

1364 N WATKINS - PACKAGE 1 RENOVATIONS

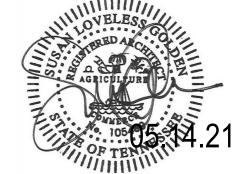
1364 N WATKINS, MEMPHIS, TN 38108 COMMISSION NO. 2020698

CONSTRUCTION DOCUMENTS

ISSUE DATE: 05.14.21

orgasarchitects ARCHITECT INTERIOR DESIGN

396 North Cleveland Street Memphis, Tennessee 38104 t 901.260.9600 f 901.531.8042 www.brg3s.com

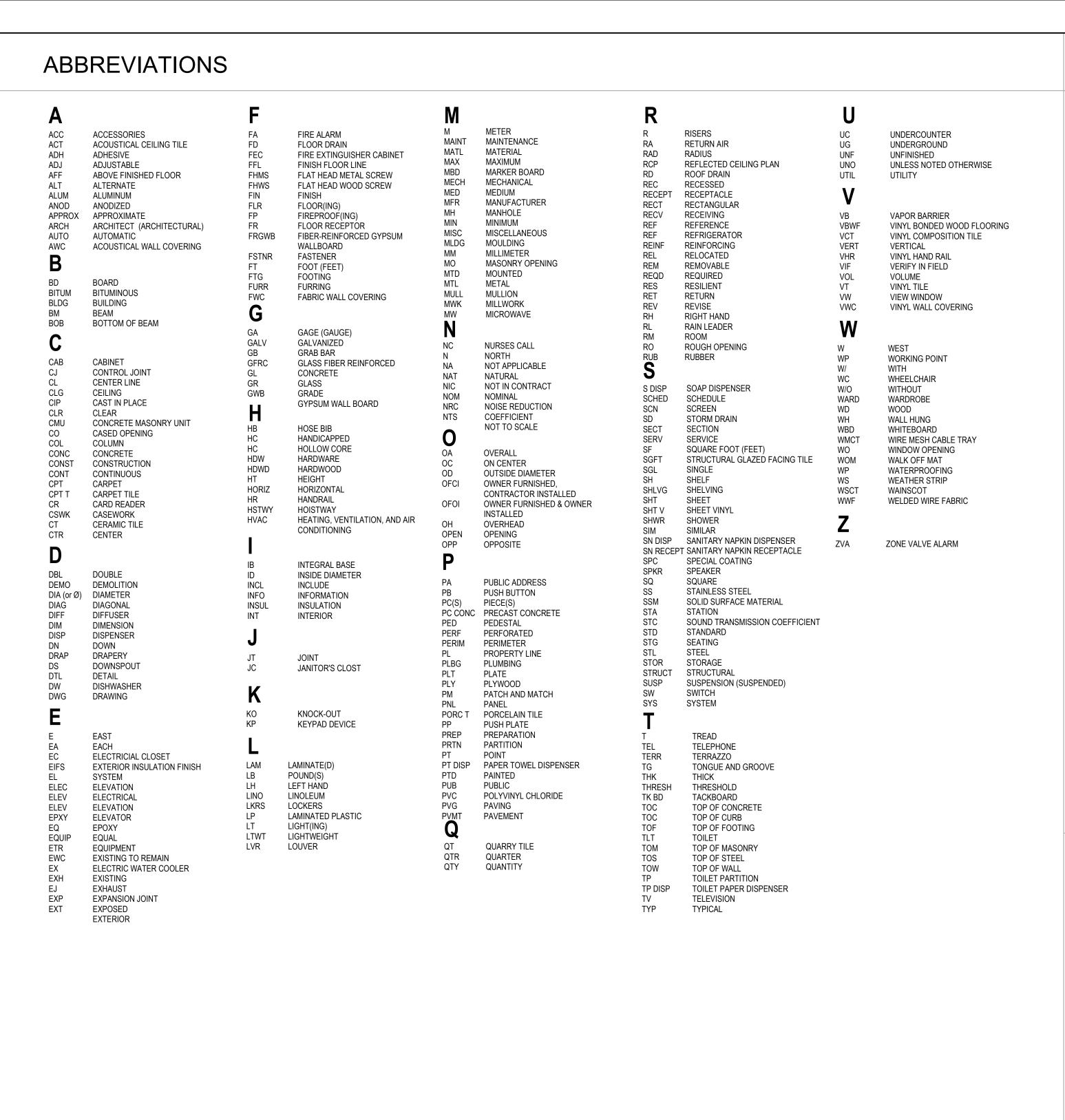




2650 Thousand Oaks Boulevard, Suite 3200

CIVIL STRUCTURAL MECHANICAL **PLUMBING ELECTRICAL**

Memphis, TN 38118 Telephone: 901.683.3900 Fax: 901.683.3990 Website: www.ssr-inc.com



BAR, AC-8.11

WALL HUNG LAVATORY/MIRROR

FIRE EXTINGUISHER

UNDER LAV. CLEARANCES

DRAWING INDEX - PACKAGE 1 - RENOVATIONS

INTERIOR

MECHANICAL

ID001 INTERIOR FINISH INDEX, SCHEDULE & PLAN

GENEF	RAL	M121	N. WATKINS OFFICE MECHANICAL FLOOR PLAN AND RCP
G100	COVER	M502	SPECIFICATIONS - MECHANICAL
G101	DRAWING INDEX, ABBR, GEN. NOTES, LIFE SAFETY PLAN & CODE SEARCH	PLUMB	BING
		P001	PLUMBING GENERAL NOTES, SCHEDULES, LEGEND AND INDE
CIVIL		P002	PLUMBING PLUMBING SPECIFICATIONS
C1.0	EXISTING CONDITIONS AND DEMOLITION PLAN	P.121	N. WATKINS OFFICE PLUMBINGFLOOR PLAN AND RCP
C2.0	SITE LAYOUT PLAN	P501	PLUMBING DETAILS
C3.0	GRADING & DRAINAGE PLAN		
C4.0	PAVING & STRIPING PLAN	ELECTI	RICAL
C5.0	SITE FENCING PLAN	E001	ELECTRICAL LEGENDS AND NOTES
		E002	ELECTRICAL SPECIFICATIONS
ARCHI [*]	TECTURAL TECTURAL	E121	N. WATKINS OFFICE ELECTRICAL FLOOR PLANS, LIGHTING,
A120	N. WATKINS OFFICE FLOOR PLAN, RCP AND ELEVATION		POWER & SYSTEMS
A170	DOOR SCHEDULE, PARTITION TYPES AND DETAILS	E501	ELECTRICAL DETAILS & SCHEDULES
A180	CASEWORK DETAILS		·

GENERAL NOTES

1. ERECT DUSTPROOF PROTECTION BARRIERS BETWEEN AREAS WHERE WORK IS BEING PERFORMED AND AREAS BEING

2. AT ALL TIMES DURING CONSTRUCTION AND/OR ALTERATIONS THE ADJACENT AREAS MAY/WILL BE OCCUPIED. THE WORK SHALL BE DONE AND SUCH TEMPORARY FACILITIES PROVIDED BY THE PRIME CONTRACTOR SO AS TO CAUSE THE

LEAST POSSIBLE INTERFERENCE WITH DAILY OPERATION OF THE FACILITY OR ANY ESSENTIAL SERVICE THEREOF. 3. AT ALL TIMES DURING CONSTRUCTION AND/OR ALTERATIONS ALL REQUIRED EXIT AND ESCAPE FACILITIES SHALL BE CONTINUOUSLY MAINTAINED. IN THE EVENT ANY REQUIRED EXIT MUST BE CLOSED OR TEMPORARILY ABANDONED PROVIDE OTHER MEASURES AND/OR MEANS WHICH WILL PROVIDE EQUIVALENT SAFETY.

4. DESIGNATED AREAS OF NEW CONNECTIONS AND/OR ALTERATIONS SHALL BE CLEAN AND FREE OF ANY DEBRIS AT THE END OF EACH DAY. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF DEMOLISHED MATERIALS FROM THE OWNER'S PROPERTY.

5. DESIGNATED AREAS OF THE EXISTING STRUCTURE WHERE WORK IS TO BE DONE, CONNECTIONS MADE, MATERIALS HANDLED, OR EQUIPMENT MOVED AND/OR RELOCATED, SHALL BE TEMPORARILY BUT ADEQUATELY ISOLATED FROM ADJACENT AREAS. TEMPORARY PROTECTION SHALL BE SUCH THAT THE INTERIOR OF OTHER FUNCTION AREAS OF EXISTING STRUCTURE WILL, AT ALL TIMES, BE PROTECTED FROM DUST, WEATHER, INCLEMENCY AND SO FAR AS POSSIBLE, FROM CONSTRUCTION TRAFFIC. FOR ALL NEW ELECTRICAL, MECHANICAL, AND/OR PLUMBING WORK.

PENETRATING THE FLOOR(S) ABOVE OR BELOW, THE EXISTING CEILING TILES SHALL BE REMOVED AND REINSTALLED. TILES DAMAGED BY THIS PROCESS SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER. REPLACEMENT TILES SHALL MATCH EXISTING. ALL SURFACES (WALLS, FLOORS, CASEWORK, ETC.) SHALL BE LEFT IN AS GOOD CONDITION AS EXISTED PRIOR TO THE START OF WORK. COORDINATE ALL WORK ON FLOORS ABOVE AND BELOW WITH THE OWNER. REMOVE ALL ITEMS SHOWN DASHED ON DEMOLITION PLAN. ALL BUILDING COMPONENTS IN EXISTING BUILDING AND DISTURBED BY THIS WORK SHALL BE RESTORED AND REFINISHED ACCORDING TO THE ROOM FINISH SCHEDULE OR TO MATCH EXISTING. ALL OPENINGS IN WALLS AND SLABS REMAINING AFTER DEMOLITION WORK HAS BEEN COMPLETED SHALL BE FILLED WITH CONSTRUCTION IDENTICAL TO ADJOINING SURFACES. ALL WALLS TO REMAIN SHALL BE PATCHED AS REQUIRED TO RECEIVE NEW FINISH.

7. PATCH AND MATCH (PM) INDICATES THAT EXISTING FINISH SHALL BE REPAIRED TO MATCH ADJACENT FINISH.

8. WHERE EXISTING CONSTRUCTION IS INDICATED TO BE REPLACED, IT IS THE INTENT TO REMOVE THE EXISTING CONSTRUCTION IN ITS ENTIRETY AND REPLACE IT WITH NEW CONSTRUCTION AS INDICATED ON THE DRAWINGS.

9. IN EXISTING AREAS WHERE NEW CEILINGS ARE INDICATED, EXISTING CEILINGS SHALL BE REMOVED. ELECTRICAL FIXTURES, HVAC REGISTERS, CURTAIN TRACKS, ETC, SHALL BE REMOVED, REPLACED OR RELOCATED AS REQUIRED BY THE CONTRACT DOCUMENTS AND TO SUIT NEW CEILLING HEIGHTS.

10. ALL EXISITING MECHANICAL, ELECTRICAL WORK IN EXISTING PARTITIONS, FLOOR, OR CEILINGS THAT INTERFERE WITH THE WORK SHALL BE RELOCATED, ADJUSTED OR REPLACED TO SUIT NEW CONDITIONS.

11. WHERE ALTERATIONS OCCUR OR NEW AND OLD WORK JOIN OR MECH. AND ELEC. CONNECTIONS ARE SHOWN IN EXISTING CEILINGS OR WALLS THE IMMEDIATE ADJACENT SURFACES SHALL BE CUT, REMOVED, PATCHED, REPAIRED OR REFINISHED AND LEFT IN AS GOOD CONDITION AS EXISTED PRIOR TO THE START OF WORK.

12. SEE HVAC, PLUMBING AND ELECTRICAL DRAWINGS FOR LOCATIONS OF NEW PENETRATIONS THROUGH EXISTING WALLS AND SLABS.

13. ALL DUCTS PENETRATING FLOOR SLABS SHALL BE ENCLOSED WITH TWO HOUR WALL PARTITIONS AND/OR PROVIDED WITH FIRE DAMPERS. SEE MECHANICAL DRAWINGS FOR LOCATIONS.

14. WHERE PIPES, DUCTS AND PANEL BOXES OCCUR, PARTITIONS SHALL BE OF SUCH THICKNESS TO ACCOMMODATE PIPES AND DUCTS, SEE HVAC, PLUMBING AND ELECTRICAL DRAWINGS.

15. ALL PIPES, DUCTS, ETC., IN FINISHED AREAS SHALL BE FURRED IN UNLESS NOTED OTHERWISE.

16. RATED PARTITIONS SHALL BE CONTINUOUS ABOVE THE CEILING SO AS TO PROVIDE A POSITIVE SMOKE AND/OR FIRE BARRIER. BOTH SIDES OF THE STUD PARTITIONS ABOVE THE CEILING SHALL BE FINISHED EXCEPT FOR DECORATIVE

17. MAINTAIN WALL FIRE RESISTIVE RATING WHERE ITEMS SUCH AS FIRE EXTINGUISHER CABINETS, ELECTRICAL PANEL BOXES, ETC, ARE BUILT INTO WALLS.

18. ALL GYPSUM WALLBOARD ON CONCRETE OR MASONRY WALLS SHALL BE FURRED OUT A MINIMUM OF 7/8". 19. ALL ABANDONED HVAC, PLUMBING AND ELECTRICAL SERVICES AND THE ASSOCIATED SUPPORT HANGER SYSTEMS

LIFE SAFETY LEGEND:

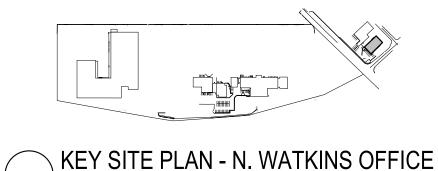
1 HR FIRE RATED PARTITION 2 HR FIRE RATED PARTITION 1 HR FIRE/SMOKE RATED PARTITION 2 HR FIRE/SMOKE RATED PARTITION **EGRESS ROUTE** • - - - - - TRAVEL DISTANCES EXISTING FIRE EXTINGUISHER CABINET

> **EMERGENCY EXIT SIGNS - SEE** ELECTRICAL DRAWINGS

FIRE EXTINGUISHER

NOT IN SCOPE

OFFICE



SHALL BE REMOVED IN THEIR ENTIRETY.

SCALE: 6" = 1'-0"

CODE SEARCH:

MATA - PACKAGE 1 RENOVATIONS

Project Number: 2020698

3. Location & Address: 1364 N Watkins St. Memphis, TN, 38108

4. Owner Contacts: Doug Cunningham

Code Review By: Amber Fournier

Date of Review:

Code Authorities: Building Department: Memphis and Shelby County Office of

Construction Code Enforcement 6465 Mullins Station Road Memphis, TN 38134

Telephone: 901.222.8300 A. Building Codes In Force

Memphis, TN: Architectural: 2015 International Building Code with Local Amendments

2015 International Existing Building Code with Local Amendments

Handicap: 2009 ANSI 117.1 with Chapter 11 of 2009 IBC Structural: 2015 International Building Code with Local Amendments

Mechanical: 2015 International Mechanical Code with Local Amendments 2015 International Fuel Gas Code with Local Amendments 2015 International Plumbing Code with Local Amendments

2014 National Electric Code with 2018 Joint Electrical Code 2015 International Energy Conservation Code with Local Amendments

B. Building Information

1. Occupancy Classification: Business B (IBC 302.1)

2. Construction Type: Type IIB, Not Sprinklered (IBC 602)

a. Allowable building area per floor (IBC TABLE 506.2): 23,000sf b. Allowable building height/stories (IBC TABLE 504.3 & 4): 55'/3 stories

3. Fire Resistance and Protection Requirements (IBC Table 601):

c. Actual Building Data:

1.) Area **2,318 sf** 2.) Height **14'** (top of parapet)

> a. Structural frame: b. Bearing walls:

Exterior walls: Less than 5' fire separation: 1 hr Interior walls:

c. Interior walls: d. Floor construction:

e. Roof construction:

separated occupancies (IBC Table 508.4)

g. Interior finishes - Wall and Ceiling (IBC 803.11):

Business/ S-2 1) Vertical Exits & Horizontal Passageways: IBC Class A 2) Exit Access Corridors & Other Exitways: Class B 3) Rooms & Enclosed Spaces: Class C

4) Interior Trim: Meet Class C; Max. area: 10% of wall

9. Fire Protection Systems:

a. Portable Fire Extinguisher (IFC 906, NFPA 10): 1.) Travel Distance - **75 feet** (NFPA 10) 2.) Minimum Rating: 2-A

5. Means of Egress Requirements:

a. Building Construction Data: 1.) Ground Floor SF B Occupancy: 2,318 sf Renovation area: 2.) Ground Floor SF S-1 Occupancy: 3,497 sf (NOT IN SCOPE)

b. Occupant Load (IBC Table 1004.1.2) 1.) Ground Floor Area/Occupant: 2,318/100= 24 occupants (1 Exits required, IBC 1006.2.1)

c. Travel Distance (IBC Table 1017.2):

Renovation area:

1.) From furthest point to exit: 200 ft. non-sprinklered 2.) Maximum Common Path of Egress Travel (IBC 1006.2.1): 100 ft

d. Maximum dead end corridor: (IBC 1020.4): 20 ft.

e. Exit access corridors fire rating (IBC 1020.1): 0 hour without sprinkler, less than 30 occupants

f. Minimum corridor width (IBC 1020.2): 36 inches

g. Minimum width of exit doors (IBC 1010.1.1): 32 inches clear

h. Minimum ceiling height (IBC 1003.2,1208.2):

1.) 7 ft 6 inches in occupied spaces. 2.) Exception, 7 feet in bathrooms, toilet rooms, kitchens, storage rooms and laundry rooms. i. Exit capacity (IBC 1005.3.1, 1005.3.2):

0.2 inches per occupant no sprinklers x 24 occupants = 4.8"

6. Doors

a. Fire Ratings (IBC 716.5): 1. Fire Barriers:

a) 4 hour ----- 3 hour door b) 3 hour ----- 3 hour door c) 2 hour ----- 1 ½ hour door

d) 1 ½ hour ----- 1 ½ hour door e) 1 hour ----- 1 hour at shafts, exit enclosures and exit passageways.

3/4 hour at other fire barriers.

a) 1 hour corridor walls ----- 1/3 hour door b) Other fire partitions ----- 3/4 hour door

b. Minimum width of exit doors

1) (IBC 1010.1.1): **32 inches** 7. Required Toilet Fixtures (IBC Table 2902.1):

a. Water closets: 1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50 = 2

b. Lavatories: 1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80 = 2 c. Drinking fountains: 1 per 100 = 1

CONSTRUCTION DOCUMENTS

396 N. Cleveland Street

t 901.260.9600

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MARK

MATA HEADQUARTERS

PACKAGE 1 -

RENOVATIONS

ABBR, GEN. NOTES,

LIFE SAFETY PLAN &

CODE SEARCH

1364 N WATKINS

2020698 05.14.21

As indicated

MEMPHIS, TN. 38108

1370 LEVEE RD,

PROJECT NAME

Date Issued

Drawing Scale

DRAWING TITLE

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1364 N. WATKINS LIFE SAFETY PLAN SCALE: 3/32" = 1'-0"

BREAK ROOM

<u>W107</u>

W103

OFFICE

<u>W101</u>

<u>W106</u>

<u>W102</u>



STD WATER CLOSET W/

TOILET SEAT COVER

LIQUID SOAP DISPENSER PAPER TOWEL DISP.

(PT. DISP.)

(SOAP DISP.)

STANDARD MOUNTING HEIGHTS

42" GRAB BAR, AC-8.2 18" GRAB

GRAB BARS & TOILET PAPER DISPENSER

AT WATER CLOSET

HAND SANITIZER DISPENSER

COAT HOOK

BAR, AC-8.11

36" GRAB

GRAB BARS AT

WATER CLOSET ____1'-6"

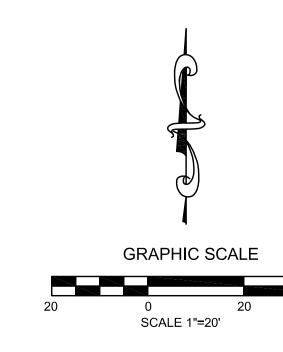
READ_ THIS

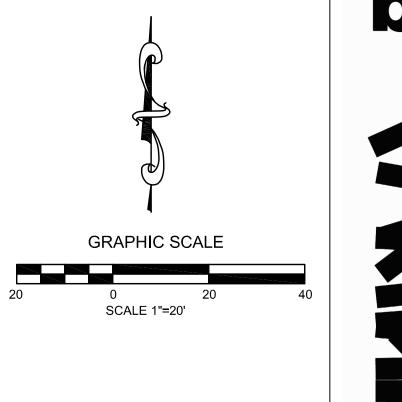
SIGNAGE

CLOCK

BAR,

AC-8.9





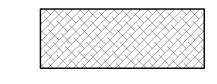




EXIST. GRAVEL TO BE REMOVED & UNDERCUT (AS REQ'D)



EXIST. ASPHALT TO BE MILLED (TOP 1-1/2")



EXIST. ASPHALT TO BE SAWCUT FULL DEPTH & REMOVED

EXIST. VEGETATION TO BE CLEARED & GRUBBED



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PACKAGE 1 -

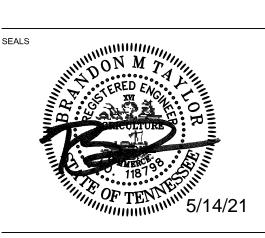
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EXISTING CONDITIONS & DEMOLITION PLAN

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CONSTRUCTION DOCUMENTS

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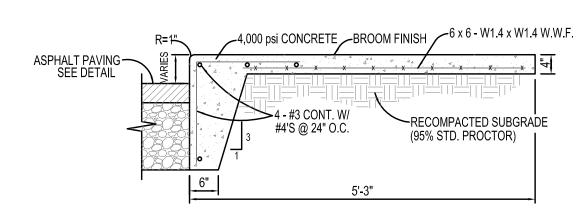
SIDEWALK DETAILS

NOT TO SCALE

'LOCKROCK' OR EQUAL (TYP.)

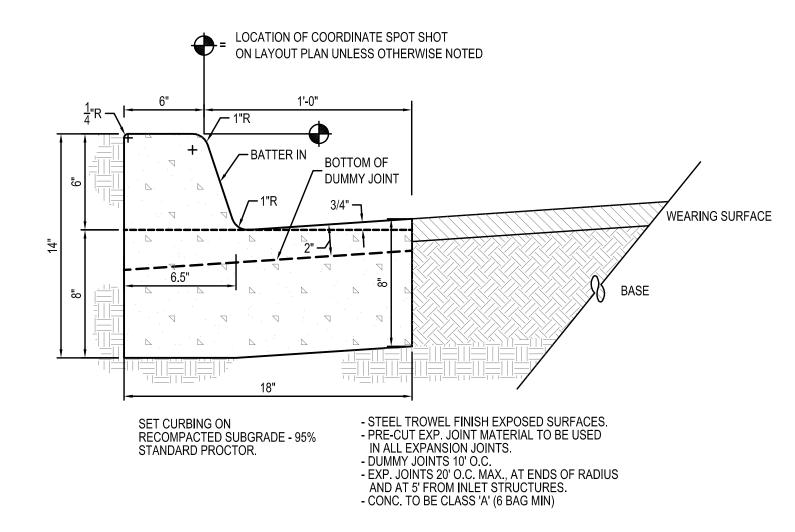
RAMP & HANDRAIL DETAIL

NOT TO SCALE



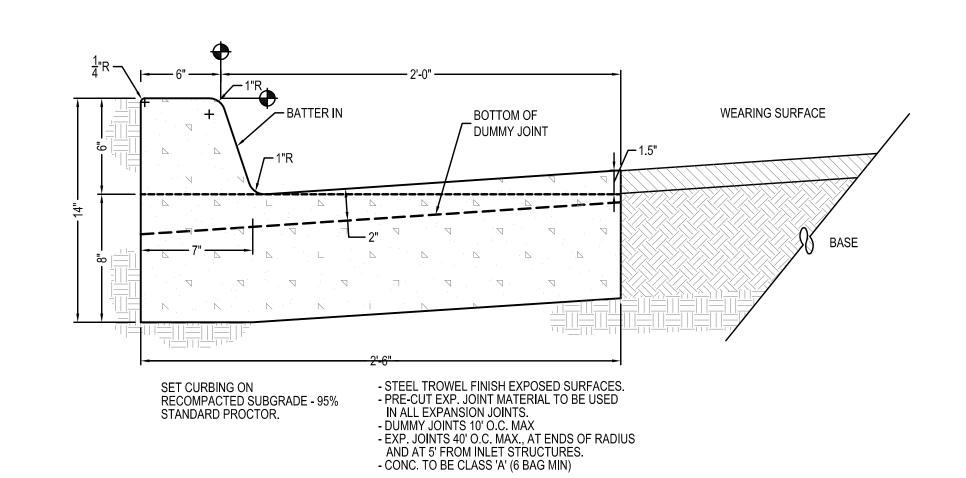
TYPICAL SIDEWALK TURNDOWN

NOT TO SCALE

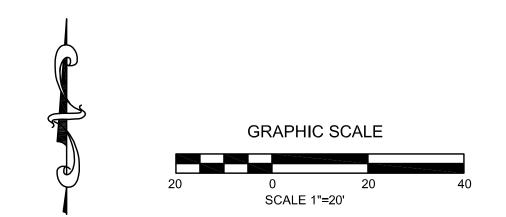


6-18 CURB & GUTTER

NOT TO SCALE



6-30 CURB & GUTTER NOT TO SCALE



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PROJECT NAME 1364 N WATKINS PACKAGE 1 -RENOVATIONS

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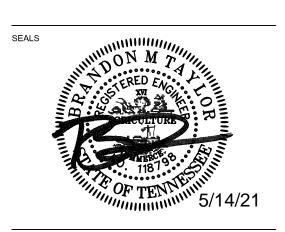
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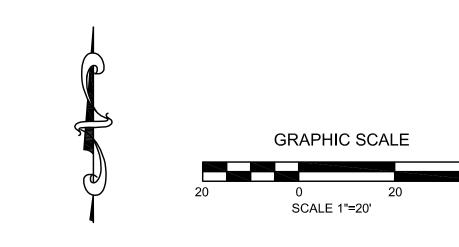
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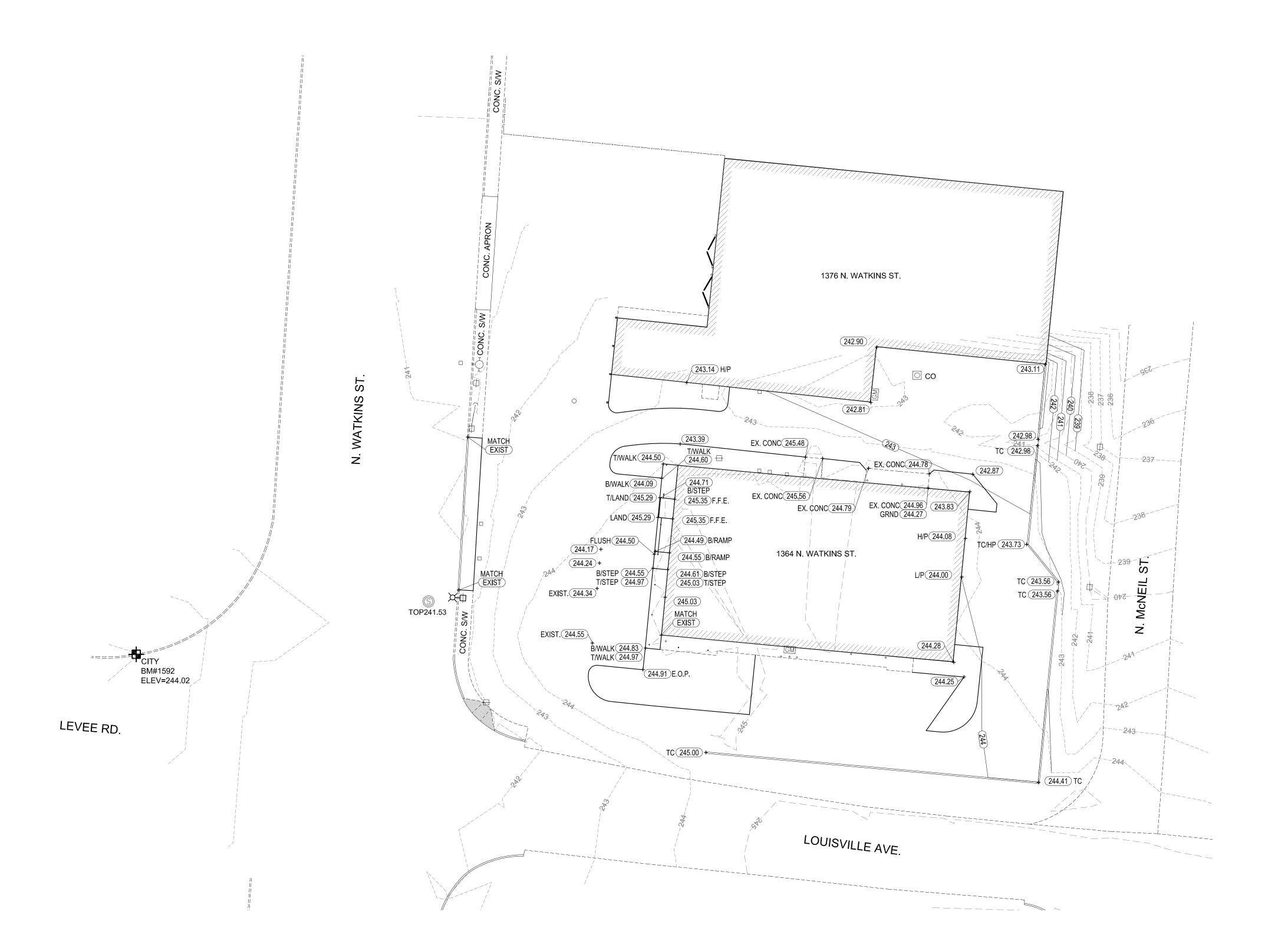
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SITE LAYOUT

PLAN







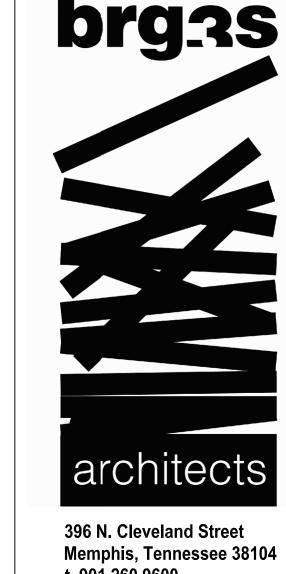
GRADING & DRAINAGE NOTES

- A MINIMUM OF 24-HOUR PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY OF MEMPHIS CONSTRUCTION INSPECTION OFFICE AT (901) 636-2462.
 ALL NEWLY CUT OR FILL AREAS, LACKING ADEQUATE VEGETATION, SHALL BE SEEDED, MULCHED, FERTILIZED AND/OR SODDED AS REQUIRED TO EFFECTIVELY CONTROL SOIL
- 3. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND NOT NECESSARILY ALL OF SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE UTILITY COMPANIES WHICH MAINTAIN A UTILITY LINE WITHIN THE BOUNDARIES OF THE PROJECT PRIOR TO INITIATION OF ANY CONSTRUCTION ON THE PROJECT OR IN THE STREETS BORDERING THE PROJECT. THE CONTRACTOR SHALL ALSO ASSUME FULL RESPONSIBILITY FOR DAMAGE TO ANY UTILITIES ENCOUNTERED WITHIN CONSTRUCTION PARAMETERS, WHETHER SHOWN ON THE CONSTRUCTION PLANS OR NOT, DURING THE WORK ON THE PROJECT. FOR SITE LOCATION OF EXISTING UTILITIES INVOLVING MLG&W, SOUTH CENTRAL BELL, AND/OR TEXAS GAS COMPANY, CALL 1-800-351-1111. FOR SEWER LOCATIONS CALL (901) 529-8025.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES.
 ALL FILL SOILS SHALL BE COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY (ASTM D-698) WITHIN 3% OF OPTIMUM MOISTURE CONTENT IN LIFTS NOT TO
- EXCEED SIX (6) INCHES OF COMPACTED THICKNESS.

 6. ALL CONSTRUCTION MATERIALS AND PROCEDURES SHALL MEET OR EXCEED THE REQUIREMENTS OF THE CITY OF MEMPHIS STANDARD CONSTRUCTION SPECIFICATIONS.

 7. PROPERTY LINES SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. GRADING,
- 7. PROPERTY LINES SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. GRADING,
 CLEARING AND THE ERECTION OR REMOVAL OF FENCES ALONG PROPERTY LINES SHALL
 BE FULLY COORDINATED WITH ADJACENT PROPERTY OWNERS.
- 8. VERIFY SITE CONDITIONS PRIOR TO CONSTRUCTION. NOTIFY THE CITY OF MEMPHIS CONSTRUCTION INSPECTION OFFICE ENGINEER OF ANY VARIATIONS PRIOR TO COMMENCEMENT OF WORK.
- ALL GRADING WORK SHALL BE PERFORMED IN SUCH A MANNER THAT ADJACENT PROPERTIES ARE NOT DAMAGED OR ADVERSELY AFFECTED.
 LOT DRAINAGE: FINISH GRADE SHALL BE SLOPED AWAY FROM THE FOUNDATION FOR DRAINAGE. THE FINISH GRADE MUST BEGIN AT LEAST 12-INCHES BELOW THE TOP OF THE FOUNDATION WALL OR THE GRADE OF THE CONCRETE SLAB AT THE INTERIOR IN THE CASE OF AN INTEGRAL SLAB AND FOUNDATION. THE MINIMUM GRADE AWAY FROM THE FOUNDATION SHALL BE TWO PERCENT (2%) IN ALL DIRECTIONS. THE DRIVEWAY SHALL BE

SLOPED DOWN AT TWO PERCENT (2%) FOR AT LEAST EIGHT FEET FROM THE STRUCTURE.



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ARK DATE DESCRIPTION

CLIENT

STATE

MEMPHIS AREA TRANSIT AUTHORIT

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1364 N WATKINS
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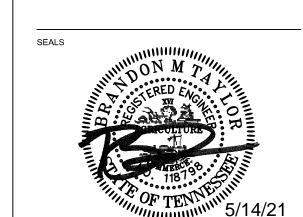
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GRADING & DRAINAGE PLAN

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CONSTRUCTION DOCUMENTS

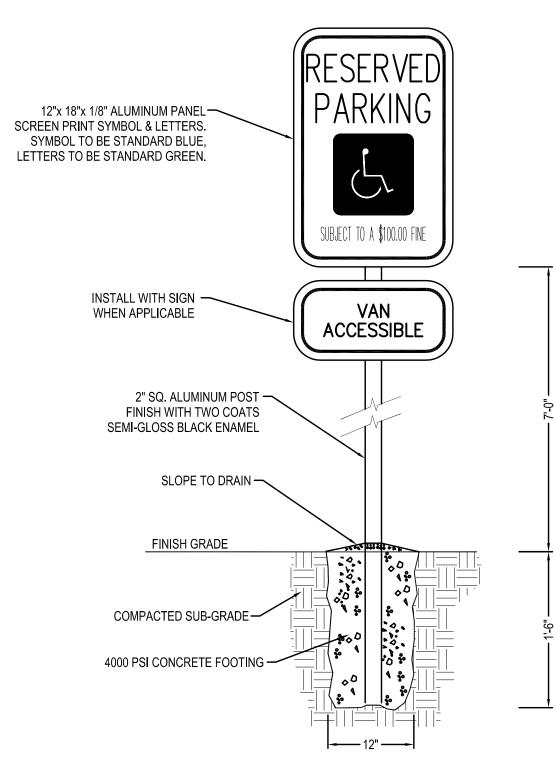
C30

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ARROW STRIPING DETAIL

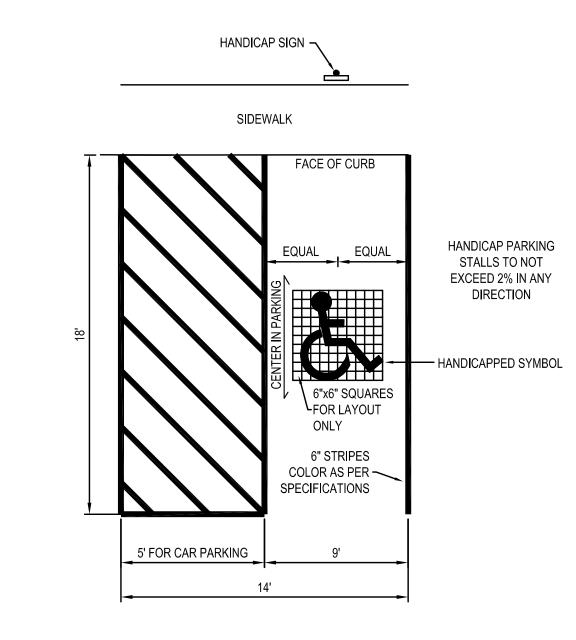
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WHEEL STOP (PRECAST CONCRETE)



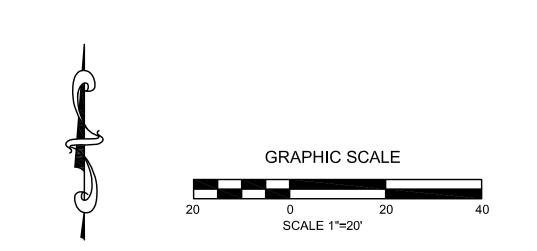
HANDICAP PARKING SIGN

NOT TO SCALE



HANDICAP PARKING STRIPING DETAIL

NOT TO SCALE



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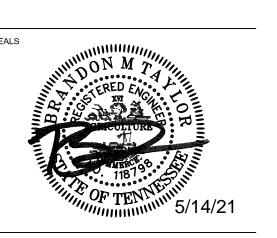
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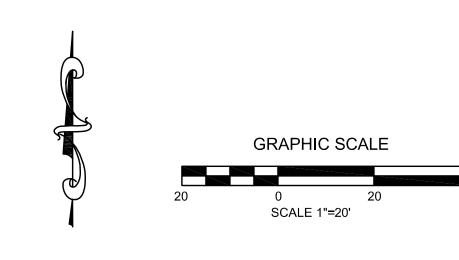
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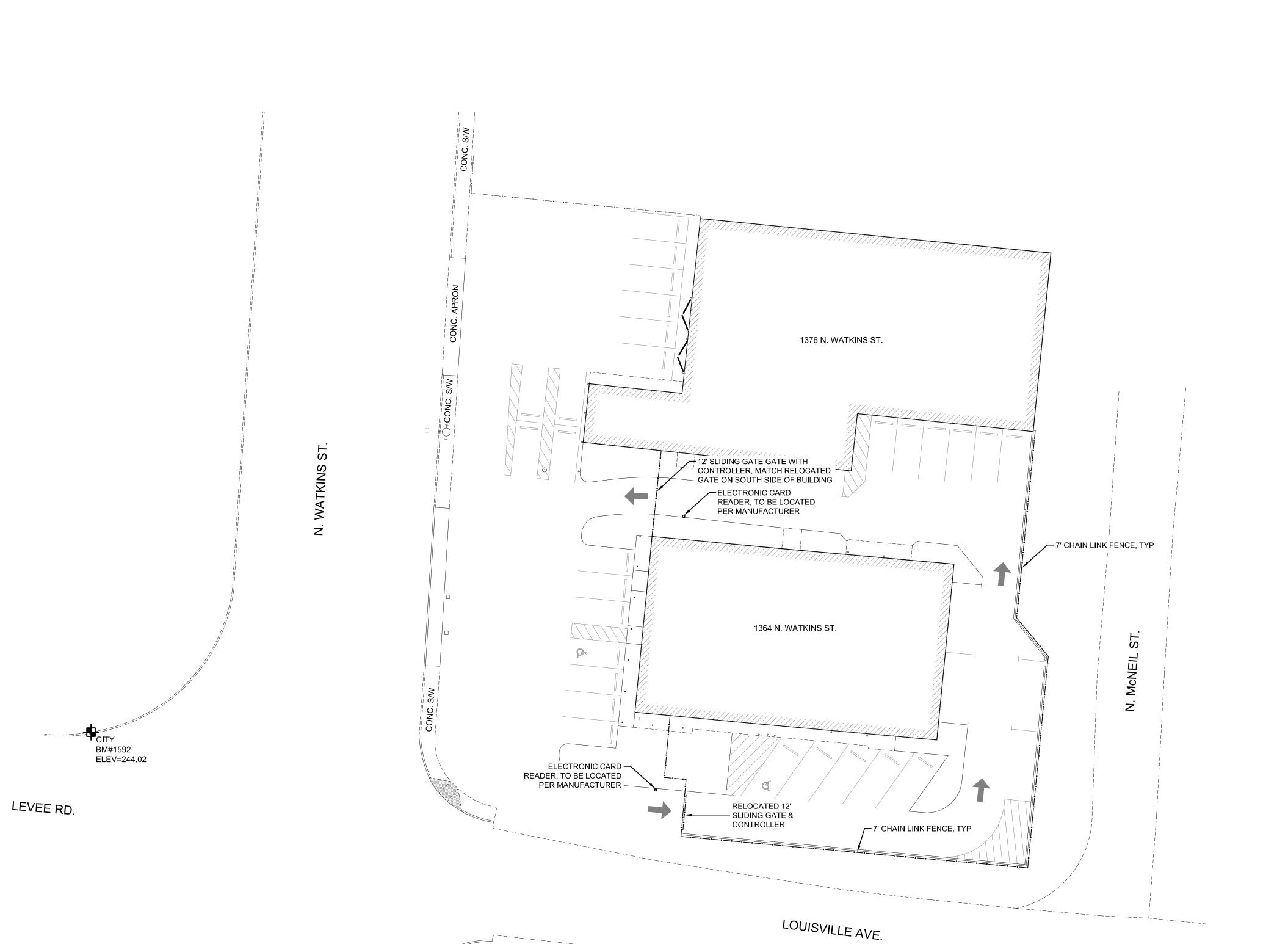
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PAVING & STRIPING PLAN







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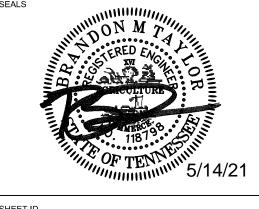
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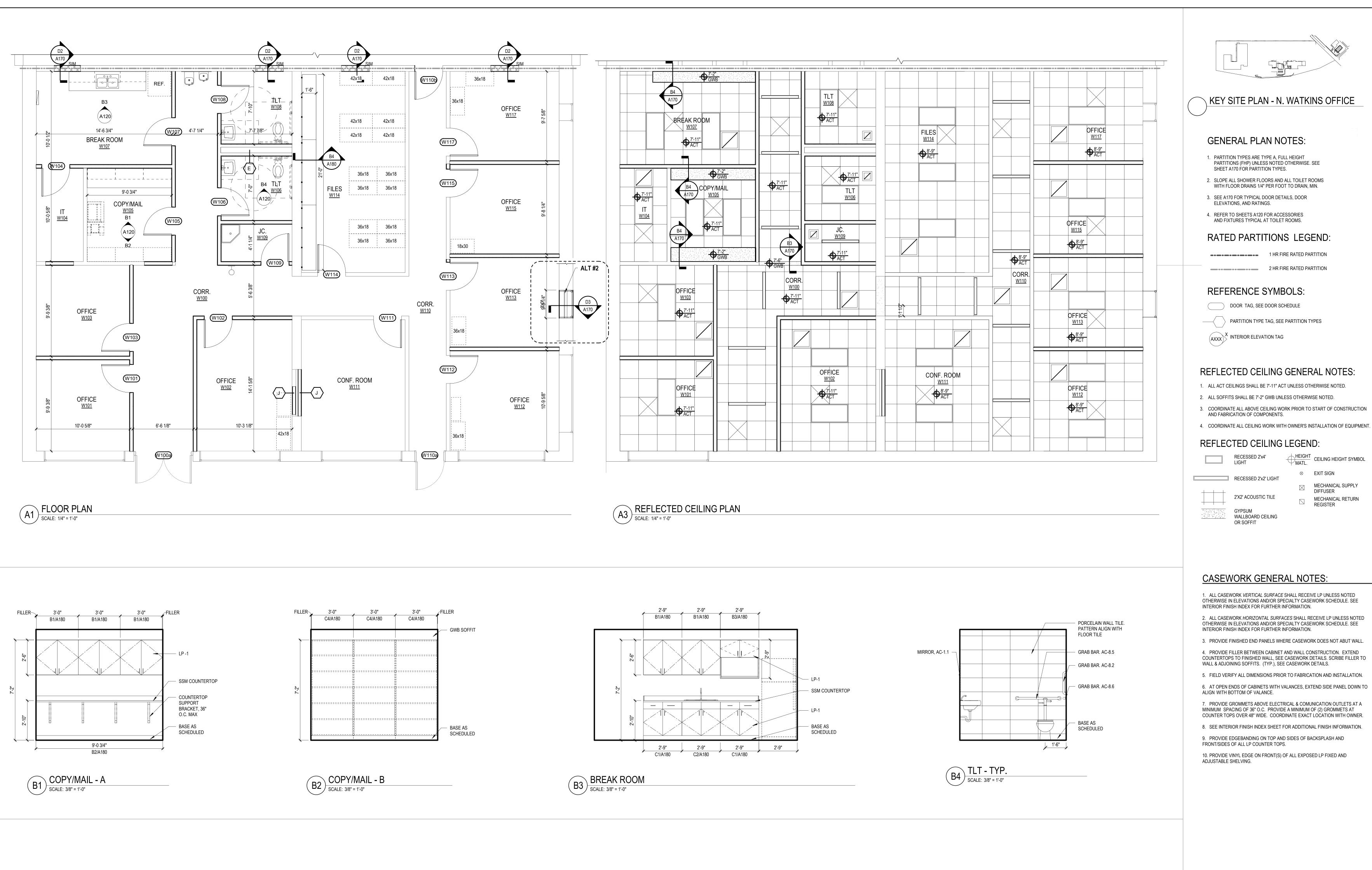
<u>UTILITY NOTE:</u> LOCATION OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND NOT NECESSARILY THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITY COMPANY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES AND UNDERGROUND STRUCTURES PRIOR TO THE INITIATION OF ANY

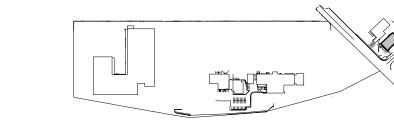
CONSTRUCTION. CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR DAMAGE TO ANY UTILITIES ENCOUNTERED WITHIN CONSTRUCTION LIMITS. CALL 1-800-351-1111 FOR UTILITY

LOCATIONS. CALL 636-0237 FOR SEWER LOCATIONS.

SITE FENCING PLAN







KEY SITE PLAN - N. WATKINS OFFICE

GENERAL PLAN NOTES:

- 1. PARTITION TYPES ARE TYPE A, FULL HEIGHT PARTITIONS (FHP) UNLESS NOTED OTHERWISE. SEE
- SHEET A170 FOR PARTITION TYPES.
- 2. SLOPE ALL SHOWER FLOORS AND ALL TOILET ROOMS WITH FLOOR DRAINS 1/4" PER FOOT TO DRAIN, MIN.
- 3. SEE A170 FOR TYPICAL DOOR DETAILS, DOOR ELEVATIONS, AND RATINGS.
- 4. REFER TO SHEETS A120 FOR ACCESSORIES AND FIXTURES TYPICAL AT TOILET ROOMS.

RATED PARTITIONS LEGEND:

1 HR FIRE RATED PARTITION 2 HR FIRE RATED PARTITION

REFERENCE SYMBOLS:

- DOOR TAG, SEE DOOR SCHEDULE
- ——〈 〉 PARTITION TYPE TAG, SEE PARTITION TYPES
- AXXX X INTERIOR ELEVATION TAG

REFLECTED CEILING GENERAL NOTES:

- 1. ALL ACT CEILINGS SHALL BE 7'-11" ACT UNLESS OTHERWISE NOTED.
- 2. ALL SOFFITS SHALL BE 7'-2" GWB UNLESS OTHERWISE NOTED.
- 3. COORDINATE ALL ABOVE CEILING WORK PRIOR TO START OF CONSTRUCTION AND FABRICATION OF COMPONENTS.

REFLECTED CEILING LEGEND:



REGISTER

GYPSUM WALLBOARD CEILING OR SOFFIT

CASEWORK GENERAL NOTES:

1. ALL CASEWORK VERTICAL SURFACE SHALL RECEIVE LP UNLESS NOTED OTHERWISE IN ELEVATIONS AND/OR SPECIALTY CASEWORK SCHEDULE. SEE INTERIOR FINISH INDEX FOR FURTHER INFORMATION.

2. ALL CASEWORK HORIZONTAL SURFACES SHALL RECEIVE LP UNLESS NOTED OTHERWISE IN ELEVATIONS AND/OR SPECIALTY CASEWORK SCHEDULE. SEE INTERIOR FINISH INDEX FOR FURTHER INFORMATION.

3. PROVIDE FINISHED END PANELS WHERE CASEWORK DOES NOT ABUT WALL. 4. PROVIDE FILLER BETWEEN CABINET AND WALL CONSTRUCTION. EXTEND COUNTERTOPS TO FINISHED WALL, SEE CASEWORK DETAILS. SCRIBE FILLER TO

WALL & ADJOINING SOFFITS. (TYP.), SEE CASEWORK DETAILS. 5. FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION AND INSTALLATION.

6. AT OPEN ENDS OF CABINETS WITH VALANCES, EXTEND SIDE PANEL DOWN TO ALIGN WITH BOTTOM OF VALANCE. 7. PROVIDE GROMMETS ABOVE ELECTRICAL & COMUNICATION OUTLETS AT A MINIMUM SPACING OF 36" O.C. PROVIDE A MINIMUM OF (2) GROMMETS AT

COUNTER TOPS OVER 48" WIDE. COORDINATE EXACT LOCATION WITH OWNER. 8. SEE INTERIOR FINISH INDEX SHEET FOR ADDITIONAL FINISH INFORMATION. 9. PROVIDE EDGEBANDING ON TOP AND SIDES OF BACKSPLASH AND FRONT/SIDES OF ALL LP COUNTER TOPS.

10. PROVIDE VINYL EDGE ON FRONT(S) OF ALL EXPOSED LP FIXED AND ADJUSTABLE SHELVING.

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MARK DATE DESCRIPTION

MATA HEADQUARTERS

1370 LEVEE RD, **MEMPHIS, TN. 38108** PROJECT NAME 1364 N WATKINS

PACKAGE 1 -RENOVATIONS

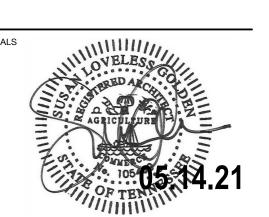
Date Issued **Drawing Scale** Copyright © 2021

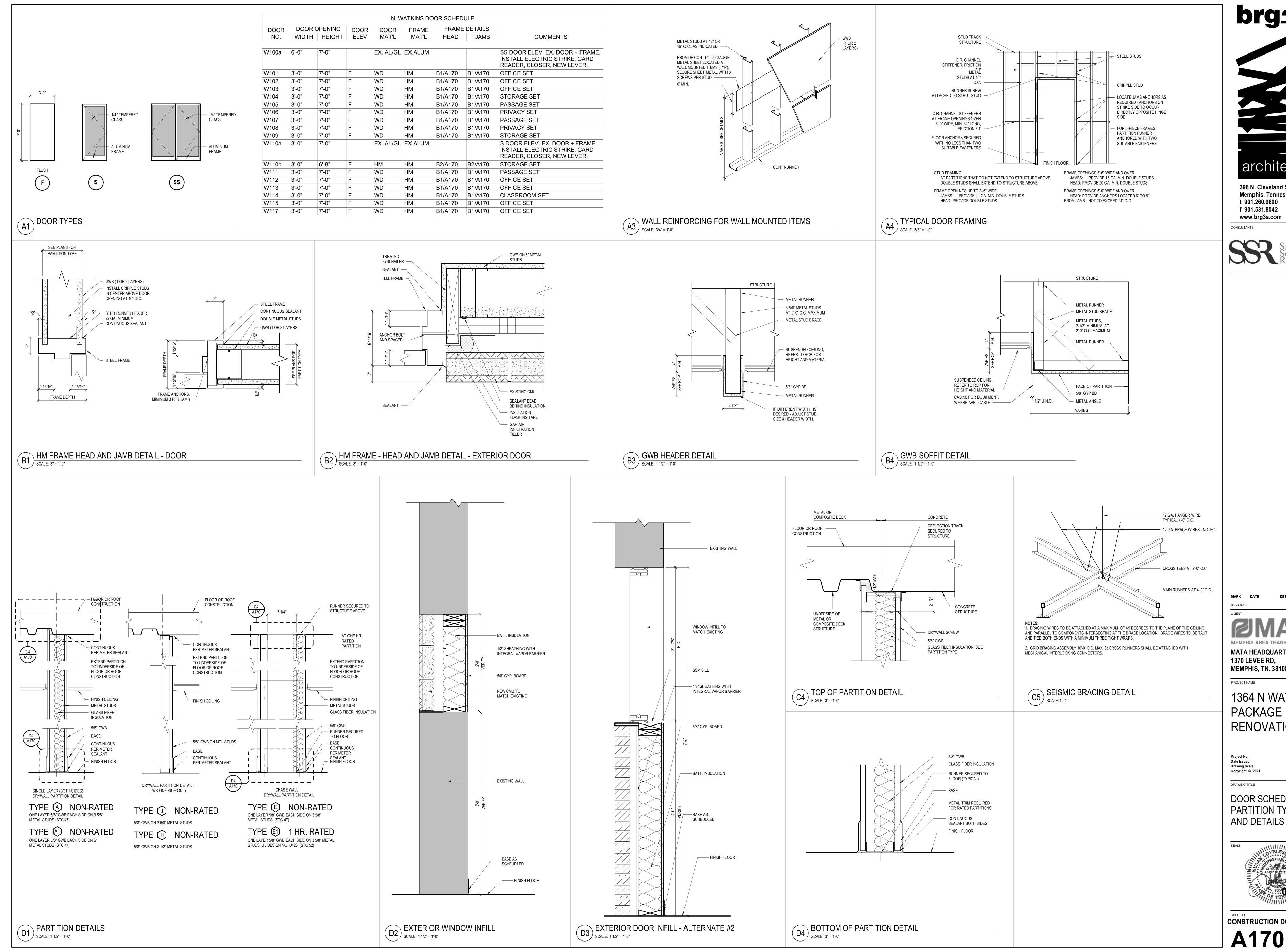
DRAWING TITLE

N. WATKINS OFFICE FLOOR PLAN, RCP AND ELEVATION

2020698 05.14.21

As indicated





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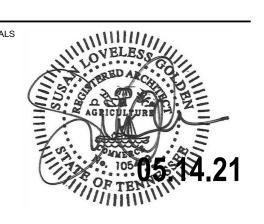
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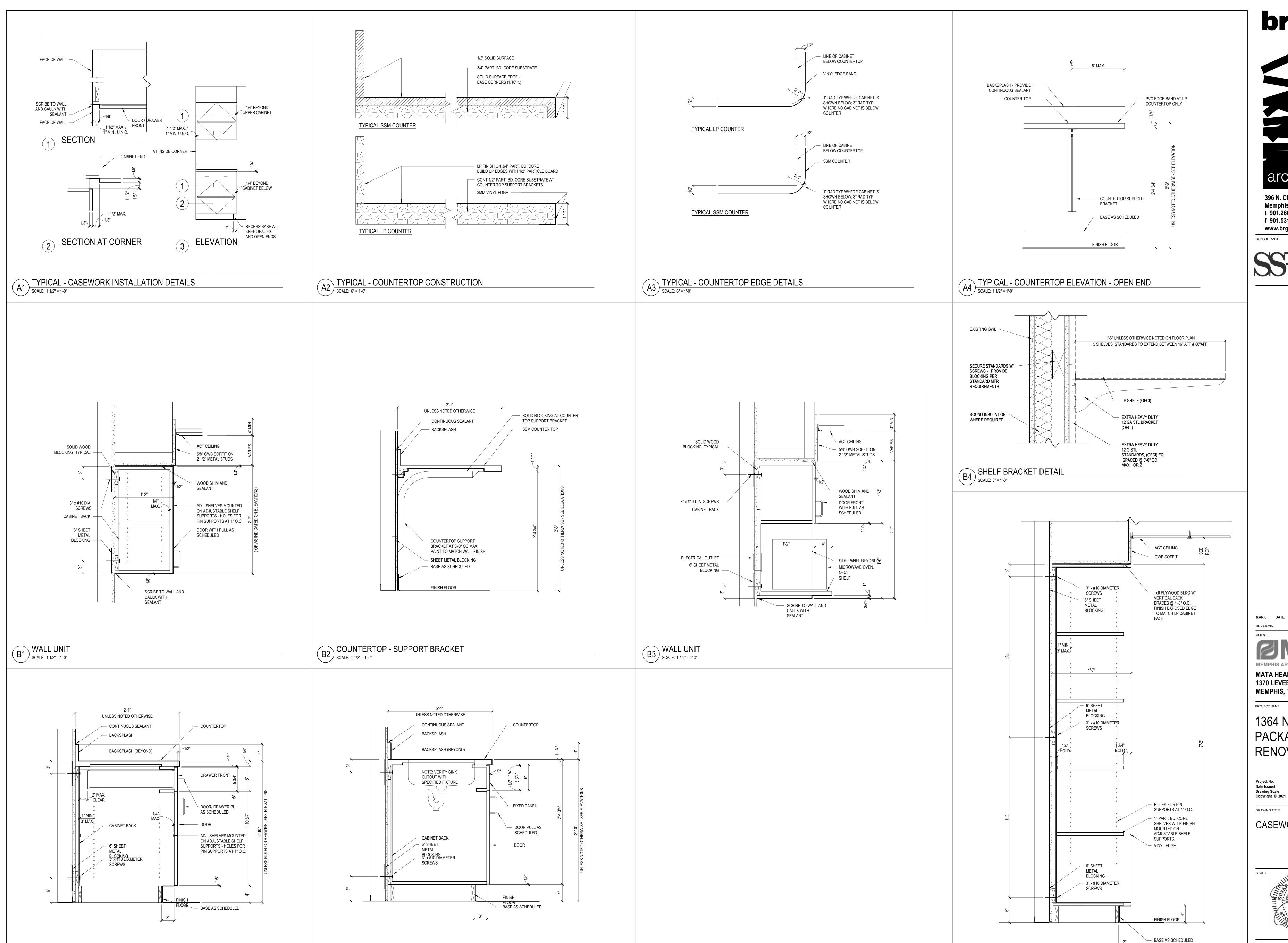
1364 N WATKINS PACKAGE 1 -RENOVATIONS

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DOOR SCHEDULE,

PARTITION TYPES AND DETAILS





C2 BASE UNIT - SINK
SCALE: 1 1/2" = 1'-0"

C1 BASE UNIT

SCALE: 1 1/2" = 1'-0"

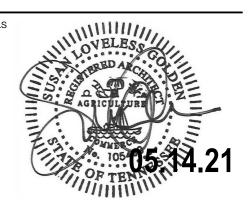
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MATA HEADQUARTERS 1370 LEVEE RD, **MEMPHIS, TN. 38108**

1364 N WATKINS PACKAGE 1 -RENOVATIONS

CASEWORK DETAILS

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CONSTRUCTION DOCUMENTS A180

FULL HEIGHT CABINET - SHELVING - NO DOOR -LP SOFFIT SCALE: 1 1/2" = 1'-0"

GENERALFLOORCOVERING NOTES:

FLOORCOVERING MATERIALS ARE IDENTIFIED ON BOTH INTERIOR ROOM FINISH SCHEDULE & THE INTERIOR FLOOR FINISH PLAN(S). ON INTERIOR ROOM FINISH SCHEDULE & THE INTERIOR FLOOR FINISH PLAN(S) THE COMPLEXITY OF FINISHES/ MATERIALS IS CLARIFIED USING SYMBOL(S) LISTED BELOW. CONTRACTOR SHALL SUBMIT TO THIS OFFICE ACTUAL SAMPLES IN TRIPLICATE OF ALL COLORS, MATERIALS, STYLES & PATTERNS FOR DESIGNER'S VERIFICATION AND APPROVAL, NO LATER THAN TWO (2) WEEKS FROM DATE OF CONTRACT. SIZE OF SAMPLES SHALL BE APPROXIMATELY 12"x12". SAMPLES SHALL BE PROPERLY LABELED BY PROJECT AND CODE AND SUBMITTED FOR APPROVAL PRIOR TO CONTRACTOR ORDERING MATERIAL.

FLOORCOVERING SYMBOL LEGEND:

PORCELAIN TILE DISTRIBUTION SYMBOL

RESILIENT TILE FLOORING DISTRIBUTION SYMBOL MATERIAL CODE PORCELAIN TILE COLOR CODE

RESILIENT SHEET FLOORING DISTRIBUTION SYMBOL

MATERIAL CODE

POLY RESIN DISTRIBUTION SYMBOL

POLY RESIN COLOR CODE

1. RESILIENT TILE FLOORING: LVT - LUXURY VINYL TILE SPECIAL INSTRUCTIONS: 1/3 OFFSET

AREAS DESIGNATED AS LVT SHALL RECEIVE: ARMSTRONG, NATURAL CREATIONS DIAMOND 10 TECHNOLOGY ARBOR ART, SIZE: 4" X 36", COLOR NAME: AVILA OAK MOROCCAN SAND

2. PORCELAIN TILE FLOORING:

PT - PORCELAIN TILE FLOORING SPECIAL INSTRUCTIONS: NONE AREAS DESIGNATED AS PT SHALL RECEIVE:

TRINITY TILE, EXPOSURE, SIZE: 12" X 24", COLOR NAME: ARENA, FINISH: MATTE

GROUT JOINT SIZE: 1/8, GROUT MANUFACTURER: MAPEI, GROUT COLOR: WARM GRAY, #93

3. BASE:

RUB - RUBBER BASE AREAS DESIGNATED AS RUB SHALL RECEIVE: JOHNSONITE, 4" COVE BASE, COLOR: CLAY, COLOR#: 09

TB - TILE BASE AREAS DESIGNATED AS TB SHALL RECEIVE: 4" TILE BASE, SEE INTERIOR FINISH SCHEDULE AND/OR INTERIOR FINISH PLAN(S) FOR COORDINATING MATERIAL

4. TRANSITION STRIPS:

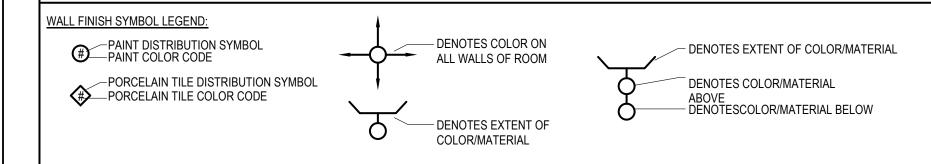
SPECIAL INSTRUCTIONS: ALL TRANSITIONS IN DOORWAYS SHALL OCCUR AT THE CENTERLINE OF DOOR UNLESS SHOWN OTHERWISE. ALL FLOOR TRANSITIONS TO BE LEVEL AND FLUSH. NOT ALL FLOORING TRANSITIONS SHOWN ON PLAN

TRANSITIONS BETWEEN PT AND LVT SHALL BE: SCHLUTER SYSTEM, RENO-TK, COLOR: BRUSHED STAINLESS STEEL.

WALLCOVERING FINISH NOTES

GENERAL WALLCOVERING NOTES:

WALL FINISH MATERIALS ARE IDENTIFIED ON BOTH INTERIOR ROOM FINISH SCHEDULE & THE INTERIOR WALL FINISH PLAN(S). ON INTERIOR ROOM FINISH SCHEDULE & THE INTERIOR WALL FINISH PLAN(S) THE COMPLEXITY OF FINISHES/ MATERIALS IS CLARIFIED USING SYMBOL(S) LISTED BELOW. CONTRACTOR SHALL SUBMIT TO THIS OFFICE ACTUAL SAMPLES IN TRIPLICATE OF ALL COLORS. MATERIALS. STYLES & PATTERNS FOR DESIGNER'S VERIFICATION AND APPROVAL, NO LATER THAN TWO (2) WEEKS FROM DATE OF CONTRACT. SIZE OF SAMPLES SHALL BE APPROXIMATELY 12"x12". SAMPLES SHALL BE PROPERLY LABELED BY PROJECT AND CODE AND SUBMITTED FOR APPROVAL PRIOR TO CONTRACTOR ORDERING MATERIAL.



- TILE AS SCHEDULED

VCT AS SCHEDULED

AS SPECIFIED

METAL EDGE TRANSITION

PTD - PAINT

SPECIAL INSTRUCTIONS: NONE AREAS DESIGNATED AS PTD SHALL RECEIVE: SHERWIN-WILLIAM, COLOR: CREAMY, COLOR #: SW7012, FINISH: MATTE

SPECIAL INSTRUCTIONS: ALL RESTROOM WALLS TO RECEIVE EPOXY FINISH, U.N.O.

AREAS DESIGNATED AS EPXY SHALL RECEIVE: MANUFACTURER, COLOR AS DESIGNED ON INTERIOR FINISH SCHEDULE OR INTERIOR FINISH PLAN(S), FINISH: EPOXY

2. WALL TILE: PT - PORCELAIN TILE

SPECIAL INSTRUCTIONS: NONE AREAS DESIGNATED AS PT SHALL RECEIVE:

TRINITY TILE, EXPOSURE, SIZE: 12" X 24", COLOR NAME: ARENA, FINISH: MATTE

LVT TO TILE TRANSITION

(B1) FINISH FLOOR - TRANSITIONS

GROUT JOINT SIZE: 1/8, GROUT MANUFACTURER: MAPEI, GROUT COLOR: WARM GRAY, #93

CASEWORK FINISH NOTES

GENERAL CASEWORK NOTES:

CONTRACTOR SHALL SUBMIT TO THIS OFFICE ACTUAL SAMPLES IN TRIPLICATE OF ALL COLORS, MATERIALS, STYLES & PATTERNS FOR DESIGNER'S VERIFICATION AND APPROVAL, NO LATER THAN TWO (2) WEEKS FROM DATE OF CONTRACT. SIZE OF SAMPLES SHALL BE APPROXIMATELY 12"x12". SAMPLES SHALL BE PROPERLY LABELED BY PROJECT AND CODE AND SUBMITTED FOR APPROVAL PRIOR TO CONTRACTOR ORDERING MATERIAL.

1. LAMINATED PLASTIC:

LP - LAMINATED PLASTIC CASEWORK DESIGNATED AS LP, (VERTICAL & HORIZONTAL SURFACES), SHALL RECEIVE MATERIAL AS SHOWN BELOW

UNLESS DESIGNATED IN ELEVATIONS AND/OR SPECIALTY CASEWORK SCHEDULE TO RECEIVE ANOTHER LP SELECTION AS LISTED IN 'ADDITIONAL LP COLOR CODES' BELOW.

FORMICA, WHITE DROPS, #8824, FINISH: MATTE

2. SOLID SURFACE:

SSM - SOLID SURFACE MATERIAL

CASEWORK DESIGNATED AS **SSM** SHALL RECEIVE MATERIAL AS SHOWN BELOW UNLESS DESIGNATED IN ELEVATIONS AND/OR SPECIALTY CASEWORK SCHEDULE TO RECEIVE ANOTHER SSM SELECTION/FINISH AS LISTED IN 'ADDITIONAL SSM COLOR CODES' BELOW.

CASEWORK DESIGNATED TO RECEIVE SSM SHALL RECEIVE: DURASEIN, COLOR: ODYSSEY

MISCELLANEOUS FINISH NOTES

. WINDOW TREATMENTS SHALL BE MATCH EXISTING

2. ALL WINDOW SILLS SHALL BE: DURASEIN, COLOR: ODYSSEY

B. ALL COUNTER SUPPORT BRACKETS TO BE PTD TO MATCH WALL (MAKE SURE OUR SPECS MATCH!)

4. INTERIOR SOFFITS DESIGNATED AS <u>PTD</u> SHALL BE PAINTED TO MATCH ADJACENT FASCIA, UNLESS NOTED OTHERWISE

5. INTERIOR FASCIAS DESIGNATED AS <u>PTD</u> SHALL MATCH ADJACENT WALL, UNLESS NOTED OTHERWISE 6. INTERIOR GWB CEILINGS DESIGNATED AS PTD SHALL BE CEILING WHITE, UNLESS NOTED OTHERWISE

. INTERIOR DOORS DESIGNATED AS <u>WD</u> SHALL BE FINISHED TO MATCH <u>TYPICAL VERTICAL SURFACE LAMINATE</u>.

8. INTERIOR DOORS DESIGNATED AS <u>PTD</u> SHALL BE SEMI-GLOSS FINISH, COLOR TO MATCH ADJACENT WALL, U.N.O.

D. INTERIOR DOOR FRAMES TO BE SHERWIN-WILLIAMS, COLOR: CANVAS TAN, COLOR#: SW 7531, SEMI-GLOSS FINISH. . GWB REVEAL WILL BE REQUIRED WHERE ANY ACCENT WALL PAINT DOES NOT TERMINATE AT WALL CORNER.

ALL HVAC REGISTERS AND GRILLS, ELECTRICAL PANELS, ACCESS PANELS, ELECTRICAL OUTLET STRIPS, AND FIRE EXTINGUISHER CABINETS SHALL BE FIELD PAINTED TO MATCH ADJACENT WALL OR CEILING FINISH.

N. WATKINS INTERIOR ROOM FINISH SCHEDULE						
ROOM NUMBER	ROOM NAME	FLOOR FINISH	BASE FINISH	WALL FINISH	CEILING FINISH	COMMENTS
W100	CORR.	LVT	RUB	PTD	ACT	
W101	OFFICE	LVT	RUB	PTD	ACT	
W102	OFFICE	LVT	RUB	PTD	ACT	
W103	OFFICE	LVT	RUB	PTD	ACT	
W104	IT	LVT	RUB	PTD	ACT	
W105	COPY/MAIL	LVT	RUB	PTD	ACT	
W106	TLT	PT	ТВ	PTD/PT	ACT	
W107	BREAK ROOM	LVT	RUB	PTD	ACT	
W108	TLT	PT	ТВ	PTD/PT	ACT	
W109	JC.	PT	ТВ	PTD	ACT	
W110	CORR.	LVT	RUB	PTD	ACT	
W111	CONF. ROOM	LVT	RUB	PTD	ACT	
W112	OFFICE	LVT	RUB	PTD	ACT	
W113	OFFICE	LVT	RUB	PTD	ACT	
W114	FILES	LVT	RUB	PTD	ACT	
W115	OFFICE	LVT	RUB	PTD	ACT	
W117	OFFICE	LVT	RUB	PTD	ACT	
14/000	EU E	LVT	DLID	DTD	ACT	





WALL FINISH LEGEND

PAINT DISTRIBUTION SYMBOL

PORCELAIN TILE DISTRIBUTION SYMBOL

PORCELAIN TILE COLOR CODE

PAINT COLOR CODE

DENOTES COLOR ON

ALL WALLS OF ROOM

DENOTES EXTENT OF

COLOR/MATERIAL





As indicated brg3s

CONSTRUCTION DOCUMENTS

ID001



FLOOR FINISH LEGEND

LVT - ARMSTRONG, NATURAL

CREATIONS DIAMOND 10

TECHNOLOGY ARBOR ART,

PT - TRINITY TILE, EXPOSURE, SIZE: 12" X 24",

FINISH: MATTE

COLOR NAME: ARENA,

SIZE: 4" X 36", COLOR NAME:

AVILA OAK MOROCCAN SAND

AIR DISTRIBUTION DEVICE SCHEDULE

GENERAL NOTES:

1. PROVIDE MOUNTING STYLE BASED ON CEILING TYPE INDICATED ON THE REFLECTED CEILING PLANS.
2. ALL AIR DISTRIBUTION DEVICES SHALL HAVE A MAXIMUM NC RATING OF 25.

ALL AIR DISTRIBUTION DEVICES SHALL HAVE A MAXIMOM NO INSTRUMENTATION OF 25.
 IN AREAS WITH LAY-IN CEILINGS, PROVIDE LISTED PANEL SIZE.
 IN AREAS WITH HARD CEILINGS, PROVIDE SURFACE MOUNTED TYPE AIR DISTRIBUTION DEVICE AT LISTED FACE SIZE WITHOUT PANEL.
 ALL AIR DEVICES LOCATED IN INACCESSIBLE HARD CEILINGS SHALL BE PROVIDED WITH VOLUME DAMPERS (OPPOSED BLADE WHEN

AVAILABLE).
6. CONTRACTOR SHALL PAINT THE INTERIOR OF RETURN/EXHAUST SQUARE TO ROUND TRANSITIONS AND PLENUMS FLAT BLACK.
7. PROVIDE TRANSITION AS REQUIRED FOR DUCT AND DEVICE CONNECTION.
8. RUNOUT DUCTS FOR RETURN/EXHAUST GRILLES SIZED AT MAXIMUM VELOCITY OF 600 FPM.

9. CEILING DIFFUSERS ARE 4-WAY THROW UNLESS NOTED OTHERWISE. INCREASE NECK SIZE ONE STEP FOR 2-WAY THROW AND PROVIDE

BLANK OFF PLATES AS REQUIRED.

10. FACE, NECK, AND RUNOUT SIZES FOR SIDEWALL GRILLES ARE THE NOMINAL DUCT SIZE.

11. REFER TO FLOOR PLANS FOR LENGTHS OF TYPE S2 NOT REFLECTED IN THE SCHEDULE.

12. REFER TO SPECIFICATION SECTION 233700 FOR ADDITIONAL REQUIREMENTS.

REMARKS: A. FIELD EXTERNALLY INSULATED PLENUM/BACK PAN. B. MANUFACTURER PROVIDED EXTERNAL INSULATION.

B. MANUFACTURER PROVIDED EXTERNAL INSULATION.
C. FACTORY LEAK TESTED.
D. MANUFACTURER PROVIDED BACK PLENUM WITH NECK OPENING SIZES AS INDICATED.
E. PROVIDE WITH KNIFE EDGE FOR HEPA GEL SEAL.
F. COLOR SELECTED BY ARCHITECT.
G. PROVIDE BLANK OFF PLATES FOR UNUSED PORTIONS OF CONTINUOUS SLOT.

H. HEAVY DUTY CONSTRUCTION.
I. PROVIDE WITH HINGED FRAME.
J. FACE OPERATED (VIA SLOT) OPPOSED BLADE DAMPER.
K. REAR OPERATED (VIA SLOT) OPPOSED BLADE DAMPER.

J. FACE OPERATED (VIA SLOT) OPPOSED BLADE DAIMPER.
K. REAR OPERATED (VIA SLOT) OPPOSED BLADE DAMPER.
L. LAMINAR DIFFUSER WITH INTEGRAL LED LIGHTING. PROVIDED BY MECHANICAL
CONTRACTOR, WIRING BY ELECTRICAL CONTRACTOR. REFER TO ELECTRICAL LUMINAIRE
SCHEDULE FOR ADDITIONAL REQUIREMENTS.

DESIGNATION	CFM F	RANGE	MANUFACTURER	MODEL	TYPE	LOCATION	FACE	NECK	RUNOUT	PANEL	REMARKS
DESIGNATION	MIN.	MAX.	WANDFACTURER	WIODEL	IIFE	LOCATION	SIZE (IN.)	SIZE (IN.)	SIZE (IN.)	SIZE (IN.)	KEWAKKS
E1		•									
E1	0	190	TITUS	50F	1/2 IN. EGGCRATE	CEILING	24x24	8 DIA.	8 DIA./10x6	24x24	D
E1A								•			•
E1A	0	90	TITUS	50F	1/2 IN. EGGCRATE	CEILING	12x12	6 DIA	6 DIA./8x4	12x12	D
R1		•									
R1	0	190	TITUS	50F	1/2 IN. EGGCRATE	CEILING	24x24	8 DIA.	8 DIA./10x6	24x24	D
R1	195	280	TITUS	50F	1/2 IN. EGGCRATE	CEILING	24x24	10 DIA.	10 DIA./12x8	24x24	D
R1	285	460	TITUS	50F	1/2 IN. EGGCRATE	CEILING	24x24	12 DIA.	12 DIA./14x10	24x24	D
S1		•									
S1	0	90	TITUS	TMS	LOUVERED FACE	CEILING	24x24	6 DIA.	6 DIA./8x4	24x24	-
S1	95	190	TITUS	TMS	LOUVERED FACE	CEILING	24x24	8 DIA.	8 DIA./10x6	24x24	-
S1	195	320	TITUS	TMS	LOUVERED FACE	CEILING	24x24	10 DIA.	10 DIA./12x8	24x24	_

	DUC	rwork		
SYMBOL / ABBREVIATION	DESCRIPTION	SYMBOL / ABE	BREVIATION	DESCRIPTION
	RECTANGULAR SUPPLY DUCT - UP	12"X12" FACE	24"X24" FACE	SUPPLY DIFFUSER AND AIR QUANTITY. BLANK OUTS INDICATE NO AIR FLOW IN THIS
	RECTANGULAR SUPPLY DUCT - DOWN		× sx	DIRECTION. (X DENOTES TYPE. SEE NOTE 1 OF AIR DISTRIBUTION DEVICE SCHEDULE)
	RECTANGULAR RETURN / EXHAUST DUCT - UP		RX	RETURN GRILLE AND AIR QUANTITY (X DENOTES TYPE) EXHAUST GRILLE AND AIR QUANTITY (X DENOTES TYPE)
	RECTANGULAR RETURN / EXHAUST DUCT - DOWN	100SX	100SX	LAMINAR FLOW SUPPLY DIFFUSER AND AIR FLOW QUANTITY (X DENOTES TYPE)
	ROUND SUPPLY DUCT - UP	<u> </u>	100	LINEAR SLOT DIFFUSER AND AIR FLOW QUANTITY SCREENED OPENING AND AIR FLOW QUANTITY
	ROUND SUPPLY DUCT - DOWN	AT-XX-XX —		SOUND ATTENUATOR HEATING COIL WITH IDENT.
	ROUND RETURN / EXHAUST DUCT - UP	XXX T		ELECTRIC HEATING COIL WITH IDENT.
	ROUND RETURN / EXHAUST DUCT - DOWN	ATU-XX-XX XXX		AIR TERMINAL UNIT WITH IDENT. & MAX CFM
	OVAL SUPPLY DUCT - UP	ATU-XX-XX XXX		AIR TERMINAL UNIT WITH IDENT., MIN AND MAX
	OVAL SUPPLY DUCT - DOWN	CB-XX-XX XXX	† † †	CHILLED BEAM WITH IDENT. & CFM
	OVAL RETURN / EXHAUST DUCT - UP	CFM	7	AIRFLOW TRANSFER RATE AT DOOR
	OVAL RETURN / EXHAUST DUCT - DOWN	AI AF		ACCESS DOOR ABOVE FINISHED FLOOR
		AT		AUTOMATIC TEMPERATURE CONTROL PANEL
	FIRE DAMPER	BD		BACKDRAFT DAMPER
	SMOKE DAMPER	ВС	DD	BOTTOM OF DUCT
	SIVIONE DAIVIPEN	ВС)P	BOTTOM OF PIPE
***	COMBINATION FIRE/SMOKE DAMPER	C	S	COLD DECK SUPPLY
		DD		DIRECT DIGITAL CONTROL
,	MANUAL VOLUME DAMPER	DI.		DISHWASHER EXHAUST INTERNAL DUCT LINING
		E/		EXHAUST AIR
M M	MOTORIZED DAMPER	F		FIRE DAMPER
HA L	AIR FLOW MONITORING STATION	FS	SD.	COMBINATION FIRE/SMOKE DAMPER
	AIRT LOW MONTORING STATION	GI	E	GREASE EXHAUST
	DIFFERENTIAL PRESSURE SENSOR	H		HOOD EXHAUST HOT DECK SUPPLY
		IE		ISOLATION EXHAUST
SP SP	STATIC PRESSURE SENSOR	LE		LAB EXHAUST
· co	CARBON DIOXIDE DETECTOR	М	L	MARINE LIGHT
	OARDON BIOAIDE BETEGTOR	MV	/D	MANUAL VOLUME DAMPER
	CARBON MONOXIDE DETECTOR	0/		OUTSIDE AIR
		OB		OPPOSED BLADE DAMPER PHARMACY EXHAUST
	DUCT SENSOR	R/		FHARWACT EXHAUST
		1	\neg	RETURN AIR
		SA		RETURN AIR SUPPLY AIR
	TRAVERSE DUCT TEST AND BALANCE		A	
	TRAVERSE DUCT TEST AND BALANCE	S/ SI	A D O	SUPPLY AIR SMOKE DAMPER SCREENED OPENING
— <u>D</u>	TRAVERSE DUCT TEST AND BALANCE	S/ SI SW	A D O VR	SUPPLY AIR SMOKE DAMPER SCREENED OPENING SIDEWALL REGISTER
— <u>D</u>	TRAVERSE DUCT TEST AND BALANCE	S/ SI	A D O VR VG	SUPPLY AIR SMOKE DAMPER SCREENED OPENING
— <u>D</u>	TRAVERSE DUCT TEST AND BALANCE	SA SI SC SW	A D O VR VG	SUPPLY AIR SMOKE DAMPER SCREENED OPENING SIDEWALL REGISTER SIDEWALL GRILLE
— <u>D</u>	TRAVERSE DUCT TEST AND BALANCE HUMIDIFIER WITH IDENTIFICATION	SA SI SW SW	A D D VR VG G	SUPPLY AIR SMOKE DAMPER SCREENED OPENING SIDEWALL REGISTER SIDEWALL GRILLE TRANSFER GRILLE
HUM H-XX H-XX H-XX H H-XX	TRAVERSE DUCT TEST AND BALANCE HUMIDIFIER WITH IDENTIFICATION TRANSITION	S/ SI SW SW TO UN	A D D VR VG G HO WALL	SUPPLY AIR SMOKE DAMPER SCREENED OPENING SIDEWALL REGISTER SIDEWALL GRILLE TRANSFER GRILLE UNLESS NOTED OTHERWISE MOUNTED CONTROL DEVICES THERMOSTAT OR TEMP SENSOR
— <u>D</u>	TRAVERSE DUCT TEST AND BALANCE HUMIDIFIER WITH IDENTIFICATION TRANSITION	S/ SI SW SW TO UN	A D D WALL D WALL	SUPPLY AIR SMOKE DAMPER SCREENED OPENING SIDEWALL REGISTER SIDEWALL GRILLE TRANSFER GRILLE UNLESS NOTED OTHERWISE MOUNTED CONTROL DEVICES THERMOSTAT OR TEMP SENSOR HUMIDISTAT OR HUMIDITY SENSOR
HUM H-XX H-XX H-XX H H-XX	TRAVERSE DUCT TEST AND BALANCE HUMIDIFIER WITH IDENTIFICATION TRANSITION RADIUS ELBOW SQUARE THROAT ELBOW WITH TURNING VANES	S/ SI SW SW TO UN	A D D WALL D WALL D D O WALL D D D D D D D D D D D D D D D D D D	SUPPLY AIR SMOKE DAMPER SCREENED OPENING SIDEWALL REGISTER SIDEWALL GRILLE TRANSFER GRILLE UNLESS NOTED OTHERWISE MOUNTED CONTROL DEVICES THERMOSTAT OR TEMP SENSOR
HUM H-XX H-XX H-XX H H-XX	TRAVERSE DUCT TEST AND BALANCE HUMIDIFIER WITH IDENTIFICATION TRANSITION RADIUS ELBOW SQUARE THROAT ELBOW WITH TURNING	SA SI SW SW TO UN	A D D WALL D O WALL D O O O O O O O O O O O O O O O O O O	SUPPLY AIR SMOKE DAMPER SCREENED OPENING SIDEWALL REGISTER SIDEWALL GRILLE TRANSFER GRILLE UNLESS NOTED OTHERWISE MOUNTED CONTROL DEVICES THERMOSTAT OR TEMP SENSOR HUMIDISTAT OR HUMIDITY SENSOR PRESSURE MONITOR
HUM H-XX H-XX H-XX H H-XX	TRAVERSE DUCT TEST AND BALANCE HUMIDIFIER WITH IDENTIFICATION TRANSITION RADIUS ELBOW SQUARE THROAT ELBOW WITH TURNING VANES BRANCH DUCT CONNECTION RECTANGULAR OR ROUND BRANCH.	SA SI SW SW TO UN	A D D WALL D O O O O O O O O O O O O O O O O O O	SUPPLY AIR SMOKE DAMPER SCREENED OPENING SIDEWALL REGISTER SIDEWALL GRILLE TRANSFER GRILLE UNLESS NOTED OTHERWISE MOUNTED CONTROL DEVICES THERMOSTAT OR TEMP SENSOR HUMIDISTAT OR HUMIDITY SENSOR PRESSURE MONITOR CARBON DIOXIDE SENSOR
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H-XX H-XX H-XX H-XX H-XX H-XX H-XX H-XX	TRAVERSE DUCT TEST AND BALANCE HUMIDIFIER WITH IDENTIFICATION TRANSITION RADIUS ELBOW SQUARE THROAT ELBOW WITH TURNING VANES BRANCH DUCT CONNECTION RECTANGULAR OR ROUND BRANCH. RECTANGULAR TRUNK. MVD REQUIRED TO AIR DEVICES	SA SI SW SW TO UN	A D D WALL D M-X D M-X	SUPPLY AIR SMOKE DAMPER SCREENED OPENING SIDEWALL REGISTER SIDEWALL GRILLE TRANSFER GRILLE UNLESS NOTED OTHERWISE MOUNTED CONTROL DEVICES THERMOSTAT OR TEMP SENSOR HUMIDISTAT OR HUMIDITY SENSOR PRESSURE MONITOR CARBON DIOXIDE SENSOR MULTI-POINT MONITOR
H-XX H-XX H-XX R H-XX R R/D R/D X	TRAVERSE DUCT TEST AND BALANCE HUMIDIFIER WITH IDENTIFICATION TRANSITION RADIUS ELBOW SQUARE THROAT ELBOW WITH TURNING VANES BRANCH DUCT CONNECTION RECTANGULAR OR ROUND BRANCH. RECTANGULAR TRUNK. MVD REQUIRED TO AIR DEVICES RISE/DROP IN ELEVATION	SA SI SW SW TO UN	A D D WALL D M-X D M-X	SUPPLY AIR SMOKE DAMPER SCREENED OPENING SIDEWALL REGISTER SIDEWALL GRILLE TRANSFER GRILLE UNLESS NOTED OTHERWISE MOUNTED CONTROL DEVICES THERMOSTAT OR TEMP SENSOR HUMIDISTAT OR HUMIDITY SENSOR PRESSURE MONITOR CARBON DIOXIDE SENSOR MULTI-POINT MONITOR
H-XX H-XX H-XX R/D R/D X	TRAVERSE DUCT TEST AND BALANCE HUMIDIFIER WITH IDENTIFICATION TRANSITION RADIUS ELBOW SQUARE THROAT ELBOW WITH TURNING VANES BRANCH DUCT CONNECTION RECTANGULAR OR ROUND BRANCH. RECTANGULAR TRUNK. MVD REQUIRED TO AIR DEVICES RISE/DROP IN ELEVATION SPLITTER WITH SPLIT SIZE SHOWN	SA SI SW SW TO UN	A D D WALL D M-X D M-X	SUPPLY AIR SMOKE DAMPER SCREENED OPENING SIDEWALL REGISTER SIDEWALL GRILLE TRANSFER GRILLE UNLESS NOTED OTHERWISE MOUNTED CONTROL DEVICES THERMOSTAT OR TEMP SENSOR HUMIDISTAT OR HUMIDITY SENSOR PRESSURE MONITOR CARBON DIOXIDE SENSOR MULTI-POINT MONITOR

MECHANICAL LEGEND

(NOT ALL SYMBOLS MAY BE USED

MECHANICAL GENERAL NOTES

- A. CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE PROJECT SCOPE, UTILITY CONNECTIONS, AND ALL BUILDING SERVICES.
- B. PROVIDE HOUSEKEEPING PADS UNDER ALL FLOOR MOUNTED EQUIPMENT. HOUSEKEEPING PAD SIZE AND FLOOR DRAIN LOCATIONS SHALL BE COORDINATED WITH THE SIZE AND LOCATION OF EXACT EQUIPMENT TO BE INSTALLED.
- C. STANDARD DETAILS ILLUSTRATED ON THE DRAWINGS SHALL BE APPLIED IN ALL CASES WHERE THE FEATURE OCCURS IN THE SYSTEM DESIGN.
- D. ALL DUCTWORK SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS IN INCHES. ALL DUCTWORK NOTED AS (D.L.) SHALL BE PROVIDED WITH INTERNAL DUCT LINING. REFER TO SPECIFICATION SECTION 230700 FOR DUCT INSULATION & LINING REQUIREMENTS.
- E. MAJOR EQUIPMENT SHOWN ON THE PLANS AND ELEVATIONS ILLUSTRATE THE GENERAL ARRANGEMENT AND SPACE ALLOCATIONS. THE CONTRACTOR SHALL VERIFY THE SPACE REQUIREMENTS FOR EACH SYSTEM COMPONENT USING MANUFACTURER CERTIFIED SHOP DRAWINGS AND MAKE THE NECESSARY ADJUSTMENTS IN EQUIPMENT PLACEMENT AND CONNECTION IN ORDER TO ACCOMMODATE THE EXACT EQUIPMENT TO BE
- F. SUPPORTS, ANCHOR BOLTS, AND HANGERS FOR ALL EQUIPMENT SPECIFIED IN DIVISION 23 SHALL CONFORM TO THE SPECIFICATIONS. MISCELLANEOUS STEEL BRACING SUPPORTS AND REINFORCING STEEL NEEDED TO SUPPORT EQUIPMENT SPECIFIED IN DIVISION 23 SHALL BE PART OF THE SCOPE OF WORK OF DIVISION 23.
- G. DIFFUSERS, REGISTERS, AND GRILLES SHOWN ON THE MECHANICAL DRAWINGS SHALL BE IN ACCORDANCE WITH THE AIR DISTRIBUTION DEVICE SCHEDULE AND SPECIFICATIONS. BRANCH DUCTS TO AIR DEVICES SHALL BE IN ACCORDANCE WITH THE SCHEDULE UNLESS NOTED OTHERWISE.
- H. FIRE/SMOKE DAMPERS SHALL BE INSTALLED IN DUCTWORK PENETRATIONS THROUGH RATED PARTITIONS, WALLS, BARRIERS, FLOORS, AND SHAFTS IN ACCORDANCE WITH THE PROJECT APPLICABLE BUILDING CODES. DAMPERS SHALL MEET THE REQUIREMENTS OF THE FIRE/SMOKE RATING AND BE "U.L." LABELED. REFER TO ARCHITECTURAL DRAWINGS FOR THE LOCATIONS AND RATINGS OF ALL WALLS AND FLOORS.
- PENETRATIONS THROUGH RATED WALLS AND FLOORS SHALL BE SLEEVED, SEALED AND FIRESAFED TO MAINTAIN THE INTEGRITY OF THE WALL AND FLOOR UL FIRE RESISTANCE RATING.
- J. DUCTWORK AND PIPING 4" AND LARGER ROUTED PARALLEL TO A RATED WALL SHALL BE INSTALLED WITH A MINIMUM 6" CLEARANCE TO ALLOW FOR INSPECTION OF WALL PENETRATIONS.
- K. DUCTWORK STORED ON-SITE AWAITING INSTALLATION SHALL REMAIN PROPERLY SEALED AND PROTECTED. OPEN ENDS OF DUCTWORK SHALL BE CAPPED AND SEALED AFTER INSTALLATION.
- L. SMOKE DETECTORS SHALL BE LOCATED AS INDICATED ON THE MECHANICAL PLANS AND IN CONFORMANCE WITH NFPA 90A AND LOCAL CODES.
- M. CEILING DIFFUSER LOCATIONS SHALL BE AS SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLANS.
- N. CEILING DIFFUSERS, REGISTERS AND GRILLES SHALL BE FURNISHED WITH MOUNTING FRAMES AND FEATURES IN ACCORDANCE WITH THE CEILING TYPE.O. PIPING CONNECTIONS TO AIR HANDLING UNIT COILS AND MAJOR EQUIPMENT TO BE FABRICATED WITH
- ISOLATION VALVES, FLANGES, AND/OR UNIONS POSITIONED TO ALLOW REMOVAL AND SERVICE OF THE COMPONENT PARTS.
- P. THERMOMETER WELLS AND PRESSURE GAUGES SHALL BE INSTALLED ON THE TOP OR SIDE OF HORIZONTAL PIPING IN ORDER TO RETAIN GAUGE FLUID AND BE EASILY READ FROM THE FLOOR.
- Q. PROVIDE EXPANSION JOINT AT EACH PIPE AND DUCT CROSSING AN INTERIOR BUILDING EXPANSION JOINT.

 R. PROVIDE MANUAL BALANCING/VOLUME DAMPERS AT ALL LOW PRESSURE BRANCH TAKE-OFFS TO DIFFUSERS
- AND GRILLES FROM SUPPLY, RETURN AND EXHAUST MAINS AND SUB-MAINS, AND AT ALL LOW PRESSURE DUCT SPLITS OR SUB-MAIN TAKE-OFFS. DAMPERS SHALL BE INSTALLED ABOVE AN ACCESSIBLE CEILING OR ACCESS PANEL.
- S. DRAWINGS ARE SCHEMATIC IN NATURE AND SHALL NOT BE SCALED. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING EXACT ROUTING OF ALL SERVICES WITH EXISTING CONDITIONS AND WITH ALL OTHER TRADES. REFER TO SPECIFICATIONS FOR COORDINATION DRAWING REQUIREMENTS.
- T. MAINTAIN ACCESSIBILITY OF ALL EQUIPMENT, DAMPERS, CONTROL PANELS, VALVES, AND OTHER DEVICES. PROVIDE ACCESS PANELS AS REQUIRED. COORDINATE PLACEMENT WITH THE ARCHITECT PRIOR TO
- INSTALLATION.

 U. CONTRACTOR SHALL COORDINATE WITH THE ARCHITECT PRIOR TO CUTTING ANY OPENING IN THE STRUCTURE.
- V. WHERE WORK IN RENOVATED AREAS AFFECTS SYSTEMS IN OTHER AREAS OF THE BUILDING, THE CONTRACTOR SHALL COORDINATE THIS WORK WITH THE OWNER. THIS WORK SHALL BE DONE TO FIT THE BUILDING OPERATIONAL SCHEDULE AND MINIMIZE DISRUPTION/ DISCOMFORT TO OCCUPIED AREAS. PROVIDE MINIMUM 48 HOURS WRITTEN NOTICE WITH ANTICIPATED DURATION OF OUTAGE.
- W. COORDINATE WITH ALL TRADES FOR REQUIRED CEILING REMOVAL IN EXISTING BUILDING. NOTIFY THE ARCHITECT AND OWNER PRIOR TO COMMENCING REMOVAL. REMOVE ONLY THAT PORTION OF CEILING NECESSARY TO ACCESS AND COMPLETE THE NEW WORK. UPON COMPLETION OF THE ABOVE CEILING WORK, CEILING IS TO BE REINSTALLED. REPLACE ANY DAMAGED CEILING THES WITH NEW THES TO MATCH EXISTING.
- CEILING IS TO BE REINSTALLED. REPLACE ANY DAMAGED CEILING TILES WITH NEW TILES TO MATCH EXISTING.

 X. UNLESS OTHERWISE NOTED ON PLANS, LOW RETURN AIR AND LOW EXHAUST AIR GRILLES/REGISTERS SHALL BE MOUNTED 8" ABOVE FINISHED FLOOR TO THE BOTTOM OF THE FRAME.
- Y. CONTRACTOR SHALL COMPLY WITH THE ARCHITECT AND/OR OWNER PROVIDED INFECTION CONTROL RISK ASSESSMENT PLAN AND OTHER CONSTRUCTION RELATED PROCESSES.
- Z. OUTSIDE AIR INTAKES SHALL BE A MINIMUM OF 25 FEET AWAY FROM PLUMBING VENTS, EXHAUST VENTS, AND OTHER SOURCES OF NOXIOUS FUMES AND/OR ODORS. INTAKES SHALL BE A MINIMUM OF 36" ABOVE FINISHED ROOF AND 72" ABOVE FINISHED GRADE.
- AA. IN RETURN AIR PLENUM APPLICATIONS, CONTRACTOR SHALL PROVIDE MINIMUM 32" X 16" ACOUSTICALLY LINED AIR TRANSFER OPENING WITH TOP OF OPENING TIGHT TO PLENUM DECK ABOVE ROOM ENTRY DOOR IN FULL-HEIGHT WALLS. PROVIDE FIRE AND/OR SMOKE DAMPERS AT PENETRATIONS OF ALL FIRE AND SMOKE RATED WALLS AS REQUIRED TO MEET WALL RATING. PROVIDE SMOKE DETECTORS AT INLET OF EACH OPENING IN RATED SMOKE WALLS. CONTRACTOR IS DIRECTLY RESPONSIBLE FOR THIS COORDINATION AND INSTALLATION OF AIR TRANSFER OPENINGS IN FULL-HEIGHT WALLS.

MECHANICAL DEMOLITION NOTES

- A. PRIOR TO ANY DEMOLITION WORK, CONTRACTOR SHALL TAKE AIR FLOW AND STATIC PRESSURE READINGS ON EXISTING EQUIPMENT AS FOLLOWS: (INSERT SPECIFIC EQUIPMENT NAMES HERE). RECORD AND SUBMIT TO
- B. PRIOR TO DEMOLITION WORK, CONTRACTOR SHALL TAKE AIRFLOW READINGS OF ALL GRILLES, REGISTERS, AND DIFFUSERS IN PROJECT AREAS. RECORD AND SUBMIT TO ARCHITECT/ENGINEER.
- C. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE CONDITION OF ALL EXISTING EQUIPMENT, EXACT SIZES OF EXISTING DUCT AND PIPING, ETC. BEFORE DEMOLITION WORK IS BEGUN. REPORT ANY DISCREPANCIES BETWEEN PLANS AND ACTUAL FIELD CONDITIONS TO ARCHITECT AND ENGINEER PRIOR TO THE
- COMMENCEMENT OF DEMOLITION WORK.

 D. REMOVE THE INDICATED HVAC ITEMS AS SHOWN ON PLANS. THIS INCLUDES ALL HANGERS, STRAPS AND RELATED MATERIAL. IF THE OWNER WISHES TO UTILIZE THE EXISTING EQUIPMENT, CONTRACTOR SHALL MOVE THE EQUIPMENT TO AN ON-SITE LOCATION DESIGNATED BY THE OWNER. ALL EQUIPMENT REFUSED BY OWNER SHALL BE DISPOSED OF IN A MANNER ACCEPTABLE BY LOCAL JURISDICTION. ITEMS SHOWN TO BE REMOVED
- SHALL NOT BE ABANDONED IN PLACE.

 E. CAP AND SEAL AIR TIGHT ALL POINTS AT WHICH DUCTWORK IS REMOVED FROM DUCTWORK THAT WILL REMAIN.
- RE-INSULATE REMAINING DUCTWORK TO MAINTAIN VAPOR BARRIER.

 F. CAP AND SEAL WATER TIGHT ALL POINTS WHICH PIPING IS REMOVED. RE-INSULATE REMAINING PIPING TO
- MAINTAIN VAPOR BARRIER.

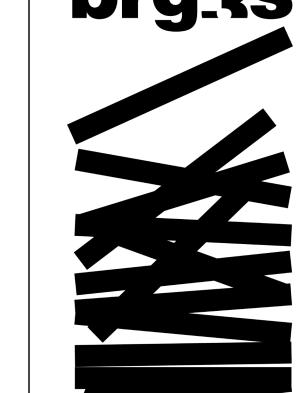
 G. PATCH OPENINGS IN WALLS WITH LIKE MATERIALS TO MAINTAIN THE INTEGRITY OF THE WALL WHERE AIR
- H. CONTRACTOR SHALL VERIFY CLEARANCE REQUIREMENTS AND INDICATE ROUTING OF NEW DUCTWORK BEFORE

DEVICES, DUCTS, PIPING, ETC. HAVE BEEN REMOVED.

- FABRICATION BEGINS AS RISES AND DROPS MAY BE NECESSARY DUE TO EXISTING FIELD CONDITIONS.

 CONTRACTOR SHALL VERIFY ALL EXISTING TO REMAIN FIRE, SMOKE, AND COMBINATION FIRE/SMOKE DAMPERS AND DUCT SMOKE DETECTORS IN THE PROJECT AREA ARE IN PROPER WORKING CONDITION. CONTRACTOR TO NOTIFY ENGINEER AND OWNER OF ANY EXISTING EQUIPMENT FOUND INOPERABLE.
- J. CONTRACTOR TO VERIFY ALL MOTORS, MANUAL AND MOTORIZED DAMPERS, TEMPERATURE AND HUMIDITY SENSORS, AIR TERMINAL UNITS, AND CONTROLS IN THE PROJECT AREA SHOWN AS EXISTING TO REMAIN ARE IN PROPER WORKING CONDITION. CONTRACTOR TO NOTIFY ENGINEER AND OWNER OF ANY EXISTING EQUIPMENT FOUND INOPERABLE.
- K. GENERAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL AND ELECTRICAL CONTRACTOR ALL CEILING REMOVAL WHICH IS REQUIRED TO ACCESS THEIR WORK AND IS NOT DESIGNATED FOR REMOVAL. NOTIFY ARCHITECT AND OWNER PRIOR TO COMMENCING REMOVAL. IF EXISTING CEILING IS DETERMINED TO REQUIRE REMOVAL, REMOVE ONLY THAT PORTION NECESSARY TO ACCESS AND COMPLETE DEMOLITION AND NEW WORK.

UPON COMPLETION OF THE ABOVE CEILING WORK, CEILING IS TO BE REPLACED TO MATCH EXISTING CEILING.



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CONSULTANTS



MARK DATE DESCRIPTION
REVISIONS

ZIMATA

1370 LEVEE RD,
MEMPHIS, TN. 38108

PROJECT NAME

1364 N WATKINS

05.14.2021

1/8" = 1'-0"

PACKAGE 1 -RENOVATION

MATA HEADQUARTERS

Project No.

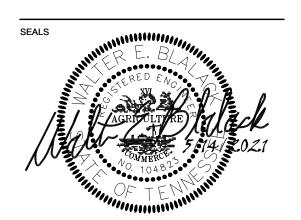
Date Issued

Drawing Scale

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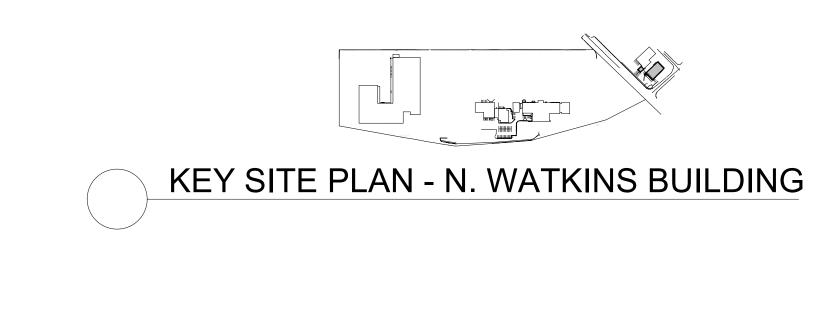
DRAWING TITLE

MECHANICAL LEGENDS, INDEX, AND NOTES



CONSTRUCTION DOCUMENTS

M001



SHEET KEYED NOTES

1) EXISTING CARRIER RTU MODEL 48FCDA04A2 TO REMAIN. PROVIDE NEW MERV 13 PLEATED FILTERS. PROVIDE UV LIGHTING.

(2) CALABRATE RTU TO NEW CFM REQUIREMENT.

3 IMPLEMENT TVA ENERGY INCENTIVE. SEE GENERAL NOTE.

TVA ENERGY INCENTIVE

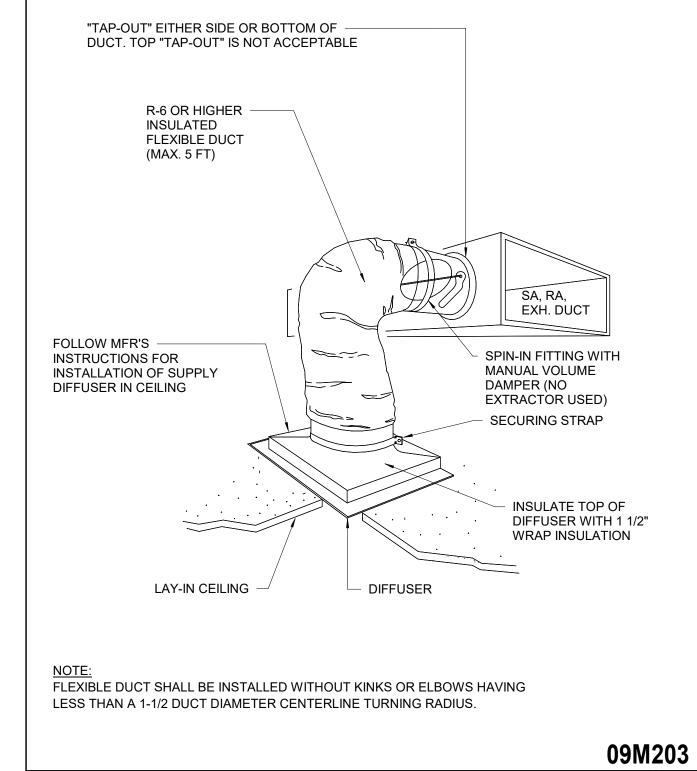
1. AS PART OF THE TVA ENERGYRIGHT INCENTIVE, CONTRACTOR SHALL COORDINATE WITH MATA TO COMPLETE THE INCENTIVE APPLICATION. 2. PROJECTS REQUIRE PRE-APPROVAL BEFORE ANY REMOVAL, PURHCASE OR INSTALLATION OF ANY EQUIPMENT.

CONTRACTOR SHALL COORDINATE WITH THE OWNER AND VISIT ENERGYRIGHT.COM TO APPY FOR THE INCENTIVE TO FIND PREFERRED PARTNERS NETWORK (PPN) CONTRACTOR AND COMPLETE THE APPICATION REQUIREMENTS. THE PROJECT SUBMISSION MUST USE AN APPROVED PPN MEMBER. 4. INSTALL AN IN-DUCT ULTRAVIOLET GERMICIDAL IRRADIATION (UVGI)

LIGHTING INSIDE THE SUPPLY AIR DUCTWORK IN EACH OF TWO 3-TON ROOFTOP HVAC UNITS. THE REQUIRED CRITERIA FOR ANTICIPATED ENERGY CONSUMPTION IS NO MORE THAN EIGHT (8) WATTS PER TON (24 WATTS TOTAL) FOR EACH OF THE TWO HVAC UNITS. 5. MATERIAL AND INSTALLATION SHALL MEET WITH THE REQUIREMENTS

OF THE INCENTIVE. 6. INSTALLATION CONSIDERATIONS: A. AVOID MOUNTING LAMPS NEAR ANY DUCT OPENINGS, JOINTS, SEAMS, ETC. THE UVGI SYSTEM CANNOT BE INSTALLED IN FLEX

B. ENSURE NO PLASTIC PARTS, DEVICES, COMPONENTS OR WIRE INSULATION ARE EXPOSED TO THE UV-C LIGHT.



DUCTWORK CONNECTION TO SQUARE FACE SUPPLY RETURN, EXHAUST CONNECTION

brg35

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MEMPHIS, TN. 38108 PROJECT NAME 1364 N WATKINS PACKAGE 1 -

RENOVATION

MATA HEADQUARTERS

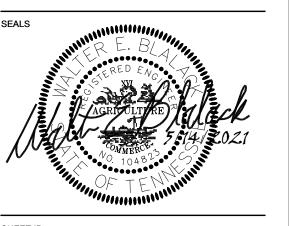
1370 LEVEE RD,

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N. WATKINS OFFICE MECHANICAL FLOOR PLAN AND RCP



CONSTRUCTION DOCUMENTS

WAREHOUSE

FILES

EXISTING 22x14 FROM

UNIT ABOVE

<u>W107</u> 230 R²

EXISTING 22x14 FROM UNIT ABOVE-

<u>W104</u>

220 S1

W100a

3 1364 N. WATKINS MECHANICAL FLOOR PLAN

M121

1.1 REQUIREMENTS:

- A. APPLICABLE PROVISION OF GENERAL CONDITIONS OF DIVISION 1, GENERAL REQUIREMENTS, GOVERN ALL WORK SPECIFIED IN THIS SECTION.
- B. REFER TO ARCHITECTURAL DRAWINGS FOR APPLICABLE PROVISIONS OF THE GENERAL CONDITIONS FOR GENERAL REQUIREMENTS THAT GOVERN ALL WORK SPECIFIED IN THIS SECTION.
- C. REFER TO MECHANICAL DRAWINGS FOR GENERAL REQUIREMENTS APPLYING, BUT NOT LIMITED TO THE FOLLOWING:
- ALTERNATES 2. INSPECTION OF SITE.
- 3. VERIFICATION OF UTILITIES AND SERVICES. 4. REQUIREMENTS OF REGULATORY AGENCIES.
- DRAWINGS SAFETY DEVICES.
- 7. SHOP DRAWINGS. 8. GUARANTEE.

1.2 SCOPE OF WORK INCLUDED:

- A. MECHANICAL WORK SHALL INCLUDE ALL CONSTRUCTION IN CONNECTION WITH HEATING, VENTILATING AND AIR CONDITIONING AS DESCRIBED HEREAFTER.
- B. WORK SPECIFIED UNDER THIS SECTION INCLUDES FURNISHING OF AND PAYING FOR ALL MATERIALS, LABOR, EQUIPMENT LICENSES, TAXES, AND OTHER ITEMS REQUIRED FOR EXECUTION AND COMPLETION OF ALL WORK INDICATED.
- C. EVERYTHING NECESSARY FOR A COMPLETE AND SATISFACTORY INSTALLATION INCLUDING ALL NECESSARY PARTS, DEVICES, ACCESSORIES, ETC., REQUIRED BY CODES OR THAT MAY BE REQUIRED TO SATISFACTORILY COMPLETE THE INSTALLATION OF THE ABOVE ITEMS SHALL BE PROVIDED.
- 1.3 RELATED WORK UNDER OTHER DIVISIONS OF THE CONTRACT:
 - A. CONCRETE PADS AND FOUNDATIONS REF. STRUCTURAL B. POWER AND CONTROL WIRING - REF. ELECTRICAL
- 1.4 REFERENCE STANDARDS:
- A. ALL WORK MUST BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FOLLOWING PERTINENT STANDARDS AND LEGAL CODES AND ORDINANCES:
- 1. INTERNATIONAL BUILDING CODE AND PUBLICATIONS REFERRED TO THEREIN 2. OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)
- 3. STATE, COUNTY, AND LOCAL MECHANICAL, GAS, AND PLUMBING CODES
- 4. NATIONAL ELECTRICAL CODE (NEC) 5. AIR MOVEMENT AND CONTROL ASSOCIATION (AMCA)
- 6. AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS, INC. (ASHRAE) 7. AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)
- 9. ASSOCIATED AIR BALANCE COUNCIL (AABC) 10. NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB)
- 11. SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA) 12. CAST IRON PIPE INSTITUTE (CIPI)

8. AMERICAN SOCIETY FOR TESTING AND MATERIAL (ASTM)

- 13. NATIONAL SANITATION FOUNDATION TESTING LABORATORY (NSF) 14. PLUMBING DRAINAGE INSTITUTE (PDI)
- 15. FACTORY MUTUAL GLOBAL (FM) 16. STANDARDS AND PERIODICALS LISTINGS, UNDERWRITERS LABORATORIES
- 17. FOR WORK NOT SPECIFICALLY LISTED ABOVE, USE THE STANDARDS AND CODES OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

1.5 VERIFICATION OF UTILITIES AND SERVICES:

- A. IMMEDIATELY UPON COMMENCING CONSTRUCTION, AND PRIOR TO CONSTRUCTION OF ANY PART OF THE FACILITY INVOLVED IN ANY WAY WITH UTILITIES. INVESTIGATE THOROUGHLY THE SIZE, CAPACITY. ARRANGEMENT AND LOCATION OF UTILITIES. REPORT ANY DISCREPANCIES OR APPARENT PROBLEM INVOLVING THE PROJECT THAT PERTAIN TO UTILITIES. THIS APPLIES TO PRIVATE AS WELL AS PUBLIC UTILITIES.
- 1.6 REQUIREMENTS OF REGULATORY AGENCIES:
- A. ALL WORK SHALL BE EXECUTED AND INSPECTED IN ACCORDANCE WITH ALL LOCAL OR STATE CODES, LAWS, ORDINANCES, RULES AND REGULATIONS APPLICABLE TO THE PARTICULAR CLASS OF WORK AND SHALL INCLUDE ALL APPLICABLE SERVICE CHARGES, FEES, PERMITS, ROYALTIES, TAXES, AND OTHER SIMILAR COSTS IN CONNECTION THEREWITH. IF THE DRAWINGS OR SPECIFICATIONS ARE AT VARIANCE WITH ABOVE MENTIONED LAWS, RULES AND REGULATIONS, NOTIFY THE ENGINEER IN WRITING SO ANY NECESSARY CHANGES CAN BE PROVIDED PRIOR TO CONTRACT.
- B. IF THE CONTRACTOR PERFORMS ANY WORK KNOWING IT TO BE CONTRARY TO SUCH LAWS, RULES OR REGULATIONS, AND WITHOUT NOTICE AS REQUIRED ABOVE, HE SHALL BEAR COSTS ARISING THEREFROM. THE DRAWINGS AND SPECIFICATIONS TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT THAN CODES, ORDINANCES, OR STATUTES IN EFFECT.
- C. APPLICABLE CODES, ORDINANCE, STANDARDS AND STATUTES TAKE PRECEDENCE WHERE THEY ARE MORE STRINGENT OR CONFLICT WITH THE DRAWINGS AND SPECIFICATIONS.

1.7 INSTRUCTION OF OWNER:

- A. WHEN THE SYSTEM IS IN COMPLETE OPERATION, AND PRIOR TO DATE OF FINAL COMPLETION, PROVIDE AN APPROVED QUALIFIED ENGINEER, TECHNICIAN, OR MECHANIC, FOR A PERIOD OF FOUR (4) MAN-HOURS TO INSTRUCT THE OWNER, OR HIS AUTHORIZED PERSONNEL, IN OPERATION AND MAINTENANCE OF ALL SYSTEMS INSTALLED UNDER THIS SECTION OF WORK, OR RELATED WORK UNDER OTHER SECTIONS.
- B. REVIEW OPERATING AND MAINTENANCE MANUAL. IDENTIFY ALL CONTROLS AND ALL LUBRICATION POINTS, DEMONSTRATE START, STOP, AND ADJUSTMENTS OF ALL SYSTEMS AND EQUIPMENT.

1.8 DRAWINGS:

- A. IT IS INTENDED THAT ALL PARTS AND COMPONENTS BE LOCATED SYMMETRICALLY WITH ARCHITECTURAL ELEMENTS, AND SHALL BE INSTALLED AT EXACT HEIGHT AND LOCATIONS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- B. BE ACQUAINTED WITH ANY AND ALL PECULIARITIES AND LIMITATIONS OF THE SPACES AVAILABLE FOR THE INSTALLATION OF ALL WORK AND MATERIALS FURNISHED AND INSTALLED UNDER THIS SECTION OF THE SPECIFICATIONS. EXERCISE DUE AND PARTICULAR CAUTION TO DETERMINE THAT ALL PARTS OF THE WORK ARE MADE QUICKLY AND EASILY ACCESSIBLE.
- C. ALTHOUGH THE LOCATIONS OF THE EQUIPMENT AND PIPING MAY BE SHOWN ON THE DRAWINGS IN CERTAIN POSITIONS, SHOULD THE CONTRACTOR DISCOVER CONFLICTS OR INTERFERENCES DURING PROGRESS OF THE WORK HE SHALL REPORT ANY DISCREPANCIES OR INTERFERENCES THAT ARE DISCOVERED. FAILURE TO REPORT SUCH DISCREPANCIES AND INTERFERENCES SHALL RESULT IN THE CORRECTING OF THESE ERRORS OR OMISSIONS BY THIS SECTION AT HIS OWN EXPENSE. ALL WORK INSTALLED UNDER THIS SECTION WHICH DEVIATES FROM THE DRAWINGS AND SPECIFICATION WITHOUT PRIOR APPROVAL, SHALL BE ALTERED BY THIS SECTION AT HIS OWN EXPENSE, TO COMPLY WITH THE DRAWINGS AND SPECIFICATIONS AS DIRECTED.
- D. THE DRAWINGS ARE SCHEMATIC IN NATURE AND DO NOT REFLECT ALL OFFSETS OR CHANGES OF DIRECTION OR ELEVATION TO COORDINATE WITH THE ACTUAL CONSTRUCTION OF THE PROJECT. CONTRACTOR SHALL COORDINATE WITH THE ACTUAL CONDITIONS PRESENTED DURING CONSTRUCTION TO ENSURE THE INTENT OF THE DESIGN IS MET.

1.9 SAFETY DEVICES:

A. CONTRACTOR SHALL FURNISH AND INSTALL SAFETY GUARDS FOR ALL DANGEROUS MOVING PARTS SUCH AS BELTS AND PULLEYS, FLEXIBLE SHAFT CONNECTIONS AND THE LIKE, AND SHALL PROVIDE

ALL REQUIRED SAFETY CONTROLS TO PREVENT DANGEROUS OR DAMAGING OPERATION OF EQUIPMENT.

1.10 SHOP DRAWINGS (SUBMITTALS):

A. EQUIPMENT SUBMITTALS:

- 1. ELECTRONIC COPIES OF SHOP DRAWINGS AND/OR MANUFACTURER'S DESCRIPTIVE DATA IN A PDF FORMAT OF A NATURE TO COMPLETELY IDENTIFY THE EQUALITY OF THE MATERIAL OR EQUIPMENT INTENDED FOR INSTALLATION SHALL BE SUBMITTED FOR APPROVAL BEFORE BEGINNING ANY CONSTRUCTION AND WITHIN THIRTY DAYS AFTER SIGNING CONTRACT. FAILURE TO SUBMIT DATA FOR APPROVAL WITHIN THIRTY DAYS TIME LIMIT WILL BE CONSTRUED AS MEANING EQUIPMENT CALLED FOR BY NAME WILL BE FURNISHED. DATA SHALL BE ORGANIZED IN SAME ORDER AS LISTED BELOW. SHALL BE SUBMITTED ALL IN ONE BROCHURE, INDEXED BY FLYSHEET ON FRONT PAGE, AND BE BOUND IN SETS, ALL SETS IDENTICAL. NO EXCEPTION WILL BE MADE TO THIS PROCEDURE AND TIME SCHEDULE.
- 2. EACH ITEM SUBMITTED FOR REVIEW SHALL BE MARKED AND HAVE SUBMITTAL DATA PRECEDED BY A TYPEWRITTEN DESCRIPTION (BY CONTRACTOR OR ITEM SUPPLIER) OF THE ITEM. DESCRIPTION TO INCLUDE MAKE AND MODEL NUMBERS AND SHALL DESCRIBE THE ITEM. LIST ALL OPTIONS AND ACCESSORIES WHICH ARE INCLUDED. LIST ANY OPTIONS OR ACCESSORIES SHOWN ON SHOP DRAWINGS WHICH ARE NOT INCLUDED.
- 3. SUBMIT THE FOLLOWING FOR APPROVAL, REFERRING TO THE VARIOUS SECTIONS OF THIS SPECIFICATION FOR SPECIFIC ITEMS (AS APPLICABLE):
- a. VENTILATING EQUIPMENT. b. DUCT INSULATION.
- c. DUCT HANGERS. d. AIR DISTRIBUTION EQUIPMENT.

1.11 GUARANTEE:

- A. ALL WORK PERFORMED UNDER THIS DIVISION SHALL BE GUARANTEED TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FROM DATE OF SUBSTANTIAL COMPLETION OF SUCH WORK FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.
- B. LATENT DEFECTS ARISING DURING THIS PERIOD SHALL, UPON NOTIFICATION BY THE OWNER, BE PROMPTLY CORRECTED AT NO ADDITIONAL COST TO THE OWNER.

1.12 COORDINATION:

A. COORDINATE ALL WORK WITH THAT OF THE OTHER TRADES ON THE JOB AND ALSO WITH THAT OF THE OWNER, IN ORDER THAT THERE WILL BE NO DELAY IN THE PROPER INSTALLATION AND COMPLETION OF THE WORK. ANY COST FOR EXTRA WORK OR MATERIALS RESULTING FROM LACK OF COORDINATION OF WORK PERFORMED UNDER THIS SECTION SHALL BE BORNE BY THIS SECTION.

1.13 WORKMANSHIP, MATERIALS AND EQUIPMENT:

A. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER AND SHALL PRESENT A NEAT AND MECHANICAL APPEARANCE WHEN COMPLETED. ALL MATERIALS SHALL BE OF TYPE, QUALITY, AND OF MINIMUM RATING PRESCRIBED HEREIN OR AS INDICATED ON THE PLANS.

1.14 MANUFACTURER'S RECOMMENDATIONS:

- A. ALL MATERIAL AND EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER OF SUCH MATERIAL AND EQUIPMENT.
- B. IN THE EVENT OF DISCREPANCY BETWEEN MANUFACTURER'S RECOMMENDATIONS AND ANY REQUIREMENTS OF DRAWINGS OR SPECIFICATIONS, CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER IN ORDER THAT THE MATTER CAN BE CLEARED UP PRIOR TO ANY INSTALLATION OF MATERIALS OR EQUIPMENT.

1.15 PROTECTION OF WORK:

A. PROTECT WORK AT ALL TIMES FROM DANGER BY FREEZING, BREAKAGE, DIRT, FOREIGN MATERIALS, ETC., AND REPLACE ALL WORK SO DAMAGED. USE EVERY PRECAUTION TO PROTECT THE WORK OF OTHERS, AND BE RESPONSIBLE FOR ALL DAMAGE TO OTHER WORK CAUSED BY WORK OF, OR THROUGH THE NEGLECT OF WORKMEN UNDER THIS SECTION OF THE SPECIFICATIONS.

1.16 EQUIPMENT/PIPING SUPPORTS:

- A. FURNISH AND ERECT ALL NECESSARY STEEL MEMBERS, FRAMES, CONNECTIONS, ETC., TO SUPPORT EQUIPMENT AND PIPING INSTALLED UNDER THIS SECTION. REGARDLESS OF WHETHER THE DRAWINGS INDICATE SUPPORT DETAILS OR NOT. COORDINATE WITH GENERAL CONTRACTOR TO DETERMINE WHICH SUPPORTS ARE BEING FURNISHED BY OTHER SECTIONS.
- B. PROVIDE CONCRETE PADS, CURBS, ETC. FOR SUPPORT OF EQUIPMENT AND PIPING INSTALLED UNDER THIS SECTION, WHETHER SHOWN ON DRAWINGS OR NOT, EXCEPT WHERE SUPPORTS ARE REQUIRED TO BE FURNISHED AND INSTALLED BY OTHER SECTIONS OF THESE SPECIFICATIONS. COORDINATE RESPONSIBILITY WITH GENERAL CONTRACTOR.
- C. PROVIDE VIBRATION ABSORBING, MOUNTING DEVICES (INCLUDING SEISMIC RESTRAINT) DESIGNED TO PREVENT TRANSMISSION OF VIBRATION AND NOISE TO THE BUILDING STRUCTURE.

1.17 PAINTING AND IDENTIFICATION:

A. THE FOLLOWING PROTECTIVE PAINTING AND IDENTIFICATION OF EQUIPMENT AND PIPING SHALL BE PROVIDED UNDER THIS DIVISION OF THE WORK, OTHER FINISH PAINTING SHALL BE PROVIDED UNDER THE "PAINTING" DIVISION OF THE SPECIFICATIONS.

1. FABRICATED EQUIPMENT AND ASSEMBLED UNITS SHALL BE FURNISHED WITH FACTORY

APPLIED, PROTECTIVE, PRIME COAT PAINT OF FINISHED BAKED ENAMEL AS SPECIFIED HEREINBEFORE. EQUIPMENT SURFACES DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE REFINISHED BY THE CONTRACTOR.

1.18 TESTING:

- A. UPON COMPLETION OF WORK, ALL EQUIPMENT SHALL BE CLEANED AND ADJUSTED FOR PROPER OPERATION AND ANY DEFECTS DISCOVERED SHALL BE CORRECTED BEFORE FINAL INSPECTION PRIOR TO ACCEPTANCE.
- B. ALL AIR LEAKS SHALL BE REPAIRED. DUCTWORK SHALL BE TESTED FOR LEAKS BEFORE APPLYING EXTERNAL INSULATION AND BEFORE CONCEALING IN INACCESSIBLE LOCATIONS.

1.19 ADJUSTMENTS:

- A. UPON COMPLETION OF THE INSTALLATION OF ALL WORK AND EQUIPMENT. THE CONTRACTOR SHALL START ALL EQUIPMENT AND MAKE ALL NECESSARY ADJUSTMENTS TO PLACE ENTIRE HEATING, VENTILATING, AND AIR CONDITIONING SYSTEMS IN A SATISFACTORY CONDITION FOR CONTINUOUS SAFE OPERATION.
- B. TEMPERATURE AND SAFETY CONTROLS SHALL BE ADJUSTED AS NECESSARY TO INSURE CONTINUOUS, TROUBLE FREE, SAFE, AND AUTOMATIC OPERATION OF SYSTEMS.

1.20 CONTRACTOR'S TEST AND BALANCE:

- A. PROVIDE A TEST AND BALANCE REPORT OF THE SUPPLY AIR SYSTEM SERVING THE RENOVATED AREAS FOLLOWING PROCEDURES RECOMMENDED BY THE AABC OR OWNER-APPROVED AGENCY. PROVIDE AN AABC CERTIFIED TEST AND BALANCE OF MODIFIED AIR SYSTEMS: TERMINAL UNITS, TERMINAL UNIT REHEAT COILS. AND ASSOCIATED AIR INLETS AND OUTLETS. MEASURE AND DOCUMENT PRESSURE DROP ACROSS REHEAT COILS AT MAXIMUM DESIGN FLOW. FOR ALL BALANCE PARAMETERS DOCUMENT SPECIFIED, TEST, AND FINAL CONDITIONS. ACCEPTABLE MARGIN IS ±10%. PERMANENTLY MARK ALL BALANCE POINTS AT DAMPERS AND VALVES. INCLUDE CALIBRATION OF FLOW SENSORS, DIFFERENTIAL PRESSURE TRANSDUCERS, SETTING MAXIMUM AND MINIMUM AIR FLOW SETPOINTS.
- B. ASSIST CONTROL CONTRACTOR WITH CALIBRATION OF ANY NEW SENSORS. C. PROVIDE PROFESSIONAL REPORT IN PDF FORMAT

1.21 CLEAN-UP:

A. KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY EMPLOYEES OR WORK UNDER THIS SECTION OF THE SPECIFICATIONS. AT THE COMPLETION OF THE WORK, REMOVE ALL SURPLUS MATERIALS, TOOLS, ETC., AND LEAVE THE PREMISES "BROOM-CLEAN".

1.22 INSTRUCTION OF OWNER:

A. PROVIDE THE SERVICES OF APPROVED QUALIFIED ENGINEER, TECHNICIAN OR MECHANIC FOR A PERIOD OF 4 HOURS TO INSTRUCT THE OWNER OR HIS AUTHORIZED REPRESENTATIVE, IN ALL PHASES OF OPERATION AND MAINTENANCE OF EACH OF THE MECHANICAL SYSTEMS.

1.23 OPERATING AND MAINTENANCE INSTRUCTIONS:

- A. FURNISH AND TURN OVER TO A/E THREE (3) HARD COPIES AND ONE ELECTRONIC COPY OF OPERATION AND MAINTENANCE INSTRUCTIONS, TO INCLUDE:
- 1. COMPLETE SET OF APPROVED SUBMITTAL DATA ON INSTALLED EQUIPMENT, TO INCLUDE FINAL TEST AND BALANCE REPORT, AS BUILT TEMPERATURE CONTROL DIAGRAMS AND WIRING DIAGRAMS.
- 2. OPERATING INSTRUCTIONS ON ALL EQUIPMENT HAVING MOVING PARTS, TO INCLUDE RECOMMENDED MAINTENANCE AND INSPECTION SCHEDULE.
- 3. PARTS LISTS ON ALL EQUIPMENT, ALONG WITH NAME, ADDRESS, AND TELEPHONE
- NUMBER OF SOURCE OF PURCHASE OR LOCAL REPRESENTATIVE.
- 4. COPIES OF ALL WARRANTIES OR GUARANTEES.
- 5. COPIES OF INSTALLATION INSTRUCTIONS WHEN FURNISHED WITH EQUIPMENT B. INSTRUCTIONS SHALL BE IN HARD COVER BINDER WITH INDEX. INSERT IN ORDER AS LISTED
- HEREIN. PROVIDE ELECTRONIC COPY. PART 2 PRODUCTS

2.1 MATERIALS AND EQUIPMENT:

A. MATERIALS AND/OR EQUIPMENT SPECIFIED HEREIN TO BE OF A CERTAIN MANUFACTURER OR BRAND ARE USED AS A STANDARD AND MATERIALS AND/OR EQUIPMENT OF OTHER MANUFACTURER MAY BE SUBMITTED FOR SUBSTITUTION PROVIDED THAT THEY MEET OR EXCEED QUALITY AND ALL CAPACITIES SPECIFIED AND SPACE REQUIREMENTS SHOWN ON THE DRAWINGS.

2.2 LOW PRESSURE DUCTWORK:

- A. DUCTWORK SUBJECT TO PRESSURES UP TO 2.0" WATER COLUMN SHALL BE DESIGNATED LOW PRESSURE DUCTWORK AND SHALL BE CONSTRUCTED OF GALVANIZED STEEL ASTM A525-75 GRADE G90, HOT DIP GALVANIZED TO 0.90 OZ. OF ZINC PER SQUARE FOOT OF METAL.
- B. ALL CONSTRUCTION AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH S.M.A.C.N.A. RECOMMENDATIONS.
- C. ALL DUCT SIZES SHOWN ON DRAWINGS ARE NET INSIDE CLEAR DIMENSIONS MEASURED INSIDE BARE DUCT.
- D. METAL GAUGE, LONGITUDINAL AND TRANSVERSE JOINTS, SHALL BE FOR 2.0" PLUS OR MINUS STATIC PRESSURE, UNLESS OTHERWISE INDICATED ON DRAWINGS.
- E. RADIUS ELBOWS SHALL HAVE MINIMUM CENTERLINE RADIUS OF 1.5 X DUCT WIDTH. LARGER ELBOWS SHALL BE VANED PER S.M.A.C.N.A. DETAILS. SQUARE ELBOWS SHALL HAVE FACTORY TURNING VANES, PER S.M.A.C.N.A. DETAILS, BARBER COLEMAN "AIRTURNS", OR EQUIVALENT TITUS.
- F. TRANSITIONS SHALL BE AS GRADUAL AS POSSIBLE, BUT NOT TO EXCEED 30° PER
- G. BRANCH DUCT TAKEOFFS FOR RECTANGULAR DUCTS SHALL BE ONE OF THE
- 1. 90° TAKEOFF (STRAIGHT TAP) WITH ADJUSTABLE DEFLECTOR IN TRUNK DUCT, OR FIXED DEFLECTOR WITH MANUAL DAMPER.
- 2. 45° ELBOW TAP-IN.
- 3. 90° TAKEOFF WITH 45° ENTRY.
- H. BRANCH DUCT TAKEOFFS FOR ROUND DUCT SHALL BE MADE WITH ONE OF THE
- FOLLOWING:
- 2. 90° CONICAL TAP-IN.
- 3. RECTANGULAR TO ROUND TRANSITION BOOT, 45° ENTRY.
- I. ALL BRANCH TAKEOFFS SHALL HAVE MANUAL DAMPER WITH QUADRANT
- J. FINAL CONNECTIONS FROM DUCTS TO CEILING DIFFUSERS MAY BE MADE WITH FLEXIBLE INSULATED DUCT NOT TO EXCEED 3'-6" IN LENGTH.

2.3 FLEXIBLE INSULATED DUCT:

- A. LOW PRESSURE (2" S.P. AND UNDER) SHALL BE CONSTRUCTED AS FOLLOWS:
- 1. CORE LINER: FLEXIBLE ACOUSTICALLY TRANSPARENT PLASTIC SHEET LINER BONDED TO GALVANIZED SPRING STEEL WIRE HELIX.
- 2. INSULATION: 1" THICK GLASS FIBER 1 LB. DENSITY
- 3. VAPOR JACKET: FLEXIBLE COPOLYMER SEAMLESS SHEET HAVING PERM RATING 0.05.
- 4. RATING: U/L-181 CLASS 1 AIR DUCT, RATED AND LABELED 2.0" STATIC PRESSURE, 4,000 FPM VELOCITY.

5. DUCT SHALL BE FLEXMASTER, TYPE 8M, OR APPROVED EQUAL.

2.4 DIFFUSERS, GRILLES AND REGISTERS:

2. GRILLES AND REGISTERS

- A. CEILING SUPPLY AND RETURN DIFFUSERS SHALL BE SIZED FOR A MAXIMUM STATIC PRESSURE DROP OF 0.05 INCHES W.G., AND MAXIMUM NOISE LEVEL OF NC=30. SELECTION FOR THROW TO NEAREST WALL SHALL PROVIDE A DOWNWARD AIR MOVEMENT AT WALL OF 50 FPM.
- B. ALL CEILING DIFFUSERS SHALL HAVE VOLUME CONTROL DAMPER OPERABLE FROM THE FACE OF THE DIFFUSER. DIFFUSERS AND GRILLES SHALL BE AS INDICATED ON
- C. UNLESS OTHERWISE NOTED ON DRAWINGS AIR DISTRIBUTION CONSTRUCTION AND FINISHES SHALL BE AS FOLLOWS:
- 1. CEILING DIFFUSERS STEEL CONSTRUCTION BAKED WHITE ENAMEL FINISH.
- CEILING- STEEL OR ALUMINUM CONSTRUCTION BAKED WHITE ENAMEL FINISH. D. CEILING DIFFUSERS, SUPPLY AND RETURN, SHALL HAVE REMOVABLE FACE PLATE AND
- FRAMES SELECTED FOR THE CEILING CONSTRUCTION IN WHICH INSTALLED (T-BAR, SPLINE, ETC.). 2.5 DAMPERS:
- A. MANUAL VOLUME DAMPERS SHALL BE INSTALLED IN EACH BRANCH DUCT, AND WHERE
- B. DAMPER CONSTRUCTION SHALL BE PER FIGURE 2-14 AND 2-L5 OF SMACNA "HVAC DUCT CONSTRUCTION STANDARDS", FIRST EDITION. MARK END OF SHAFT PARALLEL TO BLADE AND PROVIDE LOCKING QUADRANT.
- C. PROVIDE STAND-OFF ASSEMBLY FOR ALL DAMPERS INSTALLED ON INSULATED DUCT.

A. DUCTS:

1. ALL SUPPLY, AND RETURN AIR DUCTS SHALL BE INSULATED WITH 2 INCH THICK INSULATION FACED WITH FOIL REINFORCED KRAFT, EQUAL TO FRK 25-ED100, AS MANUFACTURED BY OWENS-CORNING FIBERGLASS CORP. OR KNAUF MULTI-PURPOSE 1 LB. DENSITY FSK. INSULATION SHALL BE WRAPPED TIGHTLY ON THE DUCTWORK WITH ALL CIRCUMFERENTIAL JOINTS BUTTED AND ALL LONGITUDINAL JOINTS OVERLAPPED A MINIMUM OF 2 INCH. ADDITIONALLY SECURE INSULATION TO THE BOTTOM OF RECTANGULAR DUCT WORK, OVER 24 INCH WIDE, WITH MECHANICAL FASTENERS AT NOT MORE THAN 12 INCH O.C. ALL PIN PENETRATIONS AND/OR PUNCTURES SHALL BE COVERED W/FRJ TAPE.

B. SMOKE AND FLAME RATING:

1. ALL INSULATION SHALL HAVE COMPOSITE FIRE AND SMOKE HAZARD RATING AS TESTED BY PROCEDURES ASTM E-84, NFPA 255, AND WL 723 NOT EXCEEDING FLAME SPREAD 25 AND SMOKE DEVELOPED 50.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS:

- A. REFER TO PART 1 GENERAL FOR:
 - 1. COORDINATION
 - 2. WORKMANSHIP, MATERIALS AND EQUIPMENT 3. MANUFACTURER'S RECOMMENDATIONS
 - 4. PROTECTION OF WORK 5. UTILITY CONNECTIONS
 - 6. PATCHING
 - 7. PAINTING IDENTIFICATION 8. ADJUSTMENTS 9. CONTRACTORS TEST AND BALANCE 10. CLEAN-UP

3.2 LOW VELOCITY DUCTWORK:

- A. FOLLOW RECOMMENDATION OF ASHRAE "HANDBOOK", SMACNA "LOW PRESSURE DUCT CONSTRUCTION METHODS", AND THE DRAWINGS.
- B. UNLESS INDICATED OTHERWISE ON DRAWINGS ALL LOW PRESSURE DUCTWORK FOR 2" W.C.
- C. SEAL ALL JOINTS BY DIPPING IN HARD CAST TAPE DT-5400 IN HARD CAST ACTIVATOR RTA 50 AND THEN WRAPPING AROUND AND OVER THE JOINTS.
- D. TRANSVERSE JOINT SYSTEMS MANUFACTURED BY DUCTMATE OR EQUAL ARE ACCEPTABLE.
- E. IN GENERAL, VERTICAL RISERS AND OTHER DUCT RUNS WHERE THE METHOD OF SUPPORT SPECIFIED ABOVE IS NOT APPLICABLE SHALL BE SUPPORTED BY SUBSTANTIAL ANGLE BRACKETS DESIGNED TO MEET FIELD CONDITIONS AND INSTALLED TO ALLOW FOR DUCT EXPANSION.

F. WHERE DUCTS PASS THROUGH WALLS, FLOORS OR PARTITIONS, THE EDGES SHALL BE PACKED

WITH MINERAL FIBER OR OTHER NON-COMBUSTIBLE MATERIAL. AFTER HOLE IS FILLED, PROVIDE

SHEET METAL COLLAR AROUND THE DUCT TO COVER THE ROUGH OPENING. G. VOLUME DAMPERS SHALL BE INSTALLED WHERE BRANCHES TAKE-OFF FROM MAIN TRUNK

DUCTWORK, WHERE DUCTS DIVIDE, OR WHERE SHOWN ON THE PLANS.

- H. PROVIDE FLEXIBLE CONNECTIONS AT ALL CONNECTIONS BETWEEN DUCTS AND FANS OR CASINGS.
- I. DAMPERS: PROVIDE ACCESSIBLE VOLUME DAMPERS IN BRANCH DUCTS, CONNECTIONS TO GRILLES, AND OTHER PLACES WHERE NECESSARY TO BALANCE THE AIRFLOW, WHETHER SHOWN ON PLANS OR NOT.
- J. FIRE STOPPING SHALL BE PROVIDED AT ALL DUCT PENETRATIONS OF FIRE RATED WALLS, PARTITIONS, FLOORS, ROOFS, OR OTHER RATED BUILDING ASSEMBLIES. PROVIDE GROUT TO FILL OPENINGS IN HOLLOW MASONRY AROUND WALL OPENINGS. PROVIDE SHEET METAL SLEEVE AT OTHER HOLLOW WALL OR PARTITIONS. PACK OPENING BETWEEN DUCT AND SLEEVE OR OPENING ON ALL SIDES WITH FIREPROOF MINERAL WOOL AND CAULK EACH SIDE WITH NON-COMBUSTIBLE CALKING COMPOUND.

3.3 REGISTERS AND DIFFUSERS:

A. CEILING DIFFUSERS SHALL BE INSTALLED IN MANNER RECOMMENDED FOR THE TYPE CEILING IN WHICH INSTALLED. ALL SHALL BE CENTERED GEOMETRICALLY IN CEILING ELEMENTS WITH SIDES PARALLEL TO WALLS AND PARTITIONS. PROVIDE SUPPORTS ABOVE CEILING WHERE REQUIRED TO SUPPORT OUTLET WEIGHT AND TO PULL SURFACE FLANGES FLUSH TO CEILING. INSULATE TOPS OF DIFFUSERS AND REGISTERS ABOVE CEILING IN NON PLENUM RETURN CEILING SPACES.

3.4 FLEXIBLE INSULATED DUCTS:

- A. INSTALL IN ACCORDANCE WITH SMACNA "FLEXIBLE INSULATE DUCT CONSTRUCTION STANDARDS".
- B. DRAW BANDS AT ENDS OF DUCT SHALL BE NON-FERROUS METAL.
- C. WHERE ENDS OF DUCT ABUT OTHER INSULATION OR LINED METAL DUCTS, SEAL THE VAPOR JACKET TO THE ADJACENT SURFACE WITH PERMANENT ADHESIVE. USE NO "DUCT-TAPE.

3.5 SLEEVES:

- A. SLEEVES IN NON-BEARING PARTITIONS, OR NON-LOAD BEARING WALLS MAY BE 22 GAUGE SHEET STEEL OR HOLE-OUTS. IN BEARING WALLS, WATERPROOFED FLOORS, OR ROOFS, THEY SHALL BE SCHEDULE 40 STEEL PIPE WITH FINISHED ENDS.
- B. CAULK SLEEVES IN FLOOR WITH FIREPROOF MINERAL WOOL AND SEAL ENDS WITH FIREPROOF CALKING COMPOUND TO SEAL SPACE BETWEEN PIPE OR COVERING, AND THE SLEEVE. SLEEVES IN ROOF SHALL BE FLASHED AND MADE WATERTIGHT. PACK SLEEVES PASSING THROUGH FIRE WALLS OR FIRE RATED FLOORS WITH FIREPROOF MINERAL WOOL AND SEAL ENDS WITH NON-HARDENING FIREPROOF CALKING COMPOUND.
- C. SLEEVES SHALL BE INSTALLED AND SECURELY FASTENED IN THEIR PROPER POSITION BY EACH SPECIALTY CONTRACTOR FOR HIS OWN WORK, WHO SHALL BE RESPONSIBLE FOR FINAL LOCATION.

3.6 UNIONS:

- A. UNIONS BETWEEN PIPING OF DIFFERENT MATERIALS SHALL BE PROVIDED WITH DIELECTRIC UNIONS
- INSTALLED HEREIN. EACH HANGER SHALL BE SUITABLE TO MEET THE STRUCTURAL, TEMPERATURE, PIPE MATERIAL AND EXPANSION CONDITIONS ENCOUNTERED. SELECTION AND APPLICATION SHALL BE IN ACCORDANCE WITH ANSI/MSS SP-69. B. CLAMPS, INSERTS, BOLTS, CHANNEL AND ANGLE IRON, RACKS, ROLLERS, ETC., SHALL BE

FURNISHED FOR PIPING AND EQUIPMENT SUPPORTS AS REQUIRED. ALL HANGER AND SUPPORT

A. FURNISH ALL MATERIALS REQUIRED FOR THE PROPER SUPPORT OF EQUIPMENT AND PIPING

- COMPONENTS SHALL BE ADEQUATE FOR THE LOADS INVOLVED. C. EQUIPMENT SHALL BE SUPPORTED ADEQUATELY WITH ALL BRACING, FOUNDATIONS, ANGLES,
- CHANNELS, HANGERS, ETC. D. SPECIALLY DESIGNED HANGERS SHALL BE FABRICATED AND INSTALLED PER ANSI/MSS SP-89.

3.7 HANGERS AND SUPPORTS:

3.8 INSULATION:

3.9 AS-BUILT DRAWINGS:

A. DUCT INSULATION: 1. FLEXIBLE BLANKET WRAP INSULATIONS SHALL HAVE LONGITUDINAL AND TRANSVERSE JOINTS IN JACKET SEALED BY CEMENTING AND OVERLAP OF JACKETING, OR AN OVERLAPPING STRIP OF JACKET MATERIAL. NO STAPLING AND/OR DUCT TAPE WILL BE PERMITTED. VAPOR SEAL JACKET

A. MAKE ALL NECESSARY MEASUREMENTS OF THE ACTUAL INSTALLED LOCATIONS OF THE INSTALLED

THESE FIELD MEASUREMENTS. SHOW LOCATIONS BY DIMENSION FROM PERMANENT, READILY

LOCATIONS, DEPTHS AND SIZES OF ALL INSTALLED COMPONENTS.

IDENTIFIABLE REFERENCE POINTS SUCH AS BUILDING WALLS, COLUMNS, ETC., UPON COMPLETION

OF THE PROJECT, DELIVER TO THE OWNER MARKED TRACINGS SHOWING THE ACTUAL INSTALLED

SYSTEMS AND COMPONENTS AS THE WORK PROGRESSES AND KEEP ACCURATE RECORDS OF

TO ALL HANGER STRAPS AND SIMILAR PENETRATIONS AND EDGES AT ACCESS DOORS AND THE

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CONSULTANTS

MARK DATE DESCRIPTION REVISIONS

MEMPHIS AREA TRANSIT AUTHORITY MATA HEADQUARTERS

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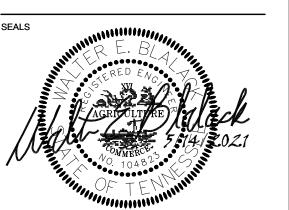
PROJECT NAME 1364 N WATKINS

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SPECIFICATIONS -MECHANICAL

05.14.2021

12" = 1'-0"



ALL PLUMBING LEGEND							
			NOT ALL SYMBOLS	MAY BE USED			
SYMBOL		ABB.	DESCRIPTION	SYMBOL		ABB.	DESCRIPTION
—сw—	CW	CW	DOMESTIC COLD WATER	C+			PIPE TURN DOWN
CW	<u>C</u>	CW	DOM. COLD WATER (BELOW)	+0	IIO		PIPE TURN UP
-CW HP-	CW HP	CW HP	DOMESTIC COLD WATER HIGH PRESSURE	ቒ	Δ̈́		BALL VALVE
—HW—	HW	HW	DOMESTIC HOT WATER	⋈	凸		GATE VALVE
HW	THW T	HW	DOMESTIC HOT WATER (BELOW)	7	式		CHECK VALVE
-HW 140-	HW 140	HW 140	DOMESTIC HOT WATER 140	\boxtimes	+ 1		BALANCING VALVE
—HWR—	HWR	HWR	DOMESTIC HOT WATER RECIRC.	ρ			BUTTERFLY VALVE
HWR	EHWR	HWR	DOMESTIC HOT WATER RECIRC. (BELOW)	Å	å	PRV	PRESSURE REGULATING VALVE
——D—	D	D	DRAIN	区	2		SOLENOID VALVE
D	E	D	DRAIN (BELOW)	$\overline{\qquad}$	A		STRAINER
—PD —	PD	PD	PUMP DISCHARGE	D	đ		REDUCER
PD	PD 3	PD	PUMP DISCHARGE (BELOW)	÷	<u></u>		PIPE GUIDE
—SHW—	SHW	SHW	SOFTENED HOT WATER	×	×		ANCHOR
—scw—	SCW	SCW	SOFTENED COLD WATER	φ	Q		PRESSURE GAUGE
—DI—	DI	DI	DEIONIZED WATER SUPPLY	• •		1	PRESSURE SWITCH WITH DEMAND CHECK FITTING
—DIR—	DIR	DIR	DEIONIZED WATER RETURN	Φ	j		THERMOMETER
—RO—	₹ RO	RO	REVERSE OSMOSIS	<u> </u>	<u> </u>		CAP/PLUG
—TW—	TW	TW	TEMPERED WATER			СО	CLEANOUT (ABOVE CEILING)
— G—	G	G	NATURAL GAS	<u></u>	<u></u>		UNION
—TP —	TP TP	TP	TRAP PRIMER	<u> </u>		PR	PRESSURE RELIEF VALVE
— W—	. w	W	WASTE	<u> </u>		+	SHOCK ARRESTOR
W		W	WASTE (BELOW)	<u> </u>			HOSE BIBB / WALL HYDRANT
V	<i>₹yy</i>	V	SANITARY VENT	O ^{FCO}		FCO	FLOOR CLEAN OUT
—SW—	8 SW	SW	STORM WATER	0		wco	
SW	? <u>s</u> w	SW	STORM WATER (BELOW)			FD	WALL CLEAN OUT
		+	, ,				FLOOR DRAIN
—OD—	OD	OD	STORM OVERFLOW DRAIN			VTR	VENT THRU ROOF
SSD	SSD	SSD	SUB-SURFACE DRAINAGE (BELOW)			I.E.	INVERT ELEVATION
—GW—	GW	GW	GREASE WASTE (DELOW)			AFF	ABOVE FINISHED FLOOR
GW	<u> </u>	GW	GREASE WASTE (BELOW)			DCVA	DOUBLE CHECK VALVE ASSEMBLY DOUBLE DETECTOR CHECK VALVE
GV	<u> </u>	GV	GREASE VENT			DDCVA	ASSEMBLY
——AW——	AW	AW	ACID WASTE	X" SW-X (UP/DN) X S.F. X GPM			STORM WATER STACK ID SIZE SYSTEM-STACK ID (UP/DN) SQUARE FEET GPM
AW	<u>AW</u>	AW	ACID WASTE (BELOW)				'
AV		AV	ACID VENT	X" OD-X (UP/DN) X S.F. X GPM			OVERFLOW DRAIN STACK ID SIZE SYSTEM-STACK ID (UP/DN) SQUARE FEET GPM
— AI —	AI AI	Al	AIR INTAKE	[]X G X G			SQUARE FEET GPM
— CO2—	CO2	CO2	CARBON DIOXIDE	X" F-X (UP/DN)			FIRE RISER ID
—-CA	CA	CA	COMPRESSED AIR				SIZE SYSTEM-RISER ID (UP/DN)
— IA —	<u>IA</u>	IA	INSTRUMENT AIR	X" AW-X (UP/DN)	(" AV-X (UP/DN)		ACID WASTE/VENT STACK ID
— LA —	LA	LA	LAB AIR			1	SIZE SYSTEM-STACK ID (UP/DN)
— LV —	LV	LV	LAB VACUUM	x" P-X (UP/DN)			SANITARY WASTE STACK ID
—MA—	MA	MA	MEDICAL AIR	X" X-DÈU, X GÉM			SIZE SYSTEM-STACK ID (UP/DN) DRAINAGE FIXTURE UNITS GPN
—VAC—	VAC	VAC	MEDICAL VACUUM	0			CEILING SPRINKLER - UPRIGHT
—N20—	N20	N20	NITROUS OXIDE	•			CEILING SPRINKLER - CONCEALED
— N2 —	N2	N2	NITROGEN	•			CEILING SPRINKLER - RECESSED PENDANT
<u> </u>	O2	O2	OXYGEN	◁			SIDEWALL SPRINKLER
—	VE	VE	VACUUM EXHAUST	4			SIDEWALL EXTENDED COVERAGE SPRINKLER
—WAGD—	WAGD	WAGD	WASTE ANESTHESIA GAS DISPOSAL	•			WALL HUNG FIRE EXTINGUISHER
—НЕ—	HE	HE	HELIUM				FIRE EXTINGUISHER CABINET
— H2 —	H2	H2	HYDROGEN	₿		1	FIRE DEPARTMENT CONNECTION
——AR —	AR	AR	ARGON				MEDGAS ALARM SIGNAL WIRE
——A/S——	A/S	A/S	AUTOMATIC SPRINKLER SYSTEM				
_ DPS _	DPSS	DPSS	DRY PIPE SPRINKLER SYSTEM			+	
S — FDR 	FDR	FDR	FIRE DRAIN RISER			1	
— F —	? F	F	FIRE MAIN			+	
 MDSP—	/ MDSP	MDSP	MANUAL DRY STANDPIPE SYSTEM			+	

—MDSP— MDSP MANUAL DRY STANDPIPE SYSTEM

—PASS— PASS PRE-ACTION SPRINKLER SYSTEM

PLUMBING FIXTURE CONNECTION SCHEDULE

NOTES

. BRANCH CONNECTION SIZES ARE INDICATED. REFER TO FLOOR PLANS FOR MAIN PIPING SIZES.

3. SEE SECTION 224000 FOR PLUMBING FIXTURES SEPCIFICATIONS AND REQUIREMENT.
4. PROVIDE MIXING VALVE CONFORMING TO ASSE 1070 UNDER HAND WASHING FIXTURES.

4. PROVIDE MIXING VALVE CONFORMING TO ASSE 1070 UNDER HAND WASHING FIXTURES. 5. CONTRACTOR SHALL COORDINATE WITH FIXTURE SUPPLIER FOR EXACT ROUGH-INS REQUIREMENT.

6. INSTALL FIXTURES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. PIPE SIZES LISTED ARE THE REQUIRED SERVICES SIZES. THE ACTUAL CONNECTION SIZES FIXTURES SUPPLIED. COORDINATE WITH MILLWORK SUPPLIER FOR EXACT OPENING REQUIRED FOR COUNTERTOP SINK.

SEE ARCHITECTURAL DRAWINGS FOR FIXTURES, GRAB BARS, ANY ACCESSORIES SPECIFICATIONS. COORDINATE EXACT LOCATIONS, DIMENSIONS, QUANTITIES OF ALL FIXTURES

8. ALL ADA FIXTURES SHALL BE MOUNTED TO COMPLY WITH ADA REQUIREMENTS.

ALL FAUCETS SHALL BE NON-AERATING SPRAY.

9. ALL ADA FIXTURES AND TRIM INSTALLATION SHALL MEET ADA CCOMPLIANCE.

10. WATER CLOSETS SHALL BE PROVIDED WITH A MAXIMUM FLUSHING RATE PER CODE IF MORE RESTRICTED THAN FIXTURE SPECIFIED.

11. PROVIDE SET SCREWS ON ALL ESCUTCHEONS.

12. PROVIDE .5 GPM MAX FLOW CONTROL ON LAVATORY FAUCETS.

WITH ARCHITECTURAL DRAWINGS AND REQUIREMENT. SUBMIT FIXTURES FOR A REVIEW AND APPROVAL PRIOR TO ORDERING.

14. MAKE FINAL CONNECTIONS TO ALL FIXTURES AS REQUIRED.

15. PIPE, FITTINGS, FLUX, SOLDER, FAUCET, VALVES, STOPS AND SUPPLIES FOR EACH POTABLE WATER SHALL BE "LEAD FREE".

16. PROVIDE INSULATION KIT ON EXPOSED DRAIN AND SUPPLY ON ADA FIXTURES.

DESIGNATION	FIXTURE DESCRIPTION	COLD WATER	HOT WATER	DRAIN	VENT	NOTES
FD-1	FLOOR DRAIN 1. FIXTURE: ZURN #Z520-C-Y-P, 9" DIAMETER TOP, DURA-COATED CAST IRON AREA DRAIN WITH SEDIMENT BUCKET, ADJUSTABLE STRAINER AND FLASHING CLAMP DEVICE IF DRAIN IS INSTALLED ABOVE SLAB ON GRADE. SIZE AS SHOWN ON THE DRAWINGS. FLOOR DRAIN SHALL BE PROVIDED WITH TRAP PRIMER.					1.
P-1D	WATER CLOSET (WALL HUNG - BATTERY OPREATED FLUSH VALVE - BARRIER FREE - 1.6 GPF) A. FIXTURE: ZURN Z5615.258.00.00.00, WHITE ELONGATED BOWL B. VALVE: ZURN ZTR6200-WS1-LL C. SEAT: ZURN Z5956SS-EL WHITE OPEN FRONT D. TRIM: TWO BOLT CAPS INCLUDED F. CARRIERS: ZURN ZN1204-ND4 SERIES RATED 500 LB STATIC LOAD.	1"		4"	2"	
P-5B	LAVATORY (WALL HUNG - BATTERY OPERATED FAUCET - BARRIER FREE) A. FIXTURE: ZURN Z5341, 20"X18" SINGLE FAUCET HOLE B. FAUCET: ZURN Z6913-XL-N LEAD FREE WITH .5 GPM VANDAL RESISTANT LAMINAR FLOW, AND BRAIDED SUPPLIES. C. TRIM: ONE ZURN Z8700 1-1/4 INCH SEMI-CAST BRASS P-TRAP. ZURN Z8804-XL-PC WHEEL HANDLE STOPS. ZURN Z8746-PC 1-1/4 INCH OFFSET GRID DRAIN AND 1-1/4 INCH TAILPIECE. Z8946-1-NT ADA TRAP, STOP AND SUPPLY PROTECTORS. D. MOUNTING: 34 INCHES FROM FINISHED FLOOR TO FLOOD RIM. INSULATE WATER PIPING AND TRAP UNDER LAVATORY. E. TEMPERATURE LIMITING - WATTS LFUSG-B UNDERSINK GUARDIAN	1/2"	1/2"	2"	2"	
P-6D	SINK (DOUBLE COMPARTMENT - KITCHEN) A. FIXTURE: JUST DL-ADA-1829-A-GR, 18"X29"X6.5" WITH ONE HOLE FAUCET AND ONE HOLE FOR HOSE SPRAY B. FAUCET: DELTA 175-DST SINGLE HANDLE DECK MOUNTED FAUCET WITH HOSE SPRAY 1.8 LAMINAR GPM FLOW C. TRIM: TWO ZURN Z8743-1-PC GRID DRAIN WITH 1-1/2 INCH TAILPIECE. ZURN Z8804-XL-PC WHEEL HANDLE STOPS. ONE ZURN Z8702-PC SERIES 1-1/2 INCH BY 1-1/2 INCH SEMI-CAST BRASS P-TRAP. ONE ZURN Z8751 CONTINUOUS WASTE. D. DISPOSAL: BADGER 1 IN SINKERATOR 1/3 HP 120V.	1/2"	1/2"	2"	2"	
P-9	JANITORS FLOOR BASIN A. FIXTURE: STERN-WILLIAMS TERRAZZO SBC-1700 CORLOW, 24"X24"X12" WITH STAINLESS STEEL CAP, LESS TILING FLANGES B. FAUCET: STERN WILLIAM T-15-VB FAUCET WITH VACUUM BREAKER, T-35 HOSE AND WALL HOOK, 36" LONG HOSE AND STAINLESSS STELL WALL HOOK, T40 STAINLESS STEEL MOP HANGER, 24" LONG AND BP SPLASH CATCHER. C. MOUNTING: MOUNT FAUCET 36 INCHES ABOVE FINISHED FLOOR.	3/4"	3/4"	3"	2"	
P-12B	WATER COOLER (BOTTLE FILLING STATION & VERSATILE BI-LEVEL ADA COOLER NON-FILTERED 8 GPH A. FIXTURE: ELKAY EZH20 EZSTL8WSLK B. CARRIER: MP-20 MOUNTING PLATE C. TRIM: ONE ZURN Z8802-XL-LR-8860-12-PC SUPPLY WITH WHEEL HANDLE STOP. ONE ZURN Z8700-PC SERIES, 1-1/4 INCH SEMI-CAST BRASS P-TRAP D. CAPACITY: 8 GPH CHILLED WATER E. MOUNTING: ONE UNIT AT ADA HEIGHT	1/2"		2"	2"	

SH	OCK ARE	RESTC	R SCHE	DULE
GENERAL NO	TES: TORS SHALL BE SIZED	AND LOCATED I	PER PDI STANDARDS	
P.D.I. SYMBOL	FIXTURE UNITS	SIZE	MANUFACTURER	MODEL NUMBER
A	1-11	1/2" NPT	PPP	SC-500
B	12-32	3/4" NPT	PPP	SC-750
\$\line{\chi}\rightarrow\$	33-60	1" NPT	PPP	SC-1000
(D)	61-113	1 1/4" NPT	PPP	SC-1250
Ē	114-154	1 1/2" NPT	PPP	SC-1500
⟨F ⟩	155-330	2" NPT	PPP	SC-2000

SHEET INDEX - PLUMBING

NUMBER	SHEET NAME						
P001	PLUMBING GENERAL NOTES, SCHEDULES, LEGEND AND INDEX						
P002	PLUMBING SPECIFICATIONS						
P120	N. WATKINS OFFICE PLUMBING DEMO PLANS						
P121	N. WATKINS OFFICE PLUMBING FLOOR PLAN AND RCP						
P501	PLUMBING DETAILS						

PLUMBING GENERAL NOTES

- A. CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE PROJECT SCOPE, UTILITY CONNECTIONS AND ALL BUILDING SERVICES. EXISTING SITE UTILITIES SHALL BE FIELD LOCATED FOR EXACT LOCATION AND ELEVATION BEFORE BEGINNING CONSTRUCTION OR DEMOLITION.
- B. DRAWINGS SHOW KNOWN EXISTING SERVICES, PIPING, FIXTURES, EQUIPMENT, AND CONNECTIONS IN
- REASONABLE PROXIMITY. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS AND SIZES. ANY DISCREPANCIES AND / OR DEVIATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ARCHITECTS ATTENTION.

C. COORDINATE WATER, WASTE, VENT, RAIN WATER AND OTHER PIPING WITH ALL TRADES TO AVOID SPACING AND

- ROUTING PROBLEMS.

 D. FIXTURES, EQUIPMENT, CONNECTIONS AND PIPING SHALL BE FURNISHED AND INSTALLED TO MEET OR EXCEED
- STATE AND LOCAL CODES AND REQUIREMENTS.

 E. STANDARD DETAILS ILLUSTRATED ON THE DRAWINGS SHALL BE APPLIED IN ALL CASES WHERE THE FEATURE
- OCCURS IN THE SYSTEM DESIGN.
- F. FURNISH AND INSTALL SHOCK ARRESTORS IN COLD WATER LINES AT CONNECTIONS TO FLUSH VALVES AND QUICK CLOSING VALVES AND AT EACH HOT AND COLD WATER CONNECTION TO FIXTURES.
- G. PLUMBING VENTS AND STACKS THROUGH ROOF SHALL BE INSTALLED A MINIMUM OF 25 FEET CLEAR OF HVAC OUTSIDE AIR INTAKES AND ANY OPERABLE WINDOW OR BUILDING OPENING.
- H. VENT AND WASTE STACKS LESS THAN THREE INCHES IN DIAMETER SHALL NOT ROUTE THROUGH THE ROOF. PROVIDE INCREASERS ON PIPING BELOW ROOF.
- I. PENETRATIONS THROUGH WALLS AND FLOORS SHALL BE SLEEVED, SEALED AND FIRESAFED TO MAINTAIN THE
- INTEGRITY OF THE WALL AND FLOOR UL FIRE RESISTANCE RATING.
- J. DRAWINGS ARE SCHEMATIC IN NATURE AND SHALL NOT BE SCALED. CONTRACTOR IS RESPONSIBLE FOR COORDINATING EXACT ROUTING OF ALL SERVICES WITH EXISTING CONDITIONS AND WITH ALL OTHER TRADES.
- K. PROVIDE INSULATION KIT FOR SUPPLIES, TRAP AND DRAIN PIPING FOR ALL HANDICAP ACCESSIBLE LAVATORIES AND SINKS. INSULATION OF PIPING IS NOT REQUIRED WHERE PROTECTIVE SKIRT IS PROVIDED BELOW FIXTURE.

 L. PROVIDE HOUSEKEEPING PADS LINDER ALL FOLLIPMENT. COORDINATE PAD SIZE AND FLOOR DRAIN LOCATIONS.

M. SUPPORTS, ANCHOR BOLTS AND HANGERS FOR ALL EQUIPMENT SPECIFIED SHALL CONFORM TO THE

- L. PROVIDE HOUSEKEEPING PADS UNDER ALL EQUIPMENT. COORDINATE PAD SIZE AND FLOOR DRAIN LOCATIONS WITH FINAL EQUIPMENT PAD LOCATIONS. LOCATE DRAINS NEAR EQUIPMENT DRAINS AND DISCHARGE TO AVOID ROUTING OF PIPING ACROSS WALK PATHS.
- SPECIFICATIONS. MISCELLANEOUS STEEL BRACING SUPPORTS AND REINFORCING STEEL NEEDED TO SUPPORT EQUIPMENT AND PIPING SYSTEMS SPECIFIED SHALL BE FURNISHED AND INSTALLED AS PART OF THE WORK.
- N. MAINTAIN ACCESSIBILITY OF ALL EQUIPMENT AND VALVES. PROVIDE ACCESS PANELS AS REQUIRED. COORDINATE PLACEMENT WITH THE ARCHITECT PRIOR TO INSTALLATION.
- O. INSTALL EXTERIOR WALL HYDRANTS AT 18" ABOVE FINISHED GRADE.

POSITION FOR A DRAINAGE SYSTEM.

- P. CONTRACTOR SHALL COORDINATE WITH THE ARCHITECT PRIOR TO CUTTING ANY OPENING IN THE STRUCTURE. COORDINATE SLEEVING OF BEAMS AND CORING OF STRUCTURE WITH STRUCTURAL DRAWINGS AND DETAILS PRIOR TO INSTALLATION.
- Q. CONTRACTOR SHALL PROVIDE TRAP PRIMERS ON ALL FLOOR DRAINS NOT RECEIVING CONSTANT DISCHARGE FROM FIXTURES AND/OR EQUIPMENT AND AS REQUIRED BY STATE AND LOCAL CODES.
- R. ALL SANITARY AND STORM WATER PIPING BELOW GRADE IN AREAS SUBJECT TO TRAFFIC WITH LESS THAN TWO FEET OF EARTH COVER SHALL BE DUCTILE IRON.
- S. PROVIDE PIPING EXPANSION JOINTS AT EACH PIPE CROSSING AN INTERIOR BUILDING EXPANSION JOINT.

 T. ORIENT FLUSH VALVE HANDLES ASSOCIATED WITH BARRIER-FREE WATER CLOSETS ON THE WIDE SIDE OF THE
- STALL TO COMPLY WITH ADA REQUIREMENTS.

 U. PROVIDE LEAD FREE MIXING VALVES UNDER PUBLIC LAVATORIES, KITCHEN HAND WASHING SINKS OR ANY OTHER
- FIXTURE REQUIRING TEMPERED WATER TO MEET ASSE 1070/ASME A112.1070 OR LOCAL ADOPTED CODE.

 V. A DOUBLE WYE OR DOUBLE COMBINATION WYE AND 1/8 BEND FITTING IS NOT ACCEPTABLE IN A HORIZONTAL

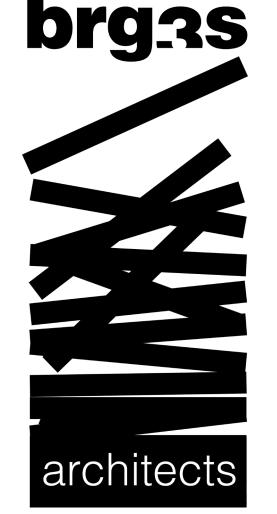
PLUMBING DEMOLITION NOTES

- A. CONTRACTOR SHALL REMOVE EXISTING SERVICES SUCH AS WATER, WASTE AND VENT PIPING SERVING FIXTURES AND/OR CONNECTIONS TO EQUIPMENT WHICH ARE SHOWN ON THE DRAWINGS TO BE REMOVED OR RELOCATED. PERMANENTLY SEAL AND CAP SERVICES NEXT TO MAIN SERVICE LINES ABOVE CEILINGS, IN WALLS OR BELOW FLOORS. ALL EXISTING DOMESTIC HOT AND COLD WATER DEAD-LEG PIPING, WHETHER SHOWN ON THE DRAWINGS OR NOT SHALL BE REMOVED BACK TO MAIN.
- B. EXISTING PLUMBING FIXTURES AND RELATED ITEMS WHICH ARE TO BE REMOVED SHALL BE SUBMITTED TO THE OWNER. ITEMS THE OWNER WISHES TO RETAIN SHALL BE STORED BY THE CONTRACTOR WHERE DIRECTED BY THE OWNER. ALL OTHER ITEMS NOT RETAINED BY THE OWNER SHALL BE LEGALLY DISPOSED.
- C. DRAWINGS SHOW KNOWN EXISTING SERVICES IN REASONABLE PROXIMITY. CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS. NOTE DISCREPANCIES AND BRING TO THE ARCHITECT'S ATTENTION.
- D. EXISTING FIXTURES, EQUIPMENT, SERVICES AND CONNECTIONS WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE REWORKED OR REPLACED AS REQUIRED TO PROVIDE ORIGINAL CONDITION AND OPERATION.
- E. PENETRATIONS THROUGH EXISTING WALLS AND FLOORS SHALL BE SLEEVED, PATCHED AND SEALED/FIRESAFED
- TO MAINTAIN THE INTEGRITY OF EXISTING WALL AND FLOOR UL FIRE RESISTANCE RATING.
- F. EXISTING PLUMBING SERVICES NOT SHOWN ON THE DRAWINGS SHALL REMAIN AS IS, UNLESS NOTED
- G. CONTRACTOR SHALL COORDINATE THE INTERRUPTION OF EXISTING SERVICES WITH THE OWNER PRIOR TO DEMOLITION OR CONSTRUCTION. PROVIDE A MINIMUM OF 48 HOURS WRITTEN NOTICE WITH ANTICIPATED DURATION OF OUTAGE. ALL WORK SHALL BE PERFORMED TO FIT THE OPERATIONAL SCHEDULE OF THE
- H. EXISTING FIXTURES, EQUIPMENT CONNECTIONS AND SERVICE LINES SHALL BE FIELD VERIFIED FOR EXACT LOCATION AND SIZE. NOTE DISCREPANCIES AND DEVIATIONS AND BRING TO THE ARCHITECT'S ATTENTION.

SITE UTILITY NOTES - EXISTING CONSTRUCTION

- A. DRAWINGS SHOW ONLY KNOWN EXISTING UTILITIES REQUIRED TO PROVIDE SERVICES TO THIS PROJECT. SUBSURFACE INVESTIGATION HAS NOT BEEN PERFORMED. CONTRACTOR SHALL FIELD LOCATE AND VERIFY EXACT LOCATION(S) OF OTHER EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REMOVE, REWORK AND/OR REROUTE EXISTING UTILITIES AS REQUIRED. EXISTING UTILITIES DISCOVERED DURING EXCAVATION SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION FOR RESOLUTION AS NEEDED. UTILITY CONSTRUCTION SHALL CONFORM TO STATE AND LOCAL CODES AND REQUIREMENTS.
- B. CONTRACTOR SHALL FIELD LOCATE AND VERITY EXACT SIZES AND MATERIAL TYPES OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BRING ANY DEVIATIONS DISCOVERED TO THE ARCHITECT'S ATTENTION.

PIPING MATERIALS SCHEDULE				
GENERAL NOTES: 1. TYPE NOTE HERE.				
PLUMBING SYSTEM	PLUMBING MATERIAL DESCRIPTION			
SANITARY DRAIN PIPING	STANDARD WEIGHT CAST IRON PIPE, BELL & SPIGOT JOINTS (BELOW SLAB)			
SANITARY DRAIN PIPING	STANDARD WEIGHT CAST IRON PIPE, WITH NO HUB JOINTS (ABOVE SLAB)			
VENT PIPING	STANDARD WEIGHT CAST IRON PIPE, WITH NO HUB JOINTS (ABOVE SLAB)			
DOMESTIC WATER PIPING (ABOVE SLAB)	TYPE "L". COPPER TUBING, WITH WROUGHT COPPER FITTINGS (ASTM B88).			
DOMESTIC WATER PIPING (BELOW SLAB)	TYPE "K". COPPER TUBING, WITH BRAZED WROUGHT COPPER FITTINGS (ASTM B88).			



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CONSULTANTS



ARK DATE DESCRIPTION

CLIENT

1370 LEVEE RD,
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PROJECT NAME

MATA HEADQUARTERS

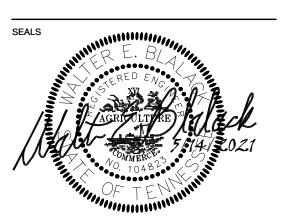
1364 N WATKINS PACKAGE 1 -RENOVATION

Project No. Date Issued Drawing Scale

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PLUMBING GENERAL NOTES, SCHEDULES, LEGEND AND INDEX

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1.1 REQUIREMENT

- A. APPLICABLE PROVISION OF GENERAL CONDITIONS OF DIVISION 1, GENERAL REQUIREMENTS, GOVERN ALL WORK SPECIFIED IN THIS SECTION.
- B. REFER TO ARCHITECTURAL DRAWINGS FOR APPLICABLE PROVISIONS OF THE GENERAL CONDITIONS REFER TO ARCHITECTURAL DRAWINGS FOR APPLICABLE PROVISIONS OF THE GENERAL CONDITIONS
- C. REFER TO DRAWINGS FOR GENERAL REQUIREMENTS APPLYING, BUT NOT LIMITED TO THE FOLLOWING:
 - INSPECTION OF SITE. VERIFICATION OF UTILITIES AND SERVICES.
 - REQUIREMENTS OF REGULATORY AGENCIES
 - DRAWINGS
 - SAFETY DEVICES SHOP DRAWINGS GUARANTEE

1.2 SCOPE OF WORK INCLUDED

- A. WORK SHALL INCLUDE ALL CONSTRUCTION IN CONNECTION WITH PLUMBING AND FIRE PROTECTION AS DESCRIBED HEREAFTER.
- B. WORK SPECIFIED UNDER THIS SECTION INCLUDES FURNISHING OF AND PAYING FOR ALL MATERIALS, LABOR, EQUIPMENT LICENSES, TAXES, AND OTHER ITEMS

REQUIRED FOR EXECUTION AND COMPLETION OF ALL WORK INDICATED.

C. EVERYTHING NECESSARY FOR A COMPLETE AND SATISFACTORY INSTALLATION INCLUDING ALL NECESSARY PARTS, DEVICES, ACCESSORIES, ETC., REQUIRED BY CODES OR THAT MAY BE REQUIRED TO SATISFACTORILY COMPLETE THE INSTALLATION OF THE ABOVE ITEMS SHALL BE APPROVED...

1.3 RELATED WORK UNDER OTHER DIVISIONS OF THE CONTRACT:

- A. CONCRETE PADS AND FOUNDATIONS REF. STRUCTURAL
- B. POWER AND CONTROL WIRING REF. ELECTRICAL

1.4 REFERENCE STANDARDS:

- A. ALL WORK MUST BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FOLLOWING PERTINENT STANDARDS AND LEGAL CODES AND ORDINANCES:
- INTERNATIONAL BUILDING CODE AND PUBLICATIONS REFERRED TO THEREIN LIFE SAFETY CODE, NFPA NO. 101
- OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) STATE, COUNTY, AND LOCAL PLUMBING CODES
- NATIONAL ELECTRICAL CODE (NEC) AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)
- AMERICAN WATER WORKS ASSOCIATION (AWWA) AMERICAN SOCIETY FOR TESTING AND MATERIAL (ASTM)
- CAST IRON PIPE INSTITUTE (CIPI) NATIONAL SANITATION FOUNDATION TESTING LABORATORY (NSF)
- 11. PLUMBING DRAINAGE INSTITUTE (PDI) 12. STANDARDS AND PERIODICALS LISTINGS, UNDERWRITERS LABORATORIES 13. FOR WORK NOT SPECIFICALLY LISTED ABOVE, USE THE STANDARDS AND

CODES OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

1.5 INSPECTION OF THE SITE:

A. BIDDERS SHALL VISIT THE SITE OF THE WORK BEFORE SUBMITTING BIDS AND SATISFY THEMSELVES AS TO THE NATURE AND SCOPE OF ALL WORK TO BE DONE INCLUDING REQUIREMENTS OF LOCAL AUTHORITIES TO MEET WITH THEIR PROCEDURES OR

1.6 VERIFICATION OF UTILITIES AND SERVICES:

A. IMMEDIATELY UPON COMMENCING CONSTRUCTION, AND PRIOR TO CONSTRUCTION OF ANY PART OF THE FACILITY INVOLVED IN ANY WAY WITH UTILITIES, INVESTIGATE THOROUGHLY THE SIZE, CAPACITY, ARRANGEMENT AND LOCATION OF UTILITIES REPORT ANY DISCREPANCIES OR APPARENT PROBLEM INVOLVING THE PROJECT THAT PERTAIN TO UTILITIES. THIS APPLIES TO PRIVATE AS WELL AS PUBLIC UTILITIES. COORDINATE WITH LOCAL UTILITY SERVICE PROVIDER FOR EXTENSION OF ALL NECESSARY UTILITY CONNECTIONS, SETTING OF METERING EQUIPMENT, AND PAY ALL COSTS INCURRED THEREBY.

1.7 REQUIREMENTS OF REGULATORY AGENCIES:

- A. WORK SHALL BE EXECUTED AND INSPECTED IN ACCORDANCE WITH ALL LOCAL OR STATE CODES, LAWS, ORDINANCES, RULES AND REGULATIONS APPLICABLE TO THE PARTICULAR CLASS OF WORK AND SHALL INCLUDE ALL APPLICABLE SERVICE CHARGES, FEES, PERMITS, ROYALTIES, TAXES, AND OTHER SIMILAR COSTS IN CONNECTION THEREWITH. IF THE DRAWINGS OR SPECIFICATIONS ARE AT VARIANCE WITH ABOVE MENTIONED LAWS, RULES AND REGULATIONS, NOTIFY THE ENGINEER IN WRITING SO ANY NECESSARY CHANGES CAN BE PROVIDED PRIOR TO CONTRACT.
- B. IF THE CONTRACTOR PERFORMS ANY WORK KNOWING IT TO BE CONTRARY TO SUCH LAWS, RULES OR REGULATIONS, AND WITHOUT NOTICE AS REQUIRED ABOVE, HE SHALL BEAR COSTS ARISING THEREFROM. THE DRAWINGS AND SPECIFICATIONS TAKE PRECEDENCE WHEN THEY ARE MORE STRINGENT THAN CODES, ORDINANCES, OR STATUTES IN EFFECT.
- APPLICABLE CODES, ORDINANCE, STANDARDS AND STATUTES TAKE PRECEDENCE WHERE THEY ARE MORE STRINGENT OR CONFLICT WITH THE DRAWINGS AND

1.8 INSTRUCTION OF OWNER:

- A. WHEN THE SYSTEM IS IN COMPLETE OPERATION, AND PRIOR TO DATE OF FINAL COMPLETION, PROVIDE AN APPROVED QUALIFIED ENGINEER, TECHNICIAN, OR MECHANIC, FOR A PERIOD OF FOUR (4) MAN-HOURS TO INSTRUCT THE OWNER, OR HIS AUTHORIZED PERSONNEL, IN OPERATION AND MAINTENANCE OF ALL SYSTEMS INSTALLED UNDER THIS SECTION OF WORK, OR RELATED WORK UNDER OTHER
- B. REVIEW OPERATING AND MAINTENANCE MANUAL. IDENTIFY ALL CONTROLS AND ALL LUBRICATION POINTS, DEMONSTRATE START, STOP, AND ADJUSTMENTS OF ALL SYSTEMS AND EQUIPMENT.

1.9 DRAWINGS:

- A. IT IS INTENDED THAT ALL EQUIPMENT AND PIPING BE LOCATED SYMMETRICALLY WITH ARCHITECTURAL ELEMENTS, AND SHALL BE INSTALLED AT EXACT HEIGHT AND LOCATIONS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.
- B. BE ACQUAINTED WITH ANY AND ALL PECULIARITIES AND LIMITATIONS OF THE SPACES AVAILABLE FOR THE INSTALLATION OF ALL WORK AND MATERIALS FURNISHED AND INSTALLED THIS SECTION OF THE SPECIFICATIONS. EXERCISE DUE AND PARTICULAR CAUTION TO DETERMINE THAT ALL PARTS OF THE WORK ARE MADE QUICKLY AND EASILY ACCESSIBLE.
- C. ALTHOUGH THE LOCATIONS OF THE EQUIPMENT AND PIPING MAY BE SHOWN ON THE DRAWINGS IN CERTAIN POSITIONS, SHOULD THE CONTRACTOR DISCOVER CONFLICTS OR INTERFERENCES DURING PROGRESS OF THE WORK, HE SHALL REPORT ANY DISCREPANCIES OR INTERFERENCES THAT ARE DISCOVERED. FAILURE TO REPORT SUCH DISCREPANCIES AND INTERFERENCES SHALL RESULT IN THE CORRECTING OF THESE ERRORS OR OMISSIONS BY THIS SECTION AT HIS OWN EXPENSE. ALL WORK INSTALLED UNDER THIS SECTION WHICH DEVIATES FROM THE DRAWINGS AND SPECIFICATION WITHOUT PRIOR APPROVAL, SHALL BE ALTERED BY THIS SECTION AT HIS OWN EXPENSE, TO COMPLY WITH THE DRAWINGS AND SPECIFICATIONS AS
- D. THE DRAWINGS ARE SCHEMATIC IN NATURE AND DO NOT REFLECT ALL OFFSETS OR CHANGES OF DIRECTION OR ELEVATION TO COORDINATE WITH THE ACTUAL CONSTRUCTION OF THE PROJECT. CONTRACTOR SHALL COORDINATE WITH THE ACTUAL CONDITIONS PRESENTED DURING CONSTRUCTION TO ENSURE THE INTENT OF THE DESIGN IS MET

1.10 SAFETY DEVICES:

A. CONTRACTOR SHALL FURNISH AND INSTALL SAFETY GUARDS FOR ALL DANGEROUS MOVING PARTS SUCH AS BELTS AND PULLEYS, FLEXIBLE SHAFT CONNECTIONS AND THE LIKE, AND SHALL PROVIDE ALL REQUIRED SAFETY CONTROLS TO PREVENT DANGEROUS

1.11 SHOP DRAWINGS (SUBMITTALS):

OR DAMAGING OPERATION OF EQUIPMENT.

A. EQUIPMENT SUBMITTALS:

- 1. SIX COPIES OF SHOP DRAWINGS AND/OR MANUFACTURER'S DESCRIPTIVE DATA OF A NATURE TO COMPLETELY IDENTIFY THE EQUALITY OF THE MATERIAL OR EQUIPMENT INTENDED FOR INSTALLATION SHALL BE SUBMITTED FOR APPROVAL BEFORE BEGINNING ANY CONSTRUCTION AND WITHIN THIRTY DAYS AFTER SIGNING CONTRACT. FAILURE TO SUBMIT DATA FOR APPROVAL WITHIN THIRTY DAYS TIME LIMIT WILL BE CONSTRUED AS MEANING EQUIPMENT CALLED FOR BY NAME WILL BE FURNISHED. DATA SHALL BE ORGANIZED IN SAME ORDER AS LISTED BELOW, SHALL BE SUBMITTED ALL IN ONE BROCHURE, INDEXED BY FLY SHEET ON FRONT PAGE, AND BE BOUND IN SETS, ALL SETS IDENTICAL. NO EXCEPTION WILL BE MADE TO THIS PROCEDURE AND TIME SCHEDULE.
- EACH ITEM SUBMITTED FOR REVIEW SHALL BE MARKED AND HAVE SUBMITTAL DATA PRECEDED BY A TYPEWRITTEN DESCRIPTION (BY CONTRACTOR OR ITEM SUPPLIER) OF THE ITEM. DESCRIPTION TO INCLUDE MAKE AND MODEL NUMBERS AND SHALL DESCRIBE THE ITEM. LIST ALL OPTIONS AND ACCESSORIES WHICH ARE INCLUDED. LIST ANY OPTIONS OR ACCESSORIES SHOWN ON SHOP DRAWINGS WHICH ARE NOT INCLUDED.
- SUBMIT THE FOLLOWING FOR APPROVAL, REFERRING TO THE VARIOUS SECTIONS OF THIS SPECIFICATION FOR SPECIFIC ITEMS: (AS APPLICABLE)
- PIPE INSULATION, PIPE HANGERS, PIPE IDENTIFICATION LABELS VALVES AND STRAINERS PIPING SPECIALTIES
- PIPE AND FITTINGS
- VALVES WATER HEATERS

CARRIERS INSULATION

- DRAINS CLEANOUTS
- HYDRANTS **FIXTURES**

1.12 GUARANTEE:

- A. ALL WORK PERFORMED UNDER THIS DIVISION SHALL BE GUARANTEED TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP FROM DATE OF SUBSTANTIAL COMPLETION OF SUCH WORK AS FOLLOWS:
- B. IN ADDITION TO THE STANDARD ONE (1) YEAR GUARANTEE SPECIFIED. THE CONTRACTOR PERFORMING THE WORK UNDER THIS SECTION SHALL GUARANTEE REFRIGERATION COMPRESSORS (MATERIAL AND LABOR) AGAINST FAILURE FOR A PERIOD OF FIVE (5) YEARS, AND LOSS OF REFRIGERANT AND OIL SHALL BE INCLUDED IN THE GUARANTEE.

1.13 COORDINATION:

A. COORDINATE ALL WORK WITH THAT OF THE OTHER TRADES ON THE JOB AND ALSO WITH THAT OF THE OWNER, IN ORDER THAT THERE WILL BE NO DELAY IN THE PROPER INSTALLATION AND COMPLETION OF THE WORK. ANY COST FOR EXTRA WORK OR MATERIALS RESULTING FROM LACK OF COORDINATION OF WORK PERFORMED UNDER THIS SECTION SHALL BE BY THIS SECTION.

1.14 WORKMANSHIP, MATERIALS AND EQUIPMENT:

A. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER AND SHALL PRESENT A NEAT AND MECHANICAL APPEARANCE WHEN COMPLETED. ALL MATERIALS SHALL BE OF TYPE, QUALITY, AND OF MINIMUM RATING PRESCRIBED HEREIN OR AS INDICATED ON THE PLANS.

1.15 MANUFACTURER'S RECOMMENDATIONS

- ALL MATERIAL AND EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER OF SUCH MATERIAL AND EQUIPMENT
- B. IN THE EVENT OF DISCREPANCY BETWEEN MANUFACTURER'S RECOMMENDATIONS AND ANY REQUIREMENTS OF DRAWINGS OR SPECIFICATIONS, CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER IN ORDER THAT THE MATTER CAN BE CLEARED UP PRIOR TO ANY INSTALLATION OF MATERIALS OR EQUIPMENT.

1.16 PROTECTION OF WORK:

PROTECT WORK AT ALL TIMES FROM DANGER BY FREEZING, BREAKAGE, DIRT. FOREIGN MATERIALS, ETC., AND REPLACE ALL WORK SO DAMAGED, USE EVERY PRECAUTION TO PROTECT THE WORK OF OTHERS, AND BE RESPONSIBLE FOR ALL DAMAGE TO OTHER WORK CAUSED BY WORK OF, OR THROUGH THE NEGLECT OF WORKMEN UNDER THIS SECTION OF THE SPECIFICATIONS.

1.17 UTILITY CONNECTIONS:

 COORDINATE WITH THE LOCAL UTILITY COMPANY TO PROVIDE TAPPING OF EXISTING UTILITY MAINS AND TO EXTEND SERVICES TO LOCATION AS INDICATED, SET METERING EQUIPMENT COMPLETE WITH VALVES, ETC. PAY ALL COST FOR SUCH SERVICES, AND PERFORM ALL NECESSARY WORK REQUIRED BY LOCAL UTILITY COMPANY TO ASSIST IN THE EXTRUSION OF THE UTILITY.

1.18 EQUIPMENT/PIPING SUPPORTS:

- A. FURNISH AND ERECT ALL NECESSARY STEEL MEMBERS, FRAMES, CONNECTIONS, ETC., TO SUPPORT EQUIPMENT AND PIPING INSTALLED UNDER THIS SECTION, REGARDLESS OF WHETHER THE DRAWINGS INDICATE SUPPORT DETAILS OR NOT. COORDINATE WITH GENERAL CONTRACTOR TO DETERMINE WHICH SUPPORTS ARE BEING FURNISHED BY OTHER SECTIONS.
- PROVIDE CONCRETE PADS, CURBS, ETC. FOR SUPPORT OF EQUIPMENT AND PIPING INSTALLED UNDER THIS SECTION, WHETHER SHOWN ON DRAWINGS OR NOT, EXCEPT WHERE SUPPORTS ARE REQUIRED TO BE FURNISHED AND INSTALLED BY OTHER SECTIONS OF THESE SPECIFICATIONS. COORDINATE RESPONSIBILITY WITH GENERAL CONTRACTOR
- PROVIDE VIBRATION ABSORBING, MOUNTING DEVICES DESIGNED TO PREVENT ALL TRANSMISSION OF VIBRATION AND NOISE TO THE BUILDING STRUCTURE

1.19 PATCHING:

A. PERFORM ALL CUTTING REQUIRED FOR THE INTRODUCTION AND PLACEMENT OF WORK. CUTTING AND PATCHING REQUIRED AS A RESULT OF THE OMISSION OF AN OPENING IN CONSTRUCTION SHALL BE DONE AT THIS SECTION'S EXPENSE.

1.20 PAINTING AND IDENTIFICATION:

- THE FOLLOWING PROTECTIVE PAINTING AND IDENTIFICATION OF EQUIPMENT AND PIPING SHALL BE PROVIDED UNDER THIS DIVISION OF THE WORK, OTHER FINISH PAINTING SHALL BE PROVIDED UNDER THE "PAINTING" DIVISION OF THE PROJECT
- 1. FABRICATED EQUIPMENT AND ASSEMBLED UNITS SHALL BE FURNISHED WITH FACTORY APPLIED, PROTECTIVE, PRIME COAT PAINT OF FINISHED BAKED ENAMEL AS SPECIFIED HEREINBEFORE. EQUIPMENT SURFACES DAMAGED DURING THE COURSE OF CONSTRUCTION SHALL BE REFINISHED BY THE CONTRACTOR.
- 2. UNLESS SPECIFIED OTHERWISE IN DIVISION 9, "FINISHES", THIS DIVISION SHALL PAINT ALL PIPING, AND SUPPORTS WHICH ARE EXPOSED TO VIEW. PRIMING
- AND PAINTING SHALL BE AS SPECIFIED IN DIVISION 9, "FINISHES". 3. DETACHED MOTOR CONTROLLERS, DISCONNECTS, ETC., SHALL BE IDENTIFIED WITH MECHANICALLY FASTENED METAL OR PLASTIC PLATES WITH ETCHED LETTERS TO COMPLETELY IDENTIFY THE SERVICE OF THE ELECTRICAL

EQUIPMENT. ALL MECHANICAL PIPING SHALL BE CLEARLY IDENTIFIED WITH

4. ALL PLUMBING/FIRE PROTECTION EQUIPMENT SHALL BE CLEARLY MARKED WITH IDENTIFICATION.

STRAP-ON LABELS AND FLOW ARROWS.

1.21 TESTING:

- A. UPON COMPLETION OF WORK, ALL EQUIPMENT SHALL BE CLEANED AND ADJUSTED FOR PROPER OPERATION AND ANY DEFECTS DISCOVERED SHALL BE CORRECTED BEFORE FINAL INSPECTION PRIOR TO ACCEPTANCE.
- B. SOIL, WASTE, VENT AND CONDENSATE PIPING SHALL BE TESTED BY PLUGGING ALL OPENINGS AND TESTING IN 10 PSI SECTIONS WITH WATER. TEST SHALL BE MAINTAINED FOR NOT LESS THAN 15 MINUTES.
- THE DOMESTIC WATER SYSTEM SHALL BE DISINFECTED AS FOLLOWS: THE SYSTEM SHALL BE FILLED WITH A SOLUTION CONTAINING 100 PARTS PER MILLION OF AVAILABLE CHLORINE AND ALLOWED TO STAND 2 HOURS BEFORE FLUSHING AND RETURNING TO SERVICE.
- THE ABOVE TESTS SHALL BE MADE IN THE PRESENCE OF THE OWNER OR HIS AUTHORIZED REPRESENTATIVE. THE TEST RESULTS SHALL BE INCLUDED IN THE O&M MANUALS AS PART OF THE CLOSE-OUT DOCUMENTS.

1.22 ADJUSTMENTS:

A. UPON COMPLETION OF THE INSTALLATION OF ALL WORK AND EQUIPMENT, THE CONTRACTOR SHALL START ALL EQUIPMENT AND MAKE ALL NECESSARY ADJUSTMENTS TO PLACE ENTIRE SYSTEMS IN A SATISFACTORY CONDITION FOR CONTINUOUS SAFE OPERATION.

1.23 CONTRACTOR'S TEST AND BALANCE:

A. RECIRCULATING SYSTEM SHALL BE TESTED 1.24 CLEAN-UP:

A. KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY EMPLOYEES OR WORK UNDER THIS SECTION OF THE SPECIFICATIONS. AT THE COMPLETION OF THE WORK, REMOVE ALL SURPLUS MATERIALS, TOOLS, ETC., AND LEAVE THE PREMISES "BROOM-CLEAN".

1.25 OPERATING AND MAINTENANCE INSTRUCTIONS:

- FURNISH AND TURN OVER TO A/E THREE (3) COPIES OF OPERATION AND MAINTENANCE INSTRUCTIONS, TO INCLUDE:
- 1. COMPLETE SET OF APPROVED SUBMITTAL DATA ON INSTALLED EQUIPMENT, TO INCLUDE FINAL TEST AND BALANCE REPORT, AS BUILT TEMPERATURE CONTROL DIAGRAMS AND WIRING DIAGRAMS.
- 2. OPERATING INSTRUCTIONS ON ALL EQUIPMENT HAVING MOVING PARTS. TO INCLUDE LUBRICATING INSTRUCTIONS AND RECOMMENDED MAINTENANCE AND INSPECTION SCHEDULE.
- 3. PARTS LISTS ON ALL EQUIPMENT, ALONG WITH NAME, ADDRESS, AND TELEPHONE NUMBER OF SOURCE OF PURCHASE OR LOCAL REPRESENTATIVE.
- 4. COPIES OF ALL WARRANTIES OR GUARANTEES.
- 5. COPIES OF INSTALLATION INSTRUCTIONS WHEN FURNISHED WITH EQUIPMENT. INSTRUCTIONS SHALL BE IN HARD COVER BINDER WITH INDEX. INSERT IN ORDER AS

PART 2 PRODUCTS

2.1 MATERIALS AND EQUIPMENT:

- A. MATERIALS AND/OR EQUIPMENT INVOLVED IN THE SPECIFIED INSTALLATION SHALL BE OF THE BEST FOR THE PURPOSE INTENDED AND SHALL MEET WITH THE APPROVAL OF THE OWNER. THE OWNER RESERVES THE RIGHT TO REJECT ANY MATERIALS AND WORKMANSHIP NOT IN ACCORDANCE WITH THOSE SPECIFIED OR NOT MEETING WITH THE ENGINEER'S APPROVAL, EITHER BEFORE OR AFTER
- MATERIALS AND/OR EQUIPMENT SPECIFIED HEREIN TO BE OF A CERTAIN MANUFACTURE OR BRAND ARE USED AS A STANDARD AND MATERIALS AND/OR EQUIPMENT OF OTHER MANUFACTURE MAY BE SUBMITTED FOR SUBSTITUTION PROVIDED THAT THEY MEET OR EXCEED QUALITY AND ALL CAPACITIES SPECIFIED AND SPACE REQUIREMENTS SHOWN ON THE DRAWINGS.

2.2 PIPING MATERIALS

- A. PIPING MATERIALS SHALL BE AMERICAN MADE AND THE MANUFACTURER SHALL BE APPROVED BY THE ARCHITECT/ENGINEER. CERTIFICATION TO BE PROVIDED WHEN
- SOIL, WASTE, AND VENT PIPING AND FITTINGS INSIDE OF BUILDING BELOW GRADE SHALL BE STANDARD WEIGHT CAST IRON BELL AND SPIGOT DWV SOIL PIPE, COATED INSIDE AND OUT, CONFORMING TO THE LATEST ISSUE OF ASTM A-74. JOINTS FOR CAST IRON SOIL PIPE AND FITTINGS WITH HUBS AND PLAIN-END SPIGOTS SHALL BE MADE WITH POSITIVE DOUBLE SEAT ELECTROMETRIC COMPRESSION-TYPE GASKETS CONFORMING TO ASTM C564, LATEST ISSUE.
- C. SOIL, WASTE, AND VENT PIPING AND FITTINGS INSIDE OF BUILDING ABOVE GRADE SHALL BE CAST IRON HUMBLES DWV SOIL PIPE, MEETING THE CAST IRON PIPE INSTITUTE STANDARD 301-75 OR LATEST REVISION THEREOF, WITH CLAMP ASSEMBLY FOR HUBLESS PIPE MEETING CIPI 301 OR LATEST REVISION THERE OF AND SHALL BEAR THE REGISTERED INSIGNIA C.1.
- D. DOMESTIC WATER PIPING:
 - HOT AND COLD WATER PIPING SHALL BE TYPE "L" HARD DRAWN COPPER WITH WROUGHT COPPER FITTINGS ABOVE GROUND.
 - WATER LINES (TRAP PRIMER) INSTALLED UNDERGROUND SHALL BE TYPE "K" COPPER WITH NO JOINTS.
- E. CONDENSATE DRAIN PIPING:

1. CONDENSATE DRAIN PIPE SHALL BE TYPE "M" COPPER WITH DWV FITTINGS.

2.3 UNIONS:

- UNIONS FOR COPPER PIPE 2 INCH AND SMALLER SHALL BE WROUGHT COPPER ON THE COPPER SWEAT END AND RED CAST BRASS RING NUT AND THREAD PIECE. UNIONS 2 INCH AND SMALLER SHALL BE NIBCO NO. 633 OR EQUAL.
- UNIONS, 2 INCHES AND SMALLER SHALL BE OF MALLEABLE GROUND JOINT PATTERN WITH BRASS-TO-IRON SEAT. LARGER UNIONS SHALL BE OF CAST IRON, MALLEABLE IRON. OR FORGED STEEL OF FLANGE-AND-GASKET TYPE WITH RING OR FACE GASKET OF SUCH COMPOSITION AS WILL BE ENTIRELY SUITABLE FOR THE FLUID
- DIELECTRIC TYPE UNIONS SHALL BE PROVIDED AT JUNCTION OF PIPING OF DIFFERENT MATERIAL.

2.4 VALVES:

- VALVES SHALL BE OF A SINGLE MANUFACTURER INSOFAR AS APPLICABLE AND SHALL BE APPROVED STANDARD WEIGHT VALVES SUITABLE FOR A MINIMUM WORKING PRESSURE OF 125 PSI SWP OR PRESSURE OF PIPE SYSTEM USED ON WHICHEVER IS HIGHER. GATE, GLOBE AND BALL VALVE SHALL BE REPACKABLE WHILE OPEN AND UNDER PRESSURE. BALL VALVES SHALL HAVE BLOW OUT PROOF STEMS.
- B. BALL VALVES SHALL HAVE A 400 LB. WATER RATING, RING BALL DESIGN, CONVENTIONAL PORT, THREE PIECE CONSTRUCTION, AND ANTI BLOWOUT STEM, WITH SCREWED CONNECTIONS FOR STEEL PIPE AND SOLDER CONNECTIONS FOR
- COPPER PIPE, 2 1/2" AND SMALLER. CHECK VALVES 2 INCHES AND SMALLER SHALL HAVE BRONZE BODY WITH SOLDER OR SCREW-END CONNECTIONS AS APPLICABLE AND SHALL BE OF THE HORIZONTAL SWING CHECK TYPE WITH TEFLON DISKS. HANGER PINS SHALL BE SUPPORTED AT BOTH ENDS BY REMOVABLE SIDE PLUGS.
- D. BALL AND CHECK VALVES SHALL BE NIBCO, CRANE, MILWAUKEE, OR EQUAL AND SHALL BE INSTALLED AS RECOMMENDED BY VALVE MANUFACTURER. VALVES SHALL BE SIMILAR TO THE FOLLOWING:

BALL VALVES	CRANE	NIBCO	MILWAUKEE
2-1/2" & SMALLER		T-590 S-590	BA-300 BA-350
CHECK VALVES	27/T)		
2 INCH & SMALLER	37(T)	T-413-Y S-413-Y	508 507
SYSTEM DRAIN VALV	E 63		

HYDRANTS FOR INSTALLATION ON EXTERIOR WALLS SHALL BE NON-FREEZE TYPE WITH 3/4" HOSE CONNECTION, INTEGRAL VACUUM BREAKER, KEY OPERATED UNITS AS LISTED BELOW. COVER TO BE NICKEL BRASS WITH BRONZE CASING.

2.5 DRAINS:

FLOOR DRAINS SHALL BE AS MANUFACTURED BY JOSAM, WADE, OR ZURN, EQUAL TO DRAINS SPECIFIED BY WADE CATALOG NUMBERS ON PLAN. HYDRANTS, FLOOR DRAINS, AND CLEANOUTS SHALL BE OF SAME MANUFACTURER UNLESS NOTED

TEMPERATURE AND PRESSURE RELIEF VALVES SHALL BE "WATTS" OR EQUAL WITH SETTINGS AS REQUIRED BY LOCAL CODE AND/OR OTHER CODES HAVING JURISDICTION. FURNISH AS INDICATED OR AS REQUIRED.

2.6 T AND P RELIEF VALVES:

2.7 WATER HAMMER: SHOCK STOPS/ARRESTORS SHALL BE INSTALLED WHERE INDICATED ON THE D

DRAWINGS AND SHALL BE APPROVED BY PLUMBING DRAINAGE INSTITUTE (PDI). SEE

2.8 CLEANOUTS:

CAST IRON CLEANOUT

WADE W-8590-A

- CLEANOUTS SHALL BE PROVIDED IN WASTE AND DRAINAGE LINES WHERE INDICATED ON DRAWINGS AND/OR AS REQUIRED BY PLUMBING CODE. CLEANOUTS SHALL BE SIZED SAME AS FOR PIPE IN WHICH INSTALLED, EXCEPT NO CLEANOUT NEED BE
- B. CLEANOUTS FOR EXPOSED PIPING WHERE INSTALLED IN CAST IRON PIPING SHALL CONSIST OF RAISED HEAD CAST BRASS PLUG WITH CAULKING FERRULE AS LISTED
- WADE W-8550-A CLEANOUTS FOR EXPOSED PIPING WHERE INSTALLED IN TAPPED DRAINAGE FITTING, CLEANOUTS SHALL BE CAST BRASS RAISED-HEAD PLUG AS LISTED BELOW: TAPPED DRAINAGE CLEANOUT
- ACCESS COVERS FOR CLEANOUTS IN WALLS SHALL HAVE STAINLESS STEEL COVER ATTACHED TO PLUG WITH COUNTERSUNK PLATED BRASS SCREW AS LISTED BELOW. WALL CLEANOUTS
- WADE W-8470-R CLEANOUTS INSTALLED IN FLOOR SLABS SHALL HAVE SCORIATED POLISHED NICKEL PLATED FLUSH ACCESS COVER AND MATCHING FLANGE FOR FLUSH MOUNTING AS LISTED BELOW. ALL CLEANOUT CAPS TO BE WIPED WITH "KEY GREASE" FOR EASY
- FLOOR CLEANOUTS(CONCRETE) -WADE W-6000-NB FLOOR CLEANOUT(TILE) - WADE W-6000 S-NB FLOOR CLEANOUT(CARPET) - WADE W-6000-PB WITH NB-CM
- FOR INSTALLATION IN EXTERIOR PIPING, CLEANOUTS FLUSH WITH FINISH GRADE SHALL CONSIST OF CAST IRON ADJUSTABLE HEAD, SERRATED CUTOFF FERRULE BRASS COUNTER SUNK HEAD INTERNAL PLUG, HEAVY SCORIATED C.I. COVER WITH POLISHED BRONZE TOP MARKED "C.O." AS LISTED BELOW, INSTALLED IN CONCRETE PAD 12"x12"x9" DEEP, TOP OF PAD TO BE FLUSH WITH FINISH GRADE.

2.9 WATER HEATER:

A. REFER TO DRAWINGS FOR WATER HEATER MODEL NUMBER.

EXTERIOR CLEANOUTS - WADE W-6000Z

VERTICAL PIPING (ALONG WALLS)

2.10 HANGERS AND SUPPORTS:

NOT BE USED.

STRENGTH REQUIRED.

- PIPING SHALL BE HUNG FROM STRUCTURE BY ADJUSTABLE HANGERS, PER ANSI/MSS STANDARD SP-58, SP-69 AND SP-89, SPACED AS NOTED WITH ADDITIONAL SUPPORT FOR VALVES AND SPECIALTIES. OR AT JOINTS SO ADJUSTMENTS FOR PITCH CAN BE MADE AFTER INSTALLATION. REFERENCES ARE TO GRINNELL FIGURE NUMBERS.
- FERROUS PIPE (HORIZONTAL). a. 2 INCH AND SMALLER - GRINNELL FIG. 104 ADJUSTABLE SPLIT RINGS. b. OVER 2 INCH - GRINNELL FIG.260 STEEL CLEVIS. c. WHERE PIPES ARE GROUPED, USE OF "UNISTRUT" RACKS AND BRACKETS WILL BE PERMISSIBLE

COMPARABLE PRODUCTS OF F & S, ELCEN, MICHIGAN, OR B-LINE ARE ACCEPTABLE

- COPPER TUBING (HORIZONTAL) a. 1/2 INCH TO 6 INCH SIZE - GRINNELL FIG. 260 WITH FIG 81 INSULATION PROTECTORS, LENGTH AND GAUGE AS RECOMMENDED BY MANUFACTURER.
- b. COPPER TUBING: 1 INCH AND SMALLER ANCHOR MIDWAY BETWEEN FLOOR AND CEILING WITH GRINNELL FIG. CT-138R SPLIT RING EXTENSION. ROD SUSPENSION-SUSPEND HANGER RODS FROM SUPPORTS AS LISTED HEREIN. FIGURE NUMBERS USED REFER TO GRINNELL CATALOGS, COMPARABLE PRODUCTS

OF F & S, ELCEN, MICHIGAN OR B-LINE ARE ACCEPTABLE. WIRE FASTENINGS SHALL

a. STEEL: 1 INCH AND SMALLER - ANCHOR MIDWAY BETWEEN FLOOR AND

CEILING WITH GRINNELL FIG. 103 STEEL OFFSET PIPE CLAMPS.

1. STEEL BEAMS: FIG. 217, 218, 225 OR 227 BEAM CLAMPS 2. STEEL JOISTS: FIG. 64 CLAMP FASTEN TO TOP CHORD OF BAR JOIST WITH THREADED ROD AND HANGER WHEN PIPES PASS THROUGH BAR JOISTS. WHEN PARALLEL TO JOISTS PROVIDE AN ANGLE WELDED TO ADJACENT JOISTS FOR FASTENING OR HANGER ROD. 3. PIPE ALONG WALLS: FIG. 194 OR 195 WELDED STEEL BRACKETS, DEPENDENT ON

2.12 INSULATION:

A. DOMESTIC WATER PIPING:

- COLD WATER PIPING SHALL BE INSULATED WITH 1/2" THICK SECTIONAL PREFORMED 4.25 LB. DENSITY FIBERGLASS PIPE COVERING WITH FACTORY WHITE CREPE DRAFT JACKET WITH SELF-SEALING LAP. COLD WATER PIPING IN VENTILATED CHASES, INDIVIDUAL FIXTURE SUPPLIES, ETC., SHALL NOT BE INSULATED. FITTINGS ARE TO BE TREATED SAME AS PIPE COVERING. INSULATION SHALL BE CONTINUOUS ACROSS HANGER AND SUPPORTS. INSULATE AT FOLLOWING LOCATIONS:
- a. ALL PIPING ABOVE CEILING.
- HOT WATER AND HOT WATER RETURN PIPING SHALL BE INSULATED WITH 1" WITH FACTORY WHITE CREPED KRAFT JACKET WITH SELF-SEALING LAP. INSULATION SHALL BE CONTINUOUS ACROSS HANGER AND SUPPORTS. INSULATE AT FOLLOWING LOCATIONS:
- THICK SECTIONAL PREFORMED 4.25 LB DENSITY FIBERGLASS PIPE COVERING

a. ALL PIPING. PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS: REFER TO PART 1 GENERAL FOR:

8. ADJUSTMENTS

10. CLEAN-UP

1. COORDINATION 2. WORKMANSHIP, MATERIALS AND EQUIPMENT 3. MANUFACTURER'S RECOMMENDATIONS 4. PROTECTION OF WORK 5. UTILITY CONNECTIONS 6. PATCHING 7. PAINTING IDENTIFICATION

9. CONTRACTORS TEST AND BALANCE

3.2 VENT PIPE:

INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS TO COMPLY WITH NFPA-211 AND LOCAL CODE REQUIREMENTS. PROVIDE PROPER CLEARANCE FROM COMBUSTIBLES. USE VENTILATED THIMBLES AT FLOOR, ROOF, WALL, AND PARTITION PENETRATIONS

3.3 PIPING INSTALLATION:

A. FURNISH AND INSTALL ALL PIPING RELATED TO PLUMBING SYSTEM. ALL PIPING SHALL BE INSTALLED PARALLEL AND SQUARE WITH THE BUILDING LINES AND SHALL BE SLOPED TO PERMIT DRAINAGE. SUITABLE PROVISION FOR DRAINAGE AT ALL LOW POINTS SHALL BE PROVIDED. PIPING SHALL BE ARRANGED TO MAINTAIN HEADROOM AND KEEP PASSAGEWAYS CLEAR AND, WHERE NECESSARY, SHALL BE OFFSET TO MAINTAIN THE REQUIRED CLEARANCES AND CONFORM WITH THE STRUCTURAL FEATURES OF THE BUILDING. CONTRACTOR SHALL DETERMINE IN

ADVANCE OF CONSTRUCTION LOCATIONS FOR ALL PIPING, SLEEVES, HANGERS, ETC.

NO ALLOWANCE WILL BE MADE FOR "EXTRAS" DUE TO INACCURATE LOCATION OF

- SLEEVES, PIPING, OR EQUIPMENT. C. ALL PIPING SHALL HAVE PROVISIONS FOR EXPANSION AND CONTRACTION WITH
- ANCHORAGE AT EACH POINT SHOWN ON THE PLANS AND/OR AS REQUIRED. D. FULL LENGTH PIPE SHALL BE USED WHERE POSSIBLE, SHORT LENGTHS AND COUPLINGS WILL NOT BE PERMITTED. AFTER CUTTING, ALL PIPES SHALL BE REAMED OUT TO FULL BORE, AND BEFORE ERECTION, ALL CUTTINGS AND FOREIGN MATTER SHALL BE REMOVED FROM THE INSIDE OF PIPES. SCREWED JOINTS SHALL BE MADE TIGHT WITHOUT CAULKING OR THE USE OF LEAD OR PAINT, AND NO LUBRICANT
- SHALL BE USED EXCEPT TEFLON OR PASTE, APPLIED TO MALE THREADS ONLY. EVERY SECTION OF CAST IRON PIPE SHALL BE CHECKED FOR CRACKS. BELL LAND SPIGOT SHALL BE CLEAN BEFORE NEOPRENE IS INSTALLED AS RECOMMENDED BY MANUFACTURER OF PIPE WITH RECOMMENDED LUBRICANT. NO PIPING SHALL BE INSTALLED THAT DOES NOT COMPLY WITH LOCAL CODE.
- EVERY SECTION OF CAST IRON PIPE SHALL BE CHECKED FOR CRACKS. NEOPRENE SLEEVES, STAINLESS STEEL SHIELD AND CLAMP ASSEMBLY SHALL BE INSTALLED. AND SCREWS TIGHTENED TO TORQUE AS RECOMMENDED BY MANUFACTURER OF
- G. DOMESTIC WATER PIPING: TYPE "L" COPPER SHALL BE INSTALLED WITH "LEAD FREE" 95.5% TIN, 4.5% COPPER AND .5% SILVER SOLDER AND NON-CORROSIVE FLUX. TYPE "K" COPPER SHALL BE INSTALLED WITH "SIL-FOSS" BRAZING ALLOY WITH MELTING TEMPERATURE IN EXCESS OF 1100° F. CONTRACTOR SHALL MINIMIZE THE NUMBER OF FITTINGS BELOW GRADE. BURIED PIPE SHALL BE COATED WITH TWO COATS OF ASPHALTUM WITH GLASS CLOTH EMBEDDED AFTER FIRST
- CONDENSATE DRAIN PIPING SHALL HAVE "LEAD FREE" 95.5% TIN, 4.5% COPPER AND .5% SILVER SOLDERED JOINTS. CONTRACTOR SHALL PROVIDE ADAPTERS TO MATCH AIR CONDITIONING EQUIPMENT. DRAIN SHALL BE EXTENDED AND/OR COLLECTED
- BRANCH CONNECTIONS TO MAINS MAY BE MADE WITH THREADED OUTLETS OR WELDOLETS PROVIDED THE BRANCH LINE PIPE SIZE IS NO MORE THAN HALF THE SIZE OF THE MAIN.

AND ROUTED AS INDIRECT WASTE SYSTEM AS SHOWN ON DRAWING.

3.4 SLEEVES

- PIPES PASSING THROUGH WALLS, PARTITIONS, FLOORS OR ROOFS SHALL BE PROTECTED BY STEEL SLEEVES THROUGH FULL THICKNESS OF CONSTRUCTION. ALLOW 1/2 INCH CLEARANCE AROUND PIPE OR COVERING AND TERMINATE FLUSH WITH FINISH SURFACE EXCEPT IN ROOMS CONTAINING FLOOR DRAINS OR IN WATERPROOFED FLOORS. SLEEVES IN FLOORS WITH DRAINS SHALL TERMINATE 1-1/2 INCHES ABOVE THE FLOOR. SLEEVES IN WATERPROOFED SLABS SHALL EXTEND.
- SUFFICIENTLY SO WATERPROOFING CAN BE FLASHED AROUND THE SLEEVE. B. SLEEVES IN NON-BEARING PARTITIONS, OR NON-LOAD BEARING WALLS MAY BE 22 GAUGE SHEET STEEL OR HOLE-OUTS. IN BEARING WALLS, WATERPROOFED FLOORS,
- OR ROOFS, THEY SHALL BE SCHEDULE 40 STEEL PIPE WITH FINISHED ENDS. D. CAULK SLEEVES IN FLOOR WITH FIREPROOF MINERAL WOOL AND SEAL ENDS WITH FIREPRO OF CALKING COMPOUND TO SEAL SPACE BETWEEN PIPE OR COVERING, AND THE SLEEVE. SLEEVES IN ROOF SHALL BE FLASHED AND MADE WATERTIGHT. PACK SLEEVES PASSING THROUGH FIRE WALLS OR FIRE RATED FLOORS WITH FIREPROOF MINERAL WOOL AND SEAL ENDS WITH NON-HARDENING

SLEEVES SHALL BE INSTALLED AND SECURELY FASTENED IN THEIR PROPER

3.5 ESCUTCHEONS:

ROOMS".

FIREPROOF CALKING COMPOUND.

RESPONSIBLE FOR FINAL LOCATION.

PROVIDE CHROME PLATED METAL ESCUTCHEONS WITH FASTENING DEVICES ON ALL PIPES PASSING THROUGH FINISHED WALL SURFACES AND FINISHED CEILING SURFACES. PROVIDE WITH SET SCREWS. SPACES WHICH ARE PAINTED, PANELED OR HAVING OTHER DECORATIVE WALL FINISH SHALL BE CONSIDERED "FINISHED

POSITION BY EACH SPECIALTY CONTRACTOR FOR HIS OWN WORK, WHO SHALL BE

3.6 UNIONS:

- INSTALL UNIONS AT EACH CONNECTION OF SCREWED PIPING TO EQUIPMENT, AND AT VALVES, TRAPS, AND ACCESSORIES WHERE REQUIRED TO PERMIT DISCONNECTION OF PIPE AND REMOVAL OF EQUIPMENT, VALVES, ETC. WITHOUT DISASSEMBLY OF PIPING OTHER THAN BETWEEN UNION AND EQUIPMENT. IN WELDED PIPING, OR PIPING 2-1/2" AND LARGER FLANGED JOINTS OR FLANGED UNIONS SHALL
- UNIONS SHALL BE INSTALLED AT ALL PIECES OF EQUIPMENT REQUIRING REMOVAL FOR REPLACEMENT I.E. WATER HEATERS, BOOSTER HEATER, HEAT EXCHANGERS.

DIELECTRIC UNIONS OR FLANGES. 3.7 VALVES:

A SHUTOFF VALVE SHALL BE INSTALLED IN EACH CONNECTION TO EACH PIECE OF EQUIPMENT AND VALVES SHALL BE LOCATED SUCH THAT THE EQUIPMENT MAY BE SERVICED OR REMOVED AND REPLACED WITHOUT SHUTDOWN OF THE GENERAL PIPING SYSTEM. SHUTOFF VALVES SHALL ALSO BE INSTALLED IN BRANCH LINES TO

UNIONS BETWEEN PIPING OF DIFFERENT MATERIALS SHALL BE PROVIDED WITH

B. ALL VALVES DESIGNED FOR SOLDERING SHALL BE PROTECTED FROM HEAT AS RECOMMENDED BY MANUFACTURER TO PROTECT SEALS

C. NON-FREEZE HOSE BIBBS ON EXTERIOR WALL SHALL BE LOCATED 18" ABOVE

D. CHECK VALVES AND SPECIAL PURPOSE VALVES NECESSARY FOR PROPER SYSTEM

ALL TEMPERATURE AND PRESSURE RELIEF VALVES SHALL BE PIPED SAME SIZE AS

RISERS DROPPING IN WALLS, PARTITIONS, OR CHASES.

FUNCTIONING SHALL BE INSTALLED WHERE REQUIRED.

OPENING TO WITHIN 4" OF FLOOR.

3.8 DRAINS:

LOCATION OF ALL FLOOR DRAIN SHALL BE COORDINATE WITH ARCHITECT, STRUCTURAL FLOOR SLOPE AND EQUIPMENT SUPPLIED FOR THE PROJECT. 3.9 T & P RELIEF VALVES

3.10 VACUUM BREAKER:

A. VACUUM BREAKERS SHALL BE INSTALLED BETWEEN SHUT-OFF VALVE AND HOSE CONNECTION AND ABOVE SUPPLY BEING PROTECTED AS RECOMMENDED BY

3.11 WATER HAMMER

A. ALL SHOCK STOPS SHALL BE INSTALLED IN A VERTICAL POSITION. PIPE SIZE SHALL NOT HUBLESS THAN OPENING IN SHOCK STOPS.

3.12 CLEANOUTS:

WHERE REQUIRED FOR ADEQUATE SERVICE OF DRAINAGE SYSTEMS. CLEANOUTS SHALL BE INSTALLED PER CODE, AT BASE OF ALL STACKS, AND AT ALL CHANGES IN DIRECTION OF 45° OR MORE. B. CLEANOUTS REQUIRED OUTSIDE OF BUILDING SHALL BE INSTALLED WITH 12-INCH

CLEANOUTS SHALL BE INSTALLED WHERE SHOWN ON DRAWINGS AND ALL POINTS

- SQUARE BY 9" DEEP CONCRETE PAD AT GROUND SURFACE. SUCH CLEANOUTS SHALL HAVE COUNTERSUNK BRASS HEADS AND SHALL BE INSTALLED IN CAST IRON CLEANOUT FERRULE.
- WHERE CLEANOUTS ARE ON ACCESSIBLE PIPE CLEANOUT PLUGS SHALL BE RAISED

3.14 WATER HEATER:

A. IF FOR ANY REASON DRAWINGS REFLECT A DEVIATION FROM MANUFACTURER'S RECOMMENDATIONS FOR HIS EQUIPMENT, COORDINATION WITH THE ENGINEER IS R

3.15 VENT PIPING THROUGH ROOF:

A. EXTEND ALL VENT PIPING 12 INCHES ABOVE ROOF AND FLASH WITH FLASHING COLLAR EXTENDED MINIMUM DISTANCE OF 8" ON ALL SIDES OF RISER. COLLAR

3.16 CONNECTIONS OF MISCELLANEOUS EQUIPMENT

SHALL BE DESIGNED FOR TYPE OF ROOF.

A. THE FOLLOWING EQUIPMENT SHALL BE FURNISHED UNDER SEPARATE DIVISIONS. ROUGH-IN AND MAKE FINAL CONNECTIONS TO ALL EQUIPMENT, WITH CUTOFF VALVES AS REQUIRED FOR A COMPLETE AND SATISFACTORY INSTALLATION.

1. DISPOSALS 2. ICE MACHINES/MAKERS

- 3.17 HANGERS AND SUPPORTS: A. FURNISH ALL MATERIALS REQUIRED FOR THE PROPER SUPPORT OF EQUIPMENT AND PIPING INSTALLED HEREIN. EACH HANGER SHALL BE SUITABLE TO MEET THE STRUCTURAL, TEMPERATURE, PIPE MATERIAL AND EXPANSION CONDITIONS ENCOUNTERED. SELECTION AND APPLICATION SHALL BE IN ACCORDANCE WITH
- CLAMPS, INSERTS, BOLTS, CHANNEL AND ANGLE IRON, RACKS, ROLLERS, ETC. SHALL BE FURNISHED FOR PIPING AND EQUIPMENT SUPPORTS AS REQUIRED. ALL HANGER AND SUPPORT COMPONENTS SHALL BE ADEQUATE FOR THE LOADS
- C. VERTICAL PIPING SHALL BE SUPPORTED WITH RISER CLAMPS OR OTHER SATISFACTORY MEANS AS DICTATED BY THE PARTICULAR SITUATION AND AS
- SUPPORTED WITH CONCRETE BASE SUPPORT. D. EQUIPMENT SHALL BE SUPPORTED ADEQUATELY WITH ALL BRACING, FOUNDATIONS,

RECOMMENDED BY THE HANGER MANUFACTURER. SPECIAL SITUATIONS SHALL BE

TAKEN CARE OF AS DICTATED BY GOOD PRACTICE. BASE OF EACH STACK SHALL BE

ANGLES, CHANNELS, HANGERS, ETC. SPECIALLY DESIGNED HANGERS SHALL BE FABRICATED AND INSTALLED PER

ANSI/MSS SP-89. 3.18 EXPANSION AND CONTRACTION:

ALL PIPING SHALL BE INSTALLED SO AS TO BE FREE FROM STRESS, STRAINS AND DISTORTIONS BY EXPANSION OR CONTRACTION. EXPANSION AND CONTRACTION SHALL BE TAKEN UP BY OFFSETS IN PIPING WITH REQUIRED ANCHORS, EXPANSION LOOPS AND JOINTS, ETC., ALL TO MEET WITH GOOD ACCEPTED PRACTICES. WHETHER SPECIFICALLY INDICATED OR NOT. INSTALL ANCHORS OF SUITABLE DESIGN AND ADEQUATE STRENGTH FOR GUIDANCE OF PIPING SUBJECTED TO EXPANSION AND CONTRACTION DUE TO TEMPERATURE CHANGES. ANCHORS SHALL BE SECURELY ATTACHED TO THE BUILDING FRAME.

A. HANGER LOCATIONS FOR GENERAL SERVICE STEEL AND COPPER PIPING SHALL NOT

MAXIMUM SPACING

3.19 HANGER LOCATIONS:

EXCEED A DISTANCE OF 2 FEET 6 INCH FROM A POINT OF CHANGE IN PIPING DIRECTION AND SHALL BE SPACED IN ACCORDANCE WITH THE FOLLOWING 1. INSULATED PIPE WITH VAPOR JACKET:

STEEL PIPE COPPER PIPE 1" AND SMALLER 1-1/4" TO 2-1/2" 3" AND LARGER 2. UNINSULATED PIPE: STEEL PIPE COPPER PIPE WATER VAPOR WATER VAPOR SERVICE SERVICE SERVICE 1/2" AND SMALLER

ADDITIONAL SUPPORTS SHALL BE PROVIDED AT ALL CHANGES OF DIRECTION AND FOR CONCENTRATED LOADS SUCH AS VALVES.

3. CAST IRON SOIL PIPE 10 FT. O.C. MAXIMUM, WITH ONE HANGER ADJACENT TO

HANGERS SHALL BE SUSPENDED FROM MILD STEEL RODS SIZED IN ACCORDANCE

HUB ON EACH PIPE SECTION, EACH CHANGE OF DIRECTION AND EACH BRANCH 4. FOR CEMENT, GLASS, PLASTIC, OR FIBER REINFORCED PLASTIC PIPE FOLLOW THE MANUFACTURER'S RECOMMENDATIONS.

ROD DIAMETER (INCHES) PIPE SIZE (INCHES) 2 OR SMALLER 2-1/2 TO 3 PIPE COVERING SHALL BE CONTINUOUS ACROSS HANGERS AND SUPPORTS AND SHALL BE PROTECTED AT E TRANSMIT THE LOAD OF THE PIPE LINE THROUGH THE

INSULATION TO THE SUPPORTING UNIT. PROTECTION SHIELDS SHALL BE FULL

CIRCUMFERENCE OF PIPE INSULATION WHERE PIPING IS CLAMPED TO UNISTRUT TRAPEZE PROTECTION SHIELDS SHALL NOT BE LESS THAN THE FOLLOWING LENGTHS: LENGTH (INCHES) METAL GAUGE PIPE SIZE (INCHES)

3.20 INSULATION:

1/2 TO 3

1-1/4" 1-1/2"

2-1/2"

WITH THE FOLLOWING TABLE:

A. PIPE COVERINGS: WATER PIPING SHALL NOT BE INSTALLED IN AREAS SUBJECT TO FREEZING WITHOUT ADEQUATE INSULATION AND HEAT CABLE AS REQUIRED.

- INSULATION SHALL BE APPLIED OVER CLEAN DRY PIPE SURFACES AFTER PIPING HAS BEEN TESTED AND PROVEN TIGHT, FITTINGS, VALVE BODIES, ETC., SHALL BE INSULATED WITH FACTORY MOLDED COVERING, OR MOLDED BY HAND WITH SUITABLE INSULATING MATERIAL AND BINDER SAME THICKNESS AS ADJOINING PIPE COVERING. BLANKET INSULATION WITH PVC FITTINGS COVERS ARE NOT ACCEPTABLE. OMIT INSULATION AT UNIONS AND FLANGES AND AT THESE POINTS BEVEL INSULATION NEATLY AND FINISH AS SPECIFIED FOR FITTINGS, ALL INSULATIONS BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, ALL INSULATION ON PIPING SHALL BE PROTECTED BY METAL SHIELDS AT ALL HANGERS AND INSULATION SHALL BE CONTINUOUS ACROSS HANGERS AND SLEEVES. SIZE ALL HANGERS AND SLEEVES ACCORDINGLY.
- PIPE COVERINGS SHALL BE PROTECTED AT EACH SUPPORTING UNIT. ENDS OF INSULATION AT UNIONS, ETC., SHALL BE BEVELED AND SEALED WITH
- A. UPON COMPLETION OF THE PROJECT, DELIVER TO THE ARCHITECT REPRODUCIBLE TRACING OR MYLARS SHOWING THE ACTUAL INSTALLED LOCATIONS, DEPTHS AND SIZES OF ALL UNDERGROUND PIPING.

WHITE VAPOR SEAL COATING REGARDLESS OF TEMPERATURE.

MAKE ALL NECESSARY MEASUREMENTS OF THE ACTUAL INSTALLED LOCATIONS OF THE UNDERGROUND PIPING AS THE WORK PROGRESSES AND KEEP ACCURATE RECORDS OF THESE FIELD MEASUREMENTS. SHOW LOCATIONS BY DIMENSION FROM PERMANENT, READILY IDENTIFIABLE REFERENCE POINTS SUCH AS BUILDING WALLS. COLUMNS, CURBS, DRIVES, ETC., AND SHOW APPROXIMATE DEPTH BELOW FINISHED FLOORS OR FINISHED GRADES. THE CONTRACTOR SHALL PAY FOR ALL DRAFTING

*** END OF SPECIFICATION ***

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DESCRIPTION

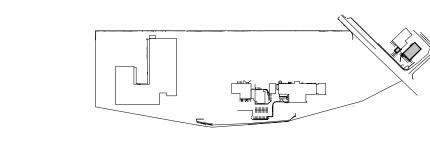
1370 LEVEE RD. MEMPHIS, TN. 38108 1364 N WATKINS

MATA HEADQUARTERS

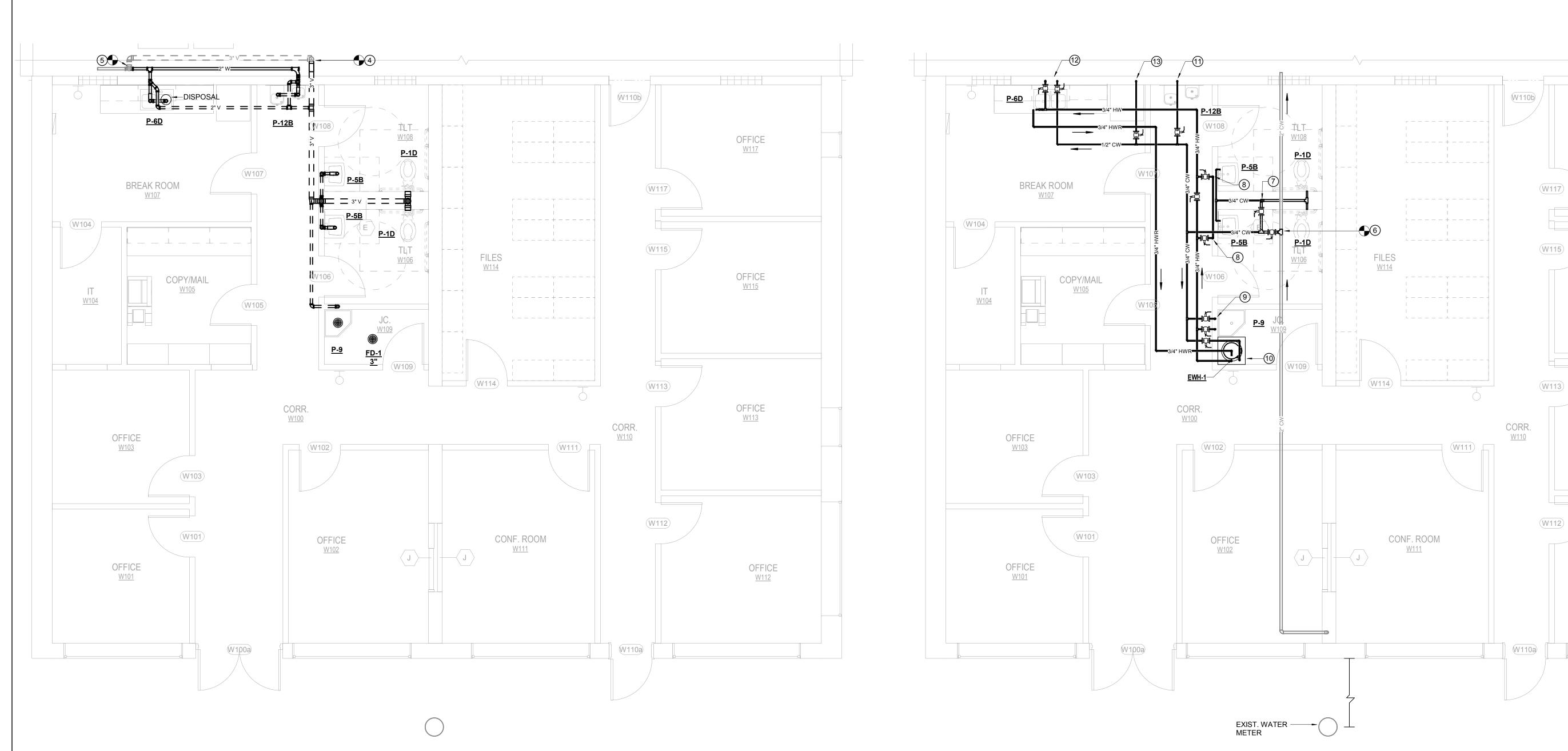
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SHEET GENERAL NOTES

A. SEE SHEET P001 FOR GENERAL NOTES, SCHEDULES AND LEGEND AND INDEX.

B. SAW CUT AND BREAK OUT EXISTING CONCRETE FLOOR/ CORE DRILL EXISTING WALL FOR INSTALLATION OF NEW WASTE/VENT/WATER PIPING. REPAIR FLOOR AND WALLS AS REQUIRED. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR NEW FLOOR AND FINISH. SEE TYPICAL TRENCH REPAIR WHERE APPLICABLE. /

SHEET KEYED NOTES

 CONNECT NEW WASTE PIPING TO EXIST. THIS APPROX.
 LOCATION. VERIFY EXACT LOCATION, SIZE AND ELEVATION PRIOR TO CONSTRUCTION.

(2) EXISTING W/V UP

OFFICE

W117

OFFICE

W115

OFFICE

W113

(3) 3" W. UP TO FIXTURE.

(4) CONNECT NEW 3" V. TO EXIST. OR PROVIDE NEW 3" VTR. VERIFY EXACT LOCATION AND ARRANGEMENT AS REQUIRED PRIOR TO CONSTRUCTION.

(5) CONNECT TO EXIST 3" W. THIS AREA.. VERIFY EXACT LOCATION AND ARRANGEMENT AS REQUIRED PRIOR TO CONSTRUCTION.

(6) CONNECT TO EXIST 2" CW. THIS AREA.. VERIFY EXACT LOCATION, SIZE AND ARRANGEMENT AS REQUIRED PRIOR TO CONSTRUCTION.

(7) 1 1/2" CW DN. TO FIXTURES. 8 3/4" HW LOOP UP/DN. SEE DIAGRAM 6

(9) 1/2" HW & CW DN. TO FIXTURE.

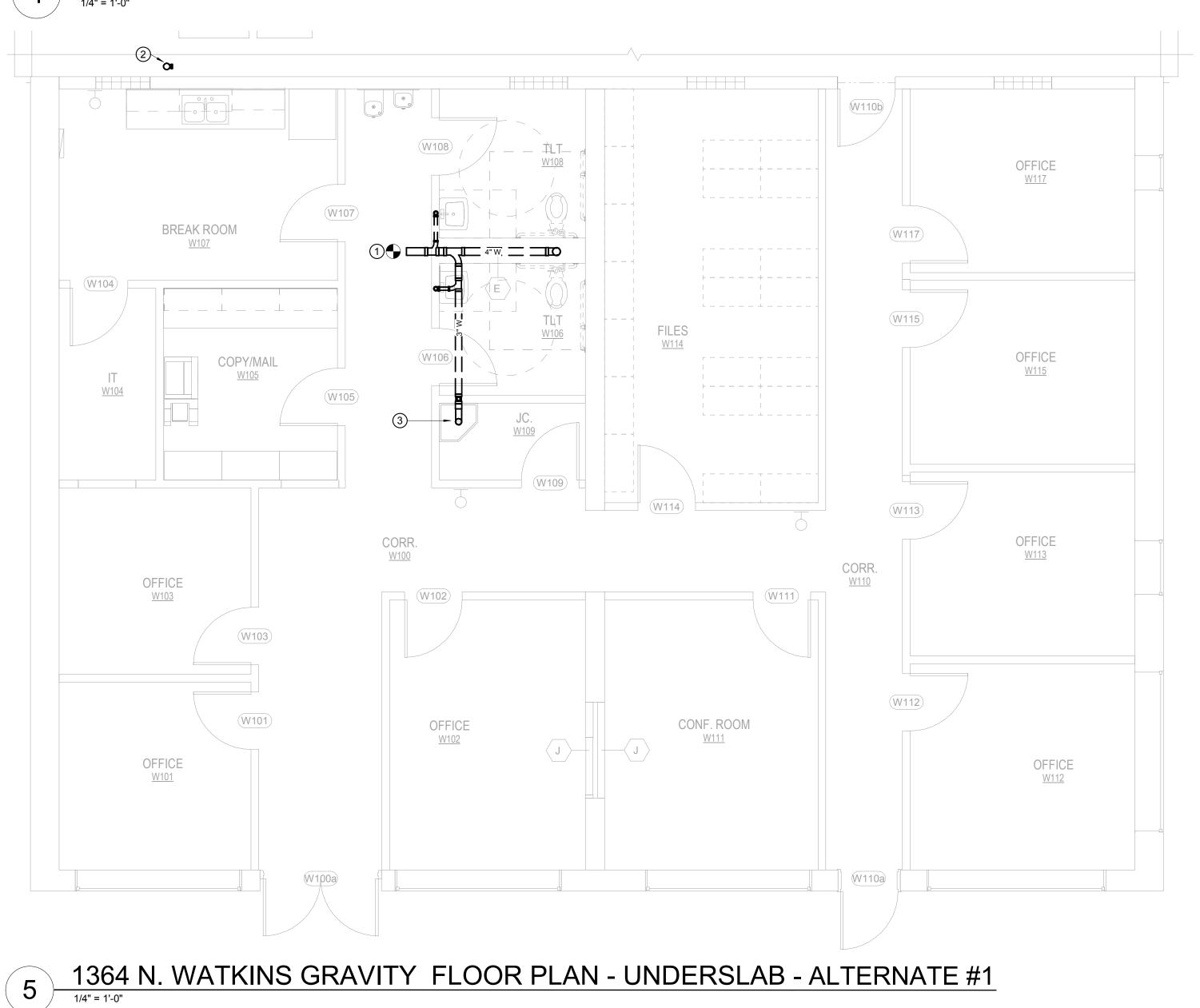
(10) 3/4" CW, HW & 3/4" HWR TO WATER HEATER. SEE DETAIL

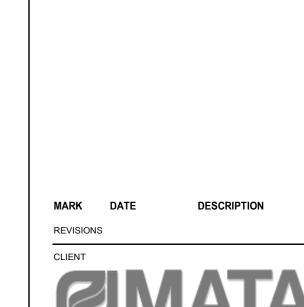
(11) 1/2" CW DN. TO FIXTURE.

(12) 1/2" HW & CW DN. TO FIXTURE.

(13) 1/2" CW DN. TO ICE MAKER. PROVIDE BACKFLOW PREVENTER AS REQUIRED.

1364 N. WATKINS PRESSURE PIPING FLOOR PLAN





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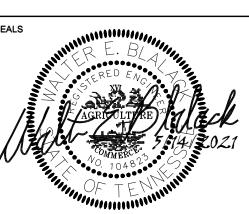
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N. WATKINS OFFICE PLUMBING FLOOR PLAN AND RCP

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CONSTRUCTION DOCUMENTS

P121

1364 N. WATKINS GRAVITY FLOOR PLAN



SSR Smith Seckman Reid, Inc.

MARK DATE DESCRIPTION
REVISIONS

CLIENT

MEMPHIS AREA TRANSIT AUTHORITY

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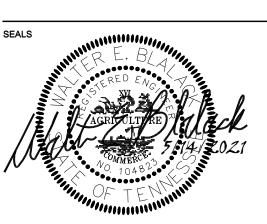
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WING TITLE

PLUMBING DETAILS

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PLUMBING DETAILS



SHEET ID
CONSTRUCTION DOCUMENTS

P501

	LEGEND (NOT ALL SYMBOLS MAY BE USED)
SYMBOL	DESCRIPTION MAY BE USED)
- STMBOL	LIGHTING
<u>XX</u> 1	LIGHTING FIXTURE ANNOTATIONS (LOCATION OF DESIGNATORS MAY VARY)
[x]	FIXTURE TYPE: XX CIRCUIT NUMBER: 1 CONTROL DESIGNATION: [x]
00	SURFACE, SUSPENDED, OR RECESSED LUMINAIRES
	(TYPE DETERMINES MOUNTING)
0	RECESSED OR SURFACE DOWNLIGHT LUMINAIRE
<u></u>	PENDANT MOUNTED LUMINAIRE
	WALLWASH LUMINAIRE WALL MOUNTED LUMINAIRES
	NO SHADING INDICATES CONNECTION TO NORMAL BRANCH CIRCUIT
	SHADING INDICATES CONNECTION TO LIFE SAFETY OR EMERGENCY BRANCH CIRCUIT
◆ ⊗	ILLUMINATED EXIT SIGNS, PROVIDE DIRECTIONAL ARROWS AND MOUNTING AS INDICATED ON PLANS
\	BATTERY POWERED EMERGENCY LIGHT
$\nabla \nabla \nabla$	TRACK LIGHTING
•	POLE MOUNTED SITE LIGHTING LUMINAIRES
	GROUND OR POLE MOUNTED FLOODLIGHT
<u> </u>	FAA SPECIALTY LIGHTING (TYPE DETERMINES MOUNTING)
11	RECEPTACLES 11 = CIRCUIT NUMBER (TYPICAL)
⊕ 11	DUPLEX RECEPTACLE - STANDARD MOUNTING HEIGHT XX= RECEPTACLE DESIGNATOR (TYPICAL) DUPLEX RECEPTACLE - ABOVE COUNTER OR SPECIAL MOUNTING HEIGHT
—— —	DOUBLE-DUPLEX RECEPTACLE
₩-	DOUBLE-DUPLEX RECEPTACLE - ABOVE COUNTER OR SPECIAL MOUNTING HEIGHT
—— <u>"</u>	DUPLEX GFCI RECEPTACLE
=	DUPLEX GFCI RECEPTACLE - ABOVE COUNTER OR SPECIAL MOUNTING HEIGHT
=	SWITCHED DUPLEX RECEPTACLE - STANDARD MOUNTING HEIGHT
=	DUPLEX RECEPTACLE, EMERGENCY POWER - STANDARD MOUNTING HEIGHT
÷	DUPLEX RECEPTACLE, EMERGENCY POWER - ABOVE COUNTER OR SPECIAL MOUNTING HEIGHT
+	DOUBLE-DUPLEX RECEPTACLE, EMERGENCY POWER - STANDARD MOUNTING HEIGHT
—	DOUBLE-DUPLEX RECEPTACLE, EMERGENCY POWER - ABOVE COUNTER OR SPECIAL MOUNTING HEIGHT DUPLEX GFCI RECEPTACLE, EMERGENCY POWER -
•	STANDARD MOUNTING HEIGHT DUPLEX GFCI RECEPTACLE, EMERGENCY POWER -
⊕ ⊗-	ABOVE COUNTER OR SPECIAL MOUNTING HEIGHT SPECIAL CONFIGURATION RECEPTACLE (TYPE AS NOTED)
⊕	SPECIAL CONFIGURATION RECEPTACLE, EMERGENCY POWER (TYPE AS NOTED)
⊚ ^{XX}	FLOOR BOX / POKE-THRU XX - DEVICE TYPE
© XX	FLOOR BOX / POKE-THRU, EMERGENCY POWER XX - DEVICE TYPE
	PLUGMOLD OR RACEWAY WITH RECEPTACLES AS NOTED
	SWITCHES AND LIGHTING CONTROLS
S	SINGLE POLE SWITCH
S ₂	DOUBLE POLE, SINGLE THROW SWITCH
S₃	THREE-WAY SWITCH FOUR-WAY SWITCH
S ₄ Sk	SINGLE POLE SWITCH - KEY OPERATED
S _D	DIMMER SWITCH
Slv	LOW VOLTAGE SWITCH
Sp	SINGLE POLE SWITCH WITH PILOT LIGHT
Soc	OCCUPANCY SENSOR SWITCH, WALL MOUNT
S _{VD}	VACANCY DIMMER
S_{VC}	VACANCY SENSOR SWITCH
S _M	MOTOR RATED SWITCH WITH THERMAL OVERLOAD
S _T	TIMER SWITCH
Sv	VARIABLE INTENSITY SWITCH
S _J	JOG SWITCH CIRCUIT BREAKER
S _{CB}	PHOTOCELL - CEILING / WALL MOUNT
<u></u>	OCCUPANCY SENSOR - CEILING / WALL MOUNT
© H3	DAYLIGHT SENSOR - CEILING / WALL MOUNT
	VACANCY SENSOR - CEILING / WALL MOUNT
	CIRCUITS AND RACEWAYS
	BRANCH CIRCUIT OR RACEWAY CONCEALED OR EXPOSED
	BRANCH CIRCUIT OR RACEWAY BELOW OR IN FLOOR SLAB OR BELOW GRADE
0	CONDUIT OR RACEWAY TURNING UP
•	CONDUIT OR RACEWAY TURNING DOWN
<u></u>	CAPPED CONDUIT OR RACEWAY
<u></u>	CIRCUIT OR CONDUIT CONTINUATION HOMEDIAN TO DANIEL BOARD, NUMBER OF ARROWHEADS INDICATES
	HOMERUN TO PANELBOARD - NUMBER OF ARROWHEADS INDICATES QUANTITY OF CIRCUITS. REFER TO SPECIFICATIONS FOR MINIMUM CONDUIT SIZES.
	NOTES: 1. ALL BRANCH CIRCUITS SHALL BE #12 AWG MINIMUM. REFER TO THE
PARTY. *	SPECIFICATIONS FOR UPSIZING REQUIREMENTS DUE TO VOLTAGE DROP OR OTHER PURPOSES.
PARTIAL CIRCUIT	2. ALL BRANCH CIRCUITS SHALL CONTAIN A SEPARATE GREEN INSULATED GROUNDING CONDUCTOR, #12 AWG MINIMUM, OR OTHERWISE AS NOTED.
	OTHERWISE AS NOTED. 3. ALL 120V AND 277V BRANCH CIRCUITS SHALL UTILIZE A SEPARATE
	DEDICATED NEUTRAL UNLESS OTHERWISE NOTED.

	LEGEND (NOT ALL SYMBOLS MAY BE USED)
SYMBOL	DESCRIPTION
	FIRE ALARM
	FIRE ALARM VISUAL DEVICE - STROBE ONLY
\otimes	FIRE ALARM CEILING MOUNT VISUAL DEVICE - STROBE ONLY
	FIRE ALARM AUDIO DEVICE
	FIRE ALARM AUDIO DEVICE WITH STROBE
	FIRE ALARM HORN
	FIRE ALARM HORN WITH STROBE
⊗⊲	FIRE ALARM CEILING MOUNT HORN WITH STROBE
<u></u>	FIRE ALARM CEILING MOUNT AUDIO DEVICE WITH STROBE
FS	FIRE ALARM CEILING MOUNT SPEAKER
F	FIRE ALARM MANUAL PULL STATION
®xx	FIRE ALARM SMOKE DETECTOR NO SUBSCRIPT= IONIZATION TYPE; P= PHOTOELECTRIC; SS= SINGLE STATION SMOKE ALARM
\bigoplus	FIRE ALARM HEAT DETECTOR SUBSCRIPT AS FOLLOWS: R=RATE OF RISE; T=FIXED TEMPERATURE
SD	FIRE ALARM DUCT SMOKE DETECTOR
0	GAS DETECTOR
\Diamond	FLAME DETECTOR
HBD _X	BEAM DETECTOR SUBSCRIPT AS FOLLOWS: T=TRANSMITTER; R=RECEIVER
<€M>	FIRE ALARM CONTROL MODULE
⋘	FIRE ALARM MONITOR MODULE
₹M>	FIRE ALARM RELAY MODULE
FS	FLOW SWITCH
TS	TAMPER SWITCH
∢ F	FIREFIGHTER'S TELEPHONE JACK
	MAGNETIC DOOR HOLDER
RI	SMOKE DETECTOR REMOTE INDICATOR / TEST SWITCH
FACP	FIRE ALARM CONTROL PANEL
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FEP	FIRE ALARM EXTENDER PANEL
SCPP	SMOKE CONTROL AND PRESSURE PANEL
	MISCELLANEOUS
	NON-FUSIBLE SAFETY SWITCH, SIZE AS NOTED (AMP RATING/POLES)
4	FUSIBLE SAFETY SWITCH, SIZE AS NOTED (AMP RATING/POLES/FUSE SIZE)
4⊠	COMBINATION MOTOR STARTER/SAFETY SWITCH
	FACTORY WIRED CONTROLLER OR EQUIPMENT
/X/	MOTOR CONNECTION
	DUCT HEATER CONNECTION
<u> </u>	JUNCTION BOX
	PANELBOARD
©	CLOCK, SINGLE FACE - CLOCK AND RECEPTACLE AS SPECIFIED
© 2	CLOCK, DOUBLE FACE - CLOCK AND RECEPTACLE AS SPECIFIED
C2 BAS	CLOCK, DOUBLE FACE - CLOCK AND RECEPTACLE AS SPECIFIED BUILDING AUTOMATION SYSTEM CONTROL PANEL
BAS	BUILDING AUTOMATION SYSTEM CONTROL PANEL
BAS	BUILDING AUTOMATION SYSTEM CONTROL PANEL SECURITY SYSTEM CONTROL PANEL
BAS SP	BUILDING AUTOMATION SYSTEM CONTROL PANEL SECURITY SYSTEM CONTROL PANEL DOOR SWITCH MOUNTED IN DOOR JAMB
BAS SP DC DR	BUILDING AUTOMATION SYSTEM CONTROL PANEL SECURITY SYSTEM CONTROL PANEL DOOR SWITCH MOUNTED IN DOOR JAMB DOOR RELEASE PUSH BUTTON
BAS SP DC DR CR	BUILDING AUTOMATION SYSTEM CONTROL PANEL SECURITY SYSTEM CONTROL PANEL DOOR SWITCH MOUNTED IN DOOR JAMB DOOR RELEASE PUSH BUTTON CARD READER
BAS SP DC DR CR KP	BUILDING AUTOMATION SYSTEM CONTROL PANEL SECURITY SYSTEM CONTROL PANEL DOOR SWITCH MOUNTED IN DOOR JAMB DOOR RELEASE PUSH BUTTON CARD READER ELECTRONIC KEY PAD
BAS SP DC DR CR KP	BUILDING AUTOMATION SYSTEM CONTROL PANEL SECURITY SYSTEM CONTROL PANEL DOOR SWITCH MOUNTED IN DOOR JAMB DOOR RELEASE PUSH BUTTON CARD READER ELECTRONIC KEY PAD PUSH BUTTON STATION
BAS SP DC DR CR KP VFD	BUILDING AUTOMATION SYSTEM CONTROL PANEL SECURITY SYSTEM CONTROL PANEL DOOR SWITCH MOUNTED IN DOOR JAMB DOOR RELEASE PUSH BUTTON CARD READER ELECTRONIC KEY PAD PUSH BUTTON STATION VARIABLE FREQUENCY DRIVE
BAS SP DC DR CR KP VFD P	BUILDING AUTOMATION SYSTEM CONTROL PANEL SECURITY SYSTEM CONTROL PANEL DOOR SWITCH MOUNTED IN DOOR JAMB DOOR RELEASE PUSH BUTTON CARD READER ELECTRONIC KEY PAD PUSH BUTTON STATION VARIABLE FREQUENCY DRIVE PUSH PLATE (DOOR OPERATOR)
BAS SP DC DR CR KP VFD P	BUILDING AUTOMATION SYSTEM CONTROL PANEL SECURITY SYSTEM CONTROL PANEL DOOR SWITCH MOUNTED IN DOOR JAMB DOOR RELEASE PUSH BUTTON CARD READER ELECTRONIC KEY PAD PUSH BUTTON STATION VARIABLE FREQUENCY DRIVE PUSH PLATE (DOOR OPERATOR) SPECIALTY EQUIPMENT TAG

	LEGEND	MAY BE USED)
SYMBOL	DESCRIPTION	
	ABBREVIATIONS	
ABC	ABOVE COUNTER	
ADO	AUTOMATIC DOOR OPENER	
AFCI	ARC FAULT CIRCUIT INTERRUPTER	
AFF	ABOVE FINISHED FLOOR	
AFG	ABOVE FINISHED GRADE	
CLG	CEILING	
COF	COFFEE MACHINE	
COP	COPIER	
CR	CONTROLLED RECEPTACLE	
CS	CONTROLLED RECEPTACLE - SPLIT WIRED	
DC	DIGITAL CLOCK	
DW	DISHWASHER	
Е	EMERGENCY POWER	
EPO	EMERGENCY POWER OFF	
EV	ELECTRICAL VEHICLE CHARGING STATION	
EWB	ELECTRONIC WHITE BOARD	
EWC	ELECTRIC WATER COOLER	
FBO	FURNISHED BY OTHERS	
FLR	FLOOR MOUNTED	
FSD	FIRE/SMOKE DAMPER	
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	
ICE	ICE MACHINE/MAKER	
IG	ISOLATED GROUND	
MW	MICROWAVE	
PC	PERSONAL COMPUTER WORKSTATION	
PR	PRINTER	
PT	PNEUMATIC TUBE	
RF	REFRIGERATOR	
TC	TIME CLOCK	
TR	TAMPER RESISTANT	
TV	TELEVISION	
URF	UNDERCOUNTER REFRIGERATOR	
USB	RECEPTACLE WITH USB OUTLET(S)	
USBX	USB ONLY (X) = NUMBER OF USB OUTLETS	
VFD	VARIABLE FREQUENCY DRIVE	
VM	VENDING MACHINE	
WP	WEATHERPROOF	

	SHEET INDEX
NUMBER	SHEET NAME
E001	ELECTRICAL LEGENDS AND NOTES
E002	ELECTRICAL SPECIFICATIONS
E121	N. WATKINS OFFICE ELECTRICAL FLOOR PLANS, LIGHTING, POWER & SYSTEMS
E501	ELECTRICAL DETAILS & SCHEDULES



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K DATE DESCRIPTION

MEMPHIS AREA TRANSIT AUTHOR

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PROJECT NAME

1364 N WATKINS

PACKAGE 1 -

RENOVATION

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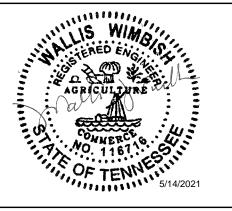
DRAWING TITLE

ELECTRICAL LEGENDS AND NOTES

NOTES

SEALS

WINDS



Project Number 05.14.2021 1/8" = 1'-0" brg3s

SCOPE

- A. INCLUDES THE FURNISHING OF ALL LABOR, SUPERVISION, MATERIALS, EQUIPMENT. TOOLS, ETC., REQUIRED FOR THE ELECTRICAL SYSTEMS AS SHOWN AND DESCRIBED IN THESE DRAWINGS.
- B. THE WORK SHALL INCLUDE, BUT IS NOT NECESSARILY LIMITED TO, THE FOLLOWING:
- RACEWAYS.
- BUILDING WIRE AND CABLE.
- 3. WIRING DEVICES.
- 4. ELECTRICAL BOXES AND FITTINGS. 5. CIRCUIT AND MOTOR DISCONNECTS.
- SUPPORTING DEVICES.
- SEISMIC RESTRAINTS.
- 8. ELECTRICAL IDENTIFICATION. GROUNDING.

10. LIGHTING.

RELATED WORK

- A. THE FOLLOWING WORK RELATED TO THE ELECTRICAL WORK.
- 1. HEATING, VENTILATING, AIR CONDITIONING AND PLUMBING EQUIPMENT, INCLUDING MOTORS, MOTOR STARTERS AND CONTROL EQUIPMENT WILL BE FURNISHED AND INSTALLED UNDER DIVISION 15.
- 2. PAINTING, EXCEPT REPAIR OF FACTORY APPLIED FINISHES ON ELECTRICAL EQUIPMENT.
- RADIOGRAPHY SYSTEMS

CODES AND PERMITS

A. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2017 EDITION OF THE NATIONAL ELECTRICAL CODE. AND THE LATEST EDITION OF ALL LOCAL OR STATE CODES, LAWS, AND ORDINANCES.

DEMOLITION

- A. EXISTING ELECTRICAL WIRING RACEWAYS, JUNCTION BOXES, FIXTURES AND DEVICES WHICH ARE TO REMAIN BUT CONFLICT WITH NEW CONSTRUCTION SHALL BE REMOVED, RELOCATED AND REINSTALLED AS REQUIRED TO ACCOMMODATE NEW CONSTRUCTION.
- B. EXISTING RACEWAY AND JUNCTION BOXES WHICH WILL NOT BE REUSED MAY REMAIN IN PLACE PROVIDED THAT THEY DO NOT CONFLICT WITH NEW CONSTRUCTION. EXISTING CONDUCTORS IN SUCH RACEWAYS SHALL BE REMOVED BACK TO THE NEAREST "LIVE" JUNCTION BOX.
- ELECTRICAL EQUIPMENT WHICH WILL NOT BE REUSED SHALL BE TURNED OVER TO THE OWNER OR REMOVED FROM THE PREMISES AS DETERMINED BY THE PROJECT

TRADE NAMES AND EQUALS

- MANUFACTURER'S TRADE NAMES OR CATALOG NUMBERS USED IN THESE SPECIFICATIONS AND INDICATED ON THE DRAWINGS DENOTE TYPE, SIZE, QUALITY. AND DESIGN OF EQUIPMENT REQUIRED.
- B. WHERE EQUIPMENT IS SPECIFIED AS "EQUAL", OR "APPROVED EQUAL", IT SHALL MEAN EQUAL IN THE OPINION OF THE ENGINEER. THIS CONTRACTOR IS FREE TO OFFER SUBSTITUTIONS FOR CONSIDERATION AS EQUAL AFTER THE CONTRACT IS SIGNED: HOWEVER, BUT SHALL BE PREPARED TO FURNISH SPECIFIED MATERIALS WHERE SUBSTITUTIONS ARE NOT APPROVED.

MATERIAL AND EQUIPMENT

- A. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND OF THE QUALITY SPECIFIED.
- MATERIAL OR EQUIPMENT THAT HAS BEEN STORED OUTDOORS UNPROTECTED FOR LONG PERIODS OF TIME OR OTHERWISE DAMAGED IS NOT ACCEPTABLE AS NEW MATERIAL.
- APPARATUS AND MATERIALS USED IN THIS WORK WHICH ARE SUBJECT TO APPROVAL OF UNDERWRITERS LABORATORIES (UL) SHALL BEAR THE UL LABEL, OR BE UNDERWRITERS LISTED.

DELIVERY, STORAGE, AND HANDLING OF MATERIAL AND EQUIPMENT

- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PURCHASE, DELIVERY, AND STORAGE OF ALL MATERIALS AND EQUIPMENT INDICATED TO BE SUPPLIED UNDER THIS SECTION OF THE SPECIFICATIONS, AND IT SHALL BE HIS RESPONSIBILITY TO SCHEDULE THE DELIVERY OF MATERIALS AND EQUIPMENT AT SUCH STAGES OF THE WORK AS WILL PERMIT UNINTERRUPTED CONSTRUCTION OF ALL PHASES OF THE WORK.
- WHERE OWNER FURNISHED EQUIPMENT IS TO BE TURNED OVER TO THIS CONTRACTOR FOR INSTALLATION, IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO RECEIVE SUCH EQUIPMENT AND STORE IN A SAFE, DRY LOCATION.
- PERFORM ALL REQUIRED RIGGING, HOISTING, TRANSPORTING, ETC., OF ALL EQUIPMENT FURNISHED, AND FURNISH ANY ADDITIONAL STRUCTURAL MEMBERS, AS MAY BE REQUIRED, FOR THE PROPER SUPPORT OF ANY AND ALL EQUIPMENT FURNISHED HEREUNDER.

ACCURACY OF DATA

- THE DRAWINGS ARE GENERALLY DIAGRAMMATIC, AND EXCEPT WHERE DIMENSIONS ARE SHOWN, ARE NOT INTENDED TO SHOW THE EXACT LOCATIONS OF OUTLETS, CONDUITS, SWITCHES, FIXTURES, ETC. ALL WORK SHALL BE INSTALLED AS NEARLY AS POSSIBLE IN THE LOCATIONS INDICATED, WITH ONLY SUCH MINOR ADJUSTMENTS AS WILL BE REQUIRED TO AVOID INTERFERENCES WITH STRUCTURE OR THE WORK OF OTHER TRADES.
- SHOULD ANY STRUCTURAL OR MECHANICAL INTERFERENCES PREVENT THE INSTALLATION OF CONDUIT, SETTING OF JUNCTION BOXES AND CABINETS, ARRANGEMENT OF LIGHTING FIXTURES AND METHOD OF SUSPENSION, ETC., IN THE LOCATIONS INDICATED ON THE DRAWINGS, THE NECESSARY DEVIATIONS THEREFROM MUST BE MADE WITHOUT ADDITIONAL COST TO THE OWNER. WHERE RELOCATION IS NOT OVER FIVE (5) FEET FROM THE LOCATION SHOWN ON THE DRAWINGS.
- THE DRAWINGS ARE NOT INTENDED TO SHOW ALL JUNCTION OR PULL BOXES, FITTINGS AND CONNECTIONS, AND DETAILS OF WORK TO BE DONE. THIS CONTRACTOR SHALL SUPPLY ALL NECESSARY BOXES, FITTINGS, AND CONNECTIONS FOR COMPLETE INSTALLATION IN A SATISFACTORY MANNER.
- ANY OFFSETS IN CONDUIT REQUIRED OR NECESSARY TO AVOID INTERFERENCES WITH STRUCTURE, OR THE WORK OF OTHER TRADES, ETC., SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
- REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ALL DIMENSIONS OF BUILDING SPACES.
- PREPARE SHOP DRAWINGS, AS NECESSARY, FOR COORDINATION OF THE WORK TO AVOID INTERFERENCE.
- G. THE DRAWINGS AND SPECIFICATIONS ARE COMPLEMENTARY TO EACH OTHER, AND WHAT IS CALLED FOR BY ONE SHALL BE AS BINDING AS IF CALLED FOR BY

COORDINATION

COORDINATE WORK WITH THAT OF OTHER SUBCONTRACTORS ON THE JOB AND ALSO WITH THAT OF THE OWNER IN ORDER THAT THERE BE NO DELAY IN THE PROPER INSTALLATION AND COMPLETION OF THE WORK.

MANUFACTURER'S RECOMMENDATIONS

UNLESS SPECIFICALLY INDICATED OTHERWISE, ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH THE RECOMMENDATION OF THE MANUFACTURER. A COPY OF THE MANUFACTURER'S INSTALLATION RECOMMENDATIONS SHALL BE KEPT IN THE JOB SUPERINTENDENT'S OFFICE AND SHALL BE AVAILABLE TO THE OWNER'S REPRESENTATIVE AT ALL TIMES.

CUTTING AND PATCHING

- PROVIDE ALL CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF THE ELECTRICAL WORK
- PROVIDE ALL SLEEVES, ETC., REQUIRED FOR THE INTRODUCTION AND PLACEMENT OF THE WORK.
- BEAMS OR COLUMNS SHALL NOT BE PIERCED WITHOUT THE PERMISSION OF THE STRUCTURAL ENGINEER, AND THEN ONLY AS DIRECTED.

TEMPORARY CONSTRUCTION POWER AND LIGHTING

THIS CONTRACTOR SHALL PROVIDE ALL TEMPORARY WIRING FOR CONSTRUCTION POWER AND LIGHTING FOR THE PROJECT AS REQUIRED.

- TEST ALL ELECTRICAL WIRING FOR CONTINUITY, SHORTS, IMPROPER GROUNDS AND INSULATION RESISTANCE. MOTORS SHALL BE CHECKED FOR PROPER ROTATION AND BRANCH CIRCUIT AND OVERLOAD PROTECTION. PANELBOARDS SHALL BE CHECKED FOR BALANCED LOADING AND CORRECT PHASE ROTATION. DISCREPANCIES SHALL BE CORRECTED. THIS CONTRACTOR SHALL FURNISH TEST EQUIPMENT AND MATERIAL, AND SHALL BE RESPONSIBLE FOR REPLACEMENT OR REPAIR OF DAMAGE DUE TO TEST FAILURES.
- AFTER INSTALLATION IS COMPLETE. VOLTAGE MEASUREMENTS SHALL BE MADE AT EACH PANELBOARD TO VERIFY PROPER SYSTEM VOLTAGES. VOLTAGE SHALL BE MEASURED UNDER LOAD CONDITIONS WHERE POSSIBLE. VOLTAGE READINGS SHALL BE RECORDED.
- AFTER ALL TESTS HAVE BEEN COMPLETED. THIS CONTRACTOR SHALL CLEAN ALL THE FIXTURES AND REPLACE ANY LAMPS USED FOR TEMPORARY LIGHTING. ALL EQUIPMENT AND CONDUIT SHALL BE CLEANED AND LEFT IN WORKING ORDER. ALL DEBRIS CREATED BY THE EXECUTION OF THE ELECTRICAL WORK SHALL BE REMOVED BY THIS CONTRACTOR. THIS CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO KEEP PANELS, ESPECIALLY CIRCUIT BREAKER HANDLES. CLEAN DURING CONSTRUCTION.

RACEWAYS

- ALL WIRING SHALL BE INSTALLED IN A CONTINUOUS RACEWAY SYSTEM, OR TYPE MC CABLE AS ALLOWED ELSEWHERE IN THESE SPECIFICATIONS. CONDUIT SHALL BE RUN CONCEALED OR EXPOSED, AS SPECIFICALLY INDICATED ON THE PLANS. IN GENERAL. CONDUIT IS INDICATED TO BE RUN CONCEALED IN FINISHED AREAS: ALL OTHER CONDUIT IS RUN EXPOSED.
- ELECTRICAL METALLIC TUBING (EMT) MAY BE USED WHERE CONDUIT IS RUN CONCEALED IN WALLS ABOVE THE FLOOR SLAB AND ABOVE OFFICE SPACES. GRS SHALL BE USED WHERE CONDUITS ARE RUN EXPOSED INSIDE THE BUILDINGS, EXCEPT THAT EXPOSED CONDUIT NOT SUBJECT TO DAMAGE ABOVE 6' AFF MAY BE EMT.
- LIQUID-TIGHT FLEXIBLE METAL CONDUIT IN SHORT LENGTHS (30" OR LESS) SHALL BE USED AT CONNECTIONS TO MOTORS. OR TO EQUIPMENT SUBJECT TO MOVEMENT, VIBRATION OR MISALIGNMENT, LIQUID-TIGHT FLEXIBLE CONDUIT SHALL NOT BE USED FOR OTHER APPLICATIONS.
- CONTRACTOR MAY PROVIDE TYPE MC CABLE IN LIEU OF EMT CONDUIT OR FLEXIBLE METAL CONDUIT CONCEALED IN WALLS OR CEILINGS FOR LIGHTING AND RECEPTACLE CIRCUITS. DO NOT USE TYPE MC CABLE FOR FIRE ALARM, HVAC EQUIPMENT. IN EXPOSED LOCATIONS. OUTDOORS. OR FOR CIRCUITS LARGER THAN 20 AMPS.
- EXPOSED CONDUIT SHALL BE RUN IN PARALLEL ROWS NEATLY RACKED PARALLEL OR PERPENDICULAR TO WALLS AND STRUCTURAL MEMBERS.
- INSTALL CONDUIT ONLY AFTER PROPOSED RUNS HAVE BEEN CHECKED ON PLANS AND AT SITE FOR INTERFERENCE WITH OTHER TRADES. WHEREVER POSSIBLE, LOCATE CONDUIT OVER PIPING OF OTHER TRADES. ALL HORIZONTAL CONDUIT RUNS IN ATTIC SHALL BE RUN AS HIGH AS POSSIBLE IN ORDER TO PROVIDE FREE SPACE ABOVE CEILING FOR INSTALLATION OF AIR DISTRIBUTION DUCT AND PIPING.
- ROUGHING-IN DIMENSIONS OF ELECTRICALLY OPERATED EQUIPMENT WILL BE BY TRADES SUPPLYING SAME. SET CONDUIT AND BOXES FOR CONNECTING TO EQUIPMENT ONLY AFTER RECEIVING APPROVED DIMENSIONS AND AFTER CHECKING LOCATIONS WITH OTHER CONTRACTORS.
- PLUG THE ENDS OF EACH RACEWAY WITH AN APPROVED CAP, OR CAPPED BUSHING TO PREVENT THE ENTRANCES OF FOREIGN MATERIAL DURING THE CONSTRUCTION PERIOD. CONDUIT LEFT EMPTY FOR FUTURE WIRING SHALL BE
- ARRANGEMENTS OF CONDUIT WIRING AND EQUIPMENT THAT DIFFER MATERIALLY FROM THE OBVIOUS INTENT OF THE PLANS WILL NOT BE PERMITTED, EXCEPT WHERE NECESSARY TO AVOID INTERFERENCES AND ONLY WHERE SPECIFICALLY APPROVED BY THE ENGINEER.
- CONDUIT SHALL BE SIZED AS INDICATED ON THE PLANS AND WHERE NOT INDICATED, SIZES SHALL MEET NEC REQUIREMENTS FOR NUMBER OF CONDUCTORS TO BE ACCOMMODATED, BASED ON TYPE THW INSULATED CONDUCTORS.
- CONDUITS PROJECTING THROUGH ROOFING SHALL BE MADE WATERTIGHT BY PROPER FLASHING AND PITCH POCKETS WITH STORM COLLAR SECURELY FASTENED TO CONDUIT ABOVE THE FLASHING.
- SHORT LENGTHS OF FLEXIBLE STEEL CONDUIT, "GREENFIELD", MAY BE USED ABOVE FURRED CEILINGS BETWEEN OUTLET BOXES AND LAY- IN TYPE CEILING FIXTURES.
- ELECTRICAL METALLIC TUBING 3/4" AND LARGER SHALL BE PROVIDED WITH INSULATED CONNECTORS OR END BUSHINGS.

ALL OPENINGS WHERE CONDUIT PENETRATES WALLS OR FLOORS SHALL BE

- MINIMUM SIZE BRANCH CIRCUIT CONDUIT SHALL BE 1/2" NOMINAL SIZE.
- SEALED WATER AND AIRTIGHT. CONNECTORS AND COUPLINGS FOR EMT CONDUIT IN WET OR DAMP LOCATIONS
- SHALL BE COMPRESSION TYPE. SET SCREW CONNECTORS AND COUPLINGS SHALL NOT BE USED.
- Q. ALL CONDUIT SHALL BE UL LISTED AND LABELED FOR THE APPLICATION USED.
- EMERGENCY SYSTEMS CIRCUIT SHALL BE RUN IN NONFLEXIBLE METAL RACEWAYS ONLY.
- METAL-CLAD CABLES USED IN PATIENT CARE AREAS FOR NON EMERGENCY SYSTEMS CIRCUITS SHALL HAVE A CABLE ARMOR THAT IS IDENTIFIED AS AN EQUIPMENT GROUND RETURN PATH. THE CABLE SHALL ALSO INCLUDE AN INSULATED EQUIPMENT GROUNDING CONDUCTOR.

BUILDING WIRE, CABLE AND CONNECTORS

- BUILDING WIRE AND CONNECTORS SHALL BE UL LISTED AND LABELED. COMPLY WITH NEMA, ICEA, ANSI AND ASTM STANDARDS PERTAINING TO MATERIALS, CONSTRUCTION AND TESTING OF BUILDING WIRE AND CABLE.
- EXCEPT AS OTHERWISE INDICATED, PROVIDE WIRE, CABLE AND CONNECTORS OF MANUFACTURER'S STANDARD MATERIALS, AS INDICATED BY PUBLISHED PRODUCT INFORMATION, DESIGNED AND CONSTRUCTED AS RECOMMENDED BY MANUFACTURER AND AS REQUIRED FOR THE INSTALLATION.
- PROVIDE FACTORY FABRICATED 600 VOLT INSULATED BUILDING WIRE OF SIZES, RATINGS, MATERIALS, AND TYPES INDICATED BELOW:
- UL TYPE: THHN DRY LOCATIONS ONLY UL TYPE: THW - WET OR DRY LOCATIONS UL TYPE: THWN - WET OR DRY LOCATIONS UL TYPE: SA - FIXTURE WIRING ONLY

EQUIPMENT GROUND

STRIPE

MATERIAL COPPER CONDUCTORS #10 AWG AND SMALLER: SOLID OR STRANDED CONDUCTORS: #8

AWG AND LARGER CONCENTRIC-LAY-STRANDED (STANDARD FLEXIBILITY) CONDUCTOR IDENTIFICATION: CONDUCTORS SHALL BE IDENTIFIED BY COLOR

AS FOLLOWS: 208Y/120 480/277 A PHASE VOLT SYSTEMS VOLT SYSTEMS **B PHASE BLACK** BROWN C PHASE RED ORANGE YELLOW **NEUTRAL** BLUE

WHITE

GREEN

COLOR FOR CONDUCTORS #10 AWG AND SMALLER, COLOR SHALL BE PERMANENT FACTORY APPLIED. CONDUCTORS #8 AWG AND LARGER SHALL BE BLACK WITH 3M OR EQUAL. COLOR CODED PHASE TAPE APPLIED AT THE TERMINATIONS. WHERE TYPE MC CABLE IS USED, CIRCUIT NUMBERS SHALL BE APPLIED AT ALL WIRE SPLICES AND TERMINATIONS.

GRAY

GREEN/YELLOW

- INSTALL ELECTRICAL BUILDING WIRES AND CABLES, AS INDICATED, IN COMPLIANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, APPLICABLE REQUIREMENTS OF NEC, AND IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES.
- WIRE SHALL BE PROTECTED DURING STORAGE AND HANDLING AND SHALL BE IN FIRST CLASS CONDITION WHEN INSTALLED.
- NO GREASE OF ANY KIND AND NO COMPOUND OTHER THAN A NEUTRAL LUBRICANT AS APPROVED BY THE WIRE OR CABLE MANUFACTURER SHALL BE USED AS A PULLING COMPOUND.
- WHEN WIRES ARE INSTALLED IN CONDUIT, SUFFICIENT SLACK SHALL BE ALLOWED TO PERMIT THE CONNECTION OF FIXTURES OR WIRING DEVICES WITHOUT ADDITIONAL SPLICE.
- ALL CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET OR FROM PANEL TO OUTLET OR DEVICE. NO SPLICES WILL BE PERMITTED IN CONDUIT
- UNLESS OTHERWISE NOTED ON THE PLANS, BRANCH CIRCUITS SHALL BE RUN HOME IN INDIVIDUAL CONDUITS, AS FOLLOWS:
- 1. FOR 3-PHASE, 4-WIRE SYSTEM, NOT MORE THAN 3 SINGLE-PHASE

CIRCUITS WITH COMMON NEUTRAL IN A SINGLE CONDUIT.

2. ALL POWER AND LIGHTING BRANCH CIRCUIT WIRING SHALL BE RUN HOME IN SEPARATE CONDUITS, AS INDICATED.

FEEDERS SHALL BE RUN IN INDIVIDUAL CONDUITS FROM THE FEEDER SOURCE

- TO THE LOAD TERMINATIONS, AS INDICATED ON THE DRAWINGS. DO NOT COMBINE MULTIPLE FEEDERS IN A WIREWAY OR JUNCTION BOX. USE COMPRESSION TYPE WIRE CONNECTORS FOR STRANDED CONDUCTORS,
- SUBJECT TO VIBRATION. WIRE NUTS MAY BE USED ELSEWHERE. BRANCH CIRCUITS FOR MOTORS, AS INDICATED ON THE DRAWINGS, ARE APPROXIMATE SIZE ONLY. THIS CONTRACTOR IS CAUTIONED TO OBTAIN THE EXACT RATING OF THE MOTOR OPERATED EQUIPMENT FROM THE MECHANICAL CONTRACTOR, AND HE SHALL ADJUST THE SIZE OF THE PROTECTIVE DEVICE

FOR MOTOR CONNECTIONS. AND ALL OTHER CONNECTIONS OR SPLICES

AT EACH OUTLET LOCATION. THE TERMINATING CONDUCTORS SHALL BE LEFT

AND WIRE TO CONFORM TO THE REQUIREMENTS OF THE EQUIPMENT. ALL SUCH CHANGES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

- TORQUE ALL BOLTED LUGS AND CONNECTORS TO TORQUE VALUES RECOMMENDED BY THE EQUIPMENT MANUFACTURER. WHERE TORQUE VALUES ARE NOT GIVEN, USE APPLICABLE TORQUE VALUES GIVEN BY UL STANDARDS #486A AND #486B. IF STUDS ARE COPPER OR STEEL, OR IF STEEL BOLTS ARE USED. USE A BELLEVILLE DISHED WASHER WITH A WIDE SERIES. HEAVY FLAT WASHER. TIGHTEN THE CONNECTION UNTIL THE BELLEVILLE IS FLAT. DO NOT RE-TIGHTEN LATER.
- MINIMUM SIZE BRANCH CIRCUIT CONDUCTOR SHALL BE #12 AWG.

NOT LESS THAN 8" LONG WITHIN THE OUTLETS.

- FIELD CONNECTIONS AT PANELBOARDS SHALL PROVIDE THE PROPER PHASE RELATIONSHIP, AS INDICATED ON THE DRAWINGS, OR AS SPECIFIED HEREIN.
- PRIOR TO ENERGIZATION, TEST ALL LIGHTING, POWER, CONTROL, AND SPECIAL CIRCUITS AND ASSOCIATED ELECTRICAL EQUIPMENT FOR LOW INSULATION RESISTANCE, GROUNDS, AND SHORT CIRCUITS.
- FURNISH AND SET UP ALL METERS, INSTRUMENTS, EQUIPMENT, AND LABOR REQUIRED TO MAKE TESTS, AS INDICATED.
- PROMPTLY REPLACE ANY WORK FOUND DEFECTIVE UNDER TEST. AFTER REPLACEMENT, TEST WORK AGAIN. FINAL ACCEPTANCE OF WORK DEPENDS ON SUCCESSFUL COMPLETION OF OPERATIONAL TESTS ON ALL EQUIPMENT TO SHOW THAT THE EQUIPMENT WILL PERFORM THE FUNCTIONS FOR WHICH IT WAS DESIGNED.
- REPAIR AND/OR REPLACE AT CONTRACTOR'S EXPENSE. ANY EQUIPMENT DAMAGED IN THE PROCESS OF CONDUCTING THE TESTS. TEST RESULTS SHALL SHOW VALUES NO SMALLER THAN THOSE

RECOMMENDED BY THE NEC, IPCEA, IEEE, ANSI AND NEMA.

- PERFORM CONTINUITY TESTS ON ALL POWER AND CONTROL CIRCUITS, INCLUDING SPARE CONDUCTORS. CHECK PHASE IDENTIFICATION ON POWER
- CHECK ALL CONTROL AND INTERLOCKING WIRING FOR PROPER OPERATIONS. PERFORM OPERATIONAL TESTS TO ASSURE THAT CONTROL WIRING HAS BEEN PROPERLY INSTALLED.

BOXES AND FITTINGS

- COMPLY WITH NEC AS APPLICABLE TO CONSTRUCTION AND INSTALLATION OF ELECTRICAL WIRING BOXES AND FITTINGS.
- PROVIDE ELECTRICAL BOXES AND FITTINGS WHICH HAVE BEEN UL LISTED AND LABELED.
- PROVIDE GALVANIZED CODE GAUGE SHEET STEEL JUNCTION AND PULL BOXES WITH SCREW-ON COVERS AND WELDED SEAMS. DO NOT USE KNOCKOUT TYPE BOXES FOR ANY APPLICATION IN SIZES LARGER THAN
- BUSHINGS FOR CONDUIT TERMINATIONS, WHERE CONDUIT ENTERS OR EQUIPMENT FROM UNDERGROUND SHALL BE O.Z./GEDNEY CO., TYPE CSB SERIES, OR APPROVED EQUAL.
- INSTALL ELECTRICAL BOXES AND FITTINGS, WHERE INDICATED OR REQUIRED, COMPLYING WITH APPLICABLE REQUIREMENTS OF NEC AND NECA "STANDARD OF INSTALLATION", AND IN COMPLIANCE WITH RECOGNIZED INDUSTRY PRACTICES, TO ENSURE THAT PRODUCTS FULFILL REQUIREMENTS.
- PROVIDE KNOCKOUT CLOSURES AT UNUSED KNOCKOUT HOLES WHERE BLANKS HAVE BEEN REMOVED.
- PROVIDE SEPARATE STRUCTURAL SUPPORTS FOR ALL BOXES AND PULL BOXES IN ACCORDANCE WITH CODE REQUIREMENTS.
- PROVIDE CAST METAL WEATHERPROOF OUTLETS FOR LOCATIONS EXPOSED TO WEATHER OR MOISTURE.
- FOR CONCEALED WORK, 4" SQUARE BOXES WITH PROPERLY SIZED PLASTER RINGS OR MASONRY RINGS SHALL BE USED FOR ALL FLUSH MOUNTED RECEPTACLES AND WALL SWITCHES UP TO TWO (2) GANG. ONE PIECE GANG BOXES SHALL BE USED WHERE THREE (3) OR MORE DEVICES OCCUR AT ONE POINT.
- FOR EXPOSED WORK USE CAST METAL BOXES WITH SCREWED HUBS FOR ALL BRANCH CIRCUIT OUTLET, DEVICE AND PULL BOXES.
- TEMPORARY COVERS SHALL BE PROVIDED AT ALL OUTLET BOX LOCATIONS DURING CONSTRUCTION TO PREVENT ENTRANCE OF DIRT, PLASTER, ETC., BEFORE WIRING DEVICE IS INSTALLED.
- EXCEPT WHERE INDICATED OTHERWISE ON THE DRAWINGS, OUTLET BOXES SHALL BE SO LOCATED AS TO ALLOW THE ASSOCIATED DEVICE OR FIXTURE TO BE MOUNTED AT LOCATIONS SPECIFIED BELOW:
 - CEILING LIGHTING FIXTURES SYMMETRICALLY IN/OR ON CEILING, OR AS INDICATED ON THE PLANS.
 - RECEPTACLES 4'-0" ABOVE FLOOR IN UTILITY AREAS: 1'-6" ABOVE FINISHED FLOOR IN FINISHED AREAS; 8" ABOVE COUNTER TOPS; EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE ON THE
 - WALL SWITCHES 4'-0" ABOVE FINISHED FLOOR OR AS SPECIFICALLY INDICATED ON THE PLANS.
 - THERMOSTATS 5'-0" ABOVE FINISHED FLOOR OR AS SPECIFICALLY INDICATED ON THE PLANS.
 - OUTLETS FOR OTHER DEVICES AS INDICATED.
- PROVIDE PULL BOXES AND JUNCTION BOXES. AS INDICATED ON THE PLANS. OR AS REQUIRED. BOXES SHALL BE SIZED AS INDICATED ON THE PLANS AND WHERE NOT INDICATED, THEY SHALL BE SIZED IN ACCORDANCE WITH ARTICLE 370 OF THE NATIONAL ELECTRICAL CODE.
- PROVIDE COVERPLATES FOR ALL OUTLET BOXES EXCEPT
- COMMUNICATIONS OUTLETS. IN ALL CASES. WHERE TWO OR MORE DEVICES ARE INSTALLED IN GANG

BOXES, GANG PLATES WITH SUITABLE OPENINGS SHALL BE PROVIDED. WIRING DEVICES

- SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE THE FOLLOWING PRODUCTS, OR AN APPROVED EQUAL
- TOGGLE SWITCHES: 20 AMPERE, 120-277 VOLT, AC ONLY, QUIET TYPE, HUBBELL #1221 (SP), #1222 (DP), #1223 (3-WAY), #1224 (4-WAY).

RECEPTACLES: HOSPITAL GRADE, IVORY COLOR, HUBBELL #HBL

POWER SHALL BE RED COLOR. GROUND FAULT CIRCUIT INTERRUPTING RECEPTACLES: NEMA 5-15R, 15 AMPERE, 125 VOLT, 2-POLE, 3-WIRE DUPLEX, HUBBELL

8300 OR EQUAL. RECEPTACLE SUPPLIED BY STANDBY EMERGENCY

- #GF5252, OR APPROVED EQUAL.
- B. PROVIDE COVERPLATES FOR ALL WIRING DEVICES. MULTIPLE OUTLETS SHALL BE PROVIDED WITH MULTIPLE GANG PLATES
- OF ONE-PIECE CONSTRUCTION. COVERPLATES FOR OUTDOOR GFI DUPLEX RECEPTACLES SHALL BE TAYMAC #20310, OR APPROVED EQUAL FOR USE WITH TYPE "FS" BOXES.
- COVERPLATES FOR ALL FLUSH MOUNTED DEVICES SHALL BE

COVERPLATES SHALL HAVE NEMA 3R RATING.

HIGH-IMPACT SMOOTH NYLON, WITH COLOR TO MATCH DEVICE.

CIRCUIT AND MOTOR DISCONNECTS

- ALL DISCONNECT SWITCHES SHALL BE NEMA TYPE HD AND UL LISTED, 240 VOLT OR 600 VOLT RATING AS REQUIRED.
- FURNISH AND INSTALL DISCONNECT SWITCHES WHERE INDICATED ON THE DRAWINGS AND/OR WHERE REQUIRED BY CODE. DISCONNECT SWITCHES SHALL BE FUSIBLE OR NON-FUSIBLE, AS INDICATED, OR REQUIRED. TO PROVIDE THE REQUIRED DISCONNECT MEANS AND/OR
- BRANCH CIRCUIT PROTECTION. DISCONNECT SWITCHES SHALL BE AS MANUFACTURED BY SQUARE D COMPANY, G. E. COMPANY, SIEMENS, OR APPROVED EQUAL.

SUPPORTING DEVICES

ASSEMBLIES".

MOUNTING.

PRODUCT INFORMATION.

PRESSED STEEL STRAPS.

AND/OR HANGER RODS.

BOARD WALLS AND CEILINGS.

(UNISTRUT P-1000 MINIMUM SIZE).

ACCORDANCE WITH THE NEC.

SPECIFIED HEREIN.

FOR ANY PURPOSE

SEISMIC LOADING.

CONDUIT SUPPORT

ELECTRICAL IDENTIFICATION

E-Z, OR APPROVED EQUAL.

FOLLOWING INFORMATION:

SEISMIC RESTRAINTS

STUDS.

NO. FB 1, "FITTINGS AND SUPPORTS FOR CONDUIT AND CABLE

COMPLY WITH THE NATIONAL ELECTRICAL CONTRACTORS

ASSOCIATION "STANDARD OF INSTALLATION" PERTAINING TO

ANCHORS, FASTENERS, HANGERS, SUPPORTS AND EQUIPMENT

SHALL COMPLY WITH MANUFACTURER'S STANDARD MATERIALS,

DESIGN, AND CONSTRUCTION IN ACCORDANCE WITH PUBLISHED

PROVIDE SUPPORTING DEVICES OF TYPES, SIZES AND MATERIALS

1. ONE-HOLE STRAPS: SPECIFICALLY DESIGNED FOR TYPE MC

CABLE, SIZED FOR THE SPECIFIC APPLICATION.

INDICATED AND HAVING THE FOLLOWING CONSTRUCTION FEATURES:

2. ONE-HOLE AND TWO HOLE CONDUIT STRAPS: FOR SUPPORTING

HANGERS: SPECIFICALLY DESIGNED FOR USE WITH UNISTRUT

RIGID STEEL CONDUIT: HOT-DIPPED GALVANIZED MALLEABLE

PROVIDE ANCHORS OF TYPES, SIZES AND MATERIALS INDICATED, AND

4. ONE-HOLE CONDUIT STRAPS FOR SUPPORTING GALVANIZED

IRON. PRESSED STEEL STRAPS ARE NOT ACCEPTABLE.

1. TOGGLE BOLTS: SPRINGHEAD; 3/16" X 4" FOR USE IN GYPSUM

PROVIDE U-CHANNEL STRUT SYSTEM FOR SUPPORTING SURFACE

HOT-DIPPED GALVANIZED STEEL OF TYPES AND SIZES INDICATED

FURNISH AND INSTALL ALL NECESSARY HANGERS, SUPPORTS, ETC.,

CONNECTOR BOXES, LIGHTING FIXTURES, PANELBOARDS, PULL

STRUCTURE BY MEANS OF BOLTS, U-CHANNEL STRUT SYSTEM,

BOXES, CONDUIT, OUTLET BOXES, AND ALL OTHER ITEMS OF

ELECTRICAL WORK INCLUDED IN THIS PROJECT

ANCHORS AND RODS. OR OTHER APPROVED MEANS.

AS REQUIRED, FOR RIGIDLY AND SECURELY MOUNTING ALL SWITCHES,

ALL HANGERS AND SUPPORTS SHALL BE FASTENED TO THE BUILDING

TYPE MC CABLES SHALL BE SUPPORTED WITHIN 12 INCHES OF EVERY

LIGHTING FIXTURES SHALL BE SECURELY SUPPORTED FROM THE

BUILDING STRUCTURE, AS INDICATED ON THE DRAWINGS OR AS

SUPPORT BOXES FROM BUILDING STRUCTURE IN AN APPROVED

DO NOT USE PERFORATED STRAP IRON HANGERS ON THIS PROJECT

MANNER; MAKE SUPPORT INDEPENDENT OF CONDUIT TO WHICH THEY

ARE CONNECTED. ROD HANGERS SHALL BE USED WHERE SUITABLE.

WHERE ROD HANGERS ARE NOT SUITABLE, PROVIDE U-CHANNEL

WHERE MULTIPLE RUNS OF EXPOSED CONDUIT ARE REQUIRED,

WHERE CONDUIT IS SUPPORTED BY SUSPENDED HANGERS, THE

Q. ALL SUPPORT SYSTEMS UTILIZED ON THIS PROJECT SHALL EMPLOY

TOTAL LENGTH TO THE BOTTOM OF THE HANGER SHALL NOT EXCEED

12", OR PROVISION SHALL BE MADE FOR THE SUPPORT OF REQUIRED

SCREWS OR BOLTS AND NUTS TO SECURE CABLES, CONDUIT, AND

FURNISH AND INSTALL SEISMIC RESTRAINTS TO PROVIDE MULTI-

LIGHTING FIXTURES, TRANSFORMERS, CONDUIT, ETC., TO RESIST

LATERAL AND VERTICAL FORCES OF EARTHQUAKE LOADS IN

COMPLIANCE WITH APPLICABLE CODES.

DIRECTIONAL BRACING AND SUPPORT FOR ELECTRICAL EQUIPMENT,

FURNISH AND INSTALL A CONDUCTOR IDENTIFICATION BAND ON EACH

CONDUCTOR IN EACH BOX/ENCLOSURE/CABINET WHERE WIRES OF

MORE THAN ONE CIRCUIT ARE PRESENT, EXCEPT WHERE ANOTHER

FORM OF IDENTIFICATION, SUCH AS COLOR CODED CONDUCTORS, IS

PROVIDED. CONDUCTOR IDENTIFICATION BANDS SHALL BE T & B TYPE

IDENTIFICATION PLATE AT EACH PANELBOARD AND DISCONNECT

SWITCH. SECURE WITH STAINLESS STEEL SCREWS. INCLUDE THE

1. DISTRIBUTION LIGHTING AND APPLIANCE PANELBOARDS - PANEL

2. EACH DISCONNECT SWITCH - LOAD SERVED, VOLTAGE AND

CIRCUIT NUMBER IN 1/8" LETTERS (E.G., "ACU-1, 208V, A-6")

NAME IN 1/4" LETTERS, VOLTAGE AND PHASE IN 1/8" LETTERS (E.G.,

FURNISH AND INSTALL AN ENGRAVED PLASTIC LAMINATE

"PANEL A, 120/208V, 3-PHASE, 4 WIRE").

STRUT SUPPORTS FROM BUILDING STRUCTURE.

PROVIDE UNISTRUT SUPPORTS FOR CONDUIT.

JUNCTION OR OUTLET BOX, AND AT INTERVALS NOT TO EXCEED 6'-0" IN

MOUNTED ELECTRICAL EQUIPMENT, 12 GAUGE MINIMUM SIZE

HAVING THE FOLLOWING CONSTRUCTION FEATURES:

2. LEAD EXPANSION ANCHORS: FOR CONCRETE OR

3. WOOD SCREWS: FOR USE IN WOOD JOISTS AND

EMT CONDUIT, HOT-DIPPED GALVANIZED MALLEABLE IRON OR

WHERE MANUFACTURED SUPPORTING DEVICES ARE PROVIDED, THEY

- PROVIDE SUPPORT FOR ALL ELECTRICAL WORK AS INDICATED ON THE DRAWINGS, AS SPECIFIED HEREIN, OR AS REQUIRED BY CODE.
- COMPLY WITH NEC AS APPLICABLE TO CONSTRUCTION AND INSTALLATION OF ELECTRICAL SUPPORTING DEVICES.
- COMPLY WITH APPLICABLE REQUIREMENTS OF ANSI/NEMA STD. PUB.
 - SHALL BE PROVIDED WITH ALL FEEDERS AND BRANCH CIRCUITS. THIS GROUNDING CONDUCTOR SHALL BE
 - INSULATED SAME AS REQUIRED FOR 600 VOLT PHASE CONDUCTORS AND SHALL BE GREEN IN COLOR, WHERE POSSIBLE. GROUNDING CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH ARTICLE 250-95 OF THE NEC AND SHALL TERMINATE BY MEANS OF COMPRESSION LUGS AT EACH GROUND BUS, PANELBOARD GROUNDING BAR, PULL BOXES, DISCONNECT SWITCHES, STARTERS, MOTORS, AND OTHER DEVICES.
 - SYSTEMS AS RECOMMENDED BY SYSTEMS MANUFACTURER.

- PROVIDE ONLY LED LIGHTING FIXTURES, EXIT SIGNS AND EMERGENCY LIGHTING UNITS WHICH ARE UL LISTED AND
- CLEAN LIGHTING FIXTURES OF DIRT AND DEBRIS UPON COMPLETION OF THE INSTALLATION. PROTECT INSTALLED FIXTURES FROM DAMAGE DURING REMAINDER OF

WIRING FOR HVAC EQUIPMENT

- FURNISH AND INSTALL ALL LINE VOLTAGE POWER, INTERLOCK AND TEMPERATURE CONTROL WIRING FOR HEATING, VENTILATING AND AIR CONDITIONING EQUIPMENT. FURNISH AND INSTALL DISCONNECT SWITCHES AS INDICATED OR
- CONNECTION TO HVAC EQUIPMENT SUBJECT TO MOVEMENT OR VIBRATION SHALL BE MADE WITH LIQUID-TIGHT FLEXIBLE
- ALL WIRING INSTALLED OUTDOORS SHALL UTILIZE COMPRESSION TYPE EMT FITTINGS, AND WEATHERPROOF GASKETED CAST METAL BOXES.

GROUNDING

- FURNISH AND INSTALL SYSTEM, ENCLOSURE, AND EQUIPMENT GROUNDING FOR ALL ELECTRIC WIRING FOR THE BUILDING IN FULL COMPLIANCE WITH THE REQUIREMENTS OF LOCAL CODES AND THE NEC. ALL GROUNDING CONDUCTORS SHALL BE COPPER.
- PROVIDE GROUNDING PRODUCTS THAT ARE UL LISTED AND LABELED AND COMPLY WITH ESTABLISHED INDUSTRY
- STANDARDS FOR APPLICATIONS INDICATED. A CONTINUOUS (GREEN) EQUIPMENT GROUNDING CONDUCTOR
- PROVIDE ALL GROUNDING REQUIRED FOR NEW RADIOGRAPHY

LIGHTING

- LABELED.
- CONSTRUCTION PERIOD.

- REQUIRED.
- CONDUIT.

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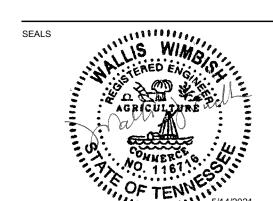
MARK DATE DESCRIPTION

MATA HEADQUARTERS 1370 LEVEE RD, **MEMPHIS, TN. 38108**

PROJECT NAME 1364 N WATKINS PACKAGE 1 -RENOVATION

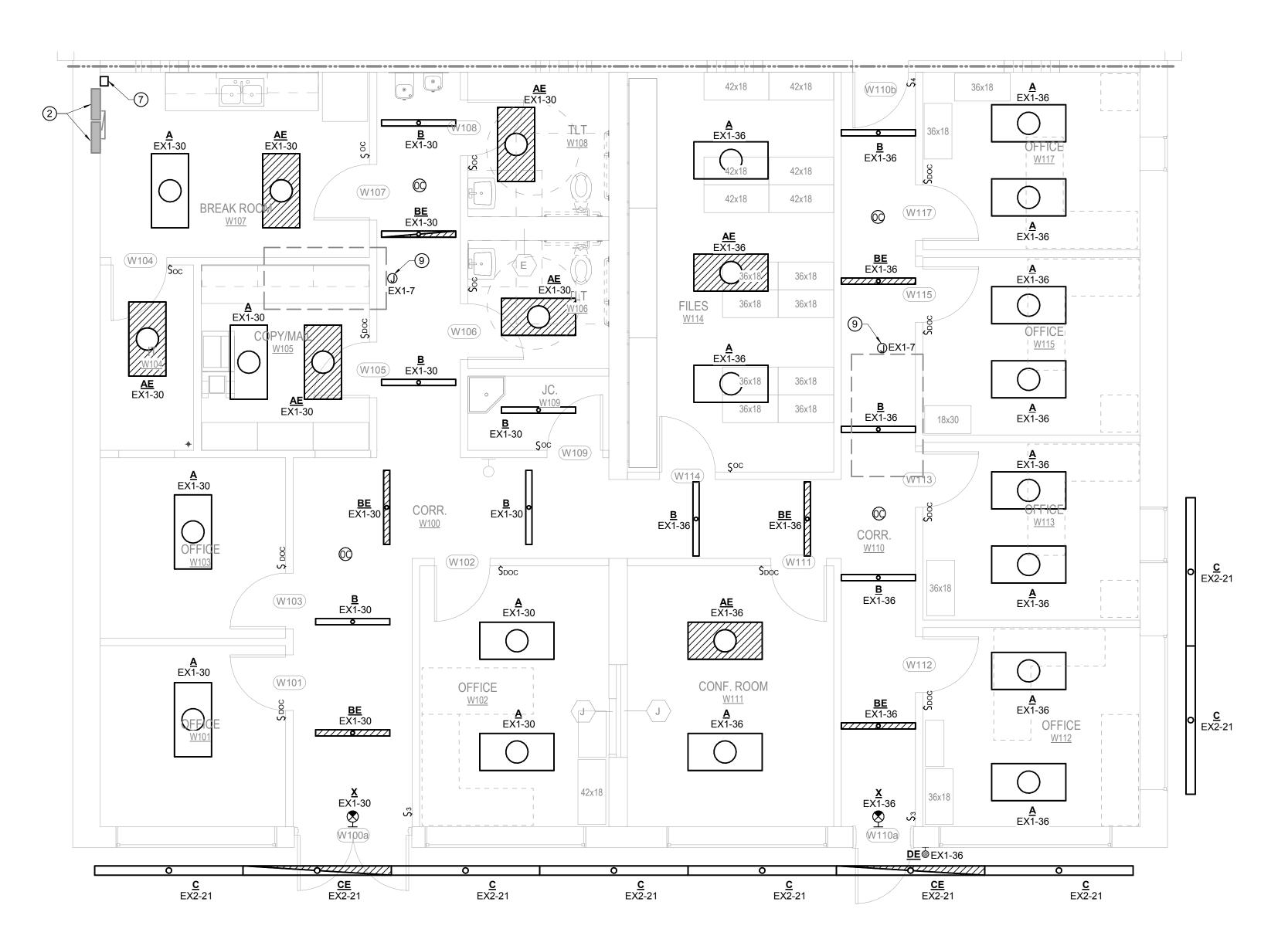
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ELECTRICAL SPECIFICATIONS

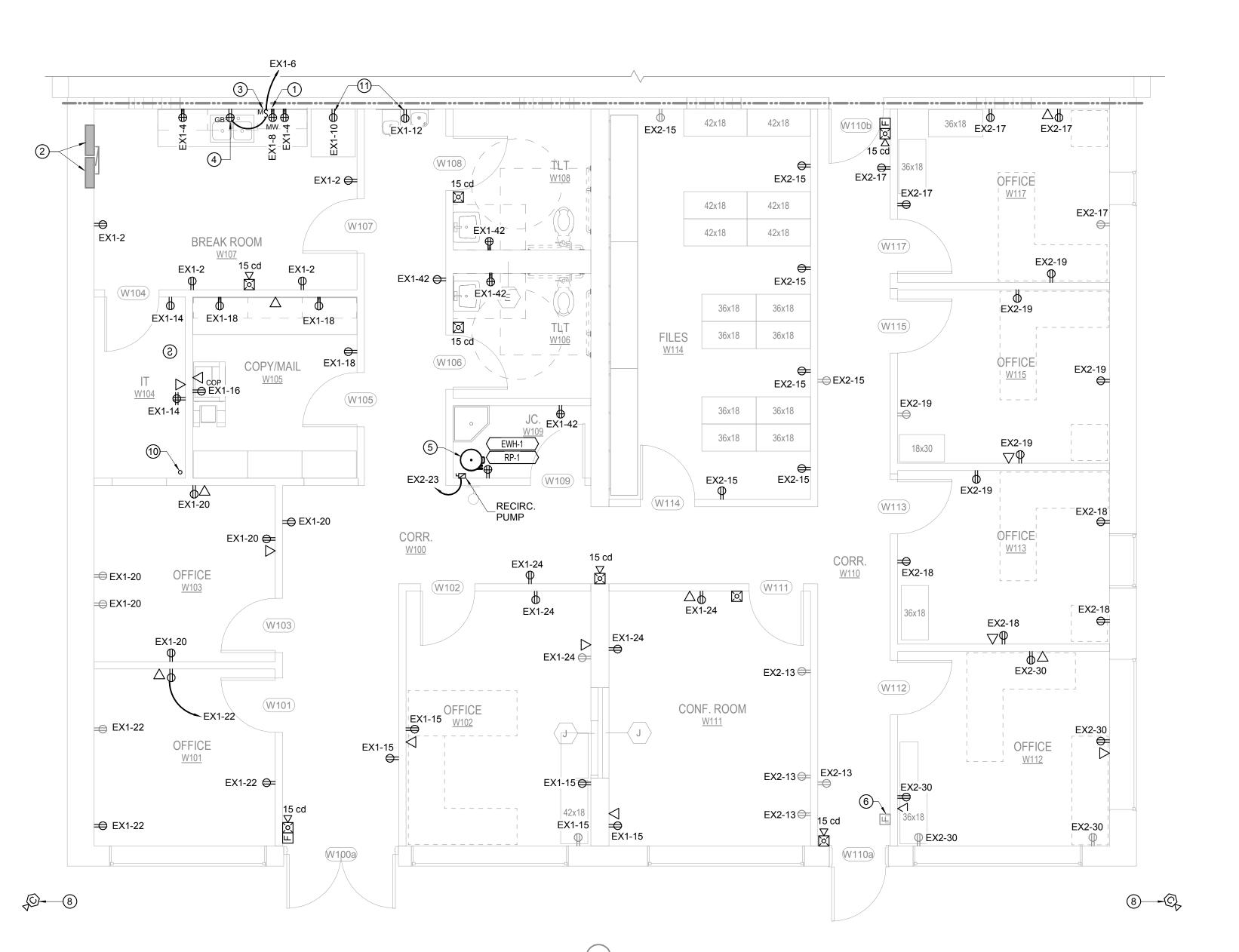


CONSTRUCTION DOCUMENTS

E002



1364 N. WATKINS ELECTRICAL FLOOR PLAN - LIGHTING



KEY SITE PLAN - N. WATKINS BLDG

GENERAL NOTES

- A. UNLESS NOTED OTHERWISE. ALL POWER CIRCUITS SHALL BE CIRCUITED UTILIZING AVAILABLE 20AMP SINGLE POLE SPARES FROM DEMOLITION. CIRCUIT DESIGNATIONS ARE FOR REFERENCE ONLY. FIELD VERIFY AVAILABLE SPARE BREAKERS FROM EXISTING PANELS EX1 AND EX2 BEFORE CIRCUITING AND PROVIDE 20AMP SINGLE POLE BREAKERS AS REQUIRED. IN EVENT OF CONFLICTS WITH AVAILABLE SPARE BREAKERS AFTER DEMOLITION. NOTIFY THE ARCHITECT AND ELECTRICAL ENGINEER BEFORE PROCEEDING WITH WORK.
- B. HALF TONE DEVICES INDICATE ITS EXISTING AND TO BE REMAIN. CIRC EXISTING RECEPTACLES PER PLAN.
- C. LIGHTING FIXTURE LOCATIONS SHOWN ON THIS SHEET ARE APPROXIMATE. REFERTO THE ARCHITECTURAL REFLECTED CEILING PLAN
- D. SYMBOL WITH 'E' DESIGNATION FOR LIGHT FIXTURE SHOWN TO HAVE A BATTERY BACKUP DRIVER SHALL BE CONNECTED TO THE CONTROLLED LIGHTING CIRCUIT SERVING THE RESPECTIVE SPACE AND SHALL BE CONNECTED TO THE LINE (UN-SWITCHED) SIDE OF ANY SWITCH, RELAY ETC. THAT CONTROLS THE LIGHTING OF THAT SPACE.

FOR EXACT LOCATION OF ALL CEILING MOUNTED LIGHT FIXTURES.

- E. REFER TO MECHANICAL DRAWINGS FOR EQUIPMENT LAYOUT.
- F. CONNECT ALL NEW FIRE ALARM SYSTEM DEVICES TO THE EXISTING FIRE ALARM SYSTEM. NEW DEVICES SHALL BE FULLY COMPATIBLE WITH THE EXISTING SYSTEM. FURNISH & INSTALL ALL POWER SUPPLIES, INTERFACE DEVICES, ETC. REQUIRED. PROVIDE ALL SYSTEM MODIFICATIONS, ADDITIONAL COMPONENTS, AND REPROGRAMMING REQUIRED.
- G. EACH DATA OUTLET SHOWN ON THIS DRAWING SHALL CONSIST OF FLUSH A MOUNTED 4" X 4" BACKBOX AND SINGLE-GANG DEVICE RING WITH 0.75" CONDUIT RUN CONCEALED IN WALL TO ACCESSIBLE ABOVE CEILING SPACE. PROVIDE PULL STRING. WIRING & TERMINATIONS WILL BE INSTALLED BY THE OWNER'S TELECOMMUNICATIONS CONTRACTOR.
- H. PROVIDE BLANK COVER PLATES FOR EXISTING TELECOMMUNICATION DEVICES NOT BEING REUSED. COORDINATE WITH ARCHITECT FOR COVER PLATE FINISH.
- USE EXISTING DATA OUTLET LOCATIONS WITHIN SPACE FOR NEW DATA DEVICES AS APPLICABLE. FIELD VERIFY ALL LOCATION BEFORE ROUGH-

KEYED NOTES

- 1) COORDINATE RECEPTACLE FOR MICROWAVE WITH MILLWORK VENDOR BEFORE ROUGH-IN.
- (2) EXISTING PANELS 'EX1' & 'EX2' TO REMAIN AND BE REUSED FOR NEW
- (3) PROVIDE POWER SWITCH TO CONTROL GARBAGE DISPOSAL.
- (4) PROVIDE UNDERCOUNTER RECEPTACLE FOR GARBAGE DISPOSAL.
- (5) RELOCATED EXISTING 1.5KW ELECTRIC WATER HEATER.
- (6) EXISTING FIRE ALARM PULL STATION.
- 7) RELOCATE EXISTING EXTERIOR LIGHTING CONTROL TO THIS LOCATION. LIGHTING CONTROL TO CONTROL EXISTING EXTERIOR FIXTURES AND FIXTURE TYPES C, CE, AND DE.
- EXISTING EXTERIOR SECURITY CAMERA TO REMAIN AND BE REUSED. PROVIDE CONDUIT BACK TO CONTROL PANEL FOR SECURITY SYSTEM CONTRACTOR TO CONFIRM LOCATION.
- 9) PROVIDE 120V POWER FOR UV LIGHTING IN EXISTING ROOFTOP UNIT. COORDINATE WITH MECHANICAL.
- 10) PROVIDE 2" CONDUIT DROP INTO IT ROOM. COORDINATE EXACT LOCATION WITH SECURITY EQUIPMENT.
- (1) PROVIDE GFCI BREAKER.



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PROJECT NAME 1364 N WATKINS PACKAGE 1 -RENOVATION

Project No. Date Issued Drawing Scale

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N. WATKINS OFFICE ELECTRICAL FLOOR PLANS, LIGHTING, POWER & SYSTEMS

Project Number 05.14.2021

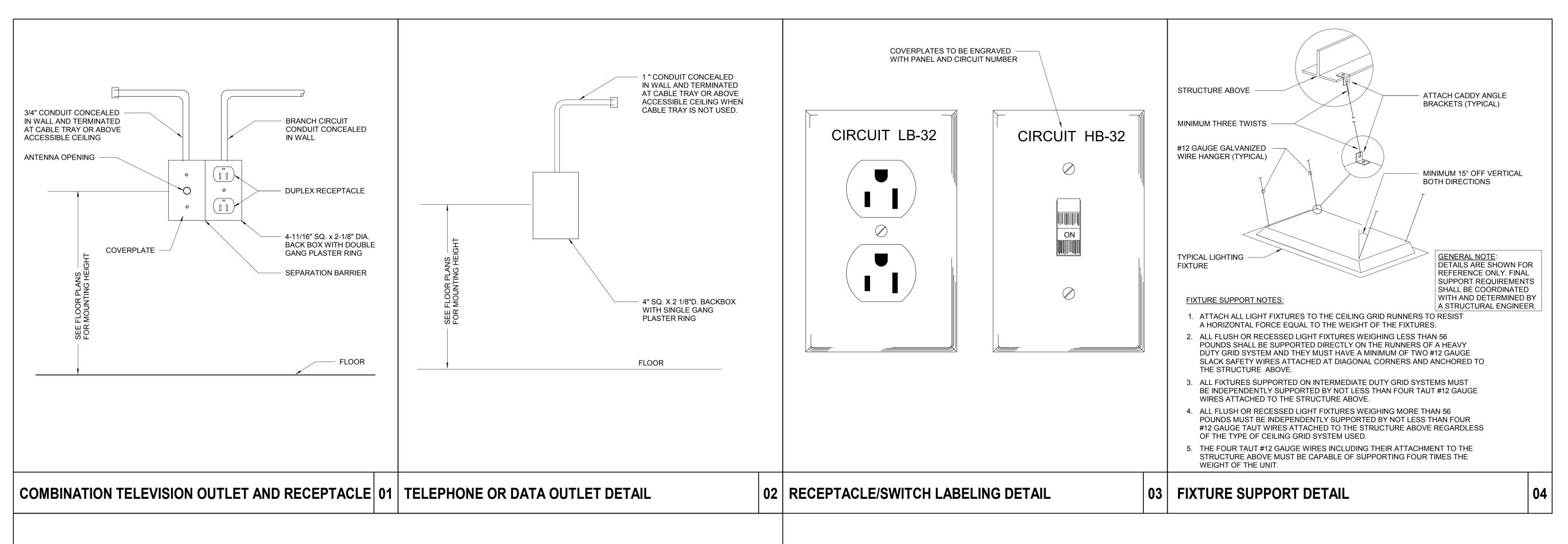
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CONSTRUCTION DOCUMENTS

1364 N. WATKINS ELECTRICAL FLOOR PLAN - POWER & SYSTEMS

E121



GENERAL NOTES:

DESCRIPTION

REQUIRED FOR CEILING COMPATIBILITY. VERIFY AND COORDINATE ALL FIXTURE FINISHES WITH ARCHITECT PRIOR TO ORDERING.

LEVEL

SERVICE BUILDING LEVEL 1

WHERE EMERGENCY BATTERY PACKS ARE INDICATED, THEY SHALL BE CONNECTED VIA UNSWITCHED PORTION OF ASSOCIATED CIRCUIT.

CONFIRM LED COLOR TEMPERATURE (WHERE APPLICABLE) FOR ALL LUMINAIRE TYPES WITH ARCHITECT AND OWNER PRIOR TO ORDERING.

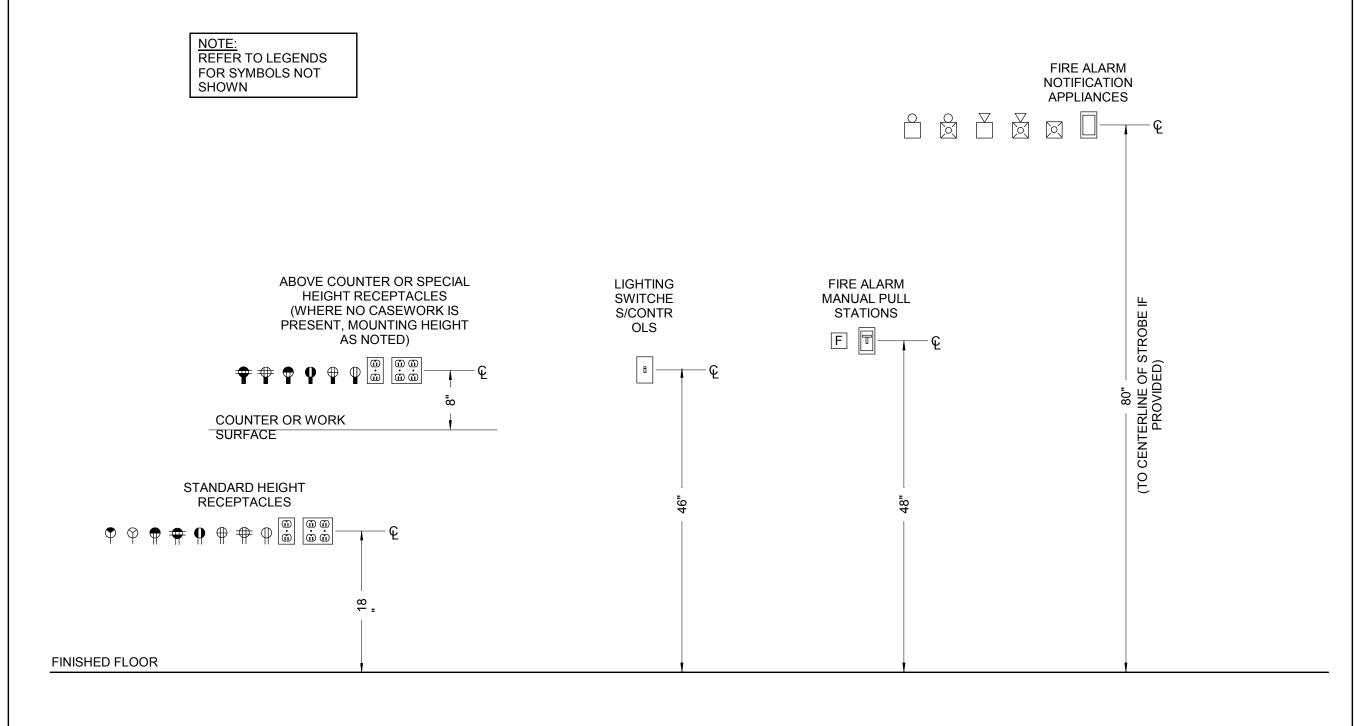
WHERE FIXTURES ARE SHOWN IN CONTINUOUS RUNS (I.E. COVES, SUSPENED LINEAR, RECESSED LINEAR, UNDERCABINET, ETC.) PROVIDE STANDARD LEN

VOLTAGE

120 V

SERVICE BUILDING LEVEL 1 120 V 1

PHASE



ELECTRICAL DEVICE MOUNTING HEIGHT DETAIL

TYPE A 2X4 LED RECESSI					LAMPS				
	DESCRIPTION	MANUFACTURER/SERIES	Model	LAMPS COLOR		INPUT WATTS	VOLTAGE	BALLAST/DRIVER	MOUNTING
	2X4 LED RECESSED PANEL	LITHONIA LIGHTING	EPANL-2X4-4800LM-80CRI-35K-ZT-MVOLT	LED	3500K	39	UNIV		RECESSED
AE	2X4 LED RECESSED PANEL - EMERGENCY	LITHONIA LIGHTING	EPANL-2X4-4800LM-80CRI-35K-ZT-MVOLT-E10WCP	LED	3500K	39	UNIV		RECESSED
В	4 FEET LED LINEAR	ALIGHT	D6-4-LS-35-U-T-BS-T-D	LED	3500K	20	UNIV		RECESSED
BE	4 FEET LED LINEAR - EMERGENCY	ALIGHT	D6-4-LS-35-U-T-BS-T-D-EC	LED	3500K	20	UNIV		RECESSED
С	SURFACE MOUNT STRIP	FLUXSTREAM	FSX-8-80L-840-UNV-DIM-IP65	LED	4000K	64	UNIV		SURFACE MOUNT
CE	SURFACE MOUNT STRIP - EMERGENCY	FLUXSTREAM	FSX-8-80L-840-UNV-DIM-IP65-BSL6LST	LED	4000K	64	UNIV		SURFACE MOUNT
DE	WALL PACK - EMERGENCY	LYTEPRO	LPW16-20-NW-G3-3-UNV-PCB	LED	4000K	20	UNIV		WALL MOUNTE
	LED EXIT SIGN	LITHONIA LIGHTING	LQM-S-W-R-MVOLT-SD	LED	N/A	3	UNIV	LED DRIVER	AS REQUIRED PE
	LED EXIT SIGN	•				3 10N	1		AS REQUIRED PER
X	LED EXIT SIGN RAL NOTES:	•	CAL EQUIPMENT CO				1		AS REQUIRED PER

H.P.

KVA

1/25 0.1 0.74 A

REFER TO AND COORDINATE WITH ARCHITECTURAL REFLECTED CEILING PLANS AND ELEVATIONS FOR FINAL FIXTURE LOCATIONS, CEILING TYPES, MOUNTING TYPES, ETC. PROVIDE REQUIRED MOUNTING KITS (I.E. FLANGE KITS, FLANGELESS FRAMES, ETC.) AS

5. WHERE SUSPENDED OR PENDANT MOUNTED FIXTURES ARE SPECIFIED, REFER TO ARCHITECTURAL DRAWINGS FOR OVERALL SUSPENSION LENGTHS AND MOUNTING HEIGHTS. PROVIDE ALL NECESSARY HARDWARE, ADAPTERS, ETC., FOR A COMPLETE INSTALLATION.

A. REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS, ELEVATIONS, AND OTHER INFORMATION REGARDING LOCATIONS OF LED TAPE LIGHT.

B. PROVIDE REMOTE LED POWER SUPPLIES AS REQUIRED FOR LENGTHS OF LED TAPE LIGHT RUNS INDICATED ON THE DRAWINGS. DO NOT EXCEED 80% OF RATED CAPACITY. INSTALL POWER SUPPLIES IN ACCESSIBLE, BUT CONCEALED LOCATIONS, SUCH AS CLOSETS,

CONCEALED IN MILLINGER, ABOVE ACCESSIBLE CEILINGS ETC. FIELD VERIFY FINAL LOCATIONS AND CONFIRM WITH ARCHITECT PRIOR TO ROUGH-IN. CONFIRM DIMMING COMPATIBILITY OF LED POWER SUPPLIES (I.E. 0-10V, ELV, TRIAC, ETC) PRIOR TO ORDERING.

CONFIRM LED DRIVER DIMMING COMPATIBILITY (I.E. 0-10V, ELV, ETC.) FOR ALL FIXTURES PRIOR TO ORDERING. REFER TO LIGHTING CONTROLS SPECIFICATIONS, AND LIGHTING CONTROL DIAGRAMS FOR ADDITIONAL INFORMATION.

NECESSARY CONNECTORS, HARDWARE, ADAPTERS, END CAPS, ETC., FOR A COMPLETE INSTALLATION. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR STANDARD SECTION LENGTHS AND MINIMUM SECTION LENGTHS.

REFER TO ELECTRICAL SITE PLANS FOR QUANTITY AND ORIENTATION OF FIXTURE HEADS FOR EACH POLE LOCATION. PROVIDE CORRESPONDING MOUNTING ARMS AND ADAPTERS AS NEEDED.

C. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR VOLTAGE DROP INFORMATION. PROVIDE LOW VOLTAGE WIRING AS REQUIRED TO NOT EXCEED MANUFACTURER'S MAXIMUM VOLTAGE DROP.

D. WHERE LED TAPE LIGHT IS SPECIFIED WITH A HOUSING, PROVIDE ALL NECESSARY HARDWARE FOR A COMPLETE INSTALLATION

LUMINAIRE SCHEDULE

PANEL

EX2

FLA

	Name: E Location: B Supply From: Mounting: S Enclosure: N Notes:)	Volts: 120/208 Wye Phases: 3 Wires: 4							A.I.C. Rating: EXISTING Mains Type: MCB Bus Rating: MCB Rating: 200 A							
CKT Circuit Description Notes			Trip	Poles	Α(VA)	В (VA)	C (VA)	Poles	Trip	Notes	Circuit Description		СКТ	
1	EXISTING LOAD		100	3	1000	720					1	20		REC BRE	AK W107	2	
3							1000	360			1	20			AK W107	4	
5									1000	672	1	20			E DISPOSAL	6	
7	RTU UV LIGHTS		20	1	48	1260					1	20		MICROW		8	
9	EXISTING LOAD		20	2			1000	900			1	20		REFRIGE		10	(1)
11									1000	720	1	20		DRINKIN	G FOUNTAIN	12	(1)
13						540					1	20		REC IT W	/104	14	ľ
15	Rec CORR. W100		20	1			900	1440			1	20		COPIER		16	
17										540	1	20			Y/MAIL W105	18 20	
19	SPARE		20	1	0	1080					1	20			EC OFFICE W103		
21	SPACE						0	720			1	20			OFFICE W101	22	
23	SPACE								0	900	1	20		REC COF	RR. W100	24	
25	SPACE				0	0								SPACE		26	
27	SPACE						0	0						SPACE		28	
29	SPACE								0	628	1	20		LTG		30	
31	SPACE				0	0								SPACE		32	
33	SPACE						0	0						SPACE		34	
35	SPACE								0	706	1	20		LTG		36	
37	SPACE				0	0								SPACE		38	
39	SPACE						0	0						SPACE		40	
41	SPACE								0	720	1	20		REC JC.	W109	42	
			Total	Load:	464	8 VA	632	AV C	6886	3 VA							
			•	Total	39) A	55	iΑ	60	Α							
.oac	Classification		Con	nected	Load	Den	nand F	actor	Den	Demand Load				Panel	Totals		
_tg				1382 V	A	•	125.00	%	1	1728 V	Ά						
Rec				10800 V	/A		96.30%			0400 \	/A	1	Total Cor	nn. Load:	17854 VA		l
Kitch	ea			672 VA	١		100.00	%		672 V	4				17800 VA		
	•											Tot		Current:			
														Current:			
												i Ulai	Demanu	Surrent.	70 A		

	Name: E	X2 (EXIS	TING)												
	Location: B	REAK W1	07				Volts:	120/2	08 Wy	е		A.	I.C. Rati	ng: EXIST	ΓING	1
	Supply From:						hases:							pe: MCB		
	Mounting: S					,	Wires:	4					Bus Rati			
	Enclosure: N	EMA 1										M	ICB Rati	ng : 200 A		
	Notes:										ı			1		
CKT	•	Notes	-	Poles	•	VA)	В (VA)	C (VA)	Poles		Notes		it Description	CKT
1	EXISTING LOAD		40	3	1000	1000					3	40		EXISTING	G LOAD	2
3							1000	1000								4
5									1000	1000						6
7	EXISTING LOAD		40	2	1000	1000					2	40		EXISTING	G LOAD	8
9							1000	1000								10
11	EWH-1 (RELOCATED)		20	1					1500	89	1	20			DRR. W110	12
13	REC CONF. ROOM W111		20	1	720	0					1	20		SPARE		14
15	REC FILES W114		20	1			1260	0			1	20		SPARE		16
17	REC CORR. W110		20	1					900	720	1	20		Rec OFFI	CE W113	18
19	REC OFFICE W115		20	1	1080	0					1	20		SPARE		20
21	EXTERIOR LTG		20	1			576	0			1	20		SPARE		22
23	RECIRC. PUMP		20	1					120	0	1	20		SPARE		24
25	SPARE		20	1	0	1000					2	20		EXISTING	G LOAD	26
27	SPARE		20	1			0	1000								28
29	SPARE		20	1					0	900	1	20		Rec OFFI	CE W112	30
31	SPARE		20	1	0	0					1	20		SPARE		32
33	SPACE						0	0			1	20		SPARE		34
35	SPACE								0	0	1	20		SPACE		36
37	SPACE				0	0					1	20		SPACE		38
39	SPACE						0	0			1	20		SPACE		40
41	SPACE								0	0	1	20		SPACE		42
		<u>'</u>	Total	Load:	6800) VA	6836	6 VA	6229	9 VA						
				Total	57	7 A	58	3 A	52	2 A	J					
oac	d Classification		Con	nected	Load	Den	nand F	actor	Den	nand I	_oad			Panel	Totals	
_tg				576 V	4	,	125.00°	%		720 V	4					
Vtr⊦	ltr			1589 V	Ά	1	100.00	%	•	1589 V	Ά	7	Total Co	nn. Load:	19865 VA	
Rec				5580 V	Ά	,	100.00%			5580 V	Ά		Total	Demand:	20009 VA	
												Tot	al Conn	. Current:	55 A	
												Total	Demano	Current:	56 A	
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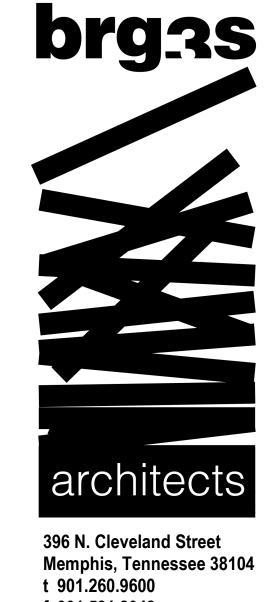
WIRE SIZE

2 #12, #120

2 #12, #12G

DISC. TYPE | AMP RATING / FUSE SIZE

NEMA 5-20R



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SSR Smith Seckman Reid, Inc.

MARK DATE DESCRIPTION
REVISIONS
CLIENT

REMARKS

VFD = VARIABLE FREQUENCY DRIVE INT = INTEGRAL DISCONNECT

TG = MOTOR RATED TOGGLE SWITCH

REMARKS

CP = CONTROL PANEL

CONDUIT SIZE

1/2"

MATA HEADQUARTERS
1370 LEVEE RD,
MEMPHIS, TN. 38108

1364 N WATKINS
PACKAGE 1 RENOVATION

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DRAWING TITLE

Project Number 05.14.2021

ELECTRICAL DETAILS & SCHEDULES

