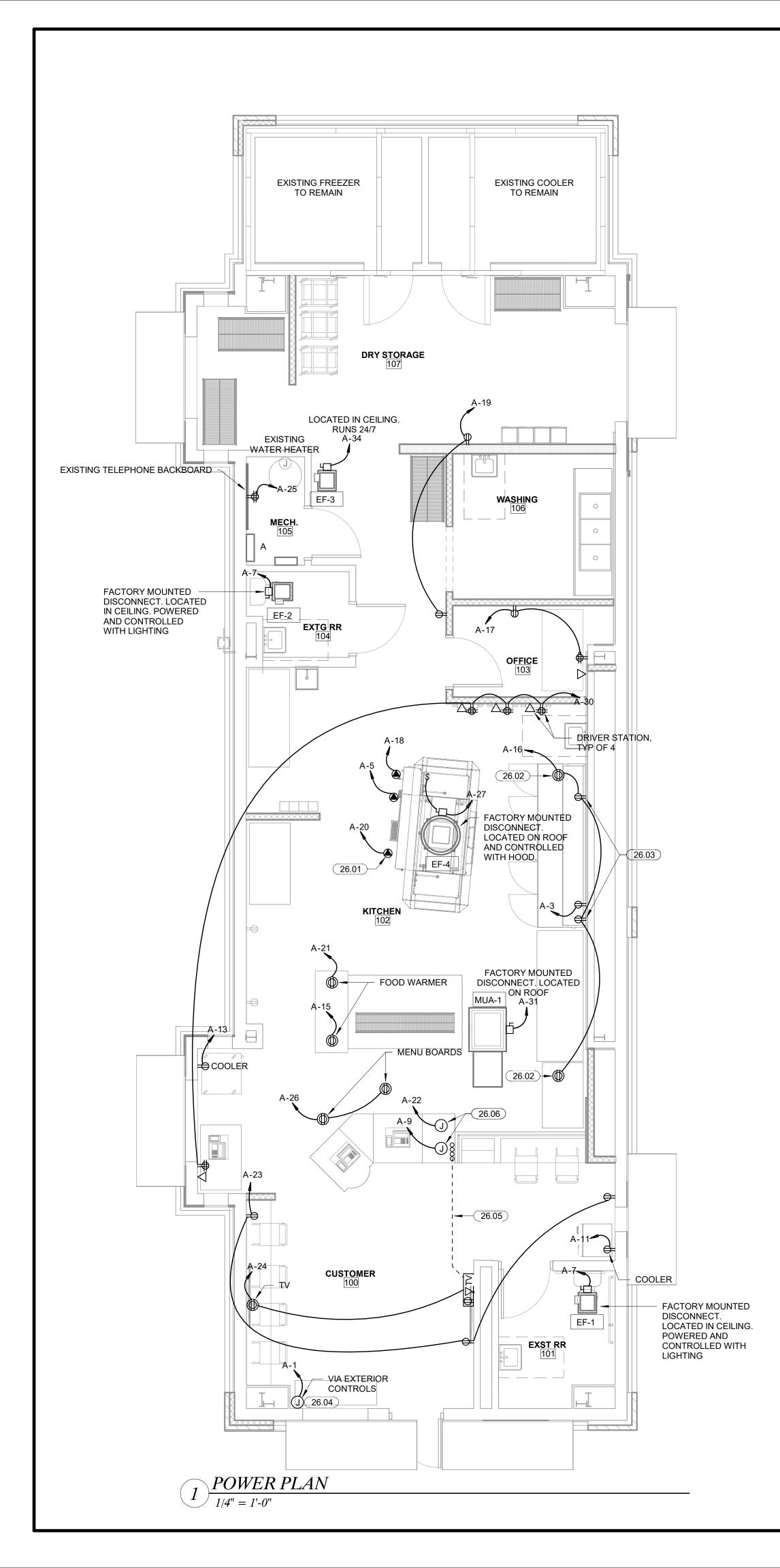
CEILING MOUNT (s)

CR

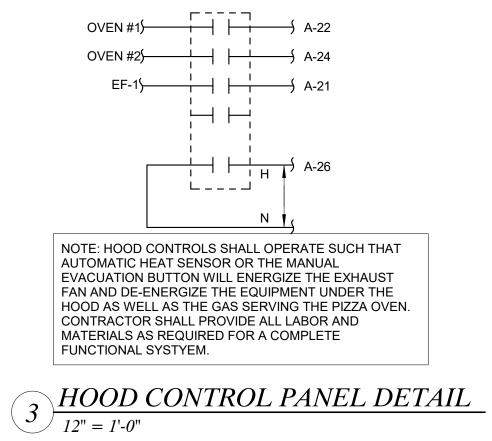
CARD READER: REFER TO SYSTEM PLANS AND SPECIFICATIONS. AT EACH DOOR WITH A CARD READER PROVIDE ALL ELECTRICAL CONNECTIONS FOR DOOR HARDWARE SYSTEMS AS REQUIRED TO MAKE A COMPLETE OPERATIONAL SYSTEM. WHERE REQUIRED, BACK TO BACK 2"X4" BOXES ARE ALLOWED FOR CARD READER AND PUSH TO EXIT SWITCH. PROVIDE POWER TO THE LOCK SYSTEM IN THE I.T. ROOM WHERE NEEDED BY CONTRACTOR INSTALLING SYSTEM.

	ABBREVIA	TIONS	
AFF A CB C E E EC E EP E GFI G GR G	BOVE COUNTER BOVE FINISHED FLOOR IRCUIT BREAKER XISTING LECTRICAL CONTRACTOR XPLOSION PROOF ROUND FAULT CIRCUIT INTERRUPTER ROUND ORSE POWER	IG ISOLATED GROUND MCC MOTOR CONTROL CENTER NEC NATIONAL ELECTRICAL CODE NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOC. NIC NOT IN CONTRACT NL NIGHT LIGHT UG UNDERGROUND UON UNLESS OTHERWISE NOTED WP WEATHERPROOF WR WEATHER RESISTANT	HP ENGINEER PROJECT NO. 2212 100 % COMPLET HP ENGINEERING INC. 5214 W. VILLAGE PARKV SUITE 120 ROGERS, AR 72758 (479) 899-6370 www.hpengineeringinc.com
	WIRIN	G	
	 WIRING CONCEALED IN CEILING OR W IS NUMBER #12 AWG MINIMUM. EXPOSED RACEWAY. 	/ALLS UON. ALL WIRE	
	→ UNDERGROUND RACEWAY; TYPE, SIZ ARRANGEMENT BY NOTATION OR SCI		
	SWITCH	IES	
	SWITCH MOUNTED AT +48"; SINGLE POLE LOWER CASE LETTER, WHEN PRESENT, IN <u>* ABBREVIATIONS FOR SWITCH</u> 2 DOUBLE POLE SWITCH 3 3-WAY SWITCH 4 4-WAY SWITCH D DIMMER SWITCH (SHALL BE COMPAT F FAN SWITCH: DUAL OPERATION WITH K KEYED SWITCH M MOTOR RATED SWITCH OS DUAL TECHNOLOGY OCCUPANCY SE V VOLUME CONTROL SWITCH CEILING MOUNTED DUAL TECHNOLOGY O	NDICATES FIXTURES CONTROLLED. ABLE WITH FIXTURE BEING DIMMED) I DIMMER NSOR	
	DRY CONTACTS. HUBBELL OMNIDIARP SE		_
	RECEPTA	CLES	_
φ	DUPLEX RECEPTACLE (NEMA 5-20R)		
Ф	DUPLEX RECEPTACLE (NEMA 5-20R); MOU 8" ABOVE COUNTERTOP.	INTED	
Ψu	(ALL RECEPTACLE TYPES) WITH USB CHAI	RGING PORTS	
Ŷ	GFI DUPLEX RECEPTACLE (NEMA 5-20R), S	SELF-TEST TYPE	
₫	GFI DUPLEX RECEPTACLE (NEMA 5-20R), S MOUNTED 8" ABOVE COUNTERTOP.	SELF-TEST TYPE;	
₽	QUADRUPLEX RECEPTACLE (TWO NEMA 5	5-20R)	
P	SPECIAL RECEPTACLE: VERIFY NEMA TYP	E WITH MANUFACTURER	
<u>@⊽</u> т∨]	TELEVISION: PROVIDE HUBBELL NSAV62M CONDUIT FOR POWER AND 1" CONDUIT (V TO ACCESSIBLE CEILING SPACE. PROVIDE COAX, AND HDMI. MOUNT AT +60" AFF UNG PRIOR TO ROUGH-IN.	VITH PULL STRINGS) FOR A/V ROUTED E CONNECTIONS FOR POWER, DATA,	
φ	SINGLE RECEPTACLE (NEMA 5-20R)		
₽ ●	SPLIT WIRED DUPLEX RECEPTACLE (NEM, DIRECT EQUIPMENT CONNECTION: VERIF		
	MANUFACTURER		
Φ	FLOOR BOX: HUBBEL 3SFBSS WITH 3SFBC ACCESSIBLE SPACE BELOW, USE POKE-T PT2X2 SERIES. SEE ARCHITECTURAL PLAN	HRU STYLE FLOOR BOXES: HUBBELL	
\square	CEILING MOUNTED RECEPTACLE(NEMA 5-	-20R)	
	PANELS AND	D MISC.	
	LIGHT OR POWER PANEL		
J	4x4 JUNCTION BOX.		
□	EQUIPMENT DISCONNECT: INTERIOR DISC EXTERIOR DISCONNECTS SHALL BE NEMA PLANS AND PER NAMEPLATE RATING.		
₹	PHONE/DATA: PROVIDE 4"X4", 30-1/4 CUBIC COUNTER (UON) WITH (2) 3/4" CONDUITS (ACCESSIBLE CEILING SPACE. PROVIDE SII COVER. PROVIDE PLASTIC BUSHINGS ON	WITH PULL STRINGS) ROUTED TO NGLE GANG MUD RING WITH BLANK	
\bigtriangledown	OTHERS. PHONE/DATA: PROVIDE 4"X4", 30-1/4 CUBIC WITH (2) 3/4" CONDUITS (WITH PULL STRIN SPACE. PROVIDE SINGLE GANG MUD RINC PLASTIC BUSHINGS ON EXPOSED CONDU	IGS) ROUTED TO ACCESSIBLE CEÍLING 3 WITH BLANK COVER. PROVIDE	
\bigcirc	PHONE/DATA: PROVIDE 4"X4", 30-1/4 CUBIC PROVIDE SINGLE GANG MUD RING WITH E	C INCH OUTLET BOX IN CEILING.	
TV	TELEVISION: PROVIDE 4X4 JUNCTION BOX STRINGS) ROUTED TO ACCESSIBLE CEILIN RING WITH BLANK COVER. CONFRIM HEIG ROUGH-IN.	NG SPACE. PROVIDE SINGLE GANG MUD	
S	CEILING MOUNTED SPEAKER		





Branch Panel: A Location: ELECTRICAL ROOM Supply From: UTILITY Mounting: SURFACE Enclosure: NEMA 1						EXISTING Volts: 120/208 Wye Phases: 3 Wires: 4							A.I.C. Rating: FULLY RATED Mains Type: MLO Mains Rating: 400 A				
Notes																	
CKT	Load Name SIGN (2,10,11)	CB 20	P	-	1200	A 1140	E	3		C	Wir e	Ρ	СВ	Load	Name	CK	
	MAKE LINE COOLER (4,11)	20	1		1200	1140	1560	1140				2	20	walk-in freezer comp	pressor	4	
5	OVEN CONVEYOR (2,11)	20	1	-					500	1140		2	20	walk-in cooler comp	ressor	6	
	LIGHTING (11)	20	1		1589	1140	000	400						•		8	
	ORDER STATION (4,11) COOLER (4,11)	20	1				800	480	360	480		1 1	20 20	walk-in freezer evap walk-in cooler evap		10	
	COKE COOLER (4,11)	20	1	_	900	900			000	100		1	20	r & I walk in coolers		14	
	FOOD WARMER (4,11)	20	1				925	1720				1	20	MAKE LINE RECEP		16	
	OFFICE RECEPTACLES (11) GENERAL RECEPTACLE (11)	20	1		720	500			720	1440		1 1	20 20	OVEN CONVEYOR HOOD CONTROL P		18 20	
	FOOD WARMER (4,11)	20	1		720	500	925	800				1	20	ORDER STATION (4.11)	20	
	LOBBY RECEPTACLES (11)	20	1						1080	860		1	20	TV & CEILING REC		24	
25	TELEPHONE BOARD	20	1		360	1000		100				1	20	MENU BOARD/COL	JNTER (4,11)	26	
	EF-4 (11) EXTERIOR LIGHTING (10,11)	20	1				559	180	560	1440		1 1	20 20	r: kitchen DRIVER STATIONS	: (1 11)	28 30	
	MAU-1 (11)	20	1		1828	180			500	1440		1	20	r: kitchen	(4,11)	30	
33	SPACE		1	_				94				1	20	EF-3 (11)		34	
	SPACE		1							100		1	20	facp		36	
37 39	SPD (11)	30	3		0	0	0	0				1 1	20 20	SPARE SPARE		38 40	
41		30	3				0	0	0	0		1	20	SPARE		40	
43	SPACE		1			10920				-		-				44	
	SPACE		1					10920		10000		3	20	rtu-1		46	
	SPACE SPACE		1							10920		1		SPACE		48 50	
	SPACE		1									1		SPACE		52	
53	SPACE		1									1		SPACE		54	
	SPACE		1									1		SPACE		56	
	SPACE SPACE		1									1		SPACE SPACE		58 60	
	r:rtu-1	20	1		180							1		SPACE		62	
63	SPACE		1									1		SPACE		64	
	SPACE		1							1800		1	20	w/h		66	
	SPACE SPACE		1									1		SPACE SPACE		68 70	
	SPACE		1				_					1		SPACE		70	
73	SPACE		1									1		SPACE		74	
	SPACE		1									1		SPACE		76	
	SPACE SPACE		1									1		SPACE SPACE		78 80	
	SPACE		1									1		SPACE		82	
	SPACE		1									1		SPACE		84	
		То	tal L	_oad:	2255	8 VA	2010	3 VA	2140	0 VA							
		Tot	al A	mps:	190	A	16	8 A	18	0 A							
Load Classification Connect						and Fa			ated De		1		Panel 1	Totals			
Lighti	-			962 V/			25.00%		2453 VA								
Powe				008 V/			00.00%		7908 VA				-	Total Conn. Load:			
Rece	ptacle		12	930 V	A		88.67%)	1	1465 V	A	_		Total Est. Demand:			
														otal Conn. Current:			
													T	otal Est. Demand	1/5 A		



KEYNOTES

26.01 HOOD CONTROL PANEL. REFER TO DETAIL ON THIS SHEET

	FOR ADDITIONAL INFORMATION.
26.02	E.C. TO PROVIDE DEVICE SHOWN. MOUNT DEVICE ABOVE SOFFIT. COORDINATE REQUIREMENTS AND EXACT LOCATION IN FIELD.
26.03	PROVIDE RECESSED CLOCK DUPLEX RECEPTACLE AT 36" AFF.
26.04	E.C. SHALL PROVIDE JUNCTION BOX FOR EXTERIOR BUILDING MOUNTED SIGN. COORDINATE EXACT LOCATION PRIOR TO INSTALLATION.
26.05	E.C. SHALL PROVIDE (4) 1" CONDUITS UNDER SLAB. (2) FOR POWER TO P.O.S. AND (2) FOR VOICE/DATA AT P.O.S. ROUTE UP WALL AS NECESSARY.
26.06	CONNECT TO PRE-INSTALLED DEVICE IN MILLWORK.

POWER PLAN NOTES

VERIFY LOCATION AND ELECTRICAL REQUIREMENTS OF ALL KITCHEN EQUIPMENT WITH OWNER AND EQUIPMENT NAMEPLATE INFORMATION PRIOR TO ROUGH-IN. AHU AND MAU PROVIDED WITH FACTORY MOUNTED DISCONNECT.

OPENINGS AROUND ELECTRICAL PENETRATIONS THROUGH FIRE-RESISTANT-RATED WALLS, PARTITIONS, FLOORS OR CEILING SHALL BE FIRESTOPPED USING APPROVED METHODS TO MAINTAIN THE FIRE RESISTANCE RATING. PROVIDE PENETRATION FIRE STOPPING WITH RATINGS DETERMINED PER ASTM E 814 OR UL 1479. FIRE STOPPING SHALL NOT BE LESS THAN FIRE RESISTANCE RATING OF CONSTRUCTED PENETRATIONS.

COORDINATE MOUNTING HEIGHTS FOR POWER ASSOCIATED WITH TV OUTLETS WITH ARCHITECT PRIOR TO ROUGH-IN.

ALL RECEPTACLES PER NEC 210.8(B)(2) IN KITCHEN/FOOD AND BEVERAGE AREAS SHALL BE GFCI PROTECTED. FOR ANY RECEPTACLE NOT ACCESSIBLE DUE TO EQUIPMENT LOCATION, PROVIDE GFCI PROTECTION AT THE CIRCUIT BREAKER.

E.C. TO COORDINATE FINAL MOUTING HEIGHT OF DRIVER STATION PRIOR TO ROUGH-IN. EXHAUST FANS HAVE FACTORY INSTALLED DISCONNECT. REFER TO

MECHANICAL PLANS FOR EXHAUST FAN CONTROLS.

PANELBOARD NOTES (#)

- . TERMINATE GROUND ON ISOLATED GROUND BUS.
- 2. INSTALL LOCKING DEVICE FURNISHED WITH PANELBOARD (LOCK-OFF FOR MAINTENANCE).
- 3. INSTALL LOCKING DEVICE FURNISHED WITH PANELBOARD (LOCK-ON FOR CRITICAL LOAD).
- 4. GFI BREAKER FOR PERSONNEL PROTECTION
- (5mA). 5. GFI BREAKER FOR EQUIPMENT PROTECTION
- (30mA). 6. CONDUCTOR SIZE SHOWN IN PANEL SCHEDULE
- HAS BEEN INCREASED FOR VOLTAGE DROP. SIZE EQUIPMENT GROUND PROPORTIONALLY PER NEC. REFERENCE GROUND WIRE SIZING CHART. 7. REFER TO FAULT CURRENT SCHEDULE FOR
- AVAILABLE FAULT CURRENT FOR INTERRUPT RATINGS. 8. REFER TO ONE-LINE DIAGRAM FOR WIRE SIZES. 9. FACTORY WIRED TO LOAD.
- 10.THRU CONTROLLER. REFER TO LIGHTING CONTROLLER DETAIL. 11. ADD NEW CIRCUIT BREAKER TO EXISTING PANEL.
- NEW CIRCUIT BREAKER SHALL MATCH AIC RATING, MANUFACTURER, AND TYPE OF EXISTING CIRCUIT BREAKERS. 12. MATCH AIC RATING OF SERVICING DEVICE.

EQUIPMENT GROUNDING **CONDUCTOR SIZING CHART**

BRKR AMPS			WIR	E SIZE		
15-20	PHASE	12	10	8	6	4
	GROUND	12	10	8	6	4
25-30	PHASE	10	8	6	4	3
	GROUND	10	8	6	4	3
35-50	PHASE	8	6	4	3	2
	GROUND	10	8	4	4	4
60	PHASE	6	4	3	2	1
	GROUND	10	6	6	4	4
70	PHASE	6	4	3	2	1
	GROUND	8	4	4	3	2
80-90	PHASE	4	3	2	1	1/0
	GROUND	8	6	4	4	3
100	PHASE	3	2	1	1/0	2/0
	GROUND	8	6	4	4	3

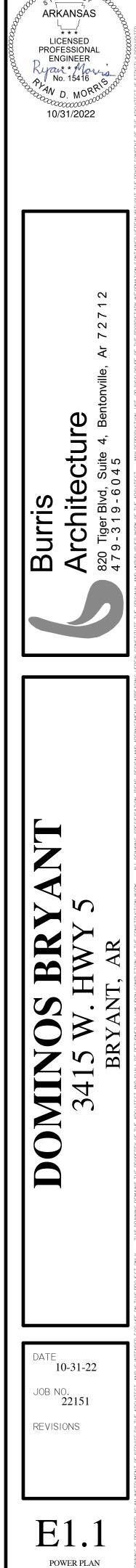
PER NEC 250.122(B)

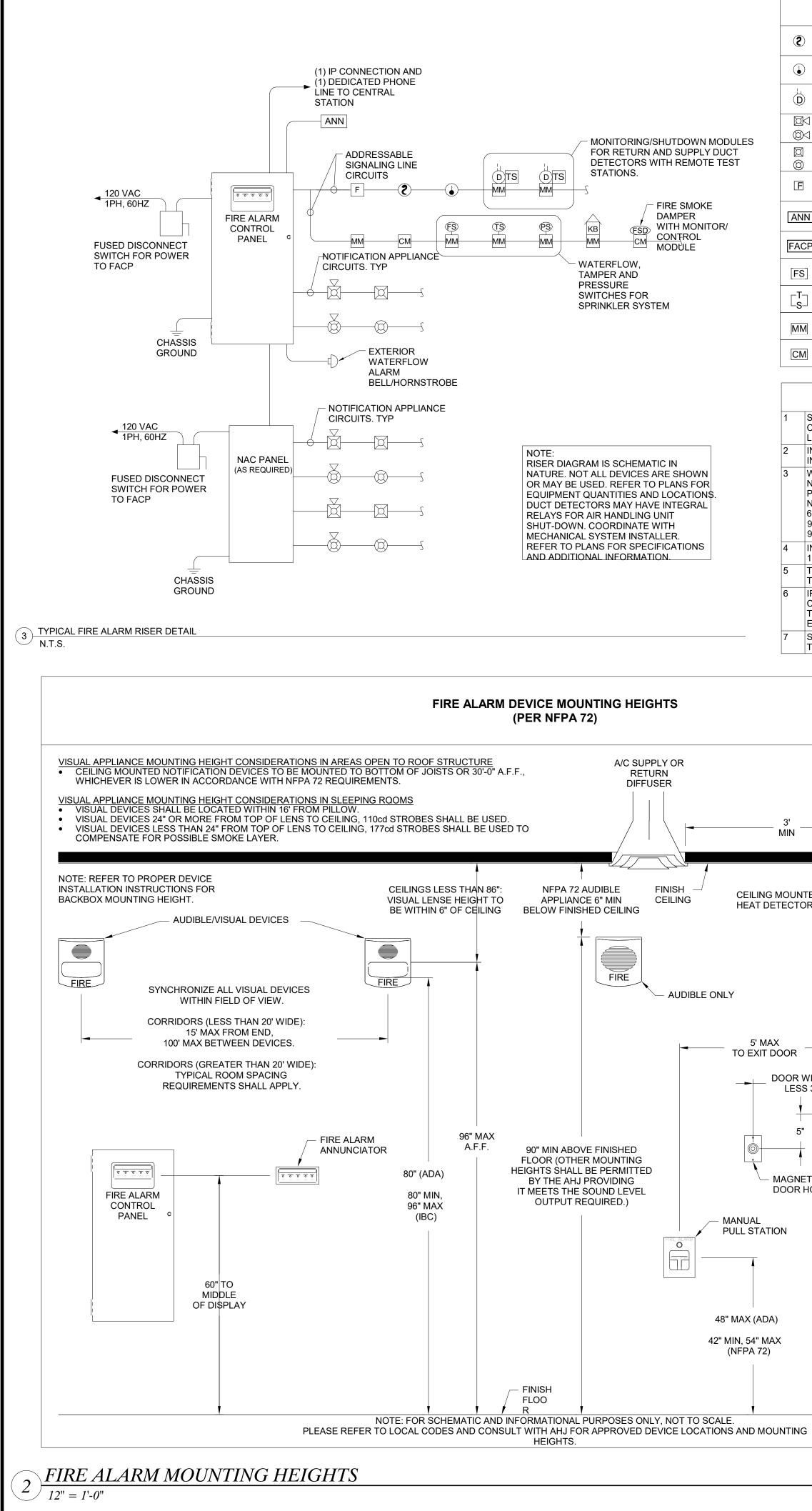
CIRCUIT DESCRIPTIONS SHOWN AS "existing" OR IN LOWER CASE LETTERS INDICATE AN EXISTING CIRCUIT BREAKER TO REMAIN AND IS BASED ON ORIGINAL BUILDING PLANS, PANEL SCHEDULES AND BREAKER ARRANGEMENTS AT THE TIME OF THE SITE VISIT.



100 % COMPLETE

HP ENGINEERING INC. 5214 W. VILLAGE PARKWAY SUITE 120 ROGERS, AR 72758 (479) 899-6370 www.hpengineeringinc.com





	FIRE ALARM LEGEND
3	SMOKE DETECTOR
١	HEAT DETECTOR
Ď	DUCT DETECTOR
	WALL MOUNT HORN STROBE
	CEILING MOUNT HORN STROBE
Ø	WALL MOUNT STROBE
$\overline{\otimes}$	CEILING MOUNT STROBE
Ē	PULL STATION
ANN	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FS	SPRINKLER FLOW SWITCH
$\begin{bmatrix} T \\ S \end{bmatrix}$	SPRINKLER TAMPER SWITCH
MM	FIRE ALARM MONITOR MODULE
СМ	FIRE ALARM CONTROL MODULE

ACCORDANCE WITH NFPA 70 AND NFPA 72. SYSTEM SHALL ALSO MEET ALL APPLICABLE BUILDING CODES, FIRE CODES AND THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND INSURANCE CARRIER. VERIFY REQUIREMENTS PRIOR TO BID SUBMITTAL INFORMATION ON CONTRACT DOCUMENTS IS GENERAL INFORMATION AND FOR BID PURPOSES ONLY. PERFORM REQUIRED CALCULATIONS AND COORDINATE WITH OTHER TRADES. DEVIATIONS FROM ENGINEERS LAYOUT WILL NOT BE CONSIDERED UNLESS A FORMALLY SUBMITTED RFI IS RECEIVED AND APPROVED PROVIDE ADDITIONAL MATERIALS AND LABOR REQUIRED DUE TO LACK OF COORDINATION OR TO MEET AUTHORITY HAVING JURISDICTION AND

FIRE ALARM GENERAL NOTES

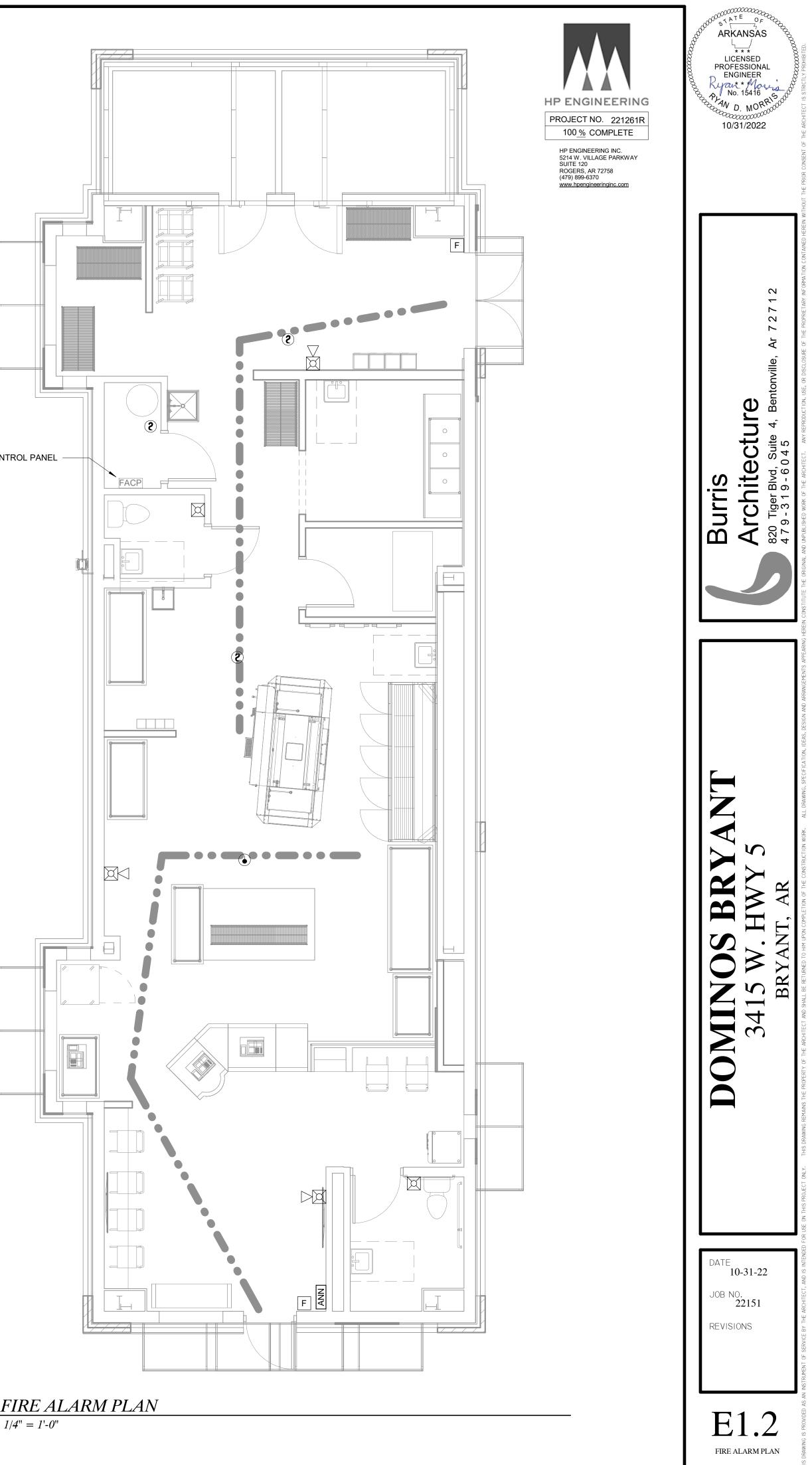
- INSURANCE CARRIER REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER
- PROVIDE ALL EQUIPMENT AND LABOR REQUIRED FOR A COMPLETE AND OPERATIONAL FIRE ALARM SYSTEM AUDIBLE NOTIFICATION DEVICES SHALL SOUND UNTIL SILENCED AT THE
- CONTROL PANEL OR REMOTE ANNUNCIATOR AS REQUIRED. VISUAL ALARM IS DISPLAYED UNTIL DEVICE IS RETURNED TO ITS NORMAL POSITION OR SUPERVISORY CONDITION IS CLEARED FORWARD COMPLETED FIRE ALARM CERTIFICATE OF COMPLETION TO THE
- OWNER PROVIDE NOTIFICATION, INITIATING AND MONITORING DEVICES AS INDICATED ON THE DRAWINGS. FIRE ALARM DEVICES SHALL BE OF ONE MANUFACTURER AND SHALL BE LISTED FOR USE WITH THE FIRE ALARM
- CONTROL PANEL PROVIDE NOTIFICATION APPLIANCE CIRCUIT PANEL(S) TO POWER NOTIFICATION DEVICES AS REQUIRED. CONNECT TO FIRE ALARM SYSTEM THE FIRE ALARM CONTROL PANEL AND REMOTE ANNUNCIATOR LOCATIONS
- SHOWN SHALL BE COORDINATED WITH THE FIRE DEPARTMENT AND AHJ PRIOR TO INSTALLATION AIR HANDLING SYSTEMS THAT ARE MONITORED SHALL SHUTDOWN AND 10 REMAIN DOWN UNTIL MANUALLY RESET

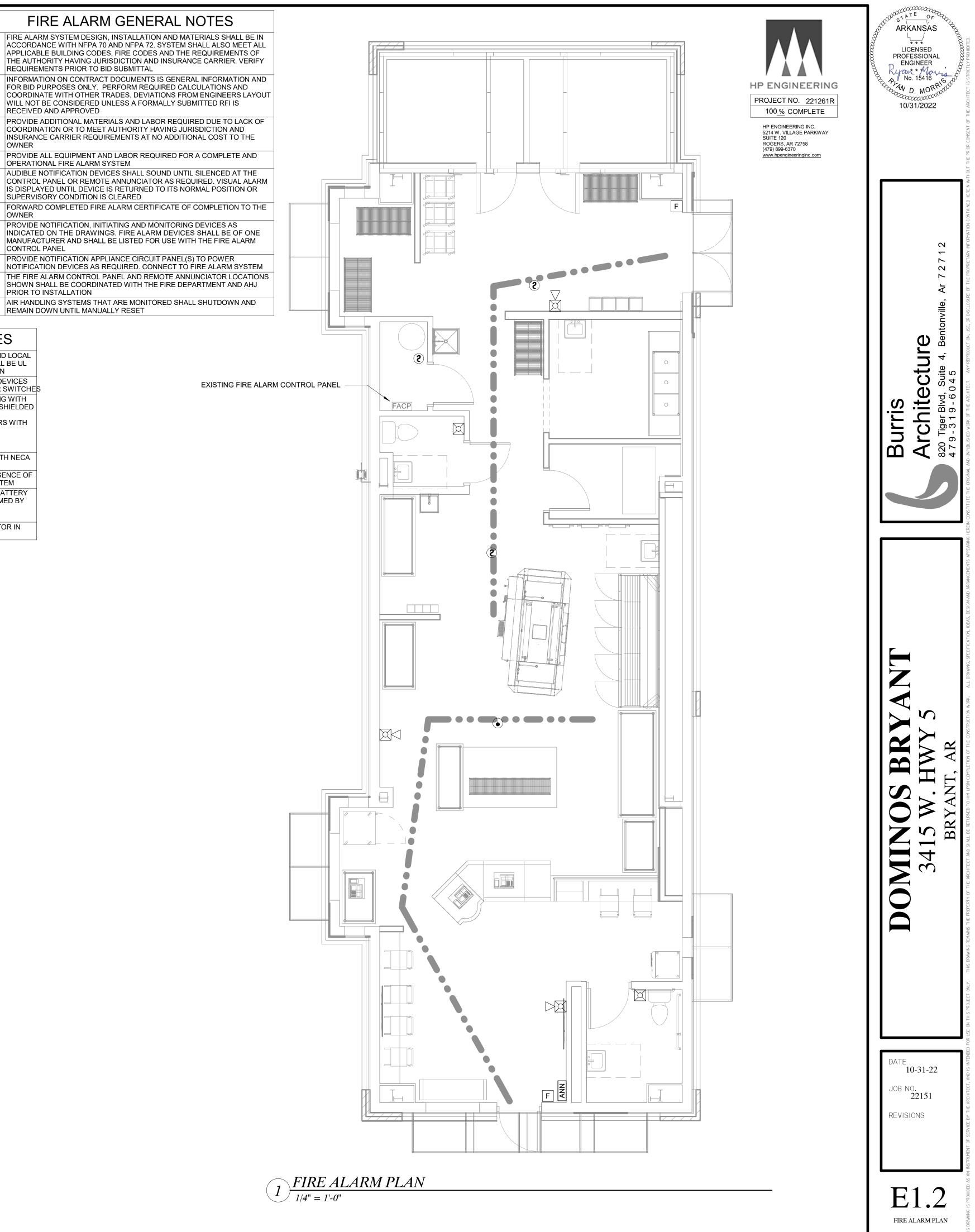
FIRE ALARM INSTALLATION NOTES

SYSTEM SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 72 AND LOCAL CODES AND REGULATIONS. ALL EQUIPMENT AND MATERIALS SHALL BE UL LISTED AND APPROVED BY THE AUTHORITY HAVING JURISDICTION INTERFACE WITH AND MONITOR ALL FIRE SUPPRESSION SYSTEM DEVICES INCLUDING (BUT NOT LIMITED TO) SPRINKLER FLOW AND TAMPER SWITCHES WIRE AND CABLE SHALL BE UL LISTED AND LABELED AS COMPLYING WITH NFPA 70, ARTICLE 760. SIGNALING LINE CIRCUITS TO BE TWISTED, SHIELDED PAIR, SIZED AS RECOMMENDED BY SYSTEM MANUFACTURER. NON-POWER-LIMITED CIRCUITS TO BE SOLID-COPPER CONDUCTORS WITH 600-V RATED, 75 DEG C, COLOR-CODED INSULATION. 9.1 LOW-VOLTAGE CIRCUITS: NO. 16 AWG, MINIMUM 9.2 LINE-VOLTAGE CIRCUITS: NO. 12 AWG, MINIMUM INSTALL AND TEST SYSTEMS ACCORDING TO NFPA 72. COMPLY WITH NECA TEST ALL SYSTEM DEVICES FOR PROPER OPERATION IN THE PRESENCE OF THE AHJ AND OTHER OFFICIALS INSPECTING THE FIRE ALARM SYSTEM IF REQUIRED BY THE LOCAL AHJ, EQUIPMENT DATA SHEETS AND BATTERY CALCULATIONS IN ACCEPTANCE WITH NFPA 72 SHALL BE PERFORMED BY THE FIRE ALARM SYSTEM MANUFACTURER/INSTALLER TO MATCH EQUIPMENT TO BE INSTALLED SYSTEM INSTALLER SHALL BE A LICENSED FIRE ALARM CONTRACTOR IN THE RESPECTIVE STATE OF THIS PROJECT

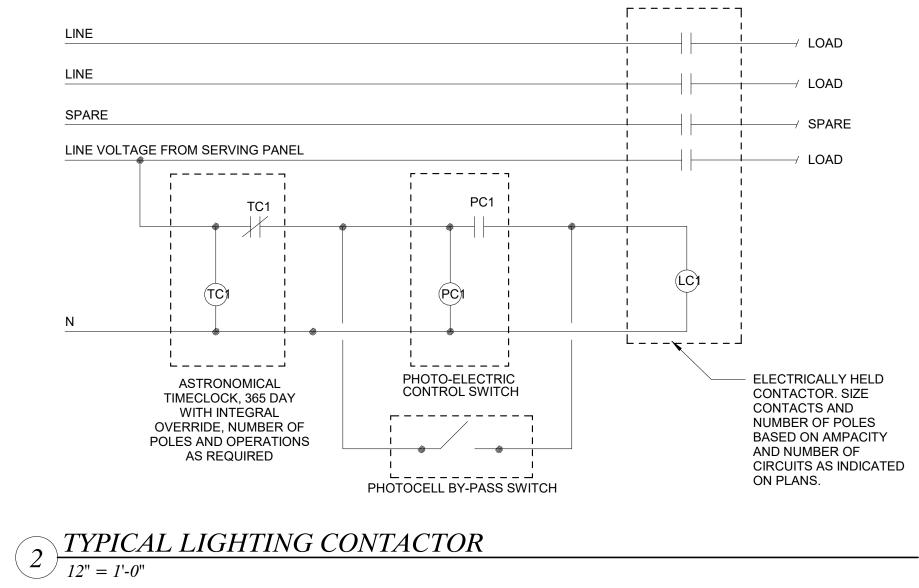
NFPA 72 2010, 2013 EDITION: 4" MINIMUM REQUIREMENT FOR SMOKE DETECTORS IS REMOVED MIN CEILING MOUNTED SMOKE/ HEAT DETECTOR MIN 12" DETECTORS **NEVER HERE** MAX NOTE: MEASUREMENT\$ SHOWN ARE TO THE CLOSEST EDGE OF THE DETECTOR. WALL MOUNTED SMOKE/ HEAT DETECTOR FINISH -WALL DOOR WIDTH LESS 3" - MAGNETIC DOOR HOLDER

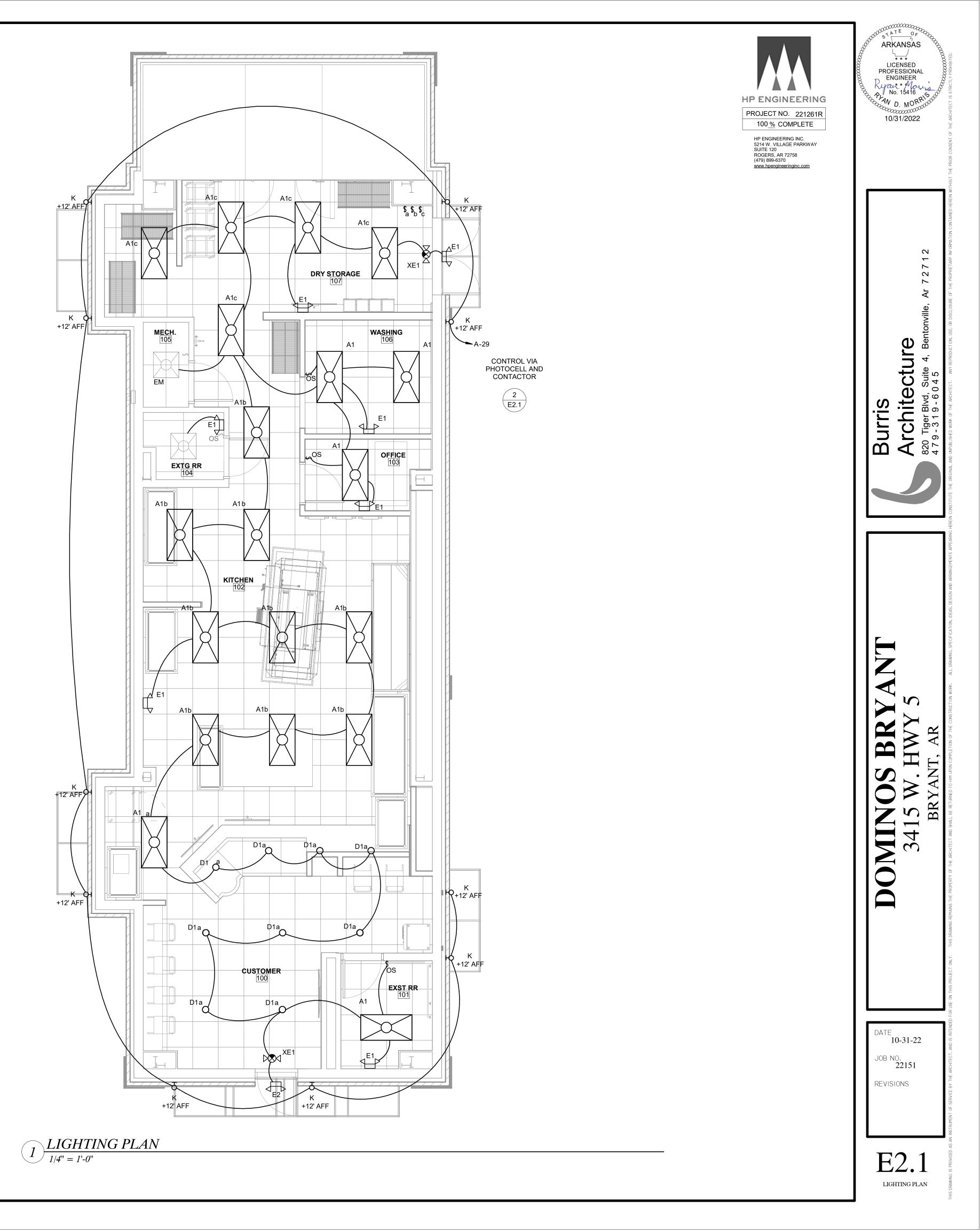
EXISTING FIRE ALARM CONTROL PANEL





LUMINAIRE SCHEDULE								
NOTES: 1. EC SHALL PROVIDE A SUBMITTAL PACKAGE INCLUDING CUTSHEETS FOR EACH FIXTURE. 2. EC SHALL PROVIDE ALL ACCESSORIES FOR A COMPLETE ASSEMBLY INCLUDING MOUNTING HARDWARE. 3. THE MOUNTING TYPE OF EACH FIXTURE SHALL BE COMPATIBLE WITH INSTALLATION SURFACE OF EACH FIXTURE. 4. ALL FINISHES SHALL BE COORDINATED WITH ARCHITECT AND DOCUMENTED ON SUBMITTALS.								
TYPE	LAMP	VOLTS	WATTS	DESCRIPTION	MANUFACTURER			
TYPE A1	LAMP LED, 3500K	VOLTS 120/277	WATTS 56 W	DESCRIPTION 2X4, TROFFER, FLAT PANEL	MANUFACTURER METALUX - 24FP			
A1	LED, 3500K	120/277	56 W	2X4, TROFFER, FLAT PANEL	METALUX - 24FP			
A1 D1	LED, 3500K LED, 3500K	120/277 120/277	56 W 19 W	2X4, TROFFER, FLAT PANEL 6", RECESSED, DOWNLIGHT, WHITE, 1500LM	METALUX - 24FP HALO - HC6			
A1 D1 E1	LED, 3500K LED, 3500K (2) LED	120/277 120/277 120/277	56 W 19 W 10 W	2X4, TROFFER, FLAT PANEL 6", RECESSED, DOWNLIGHT, WHITE, 1500LM EMERGENCY LIGHT, BUGEYE, SELF DIAGNOSTIC	METALUX - 24FP HALO - HC6 ASTRALITE EU-3			





SECTION 26A GENERAL ELECTRICAL REQUIREMENTS

Rev - 20150422

26A 1 GENERAL INSTRUCTIONS

26A 1-1 GENERAL REQUIREMENTS Requirements under Division 1 and the general and supplementary conditions of these specifications apply to this section and division. Where the requirements of this section and division exceed those of Division 1, this section and division take precedence. Become thoroughly familiar with all their contents as to requirements that affect this division, section or both. The work required under this section includes material, equipment, appliances, transportation, services, and labor required to complete the entire system as required by the drawings and specifications, or reasonably inferred to be necessary to facilitate each system's functioning as implied by the design and the equipment specified.

The specifications and drawings for the project are complementary, and portions of the work described in one, shall be provided as if described in both. In the event of discrepancies, notify the engineer and request clarification prior to proceeding with the work involved.

Drawings are graphic representations of the work upon which the contract is based. They show the materials and their relationship to one another, including sizes, shapes, locations, and connections. They also convey the scope of work, indicating the intended general arrangement of the equipment and other materials without showing all of the exact details as to elevations, offsets, control lines, and other installation requirements. Use the drawings as a guide when laying out the work and to verify that materials and equipment will fit into the designated spaces, and which, when installed per manufacturers' requirements, will ensure a complete, coordinated, satisfactory and properly operating system. Determine exact locations by job measurements, by checking the requirements of other trades, and by reviewing all contract documents. Correct errors that could have been avoided by proper checking and inspection, at no additional cost to the owner.

Specifications define the qualitative requirements for products, materials, and workmanship upon which the contract is based.

26A 1-2 DEFINITIONS

Whenever used in these specifications or drawings, the following terms shall have the indicated meanings:

Furnish: "to supply and deliver to the project site, ready for unloading, unpacking, assembling, installing, and similar operations."

Install: "to perform all operations at the project site, including, but not limited to, and as required: unloading, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, testing, commissioning, starting up and similar operations, complete, and ready for the intended use."

Provide: "to furnish and install complete, and ready for the intended use."

Furnished by owner (or owner-furnished) or furnished by others: "an item furnished by the owner or under other divisions or contracts, and installed under the requirements of this division, complete, and ready for the intended use, including all items and services incidental to the work necessary for proper installation and operation. Include the installation under the warranty required by this division.

Engineer: where referenced in this division, "engineer" is the engineer of record and the design professional for the work under this division, and is a consultant to, and an authorized representative of, the architect, as defined in the general and/or supplementary conditions. When used in this division, it means increased involvement by, and obligations to, the engineer, in addition to involvement by, and obligations to, the "architect".

AHJ: the local code and/or inspection agency (authority) having jurisdiction over the work.

NRTL: nationally recognized testing laboratory, as defined and listed by OSHA in 29 CFR 1910.7 (e.g., UL, ETL, CSA), and acceptable to the AHJ over this project.

The terms "approved equal", "equivalent", or "equal" are used synonymously and shall mean "accepted by or acceptable to the engineer as equivalent to the item or manufacturer specified". The term "approved" shall mean labeled, listed, certified, or all three, by an NRTL, and acceptable to the AHJ over this project. 26A 1-3 PRE-BID SITE VISIT

Prior to submitting bid, visit the site of the proposed work and become fully informed as to the conditions under which the work is to be done. Failure to do so will not be considered sufficient justification to request or obtain extra compensation over and above the contract price.

26A 1-4 MATERIAL AND WORKMANSHIP

Provide all material and equipment new and in first class condition. Provide markings or a nameplate for all material and equipment identifying the manufacturer and providing sufficient reference to establish quality, size and capacity. In general, provide the following quality grade(s) for all materials and equipment:

Commercial Specification Grade

Work performed under this contract shall provide a neat and "workmanlike" appearance when completed, to the satisfaction of the architect and engineer. Workmanship shall be the finest possible by experienced mechanics of the proper trade The complete installation shall function as designed and intended with respect to efficiency, capacity, noise level, etc. Abnormal or excessive noise from equipment, devices or other system components will not be acceptable.

Remove from the premises waste material present as a result of work. Clean equipment installed under this contract to present a neat and clean installation at the termination of the work.

Repair or replace public and private property damaged as a result of work performed under this contract to the satisfaction of authorities and regulations having jurisdiction.

26A 1-5 MANUFACTURERS

In other articles where lists of manufacturers are introduced, subject to compliance with requirements, provide products by one of the manufacturers specified.

Where a list is provided, manufacturers listed are not in accordance with any ranking or preference.

Where manufacturers are not listed, provide products subject to compliance with requirements from manufacturers that have been actively involved in manufacturing the specified product for no less than 5 years. 26A 1-6 COORDINATION

Coordinate all work with other divisions and trades so that the various components of the systems will be installed at the proper time, fit the available space, and will allow proper service access to those items requiring maintenance. Refer to all other division's drawings, and to relevant equipment submittals and shop drawings to determine the extent of clear spaces. Components which are installed without regard to the above shall be relocated at no additional cost to the owner.

Unless otherwise indicated, the general contractor will provide chases and openings in building construction required for installation of the systems specified herein. Contractor shall furnish the general contractor with information where chases and openings are required. Make all offsets required to clear equipment, beams and other structural members, and to facilitate concealing system components in the manner anticipated in the design. Keep informed as to the work of other trades engaged in the construction of the project, and execute work in a manner as to not interfere with or delay the work of other trades.

Figured dimensions shall be taken in preference to scale dimensions. Contractor shall take his own measurements at the building, as variations may occur. Contractor will be held responsible for errors that could have been avoided by proper checking and inspection

Provide materials with trim that will properly fit the types of ceiling, wall, or floor finishes actually installed. Model numbers listed in the construction documents are not necessarily intended to designate the required trim. 26A 1-7 ORDINANCES, CODES, AND STANDARDS

Work performed under this contract shall, at a minimum, be in conformance with applicable national, state and local codes having jurisdiction. Equipment furnished and associated installation work performed under this contract shall be in strict compliance with current applicable codes adopted by the local AHJ including any amendments and standards as set forth by the National Fire Protection Association (NFPA), Underwriters Laboratories (UL), Occupational Safety and Health Administration (OSHA), American Society of Mechanical Engineers (ASME), American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE), American National Standards Institute (ANSI), American Society of Testing Materials (ASTM) and other national standards and codes where applicable. Additionally, comply with rules and regulations of public utilities and municipal departments affected by connection of services. Where the contract documents exceed the requirements of the referenced codes, standards, etc., the contract documents shall take precedence.

Promptly bring all conflicts observed between codes, ordinances, rules, regulations, referenced standards, and these documents to the engineer's attention for final resolution. Contractor will be held responsible for any violation of the law.

Procure and pay for permits and licenses required for the accomplishment of the work herein described. Where required, obtain pay for and furnish certificates of inspection to owner. Contractor will be held responsible for violations of the law

26A 1-8 PROTECTION OF EQUIPMENT AND MATERIALS

Store and protect from damage equipment and materials delivered to job site, in accordance with manufacturers' recommendations. For materials and equipment susceptible to changing weather conditions, dampness, or temperature variations, store inside in conditioned spaces. For materials and equipment not susceptible to these conditions, cover with waterproof, tear-resistant, heavy tarp or polyethylene plastic as required to protect from plaster, dirt, paint, water, or physical damage. Equipment and material that has been damaged by construction activities will be rejected, and contractor shall furnish new equipment and material as required at no additional cost to the owner.

Keep premises broom clean from foreign material created during work performed under this contract. Piping, equipment, etc. shall have a neat and clean appearance at the termination of the work.

Plug or cap open ends of conduits while stored and installed during construction when not in use to prevent the entrance of debris into the systems.

26A 1-9 SUBSTITUTIONS

Include in the base bid the products specifically named in these specifications or on the drawings. Submit, in the form of alternates, with bid, products of any other manufacturers for similar use, provided the differences in cost, if any, are included for each proposed alternate.

No substitutions will be considered with receipt of Bids, unless the Architect and Engineer have received from the Bidder a written request for approval to bid a substitution at least ten calendar days prior to the date for receipt of Bids, and have approved the substitution request. Include, with each such request, the name of the material or equipment for which substitution is being requested, and a complete description of the proposed substitution, including drawings, cut sheets, performance and test data, and all other information necessary for an evaluation. Include also a statement setting forth changes in other materials, equipment or other work that would be required to incorporate the substitution. The burden of proof of the merit of the proposed substitute is upon the proposer. The proposer of any substitutions shall compensate the Engineer at a rate of \$150.00 per hour for time spent evaluating proposed substitutions and or the subsequent revisions to the design required to utilize the substitution.

The Architect's or Engineer's decision to approve or disapprove a substitution in a Bid is final.

rely upon approvals made in any other manner, including verbal.

No substitutions will be considered after receipt of Bids and before award of the Contract.

26A 1-10 SUBMITTALS

Assemble and submit to the architect, for engineer's review, manufacturers' product literature for material and equipment to be furnished, installed, or both, under this division, including shop drawings, manufacturers' product data and performance sheets, samples, and other submittals required by this division. Highlight, mark, list or indicate the materials, performance criteria and accessories that are being proposed. Provide the number of submittals required by division 1; however, at a minimum, submit two (2) sets. Before submitting, verify that all materials and equipment submitted are mutually compatible and suitable for the intended use, fit the available spaces, and allow ample and code-required room for access and maintenance. Submittals shall contain the following information. Submittals not so identified will be returned to the contractor without action:

The project name. The applicable specification section and paragraph. The submittal date. The contractor's stamp, which shall certify that the stamped drawings have been checked by the contractor, comply with the drawings and specifications, and have been coordinated with other trades.

Submittals and shop drawings shall not contain HP Engineering's firm name or logo, nor shall it contain the HP Engineering's engineers' seal and signature. They shall not be copies of HP Engineering's work product.

Transmit submittals as early as required to support the project schedule. Allow for two weeks engineer review time, plus mailing time, plus a duplication of this time for re-submittals, if required. The engineer's submittal reviews will not relieve the contractor from responsibility for errors in dimensions, details, size of members, or quantities; or for omitting components or fittings; or for not coordinating items with actual building conditions.

Refer to division 1 for acceptance of electronic submittals for this project. For electronic submittals, contractor shall submit the documents in accordance with the procedures specified in division 1. Contractor shall notify the architect and engineer that the shop drawings have been posted. If electronic submittal procedures are not defined in division 1, contractor shall include the website, user name and password information needed to access the submittals. For submittals sent by e-mail, contractor shall copy the architect and engineer's designated representatives. Contractor shall allow the engineer review time as specified above in the construction schedule. Contractor shall submit only the documents required to purchase the materials and/or equipment in the electronic submittal and shall clearly indicate the materials, performance criteria and accessories being proposed. General product catalog data not specifically noted to be part of the specified product will be rejected and returned without review.

26A 1-11 ELECTRONIC DRAWING FILES

In preparation of shop drawings or record drawings, contractor may, as an option, obtain electronic drawing files in Revit, AutoCAD, or DXF format from the engineer for a fee of \$200 for the first sheet and \$100 per sheet for each additional sheet. Contact the architect for written authorization; and, contact the engineer to obtain the necessary release agreement form and to indicate the desired shipping method and drawing format. In addition to payment, architect's written authorization and engineer's release agreement form must be received before electronic drawing files will be sent. 26A 1-12 OPERATION AND MAINTENANCE MANUALS

Submit to the architect, for engineer's review, copies each of operations and maintenance instruction manuals, appropriately bound into manual form including approved copies of the following, revised if necessary to show system and equipment as actually installed. Paper clips, staples, rubber bands, and mailing envelopes are not considered approved binders. Provide the number of submittals required by Division 1; however, at a minimum, submit two (2) sets, and include, at a minimum, the following information:

index of contents. Manufacturers' catalogs and product data sheets Wiring diagrams

Operation and Maintenance instructions Parts lists Approved shop drawings

Names, addresses, telephone numbers, and e-mail addresses of local contacts for warranty services and spare parts.

Submit manuals prior to requesting the final punch list and before any requests for substantial completion. Final approval of this division's systems installed under this contract will be withheld until this equipment brochure is received and deemed complete by the architect and engineer.

Provide "as-built" drawings (see Division 1 and general conditions). 26A 1-13 TRAINING

At a time mutually agreed upon between the owner and contractor, provide the services of a factory trained and authorized representative to train owner's designated personnel on the operation and maintenance of the equipment provided for this project

Provide training to include but not be limited to an overview of the system and/or equipment as it relates to the facility as a whole operation and maintenance procedures and schedules related to startup and shutdown, troubleshooting, servicing, preventive maintenance and appropriate operator intervention; and review of data included in the operation and maintenance manuals.

Submit a certification letter to the architect stating that the owner's designated representative has been trained as specified herein. Letter shall include date, time, attendees and subject of training. The contractor and the owner's representative shall sign the certification letter indicating agreement that the training has been provided.

Schedule training with owner with at least 7 days advance notice. 26A 1-14 WARRANTIES

Warrant each system and each element thereof against all defects due to faulty workmanship, design or material for a period of 12 months from date of substantial completion, unless specific items are noted to carry a longer warranty in the construction documents or manufacturer's standard warranty exceeds this duration. Warranties shall include labor and material. Remedy all defects, occurring within the warranty period(s), as stated in the general conditions and Division 1 without any additional costs to the owner.

Perform any required remedial work promptly, upon written notice from the engineer or owner.

At the time of substantial completion, deliver to the owner all warranties, in writing and properly executed, including term limits for warranties extending beyond the required period, each warranty instrument being addressed to the owner and stating the commencement date and term.

If the proposed substitution is approved prior to receipt of Bids, such approval will be stated in an Addendum. Bidders shall not

No substitutions will be considered after the Contract is awarded unless specifically provided in the Contract Documents.

Cover sheet that lists the project name, date, owner, architect, consulting engineer, general contractor, sub-contractor, and an

Test reports as defined in NETA ATS for the systems and equipment provided or furnished or installed under this contract.

26A 2 ELECTRICAL WORK

26A 2-1 BUILDING OPERATION

Comply with the schedule of operations as outlined in the architectural portions of this specification. Building shall be in continuous operation. Accomplish work that requires interruption of building operation at a time when the building is not in operation, and only with written approval of building owner and/or tenant. Coordinate interruption of building operation with the owner and/or tenant a minimum of 7 days in advance of work. 26A 2-2 EXCAVATION AND BACKFILLING

Perform excavation and backfill required for installation of underground work under this contract. Trenches shall be of sufficient width. Crib or brace trenches to prevent cave-in or settlement. Do not excavate trenches close to columns and walls of building without prior consultation with the architect. Use pumping equipment if required to keep trenches free of water. Backfill trenches in maximum 6" layers of well-tamped dry earth in a manner to prevent future settlement.

Excavation as herein specified shall be classified as common excavation. Common excavation shall comprise the satisfactory removal and disposition of material of whatever substances and of every description encountered, including rock, if any, within the limits of the work as specified and shown on the drawings. Excavation shall be performed to the lines and grades indicated on the drawings. Excavated materials which are considered unsuitable for backfill, and surplus of excavated material which is not required for backfill, shall be disposed of by the contractor at his own expense and responsibility, and to the satisfaction of the architect.

26A 2-3 COINCIDENTAL DAMAGE

Repair all streets, sidewalks, drives, paving, walls, finishes, and other facilities damaged in the course of this work. Repair materials shall match existing construction and or conform to all requirement identified in other divisions. All backfilling and repairing shall meet all requirements of the owner, city and others having jurisdiction. Repair work shall be thoroughly first class. 26A 2-4 CUTTING AND PATCHING

Following the requirements in Division 1, cut walls, floors, ceilings, and other portions of the facility as required to perform work under this division. Obtain permission of the architect, owner, or both, before doing any cutting. Cut all holes as small as possible. Patch walls, floors, and other portions of the facility as required by work under this division. All patching shall be thoroughly first class and shall match the original material and construction, including fire ratings if applicable in a manner satisfactory to the architect.

26A 2-5 ROUGH-IN

Coordinate without delay all roughing-in with other divisions. Conceal all piping and rough-in except in unfinished areas and where otherwise indicated in the construction documents. 26A 2-6 SUPPORT SYSTEMS

1.Steel slotted support systems (slotted channel): comply with MFMA-3, factory-fabricated components for field assembly; 12-gauge, 1-5/8-inch by 1-5/8-inch; Cooper B-Line, Erico International Corporation, Hilti, Inc., Power-Strut, Thomas & Betts Corporation, Unistrut.

Finishes:

A.Metallic coatings: hot-dip galvanized after fabrication and applied according to MFMA-3

B.Nonmetallic coatings: manufacturer's standard PVC, polyurethane or polyester coating applied according to MFMA-3. C.Painted coatings: manufacturer's standard painted coating applied according to MFMA-3.

D. Stainless steel: type 304, per ASTM A240.

(e.g., file, grinding stone, or similar) and cleanser to remove oils, rust, sharp edges and shards.

2.Aluminum slotted support systems (slotted channel): comply with MFMA-3, type 6063-T6, per ASTM B221; factory-fabricated components for field assembly; 12-gauge, 1-5/8-inch by 1-5/8-inch; Cooper B-Line, Erico International Corporation, Hilti, Inc., Power-Strut, Thomas & Betts Corporation, Unistrut.

Field Fabrication:

26A 2-7 PENETRATIONS

Where field cutting of standard lengths of channel are required, make cuts straight and perpendicular to manufactured surfaces. For field-cut or damaged surfaces of coated channels, dress cut ends, damaged surfaces, or both, with an abrasive material

For channel with a factory-applied coating, re-finish cut edges with a coating compatible with the factory finish and as recommended by the manufacturer (e.g., manufacturer's touch-up paint or zinc-rich cold-galvanizing compound, as applicable).

Coordinate sleeve selection and application with selection and application of fire-stopping specified in Division 7 section "through-penetration firestop systems."

Roofs:

Coordinate all roof penetrations with engineer, owner, and as applicable, the roofing contractor providing a roof warranty. Keep all raceway penetrations within mechanical equipment curbs wherever possible. Coordinate with all other applicable Division's work.

Flash and counterflash all openings through roof, and/or provide pre-fabricated molded seals compatible with the roof construction installed, or as required by the engineer, owner, or roofing contractor. All roof penetrations shall be leak-tight at the termination of the work and shall not void any new or existing roof warranties.

Walls and Floors:

Sleeves for raceways and cables

Steel pipe sleeves: ASTM A 53/A 53M, type E, grade B, schedule 40, galvanized steel, plain ends and drip rings. Cast-iron pipe sleeves: cast or fabricated "wall pipe," equivalent to ductile-iron pressure pipe, with plain ends and integral waterstop, unless otherwise indicated.

Sleeves for rectangular openings: galvanized sheet steel with minimum 0.138 inch thickness and of width and length to suit application.

26A 2-8 FIRE-STOPPING THROUGH PENETRATIONS

Fire-resistant through penetration sealants: two-part, foamed-in-place, silicone sealant formulated for use in through-penetration fire-stopping around cables, raceways, and cable tray penetrations through fire-rated walls and floors. Sealants and accessories shall have fire-resistance ratings indicated, as established by testing identical assemblies in accordance with ASTM E 814, by underwriters' laboratories, inc., or other NRTL acceptable to AHJ.

Acceptable manufacturers:

Hilti. Inc. 3m Corp. Rectorseal

Specify Technology Inc. United States Gypsum Company.

Submittals

Submit product data, manufacturer's specifications and technical data for each material including the composition and limitations, documentation of UL firestop systems to be used and manufacturer's installation instructions to comply with Division 1.

Manufacturer's engineering judgment identification number and drawing details when no UL system is available for an application. Engineering judgment shall include both project name and contractor's name who will install firestop system as described in drawings.

Submit material safety data sheets provided with product delivered to job-site

26A 2-9 CONCRETE BASES

Provide concrete bases (e.g., housekeeping pads) for equipment where indicated on the drawings and as specified herein. Concrete bases shall have chamfered edges. Size of base shall be a minimum of 2 inches greater than the footprint of the equipment that it is supporting.

Construct equipment bases of a minimum 28-day, 4000-psi concrete conforming to American Concrete Institute standard building code for reinforced concrete (ACI 318-99) and the latest applicable recommendations of the ACI standard practice manual. Concrete shall be composed of cement conforming to ASTM C 150 type I, aggregate conforming to ASTM C33, and potable water. Exposed exterior concrete shall contain 5 to 7 percent air entrainment.

Unless otherwise specified or shown on the structural drawings, reinforce equipment bases with no. 4 reinforcing bars conforming to ASTM A 615 or 6x6 – w2.9 x w2.9 welded wire mesh conforming to ASTM A185. Place reinforcing bars 24 inches on center with a minimum of two bars each direction.

Provide galvanized anchor bolts for equipment placed on concrete bases or on concrete slabs. Anchor bolts size, number and placement shall be as recommended by the manufacturer of the equipment.

Concrete equipment bases shall have a minimum height of 4 inches and shall be poured-in-place.



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26A 2-10 ACCESS DOORS

26A 2-12 CLEANING

Provide access doors in ceilings and walls, where indicated or required for access or maintenance to concealed equipment installed under this section. Provide concealed hinges, screwdriver-type lock, and anchor straps.

Manufactured by Milcor, Zurn, Titus, or equal. Obtain architect's approval of type, size, location and color before ordering. 26A 2-11 EQUIPMENT FURNISHED BY OTHERS

Provide necessary equipment and accessories that are not provided by the equipment supplier or owner to complete installation of equipment furnished by others, in locations as indicated on the drawings, specified herein, or both. Equipment and accessories not provided by the equipment supplier may include such items as flexible cords and plugs, as required for proper operation of the complete system, in accordance with the manufacturers' instructions.

Be responsible for correct rough-in dimensions, and verify them with engineer, owner's representative, equipment supplier, or all three, prior to rough-in and service installations.

In addition to the requirements of Division 1, remove from the premises dirt and refuse resulting from the performance of the electrical work, as required, to prevent accumulation. Cooperate in maintaining reasonably clean premises at all times. Immediately prior to final inspection, make a final cleanup of dirt and refuse resulting from the work. Clean all material and equipment installed under this division. Remove dirt, dust, plaster, stains and foreign matter from all surfaces. Touch up and restore all damaged finishes to their original condition.

26A 2-13 ADJUSTING, ALIGNING AND TESTING

Adjust, align, and test all electrical equipment on this project provided under this division and all electrical equipment furnished by others for installation or wiring under this division, for proper operation.

Test all systems and equipment according to the requirements in NETA ATS (latest edition) and all additional requirements specified in following sections.

Maintain the following on the project premises at all times: a true RMS reading voltmeter, a true RMS reading ammeter, and a megohmmeter insulation resistance tester. Provide test data readings as requested or as required by the engineer. 26A 2-14 EQUIPMENT IDENTIFICATION

Provide equipment identification nameplates:

-On all panelboards, switches, starters, dimmers, switches in distribution panelboards and switchboards as well as where indicated elsewhere in the construction documents.

Nameplates:

Engraved, contrasting color, three-layer, laminated plastic indicating the name of the equipment, load, or circuit as designated on the drawings and in the specifications:

-Field-applied permanent epoxy adhesive, compatible with the equipment finish.

-Attachment method shall be acceptable to the manufacturers of the equipment to which the nameplates are being applied. Color: black background with white letters for normal power; red background with white letters for emergency power. Letter height: $\frac{1}{2}$ -inch minimum. 26A 2-15 SYSTEM START UP

Prior to starting up the electrical systems:

Check all components and devices.

Lubricate items accordingly.

Tighten screws and bolts for connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486a and UL 486b.

Adjust taps on each transformer for rated secondary voltage when the transformer is at minimum load.

Check and record building's service entrance voltage, grounding conditions, grounding resistance, and proper phasing.

Replace all burned-out lamps and lamps used for temporary construction lighting in permanent light fixtures.

After all systems have been inspected and adjusted, confirm all operating features required by the drawings and specifications and make final adjustments as necessary.

26A 4 ALTERNATES

Provide all work contemplated under the different alternates to include labor, materials, equipment and services necessary for and incidental to the completion of work under each particular alternate. Furnish separate bids for each alternate applicable to contractor's proposal, stating the amount to be added or deducted from the base bid in case the alternate is accepted. Comply with applicable sections of the base specifications for work required by the alternate unless otherwise specified. Refer to the architectural portion of the specification.

END OF SECTION 26A

OR NO

EVISIONS

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26B BASIC ELECTRICAL MATERIALS AND METHODS rev - 20150520

26B 1 METHODS

26B 1-1 RACEWAYS

Metallic Conduit And Tubing

Electrical Metallic Tubing and fittings (EMT): ANSI C80.3, UL 797.

Reduced wall EMT is not allowed. Flexible Metal Conduit (FMC): zinc-coated steel or aluminum, UL 1.

Reduced-wall FMC is not allowed.

Intermediate Metal Conduit (IMC): hot-dip galvanized rigid steel conduit: ANSI C80.6, UL 1242. Liquidtight Flexible Metal Conduit (LFMC): flexible steel conduit with PVC jacket: UL 360

Rigid Metal Conduit (RMC): hot-dip Galvanized Rigid Steel conduit (GRS): ANSI C80.1, UL 6.

Plastic-coated IMC, RMC, and fittings: NEMA RN 1, UL listed.

IMC and RMC fittings: NEMA FB 1; compatible with conduit type and material, UL listed

Non-Metallic Conduit And Tubing:

Rigid Nonmetallic Conduit (RNC): schedule 40 PVC, 90 deg C rated, NEMA TC-2, UL 651; fittings: NEMA TC 3, TC 6; UL 514, compatible with conduit/tubing type and material, UL listed.

Electrical Nonmetallic Tubing (ENT): NEMA TC 13, UL listed.

Liquidtight Flexible Nonmetallic Conduit (LFNC): UL 1660. ENT and LFNC fittings: Compatible with conduit/tubing type and material, UL listed.

26B 1-2 RACEWAY INSTALLATION

Above Ground Use:

Install all circular raceways concealed above suspended ceilings or concealed in walls or floors wherever possible except where otherwise indicated.

Provide GRS for all conduits run exposed to weather, or exposed to other hazardous conditions.

All other raceway may be EMT where approved by local code. Use compression type fittings for EMT, with all fittings UL listed for the environment in which they are used.

Underground use:

Provide GRS installed below grade with a corrosion resistant bonded-plastic or approved mastic coating. This shall include the 90-degree elbow below grade and the entire vertical transition to above grade.

RNC conduit may be used underground where permitted by local code and where not specifically restricted by these documents. When used, provide coated GRS, as specified above, for all bends greater than 30 degrees, including the 90-degree elbows below grade and the entire vertical risers for transitions from below to above grade or above-slab. Equipment Connections:

Use FMC for final connection to each motor and transformer, and to any device that would otherwise transmit motion, vibration, or noise. Use LFMC where exposed to liquids, vapors or sunlight, and to connect to kitchen and food service equipment. Provide all FMC and LFMC with an insulated bonding conductor.

Use only metal raceways for all power wiring from the output of variable frequency drives to their respective motors. All feeders to variable frequency drives (VFDs) shall be in EMT or other metallic conduit. PVC or fiberglass is not allowed for feeders to VFDs.

General Raceway Installation Requirements:

Install raceways parallel and perpendicular to building lines.

Install raceways to requirements of structure and to requirements of all other work on the project; to clear all openings depressions, pipes, ducts, reinforcing steel, and other immovable obstacles.

Install raceways set in forms for concrete structure in such a manner that installation will not affect the strength of the structure.

Except where approved in writing by the engineer, install no raceway in a slab-on-grade. Locate raceway in granular fill below slabs-on-grade.

Install raceways continuous between connections to outlets, boxes and cabinets with a minimum possible number of bends and not more than the equivalent of four 90-degree bends between connections. Use manufactured elbows for all 45- and 90-degree bends, unless approved by the engineer in advance. Make other bends smooth and even and without flattening raceway or flaking galvanizing or enamel. Radii of bends shall be as long as possible and never shorter than the corresponding trade elbow.

Use long radius elbows for all underground installations, where necessary or indicated.

Securely fasten raceways in place with approved straps, hangers and steel supports as required. Attach raceway supports to the building structure. Hang single raceways for feeders with malleable split ring hangers with rod and turnbuckle suspension from inserts spaced not over 10 feet apart in construction above. Clamp groups of horizontal feeder raceways to steel channels that are suspended from inserts spaced not over 10 feet apart in construction above. Securely clamp vertical feeder raceways to structural steel members attached to structure. Install cable clamps for support of vertical feeders where required. Add raceway supports within 12 inches of all bends, on both sides of the bends. Do not support raceways from suspended ceiling components.

Ream raceway ends, thoroughly clean raceways before installation, and keep clean after installation. Plug or cover openings and boxes as required to keep raceways clean during construction and fish all raceways clear of obstructions before pulling conductors. Provide raceways of ample size for pulling of wire and not smaller than code requirements and not less than 1/2-inch in size, unless indicated otherwise on drawings.

Protect all raceway installations against damage during construction. Repair all raceways damaged or moved out of line after roughing-in to meet engineer's approval without additional cost to the owner.

Align and install true and plumb all raceway terminations at panelboards, switchboards, motor control equipment and iunction boxes.

Install approved expansion/deflection fittings where raceways pass through (if embedded) or across (if exposed) expansion joints. Also when using RNC or RAC in exposed environments in accordance with the NEC and expansion/contraction properties of RNC or RAC.

Install a pull wire in each empty raceway that is left for installation of conductors or cables under other divisions or contracts. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 24 inches of slack at each end of pull wire.

Make all joints and connections in a manner that will ensure mechanical strength and electrical continuity.

26B 1-3 BUSHINGS AND LOCKNUTS

Rigidly terminate conduits entering sheet metal enclosures to the enclosure with a bushing and locknut on the inside and a locknut or an approved hub on the outside. Conduit shall enter the enclosure squarely.

Provide bushings and locknuts made of galvanized malleable iron with sharp, clean-cut threads.

Where EMT enters a box, provide approved EMT compression connectors.

Use insulated, grounding, or combination, bushings wherever connection is subject to vibration or moisture, when required by NFPA 70, or both.

26B 1-4 CONDUCTORS AND CABLES

Conductor Material: Annealed (soft) copper complying with ICEA S-95-658/NEMA WC70; Conductor insulation types: 90-degree C-rated, type THHN/THWN-2 or XHHW-2 complying with ICEA S-95-658/NEMA 26B 1-7 OUTLET BOXES WC70

Sizes of conductors and cables indicated or specified are in American Wire Gage (AWG - brown and sharpe).

All feeder and branch circuit conductors no. 8 AWG and larger: stranded. All conductors, no. 10 AWG and smaller: solid copper

All branch circuit wiring: not smaller than no. 12 AWG. If no conductor size is indicated on the drawings for a branch circuit, provide conductors and conduit sized per NFPA 70 and based on the indicated branch circuit overcurrent protective device (OCPD) rating and number of poles. Where no circuit size (i.e., conductors and OCPD) is indicated on the drawings for a branch circuit, provide three no. 12 AWG conductors, in 1/2-inch raceway, and a 20a circuit breaker.

Control wiring: stranded copper conductors, 600v insulation, of the proper type, size and number as required to accomplish specified function. Minimum size: no. 14 AWG, unless noted otherwise.

Stranded for all flexible cords and cables, or as otherwise indicated.

Unless indicated otherwise, special purpose conductors and cables, such as low voltage control and shielded instrument wiring, shall be as recommended by the system equipment manufacturer.

Type MC cable: 600v, unjacketed; ANSI E119 and E814, UL standards 44 or 83 (as applicable), and 1569, NFPA 70 article 330; aluminum or galvanized steel interlocked armor; THHN- or XHHW-insulated conductors; color code: ICEA method 1, with green insulated grounding conductor 26B 1-5 INSTALLATION OF CONDUCTORS AND CABLES

Install all wiring in approved raceway and enclosures

specified as acceptable, or both.

Support all conductors and cables in vertical installations, as required by NFPA 70, by installing cable supports or plug-type conduit riser supports, or wire-mesh safety grips.

Install all conductors and cable in raceways continuous without taps or splices. Splice or tap only in approved boxes and enclosures with approved solderless connectors, or crimp connectors and terminal blocks for control wiring, and keep to the minimum required. Insulate all splices, taps, and joints as required by codes.

All materials used to terminate, splice or tap conductors: designed for, properly sized for, and UL listed for the specific application and conductors involved, and installed in strict accordance with the manufacturer's recommendations, using the manufacturer's recommended tools

Where wiring is indicated as installed, but the connection is indicated "future" or "by other division, trades, or contracts", leave a minimum 3-foot "pigtail" at the box, tape the ends of the conductors, and cover the box.

The number of conductors in a specific raceway "home run" is typically indicated with cross lines (tick marks) on each "circuit run" on the drawings. In general, the direction of branch circuit "home run" routing is indicated on the drawings, complete with circuit numbers and panelboard designation. Continue all such "home run" wiring to the designated panelboard, as though "circuit runs" were indicated in their entirety.

Multi-wire branch circuits (i.e., shared neutral) shall be provided with a means that will simultaneously disconnect all ungrounded conductors at the point the branch circuit originates. Multi-pole breakers or 3 single pole breakers with a handle tie are two examples.

When multiple home runs are combined into a single raceway such that the number of conductors exceeds four (conductor count is made up of any combination of phase and neutral conductors), the following restrictions apply, which are in addition to those in NFPA 70:

NORMAL or NON-ESSENTIAL CIRCUITS:

Maximum of 16 conductors in a single raceway. For up to eight conductors in a raceway, minimum raceway size: 3/4-inch. For greater than eight conductors, minimum raceway size: 1-inch. Do not install any other type of circuit in this raceway.

The minimum wire size for all conductors in this raceway: no. 10 AWG. Only 15a and 20a branch circuit homeruns may be combined into one raceway.

ISOLATED GROUND (IG) CIRCUITS:

GFCI CIRCUITS:

conduits from other circuits.

For branch circuits fed from GFCI circuit breakers, limit the one-way conductor length to 100 feet between the panelboard and the most remote receptacle or load on the GFCI circuit

Properly identify all terminal blocks and wire terminals for control wiring with vinyl stick-on markers or equivalent. Provide engineer with a list of proposed identifying numbers for review prior to installing markers.

Provide an equipment-grounding conductor, or bonding jumper, as applicable, in all feeders and branch circuits, sized in accordance with NFPA 70 tables 250.66 or 250.122, as applicable, unless indicated as larger on the drawings.

Voltage drop in branch circuits shall not exceed 3 percent.

Wiring shall have insulation of the proper color to match color code system in the table below unless there is a color system currently in use by the facility, in which case the colors are to match the existing system. In larger sizes, where properly colored insulation is not available, use vinyl plastic electrical tape of the appropriate color around each conductor at all termination points, junction and pull boxes

System Voltage 240v and under - 208y/120, 120/240, 120/208, 240d/120 Phase A – black, phase B – red, phase C – blue, neutral – white, equipment ground green, isolated ground – green w/yellow stripe.

Use of MC Cable, May Only Be Used:

In lieu of flexible conduit and wiring from light fixtures in accessible ceilings to junction boxes (attached to building structure) above the ceiling. Provide cable whips of sufficient lengths to allow for relocating each light fixture within a 5-foot radius of its installed location, but not exceeding 6 feet in unsupported lengths.

For vertical drops in stud walls.

In lieu of EMT, only for 15a and 20a branch circuits (with up to four (4) conductors, not including ground conductor), and only in dry concealed locations above grade, except where specifically not permitted by NFPA 70. Do Not Use MC Cable For The Following:

Homeruns to panelboards.

Where exposed to view.

Where exposed to damage.

Wet locations.

Hazardous locations.

When restricted otherwise above, and when specifically disallowed by the local AHJ, landlord, or both. Circuits that can be supplied by an emergency or standby power source.

Provide junction boxes, pull boxes, cabinets and wireways wherever necessary for proper installation of various electrical systems according to NFPA 70 and where indicated on the drawings. Size as required for the specific function or as required by NFPA 70, whichever is larger. Construction shall be of a NEMA design suitable for the environment installed.

Junction boxes installed behind wall cases, and in or on other display fixtures, except where otherwise specified, shall be 4-inch square or larger, with galvanized covers.

, except where specified or indicated, for low-voltage wiring or direct-buried cables; or, where type MC cable is indicated,

The Isolated Ground conductor of each IG circuit shall be continuous (no splices) the entire length of the circuit.

IG circuits shall be provided with dedicated neutrals, equipment grounds, and isolated grounds and routed in separate

Do not use multi-conductor circuits, with a shared neutral, for any GFCI circuit breaker or receptacle circuit.

26B 1-6 JUNCTION BOXES, PULL BOXES, CABINETS AND WIREWAYS

All outlets including light fixture, switch, receptacle, and similar outlets: National Electrical, Appleton, Steel City, Raco, or approved equal, galvanized steel knockout boxes, suitable in design to the purpose they serve and the space they occupy. Size as required for the specific function or as required by NFPA 70, whichever is larger. Set all outlet boxes in walls, columns, floors, or ceilings so they are flush with the finished surface, accurately set, and rigidly secured in position. Provide plaster rings, extension rings and/or masonry rings as required for flush mounting. Provide approved cast outlet boxes, with hubs and weatherproof covers, in all areas subject to damp, wet, or harsh conditions. 26B 1-8 OUTLET LOCATIONS

Coordinate locations of outlet boxes. Outlets are only approximately located on the small scale drawings. Use great care in the actual location by consulting the various large scale detailed drawings used by other division trades, and by securing definite locations from the architect and/or engineer. 26B 1-9 MOUNTING HEIGHTS

Unless noted otherwise, install wiring devices as indicated below (note: all dimensions are to the bottom of the outlet box unless noted otherwise):

Receptacles:

Vertically aligned with the ground slot mounted at the bottom: 16 inches above finished floor. Horizontally aligned, with neutral slot mounted at the top: 16 inches above finished floor.

For above counters: 6 inches above top of counter or as specified by others.

Mechanical and electrical equipment rooms and janitors closets: 44 inches above finished floor, vertically aligned. Weatherproof exterior receptacles: 24 inches above finished grade or as indicated on drawings, vertically aligned. GFCI receptacles: same as general receptacles

Isolated ground receptacles: same as general receptacles

SPD receptacles: same as general receptacles

Clock receptacles: 84 inches above finished floor or as specified by others.

Concrete block walls: dimensions above may be adjusted slightly, as required to compensate for variable joint dimensions, such that bottom or top of boxes, as applicable, are at block joints.

Switches:

General: 46 inches above finished floor.

Above counters: same as for receptacles. Concrete block walls: 40 inches above finished floor (dimension may be adjusted slightly, as required to compensate for variable joint dimensions, such that bottom of boxes are at block joints).

Walls with wainscoting: 6 inches minimum above wainscoting, but not exceeding 48 inches above finished floor. Telephone/Data Outlet Boxes:

General: match mounting height of adjacent wiring device listed above.

Wall-mounted telephone: 40 inches above finished floor.

For other than wiring devices, refer to paragraphs, articles, sections, divisions, or drawings to obtain mounting heights for specific equipment or systems. 26B 1-10 WIRING DEVICES

Unless noted otherwise on the drawings wiring devices are 20a rated devices. Where 15a rated devices are indicated on the drawings or required for circuit rating limitations, provide wiring devices equivalent to those specified for 20a, but rated for 15a.

Provide the following wiring devices where shown on drawings or required. Minor changes relative to the location of electrical equipment may be made to comply with structural and building requirements as determined in the course of construction. Provide all wiring devices of the same manufacturer and not mixed on the project, to the maximum extent possible. Provide color of toggles and receptacles as requested by the engineer:

Duplex convenience receptacles: Specification grade, NEMA 5-20R, 125V, 20A, grounding type, UL listed and labeled, nylon face, side and back wired, self grounding, manufactured by Leviton or approved equivalent. Hospital Grade straight blade receptacles: NEMA 5-20R, 125V, 20A, grounding type, UL listed and labeled, nylon face, side and back wired, self-grounding, manufactured by Leviton or approved equivalent.

Hospital Grade straight blade safety type, tamper-resistant receptacles: NEMA 5-20R, 125V, 20A, grounding type, UL listed and labeled, nylon face, side and back wired, self-grounding, manufactured by Leviton or approved equivalent. Twist-Locking type receptacles: NEMA L5-20R, 125V, 20A, grounding type, UL listed and labeled, nylon face, side and back wired, self-grounding, Leviton 2310 or approved equivalent.

Ground fault circuit interrupter type receptacles: Specification Grade, Self-Test type

UL listed and labeled complying with UL 943, Class A and NEMA WD-1-1.10, 125V, 20A, trip at 4-6mA within 0.25 second, and feed-thru type with integral heavy duty NEMA 5-20R receptacle arranged to protect receptacles downstream on the same circuit, manufactured by Leviton or approved equivalent

Isolated ground receptacles: Specification Grade NEMA 5-20R NEMA L5-20R, 125V, 20A, grounding type, UL listed and labeled, nylon face, side and back wired, furnished with a green pigtail connected to the grounding contact, and grounding contacts electrically isolated from the mounting strap, manufactured by Leviton or approved equivalent.

voltage) service: NEMA 5-20R, 125V, 20A, self-grounding type, RFI/EMI noise filtering, UL listed 1449 Second Edition (1998) & 489; equipped with LED indicator(s) and audible alarm, manufactured by Leviton or approved equivalent. Suppression module shall protect normal and common modes, with the following mode characteristics, and be suitable for ANSI/IEEE C62.41-1991 A, B installations:

Peak Energy 240 joules minimum Peak Current13,000A minimum

UL 3000A Test400V minimum

Response Time5 nano-seconds

Special Warranty: Manufacturer agrees to repair or replace TVSS receptacles, or replaceable surge modules (if removable).

that fail in materials or workmanship within 5 years from date of Substantial Completion. Special purpose receptacles: Grounding type, UL listed with NEMA configurations as implied on the Drawings,

manufactured by Leviton or approved equivalent Switches: Specification grade, rated for 120/277V, 20A, back and side wired, and UL listed and labeled, manufactured by Leviton or approved equivalent.

Pilot Light switches: 20A, 1-pole, 2-pole, 3-way switch with red neon lighted handle. Toggle shall be illuminated when the switch is in the "ON" position, manufactured by Leviton or approved equivalent.

Lighted Handle switches: 20A, 1-pole, 3-way switch with clear neon lighted handle. Toggle shall be illuminated when the switch is in the "OFF" position. Manufactured by Leviton or approved equivalent. Key operated light switches: Same as standard light switches except toggle handle shall be operated by a factory provided

key, manufactured by Leviton or approved equivalent. Switches for use with mechanically-held, electrically-operated lighting contactors: Single pole, double throw, momentary, center off switch, rated for 120/277V, and UL listed and labeled, manufactured by Leviton or approved equivalent.

Wall box dimmers: Specification grade slider type wall box dimmers, UL listed and labeled, with Radio Frequency Interference (RFI) filters to avoid interference with electronic equipment, and a minimum wattage as indicated on the Drawings or as required for the load, manufactured by Leviton or approved equivalent.

Dual Voltage Switch Relay; A normally-open, electrically-held relay that allows a single-pole switch to control loads operating at two different voltages (e.g., 120V and 277V); listed to UL Standard 916; installed in a 2-gang outlet box, with a voltage-separating barrier and plaster ring manufactured by Lighting Controls and Designs (GR 2001 DV) or approved equivalent.

Wall switch occupancy sensors: Passive Infrared type, wall box switch, 120/277V, up to 20-minute time delay, light level sensor, 180-degree field of view, square-foot coverage as required for minimum coverage of the space per the manufacturer, UL listed and labeled, and conforms to California Title 24 Energy Code, manufactured by Leviton or approved equivalent

Wall switch occupancy sensors: Adaptive technology type, wall box switch, 120/277V, up to 20-minute time delay, light level sensor, 180-degree field of view, square-foot coverage as required for minimum coverage of the space per the manufacturer, UL listed and labeled, and conforms to California Title 24 Energy Code, manufactured by Leviton or approved equivalent.

26B 1-11 SWITCH AND OUTLET COVER PLATES

Switch and outlet plates: colored, smooth nylon; by the same manufacturer as the wiring devices, wherever possible. Verify desired materials and colors with architect and/or engineer before installation. Switch plates in unfinished rooms and spaces: stamped steel, cadmium plated. Install groups of switches under one ganged-plate, usually horizontally; or, where required by details, vertically. Set all cover plates plumb, parallel, and finished flush with the wall.

26B 2-1 ELECTRICAL SERVICE See drawings for type, size, voltage, phase, and other requirements.

Provide, or arrange with the serving utility for installation to provide, a recording voltmeter at the service point, on the first day the facility is open for business, for a 24-hour voltage test. If voltage and regulation are not within acceptable limits, arrange with the utility for proper voltage. Submit to the owner a report of maximum and minimum voltage and a copy of the recording voltmeter chart. 26B 2-2 CONNECTION TO SERVING UTILITIES

Provide raceways, terminations, metering provisions, and miscellaneous equipment, as required, for electrical and telephone services for connection by the serving utility, in strict compliance with the requirements of all applicable codes and of the serving utility involved. Verify all service terminations and connection points in the field and work in conjunction with the utility involved in the installation of all services. Provide all materials and equipment required for complete utility connection but not furnished by the serving utility. Notify the utility companies involved within two weeks after notice to proceed, of all required information necessary for the utility to supply the project without delay. Pay all charges of the serving utility for the electrical service(s). 26B 2-3 GROUNDING

Permanently and effectively ground and bond the electrical installation in a thorough and efficient manner, and in conformance, at a minimum, with NFPA 70, or these documents, where they exceed code requirements. Use bare or insulated conductors, as specified herein, and other materials indicated on the drawings. 26B 3 DISTRIBUTION AND CONTROL EQUIPMENT

Enclosed circuit breaker: Square D micro-logic and thermal magnetic type or equal by Siemens, Cutler-Hammer, or General Electric; rated at 100% of the ampere size indicated, number of phases and other ratings as indicated on the drawings; permanently labeled as suitable for use as service entrance equipment; integral ground fault relay and operator where indicated or required by NFPA 70; interlocked cover and an engraved nameplate for identification. Provide with integral and separate neutral and ground assemblies, suitable for the sizes of conductors indicated. Do not double-lug any terminations not specifically listed as suitable for more than one conductor. Enclosure: NEMA design suitable for the environment in which installed or as indicated. 26B 3-5 POWER DISTRIBUTION PANELBOARDS - CIRCUIT BREAKER, 1200A BUS OR SMALLER

Panelboards: Square D type I-Line, Siemens types S4 or S5, Cutler-Hammer type Pow-R-Line 4, or General Electric types CCB or AV-1; dead front distribution panelboards with number and sizes of circuit breakers as indicated on the drawings; where installed as service entrance equipment, permanently label as suitable for use as service entrance equipment; fully-rated for the available fault current as required unless specifically indicated otherwise on the drawings; hinged, lockable front door that covers the circuit breaker handles. Circuit breakers: quick-make, quick-break, indicating type: engraved nameplates for circuit identification of each circuit breaker. Any feeder circuit breakers 800 amps and larger and all main circuit breaker(s) shall be rated at 100% of the ampere size indicated. Provide a typewritten card directory indicating exactly what each circuit breaker controls on the inside face of the door for circuit identification.

26B 3-6 MODULAR METER CENTERS Modular meter centers: Square D type EZ Meter-Pak, or approved equal by Siemens, Cutler-Hammer, or General Electric, complete with integral bus, individual current limiting circuit breaker for each module, meter sockets compatible with utility company meters, NEMA rated construction, and main lugs or disconnect as indicated on the drawings. Provide centers fully-rated for the available fault current as required unless specifically indicated otherwise on the drawings. All main circuit breaker(s) shall be rated at 100% of the ampere size indicated.

26B 3-7 GENERAL PURPOSE PANELBOARDS Panelboards: Square D type NQOD or NF, as applicable, based on voltage and ampere ratings and required short-circuit interrupting ratings as required unless otherwise indicated on the drawings, or approved equal by Siemens, Cutler Hammer, or General Electric; complete with bolt-on thermal magnetic, molded case circuit breakers assembled in a dead-front finished cabinet containing a typewritten card directory indicating exactly what each circuit breaker controls; main circuit breaker shall be rated at 100% of the ampere size indicated, fully-rated and with the integrated short circuit current ratings as required. Plug-in type breakers will not be acceptable. All two and three pole breakers: common trip type. Breakers used as switches for 120v or 277v lighting circuits: approved for the purpose and marked "SWD". Breakers used for the protection of HVAC and refrigeration equipment: HACR type.

26B 3-11 DISCONNECT (SAFETY) SWITCHES

Disconnect (safety) switches: Square D, Siemens, Cutler Hammer, or General Electric fused or non-fused (as indicated on drawings or required) NEMA KS1, heavy duty, externally operated, visible-blade safety switches; NEMA enclosure type indicated on the drawings or suitable for the environment in which installed. Based on fusible switch and fuse sizes indicated, include class R, J, or I fuse provisions as applicable.

Where indicated, provide fusible switches permanently labeled as suitable for use as service entrance equipment, with integral and separate neutral and ground assemblies, suitable for the sizes of conductors indicated. Do not double-lug any terminations not specifically listed as suitable for more than one conductor.

indicated on the drawings.

Provide SPD labeled in accordance with the latest editions of UL 1283 and 1449, including the highest fault current of section 37.3 (UL recognized for integral).

SPD shall meet or exceed the following criteria:

UL 1449 ratings: the system performance ratings shall be based on the UL 1449 listing ratings for IEEE C62.41 category C3 impulse waveforms of 6kv 1.2 x 50 microseconds, 3ka, 8 x 20 microsecond waveshapes. The maximum UL 1449 listed surge rating for each and/or all of the specified protection modes shall not be exceeded.

Service entrance switchboards, switchgear: 240ka.

Distribution panelboards, panelboards used for service entrance & MCC: 120ka.

VOLTAGE L-N 208y/120 480y/277

Transient counter: a transient voltage surge counter shall be included to totalize transient voltage surges which deviate from the sine wave envelope by more than 125v. The readout shall be at least a six digit LCD located on the unit's hinged front cover. The counter shall be equipped with a battery back-up to retain memory when power is not present. A push-button switch on the display's face-plate shall be provided for manual counter reset. Manufacturers: Cutler hammer, General Electric, Siemens, Square D, APT, Surge Suppression Incorporated

Switchboard, switchgear, panelboard and MCC internally mounted SPD: factory installed, UL- labeled by, and at the facility of the electrical distribution equipment manufacturer.

Externally mounted SPD (only allowed where noted on the construction documents): install with conductors as short and straight as possible. Twist the SPD input conductors together to reduce input conductor inductance. Follow the SPD manufacturer's recommended installation practices and comply with all applicable codes.

Warranty: the manufacturer shall provide a minimum full five year parts, labor, travel warranty from date of substantial completion against any part failure, excluding breakers, when installed in compliance with manufacturer's written instructions, UL listing requirements, and all applicable national or local electrical codes. Manufacturer shall make available local, national field engineering service support. Where direct factory employed service engineers are not locally available, travel time from the factory or nearest dispatch center shall be stated.

26B 1-12 WEATHERPROOF COVER PLATES

For exterior unattended, wet locations or other locations as indicated: in-use NEMA 3R recessed or flush mount, UL-labeled plates molded from a clear high impact ultraviolet stabilized polycarbonate material for easy verification that cords are plugged in and that the GFCI is functioning. Back box must be suitable for conduit connecting. Coordinate back box with wall depth. Intermatic WP1000RC/HRC or equal.

For attended wet or damp locations: weatherproof cover plates, UL-listed for wet locations with cover(s) closed; die-cast aluminum or type 302 stainless steel; single-cover for switches and vertically mounted receptacles; double-cover for horizontally mounted receptacles; self-closing covers.

Cover plates: by the same manufacturer as the wiring devices; complying with NFPA 70 406.8 (A) or (B) requirements for attended or unattended use as applicable.

26B 2 ELECTRICAL SERVICE AND GROUNDING

26B 3-3 SERVICE ENTRANCE CIRCUIT BREAKER - ENCLOSED, 100A - 6000A

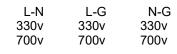
Provide switches where not furnished with the starting equipment, at all other points required by NFPA 70, and where

26B 3-12 SURGE-PROTECTIVE DEVICES (SPD)

Maximum surge current capability (single pulse rated) per phase shall be:

Branch panelboards: 80ka (non-modular is acceptable).

UL 1449 listed and recognized component suppression voltage ratings shall not exceed the following:



SPD shall have a minimum EMI/RFI filtering of -50db at 100khz.

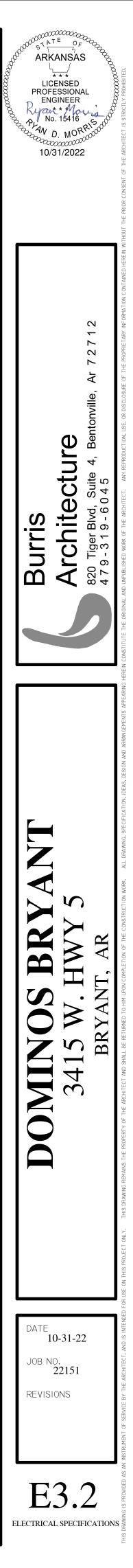
Indicators: the SPD shall use LED indicators that provide indication of suppression component failure in all protection modes including N-G, as well as optically isolated N/C dry contacts for remote monitoring.

Thoroughly factory test the specified system before shipment. Testing of each system shall include, but shall not be limited to, quality control checks, dielectric voltage withstand tests at twice rated voltage plus 1000v per UL requirements, and operational and calibration tests.



PROJECT NO. 221261R 100 % COMPLETE

HP ENGINEERING INC. 5214 W. VILLAGE PARKWAY SUITE 120 ROGERS, AR 72758 (479) 899-6370 www.hpengineeringinc.com



26B 4 LIGHT FIXTURES, LAMPS AND BALLASTS 26B 4-1 LIGHT FIXTURE LOCATIONS

Light fixtures shown on the electrical drawings represent general arrangements only. Refer to architectural drawings for more exact locations. Coordinate location with all other trades before installation to avoid conflicts. Coordinate light fixture locations in mechanical rooms with final installed piping and ductwork layouts.

26B 4-2 LIGHT FIXTURES

Provide light fixtures as scheduled on drawings, including all lamps, all necessary accessories, material and labor to securely hang, clean, and make light fixtures completely ready for use. Provide: all hangers, supports, and miscellaneous hardware required to install light fixtures; proper trim to fit each ceiling condition actually encountered; additional tie wires connected to structure to conform to seismic requirements where required by the applicable building code.

Packaging of light fixtures will not be allowed. Only those luminares listed in the light fixture schedule, or approved in accordance with substitutions of these specifications, will be accepted. Where the light fixture schedule indicates an allowance for a specific light fixture, the price is a contractor price. Include all additional costs for freight, lamps, and installation of light fixture and lamps.

Install all linear light fixtures located in areas without ceilings immediately below the roof-framing members, or suspended from chain hangers suitable in length to provide the indicated mounting height.

Through wiring of recessed light fixtures, in suspended ceilings, is not permitted. Connect each light fixture by a whip to a junction box. Provide cable whips of sufficient lengths to allow for relocating each light fixture within a 5-foot radius of its installed location, but not exceeding 6 feet in unsupported lengths.

26B 4-3 EMERGENCY LIGHTING UNITS AND EXIT SIGNS

Description: self-contained units complying with UL 924.

Battery: sealed, maintenance-free, lead-acid type. The batteries shall be of suitable rating and capacity to supply and maintain at not less than 87 1/2 percent of the nominal battery voltage for the total lamp load associated with the unit for a period of at least 1 1/2 hours, or the unit equipment shall supply and maintain not less than 60 percent of the initial emergency illumination for a period of at least 1 1/2 hours.

Charger: fully automatic, solid-state type with sealed transfer relay.

Operation: relay automatically turns lamp on when power supply circuit voltage drops to 80 percent of nominal voltage or below. Lamp automatically disconnects from battery when voltage approaches deep-discharge level. When normal voltage is restored, relay disconnects lamps from battery, and battery is automatically recharged and floated on charger. Test push button: push-to-test type, in unit housing, simulates loss of normal power and demonstrates unit operability. LED indicator light: indicates normal power on. Normal glow indicates trickle charge; bright glow indicates charging at end of discharge cycle.

Integral time-delay relay: holds unit on for fixed interval of 15 minutes when power is restored after an outage Integral self-test: factory-installed electronic device automatically initiates code-required test of unit emergency operation at required intervals. Test failure is annunciated by an integral audible alarm and flashing red LED. 26B 5 MISCELLANEOUS ELECTRICAL

26B 5-1 WIRING OF EQUIPMENT

Provide all raceways and power wiring for all applicable Divisions equipment requiring electrical connections, including, but not limited to, pumps, water heaters, and HVAC equipment, and all line-voltage control and interlock wiring not provided under other Divisions. Connect per manufacturers' wiring diagrams. Coordinate with applicable Divisions for disconnects furnished with equipment, and provide all disconnect switches as required. After installing wiring, verify that each motor load has the correct phase rotation.

Verify the actual "maximum overcurrent protection" (MOCP) device ratings and "minimum circuit ampacity" (MCA) conductor sizing for mechanical equipment from the equipment nameplate. Base electrical installations on actual required amperages, which may vary somewhat from the conductor and equipment sizes shown on the drawings; however, in no case, reduce the size of conductors indicated on the drawings without authorization from the engineer. Provide properly sized electrical wiring and equipment without extra cost to the owner. Notify the engineer of all changes required in the electrical installation due to equipment variances so that the effects on feeders, branch circuits, panelboards, fuses and circuit breakers can be checked prior to purchasing and installation. Be responsible for coordinating with applicable Divisions to verify the actual ampacities and correct sizes of all conductors and overcurrent protective devices for all equipment, and correct overload heaters for all motors, when starters are provided under Division 26.

26B 5-2 WIRING OF THERMOSTATS, TIME AND TEMPERATURE CONTROLS

Provide all raceways, power wiring, and line-voltage control and interlock wiring not provided under other Divisions, for all thermostats, temperature control devices, and controls, including, but not limited to, night-stats, water heater interlocks, time switches and override timers. See mechanical drawings for locations and temperature control diagrams. Low-voltage conductors for thermostats and temperature control system may be run exposed above finished accessible ceilings, if approved and listed for this purpose, but shall be installed in conduit within walls and where exposed in the work areas. 26B 5-3 TELEPHONE SYSTEM PROVISIONS

Provide incoming telephone service raceways as indicated on drawings or as required by the serving telephone company. Provide 3/4-inch thick plywood board, fire-retardant-treated and stamped FRT, securely anchored to the wall, at the location and of the size as indicated on the drawings.

Provide flush mounted telephone outlet boxes with ³/₄ -inch EMT stub-up concealed to accessible ceiling space at locations as indicated on the drawings.

26B 5-4 DATA SYSTEM PROVISIONS

Provide flush mounted data outlet boxes with ³/₄ -inch conduit stub-up concealed to accessible ceiling space at locations as indicated on the drawings.

22,000a at 240v maximum

as indicated on the drawings

Enclosures: NEMA rated for environment installed in or as indicated on the drawings. Coil voltage: 120v AC or as indicated on the drawings.

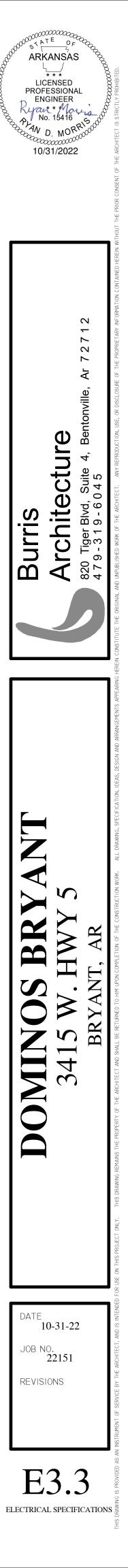
Mechanically-held type, control interface shall be 2-wire input module with 3-wire output or as indicated on the drawings; Square D class 8903 LX or equivalent of General Electric, Siemens, Cutler Hammer or Asco.

26B 5-9 MISCELLANEOUS EQUIPMENT AND CONNECTIONS

Provide all wiring and connections to equipment furnished by others, including, but not limited to, bakery equipment, deli equipment, meat room equipment, kitchen equipment, checkstand and scanners, exhaust hood fire extinguishing system, etc.

Install scan system electronic communication cable in underfloor duct (cable provided by others). Provide all raceways, wiring and related connections of devices to energy management system that are not the responsibility of Division 23.

All wiring and connections of exit door alarms. END OF SECTION 26B





HP ENGINEERING INC. 5214 W. VILLAGE PARKWAY SUITE 120 ROGERS, AR 72758 (479) 889-6370 www.hpengineeringinc.com



City of Bryant, Arkansas Community Development 210 SW 3rd Street Bryant, AR 72022 501-943-0943

SIGN PERMIT APPLICATION

Applicants are advised to read the Sign Ordinance prior to completing and signing this form. The Sign Ordinance is available at www.cityofbryant.com under the Planning and Community Development tab.

Date: 10/20/2022

Note: Electrical Permits may be Required, Please contact the Community Development Office for more information.

Sign Co. or Sign Owner	Property Owner
NameAlicia Walton	Name Lamontia LLC
Address 4825 E. Kearney St	Address 118 vernona Circle
City, State, ZipSpringfield MO 65803	City, State, Zip Sherwood, AR 72120
Phone 417-862-2454	Phone
Email Address_aliciaw@springfieldsign.com	Email Address
GENERAL INFORMATION	
Name of Business_ Scooter's Coffee	

Address/Location of sign 1816 N Reynolds Rd

Zoning Classification C-1

Please use following page to provide details on the signs requesting approval. Along with information provided on this application, a Site Plan showing placement of sign(s) and any existing sign(s) on the **property is <u>required</u>** to be submitted. **Renderings of the sign(s) showing the correct dimensions is also** <u>required</u> to be submitted with the application. A thirty-five dollar (\$35) per sign payment will be collected at the time of permit issuance. According to the Sign Ordinance a fee for and sign variance or special sign permit request shall be one hundred dollars (\$100). Additional documentation may be required by Sign Administrator.

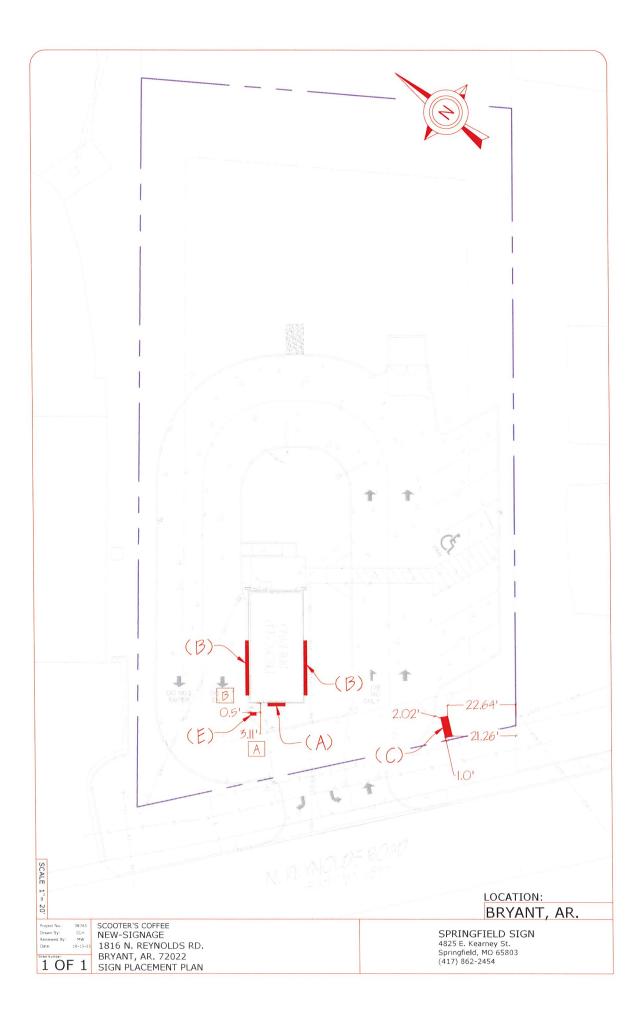
READ CAREFULLY BEFORE SIGNING

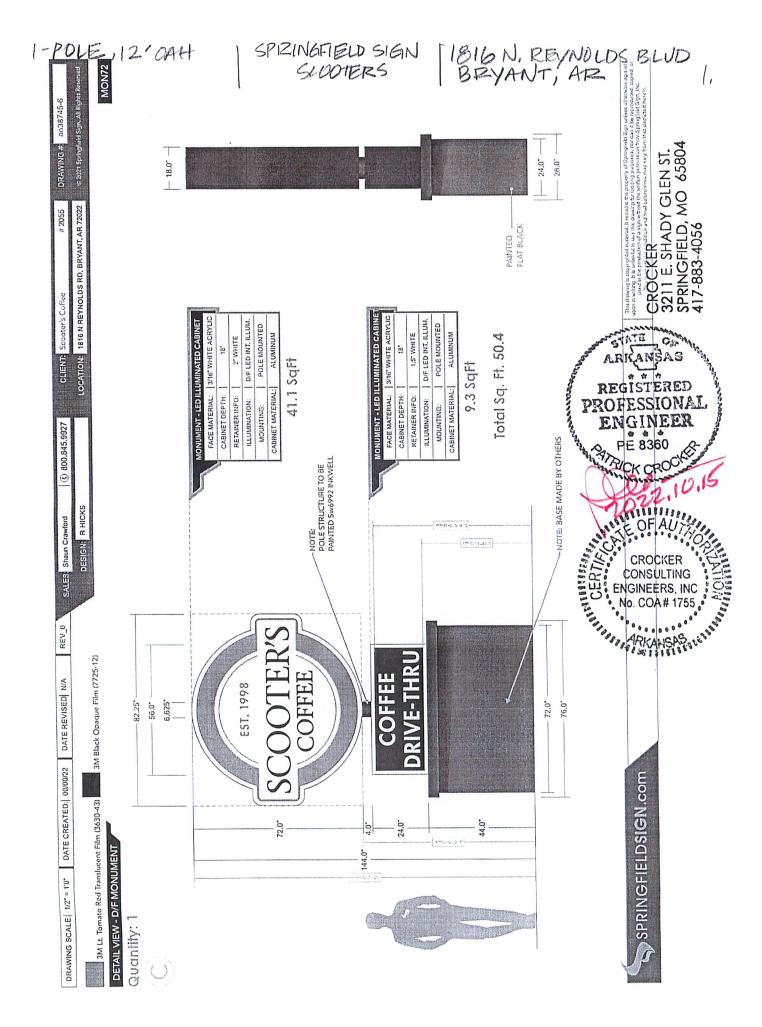
Alicia Walton

 that no sign may be placed in public right of way. I understand that I must comply with all Building and Electrical Codes and that it is my responsibility to obtain all necessary permits.

Use table below to enter information regarding each sign for approval. Please use each letter to reference each sign rendering.

SIGN	Type (Façade, Pole, Monument, other)	e, Pole, (Height, Length, Width) nt, other)		Heigh (Measured fi	Column for Admin Certifying Approval	
1				Top of Sign	Bottom of Sign	
A	Facade Front	5' 8 1/2 x 5'	28.54			
В	Facade side	48" x 218.25"	65.06			
С	Facade side	48" x 218.25"	65.06			
E						
F	Ground	72" x 82.25"	41.1	144"	72"	
G	Ground EMC	24" x 56"	9.3	68"	44"	



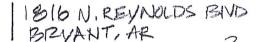


1816 N. REYNOLD'S BLYD SPRINGFIED STEN 1-POLS 12'DAH SCOOTENS BRYANT, AR 6.91 115 mple steel EST. 1998 N. SC OOTER' 15,0XH 6,9 × 6,9 × 20 = 952 × 9 = 8570 COFFEE 6" pipe 6,4 x Si7 x 20=730 x 3 = 2189 4.425 ×0.78 COFFEE 1682 10,759 DRIVE-THRU Zi SR = 10,759 x12 = 5,51 m3 3,7' 23,450 6" pepe = 8,50m -6.4 6,625× 0,280 Spy Se Oll SR = SECTION MODULUS REQUIRED SP = SECTION MODULUS PROVIDED 34 concrete 6"pripe -P=1682 M=10,759 Call before you dis Know what's below. h= 6:4 CROCKER 6=3 CONSULTING ENGINEERS, INC No. COA # 1755 = 667 Gr=(150)(2 1+ 1186 (417) (3) 6,4 (1.17)(1682) L+1 3) (667) ARKANS = 4,8'real', base is 34 × 5 deep REGISTERED PROFESSIONAL 10.15 ENGINEER CROCKER PE 8360 3211 E. SHADY GLEN ST. RICK CRO SPRINGFIELD, MO 65804 417-883-40.56

1-POLE, 12' OAH

417-883-4056

SPRINGFIELD SIGN SCOOTERS



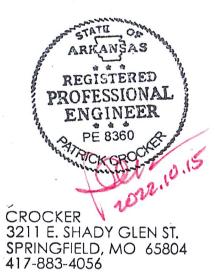
WIND @ 20 PSF SNOW @ 20 PSF SOILS AT 1500 PSF (ASSUMED) LATERAL SOIL LOADING AT FOOTING/FOUNDATION 3 POUR CONCRETE AGAINST UNDISTURBED SOILS, NOT BACKFILL ALL DESIGN, DETAILING, FABRICATION, AND CONSTRUCTION SHALL CONFORM TO THE - DESIGN, DETAILING, FABRICATIONS: FOLLOWING CODES AND SPECIFICATIONS: _ IBC 2018 EXP "____" (3-SEC GUST) - Used as base veference _ CURPENT INTL. BLDG CODE (IBC) Wind Wind - CURRENT INTL. BLDG CODE (IBC) - AMERICAN SOCIETY OF TEST'G MAT'LS (ASTM) - BLDG CODE REQMNT - REINF CONC (ACI 318-83). -CODE FOR WELDING IN BUILDING CONSTRUCTION OF THE AMERICAN WELDING SOCIETY. - CURRENT SPECS - AMERICAN INST OF STEEL CONST (ASIC) - DESIGN, FAB, & ERECTION. CONCRETE 3000 P.S.I. @ 28 DAYS COMPR STR, (145 P.C.F.) REINF ST'L - ASTM1-615, GR 60, (IF REQD). WELDED WIRE FABRIC (WWF) - ASTM A185 - ALL REINF SHALL BE FREE FROM MUD, OIL, RUST OR COATINGS THAT WOULD REDUCE OR DESTROY BOND -ALL REINF BARS SHALL LAP 30 DIAMETERS OR 12" MINIMUM, EXCEPT AS NOTED. - MIN CONC COVER ON TIES, STIRRUPS AND MAIN BARS SHALL BE 1 INCH FOR SLAB, WALL AND SURFACES NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND± 3 INCHES FOR UNFORMED SURFACES DEPOSITED AGAINST GROUND EXCEPT AS NOTED. - TIE RE-BARS. DO NOT WELD RE-BAR. STRUCTURAL STEEL AND PLATES - A-36. STRUCTURAL TUBING - ASTM A-500, GR B, FY=50 KSI. STRUCT PIPE- ASTM A-53, GR B, FY=35 KSI. ANCHOR BOLTS ASTM A-307, EXCEPT AS NOTED. HI STRGTH BOLTS - CONNNECTIONS - ASTM A-325, U.N.O. WELDING ELECTRODES - AWS D1.1-85, E70xx. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD BEFORE ERECTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. NO CABINET ENGINEERING PROVIDED. IF CABINET ENGRG IS REQ'D, CONTACT THE ENGINEER FOR ADD'TL SVCS. 6" OF CONCRETE OR GRAVEL PLACED IN BOTTOM OF FOUNDATION PRIOR TO MAIN POUR. ISOLATE ALUMINUM FROM STEEL. ALL BOLT HOLES TO BE DRILLED OR PUNCHED. ALL PIPE SIZES SHOWN ARE MINIMUM SIZES, PIPE WITH A LARGER DIAMETER, GREATER YIELD STRENGTH, AND/OR GREATER SECTION MODULUS MAY BE SUBSTIUTED. ALL STRUCTURAL LENGTHS REQUIRED ARE APPROXIMATIONS ONLY. ACTUAL LENGTH MAY SLIGHTLY VARY DEPENDING ON SIGN CABINET CONDITIONS. ALL WORK PERFORMED ON SITE SHALL BE DONE ACCORDING TO APPLICABLE OSHA WATER SHOULD NOT BE ALLOWED TO POND IN THE EXCAVATION PRIOR TO CONCRETE PLACEMENT OR ABOVE CONCRETE AFTER THE FDTN IS COMPLETED EXERCISE CARE DURING EXCAVATION OF THE FOUNDATION TO MINIMIZE DISTRUBANCE TO THE SURROUNDING SOILS. CALCULATIONS SHOWN ON THESE SHEETS ARE ONLY FOR THE BASE POLE(S) AND STATE 02 CONCRETE BASE-FOUNDATION ANSAS SR = SECTION MODULUS REQUIRED CROCKER SP = SECTION MODULUS PROVIDED REGISTERED CONSULTING 111 PROFESSIONAL ENGINEERS, INC No. COA# 1755 ENGINEER CROCKER 3211 E. SHADY GLEN ST. ÷. PE 8360 ATRICK CROS SPRINGFIELD, MO 65804

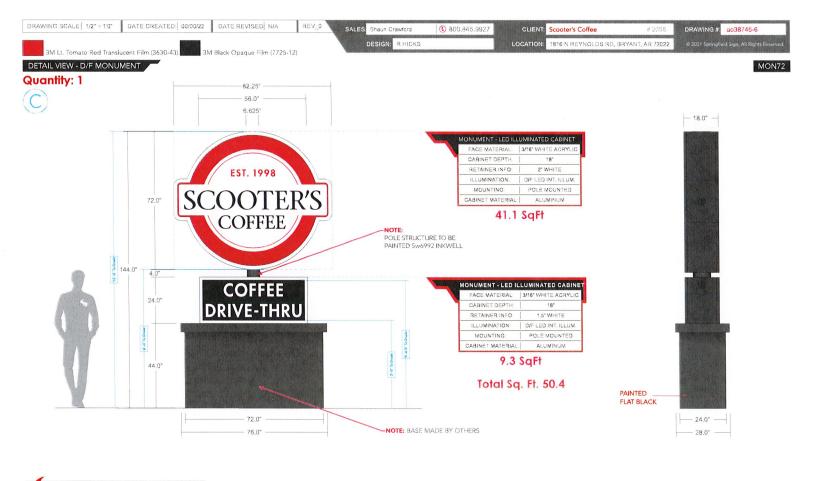
	1-POLE 12	- OAt	t SPRING	FIELD		1816 N, REYNOLD BRYANT, AR	SBV
			·	a Landar (Sana) (Sana) (Sana)			
			ب	JOB T	ITLE Spfld Sign Sc	cooters 12 ft OAH	
		- ,		JOB CALCULATEI CHECKEI	D BY	SHEET NO DATE DATE	
Wind	Loads - Other Str	ucture	<u>s:</u> ASCE 7- 10		1BC 2018		
	Wind Gust Effect Fac	Factor = tor (G) = Kzt =	0.60 0.85 Ultimate Wind S 1.00 Exp	Speed = osure =	115 mph C		-
A. Solie	d Freestanding Wall	s & Soli	d Signs (& open sign	s with less	s than 30% ope	en) Use ZOp	> r
			s/h =	1.00		Case A & B	
	Dist to sign top (h)	12.0 ft	B/s =	0.57		$C_{1} = 1.54$	
	Height (s)	12.0 ft	Lr/s =	0.00	F = qz (G Cf As = 19.1 As	
	Width (B)	6.8 ft	Kz =	0.849		As = 10.0 sf	
	Wall Return (Lr) =	0.05	qz =	14.7 psf		F = 191 lbs	
	Directionality (Kd)	0.85					
	Percent of open area to gross area	0.0%	Open reduction factor =	1.00	Llovin diet from	CaseC	
	to gross area	0.0%	ractor =	1.00	Horiz dist from windward edge	Cf F=qzGCfAs (psf)	
			Case C reduction factors		0 to s	1.80 22.4 As	
			Factor if s/h>0.8 =	0.80	s to 2s	1.20 15.0 As	
			Wall return factor				
			for Cf at 0 to s =	1.00			



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pproved 11/4/22 1 sign



City of Bryant, Arkansas Community Development 210 SW 3rd Street Bryant, AR 72022 501-943-0943

SIGN PERMIT APPLICATION

Applicants are advised to read the Sign Ordinance prior to completing and signing this form. The Sign Ordinance is available at <u>www.cityofbryant.com</u> under the Planning and Community Development tab.

Date:

Sign co. or Sign Owner
Name L. Graphics Address 70/N, Reynolds Rd
City, State, Zip_Bryant, AR 72022
Phone (-501) 653-4444
Email Address JOC @ LGraphix. 6m

Note: Electrical Permits may be Required, Please contact the Community Development Office for more information.

Property Owner

USC Name Progress Dr Address 205 City, State, Zip_____Brigant 501 Phone Email Address

GENERAL INFORMATION

Sign Co. or Sign Ownor

Name of Business	the	office			00000000000000000000000000000000000000
Address/Location of sign_	205	progress	drive	ste,	200
Zoning Classification					

Please use following page to provide details on the signs requesting approval. Along with information provided on this application, a **Site Plan showing placement of sign(s) and any existing sign(s) on the property is <u>required</u> to be submitted. Renderings of the sign(s) showing the correct dimensions is also** <u>required</u> to be submitted with the application. A thirty-five dollar (\$35) per sign payment will be collected at the time of permit issuance. According to the Sign Ordinance a fee for and sign variance or special sign permit request shall be one hundred dollars (\$100). Additional documentation may be required by Sign Administrator.

READ CAREFULLY BEFORE SIGNING

I <u>TOPLAM</u>, do hereby certify that all information contained within this application is true and correct. I fully understand that the terms of the Sign Ordinance supersede the Sign Administrator's approval and that all signs must fully comply with all terms of the Sign Ordinance regardless of approval. I further certify that the proposed sign is authorized by the owner of the property and that I am authorized by the property owner to make this application. I understand that no sign may be placed in public right of way. I understand that I must comply with all Building and Electrical Codes and that it is my responsibility to obtain all necessary permits.

3

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Use table below to enter information regarding each sign for approval. Please use each letter to reference each sign rendering.

SIGN	Type (Façade, Pole, Monument, other)	Dimensions (Height, Length, Width)	Sqft (Measured in whole as rectangle)	Height of Sign (Measured from lot surface)		Column for Admin Certifying Approval	
				Top of Sign	Bottom of Sign		
А	Remote channel letter	-22"× 138 × 5"	22	18'	16	CZ 1	1/4/22
В	Chamac						
С							
E							
F							
G							

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Sign Staff Approved CZ 11/4/22



City of Bryant, Arkansas Community Development 210 SW 3rd Street Bryant, AR 72022 501-943-0943

SIGN PERMIT APPLICATION

Applicants are advised to read the Sign Ordinance prior to completing and signing this form. The Sign Ordinance is available at www.cityofbryant.com under the Planning and Community Development tab.

Date: 10/24/2022

Sign Co. or Sign Owner	Property O
Name L. Graphics	Name
Address TOIN, Reynalds Rd	Address <u>2</u>
City, State, Zip Bryant, AR	City, State, Z
Phone (501) 653-4444	Phone (S
Email Address JOC & Large MX. Com	Email Addre
S V	
GENERAL INFORMATION	

Note: Electrical Permits may be Required, Please contact the Community Development Office for more information.

Property Owner

seyant ess

Name of Business	the	office		
Address/Location of sign	205	progress	drive	Ste, 500
Zoning Classification				

Please use following page to provide details on the signs requesting approval. Along with information provided on this application, a Site Plan showing placement of sign(s) and any existing sign(s) on the property is required to be submitted. Renderings of the sign(s) showing the correct dimensions is also required to be submitted with the application. A thirty-five dollar (\$35) per sign payment will be collected at the time of permit issuance. According to the Sign Ordinance a fee for and sign variance or special sign permit request shall be one hundred dollars (\$100). Additional documentation may be required by Sign Administrator.

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				Top of Sign	Bottom of Sign		
А	Remote Channel letter	22"×138"×5"	22	18'	16'	EL	11/4/22
В							
С							
Е							
F							
G							







City of Bryant, Arkansas Community Development 210 SW 3rd Street Bryant, AR 72022 501-943-0943



Temporary Business Application For the Sale of Fireworks

- Applications are due by 5:00PM Wednesday the week prior to the Scheduled Development and Review Committee Meeting.
- Application Deadlines and dates can be found at <u>www.cityofbryant.com</u> under the Community Development tab.

Date:

Business Information:

Name_FIVE STAR FIRE WORKS	
Federal Tax Employer ID Number453216207	
Arkansas State Sales Tax NumberN/IA	
Location of Proposed Temporary Business $23395 I - 30$	

Business Owner:	Contact Person:
Name MARK BRADFORD	Name Same INFO
Address 19 ASALEE BLVD	Address
NASH TX 95569	
Phone 903-826-4453 Email IMOFreely96(2)	Phone 903-826-4453
Email imafreely 96 (2)	Email
9 mail: com	

Checklist for Submission

- Completed Application and Checklist
- Twenty-Five Dollar (\$25.00) Application fee

Provide proof of 1,000,000 Liability Insurance or Surety Bond worth the same amount.
 (Further information on the details of liability insurance can be found in Section 2-4 of the Temporary Business Section of the Bryant Business Ordinance.)

(Continued on Page 2)

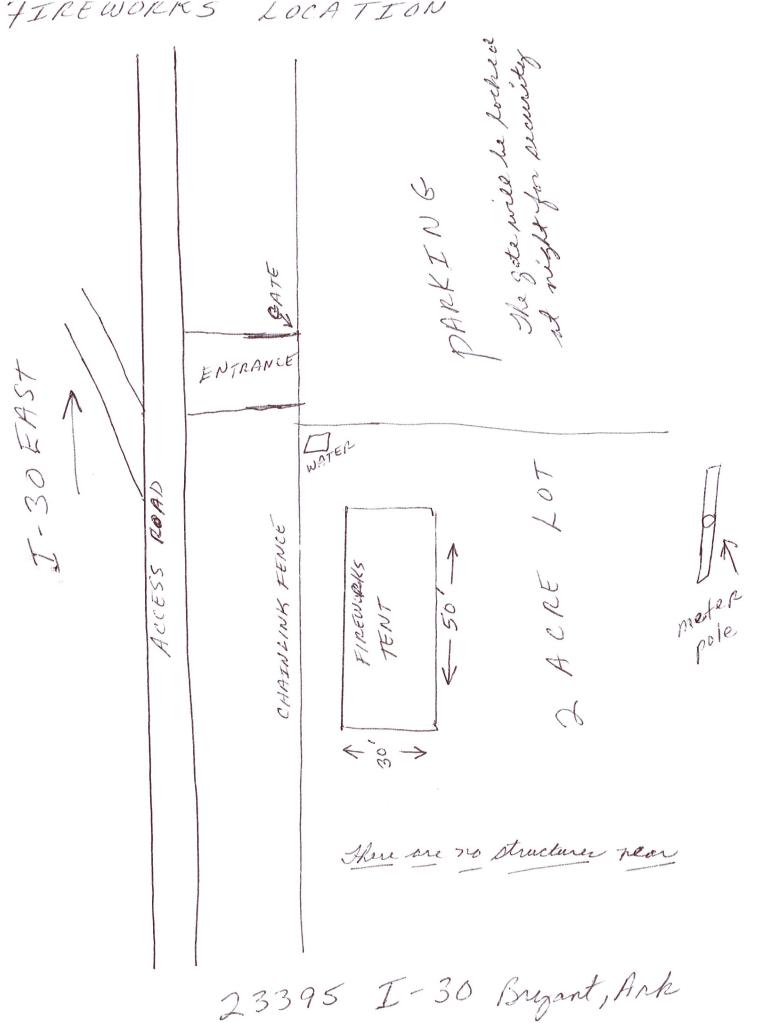
- □ Eight (8) copies of a Site Plan:
 - Site Plan shall be to scale, all structures shall be identified. Clear identification of any open display areas
 - Fireworks tent / canopy shall have a minimum 50ft. setback from all other structures
 - Show parking spaces dedicated by the owner of the property for use by the temporary business.
- Exits shall be provided every 100 ft. with a minimum of 2 remotely located exits
 Minimum exit width shall be 72 in. All exits shall be identified with proper signage
- □ No smoking permitted within 50 ft. of firework tent / canopy. "NO SMOKING" signs shall be posted at all entrance / exits
- 2 ABC fire extinguishers, with a 2A rating or greater, shall be provided. The maximum travel distance to an extinguisher shall not exceed 75 ft. Additional extinguishers may be required. Extinguishers shall be clearly visible, marked with appropriate signage, and mounted height of not less than 36 in. from the ground
- □ Generators or other combustion power sources, including fuel, shall be separated from tents / canopies by a minimum of 25 ft.
- Applicant shall contact the Bryant Fire Dept. Fire Marshal's office and schedule an inspection once the business is ready for operation. The inspection shall be conducted prior to any sales to the public are allowed. Contact: 501-943-0964

READ CAREFULLY BEFORE SIGNING

I MARK BRADFORD, do hereby certify that all information contained within this application is true and correct. I further certify that I agree too and will abide by all Temporary Business rules and regulations as outlined in the Bryant Business Ordinance. I also understand that I shall comply with all additional applicable ordinances of the City as well as the requirements of all state and federal laws. Furthermore, I understand violation of Temporary Business Ordinance 2007-43 is a misdemeanor punishable by a fine of up to \$500.00 per occurrence of violation. Each day's occurrence is a separate violation.

Owners Signature Mark Bredford

LOCATION



ACORD [®] CER	TIFIC		BILITY IN	SURA	NCE		MM/DD/YYYY)
THIS CERTIFICATE IS ISSUED AS A CERTIFICATE DOES NOT AFFIRMAT BELOW. THIS CERTIFICATE OF IN	MATTER (IVELY OR SURANCE	DF INFORMATION ONLY NEGATIVELY AMEND, DOES NOT CONSTITUT	AND CONFERS N	O RIGHTS U	JPON THE CERTIFIC/ /ERAGE AFFORDED	ATE HOL BY THE	POLICIES
REPRESENTATIVE OR PRODUCER, A IMPORTANT: If the certificate holder the terms and conditions of the policy	is an ADD , certain p	ITIONAL INSURED, the olicies may require an er					
certificate holder in lieu of such endo	sement(s).		CONTACT	-			
Ryder Rosacker McCue & Huston (M	GD by Hul	I & Company)	NAME: Kristy Wolf PHONE (A/C, No, Ext): 308-382		FAX		
509 W Koenig St Grand Island NE 68801			E-MAIL ADDRESS: kwolfe@i		(Á/C, No	oj:	<u></u>
					DING COVERAGE		NAIC #
			INSURER A : SCOTTS	SDALE INS C	0		41297
CDF Holding Company, Inc; Crazy D	hhies Fire	works LLC	INSURER B :				
DBA Red Rhino Fireworks	555100 1 110		INSURER C :				
6659 S HWY 43 PO Box 43			INSURER D :				
Joplin MO 68404			INSURER E : INSURER F :				
COVERAGES CE	RTIFICATE	NUMBER: 1708166135	INSUREN F .		REVISION NUMBER:		
THIS IS TO CERTIFY THAT THE POLICIE	S OF INSUF	RANCE LISTED BELOW HAY		THE INSURE	D NAMED ABOVE FOR	THE POL	
INDICATED. NOTWITHSTANDING ANY F CERTIFICATE MAY BE ISSUED OR MAY	PERTAIN,	THE INSURANCE AFFORD	ED BY THE POLICIE	S DESCRIBE	D HEREIN IS SUBJECT		
EXCLUSIONS AND CONDITIONS OF SUC	ADDLICIES.						
INSR LTR TYPE OF INSURANCE A GENERAL LIABILITY	INSR WVD	POLICY NUMBER CPS3994333	POLICY EFF (MM/DD/YYYY) 2/15/2022			VIITS	
A GENERAL LIABILITY		0-33994333	2/15/2022	2/15/2023	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 2,000,	
CLAIMS-MADE X OCCUR					MED EXP (Any one person)	\$ 5,000	
					PERSONAL & ADV INJURY	\$ 2,000	
					GENERAL AGGREGATE	\$ 2,000	,000
GEN'L AGGREGATE LIMIT APPLIES PER:					PRODUCTS - COMP/OP AG		000
					COMBINED SINGLE LIMIT	\$	
					(Ea accident) BODILY INJURY (Per persor	1) \$	
ANY AUTO					BODILY INJURY (Per accide		
AUTOS AUTOS NON-OWNED AUTOS AUTOS					PROPERTY DAMAGE (Per accident)	\$	
						\$	
UMBRELLA LIAB OCCUR					EACH OCCURRENCE	\$	
EXCESS LIAB CLAIMS-MAD	E				AGGREGATE	\$	
DED RETENTION \$ WORKERS COMPENSATION						\$	
AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE	7				E.L. EACH ACCIDENT	R\$	
OFFICER/MEMBER EXCLUDED? (Mandatory in NH)					E.L. DISEASE - EA EMPLO		
If yes, describe under DESCRIPTION OF OPERATIONS below					E.L. DISEASE - POLICY LIN	1IT \$	
DESCRIPTION OF OPERATIONS / LOCATIONS / VEH Regarding the General Liability coverage agreement. Regarding the General Liability coverage agreement.	Blanket Ad	Iditional Insured applies to	the entities listed be	low per attack		•	
Non-Owned Stand Coverage provided pe when required by written agreement.					·		
For premise liability – this certificate refle See Attached	cts coverage	e tor the dates and locatior	n noted below. For p	roduct liability	 this certificate reflect 	s coveraç	e for products
CERTIFICATE HOLDER			CANCELLATION			<u> </u>	
Mark Bradford/Five Star 17 Ashlee Blvd	Fireworks			N DATE TH	DESCRIBED POLICIES B IEREOF, NOTICE WILI CY PROVISIONS.		
Nash TX 75569			AUTHORIZED REPRES				
			© 1	988-2010 AC	ORD CORPORATIO	N. All ric	hts reserved

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AGENCY CUSTOMER ID:

LOC #: _____



ADDITIONAL REMARKS SCHEDULE

Page 1 of 1

AGENCY Ryder Rosacker McCue & Huston (MGD by Hull & Company)		NAMED INSURED CDF Holding Company, Inc; Crazy Debbies Fireworks LLC DBA Red Rhino Fireworks	
POLICY NUMBER		6659 S HWY 43 PO Box 43 Joplin MO 68404	
CARRIER NA	AIC CODE		
		EFFECTIVE DATE:	
ADDITIONAL REMARKS			

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

purchased from the above Named Insured only.

Dates of Operation: Dec 1, 2022-Jan 3, 2023. Location address: 5407 Hwy 5 N Bryant, AR 72022. Addtl Insureds: Brent Grant- landowner; City of Bryant, AR; Mark Bradford/Five Star Fireworks- proprietor



ENDORSEMENT

ATTACHED TO AND FORMING A PART OF POLICY NUMBER	ENDORSEMENT EFFECTIVE DATE (12:01 A.M. STANDARD TIME)	NAMED INSURED	AGENT NO.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED—OPERATORS OF NON-OWNED FIREWORK STANDS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

Section II—Who Is An Insured is amended to include as an additional insured any person or organization that holds a certificate of insurance for the "non-owned firework stands" through an agreement with you, but only with respect to "bodily injury," "property damage" or "personal and advertising injury," subject to the following additional exclusions:

- 1. The insurance afforded the additional insured does not apply to:
 - a. Any express warranty unauthorized by you;
 - Any physical or chemical change in the product made intentionally by the additional insured, including the ignition of "fireworks";
 - c. Repackaging, except when unpacked solely for the purpose of sale or inspection;
 - "Bodily injury" or "property damage" arising out of "fireworks" that are not purchased from the Named Insured;
 - e. Any failure to make such inspections, adjustments or servicing as the additional insured has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products; or

- e. Demonstration or product testing operations.
- This insurance does not apply to any insured person or organization, from which you have acquired such products, or any ingredient, part or container, entering into, accompanying or containing such products.
- Coverage provided is limited to those certificate holders who obtain a certificate of insurance prior to an "occurrence" and whose certificate of insurance is on file with us.
- Coverage provided by this endorsement is limited to the certificate holder of the "non-owned firework stands" and to the time period specified in the certificate of insurance.

For purposes of this endorsement, the following definitions apply:

"Non-owned firework stands" means any premises, site or location which is owned, or occupied by, or rented or loaned to a certificate of insurance holder, including any temporary structures, used for the retail sale of the Named Insured's "fireworks."

"Fireworks" means an explosive or burning device or pyrotechnic material, product or device.

AUTHORIZED REPRESENTATIVE

DATE

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WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE

Name Of Person Or Organization: Any person or organization with whom the insured has agreed to waive rights of recovery, provided such agreement is made in writing and prior to the loss.

Additional Premium is Included Information required to complete this Schedule, If not shown above, will be shown in the Declarations.

The following is added to Paragraph 8. Transfer Of Rights Of Recovery Against Others To Us of Section IV - Conditions:

We waive any right of recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard". This waiver applies only to the person or organization shown in the Schedule above.





ATTACHED TO AND FORMING A PART OF POLICY NUMBER	ENDORSEMENT EFFECTIVE DATE (12:01 A.M. STANDARD TIME)	NAMED INSURED	AGENT NO.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

BLANKET ADDITIONAL INSURED ENDORSEMENT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

With respect to this endorsement, **SECTION II—WHO IS AN INSURED** is amended to include as an additional insured any person or organization whom you are required to add as an additional insured on this policy under a written contract, written agreement or written permit which must be:

- a. Currently in effect or becoming effective during the term of the policy; and
- **b.** Executed prior to the "bodily injury," "property damage," or "personal and advertising injury."

The insurance provided to these additional insureds is limited as follows:

- That person or organization is an additional insured only with respect to liability for "bodily injury," "property damage" or "personal and advertising injury" caused, in whole or in part, by:
 - a. Your acts or omissions; or
 - **b.** The acts or omissions of those acting on your behalf.

A person's or organization's status as an additional insured under this endorsement ends when your operations for that additional insured are completed.

2. With respect to the insurance afforded to these additional insureds, the following exclusions are added to item 2. Exclusions of SECTION I— COVERAGES:

This insurance does not apply to "bodily injury," "property damage" or "personal and advertising injury" occurring after:

- a. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
- b. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.
- 3. The limits of insurance applicable to the additional insured are those specified in the written contract, written agreement or written permit or in the Declarations for this policy, whichever is less. These limits of insurance are inclusive of, and not in addition to, the Limits of Insurance shown in the Declarations for this policy.
- 4. Coverage is not provided for "bodily injury," "property damage," or "personal and advertising injury" arising out of the sole negligence of the additional insured.
- 5. The insurance provided to the additional insured does not apply to "bodily injury," "property damage," or "personal and advertising injury" arising out of an architect's, engineer's or surveyor's rendering of or failure to render any professional services including:

- a. The preparing, approving or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; and
- **b.** Supervisory, inspection, architectural or engineering activities.
- 6. Any coverage provided hereunder will be excess over any other valid and collectible insurance available to the additional insured whether primary, excess, contingent or on any other basis unless a

written contract specifically requires that this insurance be primary.

When this insurance is excess, we will have no duty under **SECTION I—COVERAGES** to defend the additional insured against any "suit" if any other insurer has a duty to defend the additional insured against that "suit." If no other insurer defends, we will undertake to do so, but we will be entitled to the additional insured's rights against all those other insurers.

AUTHORIZED REPRESENTATIVE

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City of Bryant, Arkansas **Community Development** 210 SW 3rd Street Bryant, AR 72022 501-943-0943



Temporary Business Application For the Sale of Fireworks

- Applications are due by 5:00PM Wednesday the week prior to the Scheduled Development and Review Committee Meeting.
- Application Deadlines and dates can be found at <u>www.cityofbryant.com</u> under the Community Development tab.

22 22 Date: //

Business Information:

Name <u>FIVE STAR FIREWORKS</u> Federal Tax Employer ID Number <u>453216207</u> Arkansas State Sales Tax Number ______N/A 5407 HWY 5N. Location of Proposed Temporary Business

Business Owner:

Name MARK BRADFORD
Address 17 ASHLEE BLUD
NASH TX 75569
Phone 903-826-4453
Email_imafreely76
3 gmail. com

Contact Person:

Name SAME INFO

Address _____

Phone 903-826-4453 Email _____

Checklist for Submission

- Completed Application and Checklist
- Twenty-Five Dollar (\$25.00) Application fee
- Provide proof of 1,000,000 Liability Insurance or Surety Bond worth the same amount. (Further information on the details of liability insurance can be found in Section 2-4 of the Temporary Business Section of the Bryant Business Ordinance.)

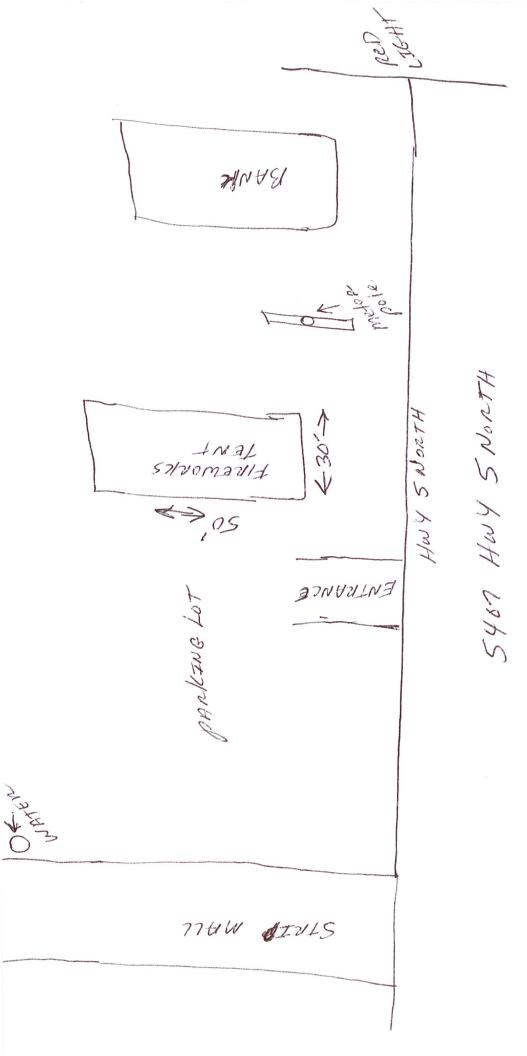
(Continued on Page 2)

- □ Eight (8) copies of a Site Plan:
 - Site Plan shall be to scale, all structures shall be identified. Clear identification of any open display areas
 - Fireworks tent / canopy shall have a minimum 50ft. setback from all other structures
 - Show parking spaces dedicated by the owner of the property for use by the temporary business.
- Exits shall be provided every 100 ft. with a minimum of 2 remotely located exits
 Minimum exit width shall be 72 in. All exits shall be identified with proper signage
- No smoking permitted within 50 ft. of firework tent / canopy. "NO SMOKING" signs shall be posted at all entrance / exits
- 2 ABC fire extinguishers, with a 2A rating or greater, shall be provided. The maximum travel distance to an extinguisher shall not exceed 75 ft. Additional extinguishers may be required. Extinguishers shall be clearly visible, marked with appropriate signage, and mounted height of not less than 36 in. from the ground
- □ Generators or other combustion power sources, including fuel, shall be separated from tents / canopies by a minimum of 25 ft.
- Applicant shall contact the Bryant Fire Dept. Fire Marshal's office and schedule an inspection once the business is ready for operation. The inspection shall be conducted prior to any sales to the public are allowed. Contact: 501-943-0964

READ CAREFULLY BEFORE SIGNING

I MARK BRADFORD, do hereby certify that all information contained within this application is true and correct. I further certify that I agree too and will abide by all Temporary Business rules and regulations as outlined in the Bryant Business Ordinance. I also understand that I shall comply with all additional applicable ordinances of the City as well as the requirements of all state and federal laws. Furthermore, I understand violation of Temporary Business Ordinance 2007-43 is a misdemeanor punishable by a fine of up to \$500.00 per occurrence of violation. Each day's occurrence is a separate violation.

Owners Signature Manh Brodford



/	ACORD [®] CERT	ΊF		ATE OF LIA	BIL	TY IN	SURA	NCE		MM/DD/YYYY) /22/2022
	THIS CERTIFICATE IS ISSUED AS A M CERTIFICATE DOES NOT AFFIRMATI' BELOW. THIS CERTIFICATE OF INS REPRESENTATIVE OR PRODUCER, AN	IATT VELY URAI	ER C 'OR NCE IE CE	DF INFORMATION ONLY NEGATIVELY AMEND, DOES NOT CONSTITUT RTIFICATE HOLDER.	AND (Exten E A C	CONFERS NO D OR ALTE ONTRACT B	o rights u r the cov etween ti	PON THE CERTIFICAT PERAGE AFFORDED E HE ISSUING INSURER	E HOL Y THE (S), AU	DER. THIS POLICIES JTHORIZED
	IMPORTANT: If the certificate holder i the terms and conditions of the policy, certificate holder in lieu of such endors	certa	ain po	olicies may require an en	oolicy(i dorser	es) must be nent. A state	endorsed. ement on thi	f SUBROGATION IS W s certificate does not c	AIVED onfer r	, subject to ights to the
P	RODUCER				CONTAC	T Kristy Wolfe	۹			
	Ryder Rosacker McCue & Huston (MG	D by	Hull	& Company)		Ext): 308-382		FAX (A/C, No):		
	509 W Koenig St Grand Island NE 68801			-		s; kwolfe@n				
`					ADDICE			DING COVERAGE		NAIC #
					INSURE	RA: SCOTTS	DALE INS C	C		41297
	ISURED				INSURE	RB:				
	CDF Holding Company, Inc; Crazy Del DBA Red Rhino Fireworks	obies	sFire	works LLC	INSURE	RC:				
	659 S HWY 43				INSURE	RD:				
	PO Box 43			-	INSURE	RE:				
	Joplin MO 68404				INSURE	<u>R F :</u>				
(NUMBER: 1708166135				REVISION NUMBER:		
	THIS IS TO CERTIFY THAT THE POLICIES INDICATED. NOTWITHSTANDING ANY RE CERTIFICATE MAY BE ISSUED OR MAY EXCLUSIONS AND CONDITIONS OF SUCH	equif Pert Poli	EMEI AIN	NT, TERM OR CONDITION THE INSURANCE AFFORDI LIMITS SHOWN MAY HAVE	of any Ed by	CONTRACT	OR OTHER I S DESCRIBEI PAID CLAIMS.	DOCUMENT WITH RESPE HEREIN IS SUBJECT T	O ALL	WHICH THIS
ï	ISR TYPE OF INSURANCE	INSR	WVD	POLICY NUMBER			POLICY EXP (MM/DD/YYYY)	LIMI	1	
	A GENERAL LIABILITY			CPS3994333		2/15/2022	2/15/2023	EACH OCCURRENCE DAMAGE TO RENTED	\$ 2,000	
	X COMMERCIAL GENERAL LIABILITY							PREMISES (Ea occurrence)	\$ 100,0	
	CLAIMS-MADE X OCCUR							MED EXP (Any one person) PERSONAL & ADV INJURY	\$ 5,000	
								GENERAL AGGREGATE	\$ 2,000	
	GEN'L AGGREGATE LIMIT APPLIES PER:							PRODUCTS - COMP/OP AGG	-	
	X POLICY PRO- LOC								\$.,
ŀ				· · · · · · · · · · · · · · · · · · ·				COMBINED SINGLE LIMIT (Ea accident)	\$	
	ANY AUTO							BODILY INJURY (Per person)	\$	
	ALL OWNED SCHEDULED AUTOS AUTOS							BODILY INJURY (Per accident)\$	
	HIRED AUTOS							PROPERTY DAMAGE (Per accident)	\$	
									\$	
ſ	UMBRELLA LIAB OCCUR							EACH OCCURRENCE	\$	
l	EXCESS LIAB CLAIMS-MADE							AGGREGATE	\$	
L	DED RETENTION \$								\$	
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY							WC STATU- OTH TORY LIMITS ER		
l	AND EMIFLOYER'S LIABILITY Y / N ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED?	N/A						E.L. EACH ACCIDENT	\$	
	(Mandatory in NH)		1					E.L. DISEASE - EA EMPLOYE		
ŀ	DESCRIPTION OF OPERATIONS below						<u> </u>	E.L. DISEASE - POLICY LIMI	5	
			1							
$\left \right $					•					
	DESCRIPTION OF OPERATIONS / LOCATIONS / VEHI Regarding the General Liability coverage, agreement. Regarding the General Liability coverage, agreement. Non-Owned Stand Coverage provided per when required by written agreement.	Blani Waiv attao	ket Ad er of ched f	Iditional Insured applies to Subrogation applies to the form GLS-326s. Blanket A	the ent entities dditiona	ities listed be listed below al Insured app	low per attac per attached blies to the er	form CG 24 04 when rec tities listed below per att	luired b ached f	y written form GLS-150s
	For premise liability – this certificate reflect See Attached	ts co	verag	e for the dates and location		below. For pr		- this certificate reflects	covera	ge for products
	CERTIFICATE HOLDER	irew	orks		SH TH	OULD ANY OF		DESCRIBED POLICIES BE IEREOF, NOTICE WILL ICY PROVISIONS.		
	17 Ashlee Blvd									
	Nash TX 75569				2	•				
						Kinna	gine			

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ADDITIONAL REMARKS SCHEDULE

Page 1 of 1

AGENCY Ryder Rosacker McCue & Huston (MGD by Hull & Company)		NAMED INSURED CDF Holding Company, Inc; Crazy Debbies Fireworks LLC DBA Red Rhino Fireworks		
POLICY NUMBER	6659 S HWY 43 PO Box 43 Joplin MO 68404			
CARRIER	NAIC CODE	EFFECTIVE DATE:		
ADDITIONAL REMARKS				
THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM, FORM TITLE: CERTIFICATE OF LIABILITY INSURANCE				
purchased from the above Named Insured only.				
Dates of Operation: Dec 1, 2022-Jan 3, 2023. Location address: 54 Mark Bradford/Five Star Fireworks- proprietor	407 Hwy 5 N	Bryant, AR 72022. Addtl Insureds: Brent Grant- landowner; City of Bryant, AR;		



ENDORSEMENT NO. _____

ATTACHED TO AND FORMING A PART OF POLICY NUMBER	ENDORSEMENT EFFECTIVE DATE (12:01 A.M. STANDARD TIME)	NAMED INSURED	AGENT NO.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED—OPERATORS OF NON-OWNED FIREWORK STANDS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

Section II-Who Is An Insured is amended to include as an additional insured any person or organization that holds a certificate of insurance for the "non-owned firework stands" through an agreement with you, but only with respect to "bodily injury," "property damage" or "personal and advertising injury," subject to the following additional exclusions:

- 1. The insurance afforded the additional insured does not apply to:
 - a. Any express warranty unauthorized by you;
 - b. Any physical or chemical change in the product made intentionally by the additional insured, including the ignition of "fireworks";
 - c. Repackaging, except when unpacked solely for the purpose of sale or inspection;
 - d. "Bodily injury" or "property damage" arising out of "fireworks" that are not purchased from the Named Insured;
 - e. Any failure to make such inspections, adjustments or servicing as the additional insured has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products; or

- e. Demonstration or product testing operations.
- 2. This insurance does not apply to any insured person or organization, from which you have acquired such products, or any ingredient, part or container, entering into, accompanying or containing such products.
- 3. Coverage provided is limited to those certificate holders who obtain a certificate of insurance prior to an "occurrence" and whose certificate of insurance is on file with us.
- 4. Coverage provided by this endorsement is limited to the certificate holder of the "non-owned firework stands" and to the time period specified in the certificate of insurance.

For purposes of this endorsement, the following definitions apply:

"Non-owned firework stands" means any premises, site or location which is owned, or occupied by, or rented or loaned to a certificate of insurance holder, including any temporary structures, used for the retail sale of the Named Insured's "fireworks."

"Fireworks" means an explosive or burning device or pyrotechnic material, product or device.

AUTHORIZED REPRESENTATIVE

DATE

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WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE

Name Of Person Or Organization: Any person or organization with whom the insured has agreed to waive rights of recovery, provided such agreement is made in writing and prior to the loss.

Additional Premium is Included Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The following is added to Paragraph 8. Transfer Of Rights Of Recovery Against Others To Us of Section IV - Conditions:

We walve any right of recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard". This waiver applies only to the person or organization shown in the Schedule above.

CG 24 04 05 09





ATTACHED TO AND FORMING A PART OF POLICY NUMBER

ENDORSEMENT EFFECTIVE DATE (12:01 A.M. STANDARD TIME) AGENT NO

POLICY NUMBER	(12:01 A.M. STANDARD TIME)	I2:01 A.M. STANDARD TIME)	
			<u> </u>

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

BLANKET ADDITIONAL INSURED ENDORSEMENT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

With respect to this endorsement, **SECTION II—WHO IS AN INSURED** is amended to include as an additional insured any person or organization whom you are required to add as an additional insured on this policy under a written contract, written agreement or written permit which must be:

- **a.** Currently in effect or becoming effective during the term of the policy; and
- **b.** Executed prior to the "bodily injury," "property damage," or "personal and advertising injury."

The insurance provided to these additional insureds is limited as follows:

- That person or organization is an additional insured only with respect to liability for "bodily injury," "property damage" or "personal and advertising injury" caused, in whole or in part, by:
 - **a.** Your acts or omissions; or
 - **b.** The acts or omissions of those acting on your behalf.

A person's or organization's status as an additional insured under this endorsement ends when your operations for that additional insured are completed.

 With respect to the insurance afforded to these additional insureds, the following exclusions are added to item 2. Exclusions of SECTION I— COVERAGES:

This insurance does not apply to "bodily injury," "property damage" or "personal and advertising injury" occurring after:

- a. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
- b. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.
- 3. The limits of insurance applicable to the additional insured are those specified in the written contract, written agreement or written permit or in the Declarations for this policy, whichever is less. These limits of insurance are inclusive of, and not in addition to, the Limits of Insurance shown in the Declarations for this policy.
- Coverage is not provided for "bodily injury," "property damage," or "personal and advertising injury" arising out of the sole negligence of the additional insured.
- 5. The insurance provided to the additional insured does not apply to "bodily injury," "property damage," or "personal and advertising injury" arising out of an architect's, engineer's or surveyor's rendering of or failure to render any professional services including:

- a. The preparing, approving or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; and
- **b.** Supervisory, inspection, architectural or engineering activities.
- 6. Any coverage provided hereunder will be excess over any other valid and collectible insurance available to the additional insured whether primary, excess, contingent or on any other basis unless a

written contract specifically requires that this insurance be primary.

When this insurance is excess, we will have no duty under **SECTION I**—**COVERAGES** to defend the additional insured against any "suit" if any other insurer has a duty to defend the additional insured against that "suit." If no other insurer defends, we will undertake to do so, but we will be entitled to the additional insured's rights against all those other insurers.

DATE

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AUTHORIZED REPRESENTATIVE

10/16/2022

Sergio Martinez

15611 Lindsey dr.

Alexander, AR 72002

RE: Rezoning Petition

The property located at 2008 Johnswood rd Bryant, AR is being considered for rezoning from RE to R2. The property is more particularly described as follows: corner of Johnswood rd and Byron Drive parcel number 840-13201-000

An application has been filed with the City of Bryant Planning Commission to rezone the property. As part of this process, a public hearing will be held on Monday November 14th,2022 at at 6:00 PM in the Boswell Community Center Courtroom, 210 SW 3rd Street, Bryant, AR 72022.

Public comments will be accepted at that time regarding this rezoning. Since you own property within 300 feet of the property in consideration, you have been sent this letter via certified mail as required by city ordinance.

Should you have any questions regarding this matter you may contact the City of Bryant at 501 943-0857 or by contacting me at 501 765-1726.

Thank you for your consideration in this matter.

Sincerely, Heating Sergito Martinez

10/19/2022

Sergio Martinez

15611 Lindsey dr.

Alexander, AR 72002

To City of Bryant Planning Commission:

I am the owner of property located at 2008 Johnswood rd. Bryant, AR; I have filed an application to consider for rezoning from RE to R2.

Under current RE zone, I am not allowed to build a house wider than 31ft because of the setbacks since the lot is only 71ft wide, that is why I have put a petition for rezoning to build a single-family house that would give me the option to build a 48ft wide house under R2 zone.

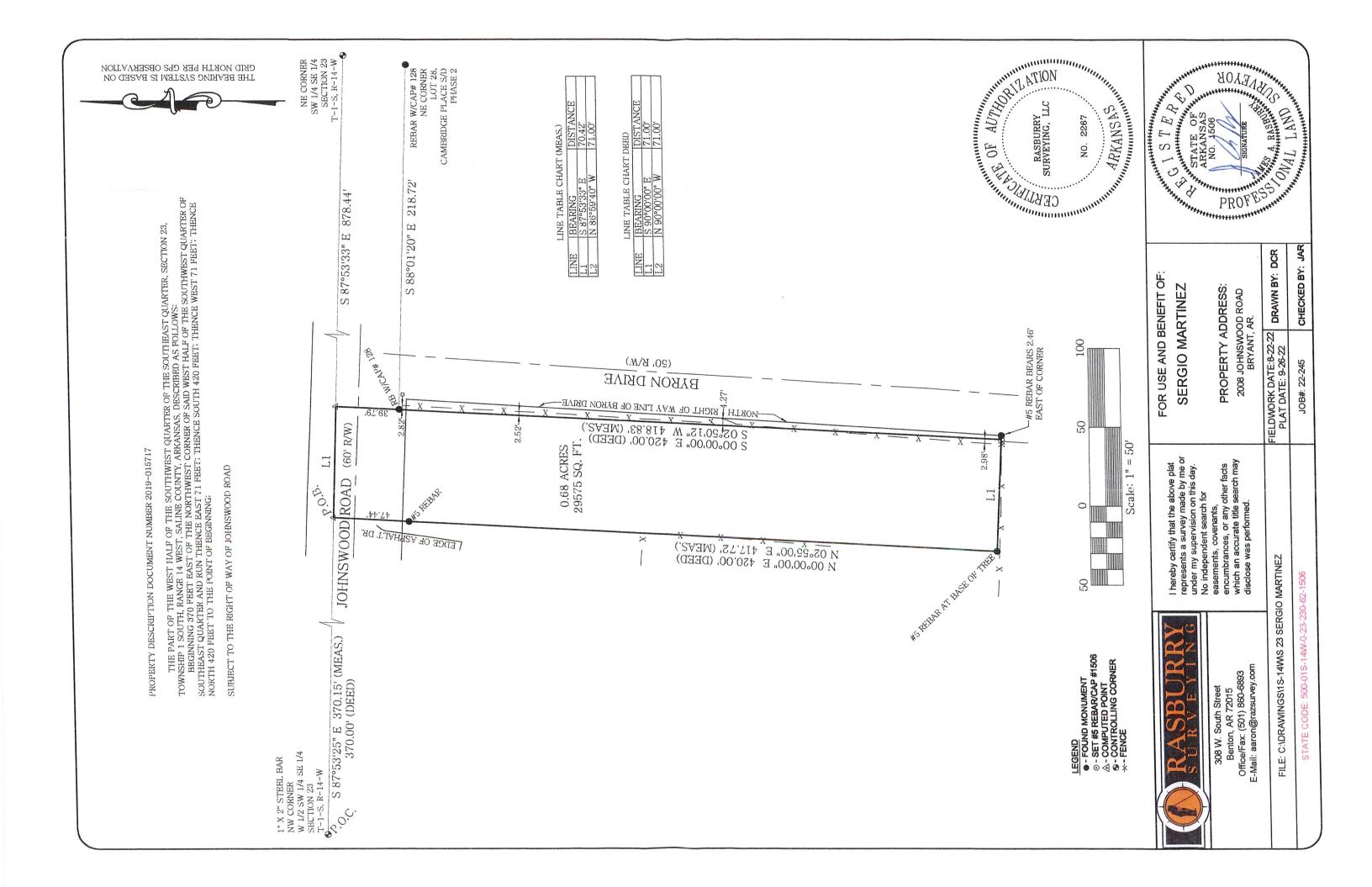
Should you have any questions regarding this matter you may contact by contacting me at 501 765-1726.

Thank you for your consideration in this matter.

Sincerely,

Martin **Sergio** Martinez

.





City of Bryant, Arkansas Community Development 210 SW 3rd Street Bryant, AR 72022 501-943-0943

Rezoning Application

Applicants are advised to read the Amendments section of Bryant Zoning Code prior to completing and signing this form. The Zoning Code is available at www.cityofbryant.com under the Planning and Community Development tab.

Date: 10/05/2022

Applicant or Designee:	Property Owner (If different from Applicant):
Name Sergio R Martinez Address 2008 Johnswood rd Phone	Phana (Ca)) 7/25/17/26
Email Address	Email Address Martinezoss Coutlook.com
Property Information:	
Address 2008 Johnswood re	
Parcel Number <u>2019-015717</u>	
Existing Zoning Classification <u><u><u></u><u><u></u><u><u></u><u><u></u><u><u></u><u></u><u><u></u><u><u></u><u></u><u><u></u><u></u><u></u><u></u><u></u><u></u></u></u></u></u></u></u></u></u></u>	
Requested Zoning Classification R_{λ}	
Legal Description (If Acreage or Metes and Bounds	description, please attach in a legible typed format)

Application Submission Checklist:

Letter stating request of zoning change from (Current Zoning) to (Requested Zoning) and to be placed on the Planning Commission Agenda

Completed Rezoning Application

- Rezoning Application Fee (\$40 fee for lot and black descriptions or \$125 for acreage or metes and bound descriptions)
- $M/A \square$ If someone, other than the owner, will be handling the zoning process, we will require a

/letter from the owner of said property, giving him or her authority to do so.

Recent surveyed plat of the property including vicinity map

Additional Requirements:

Items below **must be completed before the public hearing can occur**. Failure to provide notices in the following manners shall require delay of the public hearing until notice has been properly made.

- Publication: Public Notice shall be published by the applicant at least one (1) time fifteen (15) days prior to the public hearing at which the rezoning application will be heard. Once published please provide a proof of publication to the Community Development office. (Sample notice attached below)
- Posting of Property: The city shall provide signs to post on the property involved for the fifteen (15) consecutive days leading up to Public hearing. One (1) sign is required for every two hundred (200) feet of street frontage.
- Notification of adjacent landowners: Applicant shall attempt to inform by certified letter, return receipt requested, all owners of land within three hundred (300) feet of any boundary of the subject property of the public hearing. (Sample letter attached below)
- □ Certified list of property owners, all return receipts, and a copy of the notice shall be provided to the Community Development Department at least five (5) days prior to the public hearing.

Note: that this is not an exhaustive guideline regarding the Conditional Use Permit Process. Additional information is available in the Bryant Zoning Ordinance.

READ CAREFULLY BEFORE SIGNING

true and correct / further certify that the owner of the property authorizes this proposed application. I understand that I must comply with all City Codes that pertain to this project and that it is my responsibility to obtain all necessary permits as needed.

NOTICE OF PUBLIC HEARING

A public hearing will be held on Monday, <u>November 14th</u>, <u>2022</u> at 6:00 P.M.

at the Bryant City Office Complex, 210 Southwest 3rd Street, City of Bryant, Saline

County, for the purpose of public comment on a conditional use request at the site of

2008 Johnswood Rd, Bryant, AR 72022 (address).

A legal description of this property can be obtained by contacting the Bryant Department of Community Development.

> Rick Johnson Chairman Board of Zoning Adjustment City of Bryant

This notice is to be run in the legal notices section of the Saline Courier no less than 15 days prior to the public hearing.

SAMPLE LETTER

Date Name Address

RE: Rezoning Petition

The property loo	cated at 10	08 70	hnsoso	67 60	is being considered for
rezoning from _	RE	to	R2	The	e property is more particularly described as
follows:					

INSERT LEGAL DESCRIPTION OF PROPERTY

An application has been filed with the City of Bryant Planning Commission to rezone the property. As part of this process, a public hearing will be held on Monday _______, 2021 at 6:00 PM in the Boswell Community Center Courtroom, 210 SW 3rd Street, Bryant, AR 72022. Public comments will be accepted at that time regarding this rezoning. Since you own property within 300 feet of the property in consideration, you have been sent this letter via certified mail as required by

city ordinance.

Should you have any questions regarding this matter you may contact the City of Bryant at 501-943-0857 or by contacting me at ______.

Thank you for your consideration in this matter.

Sincerely,

Your Signature Manler Your Name Sergio Martinez



City of Bryant, Arkansas Community Development 210 SW 3rd Street Bryant, AR 72022 501-943-0943

Conditional Use Permit Application

Applicants are advised to read the Conditional Use Permit section of Bryant Zoning Code prior to completing and signing this form. The Zoning Code is available at www.cityofbryant.com under the Planning and Community Development tab.

Date: 10/25/2022	
Applicant or Designee:	Project Location:
Name KANNON PORTER	Property Address 2512 LAVERN
Address P.O. Box 732 (72089)
Phone 501-680-0549	Parcel Number 840 - 07793 - 000
Email Address: Kperter Realestate Property Owner (If different from Applicant)	Zoning Classification
Property Owner (If different from Applicant)	MAIL.Com
Name	
Phone	
Address	
Email Address	
Additional Information:	
Legal Description (Attach description if necessary	() # 7
LOT G, PIKE WOOD SUD CITY OF BRYANT, AR	3DIVISION "Z
	c c
Description of Conditional Use Request (Attach a	
	•
Proposed/Current Use of Property	ENT: SINGLE FAMILY HOME

Application Checklist

Requirements for Submission

- □ Letter stating request of Conditional Use and reasoning for request
- □ Completed Conditional Use Permit Application
- □ Submit Conditional Use Permit Application Fee (\$125)
- □ Submit Copy of completed Public Notice
- Publication: Public Notice shall be published at least one (1) time fifteen (15) days prior to the public hearing at which the variance will be heard. Once published please provide a proof of publication to the Community Development office.
- Posting of Property: The city shall provide a sign to post on the property involved for the fifteen (15) consecutive days leading up to Public hearing. One (1) sign is required for every two hundred (200) feet of street frontage.
- □ Submit eight (8) Copies of the Development Plan (Site Plan) showing:
 - Location, size, and use of buildings/signs/land or improvements
 - Location, size, and arrangement of driveways and parking. Ingress/Egress
 - Existing topography and proposed grading
 - Proposed and existing lighting
 - Proposed landscaping and screening
 - Use of adjacent properties
 - Scale, North Arrow, Vicinity Map
 - Additional information that may be requested by the administrative official due to unique conditions of the site.

Once the application is received, the material will be reviewed to make sure all the required information is provided. The applicant will be notified if additional information is required. The application will then go before the Development and Review Committee (DRC) for a recommendation to the Planning Commission. A public hearing will be held at this meeting for comments on the Conditional Use. After the public hearing, the Planning Commission will make a decision on the use.

Note: that this is not an exhaustive guideline regarding the Conditional Use Permit Process. Additional information is available in the Bryant Zoning Ordinance.

READ CAREFULLY BEFORE SIGNING

I function is true and correct. I further certify that the owner of the property authorizes this proposed application. I understand that I must comply with all City Codes and that it is my responsibility to obtain all necessary permits required.

10/25/2022

I would like to apply for a Conditional Use permits with the City of Bryant for the construction of 2 new duplexes at current address of 2512 Lavern in Bryant.

Lot 6, Pikewood Subdivision #2 Lot 7, Pikewood Subdivision #2

Thanks Inks In Vall

Kannon Porter PO Box 732 Bryant, AR 72089 501-680-0549 Kporterrealestate@gmail.com

NOTICE OF PUBLIC HEARING

A public hearing will be held on Monday, ______ at 6:00 P.M.

at the Bryant City Office Complex, 210 Southwest 3rd Street, City of Bryant, Saline

County, for the purpose of public comment on a conditional use request at the site of

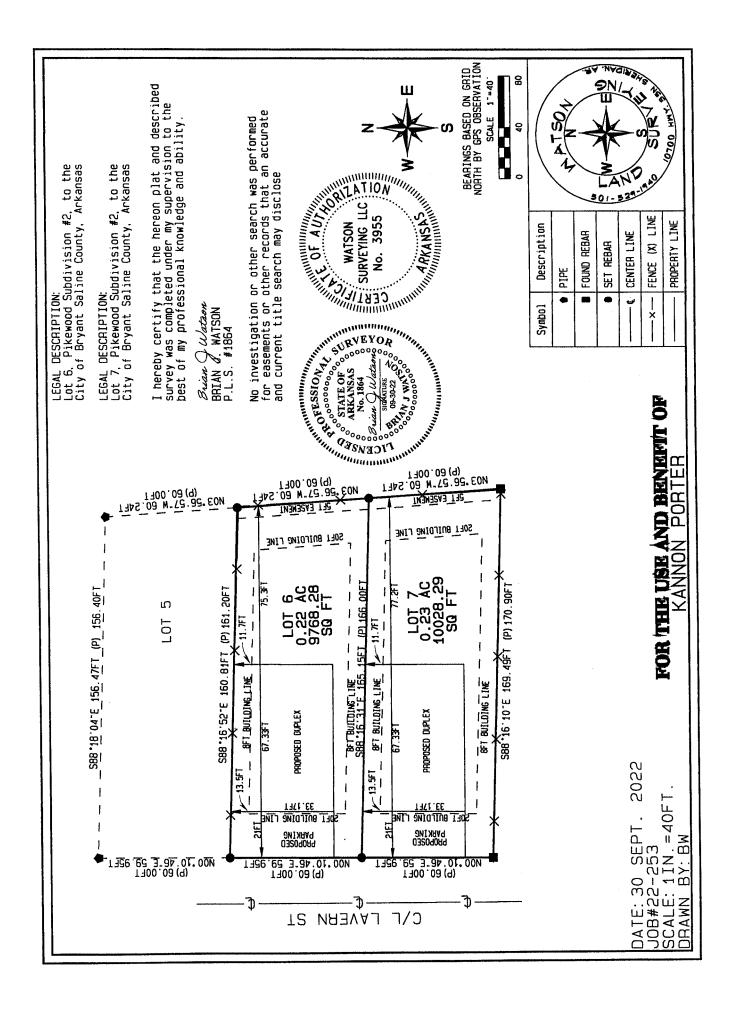
2512 LAVERN, BRYANT, AR 72022 ___(address).

A legal description of this property can be obtained by contacting the Bryant Department

of Community Development.

Rick Johnson Chairman Board of Zoning Adjustment City of Bryant

This notice is to be run in the legal notices section of the Saline Courier no less than 15 days prior to the public hearing.





City of Bryant, Arkansas Community Development 210 SW 3rd Street Bryant, AR 72022 501-943-0943

Conditional Use Permit Application

Applicants are advised to read the Conditional Use Permit section of Bryant Zoning Code prior to completing and signing this form. The Zoning Code is available at <u>Avenuetypercenteene</u> under the Planning and Community Development tab.

Date: 10/25/2022

Proposed/Current Use of Property_____

Applicant or Designee:	Project Location:
Name KANNON PORTER	Property Address 2512 LAVERN
Address P. D. Box 732 (7208	
Phone 501-680-0549	Parcel Number <u>840 · 0779</u> 44-000
Email Address: Kporter REALESTATE	Zoning Classification
Property Owner (If different from Applicant):	GMAIC.Com
Name	
Phone	
Address	
Email Address	
Additional Information:	
Legal Description (Attach description if necessary	
LOT 7, PIKEWOOD SUB CITY OF BRYANT, AR	Division #2
CITY OF BRYANT, AR	
•	
Description of Conditional Use Request (Attach a	ny necessary drawings or images)
CONSTRUCTION OF NE	W DUPLEX

CURRENT: SINGLE FAMILY HOME

Application Checklist

Requirements for Submission

- □ Letter stating request of Conditional Use and reasoning for request
- Completed Conditional Use Permit Application
- □ Submit Conditional Use Permit Application Fee (\$125)
- □ Submit Copy of completed Public Notice
- Publication: Public Notice shall be published at least one (1) time fifteen (15) days prior to the public hearing at which the variance will be heard. Once published please provide a proof of publication to the Community Development office.
- Posting of Property: The city shall provide a sign to post on the property involved for the fifteen (15) consecutive days leading up to Public hearing. One (1) sign is required for every two hundred (200) feet of street frontage.
- □ Submit eight (8) Copies of the Development Plan (Site Plan) showing:
 - Location, size, and use of buildings/signs/land or improvements
 - Location, size, and arrangement of driveways and parking. Ingress/Egress
 - Existing topography and proposed grading
 - Proposed and existing lighting
 - Proposed landscaping and screening
 - Use of adjacent properties
 - Scale, North Arrow, Vicinity Map
 - Additional information that may be requested by the administrative official due to unique conditions of the site.

Once the application is received, the material will be reviewed to make sure all the required information is provided. The applicant will be notified if additional information is required. The application will then go before the Development and Review Committee (DRC) for a recommendation to the Planning Commission. A public hearing will be held at this meeting for comments on the Conditional Use. After the public hearing, the Planning Commission will make a decision on the use.

Note: that this is not an exhaustive guideline regarding the Conditional Use Permit Process. Additional information is available in the Bryant Zoning Ordinance.

READ CAREFULLY BEFORE SIGNING

10/25/2022

I would like to apply for a Conditional Use permits with the City of Bryant for the construction of 2 new duplexes at current address of 2512 Lavern in Bryant.

Lot 6, Pikewood Subdivision #2 Lot 7, Pikewood Subdivision #2

Thanks

Vun Patt

Kannon Porter PO Box 732 Bryant, AR 72089 501-680-0549 Kporterrealestate@gmail.com

NOTICE OF PUBLIC HEARING

A public hearing will be held on Monday, _____ at 6:00 P.M.

at the Bryant City Office Complex, 210 Southwest 3rd Street, City of Bryant, Saline

County, for the purpose of public comment on a conditional use request at the site of

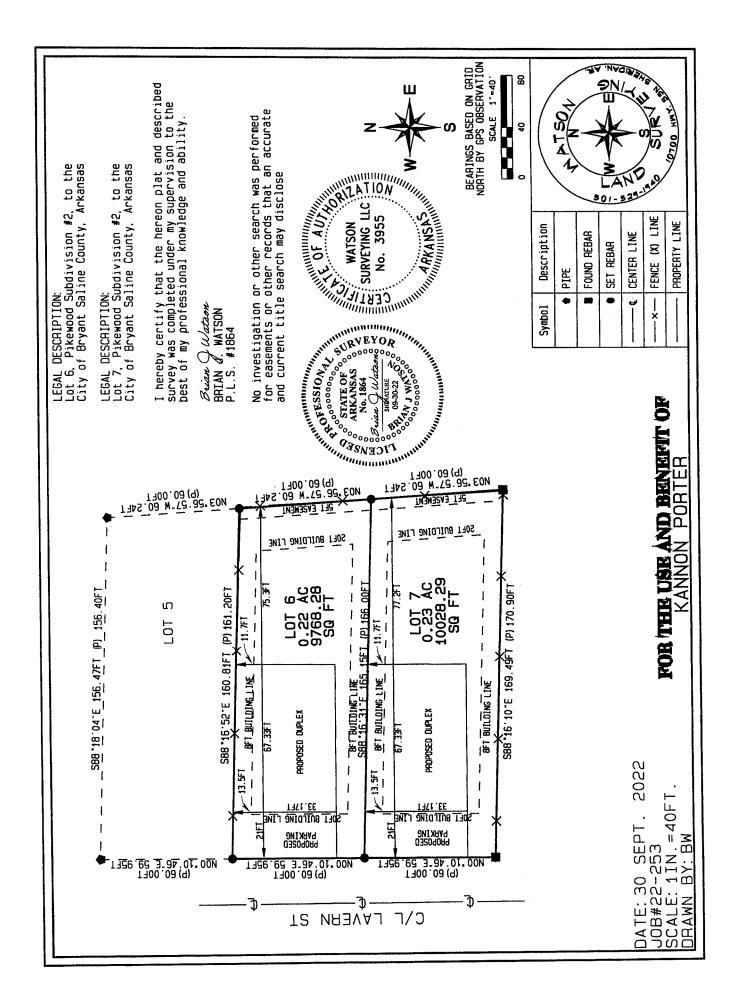
2512 LAVERN, BRYANT, AR 72022 (address).

A legal description of this property can be obtained by contacting the Bryant Department

of Community Development.

Rick Johnson Chairman Board of Zoning Adjustment City of Bryant

This notice is to be run in the legal notices section of the Saline Courier no less than 15 days prior to the public hearing.





Monday November 11, 2022

Truett Smith City of Bryant 210 Southwest Third St., Bryant, AR 72022

RE: United Traders, Inc. 2303 and 2209 Ridgecrest Dr. Bryant, Arkansas Rezone parcels 840-07878, 840-07879, 840-07880 (Hope Job #22-1234)

Dear Mr. Truett Smith,

I represent United Traders, Inc, in the above-captioned matter. United Traders is formally applying for a rezone of the attached property. This property is located in the City of Bryant at 2303 and 2209 Ridgecrest Dr. I ask that the City of Bryant start the review and approval process for the rezone of this property located at aforementioned address'.

Please feel free to contact me with any questions or concerns or if I can be of any further assistance.

Sincerely, onathan Age Jonathan Hope

> 117 South Market St. Benton, Arkansas 72015 501-315-2626 www.hopeconsulting.com



City of Bryant, Arkansas Community Development 210 SW 3rd Street Bryant, AR 72022 501-943-0943

Rezoning Application

Applicants are advised to read the Amendments section of Bryant Zoning Code prior to completing and signing this form. The Zoning Code is available at www.cityofbryant.com under the Planning and Community Development tab.

Date: Nov. 11, 2022

Applicant or Designee:	Property Owner (If different from Applicant):
Name	United Traders, Inc.
Address 117 So. Market St., Benton, AR Phone 501-315-2626	Address281 Newman Dr., North Little Rock, AR. 72117 501-945-9955 Phone
Email Address Jonathan@hopeconsulting.com	Email Address
Property Information:	
Address 2303 and 2209 Ridgecrest Dr., Bryant, AR	
Parcel Number840-07878, 840-07879, 840-07880	
Existing Zoning Classification	
Requested Zoning ClassificationC-2	
Legal Description (If Acreage or Metes and Bounds or Parcels 840-07878, 840-07879, 840-07880	description, please attach in a legible typed format)

Application Submission Checklist:

- □ Letter stating request of zoning change from (Current Zoning) to (Requested Zoning) and to be placed on the Planning Commission Agenda
- □ Completed Rezoning Application
- □ Rezoning Application Fee (\$40 fee for lot and black descriptions or \$125 for acreage or metes and bound descriptions)
- □ If someone, other than the owner, will be handling the zoning process, we will require a

letter from the owner of said property, giving him or her authority to do so.

□ Recent surveyed plat of the property including vicinity map

Additional Requirements:

Items below **must be completed before the public hearing can occur**. Failure to provide notices in the following manners shall require delay of the public hearing until notice has been properly made.

- Publication: Public Notice shall be published by the applicant at least one (1) time fifteen (15) days prior to the public hearing at which the rezoning application will be heard. Once published please provide a proof of publication to the Community Development office. (Sample notice attached below)
- Posting of Property: The city shall provide signs to post on the property involved for the fifteen (15) consecutive days leading up to Public hearing. One (1) sign is required for every two hundred (200) feet of street frontage.
- Notification of adjacent landowners: Applicant shall attempt to inform by certified letter, return receipt requested, all owners of land within three hundred (300) feet of any boundary of the subject property of the public hearing. (Sample letter attached below)
- □ Certified list of property owners, all return receipts, and a copy of the notice shall be provided to the Community Development Department at least five (5) days prior to the public hearing.

Note: that this is not an exhaustive guideline regarding the Conditional Use Permit Process. Additional information is available in the Bryant Zoning Ordinance.

READ CAREFULLY BEFORE SIGNING

I ______, do hereby certify that all information contained within this application is true and correct. I further certify that the owner of the property authorizes this proposed application. I understand that I must comply with all City Codes that pertain to this project and that it is my responsibility to obtain all necessary permits as needed.

NOTICE OF PUBLIC HEARING

A legal description of this property can be obtained by contacting the Bryant D	Department
	_(address).
County, for the purpose of public comment on a conditional use request at the	e site of
at the Bryant City Office Complex, 210 Southwest 3rd Street, City of Bryant, Sa	aline
A public hearing will be held on Monday, at	t 6:00 P.M.

of Community Development.

Rick Johnson Chairman Board of Zoning Adjustment City of Bryant

This notice is to be run in the legal notices section of the Saline Courier no less than 15 days prior to the public hearing.

SAMPLE LETTER

Date
Name
Address
RE: Rezoning Petition
The property located at _______ is being considered for
rezoning from ______ to ______. The property is more particularly described as
follows:

INSERT LEGAL DESCRIPTION OF PROPERTY

An application has been filed with the City of Bryant Planning Commission to rezone the property. As part of this process, a public hearing will be held on Monday ______, 2021 at 6:00 PM in the Boswell Community Center Courtroom, 210 SW 3rd Street, Bryant, AR 72022. Public comments will be accepted at that time regarding this rezoning. Since you own property within 300 feet of the property in consideration, you have been sent this letter via certified mail as required by city ordinance.

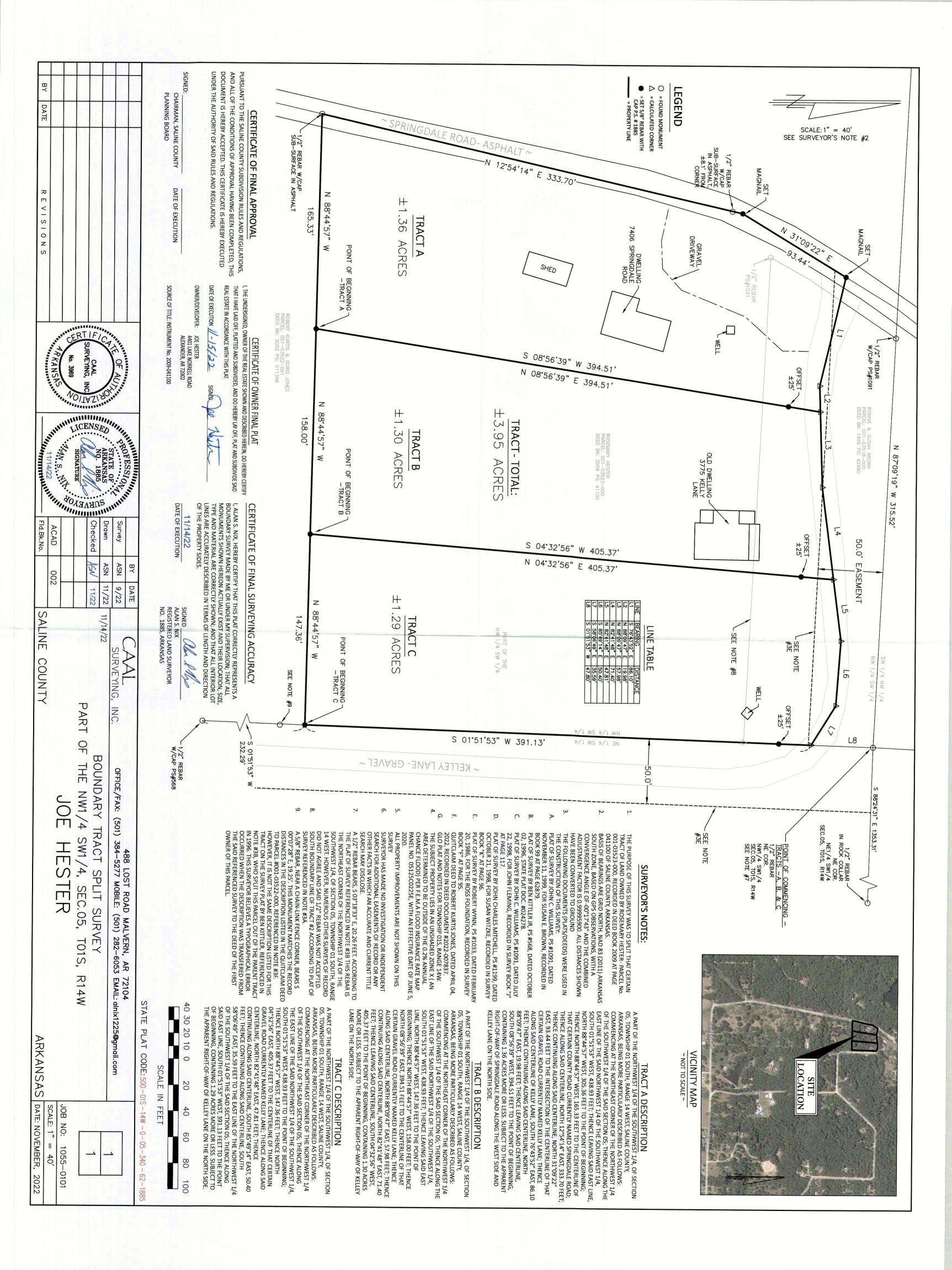
Should you have any questions regarding this matter you may contact the City of Bryant at 501-943-0857 or by contacting me at ______.

Thank you for your consideration in this matter.

Sincerely,

Your Signature Your Name







City of Bryant, Arkansas Community Development 210 SW 3rd Street Bryant, AR 72022 501-943-0943

SIGN PERMIT APPLICATION

Applicants are advised to read the Sign Ordinance prior to completing and signing this form. The Sign Ordinance is available at <u>www.cityofbryant.com</u> under the Planning and Community

Development tab.

Date: 11-15-2022

Sign Co. or Sign Owner

Note: Electrical Permits may be Required, Please contact the Community Development Office for more information.

Property Owner

Driver MILC-CARSpine Dointe

Name	Name Bryave Mitte Car opings Portice
Address	Address 154 QUAPAN DNR
City, State, Zip	_ City, State, Zip Bryant, An 72022
Phone	Phone 501-847-3170
Email Address	Email Address Coolsprings@flagshipcommunities
GENERAL INFORMATION	
Name of Business Col Spin A	Pointe
	awone / I-30 Arrowhead
Zoning Classification	
· ·	

Please use following page to provide details on the signs requesting approval. Along with information provided on this application, a **Site Plan showing placement of sign(s) and any existing sign(s) on the property is <u>required</u> to be submitted. Renderings of the sign(s) showing the correct dimensions is also** <u>required</u> to be submitted with the application. A thirty-five dollar (\$35) per sign payment will be collected at the time of permit issuance. According to the Sign Ordinance a fee for and sign variance or special sign permit request shall be one hundred dollars (\$100). Additional documentation may be required by Sign Administrator.

READ CAREFULLY BEFORE SIGNING

A Second Second

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that no sign may be placed in public right of way. I understand that I must comply with all Building and Electrical Codes and that it is my responsibility to obtain all necessary permits.

Use table below to enter information regarding each sign for approval. Please use each letter to reference each sign rendering.

SIGN		Dimensions (Height, Length, Width)	whole as		of Sign om lot surface)	Columnitor Admin Certifying Approval
				Top of Sign	Bottom of Sign	
Α	monument	Tet 181/24+ 164W	51	74+	144	· · ·
В						
С						
E						
F						
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ORDINANCE 2012 - 29

AN ORDINANCE REGULATING SIGNS WITHIN THE CITY LIMITS OF THE CITY OF BRYANT, **ARKANSAS; AND FOR OTHER PURPOSES.**

WHEREAS, the City of Bryant Arkansas desires to promote beautification efforts and promote the use of signs in the city which are safe, aesthetically pleasing, compatible with their surroundings and legible in the circumstances in which they are seen.

WHEREAS, the City of Bryant recognizes the need for a well-maintained and attractive physical appearance of the community and the need for adequate business identification for the conduct of competitive commerce.

WHEREAS, the City of Bryant desires to reduce sign or advertising distractions which may increase traffic accidents by distracting driver's attention from the roadway;

NOW BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BRYANT, ARKANSAS:

SECTION 1: Enactment of Attached Sign Ordinance Regulations.

The City Council of Bryant, Arkansas hereby approves and adopts by reference the Sign Ordinance. Said Ordinance shall be filed in the office of the City Clerk of the City of Bryant, Arkansas and from the date on which this ordinance shall take effect the provisions thereof shall be controlling within the limits of the City of Bryant and those areas in the territory subject to Bryant zoning regulations.

SECTION 2: Severability and General Repealer.

That all ordinances and part of ordinances of a permanent and general nature in effect at the time of adoption of this ordinance and not included herein, are hereby repealed where they are in conflict with this ordinance.

All Ordinances and resolutions and parts thereof in conflict herewith are hereby repealed to the extent of such conflict.

1 Page Sign Ordinance

Section 3: Emergency Clause.

An emergency is hereby declared, it being necessary to protect the health and safety of the citizens of Bryant, Arkansas such that this Ordinance shall have full force and effect immediately upon its passage.

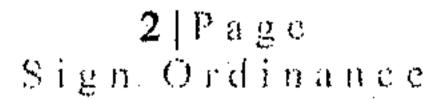
PASSED AND APPROVED THIS 27th DAY OF September , 2012, BY THE CITY COUNCIL OF BRYANT, ARKANSAS.

Jill Dabbs, Mayor

Attest:

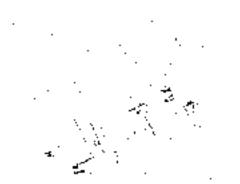
• .

Heather Kizer, City Clerk



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City of Bryant, Arkansas Community Development 210 SW 3rd Street Bryant, AR 72022 501-943-0943

SIGN PERMIT APPLICATION

Applicants are advised to read the Sign Ordinance prior to completing and signing this form. The Sign Ordinance is available at <u>www.cityofbryant.com</u> under the Planning and Community

Date: 9-19-2022

Sign Co. or Sign Owner

Development tab.

Property Owner

Note: Electrical Permits may be Required, Please contact the Community Development Office for more information.

e ser la construction de la constru

Name		Name Bryant MHC - CODSpring Point-e
Address		Address 154 QUARAW DAVE
City, State, Zip		City, State, Zip Brycunt, AR 72022
Phone		Phone 501-847-3170
Email Address		Email Address COOLS Prings & Flagship communities ·CO
GENERAL INFORMATION Name of Business <u>COO</u>	Springs Po	ivite
Address/Location of sign 5	4 Quadard D	rive Brianti Are 72022

Zoning Classification_

Please use following page to provide details on the signs requesting approval. Along with information provided on this application, a Site Plan showing placement of sign(s) and any existing sign(s) on the property is <u>required</u> to be submitted. Renderings of the sign(s) showing the correct dimensions is also <u>required</u> to be submitted with the application. A thirty-five dollar (\$35) per sign payment will be collected at the time of permit issuance. According to the Sign Ordinance a fee for and sign variance or special sign permit request shall be one hundred dollars (\$100). Additional documentation may be required by Sign Administrator.

READ CAREFULLY BEFORE SIGNING

I <u>ASNEE WMOMES</u> do hereby certify that all information contained within this application is true and correct. I fully understand that the terms of the Sign Ordinance supersede the Sign Administrator's approval and that all signs must fully comply with all terms of the Sign Ordinance regardless of approval. I further certify that the proposed sign is authorized by the owner of the property and that I am authorized by the property owner to make this application. I understand

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that no sign may be placed in public right of way. I understand that I must comply with all Building and Electrical Codes and that it is my responsibility to obtain all necessary permits.

Use table below to enter information regarding each sign for approval. Please use each letter to reference each sign rendering.

				Top of Sign	Bottom of Sign	
A	mohuming	76+181/264 66+W	51	764	164	
В	mouniment	744,8124164	51	764	15+	· · ·
С	mountherd	75+,8 425+ 6ft	51	761	164	· .
F					1 .	

Monument Tft. 81/28+ 66+ 4 74+ 51 F

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ORDINANCE 2012 - 29

AN ORDINANCE REGULATING SIGNS WITHIN THE CITY LIMITS OF THE CITY OF BRYANT, **ARKANSAS; AND FOR OTHER PURPOSES.**

WHEREAS, the City of Bryant Arkansas desires to promote beautification efforts and promote the use of signs in the city which are safe, aesthetically pleasing, compatible with their surroundings and legible in the circumstances in which they are seen.

WHEREAS, the City of Bryant recognizes the need for a well-maintained and attractive physical appearance of the community and the need for adequate business identification for the conduct of competitive dommerce.

WHEREAS, the City of Bryant desires to reduce sign or advertising distractions which may increase traffic accidents by distracting driver's attention from the roadway;

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SECTION 2: Severability and General Repealer.

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All Ordinances and resolutions and parts thereof in conflict herewith are hereby repealed to the extent of such conflict.

Page

Sign Ordinance

Section 3: Emergency Clause.

An emergency is hereby declared, it being necessary to protect the health and safety of the citizens of Bryant, Arkansas such that this Ordinance shall have full force and effect immediately upon its passage.

DAY OF September __, 2012, BY THE PASSED AND APPROVED THIS 27th CITY COUNCIL OF BRYANT, ARKANSAS.

Jill Dabbs, Mayor Attest:

Heather Kizer, City Clerk

2 Page ign Ordinance

Purpose and Scope

SECTION ONE

Purpose

Signs are an important and necessary means of communication. When properly regulated, signs can serve as a great economic and aesthetic asset. In enacting this Ordinance, it is the intent of the City of Bryant to promote commerce and the use of attractive signage, facilitate traffic safety, and to comprehensively address community aesthetic concerns about visual clutter and blight in the environment. The regulation of signs in the City is intended to cultivate an aesthetically-pleasing environment with these concerns in mind. Sign regulation shall be consistent with land use patterns, and signs shall add to, rather than detract from the architecture of the buildings where they are located. Signs shall be well maintained and, in addition, shall not create traffic safety hazards. The regulation of signs in the City of Bryant is intended to be content-neutral and to provide adequate opportunity for the presentation of messages of all kinds.

Scope

The primary intent of the Ordinance shall be to regulate signs intended to be viewed from any vehicular

or pedestrian public right-of-way.

This Ordinance shall relate signage to building design, particularly integral decorative or architectural features of buildings. This Ordinance shall not regulate official traffic or government signs, control devices or signals; the copy and message of signs; signs not intended to be viewed from a public right-ofway; product dispensers and point of purchase displays; scoreboards on athletic fields; gravestones, barber poles; religious symbols; awning signs; decorations which are seasonal, clearly incidental and customarily associated with any national, local, or religious observance; the display of street numbers; and signs not exceeding one square foot in area and bearing only property numbers, postbox numbers, or names of occupants of premises.

Applicability

No signs shall be erected or maintained in any land use district established by the City's Zoning Ordinance, except those signs specifically permitted in this ordinance. The number and area of signs as outlined in this ordinance are intended to be maximum standards.

All signage shall adhere to the guidelines and regulations detailed within this Ordinance and any and all other current laws pertaining to signage.

- **3** | P a gre Sign Ordinance

SECTION TWO

General Provisions

It shall hereafter be unlawful for any person to erect, place, or maintain a sign in the City of Bryant except in accordance with the provisions of this Ordinance.

Section 2.01 - Signs Prohibited

The following types of signs are prohibited in all districts:

- 1) Abandoned signs.
- 2) Signs imitating or resembling official traffic or government signs or signals.
- 3) Signs imitating warning signals.
- 4) Signs within Right-of-Way. No sign whatsoever, whether temporary or permanent, except erected by an official governmental agency is permitted within any street or highway right-of-way.
- 5) No signs may be painted on or attached to trees, rocks, or other natural formations, fence posts, utility poles, public benches, streetlights, or building roofs.
- 6) Portable signs. A portable sign is any signed designed to be moved easily and not permanently affixed to the ground or to a structure or building.
- 7) Off-premise/off-site signs, except as permitted by Bryant Billboard Ordinance No. 2006-42.
 8) Signs that are mounted, attached, or painted on trailers, boats or vehicles when parked to be used as additional signage on or near a business premises; and similar signs. No vehicle or trailer with advertising message mounted or painted thereon may be parked continuously for more than 15 consecutive calendar days in any zoning district, so that it becomes an advertising sign. Such vehicles or trailers parked on active construction sites or within a commercial zoning district with an approved temporary business permit for the vehicle or trailer are exempt from this regulation.

Section 2.02 - Permits Required

Unless otherwise provided by this Ordinance, all new signs shall require permits and payment of fees as described in this ordinance. No permit is required for the maintenance of a sign or for a change of copy on painted, printed, or changeable copy signs.

Section 2.03 - Signs Not Requiring Permits The following types of signs are exempt from the permit requirements but must be in conformance with all other requirements of the ordinance:

- 1) On-Premise directional signs of six (6) square feet or less
- 2) Nameplates of two (2) square feet or less, non-illuminated, attached to building or structure, or supported by a post and arm structure, 1 per occupancy
- 3) Official public safety signs/devices, traffic control devices and signals.
- 4) Window signs
- 5) Incidental signs
- 6) Signs created by landscaping by which the letters and/or symbols are composed entirely of approved landscape elements.
- 7) Sign face changes not requiring any change to the structure of a sign
- 8) A-frame signs.

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Inflatable signs less than ten (10) feet high, by ten (10) feet wide, ten (10) feet deep or one-9) thousand (1000) cubic feet. Larger inflatable signs require a permit and are allowed for a special event one time per year for a maximum of 30 days.

Blade signs. 10)

- Temporary signs. A Temporary sign is a sign that is advertising an event or special sale that is 11)
- viewable by the public for less than seven (7) days.
- Real estate signs on the premises of property for sale. 12)

Section 2.04 - Lighting

Unless otherwise prohibited by this Ordinance, all signs may be illuminated. No illuminated sign 1) shall be permitted which faces the front, side or rear lot lines of any residential lot regardless of zoning district and is located within fifty (50) feet thereof.

- Every part of the light source of any illuminated sign shall be concealed from view from vehicular 2) traffic in the public right-of-way or adjacent property. The light shall not travel from the light source directly to vehicular traffic in the public right-of-way or adjacent property, but instead shall be visible only from a reflecting or diffusing surface.
- This provision shall not apply to neon tube lighting or electronic message centers operating in 3) accordance with this ordinance.
- Backlit Illuminated Awnings Unless expressly provided otherwise in this ordinance, awning signs 4) may be illuminated, including without limitation by backlighting.
- Electronic message centers shall be illuminated in accordance with Section 2.05 of this Ordinance. 5)

Section 2.05 - Changeable Copy

Unless otherwise specified by this Ordinance, any sign herein allowed may use manual changeable copy or electronic message centers as follows:

- Electronic message centers in C-2 Commercial Zoning Districts may display animation so long as 1) flashing is not utilized.
- Electronic message centers in C-1 and C-2 Commercial Zoning Districts may display static images. 2) Such static images shall remain in place on the sign for a period of at least two seconds prior to transitioning to another static image. Frame effects shall be permitted for transition from one static image to the next so long as animation and flashing are not utilized.
- Electronic message centers are not allowed in any residential zoning district. 3) 🗄
- All electronic message centers must be equipped with automatic dimming technology which 4) automatically adjusts the sign's brightness in direct correlation with natural ambient light conditions.
- No electronic message center shall exceed a brightness level of 0.3 foot candles above ambient 5) light as measure using a foot candle (Lux) meter at a distance set by the industry standard as defined by the Outdoor Advertising Association of America.

Section 2.06 - Sign Projections from Buildings

Signs attached to and wholly supported by a building shall not project more than eight (8) feet from any building and the bottom of such sign shall not be less than ten (10) feet above the sidewalk or fourteen (14) feet above a vehicular right of way and shall not project into the public right-of-way.

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Section 2.07 - Sign Similarity to Official Signs

No sign may be placed or designed so as to simulate or interfere with traffic control devices or official highway signs.

Section 2.08 - Obstruction of Vision

No sign shall be erected on any corner lot in such a manner as to obstruct pedestrian or vehicular vision. This requirement supersedes all other setback and coverage regulations.

Section 2.09 - Interference With Utilities

No part of any sign shall be located within or over the designated safety zone of any utility easement.

Section 2.10 - Signs Viewed from Public Right of Ways

No person shall erect, fasten, or attach in any way any sign or other advertising message upon any property within the city which is facing or visible from any public street, unless legally authorized under the terms of this Ordinance. These regulations shall apply to all signs and billboards in all districts, subdivisions and zones within the City of Bryant.

Section 2.11 - Setback Requirements

No Sign shall be erected or maintained except in conformity with the following setback requirements: Front: Signs shall be set back a minimum of 10 feet from back of curb, edge of roadway surface, or 1) street right-of-way, whichever is greater.

Side: All signs shall be set back a minimum of 10 feet from the nearest side property line. 2) Exceptions: The above setback requirements shall not apply to those signs mounted on building walls lawfully sited within the setback space, when such signs otherwise conform to the provisions of this ordinance.

Section 2.12 - Sign Erection Deadline

Permits for any sign not completely erected within twelve months of date of issuance shall be void.

Section 2.13 - Inspections

All signs are subject to inspection by the Building Official or Code Enforcement, who may revoke any permit or order any sign removed upon notice and for cause as set out in Section 4.03, Section 6.07, and Section 6.08.

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SECTION THREE

Specific Requirements by Sign Type and Zoning District

- Section 3.01 Specific Requirements by Sign Type
- The following apply to specific types of signs located in the city.
- Temporary signs are allowed. Temporary signs are limited to a maximum of 32 square feet in size. 1) Signs such as banners, pennants and posters are considered temporary signs.
- Election Event Period An election event period begins 70 calendar days prior to and ends 7 2) calendar days after any public election for which the county election commission has authorized. During this event period, a lot may contain an unlimited number of temporary signs with the consent of the property owner. Property owners or their authorized agents have the right to remove unauthorized signs from their property. In no event shall signs be located in the public right-of-way.
 - Signs that are constructed, removed, destroyed or replaced shall be replaced only with a monument or ground-mounted sign which conforms to this Ordinance along the roadways listed below. Monument or ground-mounted signs shall be allowed to advertise on-premise businesses
 - and the stand of the second standard second s only.
 - A monument sign is a sign mounted directly to the ground. No poles or raised support a) structures shall be visible.
 - b) A ground-mounted sign is a permanent sign that has its supporting structure depending on the ground for attachment, and is made in such a way as to allow the supporting structure to be covered in a facade of shaped metal, brick or other durable material that matches the material encasing or surrounding the messaging area of the sign. No single pole sign, such as a telephone pole or other single wooden pole structure is allowed.
- All Signs must be maintained and kept in good repair. Signs falling into disrepair, such as falling 4) down, faded, broken, damaged, rusting, paint peeling, or tattered signs, shall be maintained and/or repaired or removed within 30 days of notice of the sign falling into disrepair. If the Director of Code Enforcement is unable to locate an owner of the sign, the Director may post the notice on the sign itself as effective notice of it falling into disrepair.
- Monument and ground-mounted signs along the following listed roadways will conform to the 5) 🗇 specifications listed in 3.01(5)(b) below:
 - a) Roadways subject to this provision:
 - Springhills and a management of a final data for a second second second second second second second second second i) -
 - Highway 5 from Commerce Drive to Springhill Road; ii)
 - iii) Hilldale Road
 - iv) Newly constructed Roads connecting to Raymar Overpass , North and South
 - Woodland Park Road **v**)
 - vi) Springhill Overpass to Woodland Park
 - vii) Prickett Road from Woodland Park to Reynolds Road
 - viii) Prickett Road
 - **Boone Road** ix)
 - Revnolds Road from Mills Park Road south to the City Limits line. X)

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xi) Mt. Carmel Road xii) Brandon Road

The signage on roadways listed above are subject to the following specifications: **b**} :

Lots or developments on less than 5 acres in size:

1. Monument or ground-mounted sign may not exceed 8 feet in height and 64 sq ft. ii) Lots or developments on property more than 5 acres, but less than 20 acres

1. Monument or ground-mounted sign may not exceed 10 feet in height and 100 sq. ft. iii) Lots or developments on property 20 acres or more in size:

1. Monument or ground-mounted sign may not exceed 12 feet in height and 144 sq. ft. Signs in Coordinated Shopping Center:

- Each Coordinated Shopping Center may have one free-standing identification sign for each **a**}_ street frontage.
- Additionally, each Center may have one directory sign, not exceeding 35 feet in height. **b**} Individual tenants in the Center may each have business identification signs mounted on their façade; total sign area shall not exceed two square feet for each one linear foot of building facade fronting the public street or parking area.

Signs in commercial cul-de-sacs: A commercial subdivision forming a cul-de-sac for individual 7) commercial lots may have a directory sign located at the entrance to the cul-de-sac. Such sign shall not exceed 35 feet in height and shall be located in a manner which does not restrict the view of

- traffic entering or exiting the subdivision.
- Banners: 8)

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6)

- a) An unlimited number of banners may be affixed to buildings, subject to aggregate signage permitted by the zoning district.
- b) All banners must be securely-affixed and kept in a safe, neat, and legible condition; banners shall not fall into disrepair. Banners falling into disrepair are subject to section 3.01(4) above.

Section 3.02 - Signs permitted in Residential "R" Districts

Signs placed in residential districts, shall conform to the following regulations.

- One sign which does not exceed two square feet in area is allowed and no permit is required. 1)
- Signs larger than two square feet but less than 32 square feet may be permitted by special permit. 2} process for such non-residential uses.
- One additional nameplate sign, not to exceed two square feet in area, is allowed without permit 3) for a dwelling group of four or more units to identify the building or as an occupant directory. Temporary signs advertising a new subdivision of five or more lots are allowed by permit for up to 4) one year. Such signs may not exceed 60 square feet in aggregate surface area, and can be no more than 15 feet in height, nor less than two feet above ground. Signs may be erected only at dedicated street entrances. If lots are not sold in one year, the contractor may request additional time to display the temporary sign from the Director of Code Enforcement or his designee. The request must be submitted in writing with a specified date for construction of permanent signage and removal of the temporary sign.

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Section 3.03 - Signs in Commercial C-1 District Signs placed in the C-1 district shall conform to the following regulations.

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- All signs permitted in the Residential Districts are allowed in Commercial Districts. 1)
- Signs mounted on the building walls are permitted subject to a limit of one sign not exceeding one 2) square foot per each one linear foot of building facade. Each exposed building wall may have one such wall-mounted facade sign.
- 3) Blade signs are allowed. A blade sign cannot exceed a total of five square feet of signage per side, must have at least six inches between the building wall and the edge of the sign nearest the building, and cannot project more than forty-two inches from the building wall on which it is mounted.
- Free standing signs are permitted subject to the following: 4)
 - Except as otherwise allowed in subsection 3.03(5) below, only one sign per lot or **a**) : commercial street frontage where adequate lot size permits the sign to be located at least 10 feet from edge of curb, street surface, or right-of-way, whichever is greatest.
 - Sign height shall not exceed 20 feet, and sign shall be constructed to provide at least 10 feet b) of visual clearance from bottom of sign to lot surface.
- The maximum aggregate surface area of all permitted signs for any establishment fronting one 5) street shall not exceed 200 square feet. In the case of a corner lot fronting on two public streets, a business may display one sign on each street frontage and will be allowed to add an additional 75 square feet to the total maximum aggregate surface area of permitted signs, to be used only for signs on one of the street frontages. No single sign may utilize more than 50% the total maximum aggregate surface footage allowed under this ordinance.
- Pole signs will be spaced no closer than 60 feet from any other pole sign. **6)**-
- The specific surface area of commercial signs displaying gasoline prices only shall be exempt from 7) calculations of the total aggregate surface area.
- Internal businesses and brands contained within a host business are allowed exterior signage. Sign 8) area utilized by the internal business/brand shall be deducted from the sign area allowed for the host business sign area.

Section 3.04 - Signs in Commercial C-2 Districts

Signs placed in C-2 districts shall conform to the following regulations.

- All signs permitted in the Residential Districts are allowed in Commercial Districts
- One façade sign is allowed per business. This sign shall not exceed two square foot for each one 2) linear foot of building facade fronting a public street, and is to be mounted on the building wall. For businesses on corner lots, side walls facing public streets may have one additional facade sign
 - subject to the same restrictions noted in this paragraph.
- Blade Signs are allowed. A blade sign cannot exceed a total of five square feet of signage per side, 3) must have at least six inches between the building wall and the edge of the sign nearest the building, and cannot project more than forty-two inches from the building wall on which it is mounted.
- Free Standing signs are permitted subject to the following: 4) 👘
 - Except as otherwise allowed in subsection 3.04(5) below, only one sign per lot or a) 🐰 commercial street frontage where adequate lot size permits sign to be located at least 10 feet from edge of curb, street surface, or right-of-way, whichever is greatest.
 - Sign height shall not exceed 25 feet or height of building whichever is less. Sign shall be b) constructed to brovide at least 10 feet of visual clearance from bottom of sign to lot surface.

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- The maximum aggregate surface area of all permitted signs for any establishment shall not exceed 5) 300 square feet. In the case of a corner lot fronting on two public streets, a business may display one sign on each street frontage and will be allowed to add an additional 100 square feet to the total maximum aggregate surface area of permitted signs, to be used only for signs on one of the street frontages. No single sign may utilize more than 50% the total maximum aggregate surface footage allowed under this ordinance.
- Pole signs will be spaced no closer than 60 feet from any other pole sign. 6)
- The specific surface area of commercial signs displaying gasoline prices only shall be exempt from 7) calculations of the total aggregate surface area.
- Internal businesses and brands contained within a host business are allowed exterior signage. Sign 8) area utilized by the internal business/brand shall be deducted from the sign area allowed for the host business sign area.

Section 3.05 - Signs in the Airport Industrial District

Signs in the Airport Industrial District are governed by the regulations established specifically for that district.

Section 3.06 - Signs in Planned Unit Development, (PUD) Districts

All signs in the PUD districts shall be submitted for review and approval as part of the PUD approval process.

SECTION FOUR

Nonconforming Signs

Section 4.01 - Determination of Legal Nonconformity

- A nonconforming sign is any permanent sign that was legally established and maintained in 1) compliance with the provisions of all applicable laws in effect at the time of original installation but that does not comply with the provisions of this sign ordinance as of the date this ordinance is adopted.
- A nonconforming sign, as defined above, shall be allowed continued use, except that the sign shall 2) not be expanded, moved, or relocated, except in the case of street relocation. A nonconforming sign shall be allowed continued use even if ownership of the property changes.

Section 4.02 - Loss of Legal Nonconforming Status

A legal nonconforming sign shall lose this designation in the following instances:

When the sign is intentionally damaged or destroyed or fails to observe the following restrictions 1) in cases of unintentional damage or destruction:

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If the sign face is unintentionally damaged or destroyed, the face may be replaced. The sign a} face supporting structure may be temporarily placed on the ground in order to replace the sign face or service the structure.

- b) If the structural components of the sign including the face structure is damaged or destroyed, the structure and face may be replaced with a new face and structure not to exceed the size, height or location of the established nonconforming sign.
- 2) When the size of the sign is altered in any way, except toward compliance with this ordinance, it will lose its legal nonconforming status. This does not refer to change of copy, face of the sign, or normal maintenance. Normal maintenance does not include the replacement of structural elements.
- 3) When the sign(s) advertising a building/development contains the majority of the businesses/tenants and the building/development undergoes major redevelopment such as demolition or expansion requiring a building permit. Exceptions:
 - a) A remodel of an existing building will not cause the loss of legal non-conformity.
 b) The construction of an additional building on the same property shall not cause the loss of
 - legal non-conformity.
- 4) When the sign is expanded, moved, or relocated, except in the case of street relocation.

Section 4.03 - Maintenance and Repair of Nonconforming signs

The legal nonconforming sign is subject to all requirements of this code regarding safety, maintenance, and repair. If a non-conforming sign is found to advertise a business that has been discontinued for ninety (90) days or more and the business' signs have been abandoned and/or fallen into disrepair (disrepair means broken, cracked, vandalized, torn, rotten, faded, faulty, defective, rusty or otherwise unsightly), the owner will be notified and if the condition(s) is not corrected within thirty (30) days, the sign will lose legal non-conforming status and shall be required to be removed.

SECTION FIVE

Construction Specifications and Maintenance Section 5.01 - Construction Specifications Every sign, all parts, portions, and materials shall be manufactured, assembled, and erected in

compliance with all applicable state, federal, and city regulations, building and electrical codes.

Section 5.02 - Construction and Maintenance

Every sign, including those specifically exempt from this ordinance in respect to permits and permit fees, and all parts, portions and materials shall be maintained and kept in good repair. The display surface of all signs shall be kept clean, neatly painted, free from rust corrosion and well maintained. If a sign is found to advertise a business that has been discontinued for ninety (90) days or more and the business' signs have been abandoned and fallen into disrepair the owner will be notified and if the condition(s) is not corrected within thirty (30) days, the sign shall be required to be removed.

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SECTION SIX

Administration and Enforcement

Section 6.01 - Director of Code Enforcement

All sign permits shall be issued by the Director of Code Enforcement or his/her designee following design review and approval from the Development Review Committee.

The Director of Code Enforcement or his/her designee is empowered, upon presentation of proper credentials, to enter or inspect any building, structure, or premises in the City for the purpose of inspection of a sign and its structural and electrical connections to ensure compliance with all applicable codes and ordinances. Such inspections shall be carried out during business hours unless an emergency exists.

Section 6.02 - Application for Permits

Application for a permit for the erection or relocation of a sign shall be made on a form provided by the Code Enforcement.

Section 6.03 - Permit Fees

Sign permits filed with the Code Enforcement shall be accompanied by a payment of the initial permit fee for each new sign as required by the ordinance. The fee shall be thirty five dollars (\$35) per sign.

Section 6.04 - Issuance and Denial

The Director of Code Enforcement or his/her designee shall issue a permit for the erection, structural alteration, or relocation of a sign provided that the sign complies with all applicable laws and regulations of the City. In all applications, where a matter of interpretation arises, the more specific definition or higher standard shall prevail. When a permit is denied, the Director of Code Enforcement shall give a written notice to the applicant along with a brief statement of the reasons for denial, citing code sections and interpretation of possible nonconformity. The Code Enforcement may suspend or revoke an issued permit for any false statement or misrepresentation of fact in the application.

Section 6.05 - Inspection Upon Completion

Any person installing, structurally altering, or relocating a sign for which a permit has been issued shall notify the Code Enforcement upon completion of the work. The Director of Code Enforcement may require a final inspection, including an electrical inspection and inspection of footings on freestanding signs.

The Director of Code Enforcement may require at the time of issuance of a permit that written notification for an inspection be submitted prior to the installation of certain signs.

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Section 6.06 - Variances and Special Permits for Signs 1) Variances A variance for height, location, type, etc. may be requested.

Requests for sign variances shall be in writing and shall be submitted along with the sign application. Such request shall demonstrate that special conditions or circumstances exist that are not applicable to other lands, structures, or buildings such that a literal interpretation of the ordinance would result in an undue hardship.

The Planning Commission shall review the request to determine if the variance should be granted.

If the Planning Commission should also decide to grant the variance, the variance shall be considered granted.

If the Planning Commission denies the variance or takes no action on the request within 30 days following the variance request appearing on its agenda, the variance shall be deemed denied. The applicant may then appeal the decision to the City Council. The appeal must be submitted to the Planning Department no less than thirty (30) working days from the date of the Planning Commission's decision or the deemed denied date whichever may apply. In order to be placed on the City Council agenda, the appeal must be submitted no less than eleven (11) days prior to the City Council meeting. If the decision is appealed but it is within the 11 days prior to the next City Council meeting, it shall be placed on the following month's regularly scheduled City Council meeting agenda.

A variance may be granted only when the requirements noted above have been met. Planning Commission or City Council shall grant only the minimum variance required to make possible the variance request, provided that such variance will be in harmony with the general purpose and intent of the ordinance and will not be injurious to the neighborhood or otherwise detrimental to the public welfare.

Special Sign Permit: 2}

In certain circumstances, special sign permits may allow additional signs, sign area and directional message center signs. A special sign permit may be approved by the Planning Commission if the Commission deems a special circumstance exists which warrants the signage requested.

The following criteria shall be used in the review and approval of requests:

- (a) Conditions exist which are unique to the property or type and size of development, which would cause hardship under a literal interpretation of the sign code.
- The proposed sign will not adversely affect other signs in the area. (b)
- The proposed signs will not be detrimental to properties located in the vicinity. (c)
- The proposed sign will not obscure fire hydrants, traffic signs or traffic signals, block (d) motorists' line of sight, or otherwise inhibit or interfere with vehicular or pedestrian traffic.

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Approval of the special sign permit will not constitute a grant of special privileges which is (e) i inconsistent with the limitations placed upon other properties in the vicinity having similar circumstances.

The Planning Commission may attach any additional requirements necessary to maintain the intent and purpose of the sign ordinance, in the interest of the public.

An application for special sign permit shall be accepted by the Planning Commission at a regularly scheduled meeting along with the payment of the application fees. A public hearing shall be scheduled for the next regularly scheduled meeting date of the Planning Commission.

Fee for Sign Variance: 3)

The fee for any sign variance or special sign permit request shall be one hundred dollars (\$100).

Section 6.07 - Violations

In cases of emergency, the Director of Code Enforcement or his designee may cause the immediate removal of a dangerous or defective sign without notice. Signs removed in this manner must present a hazard to the public safety as defined in the local building or traffic codes.

In cases of illegal signs placed in the public right-of-way, or if banners or temporary signs become faded, worn or tattered; or have become detached from the structure designed to support the signage, the Director of Code Enforcement or his designee may cause immediate removal of the sign without notification of the owner of the sign.

Section 6.08 - Removal of Signs by the Director of Code Enforcement

Signs located within the public right-of-way or which fail to comply with the written orders of removal or repair are subject to removal, the Director of Code Enforcement or his designee may order removal of the sign in question. After removal, a notice shall be mailed to the sign owner stating the nature of the work and the date on which it was performed and demanding payment of the costs as certified by the Director of Code Enforcement or his designee. Alleged violators shall have sixty (60) days from the date of said notice in which to appeal to the Planning Commission. If the amount specified in the notice is not paid within sixty (60) days of the notice and no appeal to the Planning Commission has been formally lodged, it shall become an assessment upon a lien against the property of the sign owner, and will be certified as an assessment against the property together with a ten percent (10%) penalty for collection in the same manner as the real estate taxes

The owner of the property upon which the sign is located shall be presumed to be the owner of all signs thereon unless documented facts to the contrary are brought to the attention of the Director of Code Enforcement or his designee, as in the case of a leased sign. For purposes of removal, the definition of sign shall include all embellishments and structures designed specifically to support the sign.

Removed signs shall be stored at a location designated by the sign Director of Code Enforcement or his designee pending return to the owner(s). Signs will be stored in such a manner as to minimize damage

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to them. The sign Director of Code Enforcement or his designee will notify the owner of all removal costs and the procedures for retrieving the removed sign(s).

Temporary signs located within the street right-of-way will be removed without notice and stored for 30 days pending return to owners.

Section 6.09 - Penalties

Any person who fails to comply with the provisions of the Ordinance within ten (10) days after a notice by the Director of Code Enforcement or his designee may be subject to a fine of \$25 per day, per occurrence that the violation continues.

SECTION SEVEN

Conflict, Severability, and Effective Date

Section 7.01 - Conflict

If any portion of this code is found to be in conflict with any other provision of any zoning, building, fire, safety, or health ordinance of the City code, the provision which establishes the stricter standard shall prevail.

Section 7.02 - Severability

If any section, subsection, sentence, clause, or phrase of this code or its application to any person or circumstance is held invalid by the decision of any court of competent jurisdiction, the remainder of this code, or the application of the provision to other persons or circumstances is in effect and shall remain in full force and effect.

Section 7.03 - Effective Date

This code shall take effect and be in force upon passage of the Ordinance.

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Section Seven: Conflict, Severability and Effective Date

- 7.01 Conflict
- 7.02 Severability
- 7.03 Effective Date

I. Section One: Purpose and Scope

1.01 – Intent, Scope, and Applicability

The scope of this Ordinance shall be to regulate signs intended to be viewed from any vehicular or pedestrian public right-of-way or public/private fire apparatus road. These regulations are intended to regulate signs in a manner that balances the right of free speech through sign display against the competing public and governmental interests in community aesthetics, safety, prevention of sign clutter and visual pollution, and other negative effects associated with excessive and/or improper signage.

These regulations shall be supplemented by additional ordinances and regulations established by the City of Bryant including the: Heart of Bryant Area Development Code and any other applicable ordinances as may be established. In the event of a conflict between these regulations and others, the most stringent regulations shall apply.

1.02 - Purpose

Signs are an important and necessary means of communication. When properly regulated, signs can serve as a great economic and aesthetic asset. This Article provides standards for the installation and maintenance of signs. All signs shall be installed and maintained in accordance with this Article, as applicable. The general purpose of these standards is to promote, preserve, and protect the health, safety, general welfare, convenience, and enjoyment of the public as well as to prevent the degradation of the aesthetic quality of Bryant, and to achieve the following:

A. Safety

To promote the safety of persons and property by providing that signs:

- 1. Do not create a hazard due to collapse, fire, collision, decay, abandonment, or other safety considerations;
- 2. Do not obstruct firefighting, police, and private security surveillance;
- 3. Do not create traffic hazards by confusing or distracting motorists;
- 4. Do not impair the motorist's ability to see pedestrians, obstacles, other vehicles, or to read traffic signs and signals;
- 5. Do not cause hazardous or unsafe driving conditions for motorists due to their lighting or visual motion; and,
- 6. Do not otherwise interfere with or detract from the safety of persons or property.

B. Communications Efficiency

To promote the efficient transfer of information in sign messages providing that:

- 1. Customers and other persons may identify and locate a business, establishment, or service;
- 2. No person or group is arbitrarily denied the use of the sight lines from the public right-of-way for communication purposes; and,
- 3. The messages in signs may otherwise be communicated efficiently.

C. Landscape Quality and Preservation

To protect the public welfare and to enhance the appearance and economy of the city, by providing signs that:

- 1. Do not unreasonably interfere with scenic views;
- 2. Do not create a nuisance to persons using the public rights-of-way;
- 3. Do not constitute a nuisance to occupancy of adjacent property by their brightness, light glare and reflection, size, height, movement, or visual movement;
- 4. Are not detrimental to land or property values;
- 5. Do not overwhelm people by the number of messages presented, and do not interfere with the exercise of freedom of choice to observe or ignore said messages, according to the observer's purpose;
- 6. Do not create or worsen visual clutter or visual blight;
- 7. Do not cover or blanket any prominent view of a structure or façade of historical or architectural significance;
- 8. Do not obstruct views of users of adjacent buildings to side yards, front yards, or to open space;
- 9. Are compatible with the fabric of existing neighborhoods and do not impose a foreign or inharmonious element to an existing skyline;
- 10. Contribute to the special character of particular areas or districts within the city, helping the observer to understand the city and be oriented within it;
- 11. Protect and preserve a quality landscape in the city; and
- 12. Otherwise enhance the appearance and economy of the city.

1.03 - Authority

This Ordinance is adopted under the authority conferred on the City of Bryant by the General Assembly of the State of Arkansas by the A.C.A. § 14-56-401 through § 14-56-426.

II. Section Two: General Provisions

2.01 - General

It shall be illegal for a person or entity to install, place, modify, move, or maintain a sign within the City of Bryant except in accordance with the regulations of this Ordinance. These regulations establish the minimum standards for the installation, construction, and maintenance of signage. The number and area of signs as outlined in these regulations are intended to be maximum standards. These regulations shall not apply to any signage which is not directly viewable from a public street, alley, trail, or publicly accessible fire-apparatus road. Signs shall only be permitted upon lots/parcels or buildings which are not vacant and occupied by a conforming or nonconforming primary use.

- 2.02 Signs Prohibited The following types of signs are prohibited in all districts:
 - A. Abandoned signs.
 - B. Signs imitating or resembling official traffic or government signs or signals.
 - C. Signs imitating warning signals.
 - D. Signs within Right-of-Way. No sign whatsoever, whether temporary or permanent, except erected by an official governmental agency is permitted within any street or highway right- of-way or City of Bryant public easement.
 - E. No signs may be painted on or attached to trees, rocks, or other natural formations, fence posts, utility poles, public benches, streetlights, or building roofs.
 - F. Portable signs. A portable sign is any sign designed to be moved easily and not permanently affixed to the ground or to a structure or building.
 - G. Off-premise/off-site signs, except as permitted by Bryant Billboard Ordinance No. 2006-42.
 - H. Signs that are mounted, attached, or painted on trailers, boats or vehicles when parked to be used as additional signage on or near a business premises; and similar signs.
 - 1. No vehicle or trailer with advertising message mounted or painted thereon may be parked continuously for more than fifteen (15) consecutive calendar days in any zoning district, so that it becomes an advertising sign.
 - 2. Exception Such vehicles or trailers parked on active construction sites or within a commercial zoning district with an approved temporary business permit for the vehicle or trailer are exempt from this regulation.

2.03 – Permit Requirement and Application

Except where explicitly exempted from permitting requirements by this Ordinance, no sign may be erected, transferred, rebuilt, changed, or structurally altered unless a permit has been issued by the Administrative Official or his/her designee. Addition or modification of illumination of any existing sign which changes the form or intensity of the sign's lighting shall require a sign permit.

Maintenance of existing signs, including change of copy, painting of support structures, and same for same exchange of lighting elements shall not require a sign permit. Sign design changes or structural alteration of a sign or sign support structure shall not be considered maintenance.

A. Applications

Application for a sign permit shall be made by means provided by the City of Bryant and shall contain at least the following:

- 1. Applicant Information. Name and address of the applicant and/or contractor.
- 2. Location Information. Street address and/or location of the property where the signage will be located.
- 3. Property Owner/Authorized Agent. Name and address of the property owner of the sign location along with proof the applicant is an authorized agent of the property owner, if the applicant is not the property owner.
- 4. Scaled Site Plan. A scaled site plan showing the location(s) of the signage on the property or building and showing street right-of-way, property lines, and easements as well as relationship to major site features such as buildings, parking, etc. For wall signs, provide dimension of walls and all walls signs (including windows) on the affected building elevation(s).
- 5. Scaled Sign Drawing. A scaled drawing(s) of the signage showing the design and including dimensions of the sign height, area, design, content, and dimensions of the sign as well as the design and dimensions of any measures used to support the sign or used to affix the sign to a wall, window or the ground.
- 6. Materials List and Illumination Design. Indication of materials used for the signage along with details/design on how the sign will be illuminated.
- 7. Sign Calculations. Computation of the total sign area, the area of each individual sign, the height of each sign, and the total number and size of existing and proposed signs on the site or structure.
- 8. Structural Plans. Structural design plans developed by a licensed professional engineer shall be required for any sign with a support structure exceeding twenty (20) feet tall.
- 9. Other Information. Other information as required by the Administrative Official or his/her designee that is reasonably necessary to demonstrate compliance with these regulations.

B. Application Approval and Issuance

The Administrative Official or his/her designee shall be charged with review of all sign permit applications based upon provisions of this Ordinance and other applicable regulations. Review shall be completed within thirty (30) days from receipt of the completed application, including all fees. A decision must be rendered to approve, deny, or provide notice of deficiencies in the application by the end of this thirty (30) day review period. A notice of deficiencies in the application will be provided in writing to the applicant. Any application which is amended or corrected within sixty (60) days of receipt of a notice of deficiencies in the application shall not be charged an additional sign review fee. An application shall only be approved when full compliance of the application with these regulations is demonstrated. False statements or misrepresentations of facts in the application may constitute grounds for denial of an application. For any application which is denied, a written explanation of denial will be provided to the applicant upon request.

<u>C. Fee</u>

Fees shall be submitted and paid prior to review of the application. All fees are non-refundable. The fee shall be set in accordance with a schedule of fees adopted by the City Council. If no schedule of fees is adopted, following adoption of these regulations, the fee shall be fifty dollars (\$50) per sign. Unpermitted work completed prior to approval of a sign permit shall be assessed a one-hundred fifty-dollar (\$150) fee payable prior to issuance of a sign permit for any subsequent work. All fees shall be in addition to any applicable state trade fees.

D. Inspection and Expiration

The person or contractor completing the work covered under the permit shall notify the Administrative Official or his/her designee after completion of work. A final inspection, in addition to any footing or electrical inspections, shall be required to confirm compliance with the terms of the sign permit. All work covered under a sign permit shall be completed within twelve (12) months of the date of issuance of the permit, or the permit shall become void and null. The Administrative Official may revoke any permit or order any sign removed upon notice and for cause as set out in this Ordinance.

2.04 - **Signs Not Requiring Permits** - The following types of signs are exempt from the permit requirements but must be in conformance with all other requirements of the ordinance:

- A. Temporary Signs.
- B. Signs less than two (2) square feet in size that are non-illuminated and attached to a building or structure or supported by a post and arm structure, limited to one (1) per building.
- C. Governmental signs and official public signs, including but not limited to, wayfinding signs, public notice signs, required postings by state/federal/local law, safety signs, danger signs, or traffic signs.
- D. Window signs.
- E. Incidental signs less than four (4) square feet in size.
- F. Markers located at historic sites which are recognized by local, state, or federal authorities.
- G. A-Frame signs.
- H. Signs created by landscaping and comprised only of vegetation.
- I. Handheld signs displaying protected noncommercial messages.

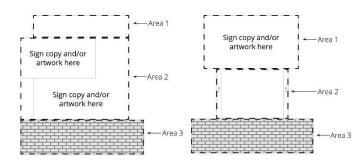
III. Section Three: Policies, Rules of Interpretation, and Standards

3.01 – Message Neutrality - This Ordinance is not intended to regulate signs in a manner that favors commercial speech over noncommercial speech. A noncommercial message may, in whole or in part, substitute a commercial message on any sign, provided all requirements of this Ordinance and other applicable regulations are met. This Ordinance is not intended in any way to regulate the message or content of any form of temporary signage.

3.02 – On-Premise/Off-Premise Distinction - The distinction between on-premise and off-premise signage applies only to permanent signage with a commercial message. It does not apply to noncommercial messages or temporary signs.

3.03 - Sign Area Measurement -

When calculating the surface area of any sign, a maximum of three (3) distinct and abutting "Areas" made up of squares or rectangles may be used to encompass the extreme limits of the writing, representation, emblem, or other display, together with any



material or color forming an integral part of the background of the display or used to differentiate the sign from the backdrop or structure against which it is placed. The minimum size for an "Area" is one square foot. Calculations shall be based upon measuring the largest sign face. No more than two (2) sign faces shall be permitted. Calculations shall not include the pole support structure for signs exceeding ten (10) feet in height.

3.04 – Height - When determining height, the average established ground level beneath the sign shall be used for measurement. Where the elevation of a street curb or sidewalk is higher than the average established ground level, height shall be measured from the elevation of the street curb or sidewalk. Any berm or fill greater than one (1) foot tall placed at the base of the sign shall not be considered the average established ground level.

3.05 - Setback Requirements

- A. No Sign shall be erected or maintained except in conformity with the following setback requirements:
 - 1. Front: Signs shall be set back a minimum of ten (10) feet from back of curb, edge of roadway surface, or street right- of-way, whichever is greater.
 - 2. Side: All signs shall be set back a minimum of ten (10) feet from the nearest side property line

B. Exceptions: The above setback requirements shall not apply to those signs mounted on building walls lawfully sited within the setback space, when such signs otherwise conform to the provisions of this ordinance.

3.06 - Lighting

- A. Unless otherwise prohibited by this Ordinance, all signs may be illuminated. No illuminated sign shall be permitted within which faces the front, side, or rear lot lines of any residential lot regardless of zoning district and is located within fifty (50) feet thereof.
- B. Every part of the light source of any illuminated sign shall be concealed from view from vehicular traffic in the public right-of-way or adjacent property. The light shall not travel from the light source directly to vehicular traffic in the public right-of-way or adjacent property, but instead shall be visible only from a reflecting or diffusing surface.
- C. This provision shall not apply to neon tube lighting or electronic message centers operating in accordance with this Ordinance.
- D. Backlit Illuminated Awnings- Unless expressly provided otherwise in this Ordinance, awning signs may be illuminated, including without limitation by backlighting.

3.07 - Changeable Copy - Unless otherwise specified by this Ordinance, any sign herein allowed may use manual changeable copy or electronic message centers as follows:

- A. Electronic message centers in C-2 Commercial Zoning Districts may display animation so long as flashing is not utilized.
- B. Electronic message centers are not allowed in any residential zoning district.
- C. All electronic message centers must be equipped with automatic dimming technology which automatically adjusts the sign's brightness in direct correlation with natural ambient light conditions.
- D. No electronic message center shall exceed a brightness level of 0.3 foot candles above ambient light as measured using a foot candle (Lux) meter at a distance set by the industry standard as defined by the Outdoor Advertising Association of America.

3.08 - **Sign Projections from Buildings** - Signs attached to and wholly supported by a building shall not project more than eight (8) feet from any building and the bottom of such sign shall not be less than ten (10) feet above the sidewalk or fourteen (14) feet above a vehicular right of way and shall not project into the public right- of-way.

3.09 - **Sign Similarity to Official Signs** - No sign may be placed or designed so as to simulate or interfere with traffic control devices or official highway signs.

3.10 - **Obstruction of Vision** - No sign or sign landscaping may be installed in a manner to obstruct vision of pedestrian and vehicular traffic at street intersections, driveways, alleys, or publicly accessible fire apparatus roads.

No sign or sign landscaping in excess of two (2) feet in height may be installed in a clear view zone. Clear view zones areas are measured from the point of intersection of lines that extend along the edge of pavement at intersections between streets or publicly accessible fire apparatus roads and another street, another publicly accessible fire apparatus road, driveway, or alley. See clear view zone figure.

Pavement edge

The measurements for clear view zones shall be as follows:

- A. Street/publicly accessible fire apparatus road to street/publicly accessible fire apparatus road intersections: Thirty (30) feet.
- B. Driveway/alley and street/publicly accessible fire apparatus road: Twenty (20) feet.

3.11 - Interference with Utilities - No part of any sign shall be located within or over the designated safety zone of any City of Bryant water, sewer, and drainage easement.

3.12 – **Maintenance Standards** - Every sign, including those specifically exempt from this ordinance in respect to permits and permit fees, and all parts, portions, and materials shall meet these maintenance standards.

- A. All sign(s)/sign support structures and premises surrounding the same shall be maintained in a clean, sanitary condition free and clear of all rubbish and weeds.
- B. All sign(s)/sign support structures shall be kept in compliance with all building and electrical codes, in conformance with the requirements of this Ordinance.
- C. All sign(s)/sign support structures shall be kept free of deterioration, breakage, termite damage, rot, corrosion, rust, or loosening. All paint and materials shall be kept free of cracking, peeling, or fading.

3.13 – Abandonment - Abandoned signs shall be required to be removed. For signs which are legally permitted and conforming, removal shall consist of removal of any sign message. Signs which are legally nonconforming or otherwise nonconforming, removal shall consist of total removal of the sign including all sign support structures.

Excluding billboards, a sign shall be considered abandoned when the building or lot/parcel upon which the sign is located is no longer occupied and vacant or actively being marketed for sale or lease for a period of more than ninety (90) consecutive days.

IV. Section Four: Specific Requirements by Sign Type and Zoning District

4.01 – Signs Allowed in Planned Unit Developments or Other Special Districts - Sign requirements for districts not covered by these regulations including Planned Unit Developments (PUDs) and other forms of special zoning shall be established by the document or regulations created for the development or district. If not established for the development or in the regulations pertaining to the special district, an applicant may petition for the development or district to be treated similarly to one or more of the districts contained in this Ordinance. The Administrative Official shall make a written determination pertaining to the request based on the similarity of the development or district(s) to one or more of the districts in this Ordinance. If the Administrative Official denies the petition, the applicant may request an appeal of a decision of the Administrative Official.

4.02 – Aesthetic Corridors and Interstate Sign Zone

A. <u>Aesthetic Corridors</u>

Freestanding or pole signs that are constructed, removed, destroyed or replaced shall be replaced only with a monument or ground-mounted sign when the building or parcel/lot is located with lot frontage and/or obtains access via driveway or publicly accessible fire apparatus road along the roadways listed below. Such signs shall meet all other regulations.

- 1. Springhill Road
- 2. Hilldale Road
- 3. Bryant Parkway

- 4. Woodland Park
- 5. Springhill Overpass to Woodland Park
- 6. Prickett Road from Woodland Park to Reynolds Road
- 7. Prickett Road
- 8. Boone Road
- 9. Reynolds Road from Mills Park Road, South to City Limits line.
- 10. Mt. Carmel Road
- 11. Brandon Road
- B. Interstate Sign Zone
 - 1. Freestanding or pole signs must be located in C-3 zoning and be 100 feet from the residentially zoned property.
 - 2. Freestanding or pole signs within five hundred (500) feet of the centerline of the median of Interstate 30 shall not exceed seventy-five (75) feet in height and two hundred (200) square feet in size.
 - 3. Freestanding or pole signs within seven hundred fifty (750) feet of the centerline of the median of Interstate 30 shall not exceed fifty (50) feet in height and one hundred fifty (150) square feet in size.

4.03 – Temporary Sign Tablentensity Commercial/Office Zoning Districts

Sign Type	Form	Limitations (Where Permitted)	Residential Zoning Districts - R-1, R-1.S, R- 2, R-E, R-M	Residential Zoning District - Multi-Family Devlopment	Residential Zoning District - Non- Residential Use	Office and Quiet Commerical District O-1	Low Intensity Commercial District C-1	General Commerical Zoning District C-2	Outdoor Display Commerical District C-3
Temporary Signs									
	Construction Signs	When a building or parcel/lot is under construction or renovation	P Max. 2 per Builidng or Parcel/Lot, Max. area: 48 sq. fl. each	P Max. 2 per Builidng or Parcel/Lot, Max. area: 48 sq. ft. each	P Max. 4 per building or Pacel/Lot, Max. area: 64 sq. ft. each				
	Real-Estate Signs	Number Allowed: 1 per frontage and/or 1 per tenant lease space	P 1 additional sign allowed for no more than 36 hours when the property is open to the public. 6 sq. ft. Max. area, Max Height: 6ft	P 1 additional sign allowed for no more than 36 hours when the property is open to the public, 6 sq. ft. Max, area, Max Height: 6ft	Ρ	Ρ	Ρ	Ρ	Ρ
	Temporary Signs During Election	Display Time Duration: 70 calendar days prior or 7 days following any federal, state, or local election authorized by the Saline County Election Commission and held in the City of Bryant.	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ
	Garage, Yard, or Estate Sale Signs	Number Allowed: 1 per frontage. Installation: Ground mounted on a stake or wire frame.Maximum Size and Height: 6 sg. ft. and 4 ft. tail. Time Duration: No more than 48 hours.	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ	Ρ
	A-frame Signs	Number Allowed: 1 per building. Maximum Size and Height: 6 sq. ft. and 3ft. tail. Must maintain a 5 ft. clearance for pedestrians.	x	x	Ρ	Ρ	Ρ	Ρ	Ρ
	General Temporary Signs	Number Allowed: 1 per building or parcelliot. Maximum Stez and Height: 32 sq. ft. and 6 ft. tall. Signs such as banners, perinants, and positers are considered temporary signs.	x	x	Ρ	Ρ	P	Ρ	Ρ

4.04 – Sign Table

Sign Type	Form	Limitations (Where Permitted)	Residential Zoning Districts - R-1, R-1.S, R- 2, R-E, R-M	Residential Zoning District - Multi-Family Devlopment	Residential Zoning District - Non- Residential Use	Office and Quiet Commerical District O-1	Low Intensity Commercial District C-1	General Commerical Zoning District C-2	Outdoor Display Commerical District C-3
Address Sign		Max.1 freestanding sign per	Р	Р	Р	Р	Р	P	Р
Free Standing Signs		frontage.							
	Monument/Ground-mounted Signs		P Max. 1 sign per frontage external to the subdivions or neighborhood.48 sq. ft. Max. 6ft tail. Settack: May be placed at the property line, provided it does not extand into the clear view zone or easement.	Max. 1 sign per frontage external to the multi- famity development. Maximum Size and Height: 36 ag. 1t. each and 6 ft. tall.	P Max. 1 Sign, Maximum Size and Height: 48 sq. ft. and 6 ft. tail. Setback: May be placed at the property line, provided it does not extend into the clear view zone or easement	P Max Size 64 sq. ft. Max. Height 8 ft.	P Max Size 64 sq. ft. Max. Height 8 ft.	P Max. Size 80 sq. ft. Max. Height 10 ft.	Max. Size 96 sq. ft. Max. Height 12 ft.
	Pole Signs		x	x	x	x	x	P Maximum Size and Height Aesthetic Carridor: 80 sq. ft. each and 10 ft. tall. All Others: 100 sq. ft. each and 25 ft. tall.	P Maximum Size and Height Aesthetic Corrider: 96 sq. ft. each and 12 ft. tall. All Others: 120 sq. ft. each and 30 ft. tall.
	Changeable Copy (Electronic Message Centers)	"See Section 3.07	x	x	x	x	x	P Electronic Message Centers: establishments may utilize up to 40% of the sign area or 48 sq. ft, whichever is less.	P Electronic Message Centers: establishments may utilize up to 40% of the sign area or 64 sq. ft., whichever is less.
	Shopping Center Directory Signs		x	x	x	x	P Max. 1 per Coordinated Shopping Center. Max Height 35 ft.	P Max. 1 per Coordinated Shopping Center. Max Height 35 ft.	P Max. 1 per Coordinated Shopping Center. Max Height 35 ft.
Wall- Attached Signs					Max. 1 Sign, Max Area:1 sq. per 1 linear ft of building frontage on elevation where the sign is installed.				
	Facade Signs	Number allowed: No Limit, provided area requiremnts are met. (Area includes wall signs, awning signs, under canooy signs, canopy signs, projecting signs, and window signs). Other: Allowed on each building elevation for primary/principal buildings.	x	x	Ρ	P Max Area: 1 sq. per 1 linear ft of building frontage on elevation where the sign is installed.	P Max Area: 1 sq. per 1 linear ft of building frontage on elevation where the sign is installed.	P Max Area: 2 sq. per 1 linear ft of building frontage on elevation where the sign is installed.	P Max Area: 2 sq. per 1 linear ft of building frontage on elevation where the sign is installed.
	Awning Signs	Number allowed: No Limit, provided area requiremnts are met. (Area includes wall signs, awning signs, under canopy signs, canopy signs, projecting signs, and window signs).	x	x	р	P Max Ares: 1 sq. per 1 linear ft of building frontage on elevation where the sign is installed.	P Max Area: 1 sq. per 1 linear ft of building frontage on elevation where the sign is installed.	P Max Area: 2 sq. per 1 linear ft of building frontage on elevation where the sign is installed.	P Max Ares: 2 sq. per 1 linear ft of building frontage on elevation where the sign is installed.
	Canopy Signs	Number allowed: No Limit, provided area requiremnts are met. (Area includes wall signs, awning signs, under canopy signs, canopy signs, projecting signs, and window signs).	x	x	Ρ	P Max Area: 1 sq. per 1 linear ft of building frontage on elevation where the sign is installed.	P Max Area: 1 sq. per 1 linear ft of building frontage on elevation where the sign is installed.	P Max Area: 2 sq. per 1 linear ft of building frontage on elevation where the sign is installed.	P Max Area: 2 sq. per 1 linear ft of building frontage on elevation where the sign is installed.
	Window Signs	Number allowed: No Limit, provided area requiremnts are met. (Area includes wall signs, awning signs, under canopy signs, canopy signs, projecting signs, and window signs).	x	x	Ρ	P Max Area: 1 sq. per 1 linear ft of building frontage on elevation where the sign is installed.	P Max Area: 1 sq. per 1 linear ft of building frontage on elevation where the sign is installed.	P Max Area: 2 sq. per 1 linear ft of building frontage on elevation where the sign is installed.	P Max Area: 2 sq. per 1 linear ft of building frontage on elevation where the sign is installed.
	Projecting Signs (Blade Signs)	Number Allowed: 1 per occupancy. Other: May not project more than 8 ft. from the side of the building. Clearance Requirements: 10 ft. shove sidewalk grade and 14 ft. vehicular way grade. (Area includes wall signs, awning signs, under canopy signs, canopy signs, projecting signs, and window signs).	x	x	Ρ	P Max Area: 1 sq. per 1 linear ft of building frontage on elevation where the sign is installed.	P Max Area: 1 sq. per 1 linesr ft of building frontage on elevation where the sign is installed.	P Max Area: 2 sq. per 1 linear ft of building frontage on elevation where the sign is installed.	P Max Area: 2 sq. per 1 linear ft of building frontage on elevation where the sign is installed.
Incidental Sign		Number Allowed: No limit, provided area requirements are met. Maximum Size: 4 sq. ft. per sign, 16 sq. ft. per occupancy.	р	P	Р	Р	Р	Р	Р

4.05 - Signs in the Airport Industrial District

Signs in the Airport Industrial District are governed by the regulations established specifically for that district.

V. Section Five: Non-Conforming Signs

5.01 - Determination of Legal Nonconformity

- A. A nonconforming sign is any permanent sign that was legally established and maintained in compliance with the provisions of all applicable laws in effect at the time of original installation but that does not comply with the provisions of this sign ordinance as of the date this ordinance is adopted.
- B. A nonconforming sign, as defined above, shall be allowed continued use, except that the sign shall not be expanded, moved, or relocated, except in the case of street relocation. A nonconforming sign shall be allowed continued use even if ownership of the property changes.
- **5.02 Loss of Legal Nonconforming Status** A legal nonconforming sign shall lose this designation in the following instances:
 - A. When the sign is intentionally damaged or destroyed or fails to observe the following restrictions in cases of unintentional damage or destruction:
 - 1. If the sign face is unintentionally damaged or destroyed, the face may be replaced. The sign face supporting structure may be temporarily placed on the ground in order to replace the sign face or service the structure.
 - 2. If the structural components of the sign including the face structure is damaged or destroyed, the structure and face may be replaced with a new face and structure not to exceed the size, height or location of the established nonconforming sign.
 - B. When the size of the sign is altered in any way, except toward compliance with this ordinance, it will lose its legal nonconforming status. This does not refer to change of copy, face of the sign, or normal maintenance. Normal maintenance does not include the replacement of structural elements.
 - C. When the sign(s) advertising a building/development contains the majority of the businesses/tenants and the building/development undergoes major redevelopment such as demolition or expansion requiring a building permit. Exceptions:
 - 1. A remodel of an existing building will not cause the loss of legal nonconformity.
 - 2. The construction of an additional building on the same property shall not cause the loss of legal non- conformity.

D. When the sign is expanded, moved, or relocated, except in the case of street relocation.

VI. Section Six: Administration and Enforcement

6.01 – Administrative Official

- A. All sign permits shall be issued by the Administrative Official or his/ her designee. The Director of Community Development is the Administrative Official for the purposes of this Ordinance.
- B. The Administrative Official or his/ her designee is empowered, upon presentation of proper credentials, to enter or inspect any building, structure, or premises in the City for the purpose of inspection of a sign and its structural and electrical connections to ensure compliance with all applicable codes and ordinances. Such inspections shall be carried out during business hours unless an emergency exists.

6.02 - Variances

- A. A variance for height, location, type, etc. may be requested. No area variance may be requested.
- B. Requests for sign variances shall be in writing and shall be submitted along with the sign application. Such request shall demonstrate that special conditions or circumstances exist that are not applicable to other lands, structures, or buildings such that a literal interpretation of the ordinance would result in an undue hardship.
- C. The Board of Zoning Adjustment shall review the request to determine if the variance should be granted and may grant or deny the request.
- D. If the Board of Zoning Adjustment denies the variance or takes no action on the request within 30 days following the variance request appearing on its agenda, the variance shall be deemed denied. The applicant may then appeal the decision to the City Council. The appeal must be submitted to the Planning Department no less than thirty(30) working days from the date of the Planning Commission's decision or the deemed denied date whichever may apply. In order to be placed on the City Council agenda, the appeal must be submitted no less than eleven (11) days prior to the City Council meeting. If the decision is appealed but it is within the 11 days prior to the next City Council meeting, it shall be placed on the following month's regularly scheduled City Council meeting agenda.
- E. A variance may be granted only when the requirements noted above have been met. The Board of Zoning Adjustment or City Council shall grant only the minimum variance required to make possible the variance request, provided that such variance will be in harmony with the general purpose and intent of the ordinance and will not be injurious to the neighborhood or otherwise detrimental to the public welfare.

F. Fees shall be submitted and paid prior to review of the application. All fees are non-refundable. The fee shall be set in accordance with a schedule of fees adopted by the City Council. If no schedule of fees is adopted, following adoption of these regulations, the fee shall be two hundred fifty dollars (\$250).

6.03 – Alternative Signage Plan

- A. An alternative signage plan may be used where impractical situations would result from this Ordinance. Alternative locations, size or quantity may be justified due to topography, utility easements, lot configuration or subdivision (particularly with respect to a shopping center), or location and size of pre-existing development. Also, the proposed use or collection of uses may not be captured by the spirit and intent of this Ordinance, justifying an Alternative Signage Plan. Such plans shall require the approval of the Planning Commission.
- B. Application shall be made in the same manner as prescribed in §203. The application must additionally include a written letter of justification for the request detailing how the application meets the approval criteria. No application may be accepted without inclusion of a letter of justification.
- C. The fee for such applications shall be determined by a fee schedule adopted by the City Council. If no fee schedule is adopted following passage of these regulations, the fee shall be two hundred fifty dollars (\$250).
- D. At least one of the following conditions shall be met in order for an Alternative Signage Plan to be considered for approval:
 - 1. The applicant must show that installation of signage per this Ordinance while meeting other site-specific constraints as listed above would put the site in direct violation of other City Ordinances or State or Federal regulations, under any practical site layout configuration.
 - 2. The use(s) and/or architectural elements proposed for the site (as already approved by the Planning Department) are such that a standard sign plan under this Article would be considered not in keeping with the code and fail to meet the general purpose of the code outlined in this Ordinance.
 - 3. The sign is at least fifty (50) years old and can be determined to have important historic significance by the Administrative Official as being a historically important place, historically important business or entity, or embodying a design or features of historical importance based upon generally accepted historic preservation professional practice standards.
 - 4. Approval of the Alternative Signage Plan would result in a preferable outcome to the residents of Bryant in contrast to only advancing the property or economic interests of the applicant.

6.04 - Violations

- A. In cases of emergency, the Administrative Official or his/her designee may cause the immediate removal of a dangerous or defective sign without notice. Signs removed in this manner must present a hazard to the public safety as defined in the local building or traffic codes.
- B. In cases of illegal signs placed in the public right- of-way, or if banners or temporary signs become faded, worn or tattered; or have become detached from the structure designed to support the signage, the Administrative Official or his designee may cause immediate removal of the sign without notification of the owner of the sign.

6.05 - Removal of Signs by the Administrative Official

- A. Signs located within the public right-of-way or which fail to comply with the written orders of removal or repair are subject to removal, the Administrative Official or his designee may order removal of the sign in question. After removal, a notice shall be mailed to the sign owner stating the nature of the work and the date on which it was performed and demanding payment of the costs as certified by the Administrative Official or his designee. Alleged violators shall have sixty (60) days from the date of said notice in which to appeal to the Planning Commission. If the amount specified in the notice is not paid within sixty (60) days of the notice and no appeal to the Planning Commission has been formally lodged, it shall become an assessment upon a lien against the property of the sign owner, and will be certified as an assessment against the property together with a ten percent (10%) penalty for collection in the same manner as the real estate taxes
- B. The owner of the property upon which the sign is located shall be presumed to be the owner of all signs thereon unless documented facts to the contrary are brought to the attention of the Administrative Official or his designee, as in the case of a leased sign. For purposes of removal, the definition of sign shall include all embellishments and structures designed specifically to support the sign.
- C. Removed signs shall be stored at a location designated by the sign Administrative Official or his designee pending return to the owner(s). Signs will be stored in such a manner as to minimize damage to them. The sign Administrative Official or his designee will notify the owner of all removal costs and the procedures for retrieving the removed sign(s).
- D. Temporary signs located within the street right- of-way will be removed without notice and stored for 30 days pending return to owners.

6.06 - Penalties

A. A violation of this Article shall be deemed a misdemeanor and shall be punishable by fine. Fines for a violation shall not be less than fifty dollars

(\$50) and no more than two hundred dollars (\$200) per day the violation continues.

- B. If a second offense occurs within twelve (12) months of the prior offense, the fine shall be no less than one hundred dollars (\$100) per day the violation continues.
- C. If a third offense and any subsequent offenses occur within twelve (12) months of the second offense, the fine shall be no less two hundred dollars (\$200) per day the violation continues.

VII. Section Seven: Conflict, Severability and Effective Date

7.01 - Conflict - If any portion of this code is found to be in conflict with any other provisions of any zoning, building, fire, safety, or health ordinance of the City code, the provision which establishes the stricter standard shall prevail.

7.02 - **Severability** - If any section, subsection, sentence, clause, or phrase of this code or its application to any person or circumstance is held invalid by the decision of any court of competent jurisdiction, the remainder of this code, or the application of the provision to other persons or circumstances is in effect and shall remain in full force and effect.

7.03 - Effective Date - This Code shall take effect and be in force upon the passage of this Ordinance.

City of Bryant 2023 Development Calendar

Application Deadlines and Meeting Dates

First Submittal Deadline 5:00 P.M.	DRC Meeting 9:00 A.M.	DRC Deadline 5:00 P.M.	DRC Meeting 9:00 A.M.	Final Revisions Deadline 5:00 P.M.	Planning Commission Meeting 6:00 P.M.	
December 7	December 15	December 21	December 29	January 2	January 9	
January 11	January 19	January 25	February 2	February 6	February 13	
February 8	February 16	February 22	March 2	March 6	March 13	
March 8	March 16	March 22	March 30	April 3	April 10	
April 5	April 13	April 19	April 27	May 1	May 8	
May 10	May 18	May 24	June 1	June 5	June 12	
June 7	June 15	June 21	June 29	July 3	July 10	
July 12	July 20	July 26	August 3	August 7	August 14	
August 9	August 17	August 23	August 31	September 5	September 11	
September 6	September 14	September 20	September 28	October 2	October 9	
October 11	October 19	October 25	November 2	November 6	November 13	
November 8	November 16	November 22	November 30	December 4	December 11	
December 6	December 14	December 20	December 28	January 2	January 8	

The DRC (Development and Review Committee) currently meets in person in the Administration Conference Room at City Hall (210 SW 3rd Street).

On Thursday's without a DRC meeting scheduled, the committee is available for a workshop or application meeting.

The deadline for a workshop, application meeting or discussion item is the Monday before by 5 p.m.