JD USA, LAKELINE MALL, STORE #1526

JD SPORTS USA.
3308 NORTH MITTHOEFFER ROAD,
INDIANAPOLIS, IN 46235
USA
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SITE LOCATION:

JD USA
11200 LAKELINE MALL DRIVE, CEDAR PARK, TX, 78613, UNIT M02A
STORE #1526

DRAWING ISSUE

DRAWING STAGE: SD ISSUE
DRAWN BY: TW
CHECKED BY: IT
ISSUE DATE: 09/25/2025
GRADE: STREAMLINE - SINGLE COLOR KIT

GOVERNING CODES

BUILDING	2021 INTERNATIONAL BUILDING CODE WITH LOCAL AMENDMENTS
MECHANICAL	2021 INTERNATIONAL MECHANICAL CODE WITH LOCAL AMENDMENTS
PLUMBING	2021 INTERNATIONAL PLUMBING CODE WITH LOCAL AMENDMENTS
ELECTRICAL	2020 NATIONAL ELECTRICAL CODE WITH LOCAL AMENDMENTS
FIRE	2021 INTERNATIONAL FIRE CODE WITH LOCAL AMENDMENTS
FUEL/GAS	2021 INTERNATIONAL FUEL GAS CODE WITH LOCAL AMENDMENTS
ENERGY	2021 INTERNATIONAL ENERGY CONSERVATION CODE WITH LOCAL AMENDMENTS

BUILDING SUMMARY

RENTAL SPACE	M02A	
TYPE OF CONSTRUCTION	TYPE II-B - SPRINKLERED	
OCCUPANCY TYPE	MERCANTILE	
TENANT STORE SPACE AREA:	6315 sq.ft.	587 m. sq.

DESIGN OCCUPANCY LOAD

FLOOR	USE	TOTAL S.F.	OCCUPANT LOAD FACTOR (SF/OCC)	OCCUPANT LOAD
GROUND FLOOR	SALES AREA (GROSS):	3507	60	59
	ACCESS. FITTING ROOM (GROSS):	120	60	2
	HALLWAY (GROSS):	312	300	2
	ACCESS. RESTROOM (GROSS):	74	1 PER	1
	STOCKROOM (GROSS):	2079	300	7
	MANAGER'S OFFICE (GROSS):	75	150	1
	STAFF AREA (GROSS):	148	15	10
GROSS LEASEABLE SPACE:	PERIMETER LEASE LINE	6315.00		82

OCCUPANT LOAD	82
GOVERNING BUILDING CODE	2021 INTERNATIONAL BUILDING CODE
JD SPORTS CODE OF CONDUCT	PER GENERAL NOTES
LANDLORD'S APPROVAL	N/A
SCOPE OF WORK	INTERIOR ALTERATIONS TO 11200 LAKELINE MALL DRIVE, CEDAR PARK, TX 78613, UNIT M02A TO INCLUDE ARCHITECTURAL, RACKING, MECHANICAL, ELECTRICAL, AND PLUMBING. THE FOLLOWING SCOPE OF WORK WILL BE ISSUED AS A SEPARATE PERMIT: -FIRE SPRINKLER ALTERATIONS -FIRE ALARM -SIGNAGE
PLUMBING FACILITIES	WATER CLOSET REQUIRED: 1 PER 500 WATER CLOSET PROVIDED: 1 LAVATORY REQUIRED: 1 PER 750 LAVATORY PROVIDED: 1 (RESTROOM FOR EMPLOYEES AND CUSTOMERS) SERVICE SINK REQUIRED: 1 SERVICE SINK PROVIDED: 1 DRINKING FOUNTAIN REQUIRED: 1 PER 1,000 DRINKING FOUNTAIN PROVIDED: 1 IBC 2021 403.2: SEPARATE FACILITIES NOT REQUIRED IN M-OCCUPANCIES WITH MAXIMUM OCCUPANT LOAD IS 100 OR FEWER.

PROJECT CONTACTS:

ARCHITECT:
MCG ARCHITECTURE
ADDRESS: 7100 E. PLEASANT VALLEY ROAD, SUITE 320, CLEVELAND, OH 44131
ARCHITECT OF RECORD: BRIAN BOWLES
CONTACT: JORGE CALDERON (PRINCIPAL)
ADDRESS: 1501 WEST FOUNTAINHEAD PARKWAY, SUITE 321, TEMPE, AZ 85282
PHONE: (602) 813-0779
EMAIL: JCALDERON@MCGARCHITECTURE.COM

PROJECT MANAGER:
FIRM: JD PLC.
NAME: JEFF FORNEY
EMAIL: JFORNEY@JDNORTHAMERICA.COM
PHONE: +1 (317) 361-0488

LEAD DESIGNER:
FIRM: JD PLC.
NAME: TENIELE WITTE
EMAIL: TWITTE@FINISHLINE.COM
PHONE: (317) 794-5219

MECHANICAL ENGINEER:
FIRM: ACIES
NAME: CARSON POON
EMAIL: CARSONP@ACIES.NET
PHONE: (408) 522-5255 EXT. 202

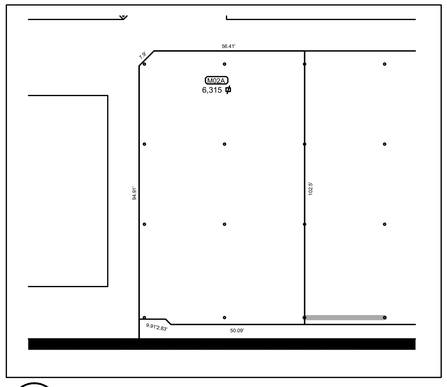
ELECTRICAL ENGINEER:
FIRM: ACIES
NAME: RIZALINO DE GUZMAN
EMAIL: RIZALINO@ACIES.NET
PHONE: (408) 522-5255 EXT. 134

PLUMBING ENGINEER:
FIRM: ACIES
NAME: CARSON POON
EMAIL: CARSONP@ACIES.NET
PHONE: (408) 522-5255 EXT. 202

LANDLORD:
SIMON PREMIUM OUTLETS
60 COLUMBIA ROAD
BUILDING B, 3RD FLOOR
MORRISTOWN, NJ 07960 USA
PHONE: (973) 228-6111

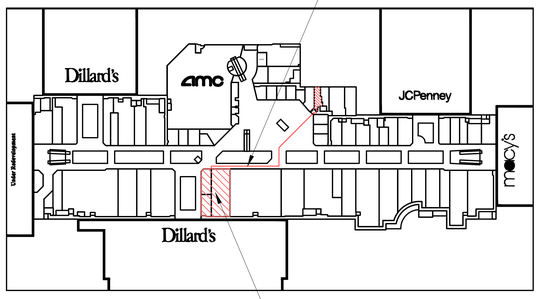
TENANT COORDINATOR:
NAME: ROBERT KROM
EMAIL: ROBERT.KROM@SIMON.COM
PHONE: (973) 364-6552

LEASE OUTLINE DRAWING (LOD):



NORTH

MALL/SITE PLAN:



NORTH

GENERAL SYMBOLS

LEASE LINE
CENTERLINE
100 ROOM — ROOM NUMBER / ROOM NAME
A-### — DETAIL NUMBER / SHEET NUMBER
A-### — ELEVATION NUMBER / SHEET NUMBER
A-### — SECTION / DETAIL NUMBER / SHEET NUMBER
X — PARTITION TYPE
— DOOR NUMBER
— KEY NOTE
SURFACE FINISH INFO — FINISH TAG
— FIXTURE TAG
FINISH FLOOR X'-X" AFF — ELEVATION DATUM
POINT OF BEGINNING
1 — REVISION DELTA

NOT IN CONTRACT
NOT USED
GWB
PLYWOOD
METAL
STONE
SOLID SURFACE
CONCRETE/CEMENT BOARD
THINSET / MORTAR
TILE
WOOD
GLASS / MIRROR
VINYL
RIGID INSULATION
BATT INSULATION
WOOD BLOCKING
SHIM

GENERAL NOTES

ARCHITECTURAL GENERAL NOTES:

1. ALL REQUIRED PERMITS MUST BE OBTAINED FROM THE REQUIRED GOVERNING AGENCIES BEFORE BUILDINGS ARE OCCUPIED.
2. GC SHALL BE RESPONSIBLE FOR AND OBTAIN ALL INSPECTIONS AND LICENSES AND PAY REQUIRED FEES.GC TO INCLUDE INSPECTIONS FOR JURISDICTION AND THIRD PARTY.
3. GC SHALL INVESTIGATE LOCAL CODES AND PROCEDURES AND SHALL COMPLY WITH ALL REQUIREMENTS.
4. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DRAWINGS.
5. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE OWNER, PROJECT MANAGER, AND ARCHITECT'S ATTENTION IMMEDIATELY. FAILURE TO DO SO WILL RESULT IN CHANGE ORDERS BEING COVERED BY THE GC.
6. GC SHALL INSPECT SITE & VERIFY FIELD DIMENSIONS BEFORE COMMENCING CONSTRUCTION. NOTIFY OWNER, PROJECT MANAGER, AND ARCHITECT IMMEDIATELY IF THERE ARE ANY SIGNIFICANT DISCREPANCIES. FAILURE TO DO SO WILL RESULT IN CHANGE ORDERS BEING COVERED BY THE GC.
7. DIMENSIONS SHOWN ON PLANS ARE TO FACE OF EXTERIOR MASONRY, CONCRETE COLUMN OR GRID LINES AND FACE OF GYP. BD. UNLESS OTHERWISE NOTED OR DETAILED.
8. GRILLS, DIFFUSERS, METAL TRIM AND OTHER ACCESSORIES SHALL COME FACTORY FINISHED. IF THEY COME OTHERWISE, GC TO VERIFY FINISH WITH PROJECT MANAGER.
9. GC SHALL, IN THE WORK OF ALL TRADES, PERFORM ANY AND ALL CUTTING, PATCHING, REPAIRING, RESTORING AND THE LIKE NECESSARY TO COMPLETE THE WORK AND TO RESTORE ANY DAMAGED OR AFFECTED SURFACES RESULTING FROM THE WORK OF THIS CONTRACT TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE OWNER. ALL ROOF PATCHING AND REPAIRS SHALL RETURN AREA TO "LIKE NEW" CONDITION & SHALL BE WATER TIGHT. ALL ROOF WORK MUST BE PERFORMED BY THE LANDLORD REQUIRED GC AT TENANT EXPENSE.
10. GC SHALL COORDINATE WORK PERFORMED BY OTHER CONTRACTORS. DISCREPANCIES, IF ANY, SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER, PROJECT MANAGER, AND ARCHITECT FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.
11. ALL REQUEST FOR CLARIFICATIONS MUST BE SUBMITTED TO THE BID ADMINISTRATOR FOR APPROVAL DURING THE BIDDING PROCESS.
12. THE GC SHALL BE RESPONSIBLE FOR THE TIMELY ARRIVAL AND STORAGE OF ANY AND ALL SPECIFIED FINISH MATERIALS, EQUIPMENT, LIGHT FIXTURES AND ANY OTHER SUCH MATERIAL(S) THAT THEY ARE RESPONSIBLE FOR PROVIDING TO BE UTILIZED ON THIS PROJECT. THE GC SHALL NOTIFY THE OWNER, PROJECT MANAGER, AND ARCHITECT IN WRITING WITHIN 48 HOURS OF DATE OF CONTRACT OF THOSE SPECIFIED ITEMS THAT MAY NOT BE READILY AVAILABLE. IF NOTIFICATION IS NOT RECEIVED BY THE ARCHITECT & OWNER, THE GC ACCEPTS RESPONSIBILITY FOR THE PROPER ORDERING AND FOLLOW-UP OF SPECIFIED ITEMS AND WILL PURSUE WHATEVER MEANS NECESSARY AT NO ADDITIONAL COST TO THE OWNER, TO ASSURE AVAILABILITY OF ALL SPECIFIED ITEMS SO AS NOT TO CREATE A HARDSHIP ON THE OWNER & NOT DELAY PROGRESS OF THE WORK. NO EXTENSION OF TIME TO THE CONTRACT WILL BE ALLOWED.
13. MECHANICAL CONTRACTOR SHALL VERIFY EXACT DIMENSIONS WITH EQUIPMENT MANUFACTURERS. MECHANICAL CONTRACTOR SHALL VERIFY ALL SIZES AND LOCATIONS OF DUCT OPENINGS BEFORE INSTALLATION AND VERIFY DISCREPANCIES WITH THE OWNER, PROJECT MANAGER AND ARCHITECT, IF ANY.
14. FOR SIZE AND LOCATIONS OF ALL OPENINGS FOR MECHANICAL DUCT WORK, REFER TO MECHANICAL DRAWINGS.
15. ALL EXTERIOR WALL OPENINGS, FLASHINGS, COUNTER FLASHINGS, COPING AND EXPANSION JOINTS SHALL BE WATERPROOF.
16. CAULKING AND SEALANTS: ALL OPEN JOINTS, PENETRATIONS AND OTHER OPENINGS IN THE BUILDING ENVELOPE SHALL BE SEALED, CAULKED, GASKETED, OR WEATHER STRIPPED TO LIMIT AIR LEAKAGE AND MEET CODE REQUIREMENT.
17. GC SHALL LEAVE THE SITE IN A NEAT, CLEAN AND ORDERLY CONDITION UPON THE CONCLUSION OF HIS WORK ON A DAILY BASIS. ALL WASTE, RUBBISH AND EXCESS MATERIALS SHALL BE REMOVED FROM THE SITE PROMPTLY. THE GC SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL TRASH, INCLUDING OWNER FURNISHED ITEMS AND TRASH GENERATED BY OWNER'S CONTRACTORS FOR THE DURATION OF THE PROJECT.
18. SAFETY: ALL CONDUCT, WORK, EQUIPMENT AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE LATEST SAFETY RULES AND REGULATIONS OF ALL AUTHORITIES AND AGENCIES HAVING JURISDICTION.
19. GC PROVIDED MATERIALS FOUND TO BE DEFECTIVE SHALL BE REMOVED AND REPLACED AT NO ADDITIONAL COST TO THE OWNER.
20. WORK COMPLETED BY OTHERS SHALL BE PROTECTED. IF OTHER TRADES CAUSE ANY DAMAGE IT IS THE RESPONSIBILITY OF THE GC AND THE SAID TRADE TO COORDINATE REPAIRS WITH NO ADDITIONAL COST OR SCHEDULE CHANGES TO THE OWNER.
21. FOR THE PURPOSE OF BIDDING, PROPRIETARY NAMES IDENTIFYING ITEMS OF WORK ARE USED SOLELY TO DESCRIBE THE STANDARD OF THE PROJECT OR THE COLOR OF THE FINISH, UNLESS THE ITEMS OF WORK ARE EXPLICITLY NOTED AS NOT HAVING AN EQUAL.
22. THE GC SHALL REMEDY, WITHOUT COST TO THE OWNER, ANY DEFECTS DUE TO FAULTY WORKMANSHIP.
23. THE GC IS RESPONSIBLE FOR ALL TEMPORARY POWER AS NECESSARY.
24. THE GC SHALL PROVIDE AN ON-SITE SUPERINTENDENT FOR THE DURATION OF THE CONSTRUCTION PROJECT THROUGH THE OPENING OF THE STORE AND ANY LL PUNCH WALK.
25. THE GC SHALL LEAVE NO GAPS AND FILL SOLID TO PIPING AND DUCTWORK TO MAINTAIN THE STRUCTURAL INTEGRITY OF DEMISING WALLS AND MAINTAIN THE MINIMUM FIRE RATING.
26. ALL PAINT SHALL BE AS SPECIFIED, FURNISHED, AND INSTALLED BY GC EXCEPT WHERE OTHERWISE SPECIFIED TO BE BY FIXTURE CONTRACTOR OR OWNER.
27. ALL WORK, MATERIALS, AND EQUIPMENT SHALL BE GUARANTEED FOR A MINIMUM PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. THE GC SHALL PROVIDE THE OWNER WITH ALL EQUIPMENT MANUALS, WARRANTIES AND OPERATING INSTRUCTIONS UPON FINAL ACCEPTANCE.
28. THE GC SHALL BE RESPONSIBLE FOR COORDINATING WITH OWNER ON ALL WORK TO BE PERFORMED BY THE OWNER. ANY POTENTIAL CONFLICTS OR DELAYS CAUSED BY THE OWNER'S SUBCONTRACTORS MUST BE DOCUMENTED IN WRITING TO THE PROJECT MANAGER BEFORE THE DELAY IS ACTUALLY INCURRED FOR IT TO BE CONSIDERED. OTHERWISE THE GC WILL BE RESPONSIBLE FOR MEETING THE SCHEDULE AS OUTLINED IN THE CONTRACT.
29. THE GC SHALL SUPPLY ALL MATERIALS, LABOR AND COORDINATION REQUIRED FOR THE INSTALLATION OF ALL OWNER SUPPLIED ITEMS AS DESCRIBED IN THE DOCUMENTS.
30. THE GC IS RESPONSIBLE FOR ALL FLOOR AND WALL PENETRATIONS FOR ELECTRICAL AND MECHANICAL WORK. ALL SUCH OPENINGS SHALL BE FRAMED AND REINFORCED.
31. THE GC SHALL CLEAN THE SITE OF ALL UNNECESSARY DEBRIS PRIOR TO STARTING CONSTRUCTION, AND SHALL KEEP THE SITE NEAT AND CLEAN AT ALL TIMES. THE GC SHALL CLEAN ALL DOORS, WINDOW GLASS, INTERIOR AND EXTERIOR WALLS, CEILING AND FLOORS, AS WELL AS ALL INSTALLED ITEMS (FIXTURES & FURNITURE) BEFORE VACATING THE PREMISES AND OWNER MOVE-IN.
32. ALL EXISTING FIREPROOFING TO BE MAINTAINED. DAMAGE OR REMOVAL OF FIREPROOFING MUST BE REPAIRED OR REPLACED AT NO COST TO OWNER.
33. THE COMPLETE BID/ PERMIT/ CONSTRUCTION DOCUMENTS FOR THIS PROJECT CONSISTS OF THE ENTIRE TABLE OF CONTENTS. WHICH MUST NOT BE SEPERATED FOR ANY REASON. THE ARCHITECT AND OWNER DISCLAIM ANY RESPONSIBILITY FOR ANY ASSUMPTIONS MADE BY A GENERAL CONTRACTOR OR SUBCONTRACTOR WHO DOES NOT RECEIVE A COMPLETE SET OF DOCUMENTS DURING THE BID AND CONSTRUCTION PHASES.

FIRE PROTECTION SYSTEM GENERAL NOTES:

1. ANY FIRE PROTECTION SYSTEMS SHOWN IN THIS DRAWING SET ARE FOR PERFORMANCE ONLY.
2. GC TO PROVIDE A COMPLETE FIRE PROTECTION SPRINKLER SYSTEM FOR ALL AREAS OF THE SPACE. DRAWINGS SHALL BE PREPARED BY THE SPRINKLER CONTRACTOR WHO SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE LOCAL AND STATE LAWS GOVERNING FIRE RATING AND/OR INSPECTION BUREAU, N.F.P.A. AND INSURANCE ASSOCIATIONS. PREPARE SHOP DRAWINGS AND OBTAIN APPROVAL FROM ALL AUTHORITIES HAVING JURISDICTION. GC SHALL VISIT THE PROJECT SITE TO ASCERTAIN THE EXTENT AND LOCATION OF ALL EXISTING SPRINKLER DROP LOCATIONS (IF ANY). RELOCATE AND/OR ADD SPRINKLER HEADS AS REQUIRED TO PROVIDE A COMPLETE APPROVED SYSTEM. USE L.L. APPROVED SPRINKLER CONTRACTOR.
3. ALL SPRINKLER HEAD LOCATIONS AND ALL FEEDER PIPE LOCATIONS MUST BE COORDINATED WITH THE MEP ENGINEER PRIOR TO BEGINNING WORK. PROVIDE OWNER WITH SHOP DRAWINGS. SPRINKLER HEAD FINISH SHALL BE SCREW-IN TYPE.
4. PROVIDE OCCUPANCY SIGNS CONFORMING TO APPLICABLE BUILDING CODE REQUIREMENTS OR IN ACCORDANCE WITH FIRE MARSHALL REQUEST.
5. PROVIDE EXIT SIGNS IN TYPE, NUMBER AND LOCATION AS SHOWN OR IN ACCORDANCE WITH FIRE MARSHALL REQUEST.
6. PROVIDE FIRE EXTINGUISHERS IN TYPE, NUMBER AND LOCATIONS AS SHOWN ON PLANS AND IN ACCORDANCE WITH FIRE MARSHAL.
7. GC SHALL VERIFY, COORDINATE AND/OR PROVIDE ANY SMOKE DETECTION AND/OR FIRE ALARM CONNECTORS AS SHOWN AND AS REQUIRED BY FIRE MARSHAL.
8. DURING CONSTRUCTION THE GC IS TO PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A WITHIN (75 FT.) FOOT TRAVEL DISTANCE TO ALL PORTIONS OF THE PROJECT ON EACH FLOOR.
9. ALL WOOD CONSTRUCTION IN CAVITIES SHALL BE FIRE RETARDANT TREATED.
8. COORDINATE SPRINKLER DRAIN DOWN WITH LANDLORD AND CONTRACTOR.
10. ANY PAINT USED SHALL BE NON-COMBUSTIBLE OR BE FLAME PROOFED IN AN APPROVED MANNER.
11. ALL REQUIRED EMERGENCY EXITS SHALL HAVE EXIT SIGNS WITH LETTERS SIX (6) INCHES HIGH AND 3/4" WIDE IN CONTRASTING COLORS. SEE PLANS FOR LOCATIONS.

CONSTRUCTION CLASSIFICATION - TYPE II-B

BUILDING ELEMENT	FIRE RATING
STRUCTURAL	0-HR
BEARING WALLS	
EXTERIOR	0-HR
INTERIOR	0-HR
NONBEARING WALLS AND PARTITIONS EXTERIOR	N/A
NONBEARING WALLS AND PARTITIONS INTERIOR	0-HR
FLOOR CONSTRUCTION	
INCLUDING SUPPORTING BEAMS AND JOISTS	0-HR
ROOF CONSTRUCTION	
INCLUDING SUPPORTING BEAMS AND JOISTS	0-HR

DRAWING REGISTER

Delta

Sheet Number	Sheet Title	Rev	Issuance
A00.0	Front Cover		
A00.1	Demise		
A00.2	Schedules		
A00.3	Code Plan		
A00.4	ADA Compliance & Standards		
A00.5	Specifications		
A00.6	Specifications		
A00.7	Specifications		
A00.8	Specifications		
A00.9	JD Sports Standards		
A01.1	Demolitions		
A02.0	Construction Plan		
A02.1	General Arrangement Plan		
A03.1	Merchandise Plan		
A04.1	Reflected Ceiling Plan		
A04.2	Architectural Power Plan		
A05.1	Shopfront		
A05.2	Shopfront		
A05.3	Shopfront		
A05.4	Shopfront Sections		
A05.5	Shopfront Sections		
A05.6	Shopfront Details		
A05.7	Shopfront Details		
A06.1	Internal Elevations		
A06.2	Fitting Room Elevations		
A06.3	Restroom Elevations		
A07.1	Flooring & Finishes		
A08.1	Fixtures and Fittings		
A09.1	Door & Wall Schedule		
A10.1	Staff Area & Office Elevations		
A10.2	Typical Details		
A10.4	Typical Ceiling Details		
A10.5	Typical Ceiling Details		
A10.6	Typical Interior Details		
Mechanical			
M0.1	Mechanical Legend, Notes, & Abbreviations		
M0.2	Mechanical Schedules		
M0.3	Mechanical Specifications		
M2.0	Mechanical Demolition Plan		
M2.1	Mechanical Floor Plan		
M6.1	Mechanical Details		
Electrical			
E-001	Electrical General Information		
E-003	Electrical Specifcations		
E-041	Electrical Compliance Forms		
E-101	Electrical Lighting Plan		
E-201	Electrical Power Plan		
E-401	Electrical 1 Line Diagram & Panel Schedules		
Plumbing			
P-001	Plumbing Notes, Legend, & Fixture Schedules		
P-002	Plumbing Specifications		
P-100	Plumbing Demolition Floor Plan		
P-101	Plumbing Floor Plan		
P-301	Plumbing Details		

BLANK SPACE FOR CITY APPROVAL

PORTFOLIO REFERENCE ONLY

mcgarchitecture.com

CLEVELAND
DENVER
GLENDORA
IRVINE
ORLANDO
PHOENIX
SAN FRANCISCO

Seal:

REGISTERED ARCHITECT
BRIAN BOWLES
No. 29861
STATE OF TEXAS

12-29-2025

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:
JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

FRONT COVER

Sheet #:
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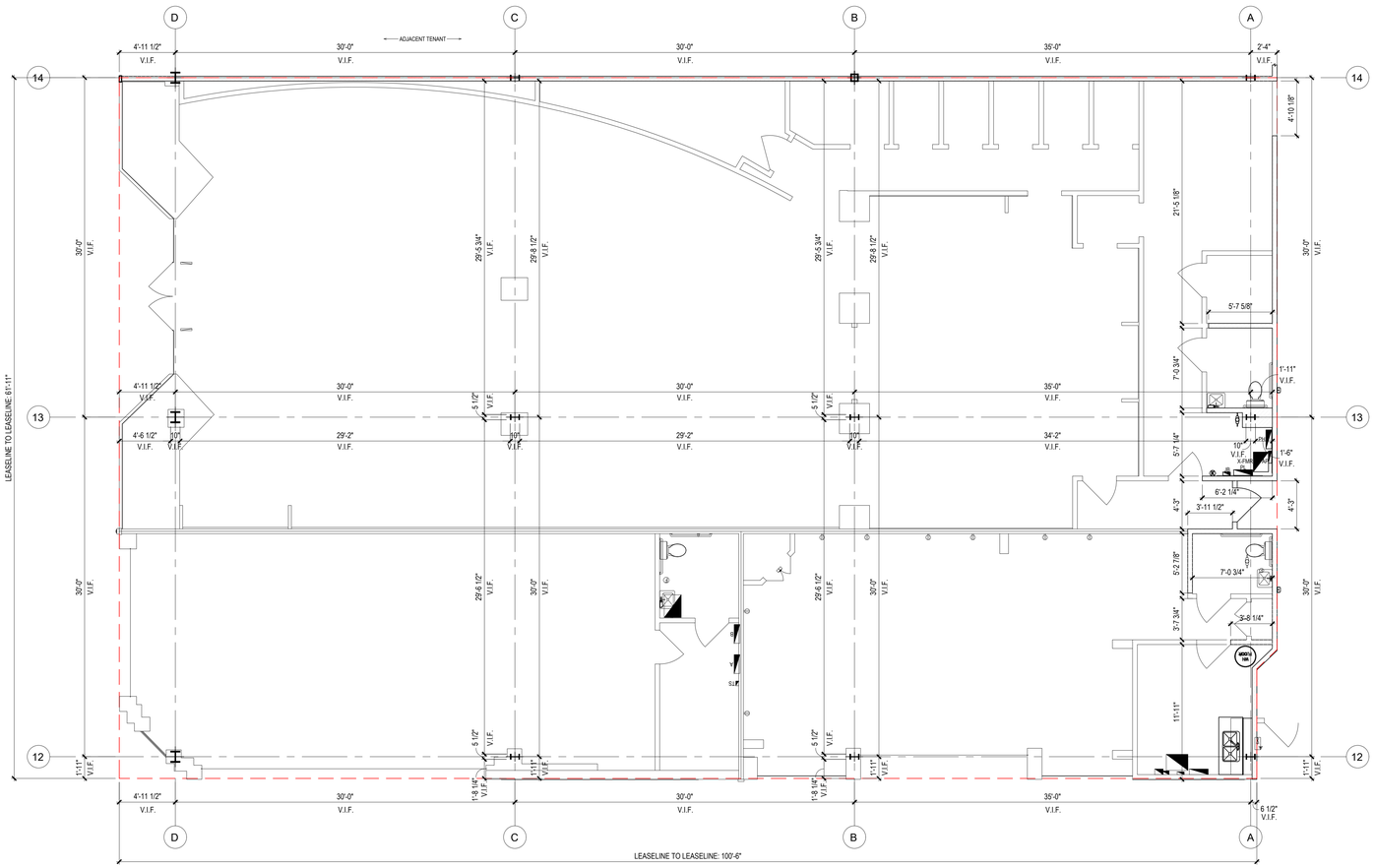
GROSS AREAS	
B	0 sqft
GF	6315 sqft
2	0 sqft
3	0 sqft
Total	6315 sqft



GENERAL NOTE:
GC TO VERIFY ALL GRIDLINE AND OVERALL DIMENSIONS. GC TO ASSESS ALL EXISTING CONDITIONS AND COORDINATE ANY DISCREPENCIES WITH THE ARCHITECT DURING FIRST WEEK OF CONSTRUCTION.

1 DEMISE PLAN
SCALE: 3/16" = 1'-0"

NORTH

mcgarchitecture.com

CLEVELAND
DENVER
GLENDORA
IRVINE
ORLANDO
PHOENIX
SAN FRANCISCO

Seal:

12-29-2025

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

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3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

DEMISE

Sheet #:
A00.1

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RESPONSIBILITY SCHEDULE

NOTES:
1. GC TO VERIFY ALL EXISTING CONDITIONS IN FIELD PRIOR TO STARTING CONSTRUCTION.
2. GC SHALL REVIEW THE DRAWINGS IN THEIR ENTIRETY TO DETERMINE PROJECT SCOPE.

	EXISTING (E)	NOT APPLICABLE (N/A)	FURNISH INSTALL LANDLORD (LL)	FURNISH INSTALL OWNER / TENANT (O)	FURNISH INSTALL GENERAL CONTRACTOR (GC)	REMARKS
GENERAL	E	N/A	LL	O	GC	
BUILDING PERMIT / FEES				●		
INSPECTIONS					●	
INSURANCE					●	
CERTIFICATE OF OCCUPANCY					●	
PROFESSIONAL CLEANING					●	REQUIRED PRE-HANDOVER AND PRE-STORE OPENING
RUBBISH REMOVAL					●	DUMPSTER PLACEMENT TO BE COORDINATED W / LANDLORD. 2 DUMPSTER SWAPS W/O HANDOVER
TEMPORARY UTILITIES				●		GC TO COORDINATE REQUIRED TEMP. UTILITIES
CONSTRUCTION BARRICADE					● ●	
BARRICADE OR WINDOW GRAPHICS				● ●		OWNER PROVIDED / OWNER INSTALLED
FLOOR LEVELING					● ●	V.I.F AND COORDINATE WITH PROJECT MANAGER. PROVIDE FINDINGS WITHIN 48 HOURS POST DEMO OF FLOORING.
SITE WORK	E	N/A	LL	O	GC	
SELECTIVE DEMOLITION OF PARTITION WALLS & FINISHED CEILING					● ●	AS REQUIRED FOR NEW WORK - REFER TO PLANS
SELECTIVE DEMOLITION OF EXISTING LIGHTING AND ELECTRICAL					● ●	AS REQUIRED FOR NEW WORK - REFER TO PLANS
SELECTIVE DEMOLITION OF EXISTING HVAC AND DUCT WORK					● ●	AS REQUIRED FOR NEW WORK - REFER TO PLANS
CONCRETE	E	N/A	LL	O	GC	
CONCRETE SLAB	●					GC TO VERIFY SLAB CONDITION
CUT / PATCH / CORE					● ●	AS REQUIRED FOR NEW WORK - GC TO X-RAY SLAB AS REQUIRED. XRAY REPORT TO BE SENT TO JD PM.
CEMENTITIOUS OVERLAY					● ●	
METALS	E	N/A	LL	O	GC	
METAL STUDS					● ●	
UNISTRUT					● ●	FIELD VERIFY REQUIREMENTS
ACM PANELS WITH GRID PRINT (ACM-1)				●		GC TO PROVIDE MEASUREMENTS AS REQ'D
POWDER COATED BRAKEMETAL (MT-1)				●		GC TO PROVIDE MEASUREMENTS AS REQ'D
DOWNSPOUT SHOT END COVER					● ●	GC TO COORDINATE WITH DOWNSPOUTS VENDOR ABOUT OVERALL SIZE
WOOD & PLASTIC	E	N/A	LL	O	GC	
PERIMETER WALL PANEL FIXTURES				●		● COORDINATE W/ FIXTURE VENDOR. BLOCKING AS REQ'D BY GC.
LOOSE FLOOR FIXTURES				●		● COORDINATE W/ FIXTURE VENDOR
CASHWRAP				●		● COORDINATE W/ FIXTURE VENDOR
FITTING ROOM BENCH				●		● PROVIDED BY FIXTURE VENDOR
SURFACE MOUNTED BLOCKING					● ●	METAL STRAPPING/FIRE RATED BLOCKING ONLY
WALL-MOUNT SHELVING - RECEIVING DESK, MANAGER'S DESK & BATHROOMS					● ●	
MASONITE				● ●		VENDOR TO SUPPLY & INSTALL.
PLYWOOD					● ●	GC TO SUPPLY AND INSTALL ALONG THE HALLWAY AT 4-0" AFF.
THERMAL & MOISTURE PROTECTION	E	N/A	LL	O	GC	
SEALANTS / CAULKING	●				● ●	
WATERPROOFING MEMBRANE		●				
FIREPROOFING / INSULATION / FIRE CAULK	●				● ●	PATCH & REPAIR AS NEEDED. PROVIDE FIREPROOFING AT ALL RATED WALL CONSTRUCTION WHERE INDICATED ON PLANS.
FIRE STOPPING	●				●	GC TO MAINTAIN EXISTING FIRE RATING PER CODE & MEET LANDLORD'S CRITERIA
ROOFING / ROOF REPAIR					● ●	PATCH & REPAIR WORK. GC TO USE LANDLORD'S REQ. VENDOR IF APPLICABLE
DOOR & WINDOWS	E	N/A	LL	O	GC	
HOLLOW METAL DOORS AND FRAMES					● ●	
DOOR HARDWARE					● ●	
OVERHEAD ROLLING GRILLE				● ●		ROLLING GRILLES TO BE SUPPLIED AND INSTALLED BY OWNER'S VENDOR, ALUMATEC.
EXISTING ENTRY DOORS	●					GC TO VERIFY HARDWARE & WORKING ORDER. REPLACE AS NEEDED
LOCK CORES				●		● OWNER SUPPLIED & GC TO INSTALL AND PROVIDE I/CORE HOUSINGS WITH SPECIFIC CAM WHERE NEEDED.
FITTING ROOM DOOR				●		● DOOR AND HINGE PROVIDED BY THE VENDOR. GC TO PROVIDE JAMB AND HEADER. GC TO INSTALL.
FINISHES	E	N/A	LL	O	GC	
TENANT SEPARATION GYP. BD.	●				●	● GC TO PATCH EXISTING AS REQUIRED
TENANT PARTITION GYP. BD.	●				● ●	
WALL BASE					● ●	REFER TO FINISH SCHEDULE
PAINT					● ●	REFER TO FINISH SCHEDULE
RUBBER BASE					● ●	
LVT				●		● GC TO COORDINATE WITH PM ON DYE LOT PLACEMENT
VCT					●	● NEW VCT TO BE INSTALLED IN NEW RESTROOM. REFER TO FLOORING & FINISHES PLAN.
WALK - OFF MAT					● ●	
CERAMIC FLOOR TILES				●		● REFER TO FINISH SCHEDULE
SEALED CONCRETE					● ●	
ACOUSTIC INSULATION ACOUSTIC SEALANT					● ●	
WALL GRAPHIC				● ●		● GC TO PREP WALL AS REQ'D AND COORDINATE WITH GRAPHICS VENDOR
BRICK SLIP VINYL				● ●		GC TO PREP WALL AS REQ'D AND COORDINATE WITH GRAPHICS VENDOR. GC TO FURNISH SEMI GLOSS PAINT TO MATCH EXISTING WALL. AREA MUST BE PAINTED (10) DAYS PRIOR. REFER TO FINISHES FOR PREP INSTRUCTIONS.
MALL FLOORING AT STOREFRONT	●				●	PATCH / REPAIR AS REQUIRED. COORDINATE WITH LL ON MALL TILES
EXTERIOR CONCRETE SIDEWALK AT STOREFRONT	●					LANDLORD TO CLEAN, PATCH, AND REPAIR AS REQUIRED.
TRANSITION STRIPS / REDUCER STRIPS					● ●	
FRP					●	● GC TO PROVIDE FRP FOR NEW WATER FOUNTAIN.
KRYTOX (SHOE)					●	● REFER TO FINISH SCHEDULE
SPECIALTIES	E	N/A	LL	O	GC	
STORE FRONT SIGNS				● ●		GC TO COORDINATE & PROVIDE ELECTRICAL AS REQ'D
SIGN BLOCKING AND ELECTRICAL CONNECTION					●	● GC TO COORDINATE W / VENDOR SHOP DRAWINGS
EAS / AV SYSTEM (SYSTEMS TO BE DETERMINED)					●	● V.I.F. W. CONSTRUCTION & PROVIDE SHOP DRAWINGS FROM VENDOR FOR REVIEW / APPROVAL
FIRE EXTINGUISHER					●	● GC TO VERIFY FINAL QUANTITY & LOCATION W / FIRE MARSHAL
RESTROOM ACCESSORIES					●	● EXISTING ACCESSORIES TO BE REMOVED AND REINSTALLED AFTER ADDITION OF FRP.
STOCK ROOM SHELVING (FIXED)				● ●		GC TO INSTALL AS PER VENDOR REQUIREMENTS. PRICE AS AN ADD/ALT. MOBILE MEDIA TO INSTALL STATIC AND MOBILE
STOCK ROOM SHELVING (MOBILE)				● ●		GC TO COORDINATE INSTALL WITH VENDOR AND PROJECT MANAGER
APPAREL RACKING				●		● GC TO INSTALL AS PER VENDOR REQUIREMENTS
INTERIOR DOOR SIGNAGE (AS REQ'D BY CODE)					● ●	
INTERIOR DOOR SIGNAGE (VINYL)				● ●		VENDOR PROVIDES AND INSTALLS
INTERIOR SIGNAGE (HANGING)- RPS- TEXFLEX				●		●
DIGITAL SCREENS & DIGITAL DISPLAYS				● ●		GC TO PROVIDE BLOCKING, POWER AND DATA AS REQ'D. UNISTRUT/ ALL THREAD/ BRACKET INSTALLATION.
STOREFRONT DIGITAL SCREEN, LED SCREEN FOR BACKWRAP				●		● CASHWRAP / BACKWRAP GC MUST INSTALL PER ESIGN CRITERIA
LIGHT BOXES				●		● GC TO PROVIDE BLOCKING & POWER AS REQ'D. GC TO INSTALL OSM LIGHT BOXES.
STORE SAFE				●		● PM TO COORDIANTE NEW AND/OR RELOCATING W REQ'D POWER AND DATA
FITTING ROOM HOOK				●		●
FITTING ROOM BARS				●		● GC TO PROVIDE BLOCKING AS REQ'D
FITTING ROOM MAGNETS				●		●
FITTING ROOM MIRROR (NON-LIT)				●		● GC TO PROVIDE BLOCKING AS REQ'D. PROVIDE BLOCKING FOR BENCH, AND WING WALLS SUPPORTING FITTING ROOM MODULAR SYSTEM. PROVIDE BLOCKING FOR BENCH, AND WING WALLS SUPPORTING THE FITTING ROOM.
H-WALL MIRRORS				●		●
COLUMN MIRRORS					● ●	
COUNTERTOPS					● ●	(N) COUNTERTOP IN MANAGER'S OFFICE. (E) STAFF AREA COUNTERTOP TO REMAIN. SEE SCHEDULE FOR FINISHES
STAFF ROOM FRIDGE AND MICROWAVE					● ●	BLACK COLORED APPLIANCES
UPPER SHELVES IN STAFF AREA		●				
MANAGER OFFICE SHELVES					● ●	AS PER PLAN
LOCKERS IN STAFF ROOM					● ●	GC TO COORDINATE LOCATION W/ PROJECT MANAGERS. REFER TO OWNER'S SPEC.
COAT HOOKS IN STAFF ROOM					● ●	GC TO COORDINATE LOCATION W/ PROJECT MANAGERS. REFER TO OWNER'S SPEC.
EQUIPMENT	E	N/A	LL	O	GC	
AUDIO HARDWARE				● ●		
AUDIO SYSTEM				● ●		GC TO PROVIDE CONDUIT (ONLY IF REQ'D BY CODE). VENDOR TO PROVIDE SPEAKER WIRE.
CASH REGISTER / COMPUTER SYSTEM				● ●		LOW - VOLTAGE WIRING BY VENDOR
TELEPHONE SYSTEM				● ●		LOW - VOLTAGE WIRING BY VENDOR
NUTECH SECURITY SYSTEM				● ●		WIRING INSTALLED BY VENDOR. CONDUIT (ONLY IF REQ'D BY CODE) FURNISHED & INSTALLED BY E.C.
EAS DEVICES				● ●		WIRING INSTALLED BY VENDOR. CONDUIT (ONLY IF REQ'D BY CODE) FURNISHED & INSTALLED BY E.C.
COUNTWISE TRAFFIC COUNTER SYSTEM				● ●		WIRING INSTALLED BY VENDOR. CONDUIT (ONLY IF REQ'D BY CODE) FURNISHED & INSTALLED BY E.C.
FOOTWEAR ORDER SCREEN (FOS) POLES				●		WIRING INSTALLED BY VENDOR. CONDUIT FURNISHED & INSTALLED BY E.C. POLES BY G.C. TV MOUNTS BE IT
DOWNSPOUTS (SHOT)				● ●		● GC TO COORDINATE WITH VENDOR
MECHANICAL	E	N/A	LL	O	GC	
HVAC UNITS	●		● ●			EXISTING TO REMAIN. REFURBISH AS NEEDED. REFER TO MECHANICAL DRAWINGS.
PLUMBING					● ●	REFER TO PLUMBING DRAWINGS.
FIRE PROTECTION	●				● ●	REQUEST SUBMITTAL
ELECTRICAL	E	N/A	LL	O	GC	
LIGHT FIXTURE	●			●		● GC TO COORDINATE W / REQUIRED VENDOR
LAMPS	●					● RE-LAMP AS REQ'D
ELECTRICAL WORK					● ●	REFER TO ELECTRICAL DRAWINGS
ELECTRICAL PANEL(S)	●				● ●	REFER TO ELECTRICAL DRAWINGS
HIGH VOLTAGE CONDUIT					● ●	REFER TO ELECTRICAL DRAWINGS
LOW VOLTAGE CONDUIT					● ●	GC TO PROVIDE ALL CONDUIT (ONLY IF REQ'D BY 2023 NATIONAL ELECTRICAL CODE) W / PULL STRINGS.
DATA AND LOW VOLTAGE WIRING				● ●		BY VENDOR U.N.O. COORDINATE WITH ITEMS LISTED IN "EQUIPMENT"
LOW VOLTAGE PULL STRING IN CONDUIT					● ●	
FIRE / SMOKE ALARM - REQUEST SUBMITTAL	●				● ●	
POWERED RAIL					● ●	
CCTV WIRING				● ●		CABLING FOR CCTV BY OWNER VENDOR
CCTV HARDWARE				● ●		TERMINATION AND CAMERA INSTALL BY VENDOR
DOORBELL					● ●	EXISTING DOORBELL TO BE REPAIRED OR REPLACED IF NOT WORKING. REFER TO ELECTRICAL PLANS FOR SPEC.
UNISTRUT FOR EAS					● ●	BRACKETS PREFERRED AND BEAM CLAMPS WHEN NEEDED
CLINTON POLES, EAS, CAMERAS, MOTION SENSORS & TRAFFIC COUNTERS				● ●		● EAS CLINTON POLES INSTALLED BY VENDOR. GC INSTALLS CLINTON POLES FOR CCTV AND MOTION DEVICES

OFF-SITE MANUFACTURING	STORE COMPONENT	FURNISHED BY
	YELLOW ILLUMINATED BOXES, SIGN, BACKWRAP/ STOREFRONT SIGNS, LIGHT BOXES, IMAGE BOXES	TDI
	ILLUMINATED STOREFRONT SIGNS, NON-ILLUMINATED STOREFRONT SIGN, AND BACKWRAP SIGN	TDI
	STOREFRONT METALS- MT-1/ACM	TDI
	STATIC/MOBILE SHELVING	MOBILE MEDIA
	DOORS/HARDWARE	GC
	SPEAKERS (LAYOUT)	MOOD MEDIA
	LIGHTING FIXTURES	VILLA
	L-METAL TRIM FOR DIGITAL SCREEN AT BACKWRAP	METAL FRONTS
	FITTING ROOM DOOR AND HINGES	TRIAD
	GLAZING CHANNEL	METAL FRONTS
	DOORS/HARDWARE	GC

2 SUBMITTAL LOG
SCALE: NTS

1. CASHWRAP & BACKWRAP
2. WALL PANEL FIXTURES
3. FLOOR FINISHES
4. LIGHT BOXES
5. WALL COVERING
6. OFFICE DESK

NOTE: GC TO COORDINATE INSTALLATION OF ITEMS LISTED ABOVE WITH OWNER PROVIDED MANUALS AND SHOP DRAWINGS.

1 GC INSTALLED SPECIALTY ITEMS
SCALE: NTS

FEASIBILITY APPROVAL

Department	Initial	Date	Comments
R&M	RM Team	09.10.25	Feedback received. Drawing approved at SD issue.
SLT	SLT	09.23.25	Feedback received. Drawing approved at SD issue.
Design	TW	09.25.25	SD Issue.
Roller Racking	TW	09.25.25	68% Standard Racking, 32% Roller Racking.

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CLEVELAND DENVER GLENDORA IRVINE ORLANDO PHOENIX SAN FRANCISCO

Seal:

12-29-2025

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:
JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

SCHEDULES

Sheet #:
A00.2

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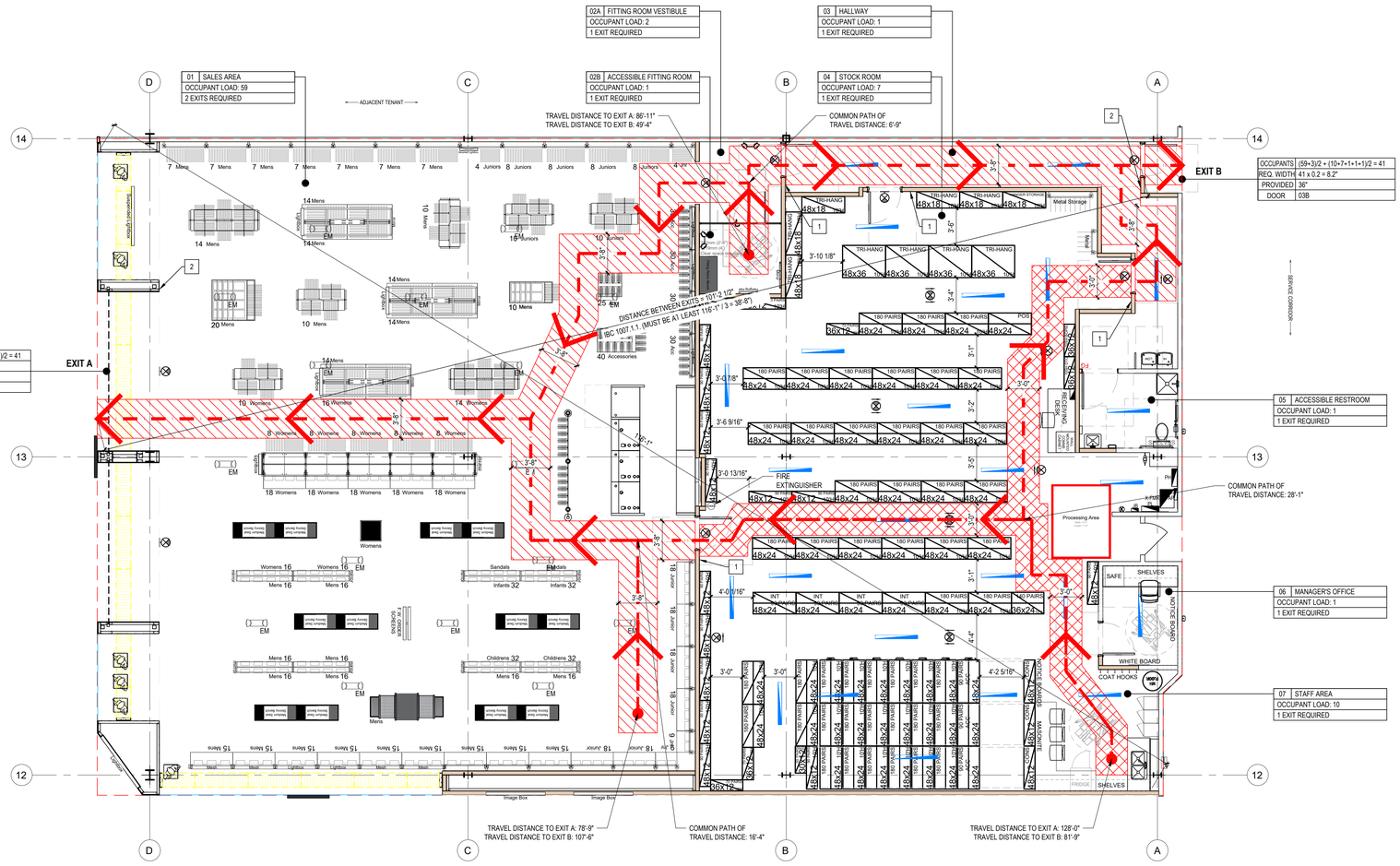

18 CODE PLAN

SCALE: 3/16" = 1'-0"

SYMBOL	DESCRIPTION
	PATH OF TRAVEL
	COMMON PATH OF TRAVEL
44" CLR.	44" CLEAR PATH OF TRAVEL (SALES AREA)
36" CLR.	36" CLEAR PATH OF TRAVEL (STOCK ROOM)
	ILLUMINATED EXIT SIGN WITH 6" HIGH LETTERS AND LISTED/LABELED IN ACCORDANCE WITH UL 924. REFER TO ELECTRICAL DRAWINGS
	FIRE EXTINGUISHER. TYPE 2A10BC PER IFC 906.3 . COORDINATE FINAL LOCATIONS AND QUANTITIES WITH LOCAL FIRE MARSHAL.
EM1 EM	EMERGENCY LIGHTING

17 SYMBOLS LEGEND

1 TACTILE EXIT SIGN TO SAY "EXIT ROUTE" SEE 2/A00.4 FOR MORE INFORMATION.

2 TACTILE EXIT SIGN TO SAY "EXIT" SEE 5/A00.4 FOR MORE INFORMATION.

9 KEYNOTES

USE	TOTAL S.F.	OCCUPANT LOAD FACTOR (SF/OCC)	OCCUPANT LOAD
SALES AREA (GROSS):	3507	60	59
ACCESSIBLE FITTING ROOM (GROSS):	120	60	2
HALLWAY (GROSS):	312	300	2
ACCESSIBLE RESTROOM (GROSS):	74	1 PER	1
STOCKROOM (GROSS):	2079	300	7
MANAGER'S OFFICE (GROSS):	75	150	1
STAFF AREA (GROSS):	148	15	10
GROSS LEASEABLE SPACE:	6315		82

EGRESS

DESCRIPTION	REQUIREMENT	PROPOSED
MIN. # OF EXITS PER OCCUPANT	2	2
MAX TRAVEL DISTANCE	250'-0" WITH SPRINKLER SYSTEM	128'-0" (REFER TO EGRESS PLAN)
HALLWAY WIDTH	44" MIN	44"
MIN. EGRESS WIDTH	82 OCC x 0.2 = 16.4"	180" + 180" + 36" = 396"
COMMON PATH OF TRAVEL DISTANCE	75'-0" MAX.	28'-1" (REFER TO EGRESS PLAN)

5 EGRESS DATA

2021 IBC 1024.2 - WIDTH AND CAPACITY
THE REQUIRED CAPACITY OF EXIT PASSAGEWAYS SHALL BE DETERMINED AS SPECIFIED IN SECTION 1005.1 BUT THE MINIMUM WIDTH SHALL BE NOT LESS THAN 44 INCHES, EXCEPT THAT EXIT PASSAGE WAYS SERVING AN OCCUPANT LOAD OF LESS THAN 50 SHALL BE NOT LESS THAN 36 INCHES IN WIDTH. THE MINIMUM WIDTH OR REQUIRED CAPACITY OF EXIT PASSAGEWAYS SHALL BE UNOBSTRUCTED.

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Seal:

12-29-2025

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:

JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

NORTH

CODE PLAN

Sheet #:

A00.3

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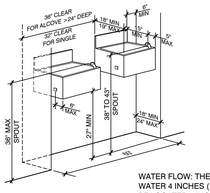


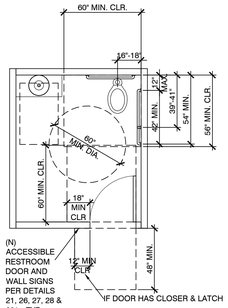
RECESSED FOUNTAINS:

1. WITHIN ALCOVES MINIMUM 18" DEEP & 32" MIN. CLR. WHEN A SINGLE FOUNTAIN IS PERMITTED.

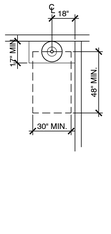
A. CONTRACTOR SHALL USE THE SIZE OF THE WATER FOUNTAIN TO BE USED TO SIZE THE ALCOVE ACCORDINGLY (COMPLYING W/MFR REQUIREMENTS & RECOMMENDATIONS) AS WELL AS COORDINATING W/THE ARCHITECT.

WATER FLOW: THE SPOUT SHALL PROVIDE A FLOW OF WATER 4 INCHES (100 mm) HIGH MINIMUM AND SHALL BE LOCATED 5 INCHES (125 mm) MAXIMUM FROM THE FRONT OF THE UNIT. THE ANGLE OF THE WATER STREAM SHALL BE MEASURED HORIZONTALLY RELATIVE TO THE FRONT FACE OF THE UNIT. WHEN SPOUTS ARE LOCATED LESS THAN 3 INCHES (75 mm) FROM THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 30 DEGREES MAXIMUM. WHERE SPOUTS ARE LOCATED BETWEEN 3 INCHES (76 mm) AND 5 INCHES (127 mm) MAXIMUM FROM THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 15 DEGREES MAXIMUM.

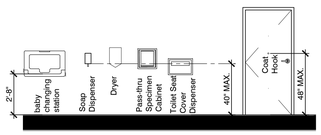
30 DRINKING FOUNTAIN
SCALE: 1/2" = 1'-0"



TOILET ROOM PLAN

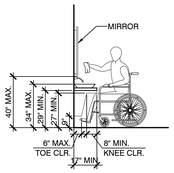


LAVATORY

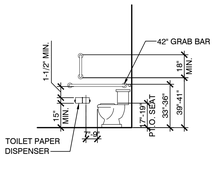


TOILET ACCESSORIES

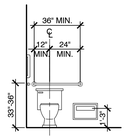
GENERAL NOTE: FOR GRAB BAR MOUNTING SEE DETAIL 16, 22 & 30/- FOR MORE INFO.



LAVATORY CLEARANCES

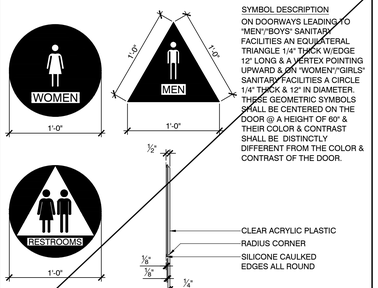


TOILET STALL CLEARANCES



NOTE: THESE FIGURES ARE ILLUSTRATIVE ONLY AND DO NOT DELINEATE THE ONLY MEANS OF COMPLIANCE. REFER TO PLANS FOR EXACT LAYOUT OF TOILET ROOMS.

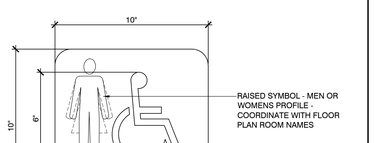
19 TOILET ROOM REQUIREMENTS
SCALE: 1/4" = 1'-0"



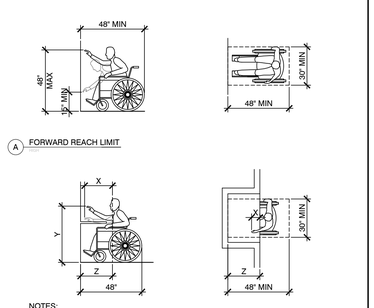
SYMBOL DESCRIPTION

ON DOORWAYS LEADING TO "MEN"/"BOYS" SANITARY FACILITIES AN EQUILATERAL TRIANGLE 1/4" THICK W/EDGE 12" LONG & A VERTEX POINTING UPWARD & ON "WOMEN"/"GIRLS" SANITARY FACILITIES A CIRCLE 1/4" THICK & 12" IN DIAMETER. THESE GEOMETRIC SYMBOLS SHALL BE CENTERED ON THE DOOR @ A HEIGHT OF 60" & THEIR COLOR & CONTRAST SHALL BE DISTINCTLY DIFFERENT FROM THE COLOR & CONTRAST OF THE DOOR.

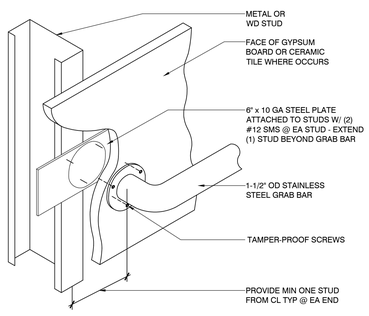
28 ACCESSIBILE SANITARY FACILITIES / RESTROOM SIGNAGE
SCALE: 1-1/2" = 1'-0"



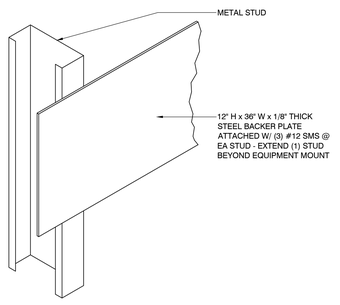
28 ACCESSIBLE SANITARY FACILIITES / RESTOOM SIGNAGE
SCALE: 3 = 1'-0"



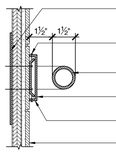
26 ACCESSIBILITY REQUIREMENTS / REACH RANGES
SCALE: 1/4" = 1'-0"



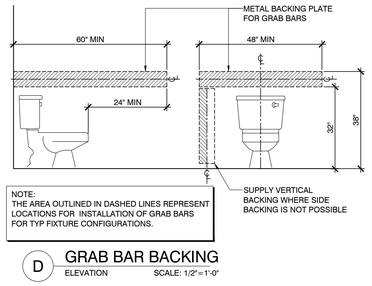
A GRAB BAR @ WALL
ISOMETRIC



B GRAB BAR @ WALL
ISOMETRIC

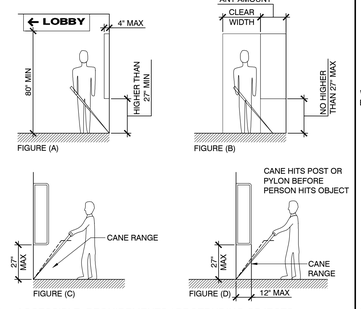


C GRAB BAR @ STUD WALL
SECTION

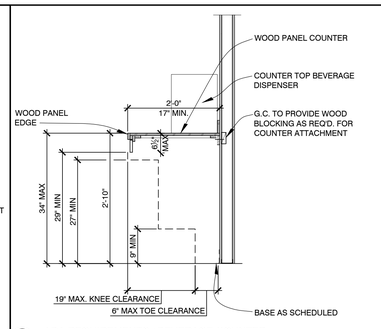


D GRAB BAR BACKING
ELEVATION SCALE: 1/2"=1'-0"

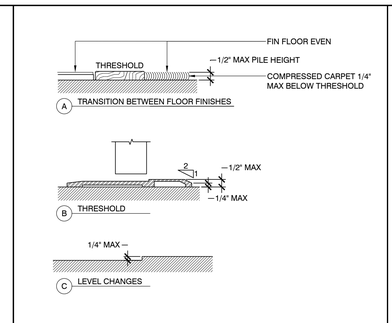
17 GRAB BAR TYPICAL ANCHORS
SCALE: 3 = 1'-0"



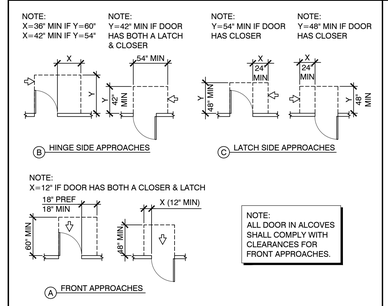
21 ACCESSIBLE REQUIREMENTS / PROTRUDING OBJECTS
SCALE: 1/4" = 1'-0"



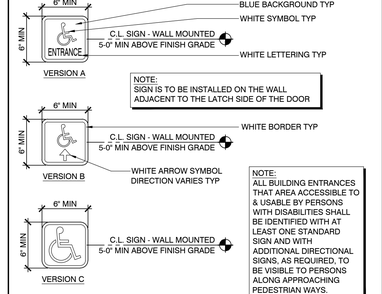
16 ADA REQUIREMENTS / BEVERAGE COUNTER
SCALE: 3/4" = 1'-0"



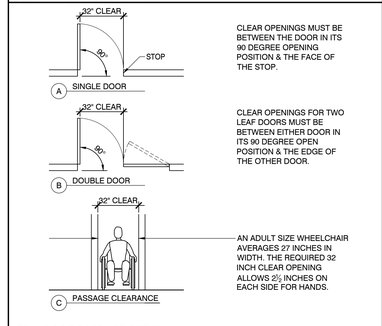
15 THRESHOLD REQUIREMENTS
SCALE: 3 = 1'-0"



14 DOOR APPROACHES
SCALE: 1/8" = 1'-0"



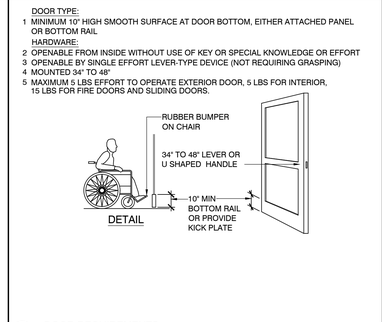
13 ENTRANCE SIGN DETAIL
SCALE: 1-1/2" = 1'-0"



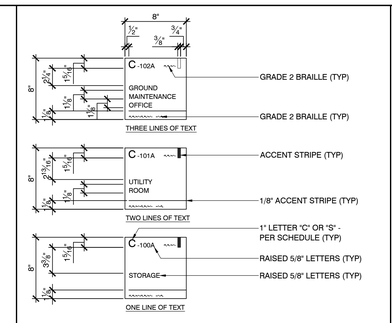
12 DOOR PASSAGE DETAIL
SCALE: 1/4" = 1'-0"

DOOR TYPE:
1 MINIMUM 10" HIGH SMOOTH SURFACE AT DOOR BOTTOM, EITHER ATTACHED PANEL OR BOTTOM RAIL

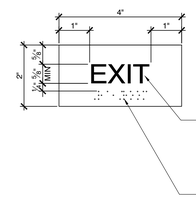
HARDWARE:
2 OPENABLE FROM INSIDE WITHOUT USE OF KEY OR SPECIAL KNOWLEDGE OR EFFORT
3 OPENABLE BY SINGLE EFFORT LEVER-TYPE DEVICE (NOT REQUIRING GRASPING)
4 MOUNTED 34" TO 48"
5 MAXIMUM 5 LBS EFFORT TO OPERATE EXTERIOR DOOR, 5 LBS FOR INTERIOR, 15 LBS FOR FIRE DOORS AND SLIDING DOORS.



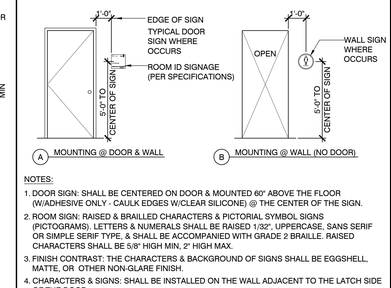
11 DOOR REQUIREMENTS
SCALE: 1/4" = 1'-0"



10 ACCESSIBILITY SIGNAGE / ROOM IDENTIFICATION SIGN
SCALE: 1-1/2" = 1'-0"



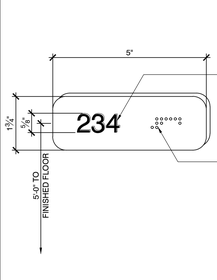
5 ADA SIGNAGE / ROOM IDENTIFICATION SIGNS
SCALE: 3 = 1'-0"



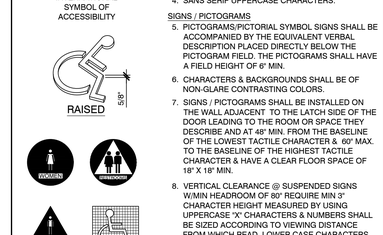
NOTES:

1. DOOR SIGN: SHALL BE CENTERED ON DOOR & MOUNTED 60" ABOVE THE FLOOR (W/ADHESIVE ONLY - CAULK EDGES W/CLEAR SILICONE) @ THE CENTER OF THE SIGN.
2. ROOM SIGN: RAISED & BRAILLED CHARACTERS & PICTORIAL SYMBOL SIGNS (PICTOGRAMS); LETTERS & NUMERALS SHALL BE RAISED 1/32", UPPERCASE, SANS SERIF OR SIMPLE SERIF TYPE, & SHALL BE ACCOMPANIED WITH GRADE 2 BRAILLE. RAISED CHARACTERS SHALL BE 5/8" HIGH MIN, 2" HIGH MAX.
3. FINISH CONTRAST: THE CHARACTERS & BACKGROUND OF SIGNS SHALL BE EGGSHELL, MATTE, OR OTHER NON-GLARE FINISH.
4. CHARACTERS & SIGNS: SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR.

11 ACCESSIBLE SANITARY FACILITIES / MOUNTING HEIGHT SIGNAGE
SCALE: 1/4" = 1'-0"



4 ACCESSIBILITY SIGNAGE / ROOM IDENTIFICATION SIGN
SCALE: 3 = 1'-0"



LETTERS AND NUMBERS:

1. WIDTH OF UPPERCASE "O" 60% MIN. & 110 MAX. HEIGHT OF THE UPPERCASE "I".
2. CHARACTER HEIGHT 5/8" MIN. & 2" MAX.; MEASURED VERTICALLY FROM BASELINE OF CHARACTER
3. CONTRAST CHARACTERS & SYMBOLS WITH BACKGROUND.
4. SANS SERIF UPPERCASE CHARACTERS.

SIGNS / PICTOGRAMS

5. PICTOGRAMS/PICTORIAL SYMBOL SIGNS SHALL BE ACCOMPANIED BY THE EQUIVALENT VERBAL DESCRIPTION PLACED DIRECTLY BELOW THE PICTOGRAM FIELD. THE PICTOGRAMS SHALL HAVE A FIELD HEIGHT OF 6" MIN.
6. CHARACTERS & BACKGROUNDS SHALL BE OF NON-GLARE CONTRASTING COLORS.
7. SIGNS / PICTOGRAMS SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR LEADING TO THE ROOM OR SPACE THEY DESCRIBE AND AT 48" MIN. FROM THE BASELINE OF THE LOWEST TACTILE CHARACTER & 60" MAX. TO THE BASELINE OF THE HIGHEST TACTILE CHARACTER & HAVE A CLEAR FLOOR SPACE OF 18" X 18" MIN.
8. VERTICAL CLEARANCE @ SUSPENDED SIGNS W/MIN HEADROOM OF 80" REQUIRE MIN 3" CHARACTER HEIGHT MEASURED BY USING UPPERCASE "X" CHARACTERS & NUMBERS SHALL BE SIZED ACCORDING TO VIEWING DISTANCE FROM WHICH READ. LOWER CASE CHARACTERS PERMITTED.

SIGN LOCATIONS:

9. ALL ACCESSIBLE ENTRANCES IDENTIFIED WITH MINIMUM OF ONE STANDARD SIGN.
10. ADDITIONAL DIRECTIONAL SIGNS ALONG ACCESSIBLE PATH OF TRAVEL ARE REQUIRED.
11. BUILDINGS REMODELED TO PROVIDE ACCESSIBLE SANITARY FACILITIES FOR PUBLIC USE SHALL HAVE INFORMATION POSTED IN THE LOBBY AS PART OF THE BUILDING DIRECTORY.

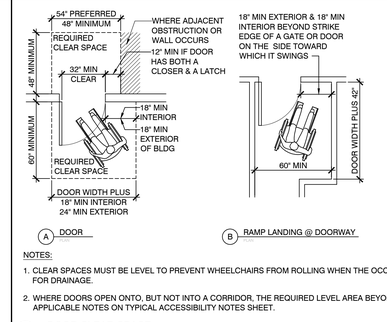
INTERNATIONAL SYMBOL OF ACCESSIBILITY:

12. STANDARD USED TO IDENTIFY ACCESSIBLE FACILITIES.
13. WHITE FIGURE ON BLUE BACKGROUND, COLOR #15090 ON FEDERAL STANDARD # 595A.
14. WHEN ENFORCING AGENCY DETERMINES, IF APPROPRIATE, SPECIAL DESIGNS AND COLORS MAY BE APPROVED.

BRAILLE:

15. USE CONTRASTED GRADE 2 SHALL COMPLY WITH **ICC A117.1.**
16. BRAILLE SHALL BE POSITIONED BELOW THE CORRESPONDING TEXT IN A HORIZONTAL FORMAT, FLUSH LEFT OR CENTERED. IF TEXT IS MULTI-LINED, BRAILLE SHALL BE PLACED BELOW THE ENTIRE TEXT. BRAILLE SHALL BE SEPARATED 3/8" MIN. & 1/2" MAX. FROM ANY OTHER TACTILE CHARACTERS & 3/8" MIN. FROM RAISED BORDERS.

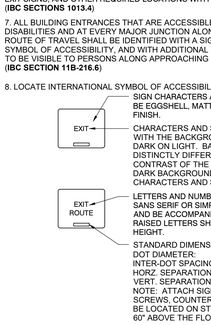
7 ACCESSIBILITY SIGNAGE / SIGNS & PICTOGRAMS
SCALE: 3/4" = 1'-0"



NOTES:

1. CLEAR SPACES MUST BE LEVEL TO PREVENT WHEELCHAIRS FROM ROLLING WHEN THE OCCUPANT RELEASES THE WHEEL GRIPS TO REACH FOR THE DOOR. 1/4" PER FOOT IS ALLOWED FOR DRAINAGE.
2. WHERE DOORS OPEN ONTO, BUT NOT INTO A CORRIDOR, THE REQUIRED LEVEL AREA BEYOND THE DOORS MAY BE A MINIMUM OF 48". FOR ADDITIONAL INFORMATION, REFER TO APPLICABLE NOTES ON TYPICAL ACCESSIBILITY NOTES SHEET.

1 DOOR CLEAR SPACE
SCALE: 1/4" = 1'-0"



2 SIGNAGE FOR ENTRY / EXIT
SCALE: 1/2" = 1'-0"

8. LOCATE INTERNATIONAL SYMBOL OF ACCESSIBILITY ON MAIN ENTRY.

1. ACCESSIBLE ENTRANCES - ACCESSIBLE BUILDING ENTRANCES ARE REQUIRED TO BE IDENTIFIED WITH AT LEAST ONE STANDARD SIGN AND ADDITIONAL DIRECTIONAL SIGNS, AS REQUIRED, TO BE VISIBLE TO PERSONS ALONG APPROACHING PEDESTRIAN WAYS (DECAL) .

2. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY IS REQUIRED TO IDENTIFY FACILITIES THAT ARE ACCESSIBLE. THE SYMBOL A WHITE FIGURE ON A BLUE BACKGROUND (COLOR NO. 15090) IN FEDERAL STANDARD 595A. WHEN IT IS DETERMINED BY THE ENFORCING AGENCY THAT SUCH SIGNS AND IDENTIFICATION PROVIDE ADEQUATE DIRECTION.

EXCEPTION:
A SPECIAL SIGN OR IDENTIFICATION WHICH COMPLEMENTS DECOR OR A UNIQUE DESIGN MAY BE APPROVED

3. BRAILLE - CONTRACTED GRADE 2 BRAILLE IS TO BE USED WHEREVER BRAILLE IS REQUIRED. DOTS ARE .01 INCH ON CENTERS IN EACH CELL WITH .02 INCH SPACE BETWEEN CELLS. DOTS ARE RAISED A MINIMUM OF 0.025 INCH ABOVE THE BACKGROUND.

4. CHARACTERS - LETTERS AND NUMBERS ON SIGNS ARE TO HAVE A WIDTH TO HEIGHT RATIO OF BETWEEN 3:5 AND 1:1 AND A STROKE WIDTH TO HEIGHT RATIO BETWEEN 1:5 AND 1:10. WHEN RAISED OR RECESSED CHARACTERS OR SYMBOLS ARE USED THEY ARE TO BE RAISED OR RECESSED A MINIMUM 1/32 INCH AND ARE TO BE SANS SERIF TYPE. RAISED CHARACTERS ARE TO BE AT LEAST 5/8 INCH HIGH AND RECESSED CHARACTERS AND SYMBOLS ARE TO HAVE A 1/4 INCH MINIMUM STROKE WIDTH.

5. PROVIDE SIGN OVER MAIN EXIT DOOR--"THIS DOOR MUST REMAIN UNLOCKED DURING BUSINESS HOURS."

6. PROVIDE TACTILE EXIT SIGNS AT EACH GRADE LEVEL EXTERIOR EXIT DOOR BY STAIRWAY, FROM INTERIOR ROOMS OR AREAS TO A CORRIDOR OR HALLWAY THAT REQUIRES VISUAL EXIT SIGNS, AND OTHER REQUIRED LOCATIONS WITH MANDATED WORDING. **(IBC SECTIONS 1013.4)**

7. ALL BUILDING ENTRANCES THAT ARE ACCESSIBLE TO AND USABLE BY PERSONS WITH DISABILITIES AND AT EVERY MAJOR JUNCTION ALONG OR LEADING TO AND ACCESSIBLE ROUTE OF TRAVEL SHALL BE IDENTIFIED WITH A SIGN DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY, AND WITH ADDITIONAL DIRECTIONAL SIGNS, AS REQUIRED, TO BE VISIBLE TO PERSONS ALONG APPROACHING PEDESTRIAN WAYS. **(IBC SECTION 11B-216.6)**

8. LOCATE INTERNATIONAL SYMBOL OF ACCESSIBILITY ON MAIN ENTRY.

mcgarchitecture.com
CLEVELAND DENVER GLENDORA IRVINE ORLANDO PHOENIX SAN FRANCISCO

Seal:

12-29-2025

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:

JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

ADA COMPLIANCE AND STANDARDS

Sheet #:

A00.4

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SPECIFICATION NOTES

DIVISION 0 – CONTRACT REQUIREMENTS

005000 CONSTRUCTION CONTRACT

A. Furnished by the Owner under separate cover.

B. References to the "Owner" shall mean Finish Line.

007200 GENERAL CONDITIONS

A. Use General Conditions agreed to by the Owner and the General Contractor.

B. References to the "Owner" shall mean Finish Line.

DIVISION 1 – GENERAL REQUIREMENTS

011000 SUMMARY

A. Definitions:
1. Landlord: Building Owner.
2. Owner: JD Sports

B. Special Work Requirements:
1. Obtain a copy of, and comply with, all design and construction requirements of the Landlord. Notify Owner immediately in the event that Landlord's requirements conflict with requirements of the Contract Documents.
2. Use of Premises:
   a. Coordinate use of premises under Owner and Landlord requirements, and in accordance with the requirements of jurisdictional code authorities.
   b. Limit use of premises to only those areas involved in the construction operations and as required for access.
   c. Occupancy Requirements: Adjacent tenant spaces may be occupied. Cooperate with the Owner and the Landlord to minimize conflict, and to facilitate the operations of adjacent tenants.
   d. Perform work during normal working hours, unless directed otherwise by the Owner.

C. Separate Work: Certain items will be furnished and installed by others. These items are noted on the Drawings as "By Owner's Vendor' or "(FOIO)". Perform work so as to allow the performance of work by other contractors.

D. Items Furnished by Owner for Installation by the Contractor:
1. Certain items will be furnished for installation by the Contractor. These items are noted on the Drawings as (FOIC).
2. Coordinate work to facilitate installation of these items.
3. Finish Line Responsibilities:
   a. Arrange for and deliver shop drawings, product data, and samples to Contractor.
   b. Arrange and pay for product delivery to site.
   c. Arrange for replacement of damaged, defective, or missing items.
   d. Arrange for manufacturers' warranties, inspections, and service.
4. Contractor's Responsibilities:
   a. Review shop drawings, product data, and samples.
   b. Schedule and coordinate deliveries; receive and unload products at site; inspect for completeness, for damage, jointly with Finish Line.
   c. Handle, store, protect, install and finish products.
   d. Repair or replace items damaged by Work of this Contract.
   e. Coordinate and provide for the installation of all fixture requirements including power and data, within all new or renovated areas.

E. Applications for Payment: Submit Applications for Payment in accordance with the General Conditions for Construction.

F. Coordination:
1. Coordinate work to assure efficient and orderly sequence of installation of construction elements, with provisions for accommodating items installed later.
2. Coordinate space requirements for mechanical and electrical systems. Make runs parallel with lines of building.
3. Execute cutting and patching to integrate elements of the Work. Remove ill-timed and defective work and replace with new work conforming to the requirements of the Contract Documents.
4. Seal penetrations through floors, walls, and ceilings.

G. Applicable Codes: Conform to the codes listed on the Drawings.

H. Request for Information:
1. A Request for Information (RFI) is a request from the Contractor directed to the Architect for clarification, interpretation, or direction regarding the Work as described by Contract Documents.
2. Coordinate and submit in timely manner so as not to impede delivery, work, and other conditions that may be detrimental to construction progress.
3. Use Architect's "Request for Information" form or another form as approved by the Architect.
4. Allow sufficient time in construction schedule for Architect's response to the RFIs.

I. Existing Utilities:
1. The Architect or the Owner assumes no responsibility for the completeness or accuracy of existing utility line information. Utility information shall be verified by the Contractor.
2. Unless otherwise required, maintain all existing utilities undisturbed during progress of work.
3. Where temporary utility shutdown is required for the performance of the work, schedule and coordinate with the Owner/Landlord Building Manager. Should the Contractor in the performance of the work, disturb, disconnect or damage any existing utilities required to remain in service, all expenses arising from such disturbance, replacing or repair thereof shall be borne by the Contractor.
4. Maintain and operate utilities systems to assure continuous service, except as otherwise approved by the Owner/landlord Building Manager. Give minimum 7 days notice of proposed utility shutdowns.
5. Obtain approval from the Owner/landlord Building Manager prior to cutting any utility lines.

J. Additional Conditions:
1. Scope of Work: As defined in the Agreement and indicated on the Drawings. Unless otherwise noted or directed, items scheduled and items indicated in the technical specifications shall only be required to the extent indicated on the Drawings. This shall not be interpreted to exclude accessories and procedures related to those items, as specified, and as necessary to complete the work.
2. Definitions:
   a. Where "as shown," "as detailed," or words of similar meaning are used, references to the Drawings are intended unless stated otherwise.
   b. Where "as directed," "as required," "as selected," "approved" or words of similar meaning are used, it shall be understood that "by the Architect" follows unless stated otherwise.
   c. "As necessary" shall be understood to mean "as necessary for a complete and fully functioning installation in accordance with requirements of the Contract Documents, applicable codes and jurisdictional requirements, and accepted trade practices.
   d. "Furnish" means "Contractor shall procure, pay for, and deliver"; "install" means "Contractor shall set in position and connect or adjust for final use"; "provide" means "Contractor shall furnish and install."
   e. Where "includes," is used, it shall be understood that items following may not be a complete list of components to the exclusion of other items not listed, but which may be reasonably inferred as necessary to complete the work.

012200 UNIT PRICES

A. Summary: Identification and description of Unit Prices.

B. General Requirements:
1. Unit Prices will be exercised at the option of the Owner.
2. Prices stated for each Unit Price shall include all costs for the construction covered by the Unit Price including overhead and profit.
3. Unit Prices shall be valid for the duration of the Contract.
4. The Construction indicated on the drawings constitutes the Basic Bid Work. Amounts stated for unit prices constitute the amounts to be added or subtracted to the Contract Price for changing the Basic Bid Work.

C. Unit Price Descriptions:
1. No. 1 – Preparation of Existing Gypsum Board Surfaces for Installation of Wallcovering:
   a. Item: Where existing gypsum board wall surfaces are textured or unsuitable for installation of new wallcovering, state the price for one of the following at Contractors Option:
      1) Skim coat existing wall surfaces.
      2) Install 1/4 inch thick gypsum board over existing wall surfaces. Finish to a level specified in Section 092900 for wallcovering substrates.
   b. Unit Measure: Per square foot.
2. No. 2 – Leveling of Existing Floor Slab:
   a. Item: State the price for leveling and filling existing exposed floor substrate to specified tolerance, in accordance with section 035416. Price shall include labor, materials, and equipment necessary to recondition the floor including preparation, priming, and filling as specified.
   b. Unit Measure: Per square foot to a depth of 1/4 inch.
3. No. 3 – Tile Floor Crack Isolation Membrane:
   a. Item: State the price for providing crack isolation membrane as specified in Section 093000.
   b. Unit Measure: Per square foot.

012300 ALTERNATES

A. Summary: Administrative and procedural requirements for Alternates.

B. Alternate:
1. An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
   a. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

C. Procedures:
1. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
   a. Costs listed for each alternate include costs of related coordination, modification, or adjustment.
   b. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
   c. Include as part of each alternate, Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar cost related to products and materials.
   d. Include as part of each alternate, if acceptance will add to or decrease Contract Time.
2. Execute accepted alternates under the same conditions as other work of the Contract.

D. Schedule of Alternates:
1. Alternate No. 1 – Polished Cementitious Topping with ~~Painted~~ Floor ~~Marking Tape~~ Stripes.
   a. Base Bid: Polished concrete floor with ~~painted~~ floor ~~marking tape~~ stripes.
   b. Alternate: In the event polishing of existing concrete floor is not feasible, install polishable cementitious topping in accordance with Section 033536, and floor marking tape striping in accordance with Section 109013. Locations as indicated. ~~Paint cementitious topping floor stripes as indicated.~~
2. Alternate No. 2 – Tile Flooring with ~~Painted Cementitious Topping~~ Floor ~~Marking Tape~~ Stripes.
   a. Base Bid: Polished concrete floor with ~~painted~~ floor ~~marking tape~~ stripes.
   b. Alternate: In the event concrete floor polishing is not allowed by landlord, install floor tile in accordance with Section 093000 and ~~cementitious topping floor stripes in accordance with Section 035416. Paint cementitious topping floor stripes as indicated~~ floor marking tape striping in accordance with Section 109013. Locations as indicated.

013119 PROJECT MEETINGS

A. Pre-construction Meeting:
1. Prior to commencing construction, administer a preconstruction meeting to discuss the methods proposed to perform the work. Schedule meeting a minimum of 10 days prior to construction unless otherwise approved or indicated.
2. Address scheduling, utility shutdown times, demolition procedures, protective enclosures, barricading, construction sequencing and phasing, work times, access, security, and all other construction issues which would affect the operation, use, and appearance of the building.

B. Progress Meetings: Attend progress meetings called by Architect and/or Finish Line throughout the progress of the work.

C. Pre-installation Meeting: Convene a pre-installation meeting when it is specified for a certain portion of the Work. Require attendance of entities directly affecting, or affected by, the work of the Section.

D. General Contractor is responsible for all Meeting Agenda, Meeting Minutes, and distribution thereof.

013300 SUBMITTAL PROCEDURES, SCHEDULES AND SHOP DRAWINGS

A. Submittal Procedure:
1. Identify deviations from Contract Documents. Leave space for Contractor and Architect review stamps.
2. Review and sign each submittal prior to submittal to Architect. Unsigned submittals may be returned without review.
3. Transmit each item to Architect unless directed otherwise. Include project name, Contractor name, subcontractor or supplier name, and drawing sheet, detail number, or specification section number corresponding to the submittal as appropriate.
4. Make submittals as required to cause no delay in the Work. Allow sufficient time for possible revision and resubmittal of rejected submittals.
5. Revise and resubmit rejected submittals as required to obtain approval.

B. Progress schedule, vendor schedule, submittal schedule, Schedule of values, and progress photos: Submit the following to Architect and Owner.
1. Progress Schedule: Submit horizontal bar chart with separate bar for each major trade or operation, identifying first work day of each week.
2. Vendor Schedule: Submit list of Owner's Vendors indicating name of Vendor, Contact Name and Phone Number, and date of arrival on site.
3. Submittal Schedule: Submit List of Submittals required by Specifications and indicate Specification Section and Date required for submittal. Allow time for Architect and Consultant reviews and resubmittal as may be required.
4. Schedule of Values:
   a. Submit typed schedule on form as approved by Architect.
   b. Subdivide into each major trade or category of work.
   c. Include a line item amount for each Allowance if applicable.
   d. Include in each line item a directly proportional amount of Contractor's overhead and profit.
5. Submit progress, vendor and value schedules within 5 days after Notice to Proceed.
6. Submit revised schedules with each Application for Payment; revised schedules shall reflect changes, including change orders, since previous submittal.
7. Submit progress photos weekly using template provided by the architect or as approved.

C. Shop Drawings, Product Data and Samples:
1. Shop Drawings:
   a. Submit shop drawings in the form of electronic copies or 2 legible hard copies.
   b. Unless specified otherwise, shop drawings shall show quantities, materials, details of assembly, adjacent construction, dimensions, and other appropriate information to fully illustrate the work.
2. Product Data:
   a. Submit product data in the form of electronic copies or 2 legible hard copies. Mark each copy to identify applicable products, models, options, copies or 2 legible hard copies. Mark each copy to identify applicable products, models, options, and other data; supplement manufacture's standard data to provide information unique to the work.
3. Samples:
   a. Submit samples as specified in the technical sections.
   b. Include identification on each sample giving full information.
   c. Submit three samples, one of which will be retained by Architect, unless indicated otherwise in the technical section.

D. Certificates: Submit the original signed version to Architect.

014500 QUALITY CONTROL

A. Standards:
1. Comply with industry standards except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.
2. Perform work to meet or exceed the requirements of applicable codes, ordinances, laws, regulations, safety orders, and directives from authorities having jurisdiction over the work.
3. Accessibility: Equipment, accessories and work shall be in accordance with Federal, State and local codes with respect to handicap accessibility, and with The Americans with Disabilities Act (ADA). The more restrictive code shall apply.
4. Perform work with persons qualified to produce workmanship of specified quality.
5. Install products in accordance with the manufacturer's recommendations. Where conflict exists between manufacturer's recommendations and the specified requirements, notify Architect immediately.

B. Examination Prior to Installation:
1. Prior to starting work of each trade or location, carefully inspect existing conditions and installed work of other trades, and verify that such work is compatible and complete to the point where new work may properly commence. Notify the Architect of conditions detrimental to the proper and timely completion of the work.
2. Do not begin installation until unsatisfactory conditions are resolved. Beginning work constitutes acceptance of existing site conditions and responsibility for defective installation caused by prior observable conditions.

C. Mock-Ups:
1. Provide mock-ups as specified in the individual specification sections. Provide additional mock-ups, as required by the Architect, until approval is obtained.
2. Do not proceed with subsequent work until approval of the mock-up is obtained.
3. Approval of mock-up shall be the standard of workmanship and materials for the remainder of the work similar to the mock-up.
4. Maintain mock-up in approved condition, until directed otherwise.
5. Unless specified otherwise, remove mock-up at completion, when directed by Architect.
6. Schedule to permit time for review and adjustment as necessary.

D. Testing Laboratory Services:
1. Where the scope of the work requires, the Owner will arrange for the services of an Independent testing laboratory to inspect and test the Work to verify compliance with the Contract Documents. Reports of all inspections and tests shall be submitted to the Architect for review.
2. Contractor's Responsibilities:
   a. Cooperate with testing laboratory personnel, and furnish access, tools, samples, certifications, test reports, design mixes, equipment, storage, and assistance as requested by the testing laboratory.
   b. Notify Architect and testing laboratory 48 hours prior to expected time for operations requiring inspection and testing. When tests or inspections cannot be performed, through the fault of the Contractor, reimburse the Owner for the additional costs incurred.
   c. Remove and replace all work found not complying with the Contract Documents. Remedies shall be in accordance with the Contract Documents and code requirements.
   d. If initial tests and inspections indicate deficient work, the Contractor shall reimburse the Owner for the costs of all subsequent tests and inspections related to the deficiency.
   e. All damage which may occur to the work as a result of normal testing operations shall be repaired to match surrounding surfaces.
   f. Schedule testing and inspection so that the work of testing and inspection personnel will be as continuous and brief as possible.
   g. Reimburse the Owner for travel and lodging expenses incurred for testing and inspection services performed outside a radius of 100 miles of the site.
3. Tests and inspections shall be in accordance with code requirements.
4. Contractor's Convenience Testing: Inspection and testing performed exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor.

015000 TEMPORARY FACILITIES AND CONTROLS

A. Temporary Utilities: Provide temporary utilities, services, and construction as required to perform the work. Coordinate temporary facilities and controls with Owner and the Landlord.
1. Electricity: Connect to existing service. Owner will pay costs of energy used. Take measures to conserve energy.
2. Lighting: Permanent lighting may be used during construction. Provide additional temporary lighting as required.
3. Heating and Ventilation: Permanent system may be used. Owner will pay for the cost of energy used. Take reasonable measures to conserve energy.
4. Telephone.
5. Water: Utilize existing facilities. Owner will pay for water used. Take reasonable measures to conserve water.
6. Sanitation: Existing facilities may be used by construction personnel prior to project turnover, subject to thorough cleaning and repair as necessary to leave facilities in new condition. When existing facilities are not operational or accessible, provide suitable portable sanitation units.

B. Controls:
1. Dust Control: Provide temporary enclosures as required to prevent penetration of dust into occupied areas separate from work areas, to prevent damage to operating systems and components, and to create environmental conditions necessary for the proper installation of materials and systems.
2. Safety Barriers: Provide and maintain, all lawful and necessary barricades, railings, lights, warning signs, signals, and precautions as may be required to safeguard persons from injury.
3. Smoking: Smoking shall be prohibited in all interior spaces.
4. Noise Control: Provide necessary precautions as required by the Landlord.
5. Construction Cleaning:
   a. Control accumulation of waste materials and rubbish. Periodically dispose of off-site.
   b. Maintain areas free of dust and other contaminants during finishing operations.
   c. Clean and sweep site daily.

C. Maintain pedestrian and vehicular access to site and within site to provide uninterrupted access.

D. Fire Safety: Comply with applicable provisions of the IFC for fire safety during demolition and construction operations.

E. Temporary Construction:

1. Obtain approval from Architect and/or Landlord for modifications to existing systems or facilities not indicated.
2. Barricade:
   a. Provide full height barricade to separate construction area from exterior or mall concourse.
   b. Barricade shall conform to Landlord's requirements. When no requirements exists, the barricade shall conform to the following:
      1) Barricade shall consist of metal stud framing and gypsum board or plywood toward the public side. Paint to match color as directed by the Landlord.
      2) Provide locked door if required for access to the construction area. If a door is required, it must swing in.
   c. Remove barricade in accordance with Section 017700.
3. Remove temporary systems or facilities when use is no longer required. Clean and repair damage caused by installation or use of temporary systems or facilities.

F. Protection: Protect existing and new construction from damage caused by construction operations; provide protective covering to protect surfaces, as appropriate.

016000 PRODUCT REQUIREMENTS

A. Delivery, Storage, and Handling:
1. Transport and handle products by methods to avoid product damage.
2. Manufactured procucts shall remain in manufacturer's containers or packaging, stored in accordance with Manufacturer's instructions, until ready for installation.

B. General Installation Requirements
1. Install each product in accordance with the product manufacturer's instructions, as supplemented by the specifications. Where manufacturer's installation tolerances are special or more restrictive than those specified, manufacturer's instructions shall govern.
2. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by Contract Documents.
3. Distribute copies of manufacturer's instructions to parties involved in the installation.
4. Maintain one set of complete instructions at the job site during installation and until completion.
5. Protect installed components and products from damage. Components and products which are damaged shall be replaced or repaired to like-new condition.

C. Product Options
1. Product Specified by Reference Standards or by Description Only. Provide product meeting those standards.
2. Product Specified by Naming One or More Manufacturers with an "or approved" provision: Use specified product or submit a request for substitution in accordance with the specified substitution requirements. When approved a substitute product may be used.
3. Product Specified by Naming One or More Manufacturers Without Provision for Substitution: No substitution will be allowed, except as specified under the Article on Substitutions.
4. Basis of Design
   a. Specifications naming products as the "Basis of Design" are not intended to imply preference and should not be construed as restrictive. The product named as basis of design is deemed suitable for use as indicated with regard to characteristics such as function, performance, size, color, texture, pattern, strength, and configuration.
   b. Where other manufacturers are named, they are deemed to make products of comparable quality with similar characteristics. There is no implied warranty that standard products of other named manufacturers are suitable for the work without modification. The Contractor is responsible for assuring coordination of the product as if no "basis of design" had been named.
   c. Unless otherwise specifically noted, where salient attributes are listed with a numerical value, without qualification such as "maximum," "minimum," or statement of an acceptable range, then values within 10 percent of those specified will be considered acceptable.
   d. Products of manufacturers not named in the specification may only be submitted subject to product substitution requirements described elsewhere in these specifications.

D. Product Substitutions:
1. Intent: The Contract Documents require consistent character and quality of design. All components, including visible items of mechanical and electrical equipment, have been selected for a coordinated design in relation to the overall project appearance, function, and performance. Proposed substitutes which in the Architect's opinion would be out of character, obtrusive, or otherwise inconsistent with the design intent, will not be approved.
2. Furnish products specified, except where "or approved" is used; substitute products may be submitted to Architect for approval.
3. Substitutions will be considered only for the following reasons:
   a. A product becomes unavailable due to no fault of the Contractor.
   b. Subsequent information or changes indicate that the specified product will not perform as intended.
   c. A substitute product will be in Owner's best interest by providing a cost savings or schedule benefit.
4. Document each substitution request on substitution request form as supplied by the Architect. Provide complete data substantiating compliance of proposed substitution with contract documents.
5. A substitution request constitutes a representation that Contractor:
   a. Has investigated proposed product and has determined that it meets or exceeds performance of the specified product, in all respects.
   b. Shall provide the same warranty for substitution as for specified product.
   c. Will coordinate installation and make other changes which may be required for work to be complete in all respects.
   d. Waives claims for additional costs that may subsequently become apparent.
   e. Agrees to pay all costs of redesign related to the substitution.
6. Substitutions will not be considered when they are indicated or implied on shop drawings or product data submittals.
7. The Architect will determine acceptability of proposed substitution, and will notify Contractor of acceptance or rejection within a reasonable time.

E. Bidder-Designed Items:
1. Items designated in the Contract Documents as "Bidder-Designed" are documented as necessary to describe design intent. The Contractor shall be responsible for the final design, engineering, permitting (if required by law), furnishing, and installation of the complete item, including components required to yield a fully functioning, structurally stable, and warrantable item in compliance with documented design intent, and applicable building codes.
2. Except as specifically indicated, the Contractor shall be responsible for interface of bidder designed items with other components of the project, including connection to utilities if appropriate.
3. Submittals for each bidder designed item shall indicate the scope of the bidder design work in detail sufficient to clearly describe interface with other items or work.

017329 CUTTING AND PATCHING

A. Repair existing surfaces and construction as necessary to make Work complete, with all components matching and consistent.

B. Provide a smooth, even, and invisible transition to new construction. When finished surfaces are cut so that an invisible transition with new work is not possible, terminate existing surface along the nearest break line, joint, or corner.

C. Major patching procedures shall be reviewed with the Building Owner, prior to proceeding.

D. Existing Sprayed Fireproofing: Patch and repair existing sprayed fireproofing to match the fire rating of the existing construction. Hand patch using UL-approved materials and procedures.

E. Cutting of Concrete or Masonry:
1. Concrete and masonry shall be sawcut or core-drilled.
2. Limit trenches cut in slabs-on-grade to a maximum width of 2 feet, unless approved otherwise by the Architect.

F. Patching of Concrete Slabs on Grade:
1. Ensure that below grade construction is complete in the slab area to be patched.
2. Replace existing subgrade materials to match existing. Replace and make continuous vapor barriers and other similar construction disturbed or damaged during demolition or construction operations.
3. Recompact existing subgrade to 95 percent of maximum dry density as determined by ASTM D1557.
4. Drill and epoxy reinforcing dowels as indicated on the Structural Drawings.
5. Unless otherwise indicated, patch slab with concrete having a minimum 28-day strength of 3000 psi; maximum water/cement ratio of 0.42. Use superplasticizer admixture as necessary for workability.
6. Finish concrete to match adjacent surfaces.

G. Patching of Abandoned Core Drills:
1. Patch with non-shrink grout.
   a. Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; minimum compressive strength of 7000 psi in 28 days. Conform to the following:
      1) Grout shall be non-bleeding.
      2) ASTM C1107, Grade B.
      3) Fluid consistency (flow cone) as measured by 25-30 second flow per ASTM C939 at temperature extremes or 40 degrees F and 90 degrees F.
      4) Working time not less than 30 minutes at both of the noted temperature extremes.
2. Trowel flush with adjacent concrete surfaces. Match adjacent finish.

017700 CLOSEOUT PROCEDURES

A. Final Cleaning:
1. Thoroughly clean all surfaces prior to final acceptance.
2. Remove waste and surplus materials, rubbish, and construction facilities from the site.

B. Closeout Procedures:
1. Comply with procedures stated in General Conditions of the Contract for Substantial and Final Completion.
2. Owner's Review and Punchlist:
   a. One week after substantial completion, the following shall be complete and ready for Owner's inspection:
      1) All Work under this contract except minor punchlist items.
      2) Completed storefront and entrance doors including application of protective Kraft paper on all glazing.
      3) Subject to compliance with Landlord's requirements, removal of temporary construction barricades.
3. Submit all certificates of approval issued by the governing authorities, including, without limitation, the following:
   a. Certificate of Occupancy.
4. Prior to final payment, submit the following affidavits using the forms listed below:
   a. Contractors Affidavit of Payment of Debts and Claims AIA Document G706.
   b. Consent of Surety for Final payment AIA Document G707.
   c. Contractors lien release, and lien releases from each subcontractor; Contractors Affidavit of Release of Liens AIA Document G706A.
5. Submit final Application for Payment identifying total adjusted contract sum, previous payments, and sum remaining due.
6. All Closeout Procedures shall be complete within 45 calendar days of store opening.

C. Project Recrord Documents:
1. Maintain a complete set of record drawings which clearly and neatly indicate exact installed locations of items that will be concealed in the work such as conduit, piping, ducts, reinforcing, mechanical and electrical equipment, and similar items. Show all changes from the contract documents, and all uncovered existing conditions that will be subsequently concealed.
2. Record drawings shall be used for no other purpose and shall be stored separately from those used for construction.
3. Documents shall be in same format as the Construction Documents.
4. Keep documents current; do not permanently conceal any work until required information has been recorded.
5. At Contract Closeout, submit documents with transmittal letter containing date, Project title, Contractor's name and address, list of documents, and signature of Contractor.
6. Provide Record Drawing Storage Tube constructed from 4" plastic pipe with end caps and provision for wall mounting. Mount on wall in Stockroom at location as directed by the Architect.

D. Submittals: in addition to submittals required by the Conditions of the Contract, and submittals required by Section 013300, furnish submittals required by governing authorities, and submit a final statement of accounting giving total adjusted Contract Sum, previous payments, and sum remaining due.

E. Operation and Maintenance Data (two copies required, separate binders):
1. Submit complete data for each piece of equipment and component used in the work.
2. Submit operation and maintenance data for mechanical and electrical systems.
3. Arrange in a binder with a section for each system.
4. Include copies of submittals where submittals are required by individual sections.
5. Provide one separate copy of the following items, punched for insertion in Owner's 3-ring binder. Submit to store Manager:
   a. Contractor's Phone List
   b. Alarmed Panic Exit Hardware Instructions (use and battery replacement)
   c. Lighting Controls O & M Manual (lighting time clock programming)
   d. HVAC O & M Manual (thermostat controls and time clock programming)

F. Warranties, Guarantees and Bonds: (two copies required, separate binders):
1. Submit manufacturer warranties.
2. Furnish written guarantee, from each subcontractor performing work covered by the additional guarantee requirements specified in the technical sections. Unless specified or approved otherwise, the guarantee shall commence on the date of Substantial Completion. Each guarantee shall be signed, and:
   a. State that the work under guarantee was installed in accordance with the Contract Documents.
   b. State the work will be free from defects in workmanship and material for the period of time specified.
   c. State that defects will be promptly repaired without additional cost to the Owner.

G. Spare Parts and Maintenance Materials: Furnish products, spare parts, and maintenance materials in quantities specified in each Section, in addition to that used for construction of Work. Coordinate with Owner; deliver to Project Site and obtain receipt prior to final payment.

DIVISION 2 – EXISTING CONDITIONS

024119 SELECTIVE DEMOLITION

A. Demolish in an orderly and careful manner as required to accommodate the work. Where demolition exceeds that indicated, verify such demolition with the Architect prior to proceeding.

B. Protect existing structural members.

C. During demolition operations, notify the Architect of all conditions which differ substantially from those indicated, specified, or expected. Perform no demolition in such areas, unless approved by the Architect.

D. Provide bidder designed temporary shoring as required to support existing construction against movement or overload during demolition operations, until permanent supports are in place.

E. Except where noted or specified otherwise, take possession of materials being demolished, and immediately remove from site in accordance with Section 015000, and local disposal and recycling requirements. Do not overload existing construction to remain with demolished materials.

F. Carefully remove, store, and protect all materials and components to be reused.

G. Where possible without damage, remove, store, and protect existing materials and components not noted for removal, which if removed, would facilitate the new construction and reconditioning.

H. Carefully remove, protect, and turn over as directed, materials and components claimed by the Owner for salvage. Prior to demolition, contact the Owner to determine which items will be claimed.

I. Where cut edges of the existing construction will be visible in the completed work, cut in uniform straight lines. Concrete and masonry shall be saw cut or core drilled.

J. Repair all demolition performed in excess of that required, at no additional cost to the Owner.

K. Utility Line Demolition:
1. Verify locations of existing utilities prior to demolition.
2. Abandoned underslab conduit shall be cut off below the finished surface line, and all conductors shall be removed. Patch and fill the opening flush with the finish.
3. Abandoned electrical conductors shall be removed back to the branch circuit panel, unless indicated otherwise. Abandoned conduit which is exposed and readily accessible shall be removed. Leave abandoned conduit which is concealed in existing construction to remain.
4. Abandoned piping which is exposed and readily accessible shall be removed. Leave abandoned piping which is concealed in existing construction to remain. Cap all exposed ends.
5. Indicate location of disconnected utilities on the Project Record Drawings.

L. Leave site in a condition acceptable to the Owner at all times. Remove demolished materials from site daily as work progresses. Do not overload existing structure with demolished materials.

M. Removal of Bonded Floor Finishes:
1. Scrape, grind and otherwise remove existing floor finish and bonding materials as necessary to receive new floor finishes.
2. Prepared surface shall present a uniform flat surface ready to receive the new floor finishes free of telegraphing and other surface irregularities.
3. New floor finishes shall not be installed over existing floor finish materials unless approved otherwise.

DIVISION 3 – CONCRETE

033536 POLISHED CONCRETE FINISHING

A. Summary: Bonded abrasive polishing of existing concrete slabs as follows:
1. Surface preparation.
2. Application of liquid concrete hardener and densifier, and stain.
3. Grind and polish of floor to desired finish.

B. Related Sections:
1. 012300 - Alternates: Work described in this section.

C. System Description:
1. Multistep mechanical processes and accessories to provide a complete system and achieve specified finish.
2. Mechanical bonded abrasive grinding and polishing equipment, concrete repair and topping materials, concrete treatment densifiers.

D. Quality Assurance:
1. Qualifications of Installers: Use only installers certified by the manufacturer and who are thoroughly trained by the manufacturer, skilled in the work, and who are completely familiar with the systems specified.
2. Submit to Owner: Written certification, signed by manufacturer's representative, stating applicator as trained and qualified to perform work of this Section using proposed manufacturer's products, including qualification criteria.

E. Mock-up:
1. Provide minimum of 60 square feet of mock-up polished slab at location designated by the Architect, using same equipment and installer's personnel who will perform the actual work.
2. Mock-up to demonstrate surface finish, color variations, and level of workmanship. Include saw cut joint with joint filler as specified.
3. Approved mock-up may be retained and incorporated into the finished work.

F. Pre-Installation Conference:
1. Administer prior to starting the work.
2. Attendance:
   1) General Contractor.
   2) Polishing system installer.
   3) System manufacturer's representative.
   4) Other parties affected by the work.
3. Agenda:
   a. Review Contract Document requirements.
   b. Review requirements for assessment of sound substrate and subsequent remediation in the case of sub-standard conditions.
   c. Review requirements for environmental conditions and storage of materials.
   d. Review system manufacturer's preparation and application instructions including, but not limited to, the following:
      1) Condition of existing concrete floor and suitability for grinding and polishing.
      2) Application of cementitious polishable toping system if required.
      3) Details of each step of grinding, honing, and polishing operations.
      4) Application of liquid applied products.
      5) Protecting concrete floor surfaces until polishing begins.
      6) Sealing and protecting polished concrete floors after polishing is completed.
   e. Review conditions or techniques which would prevent the satisfactory application of the polishing system.
4. Reports: Record discussions, including decisions and agreements reached, and furnish copy of record to the Owner and each party in attendance.

G. Project Conditions:
1. Comply with the polishing system manufacturer's written instructions for age of cured concrete, substrate temperature and moisture content, ambient temperature and humidity, ventilation, and other conditions affecting the floor finish.
2. Close areas to all traffic during and after polished concrete system application for the time period recommended by the system manufacturer.
3. Do not apply product when air, surface, or material temperatures are expected to fall below 40° F (4° C) within four hours of expected application.
4. Do not use on highly dense or non-porous surfaces.
5. Limit and control damage from excessive dust caused by grinding/polishing procedure.
6. Properly dispose of collected dust from polishing.

H. Warranty: Furnish manufacturer's standard warranty.

I. Maintenance:
1. Extra Materials: Furnish 5 gallons of the polishing system manufacturer's recommended compatible cleaning agent to onsite Owner personnel.

J. Approved Polishing System Manufacturer:
1. CTS Cement Manufacturing Corporation (Cypress CA; 800-929-3030). No Substitutions allowed.

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CLEVELAND DENVER GLENDORA IRVINE ORLANDO PHOENIX SAN FRANCISCO

Seal:

REGISTERED ARCHITECT PRINCIPAL MICHAEL J. GRIFFIN STATE OF TEXAS
12-29-2025

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:

JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

SPECIFICATIONS

Sheet #:

A00.5

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K. Materials:
1. Stain: AmeriPolish, Inc. (Lowell, AR; 800-592-9320) "Surelock Dye" system as furnished by system manufacturer; color "Gray", diluted 4:1 with Acetone or Water. and accepted from mock-up.
2. Hardener/Densifier: Low-VOC silicate as furnished by system manufacturer and accepted from mock-up.
3. Finishing Sealer: System manufacturer's recommended topical sealer; low-VOC, non-film forming, stain resistant.
4. Polishing Overlay Topping System (ALTERNATE #1):
   a. Topping: CTS Cement, "TRU-PC" polished concrete self-leveling topping; natural color (no added dye or pigment).
   b. Primer: CTS Cement, "Rapid Set TXP – TRU Epoxy Primer"; two component, moisture and alkali insensitive, epoxy primer.
5. Surface Patching and Repair Material (when required for slab repair under Work of this Section): As recommended by the polishing system manufacturer.
6. Polished Concrete Flooring Transition:
   a. Transition Type – Portland Cement Underlayment Ramp:
      1) Materials used to install the ramp are as follows in ascending order from slab to top of ramp.
         a) Substrate Primer: Ardex BACA or EP-2000.
         b) Ramp Mortar Material: Ardex ERM Exterior Ramp Mortar.
         c) Acrylic Sealer: Ardex Concrete Guard.
      2) Provide tinting pigments to custom-match the finish color of the product.

L. Equipment:
1. Field Grinding and Polishing Equipment:
   a. A multiple head, variable speed, counter rotating, walk behind machine, of various size and weights, with bonded abrasive pads affixed to heads for the purpose of grinding concrete.
   b. Equipped with heavy-duty industrial HEPA filtration vacuum to capture and prevent concrete dust from escaping into interior spaces. Provide mandatory pre-separator for all metal bond cuts when grinding dry.
   c. Grinding and polishing equipment capable of generating at least 600 lbs head pressure.
2. Edge Grinding and Polishing Equipment: Hand-held or walk-behind machines which produces same results, without noticeable differences as field grinding and polishing equipment, designed to access areas adjacent to vertical surfaces and inside corners.
3. Burnishing Equipment: High speed walk-behind machines capable of generating 1000 to 2000 revolutions per minute and with sufficient head pressure of not less than 20 pounds to raise floor temperature by 20 degrees F.
4. Diamond Tooling: Abrasive tools that contain industrial grade diamonds within a bonded matrix (such as metallic, resinous, and ceramic) attached to rotating heads to refine the concrete substrate.
   a. Allowable Grinding/Polishing Diamonds (or approved equivalents):
      1) Metal Bonded Diamond Grit Sizes: 40, 80, and 150.
      2) Hybrid Style Diamond: 30, 50, 100 or approved equivalent.
      3) Resin Bonded, Phenolic Diamond Grit Sizes: 100, 200, 400, 800, and 1500 (or manufacturer's equivalent designations) as needed to achieve specified gloss.
   b. Progression of all polishing steps shall include sequential grit sizes that are not greater than twice the previous grit used.

M. Accessories
1. Neutralizing Agent: Tri-sodium phosphate or baking soda.
2. Water: Clear and potable.
3. Kraft Curing Paper: Conforming to ASTM C171, Type 1.1.1, non-staining, moisture retentive, as specified by the system manufacturer.
4. Semi-Rigid Joint Sealant: Rapid setting, two-component polyurea polymer liquid of 100% solids content with a minimum hardness of Shore A 75 (ASTM D2240) as recommended by the polishing system manufacturer; VOC compliant; colored to match the concrete.

N. Preparation:
1. Concrete Surface:
   a. Clean, smooth, and flat conforming to specified floor tolerances specified by Section 035416
   b. Free of chemicals, acids, curing compounds and other substances that may inhibit application of products specified by this section, including penetration of dyes.
   c. Required Tests:
      1) Measure pH according to method indicated in ASTM F 710. Notify the Architect of pH results lower than 8 and higher than 10.
      2) Perform relative humidity test using in situ probes in accordance with ASTM F 2170. Notify the Architect of results higher than 75 percent.
      3) Perform anhydrous calcium chloride test in accordance with ASTM F 1869. Notify the Architect of results higher than 8 pounds per 1000 square feet in 24 hours (MVER).
   d. Test results that are determined to be out of conformance with the polishing system manufacturer's acceptable limits shall be remedied to levels needed to attain warranty certification.
2. Clean concrete surfaces of dirt and other particulates and remove oil, stains, grease, adhesives, water repellents, and other substances that may be detrimental to work of this Section.
3. Protect adjacent concrete surfaces not receiving the work of this Section.
4. Dust Control: Seal off adjacent building areas and cover adjacent work to limit air-born dust migration from settling on surfaces and polluting other parts of building.
5. Conform to the system manufacturer's instructions and provisions of the Contract Documents to achieve appearance conforming to accepted mock-ups.
6. Polishing Overlay Topping (ALTERNATE #1):
   a. In the event polishing of existing concrete floor is not feasible, install polishable cementitious topping in accordance with Section 012300, Alternate #1.
   b. Mechanically prepare surface to ICRI CSP 3-5. Use of acid is prohibited.
   c. Clean and prime substrate, prior to pouring topping, in accordance with the topping manufacturer's installation instructions.
   d. Install cementitious topping to a 3/8 inch thickness in accordance with the manufacturer's instructions.

O. Installation:
1. Install polished concrete floor system in accordance with system manufacturer's instructions at locations indicated on the Drawings.
2. Complete all joint filling work a minimum of 72 hours prior to commencement of any grinding or polishing. Fill movement joints and active cracks with semi-rigid joint sealant.
3. Perform all polishing procedures to ensure a consistent appearance from wall to wall in accordance with established appearance criteria as approved in the mock-up.
4. Clean floor thoroughly after each grinding pass using dust extraction equipment properly fitted with squeegee attachment or walk behind auto scrubber suitable to remove all visible loose debris and dust.
5. Patching and Repair:
   a. Tint the Surface Patching and Repair Material, as directed by the manufacturer to match color of existing concrete substrate.
   b. Fill surface imperfections including, but not limited to, holes, surface damage, static cracks, air holes, pop-outs, and other voids.
   c. Work compound and treatment until color differences between concrete surface and filled surface imperfections are not reasonably noticeable when viewed from 10 feet away under lighting conditions similar to those present after construction.
6. Installation of Portland Cement Transition Ramp:
   a. Install in accordance with manufacturer's installation instructions and recommended substrate preparation.
   b. Install at transition location between entry floor tile and polished concrete floor.
   c. Coordinate installation of ramp with the polished concrete system installation.
   d. Obtain approval from the Owner prior to any saw cutting and chipping operations in the structural slab.
   e. Installation of Exterior Ramping Material (ERM):
      1) At the perimeter of the structural concrete substrates to receive ramp transition fill, saw cut structural slab to a 1/4 inch depth to establish a uniform straight line to terminate the fill.
      2) Mechanically profile (achieved by hand grinder or scarification bit) area to receive ramp to a CSP of #4 and establish the 1/4 inch minimal depth required to apply the ramping material
      3) Tape off both surfaces (blue painters tape or a quality removable, non-transferring tape) to avoid applying ERM to the newly polished concrete and or existing finished floor surface.
      4) Dampen concrete area to receive ERM material just before water rejection.
      5) Apply rough trowel slurry coat of ERM just before installation of the final ERM screed to ensure a solid bond is established.
      6) Install ERM; screeded flush to the existing surface transition.
      7) Lightly wipe residual ERM material overlapping the tape to reestablish a clean transition line
      8) Seal and Burnish along with entire floor or just the ramp individually. ERM requires 72 hours (can be walked on with 2-3 hrs) before being sealed.
7. Initial Grinding:
   a. Begin grinding in one direction using sufficient size grit pad.
   b. Make sequential passes with each pass perpendicular to previous pass using finer grit pad with each pass, up to 150 grit.
   c. Bring floor into desired flatness and smoothness using metal bonded diamond grinding equipment.
   d. Achieve maximum refinement with each pass until floor is scratch pattern free and before proceeding to finer grit pads.
   e. Hand-grind and polish as necessary to bring floor finish flush with walls and other vertical surfaces.
   f. Continue grinding until aggregate exposure matches approved field mock-ups.
   g. Fill pin holes with patching compound as recommended by the polishing system manufacturer.
   h. Remove dry dust or wet slurry prior to proceeding on to treatment stage.
8. Penetrating Dye:
   a. Mix dye concentrate in accordance with manufacturer's instructions.
   b. Apply penetrating dye after appropriate resin-bonded diamond-polishing step in accordance with manufacturer's instructions.
   c. Thoroughly remove excess dye residue in accordance with manufacturer's instructions.
   d. Repeat application of penetrating dye, when applicable, due to porosity of slab or when darker color is desired.
9. Hardener/Densifier
   a. Apply to point of rejection in accordance with the system manufacturer's instructions.
   b. Remove excess material in a timely manner, in accordance with the system manufacturer's instructions, to prevent surface clouding or haze formation.
   c. Dispose of excess materials in a proper manner approved by the authority having jurisdiction (AHJ).
10. Honing
   a. Use grinding equipment with hybrid or resin bonded grinding pads.
   b. Grind concrete making as many sequential passes required to remove scratches, each pass perpendicular to previous pass, up to 400 grit pad reaching maximum refinement with each pass before proceeding to finer grit pads.
   c. Auto scrub or vacuum floor using squeegee vacuum attachment after each pass.
11. Polishing
   a. Use polishing equipment with resin bonded polishing and burnishing pads.
   b. Begin polishing in one direction starting with 800 grit pad.
   c. Make sequential passes with each pass perpendicular to previous pass using finer grit pad with each pass, up to 1500 grit.
   d. Achieve maximum refinement with each pass before proceeding to finer grit pads.
   e. Auto scrub or vacuum floor using squeegee vacuum attachment after each pass.
   f. Continue polishing until gloss appearance matches approved fied mock-up.
12. Final Finishing and Sealing
   a. Verify that the floor is dry and clear of debris prior to completion of the final polishing stages.
   b. Perform finish polishing of concrete floor slab using diamond polishing equipment to achieve uniform final finish, matching mock-up.
   c. Provide the system manufacturer's optional topical agent to seal the surface until the densifier can develop to its full potential.
   d. Final Polish: Using burnishing equipment and finest grit burnishing pads, burnish to uniform final sheen matching approved mock-up.
   e. Finish:
      1) Final Concrete Floor Finish: Conform to finish sheen and treatment as accepted by mock-up.
      2) Provide appearance similar to gloss sheen working up to a Level 3 – 1500 grit diamond polish.
         a) Reflective Clarity Reading: Not less than 65 according to ASTM D5767 prior to the application of sealers.
         b) Reflective Sheen Reading: Not less than 35 according to ASTM D523 prior to the application of sealers.
      3) Color: Provide system dye color as scheduled on the Drawings, and as approved in the mock-up
      4) Slip Resistance: Unless approved otherwise, Measured Dynamic Coefficient of Friction (DCOF) shall be not less than 0.30 (WET) at time of testing as measured using a Regan Scientific Instruments BOT-3000E Tribometer, in accordance with ANSI B101.3.

P. Field Quality Control
1. Field Testing: Engage a qualified walkway auditor to perform field testing to determine if in-place floor finish complies with specified coefficient of friction.
2. Slip Resistance Measurements:
   a. Take slip resistance measurements prior to Owner Possession.
   b. Test Method shall conform to ANSI/NFSI B101.3-2012.
   c. Provide a minimum of 2 tests for every 1000 SF of polished concrete floor area, with a maximum dimension between tests locations of 30 feet o.c.; provide even distribution of testing throughout.
   d. Collect and record slip resistance measurements on Floor Plan and submit with closeout documents as specified
   e. Within 24 hours of testing, notify the Architect of all non-conforming measurements.

Q. Protect finished floor from traffic for the duration required by the polishing system manufacturer.

035416 HYDRAULIC CEMENT UNDERLAYMENT

A. Summary:
1. Cementitious underlayments for leveling of new or existing concrete floor substrates as necessary to meet specified tolerances.
2. Cementitious toppings as necessary for leveling new or existing slabs at locations indicated to receive concrete sealer.
3. ~~[Cementitious topping at floor stripe locations between floor tile in accordance with Alternate #2]~~
4. Ramps and tapers as necessary to align levels between dissimilar finishes.
5. Ramps exposed in the final work.

B. Environmental Requirements
1. Maintain surface and ambient temperature of between 50 and 80 degrees F for 24 hours before, during, and 24 hours after underlayment installation.

C. Materials:
1. Fast-Setting Self Leveling Underlayment System: Self-leveling, pourable, cement based material, minimum 28 day compressive strength 3,000 psi when tested in accordance with ASTM C109; minimum bond strength 200 psi; one of the following.
   a. "UltraPlan 1 Plus" by Mapei Corporation (888-876-2734).
   b. "K-15" or "K55 Rapid" Self-Leveling Underlayment Concrete by Ardex Inc. (888-512-7339)
   c. "Level-Right" by Maxxon (800-356-7887).
   d. "84 Latilevel" thin pour, or "86 Latilevel" fast setting, or "86 Latilevel" thick pour by Laticrete International, Inc. (800-243-4788)
2. Fast-Setting Trowelable Underlayment System:
   a. "Mapecem Quick Patch" or "Planiprep SC" by Mapei Corporation (888-876-27341).
   b. "SD-P" Fast-Setting or "SD-F Feather Finish" underlayment by Ardex Inc. (888-512-7339).
   c. "Euco-Speed" by Euclid Chemical Company (800-321-7628).
   d. "Laticrete 220 Medium Bed Mortar" mixed with "Laticrete 3701 Latex Mortar Admix" by Laticrete International, Inc. (800-243-4788).
3. Cementitious Toppings: For concrete surfaces at locations indicated to receive concrete sealer, floor paint, or not otherwise covered by flooring material; one of the following or approved:
   a. Interior Traffic Bearing Topping System: Self-Leveling; minimum 28 day compressive strength 6,000 psi:
      1) Ardex Inc. "SD-T" Self-Leveling Self-Drying Concrete Topping."
      2) Dayton Superior "Level Topping."
      3) ProSpec "Level Set Wear Topping."
   b. Interior Traffic Bearing Topping System: Trowelable; minimum 28 day compressive strength 5,000 psi.
      1) Ardex Inc. "SD-M" Trowelable, Self-Drying, cement based, Concrete Topping"; minimum 28 day compressive strength 5,000 psi.
   c. Colors: Gray where exposed in the final work, white where floor paint will be applied as final finish.
4. Accessories: Furnish primers, patching compounds, and sand fillers as recommended by the underlayment manufacturer for the conditions of the project

D. Preparation
1. Thoroughly mix underlayment materials for each type of product in proper proportions to achieve smooth homogeneous mix, free of lumps.
2. With the exception of areas where leveling can be accomplished by use of latex underlayment, as specified in other sections, install cementitious underlayment to concrete slabs as indicated on the Drawings, and as necessary to level slabs or bring substrates to proper elevation.
3. Inspect floor to verify that demolition is complete to the point where work may progress.
4. Survey floor as necessary to set screeds and reference points, identify construction joints, and prepare for underlayment where floor does not meet specified tolerance requirements.
5. Ensure that subfloor is clean, dry, hard, sound, and free of oils, or other substance which would affect proper bonding and curing. Shotblast surface as necessary to achieve a clean surface.
6. Verify areas to be leveled are at or below final design elevation. When required, grind down high spots as necessary to meet specified tolerance requirements.

E. Application
1. Install trowelable underlayment at locations where slopes are indicated and at other locations where tapered fill is necessary to align the finished surfaces of the various floor finish materials.
2. Install self-leveling underlayment at existing concrete slab surfaces to correct slab flatness and levelness.
3. Provide cementitious toppings at locations to remain exposed in the finished work or where floor paint will be applied.
4. Set screeds, markers, and reference blocks. Set screeds at all construction and control joints to establish weakened plane joints in underlayment.
5. Install underlayments and toppings in accordance with the manufacturers' recommendations. Where subsequent finishing of the material is required, float to level surface. Do not trowel.
6. Apply primer to all areas to receive underlayment or toppings; repeat applications if necessary to achieve proper build.
7. Mix materials and pour or pump and squeegee into place to achieve appropriate thickness. Provide fill thickness as necessary to align adjacent finish flooring surfaces.
8. Cure in accordance with the manufacturer's instructions.

F. Tolerances:
1. Typical: "Flat"; level to within 1/4" in 10 feet
2. In Areas to Receive Floor Tile: "Very Flat"; level to within 1/8" in 10 feet from the required plane, with no more than 1/16" variation in 24" when measured from the high points in the surface.
3. Ramps: 1/4" per foot slope, unless indicated or specified otherwise.

G. Cleaning: As work proceeds, clean up excess materials, rubbish, and splash.

DIVISION 4 – MASONRY

Not Used

DIVISION 5 – METALS

051200 STRUCTURAL STEEL FRAMING

A. Summary:
1. Structural steel elements as indicated on the Structural Drawings.
2. Baseplate grouting
3. Priming and galvanizing of structural steel elements.

B. Submittals:
1. Shop Drawings:
   a. Indicate profiles, sizes, spacing, and locations of structural members, connections, attachments, fasteners, cambers, and loads.
   b. Indicate welded connections using standard AWS welding symbols. Include net weld lengths.

C. Certifications: Submit certification of materials with copies of mill reports for each heat of steel used.

D. Quality Assurance:
1. Unless specified or indicated otherwise, work shall comply with current AWS and AISC Standards.
2. The work of this Section is subject to testing and inspection as specified in Section 014500.
3. Use only AWS certified welders.

E. Products:
1. Steel Materials: As indicated on the Structural Drawings.
2. Accessories:
   a. Welding Electrodes: E-70 series, low hydrogen, appropriate for use.
   b. Non-Shrink Grout: ASTM C1107; non-shrink, non-metallic type; one of the following:
      1) BASF "Masterflow 713 Plus."
      2) US Spec "GP Grout."
      3) The Euclid Chemical Company "NC Grout."
3. Primers:
   a. Standard Primer: Modified alkyd; lead and chromate free; one of the following unless approved otherwise.
      1) "Azeron Primer Series 88HS" by Tnemec Company Inc. (Kansas City, MO; 816-483-3400).
      2) "Amercoat 5105" by Ameron Protective Coatings (Brea, CA; 714-529-1951).
      3) "Carbocoat 150HG" by Carboline Company (St. Louis, MO; 314-644-1000; 800-848-4645).
   b. Galvanizing Touch-up Paint: ZRC Worldwide: "Galvilite", "Cold Galvanized Compound", or approved.

F. Fabrication:
1. Fabricate structural steel items in accordance with approved shop drawings.
2. Shop fabricate in parts or sections as large as practicable.
3. Fabrication of Elements to Receive Galvanized Coatings:
   a. Fabricate in accordance with the applicable requirements of ASTM A143, A384, and A385.
   b. All welding slag and burrs shall be removed prior to galvanizing.
   c. Take care to avoid fabrication techniques which could cause distortion or embrittlement of the steel.
4. Hot Dip Galvanizing:
   a. Steel fabrications shall be galvanized in accordance with ASTM A123. Bolts, nuts, washers, and other hardware shall be galvanized in accordance with A153.
   b. Surface Finish: The galvanized coatings shall be continuous, firmly adhered, smooth, and free from defects.
   c. Locations: Provide hot dip galvanizing for all standard metal fabrications in exterior or moist conditions, unless otherwise indicated.
5. Standard Shop Primer Application:
   a. Preparation: Remove rust and scale by wire brushing, scraping, and sanding down to bare metal in accordance with SSPC-SP2 and SP3. Where SP2 and SP3 measures are insufficient, provide commercial blast cleaning in accordance with SSPC-SP6.
   b. Application: Spray apply primer in accordance with manufacturer's recommendations, mil minimum dry film thickness.
   c. Shop Primer: Shop prime all steel except:
      1) Steel encased in concrete.
      2) Surfaces to be field welded.
      3) Contact surfaces at high-strength bolts.
      4) Members to be galvanized.
      5) Surfaces to receive sprayed fireproofing.
      6) Surfaces to receive other special shop primers.

G. Erection:
1. Embedded Items: Provide anchor bolts and templates, and other items as indicated, to other Sections for installation prior to placement of cast-in concrete.
2. Temporary Shoring and Bracing: Provide as required with connections of sufficient strength to bear imposed loads. Remove temporary members when permanent members are in place and final connections are made.
3. Erect structural steel in accordance with approved shop drawings and AISC "Code of Standard Practice," Section 7.
4. Welds: AWS D1.1.
5. Cut holes by drilling only.
6. Tolerances: Maximum deviation from plumb, level, and alignment not exceed 1 to 500.
7. Base Plate Grouting: Set on leveling nuts to accurate elevations and grout solid with non-shrink grout.
8. Cleaning and Touch-Up:
   a. Clean steel of oil or other contaminants as specified under Fabrication.
   b. Clean columns, beams, girders, and other members to receive sprayed-on fireproofing free of loose rust, heavy mill scale, oil, dirt or other foreign substances prior to application of fireproofing materials.
   c. Immediately after erection, clean field welds, bolted connections, and abraded areas and touch-up factory primed surfaces with same primer as used in shop; touch-up galvanized surfaces with zinc-rich primer.

054000 COLD-FORMED METAL FRAMING

A. Summary:
1. Lightgage structural steel metal framing at exterior walls, as indicated on the at soffit and wall construction supporting storefronts, display windows, and signage eements.

B. System Description:
1. Structural Design: As indicated on the Structural drawings.
2. Configuration:
   a. Provide framing of depth indicated on the Drawings.
   b. Where stud gage is indicated on the Drawings, provide studs of indicated or heavier gage.
   c. Where stud spacing is indicated on the Drawings, provide additional studs or closer spacing as necessary to meet design requirements.
   d. In addition to cold formed metal framing, provide additional structural steel members as required to support the loads imposed.

C. Submittals:
1. Shop Drawings:
   a. Indicate component details, framing openings, bearing, anchorage, loading, temporary bracing, welds, type and location of mechanical fasteners and accessories or items required of other work for complete installation.
   b. Indicate framing layouts.

D. Quality Assurance:
1. The work of this section is subject to testing and inspection as specified in 014500.
2. Use only AWS certified welders approved by the jurisdictional code authorities.

E. Components:
1. Cold Formed Light-gage Steel Framing: ASTM A653; types as indicated on the structural drawings; G60 galvanized coating.
2. Screws: ASTM C954; self-drilling, self-tapping: pan head; galvanized or fluoropolymer coated steel; as indicated on the structural drawings.
3. Zinc Rich Touch-up Paint: ZRC Worldwide "Galvilite", "Cold Galvanized Compound", or approved.

F. Installation:
1. Install lightgage structural framing in accordance with ASTM C1007, unless indicated or specified otherwise, and as indicated on the Drawings.
2. Screw or weld each joint. Welds shall be in accordance with AWS D1.3.
3. Metal framing members shall be saw or shear cut. No torch cutting is permitted.
4. Construct corners with a minimum of 3 studs per corner.
5. Frame both sides of expansion and seismic joints. Do not bridge joints with system components or accessories.
6. Provide framing as required to form solid backing for all edges of sheathing, and trim accessories.
7. Tolerances:
   a. Plumbness: Plumb within 1/8 inch in 10 feet.
   b. Location: Located within 1/4 inch of the required location.
   c. Alignment: Stud and runner faces to receive finish materials shall not vary greater than 1/8 inch from the required plane, with no abrupt jogs or breaks in plane.
   d. Level: Level within 1/8 inch in 10 feet.
8. Erect studs in one piece full length. Splicing and wire tying of framing components shall not be used.
9. Touch-up field welds and scratched or damaged galvanizing with zinc rich paint.
10. Attach cross studs or furring channels to studs for attachment of wall mounted items.
11. Install framing between studs for attachment of electrical boxes and other mechanical and electrical items.

055000 METAL FABRICATIONS

A. General:
1. Summary:
   a. Miscellaneous metal fabrications not specified in other Sections.
   b. Formed metal clad fabrications at storefront.
   c. Formed metal cladding for panels, and standing and running trim.
   d. Aluminum trim
   e. Metal corner guards.
   f. Unistrut metal framing and threaded rod, when indicated on the Drawings.
2. Related Sections: 064000 - Architectural Woodwork: Substrate for clad panels and trim.
3. Quality Assurance:
   a. Fabricator Qualifications: Minimum of 3 years experience in high quality ornamental metal work of the type and scope specified.

B. Materials:
1. Steel Plate, Bars, Shapes: ASTM A36.
2. Tubes: ASTM A500 or A501.
3. Pipe: ASTM A53, seamless, Type S, plain end; schedule 40 unless indicated otherwise.
4. Bolts and Nuts: ASTM A307
5. Sheet: ASTM A1008.
6. Galvanized Steel: ASTM A653; G90 galvanized finish; 20 gage unless noted otherwise.
7. Aluminum:
   a. Extrusions: ASTM B221.
   b. Sheet: ASTM B209.
8. Interior Primer: Modified alkyd type; lead and chromate free; gray or white color.

C. Products:
1. Unistrut: Unistrut Corporation, Wayne, MI (800/521-7730) "P1000 Series" is standard for approval; 12 gage unless indicated otherwise on the structural drawings, manufacturer's standard pre-galvanized finish; submit alternate products for approval.
   a. Provide compatible matching fittings for complete installation as indicated on the Drawings.
2. Threaded Rod: ASTM A575, and A576; threaded hot rolled steel; sizes as indicated.
3. Metal Corner Guards:
   a. Corner Guards in Public Spaces (provide one of the following):
      1) Custom fabricate Corner Guards as specified
      2) Product Manufacturer: Stylmark, Inc. (Minneapolis, MN; 800-328-2495).
      3) Angles: Extrusion No. "110165"; 1 inch x 1 inch x 1/16" thick.
      4) Factory Lengths:
         a) 4'-2" for finishing; custom cut on site to fit from top-of-base to top of wainscoting, or from finish floor to 48" high, unless indicated otherwise on the Drawings.
         b) Paint hook perforations must be removed from ends of angles at install.
      5) Finish: Custom light gray powder coat finish to match **MT-3**.
      6) Installation: Construction adhesive, VHB Tape or screw attachment as selected by the Architect.
         a) When screw attachment method is used, provide oval head countersunk screws painted to match corner guards. Drill screw holes in corner guards prior to installation to accept countersunk screws. Do not damage finish.
   b. Corner Guards in Back of House Spaces:
      1) Manufacturer: Retail Specialty, Inc. (Shelby TWP.,MI; 586-566-7716); or approved.
      2) Stainless Steel Corner Guards:
         a) 18 ga; Type 420 stainless steel; custom size; 1-1/2 inch wings with returned edges; undrilled for adhesive attachment.
         b) Length: 48 inches
      3) Finish: Satin finish #4;
      4) Installation:
         a) Construction adhesive.
         b) Install components plumb and level and in strict accordance with the manufacturer's recommendations.
         c) Install corner guards with bottom of guard in alignment with top of base. Where trimming is required, make cuts neatly and square; ease burrs and sharp corners.
4. Metal Clad Panel and Trim Cleats: Monarch Metal Fabrication (Bohemia NY, 631-750-3000), "Monarch Standard Z-Clip", "MF375", installed as indicated and with fasteners recommended by the clip manufacturer.
5. Additional fasteners as indicated on the Structural Drawings, and as required for a compiete installation.
6. Exterior and Interior Extruded Aluminum Trim: Extrude-a-Trim, Inc. (888-561-3822; www.extrude-a-trim.com); channel shapes in size and configuration as indicated on the Drawings, 1/16 inch minimum thickness; satin finish suitable for field painting in accordance with Section 099000, or provide powder coated shop finish as indicated on the Drawings.
7. Adhesive: Commercial grade construction adhesive, interior and exterior rated; suitable for job conditions.
8. Very High-Strength Structural Bonding Tape: 3M, "VHB Tape"; double stick, width as required.

D. Fabrication:
1. Accurately fabricate work to the configurations indicated; fit to field conditions.
2. Fabricate with clean lines, and free of bends and twists. Curved surfaces shall have smooth and uniform radii. Use material in sufficient thickness so that flat surfaces form true planes, free from oil canning.
3. Leave no open joints, except where indicated or required for expansion and contraction. Exposed joints shall be uniform, straight, and hairline.
4. Square edge returns with eased corners, at all wall panel and trim edges; weld and grind smooth prior to finishing.
5. Welds shall have sufficient strength to withstand the loads applied.
6. Unless indicated otherwise, provide concealed fasteners wherever possible. Where not possible, exposed fasteners shall match material and finish of adjacent finish materials. Fasteners shall be approved by the Architect.
7. Use compatible materials, or provide isolation of dissimilar materials.
8. Material thicknesses indicated are minimum. Provide heavier material as necessary to meet the specified fabrication requirements.
9. Items to be Concealed from View: Fabricate as detailed; ease sharp edges. Furnish unfinished unless otherwise indicated.
10. For items to be exposed to view or subject to contact, grind welds smooth and level with adjacent surfaces; remove all burrs from cut edges. Fill imperfections with body putty as necessary for a smooth even finish.

E. Finishes: As indicated on the Drawings
1. Field Applied Finishes: Paint finish in accordance with Section 099000.
2. Shop Finishes:
   a. Elements to Receive Galvanized Coatings:
      1) Fabricate in accordance with the applicable requirements of ASTM A143, A384, and A385.
      2) Remove welding slag and burrs prior to galvanizing.
      3) Surface Finish: The galvanized coatings shall be continuous, firmly adhered, smooth, and free from defects.
   b. Powder Coat: Shop applied polyester or fluoropolymer powder coating in compliance with AAMA 2603 for interior locations and AAMA 2605 for exterior locations, custom color as indicated on the Drawings. Coordinate with Owners fixture vendor for product and color.

F. Installation:
1. Unless indicated otherwise, install items plumb and level. Install elements accurately in the positions indicated.
2. Support work rigidly in position. Provide reinforcing anchors, and backing as detailed, and as otherwise necessary for secure attachment.
3. Touch-up all surfaces damaged during installation. Patch all welds and damage marks with matching primer.
4. Install metal fabrications in accordance with applicable requirements specified for fabrication.
5. Isolate metal fabrications from dissimilar materials.
6. Aluminum Trim Installation:
   a. Install aluminum trim with adhesive or VHB Tape; no exposed fasteners.

G. Special Installation for Unistrut:
1. Coordinate layout with Landlord requirements; review overhead support locations with the Landlord prior to attempting installation.
2. Install items plumb and level from overhead structural supports approved by the Landlord.

DIVISION 6 - WOOD AND PLASTIC

061000 ROUGH CARPENTRY

A. General
1. Section includes
   a. Blocking.
   b. Sheathing.
   c. Plywood terminal back boards.
2. Quality Assurance:
   a. Regulatory Requirements: Work shall conform to/ meet or exceed the requirements of all applicable codes, ordinances, laws, regulations, safety orders, and directives from authorities having jurisdiction over the work.

B. Products:
1. Dimension Lumber:
   a. Lumber shall be manufactured in accordance with PS 20, and shall be stamped and graded in accordance with SPIB, WWPA, WCLIB, or NLGA grading rules.
   b. Moisture Content: Kiln dried to 19% maximum moisture content, except for material whose least dimension is 4 inches thick or greater.
   c. Species: Southern Pine, Hem-Fir, Spruce-Pine-Fir (SPF), or Douglas Fir Larch, unless indicated or specified otherwise.
   d. Architectural Lumber Grades: Unexposed non-structural wood framing and blocking indicated on the Architectural Drawings shall be graded as follows:
      1) Blocking: "Utility - Light Framing," or better.
2. Panel Materials:
   a. Miscellaneous Sheathing: APA Rated Sheathing; CD grade; Exterior; plywood or oriented strand board, unless approved otherwise; thicknesses as indicated.
   b. Terminal Backboards: APA AC grade exterior; fire retardant treated.
3. Accessories:
   a. Fasteners:
      1) Hot-dipped galvanized steel for exterior, high humidity locations.
      2) G-185 galvanized coating or stainless steel fasteners at treated wood locations.
4. Wood Treatment:
   a. Wood Preservative (Pressure Treatment):
      1) Preservative treat all wood in contact with concrete, masonry, and moist conditions. Site treat sawn ends with preservative treatment.
      2) Preservative treat all wood and plywood at roof construction or other wood in moist conditions. Site treat sawn ends with preservative treatment.
      3) For above ground use, use AWPA certified Ammonium Copper Quaternium (ACQ) or Copper Hydroxide Sodium Dimethyldithiocarbamate (CDDC) waterborne preservative with 0.25 pounds per cubic foot of wood retention.
      4) Treated wood shall have a maximum moisture content of 19%.
      5) Treated wood shall bear the quality stamp of an inspection agency approved by the jurisdictional code authorities.
   b. Fire Retardant Treatment (At Types I and II Construction only):
      1) Fire retardant treat all interior concealed lumber and plywood, and other wood as indicated or specified. Provide exterior fireproofing at rooftop blocking, nailers, curbs, sheathing, and other locations subject to wetting during construction operations.
      2) All fire retardant treated wood materials shall bear a UL "FR-S" label, or a label from an approved inspection agency certifying that the material meets the requirements of AWPA C-20 Type A for lumber and AWPA C-27 Type A for plywood.
      3) Treated lumber shall be kiln dried to a maximum moisture content of 19%; treated plywood shall be kiln dried to a maximum moisture content of 15%.
      4) Approved Products:
         a) Interior Fireproofing: Clear finish product, Hickson Corporation "Dricon," Hoover Treated Wood Products "Pyro-guard," or Kopper Performance Chemicals "FirePRO".

C. Installation:
1. Blocking:
   a. Install wood blocking to receive mechanical fasteners for support of electrical fixtures and equipment, cabinets, casework, doorstop plates, wood base, wainscots, coat hooks, and all other wall and ceiling mounted components, unless specified otherwise.
   b. Backing:
      1) Plywood backing shall be used in lieu of blocking at locations of wall-mounted standards, shelving and counters.
      2) Backing shall be mounted over face of studs beneath gypsum board and shall be continuous over entire plane of wall; 1/2 inch thickness.
      3) Secure backing with all edges on firm bearing.
2. Sheathing:
   a. Secure sheathing with edges on firm bearing. Provide solid edge blocking between sheets.
   b. Fastening shall be in accordance with code requirements, unless indicated otherwise. Use screws when fastening into metal lightgage metal framing.
   c. Allow 1/8 inch spacing at ends and edges between panels, unless otherwise recommended by panel manufacturer.
3. Plywood Terminal Backboards:
   a. Provide fire retardant treated plywood terminal backboard where indicated on the Drawings.
   b. Mechanically attach fire retardant treated plywood over gypsum board directly to metal studs.

064000 ARCHITECTURAL WOODWORK

A. Summary:
1. Wood standing and running trim.
2. Metal clad panels and trim.
3. Installation of miscellaneous BOH casework furnished by the Owner.

B. References:
1. Architectural Woodwork Institute / Architectural Woodwork Manufacturers Association of Canada / Woodwork Institute: Architectural Woodwork Standards (AWS), Current Edition.

C. Quality Assurance
1. Qualifications of Installers: Use only journeyman finish carpenters who are thoroughly trained and skilled in the work, and who are completely familiar with the materials and quality standards specified. No allowance will be made for lack of skill on the part of workmen.

D. Materials:
1. Lumber:
   a. Moisture Content: In accordance with AWI recommendations
   b. Concealed Framing Lumber: AWI Grade II pine, fir, hemlock, or other species as approved.
   c. Trim for Opaque Finish:
      1) Defects: Limit in accordance with AWS construction grade.
      2) Species: Natural birch, maple, yellow poplar, or other approved closed grain hardwood.
   d. Fire retardant rating: As indicated on the drawings.

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Seal:

REGISTERED ARCHITECT
PRINCIPAL
JOHN
MICHAEL
GRIFFIN
STATE OF TEXAS

12-29-2025

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:

JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

SPECIFICATIONS

Sheet #:

A00.6

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2. Sheet Panels:
   a. Medium Density Fiberboard (MDF): ANSI A208.2 Class MD (medium density) formaldehyde free.
   b. Fire Retardant MDF: Sierra Pine Ltd. (800-676-3339) "Medite FR2"; ANSI A208.2 Class MD; fire retardant treated to a flame spread of 25 when tested in accordance with ASTM E84.
   c. Fire retardant rating: As indicated on the drawings.
   d. Plywood for Interior Applications (Concealed): Softwood veneer plywood, APA grade stamped; B-C EXT, or better for other applications, unless otherwise noted.
3. Metal Cladding: In accordance with Section 055000.
4. Accessories:
   a. Fasteners: Zinc plated nails and trim head screws, as appropriate.
   b. Adhesives: Products of a reputable adhesive manufacturer; types as recommended by the manufacturer for the application; invisible in the finished work.
   c. Filler: Fabricator's standard non-staining sandable filler; color match to veneer for application at transparent finished surfaces.
5. Finish: As specified in Section 099000, and as indicated on the Drawings.
6. Fire Retardant Treatment:
   a. All fire retardant treated wood materials shall bear a UL "FR-S" label, or a label from an approved inspection agency certifying that the material meets the requirements of AWPA C-20 Type A for lumber and AWPA C-27 Type A for plywood.
   b. Approved Interior Fireproofing Products: Clear finish product, Hickson Corporation "Dricon", Hoover Treated Wood Products "Pyro-guard," or Kopper Performance Chemicals, "FirePRO".
   c. Treated materials shall be kiln dried to maximum 15 percent moisture content for plywood and 19 percent for lumber.

E. Fabrication
1. Standing and Running and Trim: Comply with AWI requirements for "custom" grade fabrication.
   a. Shop cut and mill all lumber to the shapes indicated.
   b. Shop fit and assemble to the greatest extent possible.
   c. Mill and assemble built-up sections.
   d. Tolerances for overall assembly dimensions shall be within 1/32 of an inch.
   e. Back or kerf cut all solid wood trim greater than 2 inch in width, except terminate before exposed ends.
2. Metal Clad Trim:
   a. Profile and detailing as indicated on the Drawings.
   b. Coordinate with fabrication of metal cladding specified in Section 055000.
   c. Use Aluminum Z-Clips concealed fastening methods as specified in Section 055000 to securely attach metal clad panels and trim to substrate material.
   d. Fabricate so that metal cladding completely conceals substrate.

F. Installation:
1. Jointing: Make all joints to conceal shrinkage; miter all exterior corners; cope all interior corners, miter or scarf all end-to-end joints; install all trim pieces as long as possible, jointing only where solid support is obtained. Make no joints closer than 4 feet to corners.
2. Lengths of Material: Use random lengths. The minimum length shall be 8 feet, except where short lengths are required by installation conditions.
3. Fastening:
   a. Install all items straight, true, level, plumb, and firmly anchored in place; where blocking or backing is required, coordinate as necessary with other trades to ensure placement of all required backing and blocking in a timely manner.
   b. Unless approved otherwise, use concealed fastening methods.
   c. Where exposed fasteners are approved, fasten trim with finish nails or screws of proper dimension to hold the member firmly in place without splitting the wood. On exposed finish work, set all nails and screws and putty. Align exposed fasteners for uniform pattern; random or "shotgun" patterns will not be accepted.
4. Metal Clad Trim:
   a. Install metal clad trim straight, true, level, plumb, and firmly anchored in place.
   b. Coordinate with installation of adjacent finishes.
   c. All fastening to be concealed.
   d. Individual lengths of trim are to be installed in a manner so that joints and corners between sections are even and hairline. No substrate material to be exposed and visible.
5. Field Finishing:
   a. Sand all opaque finish wood surfaces to AWS "Custom" grade standards.
   b. Sandpaper all wood surfaces thoroughly as required to produce a uniformly smooth surface, always sanding in the direction of the grain; no coarse grained sandpaper mark, hammer mark, or other imperfections will be accepted.
   c. See Section 099000 for finishing of woodwork not finished under this Section.
6. Installation of Owner Furnished Casework:
   a. Coordinate casework installation with the work of other trades for final electrical and mechanical connections.
   b. Install all casework accurately, plumb, square, and level, and permanently secured in accurate position as indicated on the Drawings. Casework shall be scribed to adjacent surfaces.
   c. Repair to acceptable like new condition, or replace all damaged components.

066000 PLASTIC FABRICATIONS

A. Summary:
1. Decorative acrylic panels.

B. Related Sections:
1. 055000 - Metal Fabrications: Supports, substrates and related trims.
2. Division 26 - Electrical: LED backlighting.

C. Submittals
1. Make submittals in accordance Section 013300.
2. Product Data: Submit manufacturer's product data; include product description, fabrication information.

D. Delivery, Storage and Handling:
1. Deliver plastic panel fabrications, systems and specified items in manufacturer's standard protective packaging.
2. Do not deliver plastic panel fabrications, system, components and accessories to Project site until areas are ready for installation.
3. Store materials in a flat orientation in a dry place that is not exposed to exterior elements.
4. Handle materials to prevent damage to finished surfaces. Provide protective coverings to prevent damage or staining following installation for duration of project.
5. Permit panels to reach room temperature before installing.

E. Environmental Limitations: Do not install panels until ambient temperatures and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

F. Products:
1. Manufacturer: Specified in Drawings Finish Legend; Drawing Designation **DAP-1**.
   a. Engineered acrylic panel sheet.
   b. Thickness: Provide thickness as indicated on the drawings.

G. Fabrication:
1. General: Fabricate panels to designs, sizes and thicknesses indicated and to comply with indicated standards. Sizes, profiles and other characteristics are indicated on the drawings.
2. Comply with manufacturer's written recommendations for fabrication.
3. Machining: Acceptable means of machining are listed below. Ensure that material is not chipped or warped by machining operations.
   a. Sawing and routing: Select equipment and blades suitable for type of cut required.
   b. Drilling and taping: Drills and taps specifically designed for use with plastic products.

H. Miscellaneous Materials:
1. General: Provide products of material, size, and shape required for application indicated, and with a proven record of compatibility with surfaces contacted in installation.
2. Cleaner: Type recommended by manufacturer.
3. Fasteners: Use screws designed specifically for plastics. Provide threaded metal inserts for applications requiring frequent disassembly.
4. Bonding Cements: If required, use solvents or adhesives, suitable for use with product and application.

I. Installation:
1. General: Comply with manufacturer's written instructions for the installation of panels. Sizes, profiles and other characteristics are indicated on the drawings.
2. Manufacturer's shop to fabricate items to the greatest degree possible.
3. Utilize fasteners, adhesives and bonding agents recommended by manufacturer for type of installation indicated. Material that is chipped, warped, hazed or discolored as a result of installation or fabrication methods will be rejected.
4. Install components plumb, level and rigid, scribed to adjacent finishes, in accordance with approved shop drawings and product data.
5. Form field joints using manufacturer's recommended procedures. Locate seams in panels so that they are not directly in line with seams in substrates. Seam type as indicated on the drawings.

J. Cleaning and Protection:
1. Protect surfaces from damage until date of substantial completion. Repair work or replace damaged work, which cannot be repaired to Architect's satisfaction.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

078400 FIRESTOPPING

A. General:
1. Summary: Firestopping material for penetrations in fire-rated construction.
2. System Description:
   a. Each firestopping system shall be selected to maintain fire rating of the assembly in which it used.
   b. Firestopping systems shall be resilient as necessary to accommodate differential movement between assemblies.
   c. Where firestopping is used to seal penetrations through floors with waterproof membranes, system shall be selected for compatibility with membrane material.
3. Quality Assurance:
   a. Prior to installation obtain approval from the jurisdictional code authorities for firestopping systems and applications proposed. Notify the Architect if approval cannot be obtained.
   b. Firestopping: Tested in accordance with ASTM E119, ASTM E814, or UL 1479 to meet the hourly fire ratings of the construction being sealed.

B. Products
1. Firestopping Systems:
   a. Systems meeting the requirements specified and suitable for the conditions indicated, as manufactured by one or more of the following.
      1) Metacaulk.
      2) Tremco Inc.
      3) 3M.
      4) Hilti USA
      5) W.R. Grace & Co.
   b. Electrical Box Inserts:
      1) Manufacturer: Rectorseal (Houston TX; 713-263-8001; 800-231-3345).
      2) Fire Rated Pads: "BioFireshield LECTRA-STOP"; 1/4" thick intumescent pads; sized to fit electrical boxes; classified by UL; minimum 2 hour rating.
   c. Self Contained Sealing Systems: EZ Path by Specified Technologies, Inc.,or approved. System shall permit cables to be removed and installed without adjustment, removal, or reinstallation of firestopping materials; size each assembly to accommodate 25% more cable than installed in the Project.
   d. Systems with sodium silicate shall not be used.

C. Installation:
1. Provide firestopping at mechanical, electrical, and plumbing penetrations through fire rated floors, walls, and ceilings, and other locations as indicated on the Drawings.
2. Install firestopping in accordance with the manufacturer's recommendations and as necessary to meet the specified fire rating requirements.
3. Where firestopping is used to seal around penetrations through waterproof membranes, install to maintain integrity of waterproof barrier.
4. For sealing electrical boxes, coordinate installation with Division 16. Comply with manufacturer's recommendations for preparation and installation. Install in locations as required by Code for protection of openings through fire rated partitions.
5. Cleaning:
   a. Trim excess material flush with adjacent surface.
   b. Remove spills, leave area in undamaged, clean condition.

078500 FIRE RATED JOINTS

A. Summary:
1. Requirements for fire rated assemblies at construction joints in fire-rated construction, including joints at the following locations:
   a. Where partition heads meet the underside of overhead floor or roof construction.
2. Requirements for fire rated construction joint assembly components provided in other Sections.

B. References
1. American Society for Testing and Materials (ASTM)
   a. E119 - Method for Fire Tests of Building Construction and Materials
2. Underwriters Laboratories (UL)
   a. Standard 2079 - Tests for Fire Resistance of Building Joint Systems.
3. International Building Code (IBC)

C. System Description:
1. Each fire rated construction joint assembly shall be selected to maintain fire rating of the assembly in which it used.
2. Each fire rated construction joint assembly shall be resilient as necessary to accommodate differential movement between assemblies.

D. Quality Assurance:
1. Fire Rated Construction Joint Assemblies: Successfully tested in accordance with ASTM E119, including hose stream test, to meet the hourly fire ratings of the construction being sealed.
2. Fire rated construction joint assemblies at partition heads shall have been successfully tested in accordance with the dynamic requirements of UL 2079, including hose stream test, to meet the hourly fire ratings of the construction being sealed.

E. Fire Rated Construction Joint Assemblies:
1. Metal Stud Partition Head-of-Wall Joint Assembly:
   a. System: Based on UL assemblies listed on the Drawings; select system to accommodate ±3/4 inch vertical differential movement.
   b. Basis of Design: Cemco (800-775-2362) "FAS Track DL2"; 20 gage (33 mil) track with factory installed intumescent seal; include "Fas Shaft Track DL2" for application at shaft wall assemblies and "Cemco Fas Strap" for installation of partitions against fluted metal decks; width as appropriate to flute spacing.
      1) Acceptable Option (subject to compliance with Contract Document requirements and Architect's approval):
         a) Fire Trak Corporation (Kimball MN; 800-394-9875) "Fire Trak Shadowline."
         b) Cemco (City of Industry, CA; 800-775-2362) "FireStik"; continuous angle with intumescent material adhered to 2.4 inch vertical leg; application in combination with extended leg 20 gage head track.
         c) Blazeframe Industries (Redmond, WA; 425-869-2811) "Solid Deep Leg" DLX or DLXCD as appropriate for conditions; composite track with intumescent strips. Include "Flute Cover (FC)" for installation of partitions against fluted metal decks; width as appropriate to flute spacing.
   c. Gypsum Board: As specified in Section 092900.
   d. Mineral wool packing material and void fill material per UL rated assemblies for dynamic wall head conditions as detailed in the drawings.

F. Installation:
1. Install construction joint assemblies in accordance with the fire rated assemblies listed, and as necessary to meet the specified fire rating requirements.
2. Coorcinate installation of integral components as necessary to ensure the fire rating of the assemblies.

079200 JOINT SEALANTS

A. Quality Assurance:
1. Use only skilled installers specially trained in the techniques of sealing, and familiar with the published recommendations of the manufacturers of the sealants being used.

B. Sealants:
1. Type S - Neutral Cure Silicone Sealants:
   a. Dow Corning, 790 Silicone Building Sealant, or 795 Silicone Structural Glazing and Weatherproofing Sealant.
   b. Pecora, 890 Architectural Silicone Sealant.
   c. Tremco "Spectrem 1 or 3."
2. Type PS – Multi-Component Polyurethane, Self-Leveling Type:
   a. BASF "MasterSeal SL 2," self-leveling or low-slope grade as applicable.
   b. Bostik "Chem-Calk 955SL."
   c. Pecora Corp. "Urexpan NR-200" or "Dynatrol II-SG" as applicable.
   d. Tremco Incorporated "THC-900" or "THC-901" as applicable.
3. Type C – Color-Matched Sealant (product must be from same manufacturer as tile grout):
   a. Bostik Findley, Inc. (Temecula, CA; 800-592-8558) "CeramaSeal Tub & Tile Caulk".
   b. Mapei Corporation (Deerfield Beach, FL; 888-876-2734) "Keracaulk".
4. Type A – Single Component Acrylic Sealant:
   a. Bostik "Siliconized Acrylic Latex".
   b. Pecora Corp. "Pecora AC-20."
   c. Tremco Incorporated "Tremflex 834."
5. Type SM - Mildew Resistant Silicone Sealant (USDA Approved), clear:
   a. Dow Chemical, "Dow Corning 786"
   b. GE, "SCS 1700 Sanitary"
   c. Pecora, "898NTS Silicone."
   d. Tremco Inc., "Tremsil 200."

C. Accessory Materials:
1. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
2. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
3. Joint Filler: Closed or open cell polyethylene foam as recommended by sealant manufacturer for conditions; round profile; thickness: 130% of joint width.
4. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.
5. Compressible Foam Sealant: Precompressed prefaced self-adhesive open cell polyurethane foam tape; "Backerseal" by Emseal Joint Systems, Ltd., or approved.

D. Preparation:
1. Clean and prepare joints in accordance with manufacturer's instructions. Remove loose materials and other foreign matter which might impair adhesion of sealant.
2. Apply masking tightly around joints to protect adjacent surfaces from excess sealant.
3. Prime as required for proper bond to substrate materials.
4. Place backing materials to achieve proper sealant width/depth ratios. Use bond breaker where required.

E. Installation:
1. Perform work in accordance with ASTM C1193, unless specified otherwise or recommended otherwise by the sealant manufacturer.
2. Sealant beads shall have a sectional width to depth ratio of 2 to 1, except that sealant type PT shall be installed full depth without backing.
3. Install Type C sealant full depth in tile expansion joints with no backer rod.
4. Tool joints concave, unless indicated otherwise. Finish free of air pockets, foreign embedded matter, ridges, and sags.

F. Protect sealant in joints subject to dirt, moisture, and traffic during the sealant curing process. Protection shall be able to resist traffic while remaining securely in position.

G. Schedule:
1. Type S: Provide at all exterior joints unless specified otherwise; standard colors as selected by Architect.
2. Type PS: Provide at all exterior horizontal joints subject to traffic and abrasion; standard colors as selected by Architect.
3. Type C: Provide at all joints in toilet room wall and floor tile, expansion joints in tile; furnish color from the manufacturer's full line of colors to match tile grout.
4. Type A: Provide at all interior joints, unless specified otherwise; standard colors to match adjacent construction.
5. Type SM: Provide at joints around countertops in Back of House (BOH) and Restrooms.

DIVISION 8 - DOORS AND WINDOWS

081113 HOLLOW METAL DOORS AND FRAMES

A. Summary:
1. Interior rolled steel doors and frames.
2. Exterior doors and frames, when indicated on the Drawings.
3. Door vision lite glass and glazing film.

B. Submittals: Submit manufacturer's published literature for doors and frames.

C. Quality Assurance:
1. Conform to requirements of ANSI A250.8.
2. Regulatory Requirements:
   a. Where required, installed frame and door assembly shall conform to NFPA 80 for fire rated class indicated.
   b. Where doors are noted with an hourly fire resistance rating, provide door and frame assemblies labeled by Underwriter's Laboratory (UL), or another testing laboratory approved by the local code authorities, to meet the hourly fire rating noted. Assemblies shall meet code requirements for positive pressure when required.
   c. Include "S" label on fire rated door assemblies located at 1 hour rated exit corridors.

D. Acceptable Manufacturers: Members of the Steel Door Institute and of the National Association of Architectural Metal Manufacturers, subject to compliance with specified requirements.

E. Materials: Steel sheet, cold rolled ASTM A366, or hot rolled pickled and oiled sheet conforming to ASTM A569, minimum 30% recycled content.

F. Doors:
1. Interior Door Construction:
   a. ANSI A250.8; seamless; minimum 18 gage face sheets.
   b. Core: Vertical steel stiffeners with sound ceadening fill between stiffeners, or resin impregnated kraft paper honey comb core.
   c. Provide continuously welded seamless edges. No plastic fillers will be accepted.
2. Exterior Door Construction:
   a. ANSI A250.8; seamless; minimum 16 gage face sheets.
   b. Core: Polystyrene or polyurethane foam core.
   c. Special Construction Requirements:
      1) Provide continuously welded seamless edges. No plastic fillers will be accepted.
      2) Close top edges of exterior doors flush with steel filler cap; seal joints watertight.
      3) Cut mortises for butts using appropriate templates; universal non-handed preparation of doors is not acceptable.
3. Hardware Reinforcements:
   a. Hinge reinforcements for full mortise hinges: minimum 7 gage.
   b. Lock reinforcements: minimum 16 gage
   c. Closer reinforcements: minimum 14 gage, 20 inches long.
4. Glass Moldings and Stops
   a. Fabricate glass trim from 24 gage steel.
   b. Install trim into the door as a four sided welded assembly with mitered, reinforced and welded corners.
   c. Trim: Identical in appearance on both sides of the door.
5. Fabrication:
   1) In accordance with ASNI A250.8.
   2) Edge Seam: Full height mechanical interlock.
   3) Bevel door latch edges 1/8 inch in 2 inches.
   4) Cut mortises for butts using appropriate templates; universal non-handed preparation of doors is not acceptable. Install reinforcements, welded in place.
   5) Projection weld hinge and lock reinforcements to the edge of the door; provide adequate reinforcements for other hardware as scheduled.
   6) Reinforce top and bottom of doors with 14 gage channels, welded to both face panels.
   7) Install glass moldings into the door as a four sided welded assembly with mitered, reinforced and welded corners.
   b. Vision Lites:
      1) Tempered Glass: ASTM C1048, FT; glass which has been heat treated to strengthen glass in bending to not less than 4 times the annealed strength; certified safety glass in accordance with ANSI Z97.1.
      2) Glazing Film:
         a) 3M Company (St. Paul, MN; 888-364-3577) "FASARA" Luce, White, SH2FGLU glazing film.
   c. Sizes: Dimensions on Door Schedule refer to frame opening sizes to the rabbet.
   d. Thickness: 1-3/4 inch, unless otherwise scheduled or detailed.
   e. Clearances: Fabricate for 1/8 inch clearance at head and each jamb, 1/8 inch between pairs of doors, 3/8 inch clearance from hard surface finish floor, 3/4 inch from hard surface beneath doors at openings indicated to receive carpeting, and 3/16 inch from hard surface top of threshold.

G. Frames:
1. Design: Double rabbet, unless indicated otherwise; fully welded.
2. Gages:
   a. Exterior Frames: Minimum 14 gage.
   b. Interior Frames: Minimum 16 gage for frames of door openings up to and including 4 feet in width; 14 gage for frames greater than 4 feet in width.
3. Accessories: Furnish necessary anchors for jambs, heads, and sills of assemblies.
4. Frame Hardware Reinforcements
   a. Mortise hinge reinforcement: minimum 7 gage: Furnish high frequency hinge reinforcement for top hinge on all exterior, cross corridor, and stairwell frames, in accordance with SDI 111-H.
   b. Strike reinforcements: minimum 16 gage.
   c. Closer reinforcement: minimum 14 gage.
5. Fabrication
   a. Fabricate frames to profiles and with throat dimensions as indicated.
   b. Fabricate exterior frames with 1 1/4 inch mounting flanges and 1 inch backbends where indicated.
   c. Cut mortises for butts strikes and other hardware, as scheduled, using appropriate templates. Install reinforcements. Projection weld hinge and strike reinforcements to the door frame. Provide adequate reinforcements for other hardware as scheduled.
   d. Frames shall be die mitered with integral tabs.
      1) Frames shall be shop assembled; continuous face weld joint between the head and jamb faces, at meeting mullions and between other frame members along their length either internally or externally. Grind, prime paint, and finish smooth face joints with no visible face seams.
      2) Provide two temporary steel spreaders (welded to the jambs at each rabbet of door openings) on welded frames during shipment. Remove temporary steel spreaders prior to installation of the frame.
      3) Ship frame assemblies to the jobsite completely welded. Field joints permissible only when the size of the total assembly exceeds shipping limitations. Fabricate oversized frames in sections designated for splicing in the field. Provide frames with joint reinforcements 14 gage, 8 inch long. Field weld joint reinforcement inside and tack weld outside joint at both faces, grind, and finish smooth and uniform in appearance, after installation.
   e. Provide metal plaster/mortar guards for all mortised cutouts at frames produced for installation in masonry construction.
   f. Electrical Requirements (when indicated on the Drawings): Coordinate all electrical requirements for doors and frames. Make provisions for installation of electrical items arranged so that wiring can be readily removed and replaced.
      1) Provide cutouts and reinforcements required for door frames to accept electric components.
      2) Frames with Electrical Hinges: Weld UL listed grout guard cover box over center hinge reinforcing. Top or bottom hinge locations are not permitted.
      3) Provide cutouts and reinforcements required to accept security system components, where applicable.

H. Finish:
1. Interior Frames: Manufacturer's standard rust-inhibitive primer.
2. Exterior Frames: Hot dip galvanized zinc coating conforming to ASTM A653 A60 (.60 oz/sq ft. coating weight), with manufacturer's standard primer to receive coating system specified in Section 099000.

I. Installation of Frames:
1. Install frames in accordance with SDI-105 and in accordance with labeling requirements.
2. Coordinate with wall construction for anchor placement.
3. Install accessories.
4. Installation Tolerances; Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.
5. Door and hardware installation is specified in Section 087300.
6. Door Vision Lite Glazing Film:
   a. Install screening film to #2 surface of door vision lite
   b. Clean glass and remove labels prior to installation of screening film.
   c. Comply with manufacturer's instructions for preparation and installation of screening film.
   d. Cut film accurately to extend full height and width of vision lite without visible gaps at edges. Cut film straight at butt joints so that film does not lap over sealant joints. Installed free of air bubbles, scratches, splices, and other defects which would impair clarity.

083100 ACCESS DOORS AND PANELS

A. Summary: Fire-resistive, and non-rated access doors, frames, and accessories.

B. Quality Assurance:
1. Where access doors are installed in construction with an hourly fire resistance rating, provide door and frame assemblies labeled by Underwriter's Laboratory, Warnock Hersey, or any other testing laboratory approved by the local code authorities to meet the requirements of the fire rated assembly.

C. Acceptable Manufacturers:
1. Milcor, Inc., Lima, OH.
2. J.L. Industries, Bloomington, MN.
3. Karp Associates, Inc., Maspeth, NY.
4. Nystrom, Minneapolis, MN

D. Door Types:
1. Fire Resistive Metal Access Door:
   a. Flush type design.
   b. 16 gage frame; min. 20 gage steel welded door panel insulated with non-combustible filler.
   c. Self-closing and self-latching, with interior latch release.
   d. Fully concealed pin-type hinges, or continuous piano hinge; 175 degree opening.
   e. Ring turn latch.
2. Non-rated Concealed Drywall Access Door:
   a. Recessed type design.
   b. Minimum 16 gage steel frame; minimum 16 gage steel door panel recessed to receive drywall.
   c. Integral attachment flange and drywall bead for flush installation.
   d. Fully concealed pivot rod hinge.
   e. Latches: Screw driver operated cam latch.
3. Non Rated Ceiling Access Panel at Sales Floor areas:
   a. Acceptable Manufacturer: One of the following.
      1) Intex Forms (Gilroy CA; 408-846-5667). www.intexforms.com
      2) GC Products (Sacramento CA; 800-636-8864; 916-349-2726) www.gcproductsinc.com
   b. Flush design, similar to Intex Forms "Glass Fiber Reinforced Gypsum Access Panel."
   c. Cast gypsum frame and lay in panel; 1/8 - 3/16 inch shell thickness minimum; square corners.
   d. Integral attachment flange and drywall bead for flush installation.
   e. No hardware.
   f. Size: 18" x 18", unless otherwise indicated.

E. Installation:
1. Provide access doors in the locations indicated, and for access to balancing and fire dampers, trap primers, valves, fans, terminal units, and other equipment requiring periodic inspection through finished walls or ceiling, whether indicated or not.
2. Coordinate access requirements with other trades.
3. Provide concealed drywall access doors unless fire rated access doors are required because of fire rated construction.

084226 ALL-GLASS STOREFRONT SYSTEM

A. Summary:
1. All-glass storefront system.
2. Structural engineering for attachment of glass storefront systems

B. System Description:
1. Bidder Design in accordance with Section 016000.
2. Design anchorage for all-glass storefront system.

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CLEVELAND DENVER GLENDORA IRVINE ORLANDO PHOENIX SAN FRANCISCO

Seal:

12-29-2025

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:

JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

SPECIFICATIONS

Sheet #:

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3. Provide attachments to resist code-required dead and live loads, including a uniform 10 PSF uniform load and wind and seismic loads in accordance with code requirements, including local amendments.

C. Glass Performance Criteria:
1. Stress Analysis:
   a. The glass manufacturer shall perform stress analysis to determine the proper glass thickness and treatment required to resist the structural and thermal stresses for each glazing condition (based on the worse case for each condition). All costs in conjunction with the analysis shall be borne by the Contractor.
   b. Should the stress analysis show that glass of greater strength or thickness is required over that scheduled, then all such changes shall be included in the bid price. The Contractor shall not be entitled to any claims for additional compensation for failure to meet this requirement.
   c. Submit all documentation to the glass manufacturer as required to obtain glass manufacturer's stress analysis.
2. Structural Stress Criteria:
   a. Vertical Glazing: Design glazing to withstand positive and negative loads.
   b. Center Deflection: Maximum deflection shall not exceed L/175 or 3/4 inch, whichever is less.

D. Submittals:
1. Shop Drawings:
   a. Indicate materials, thicknesses, finishes, dimensions, methods of joining and anchoring, and relationship to adjacent construction.
   b. Include typical and special details drawn at full scale.
   c. Include designing engineer's stamp.
2. Product Data:
   a. Manufacturer's product data on rails and stationary fittings.
   b. Glazing sealant.
3. Certification: Submit certification that the all-glass storefront system has been designed in accordance with the specified requirements.

E. Quality Assurance:
1. Fabricator Qualifications: Minimum of 5 years experience in the fabrication and finishing of all-glass entrance system; able to show evidence of successful completion of work similar to the work of this contract.
2. Regulatory Requirements:
   a. All-glass entrance system shall meet the requirements of the jurisdictional code authorities.
   b. Safety Glass Standard: Comply with the requirements of the jurisdictional code authorities.
   c. Furnish all calculations, engineer's stamps, drawings, and other items required by the code authorities to obtain approval of the installation.
3. Comply with pertinent recommendations in the GANA "Manual of Glazing."
4. Structural design of the all-glass entrance system shall be by a Structural Engineer Licensed to practice in the State where the Project is located.

F. Materials and Components:
1. Glass:
   a. ASTM C1036, Type I, class 1(clear), quality q3 glazing select; 1/2 inch thickness, unless indicated, required by stress analysis, or approved otherwise; fully tempered in accordance with ASTM C1048; certified safety glass in accordance with ANSI Z97.1.
   b. No tong marks, or other fabrication imperfections allowed in the finished work.
   c. Edge Treatment:
      1) Glass Edges to be Exposed in the Finished Work: Pencil edge, polished; approximate 1/8-inch chamfer.
      2) Glass Edges Indicated for Exposed Silicone Sealant Treatment: Ground edge, seamed.
   d. Unless otherwise approved by the building official, provide manufacturer's label on each light, indicating type and thickness of glass.
2. Glass Partition Glazing Materials:
   a. Insert Setting Blocks: Neoprene; 70-90 Shore A durometer hardness.
   b. Spacers for Glass Partitions: Spring clip design.
   c. Wet Glazing Sealant: Dow-Corning "999A," clear.
3. Storefront Rails, Channels and Stationary Fittings for Glass Storefront Panels:
   a. Basis of Design Manufacturer: CR Laurence (800-421-6144) or approved subject to compliance with Contract Document requirements and Architect's approval of finish and conformance to design intent.
   b. Bottom Rails: CRL SRBSPT3812CL" 6 inch, Custom Color and Length Square Sidelight Rails: end caps to match; setting blocks and gaskets.
   c. Glazing Channels: CRL "UCPT3812CL"; Custom Color and Length U-Channel; end caps to match; setting blocks and roll-in top load gaskets.
   d. Mall Front Glazing Clamps at Open Butt Joints: CRL, type and profile as indicated on the Drawings; custom finish to match rails.
   e. Powder Coat Finish: Shop applied polyester or fluoropolymer powder coating in compliance with AAMA 2603 for interior locations, and AAMA 2605 for exterior locations, custom color as indicated on the Drawings. Coordinate with Owners fixture vendor for product and color.

G. Fabrication:
1. Tempered and Heat Strengthened Glass:
   a. Tempered Glass: ASTM C1048, FT; glass which has been heat treated to strengthen glass in bending to not less than 4 times the annealed strength; certified safety glass in accordance with ANSI Z97.1.
   b. Heat Strengthened Glass: ASTM C1048, HS; glass which has been heat treated to strengthen glass in bending to not less than 2 times annealed strength.
   c. Fabricate tempered and heat strengthened glass units so that principle distortion will be in the horizontal direction in the finished installation.
   d. Unless otherwise approved by the building official, provide manufacturer's label on each light, indicating type and thickness of glass.

   e. Comply with IBC paragraph 2406.2 requirements for identification and labeling of safety-glazing materials in hazardous locations subject to human impact loads.
   f. Fabrication Process: Horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed, unless otherwise indicated.

H. Glass Panel Installation:
1. General: Install all members as detailed with adequate provision for settling, expanding, and contracting to occur without breaking glass.
2. Setting Blocks: Place setting blocks in shoes for support of glass panels. Place at quarter points of each panel, unless approved otherwise.
3. Set glass tightly in position with proper clearances in accordance with the referenced standards. Provide spacers to maintain proper clearance between glass face and glazing channels.
4. Secure glass panels to bottom rail shoes and top U channels as recommended by the manufacturer. Install glazing clamps where indicated. Wet glaze or cap with manufacturers glazing gaskets.
5. Cleaning:
   a. Clean excess glazing materials from adjacent finished surfaces.
   b. Remove labels after work is completed.

087100 DOOR HARDWARE

A. Install door hardware furnished by the Owner

B. As scheduled on the Drawings.

087300 DOOR AND HARDWARE INSTALLATION

A. Installation:
1. Mark each item of hardware as to description and location of installation in accordance with approved hardware schedule.
2. Install each hardware item in compliance with manufacturer's instructions. Wherever cutting and fitting are required to install hardware onto or into surfaces which are later to be painted or finishes in another way, install each item completely and then remove and store in a secure place during the finish operation. After completion of the finishes, reinstall each item. Do not install surface mounted items until finishes have been completed on the substrate.
3. Hardware Mounting Heights: Mounting heights are based on recommendations of the National Builders Hardware Association (NBHA). Generally, mount hardware units at the following locations on each door or door opening, except as otherwise indicated on the Drawings or required to meet code and handicapped requirements. Verify any conflicts with location of other hardware for proper clearances for installation prior to cutting or milling for specified hardware. Notify Architect immediately if such conflicts are determined.
   a. Latch and Locksets: 38 inches finish floor to center of knob.
   b. Dead Locks: 48 inches finish floor to center of cylinder.
   c. Emergency Exit Cross Bar: 38 inches from finish floor.
   d. Push/Pull: 42 inches finish floor to centerline of push/pull bar set.
   e. Push Plate: 1/2 inch from edge of door; 42 inches to center line of plate, except 45 inches where independent of the push/pull.
   f. Kick Plates: Mount at bottom edge of door and 1/2 inch from outside edge of door.;
   g. Top Hinge: 5 inches from top of door to top of hinge.
   h. Bottom Hinge: 10 inches from finish floor to bottom of hinge.
   i. Center Hinge: Equal distance between top and bottom hinges.
   j. Multiple hinge locations shall be equally spaced between top and bottom hinge.
   k. Wall Stops: Centerline of knob or point of first contact.
   l. Thresholds: Mount at exterior doors such that slope breakpoint on threshold is at lead edge of door. Set in full bed of caulking material.
   m. Clcsing: Mount for maximum degree of opening obtainable considering other hardware provided and opening conditions. Size closers for conditions and code requirements.
   n. Trim/Protection: Kickplate shall be 2" LDW x height indicated.
   o. Other hardware items shall be located as recommended by NBHA, or as may be shown or required otherwise.
4. Adjusting and Cleaning: Adjust and check each operating item of hardware and each door to ensure proper operation. Clean door and hardware.

DIVISION 9 FINISHES

092200 LIGHTGAGE METAL SUPPORT FRAMING

A. Summary:
1. Interior partition, ceiling, and soffit construction, not covered by specified in Section 054000.
2. Structural design oflightgage metal support framing systems.

B. System Description:
1. Structural Design:
   a. Structural design oflightgage metal framing systems shall be furnished by the Contractor.
   b. Select framing systems, gages, supports, bracing, and connections as necessary to meet the structural requirements specified.
   c. Partition framing shall conform to the widths indicated, unless approved otherwise. Provide thicker gages and decreased stud spacing as necessary to meet the design requirements.
2. Design Loads:
   a. Interior Ceiling Assemblies: 5 pounds per square foot uniform live load, plus dead loads.
   b. Interior Partitions: 5 pounds per square foot uniform live lateral load.
3. Deflection Requirements: Maximum of 1/240 the span, except maximum 1/360 at tile.

C. Code Requirements:
1. Provide assemblies meeting the hourly fire ratings indicated and specified. Assemblies shall been tested in accordance with ASTM E119, and shall be approved by the local jurisdictional code authorities. Coordinate installation of other materials which are a part each assembly.

2. Fire rating requirements take precedence over the construction requirements indicated. In the event of conflict, notify the Architect, and do not begin construction in the area of conflict until the conflict has been resolved.
3. Provide all calculations, drawings, product data, and other verification as required by the jurisdictional code authority to obtain approval of the lightgage metal framing installation.

D. Materials:
1. Light Gage Metal Framing: ASTM C645; galvanized; provide "C" shaped studs, U shaped runners, hat and "Z" shaped furring channels, and other sizes and shapes as necessary. Minimum 25 gage, except furnish thicker gages as required to meet deflection requirements.
2. Cold Rolled Channels: Rust inhibitive paint coating; sizes in accordance with ASTM C754.
3. Screws: Self-tapping; low profile head.
4. Proprietary Ceiling Suspension System:
   a. Manufacturer:
      1) Basis of Design: Chicago Metallic (Chicago, IL Los Angeles, CA; 800-323-7164).
      2) Acceptable Options (subject to compliance with these Contract Documents):
         a) USG Interiors, Inc. (Chicago, IL; 800-874-4968).
         b) Armstrong (800-207-2321).
   b. Suspension System: Similar to System 650, or 670; ASTM C635 heavy duty classification.
      1) Furring Runners: Manufactured from 0.020 inch thick steel 1-3/8 inch wide with knurled face by 1-1/2 inches high; factory punched cross tee slots, hanger holes, and non-directional bayonet end tab couplings.
      2) Furring Tees: Manufactured from 0.020 inch thick I-3/8 inch wide with knurled face by 1-1/2 inches high; factory punched cross tee slots and hanger holes.
      3) Furring Cross Channel: 0.020 inch thick steel; 1-3/8 Inch wide with knurled face by 7/8 inches high by 48 inches long with straight locking end tabs.
      4) Cross Tees: 0.020 inch thick steel 15/16 inch wide by 1-1/2 inches high; with staked-on dip end tab couplings, factory punched cross tee slots.
      5) Moldings: Manufacturer's standard.
5. Partition Head Compensating Channel (Non-Rated): Design for minimum ±1/2 inch deflection. Profiles as indicated; one of the following.
   a. 20 gage deep leg track; 2 inch legs.
   b. Slip Track Systems Inc. (Anaheim, CA; 714-761-1921) "SLP-TRK."
6. Other Framing Materials: Furnish in accordance with ASTM C754.

E. Partition Framing:
1. Runners:
   a. Secure runners with fasteners at maximum 24 inches oc.
   b. At concrete floors, use powder driven fasteners or drilled in concrete anchors.
   c. Top Runner: Use proprietary compensating channel or deep leg track at Contractor's option, as necessary to accommodate building deflection.
   d. Align to tolerances specified.
2. Unless indicated otherwise, install studs vertically at 24 inches oc, and not more than 2 inches from abutting construction, at each side of openings, and at corners. Studs for support of stone tile shall be installed at 16 inches o.c.
3. Fit runners under and above openings; secure intermediate studs at spacing of wall studs.
4. Brace partition framing system and make rigid.
5. Install double studs continuous from floor to ceiling track at the jamb of each door frame and cased opening. Studs shall be the same gage as the adjacent studs, but no less than 20 gage. Provide diagonal steel stud bracing to structure at each jamb at partitions which do not extend to structure.
6. Coordinate erection of stud system with requirements of door and window frames, fire extinguisher cabinets, recessed toilet accessories, access doors, and other construction within mounted partition construction.
7. Coordinate the installation of framing with the gypsum board installer to ensure support at all board edges. Provide framing immediately either side of expansion joints.
8. Stud splicing not permissible.
9. At non-load bearing full height partitions subject to compression caused by overhead structural deflection, cut studs 1/2 inch short from full height, except as otherwise indicated. Do not rigidly connect stud to top runner.
10. Stud Bridging:
    a. At interior partitions greater than 4 feet in length, and with rigid facing material on one stud flange only, provide 3/4" bridging channels in horizontal rows at a maximum of 5'-0" on center for the full height of the partition.
    b. Interior full height partitions (studs extending from the floor to the structure above) with rigid facing material stopping 3'-0" or more below top of studs - Provide one row 3/4" bridging channel horizontally at termination of gypsum board material, and one additional row for each 5'-0" of exposed studs.
    c. Install stud bridging channels in long lengths, wire tying and lapping the joints a minimum of 12." Attach bridging channel to each stud as shown in manufacturer's printed instructions.

F. Ceiling and Soffit Framing:
1. Coordinate locations of hangers and supports with the work of other Sections.
2. Provide ceiling and soffit framing as indicated. Where not indicated provide, stud and runner framing, suspended framing, or proprietary suspended framing.
3. Proprietary Suspended Framing: Install in accordance with manufacturer's recommendations.
4. Stud and Runner Framing:
   a. Secure runners to structure above with fasteners at a maximum of 24 inches on center. Size fasteners and use reinforcements as necessary to support the dead loads applied.
   b. Screw fasten framing at each flange joint.
   c. Space studs at 16 inches on center at horizontal locations.
   d. Select members to meet the structural requirements specified.
5. Lightgage Suspended Framing:
   a. Install in accordance with ASTM C754, unless indicated or specified otherwise.
   b. Suspend ceiling from overhead structural elements only. Do not support from any electrical, HVAC, plumbing, or sprinkler system components.
   c. Space carrying channels 4 feet on center with splices lapped 12 inches and tied.
   d. Support cold rolled carrying channels with hanger wires spaced at 3 feet on center for lath and plaster ceilings and 4 feet on center for gypsum board ceilings. Loop hanger wire around support element and tightly wrap around vertical wire 3 times; cut off neatly.
   e. Space furring channels 16" o.c. with splices lapped 12", minimum and tied; clip or saddle tie to runner channels with 16-gage tie wire.
   f. Where overhead obstructions prevent the regular spacing of hangers, provide secondary carrying members for indirect support of the suspension system, or reinforce the nearest adjacent hangers and related framing components as required to span the required distance.
6. Stabilize suspended ceiling, soffit, and fascia framing against lateral movement by means of diagonal bracing. At locations where partitions extend to ceiling, only, install supplementary bracing at maximum 8'-0" o.c. along length of partition, and above each door hinge and strike jamb.
7. Form openings in ceilings and frame openings for recessed light fixtures, air diffusers, access doors, hatches, etc.
8. Install supplementary hanger wires for support of ceiling mounted equipment.

G. Backing:
1. Provide steel backing where indicated. At Contractor's cotion steel backing plates may be substituted for wood blocking, except wood blocking shall be used at the following locations: Handrails, guardrails, grab bars, and similar safety items.
2. Unless indicated otherwise, steel backing shall consist of minimum 4 inch wide 16 gage steel plate screwed rigidly to the studs.

H. Installation Tolerances:
1. Install members to provide surface plane with maximum variation of 1/8 inch in 10 feet in any direction.
2. Variation from Vertical (walls): 1/8 inch in 10 feet.
3. Locate assemblies within 1/4 inch of required locations.

092900 GYPSUM BOARD

A. Quality Control: Provide assemblies meeting the hourly fire ratings indicated. Assemblies shall be approved by the local jurisdictional code authorities.

B. Materials:
1. Gypsum Board:
   a. Standard Board, Water Resistant Board: ASTM C1396; Type X in fire rated partitions where indicated, and where incorporated as a part of a fire rated assembly; 5/8 inch thick unless noted otherwise.
   b. Tile Backer Board: As specified in section 093000.
2. Accessories:
   a. Trim: Concealed flange screw-on type; metal or PVC at Contractor's option; GA 216.
   b. Reveal Moldings: Fry Reglet Co., Pittcon Industries, Inc., Gordon Inc, or approved; aluminum extrusions with taping flanges; shapes as indicated.
   c. Joint Compound, Tape, and Finishing Compound: ASTM C475 and GA 216.
   d. Screws:
      1) Interior: ASTM C1002.
      2) Exterior: Galvanized; self-drilling, bugle head screws; minimum 1-1/4 inch long.

C. Installation:
1. Installation Standard: Unless specified otherwise, perform work in accordance with Gypsum Association 216, "Recommended Specifications for the Application and Finishing of Gypsum Wallboard."
2. Screw fasten board to framing, unless approved otherwise.
3. Install water resistant board as a substrate for surfaces scheduled to receive bonded finishes in Restrooms.
4. Where gypsum board is installed to patch or resurface existing fire rated walls, install so as to maintain existing fire rating.
5. Space control joints as indicated. When not indicated, locate as directed by Architect.
6. Trim:
   a. Use longest practical lengths, with no piece less than 2 feet long for continuous runs greater than 8 feet. Securely fasten and align trim ends at joints.
   b. Place concealed flange corner beads at all external corners. At angles other than 90 degrees, bend the flange to conform to the angle.
   c. Place concealed flange type L trim where gypsum board abuts dissimilar materials.
   d. Use J trim at exposed gypsum board edges (including light coves) where sealant joint is indicated.
7. Control Joints:
   a. Position control joints to intersect light fixtures, air diffusers, door openings, and other areas of stress concentration.
   b. Position control joints at locations where expansion or control joints occur in the building structure.
   c. Locate control joints to form rectangular or square sections, in "L," "U," "T," or other irregularly shaped areas.
8. Finishing (interior):
   a. Provide finishing in accordance with GA 214.
   b. Where necessary to sand, do so without damaging the face of the gypsum board.
   c. 3 coat smooth wall finish typical.
   d. Gypsum board surfaces shall form a smooth surface free of ridges, joint marks, fastener depressions, and joint filler lines. Tapered board joints shall be taped, filled, and feathered to 12 inches either side of the joint. Non-tapered board joints shall be taped, filled, and feathered to 18 inches either side of the joint.
   e. Level 5 finish at all wall covering, and Sales Floor walls visible to the Customer in the final work, and other areas as indicated on the Drawings.

093000 TILING

A. Summary:
1. Installation of Owner provided interior wall tile at storefront.
2. Installation of Owner provided interior floor tile.
3. Tile backer board
4. LHT mortar and grout
5. Metal screeds

B. Quantity Statements:
1. Tile, with pertinent installation and maintenance instructions will be furnished by Owner.
2. Quantities of tile purchased will be based on the approved Quantity Statement furnished by the Contractor for the exact amount required for the installation. Overage quantities will be added separately by the Owner for each type of tile.
3. Contractor shall be responsible for accuracy of quantity statements. In the event that insufficient quantity is discovered after order has been placed, proceed as follows:
   a. Immediately notify the Owner in writing of the additional quantities required, whereupon the Owner will, at his cost, obtain the additional quantities.
   b. Install additional quantities at no additional cost to the Owner.
   c. Pay for unusual transportation costs incurred in obtaining additional materials.
   d. Tile furnished for overage may be installed, if necessary. Notify Owner of quantity of tile installed so that he may obtain additional tile for overage stock.

C. Submittals:
1. Product Data: Submit for each type of tile, grout, adhesive, additive, accessory, and membrane specified.
2. Samples:
   a. Grout: Submit cured samples of each grout color. Furnish 2 cured samples of approved grout colors to the expansion joint sealer installer for color matching.
   b. Screeds: Submit samples of each type and finish of screed; minimum 3 inch length.

D. Quality Assurance: Conform to ANSI Standard Specifications for the Installation of Ceramic Tile.

E. Tile Types: As scheduled on the Drawings.

F. Setting Materials:
1. Thinset Mortar: Latex-portland cement in accordance with ANSI A118.4; 100% acrylic latex additive at all locations; Mapei Corp "Grani/Rapid" or "Kerabond" with "Universal Keralastic", Laticrete International, Inc., "211 Crete Filler Powder" with 4237 Latex Thin-set Mortar Additive," Hydroment "Tile-Mate Premium" with "447 Flex-a-lastic" by Bostik, or approved.
2. Large and Heavy Tile Mortar (Medium Bed):
   a. Mapei Corp. "Grani/Rapid" or "UltraContact".
   b. Laticrete International, Inc. "255 MultiMax".
   c. Bostik Hydroment "Medium Bed Mortar" mixed with "425 Multi-Purpose Acrylic Admixture," proportions as recommended by the manufacturer.
   d. Ardex Engineerec Cements "X32 Microtec".
3. Cementitious Grout:
   a. Hydroment "Ceramic Tile Grout /Joint Filler" with "425 Flexible Grout Admixture" by Bostik; "Keracolor S" by Mapei Corp., or "1500 Series Sanded Grout" with "1776 Grout Admix Plus" by Laticrete International, Inc.; sanded as appropriate for installation.
   b. Colors as listed in the Finish Schedule.
   c. Colors: As indicated in the Finish Legend.

G. Setting Accessories:
1. Metal Screed: As manufactured by Schlüter Systems, Inc. (800-225-8902), or Ceramic Tool Company, (414-258-9066); stainless steel tile edging trim; sizes as required for installation of top of screed flush with top of tile, as detailed.
2. [Tile Waterproofing Membrane:
   a. Mapei Corp "Aqua Defense" liquid-rubber waterproofing and crack-isolation membrane.
   b. Laticrete International, Inc. "HydroBan".]
3. Crack Isolation Membrane: One of the following.
   a. Laticrete "Blue 92 Anti-Fracture Membrane".
   b. The Noble Company "NobleSeal TS," reinforced CPE sheet membrane.
   c. N.A.C. Products Inc. "ECB Membrane;" self bonding reinforced modified asphalt sheet membrane; 36" width.
4. Interior Tile Backer Board and Accessories (approved for use at interior wall locations only)
   a. Interior Wall Locations:
      1) Georgia Pacific: "DensShield".
      2) USG: "FiberRock Aqua-Tough"
      3) CertainTeed: "DiamondBack Glasroc".
      4) Thickness: Nominal 1/2 inch or 5/8 inch as indicated on the Drawings.
   b. Provide tape and fasteners as recommended by the interior tile backer board manufacturer.
   c. Backer Board Accessories:
      1) Joint Tape: Open weave glass mesh joint tape, self-adhesive; 2-1/2 inches wide.
      2) Fasteners: As recommended by the backer board manufacturer; thread forming self-drilling wafer head screws; polymer coated or zinc plated; USG "Durock Screws," "Rock-On," or approved.
5. Siloxane Type Tile Sealer:
   a. Miracle Sealants "511-H20" by Miracle Sealants and Abrasives Company (800-350-1901).

H. Preparation: Clean substrate surfaces free of grease, dirt, dust, organic impurities, curing agents, and other materials which would impair bond. Clean floors with "Blast-track" unit if necessary.

I. Slab Leveling:
1. Prior to installation of thinset floor tile, where local irregularities in the substrate surface would prevent level installation of the tile, the substrate shall be brought to plane surface with variations not to exceed 1/8 inch in 10 feet from the required plane, and no more than 1/16 inch variation in 24 inches when measured from the high points in the surface. Smooth all abrupt changes in plane.
2. Use subfloor fillers endorsed by the setting mortar manufacturer.
3. Screed or float to appropriate thickness and specified surface tolerance. Allow to set prior to proceeding with installation. Do not exceed the maximum thicknesses for thin bed mortar as recommended by the manufacturer.

J. Installation of Tile Backer Board:
1. Install in accordance with the manufacturer's installation instructions. Provide shims as necessary to align backer board with adjacent substrates.
2. At wall locations, install units with edges firmly supported over framing at a maximum spacing of 16 inches oc.
3. Provide required space between panels.
4. Screw attach units with backer board manufacturer recommended fasteners spaced 6 inches oc along framing.
5. Install fiberglass reinforcing tape with joint compound at joints between panels.

K. Crack Isolation membrane installation:
1. Install crack isolation membrane on a unit price basis in accordance with Section 012200.
2. Crack isolation membrane may be required at the following locations:
   a. At control and construction joints in concrete floors.
   b. At changes in substrate materials.
   c. Shrinkage cracks 1/16 inch or larger in existing slabs.
3. Extend a minimum of 24 inches each side of crack or joint.
4. Substrate Examination:
   a. Substrates are subject to examination by the Owner prior to installation of tile or slab leveling materials. Furnish a minimum of 7 days notice.
   b. The examination will determine the need for crack isolation membrane at locations not scheduled above.

L. Waterproof Membrane Installation:
1. Install waterproof membranes in accordance with manufacturer's installation instructions.
2. At above grade locations, install waterproof membrane completely over floor surfaces indicated, and up the wall a minimum of 5 inches. (Do not expose the waterproof membrane to view.)
3. Protect waterproof membrane from damage until after tile installation is complete.

M. Screed Installation:
1. Install screeds at tile field edges at the locations indicated.
2. Accurately cut to length for flush tightly butted joints. Provide miter cut angle joints.
3. Install in longest possible lengths, except that no screed section shall be longer than 12 feet or shorter than 4 feet.
4. Install screeds free from waves and variations in height, flush with top of adjacent tile surfaces.
5. Set screeds directly in setting bed as the tile installation proceeds. Comply with screed manufacturer's instructions to achieve mortar tightly compacted between screed and tile edge.

N. Installation of Tile:
1. Interior Floor Application - Thinset or LHT Mortar Bed over Concrete Substrate or Waterproofing/Crack Isolation Membrane.
   a. TCNA System: Similar to F113.
   b. Installation Standard: ANSI A108.5.
   c. Setting Materials: Latex modified thinset mortar; 3/32 inch minimum thickness.
2. Interior Wall Tile Application – Thinset Over Tile Backer Board.
   a. TCNA System: Similar to W244.
   b. Installation Standard: ANSI A108.5.
   c. Setting Materials: Thinset mortar.
3. Joint Pattern:
   a. Lay out tile pattern prior to commencing tile installation.
   b. Accurately locate grout joints on lines indicated; where not indicated, adjust grout joints within specified toierances to minimize use of cut tiles at field edges.
   c. Where cut tiles are necessary, position floor tile such that cut tile at each edge of each rectilinear field is not less than half of a full size unit.
   d. Unless otherwise indicated, tile joints shall be 1/8" wide.
4. Tiles shall be blended as necessary to avoid pattern repeats and "patches" of adjoining tiles of distinctive color or character within each field area.
5. Tiles that exhibit directional patterns shall be set with grain direction as indicated on the shop drawings, or, if not indicated, as directed by the Owner.
6. Install tiles aligned with adjacent finishes, where indicated. Provide mortar fill as necessary for proper alignment.
7. Use wet saws to cut tiles for accurate fit and consistent edge conditions; scratch cutters and snapped tiles are not allowed.
8. Clean joints of mortar to minimum depth of 1/4 inch to allow subsequent grout installation.
9. Tolerances:
   a. Joint Width Variation: Plus or minus 25% of joint width.
   b. Taper: Plus or minus 25% from one end to the other.
   c. Lippage: No portion of a tile surface shall vary more than 1/32 inch above or below an adjacent tile surface.
   d. Install tile fields level to within tolerance specified for finished substrate.
   e. Chipped or broken tile: Not acceptable.
10. Special Floor Tile Installation Requirements:
    a. Wash backs of each tile to remove all dust and soil which would compromise adhesion.
    b. Dampen substrate as necessary to prevent excessive suction.
    c. Key the mortar into the substrate with the flat side of the trowel.
    d. Comb mortar over the previously keyed substrate in one direction using the notch side of the trowel.
    e. Firmly press each tile into the mortar. Press down and move the tile back and forth perpendicularly across the ridges approximately 1/8 to 1/4 inch to flatten the ridges and fill in the valleys of the combed mortar, as necessary to achieve minimum mortar coverage of 95 percent, with tile corners and edges firmly supported.
    f. Set tiles in accurate alignment.

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12-29-2025

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:

JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

SPECIFICATIONS

Sheet #:

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O. Grouting:
1. Mix grouts in accordance with manufacturer's instructions.
2. Grout all joints, except expansion joints, in accordance with the manufacturer's recommendations. Float joints to a slightly concave profile.
3. Remove excess grout from tile surfaces in accordance with the grout and tile manufacturer's recommendations. Do not use excess amounts of water.
4. Protect adjacent surfaces from damage if acid cleaners are used.
5. Do not grout joints indicated to receive sealants.
6. Cured grout joints shall be made free of efflorescence, prior to sealing.
7. Cure installation in accordance with the grout manufacturer's recommendations. Protect tile and grout during curing operations.

P. Expansion Joints:
1. Place expansion joints as indicated on the Drawings, but in no case more than 16 foot intervals for interior installations.
2. Place expansion joints at control and expansion joints in concrete slabs, and at intersections with walls and columns.
3. Joint Sizes: Set to match width of typical grouted joint.
4. Leave expansion joints free of mortar.
5. Sealant materials and installation are specified in Section 079200.

Q. Cleaning:
1. Wash and thoroughly rinse all tile. Leave all tile surfaces clean. Auto-scrub floor with sealer manufacturer's recommended cleaner as required to remove all contaminants.
2. Allow floor to dry for a minimum of one hour prior to sealant application.

R. Grout Sealing: Apply two coats of sealer in accordance with the manufacturer's recommendations to achieve maximum penetration into tile grouts.

S. Special Protection Requirements For Tile Surfaces:
1. Areas Subject Only to Foot Traffic: Lay down non-staining curing paper lapped and sealed at joints and edges with Nashua Brand Duct Tape. Do not use polyethylene or products containing bituminous materials.
2. Areas Subject to Rolling Trucks, Dollies and Other Equipment: In addition to the above, such areas shall be further protected by continuous plywood or hardboard runways. Coordinate designation of such areas.

096500 RESILIENT FLOORING

A. Summary:
1. Sheet Vinyl
2. [Patch and Repair of Existing Vinyl Composition Tile.]
3. Transition Strips.

B. Submittals:
1. Product literature:
a. Submit for each product proposed, including resilient tile flooring, transition strips, threshold, and adhesives.

C. Quality Assurance:
1. Qualifications of Installers:
a. Use only skilled and experienced resilient flooring installers for preparation of substrate and installation of resilient flooring.
b. Helpers and apprentices used for such work shall be under full and constant supervision at all times by thoroughly skilled resilient flooring installers.

D. Environmental Requirements
1. Maintain minimum 70 degrees F air temperature at flooring installation area for three days prior to, during, and for 24 hours after installation.
2. Store flooring materials in area of application. Allow three days for material to reach equal temperature as area.

E. Materials:
1. Sheet Vinyl
2. Subfloor Filler: White premix latex filler, mixed with water to produce a cementitious paste.
3. Primers and Adhesives: Types as recommended by resilient flooring manufacturer for specific application.
4. Threshold: Rubber threshold in configuration as detailed.

F. General Resilient Flooring Installation Requirements:
1. [Removed damaged floor tile in accordance with section 024119.]
2. Sequence installation with plumbing fixtures to permit sealing around all floor penetrations.
3. Install subfloor filler to fill low spots, cracks, construction joints, holes and other defects, and as required to adjust level to meet adjacent finishes. Feather to maximum slope of 1/8 inch in 3 feet; float to smooth, flat, hard surface. Prohibit traffic over filler.
4. Install all resilient flooring where scheduled in accordance with manufacturer's recommendations.
5. Terminate resilient flooring at centerline of door at door openings where adjacent floor finish is dissimilar, and where no threshold is indicated.
6. Install threshold at unprotected or exposed edges where flooring terminates.
7. Scribe flooring to walls, columns, cabinets, floor outlets and other appurtenances to produce tight joints.
8. Clean substrate. Spread cement evenly in quantity recommended by manufacturer to ensure adhesion over entire area of installation. Spread only enough adhesive to permit installation of flooring before refinishing set.
9. Set flooring in place, press with heavy roller to ensure full adhesion.

G. Vinyl Composition Tile:
1. Open floor tile cartons, enough to cover each area, and mix tile to insure shade variations do not occurs within one area.
2. Unless indicated otherwise, install flooring with joints parallel to building lines.
3. Install with minimum tile width 1/2 full size at room or area perimeter.
4. Arrange to square grid pattern with all joints aligned, with pattern grain alternating with adjacent unit to produce basket weave pattern. Where patching into existing floor, match exiting pattern. 29

H. Cleaning
1. Remove excess adhesive from floor, and wall surfaces without damage.
2. Clean floor in accordance with manufacturer's instructions.

096513 RESILIENT BASE AND ACCESSORIES

A. Materials:
1. Resilient Base: Roll stock as scheduled on the Drawings.
2. Primers and Adhesives: Types as recommended by resilient base manufacturer for specific application.

B. Installation:
1. Adhesive install base materials in accordance with the manufacturer's recommendations. Adhere tightly to wall and floor surfaces.
2. Use roll stock only. Where cutting is necessary, maintain minimum measurement of 18 inches between joints.
3. Miter or cope inside corners for accurate fit.
4. Install base to walls, columns, and to wood casework toe kicks in areas where resilient base is scheduled.
5. Score back of base material with grooving tool, at outside corners; maintain minimum leg length 18 inches where wall length permits. Mount base so that scored groove is accurately aligned with corner, and with base tightly adhered to wall at both sides of corner, with no visible gaps at top of base. Where cove base is formed around outside corners, stretch toe of cove for smooth transition around corner, with toe in uniform contact with the finish flooring.
6. Scribe and fit to door frames and other obstructions.
7. Install straight and level to variation of plus or minus 1/8 inch over 10 feet.
8. Coordinate installation of base with work of Sections 096500, 033536 and 093000 as applicable.
9. Fit joints tight and vertical.

C. Cleaning
1. Remove excess adhesive from base and wall surfaces without damage.
2. Clean base in accordance with manufacturer's instructions.

097200 WALL COVERINGS

A. Summary: Installation of owner-provided wall coverings.

B. Submittals:
1. Submit evidence of experience including photographs of installations of similar, custom patterned wall coverings.
2. Prior to installation, submit written acceptance of substrate on wall covering installer's letterhead. If necessary, do not begin installation until all substrate conditions are corrected.

C. Quality Control:
1. Wall Covering Installer: Minimum of 5 years experience in wall covering installations of similar size, scope, and complexity. Able to show evidence of experience when requested by the Owner.

D. Environmental Conditions:
1. Temperature: As recommended by the wall covering manufacturer.
2. Do no wall covering work until surfaces and materials have been maintained at 60 degrees F. minimum, or higher if recommended by wall covering manufacturer, for 3 days before work begins.
3. Maintain minimum or above temperatures during the entire installing time and until adhesives have fully dried or cured.
4. Lighting: During installation, maintain minimum lighting level of 15 foot-candles on the surfaces to receive wall covering. Use temporary lighting, if necessary, to attain specified level.

E. Maintenance Materials:
1. Excess Yardage:
a. Notify Owner's representative at the site prior to removing excess yardage from the job. The Owner's representative will select the materials which are to be retained by the Owner.
b. Carefully wrap the excess yardage selected to be retained. Deliver to a location on site as directed by the Owner. Remove remainder from the site and legally dispose.

F. Materials:
1. Wall Coverings: As scheduled on the Drawings.
2. Adhesives: As recommended by the wall covering manufacturer.

G. Preparation:
1. Schedule work such that the subsequent work of other sections will not damage the work of this section.
2. Remove electrical outlet and switch plates, mechanical diffusers, escutcheons, registers, surface hardware, fittings, and fastenings prior to starting work; store during and replace after work.
3. Protection: Provide sufficient drop cloths, shields, and protective equipment to prevent wall covering materials from fouling adjacent surfaces, and in particular at storage and preparation areas.

H. Installation:
1. Apply adhesives in strict accordance with the adhesive manufacturer's directions for the type of material being applied.
2. Install wall covering secure, smooth, clean, and without wrinkles, gaps or overlaps.
3. Install wall covering in accordance with manufacturer's installation instructions.
4. Extend wall covering continuously behind such items as mirrors, and other items which are close to but not touching walls.
5. Provide double-cut seams on nonmatch patterns; butt seams on match patterns.
6. Install wall covering oriented vertically. Horizontal seams are not permitted.

30

7. Corner Seams: Make no seams within 6 inches of an inside or outside corner. Lap wall coverings at inside corner seams to prevent substrate show through.
8. Cleanup
a. Remove all adhesives, and other contaminants in a manner which will not damage the surface from which it is removed.
b. Remove debris and leave areas neat and clean.
c. Replace all removed wall plates and other accessories.
d. Repair to like-new condition, or replace as directed by the Owner, all surfaces damaged by work of this Section.

099000 PAINTING AND COATING

A. Summary:
1. Interior painting of new surfaces.
2. Painting of previously unpainted interior steel elements indicated on the Drawings.

B. Submittals:
1. Submit a list of each paint system to be used in the work.
2. Submit two samples of each color and paint system indicated.

C. Quality Assurance:
1. Paint coatings shall be free of dust, dirt, flow lines, streaks, sags, blisters, pinholes, bugs, runs, or other surface imperfections.
2. In addition to the coats specified, provide additional coats as required to obtain adequate hide.

D. Maintenance Materials: Furnish a minimum of one gallon of each color paint to Owner for future touch-up work.

E. Materials:
1. Products by the following manufacturers are acceptable:
a. Pittsburgh Paints.
b. Pratt & Lambert.
c. Benjamin Moore Paint Company
d. The Sherwin-Williams Company.
e. Glidden Professional / Akzo Nobel Paints.
2. Paint materials are to be fully VOC compliant, and of the highest quality intended for application by professional commercial painters.
3. Acrylic Wall Size: One of the following.
a. ICI Devoe "Wonderprime" DR51701 vapor barrier primer/sealer.
b. ICI Dulux "Ultra-Hide" 1060 vapor barrier primer/sealer.
c. Sherwin-Williams "Harmony Primer 0 VOC" B11W900.
d. Benjamin Moore Paint Company "Moore's Wall-Grip 203."
e. Zinsser Co, Inc. (Somerset NJ; 732-469-8100) "Shieldz Universal Pre-Wall Covering Primer"; acrylic primer/sealer.
4. Concrete Urethane Flooring Topcoat System:
a. Manufacturer: Dur-A-Flex, Inc. (East Hartford, CT; 877-251-5418) "Accelera".
1) Colorant Additive: "White" – one of the following:
a) Tennant Coatings (Minneapolis, MN, 866-540-1299), "#370300 White Colorant".
b) Sherwin Williams Company "ColorCast EcoToner #844".
2) Sheen: Gloss.
3) Add 1 pint colorant per 1 kit of Accelera.
5. Epoxy/Polyurethane System: One of the following
a. Manufacturer: Tnemec Company Inc. (Kansas City, MO; 816-483-3400).
1) Epoxy Primer: "Hi-Build Epoxoline II" Series 69.
2) Polyurethane Finish Coats: Series 75 "Endura-Shield" Acrylic Polyurethane Enamel; semi-gloss or satin sheen.
b. Manufacturer: Carboline Company (St. Louis, MO; 314-644-1000; 800-848-4645).
1) Epoxy Primer: Carboline 888
2) Polyurethane Finish Coats: Carboline 133 HB; semi-gloss or satin sheen.
c. Manufacturer: Ameron Protective Coatings (Brea, CA; 714-529-1951).
1) Epoxy Primer: "Amercoat 385."
2) Polyurethane Finish Coats: Amercoat 450SA", semi-gloss or satin sheen.
6. Direct-To-Metal (DTM) acrylic primer:
a. ICI/Devoe "Devflex 4020" primer.
b. Sherwin Williams "DTM Acrylic Primer."

F. Surface Preparation:
1. Prepare surfaces by removing dirt, dust, grease, oil, moisture, and other contaminants that will impair the proper adhesion of the finish.
2. Wood - Opaque paint finish:
a. Spot coat knots, pitch streaks, and sappy sections with sealer.
b. Fill nail holes and cracks. Sand filler smooth and level with wood surface.
3. Gypsum Board: Remove light dust, and dirt.
4. Existing Finished Surfaces To Be Repainted:
a. Remove loose, blistered, scaled, or crazed finishes to bare substrate; feather new work into existing work. Prepare surfaces to the nearest break line if necessary to blend new finishes with old finishes.
b. Wash and rinse surfaces with trisodium phosphate and water or other solution required to remove remaining film, wax, oil, grease, smoke or foreign matter which will impair bond, or cause bleed through, of newly applied finishes.
c. Lightly sand, or apply a liquid deglosser on existing semi-gloss and high-gloss finishes before refinishing.
5. Existing Unpainted Interior Steel Elements (above 10 feet) Indicated to Receive Paint:
a. Remove loose, and scaling rust with wire brush.
b. Leave surface free of dust and dirt that will impair bond of newly applied finish.
6. Existing Unpainted Interior Steel Elements (below 10 feet) Indicated to Receive Paint:
a. Solvent clean in accordance with Steel Structures Painting Council (SSPC) SP-1.
b. Commercial blast per SSPC SP-6.
c. Leave surface free of dust and dirt that will impair bond of newly applied finish.
7. Existing Concrete Floor Surfaces: 31
a. Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.
b. For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with Steel-Seam FT910. Primer required.
c. Follow the standard methods listed below when applicable:
1) ASTM D4258 Standard Practice for Cleaning Concrete.
2) ASTM D4259 Standard Practice for Abrading Concrete.
3) ASTM D4260 Standard Practice for Etching Concrete.
4) ASTM F1869 Standard Test Method for Measuring Moisture Vapor
5) Emission Rate of Concrete.
6) SSPC-SP 13/Nace 6 Surface Preparation of Concrete.
7) ICRI No. 310.2 Concrete Surface Preparation.
d. Previously Finished Surfaces:
1) Clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, additional abrasion of the surface and/or removal of the previous coating may be necessary. Retest surface for adhesion.

G. Special Application Requirements:
1. Unless specified or indicated otherwise, follow paint manufacturer's label directions for general application procedures and coverage rates.
2. Do not apply finishes on surfaces that are not sufficiently dry. Make sure each coat of finish is dry and hard before a following coat is applied unless the manufacturer's directions state otherwise.
3. Opaque Finishes:
a. Apply number of coats scheduled for each application, except that additional finish coats shall be applied as necessary for complete hiding of substrate colors.
b. Apply primer coats un-tinted. Where more than one coat of paint is required, tint each succeeding coat up to the final coat similar in tint, but slightly lighter in value (shade).
c. Sand lightly between coats if necessary to achieve required finish; sand between coats applied to wood substrates.
4. Rollers for application, and backrolling of latex paints shall have a nap of 3/8 inch or less.
5. Where roller texture is scheduled for application to plaster and gypsum board surfaces, finish coats may be roller-applied, or spray applied and backrolled at Contractor's option.
6. Factory Primed Surfaces: Apply scheduled finish system, less primer coat, except as necessary to for patching damage to factory prime coating.
7. Except where scheduled or indicated otherwise, the intent is to paint new rooms and areas. Existing areas that have not been remodeled or do not have patched surfaces are not to be repainted. Where existing surfaces have been remodeled or patched the entire room is to be repainted, including the associated access panels, electrical panels, hollow metal doors and frames (both sides), and similar elements within the room.

H. Interior Painting Systems:
1. Gypsum Board, Gypsum Plaster, and GFRG - Latex System:
a. System: Three coats - first coat acrylic latex primer sealer (untinted), second and third coat latex paint.
b. Sheen: Roller texture, eggshell sheen, except provide flat sheen at light coves, ceilings, skylight areas, clerestory areas, interior fascias, and other light sensitive surfaces. Verify locations of each sheen with Architect before proceeding with work.
c. Application:
1) Use on all exposed gypsum board, plaster, and GFRG surfaces, including the exposed portions of wall surfaces between adjacent fabric covered panels and mirrors.
2) Provide prime coat only behind permanently mounted mechanically anchored mirrors, fabric panels, and similar elements.
3) Do not apply primer or paint coatings to surfaces to receive adhesively mounted mirrors or tile.
2. Gypsum Board - Surfaces to Receive Wall covering: Apply one coat of acrylic wall size.
3. Interior Latex Dry-Fall System: One of the following; color matches as scheduled.
a. Manufacturer: Benjamin Moore Paint Company
1) Finish: M53 "Sweep-Up Spray Latex Flat."
b. Manufacturer: ICI Devoe
1) Finish: "1280-1200 Spraymaster Pro Uni-Grip WB Aquacrylic Dryfall Flat Primer and Finish."
c. Manufacturer: Sherwin-Williams
1) Finish: "Waterborne Acrlic Dryfall (B42 Series)" Flat sheen.
4. Wood - Opaque Finish Latex System:
a. System: Three coats; first coat latex wood primer, and second and third coat latex enamel.
b. Sheen: Semi-gloss, unless indicated otherwise.
c. Application: Use on all wood or medium density fiberboard surfaces indicated to receive opaque coating not otherwise specified in Sections 064000 or 081400.
5. Ferrous Metal and Galvanized - Acrylic System:
a. System: Three coats; first coat acrylic DTM primer; second and third coats latex finish. The primer may be omitted at factory primed surfaces, except as necessary to recoat damaged or abraded preprimed surfaces.
b. Sheen: Semi-gloss, unless indicated otherwise.
c. Application: Interior ferrous metal surfaces including hollow steel metal doors and frames, pipe steel hand and guard rails, overhead doors and frames, access doors and panels, and fire extinguisher cabinets.
6. Aluminum Reveals - Acrylic System:
a. System: Three coats; first coat acrylic DTM primer; second and third coats latex finish.
b. Sheen: Satin, unless indicated otherwise.
c. Application: Aluminum reveals if not pre-finished.

34

7. Concrete Floor Stripes - Epoxy System:
a. System: Two coats; first coat epoxy primer sealer, and second coat self-leveling / recoatable epoxy.
b. Sheen: Gloss, unless indicated otherwise.
c. Application: Use on concrete floor or underlayments where painted floor stripes are indicated.

I. Colors: As scheduled on the Drawings.

DIVISION 10 - SPECIALTIES

101400 SIGNAGE

A. Summary:
1. Code required, informational and directional at locations indicated on the Drawings.
2. Installation of signage.

B. Quality Assurance:
1. Regulatory Requirements: Signage shall conform to the requirements of the jurisdictional code authorities.

C. Materials:
1. General: Furnish signage similar to details. For custom signage, font shall be Optima, or approved.
2. Door Signage: Screen printed or individual letters on self-adhesive vinyl; configuration and text as indicated on the Drawings; colors as directed.

D. Installation:
1. All graphics shall be mounted level and plumb and in accurate alignment, unless indicated otherwise.
2. Decals: Adhere to substrate free of bubbles.

102813 TOILET ACCESSORIES

A. Products and Accessories: Provided by the Owner for installation.

B. Installation: Secure each item in accordance with manufacturer's recommendations, and installation instructions, and accessibility requirements.

104416 FIRE EXTINGUISHERS AND CABINETS

A. Submittals: Product literature, including extinguisher dimensions.

B. Extinguishers: Multi-Purpose Dry Chemical Type: Heavy Duty DOT Steel tank; UL rating 2A-10B;C, 5 lb capacity, FM approved; red enamel finish; pressure gage; metal valves and siphon tubes.

C. Fire Extinguisher Cabinets:
1. Manufacturer: J.L Industries #8100 series is specified as the design standard.
a. Similar products from the following manufacturers are acceptable subject to the specified requirements.
1) Potter-Roemer, Inc.
2) Larsen's Manufacturing Company
b. Trim style: Fully recessed flat trim model where wall depth allows, or semi recessed (approximately 2-1/2" projection; rolled edge) where required by wall depth.
c. Door: 2 inch wide vertical, clear tempered glass with pull handle.
d. Lettering: "Fire Extinguisher" in back lettering, vertical format.
e. Provide fire-rated model at rated wall construction.
f. Finish: Manufacturer's standard baked white enamel interior; furnish to Section 099000 for field painting when indicated on the Drawings.

D. Fire Extinguisher Brackets: Manufacturer's standard J-type. Provide at fire extinguisher locations where no cabinet is indicated.

E. Installation:
1. Install brackets 48 inches from finished floor to top of bracket.
2. Secure rigidly in place in accordance with manufacturer's instructions.
3. Install cabinets plumb and level in wall openings in locations as indicated. Unless otherwise indicated, install 30 inches from finished floor to inside bottom of cabinet.
4. When recessed cabinets are installed in fire rated walls, maintain fire resistance rating continuously behind the cabinet.
5. Install in locations as indicated on the drawings.

109913 MISCELLANEOUS SPECIALTIES

A. General:
1. Summary of Items:
a. Floor Marking Tape
2. Submittals: Provide manufacturer's product data and installation instructions. Mark as necessary to define size and color proposed.

B. Products:
1. Floor Marking Tape:
a. Manufacturer: Shield Mark, Inc. (Rocky River, OH; 800-714-9980).
b. Product: "Mighty Line", solid, 2 inches wide, PVC floor tape; color, White.
c. Location: As indicated on the Drawings.

C. Installation:
1. Preparation: Confirm concrete is clean, free of dirt and oil, and above 55 degrees Fahrenheit.
2. Install in single lines, straight, and without intermediate seams or joints.
3. Miter cut all 90 degree corners; skim seal all seams with white silicone to hide transitions.

DIVISION 11 through DIVISION 14 33

A. Not Used

DIVISION 21 – FIRE SUPPRESSION

210033 DESIGN-BUILD FIRE SUPPRESSION

A. Fire protection systems are design/build, and shall conform to the requirements of the jurisdictional code authorities, and requirements of the Landlord.

B. Sprinkler heads in Retail Sales, Fitting and Display area ceilings shall be the fully-concealed type, finished to match the ceiling they are installed in. Sprinkler heads in the remainder of the store shall be either concealed or semi-recessed, chrome finish with white trim. Confirm type and finish of heads in open to structure ceiling areas with Architect.

C. Fire protection subcontractor shall furnish stamped, signed shop drawings of the sprinkler system prepared by a Professional Engineer licensed to practice in the State where the project is located.

D. Submit approved shop drawings for local Building Department and Fire Marshal review and approval, as submittal for permit, as required.

DIVISION 22 – PLUMBING

A. See Plumbing Drawings.

DIVISION 23 – HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)

A. See Mechanical Drawings.

DIVISION 26 - ELECTRICAL

A. See Electrical Drawings.

END

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Seal:

12-29-2025

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:

JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

JD SPORTS
STANDARDS

Sheet #:

A00.9

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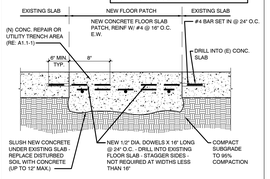
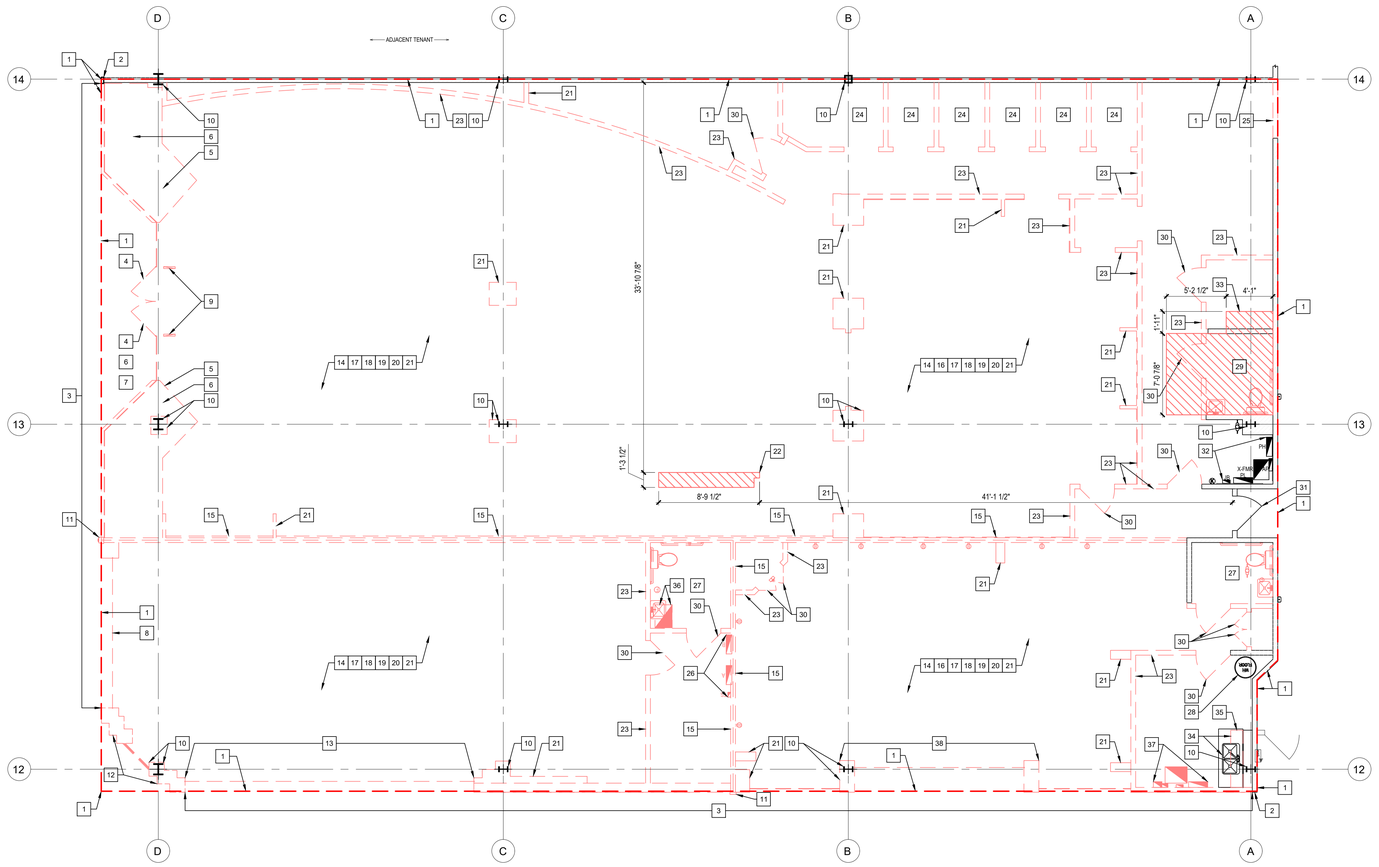
NOTE:
REPLACE DAMAGED VAPOR RETARDER IF PRESENT. OVERLAP MINIMUM 6" OVER EXISTING EDGES.

NOTE:
WHEN NEW UTILITY TRENCH CROSSES OVER AN EXISTING FLOOR SLAB EXPANSION JOINT, CONTRACTOR MUST PROVIDE THIS CONDITION TO AVOID SLAB CRACK.



20 FLOOR SLAB PATCH
SCALE: 1"-0" = 1'-0"



18 DEMOLITIONS
SCALE: 3/16" = 1'-0"

1. COORDINATE WITH M.E.P. DRAWINGS IF EXISTING EQUIPMENT IS TO REMAIN.
2. GENERAL CONTRACTOR SHALL VERIFY FIELD CONDITIONS AND NOTIFY THE ARCHITECT OF ALL DISCREPANCIES BEFORE PROCEEDING WITH WORK.
3. PREVENT MOVEMENT OR SETTLEMENT OF EXISTING STRUCTURE(S). PROVIDE AND PLACE BRACING OR SHORING AND BE RESPONSIBLE FOR SAFETY AND SUPPORT OF STRUCTURE. ASSUME LIABILITY FOR SUCH MOVEMENT, SETTLEMENT, DAMAGE OR INJURY.
4. HVAC SUBCONTRACTOR TO INSPECT EXISTING CONDITIONS AND DETERMINE WHETHER ANY COMPRESSOR REFRIGERANT LINES ARE PRESENT THAT MUST BE PROPERLY DRAINED (TO E.P.A. STANDARDS) PRIOR TO DEMOLITION.
5. BURNING OF MATERIALS ON SITE IS NOT PERMITTED.
6. NO WORK IS TO BE PERFORMED OUTSIDE THE LEASE LINE AS DEFINED BY THE LANDLORD.
7. REPAIR ALL DEMOLITION PERFORMED IN EXCESS OF THAT REQUIRED AT NO COST TO THE OWNER.
8. TEMPORARY BARRICADE BY BOSTON BARRICADE. ANY ADDITIONAL LL REQUIREMENTS FOR SEALING BARRICADE FROM DUST/SMELL/ETC. TO THE OUTSIDE OF THE SPACE IS THE RESPONSIBILITY OF THE GC.
9. PLACE MARKERS TO INDICATE LOCATIONS OF DISCONNECTED SERVICES. IDENTIFY SERVICE LINES AND CAPPING LOCATIONS ON PROJECT RECORD DOCUMENTS.
10. CEASE OPERATIONS AND NOTIFY THE OWNER IMMEDIATELY IF SAFETY OF STRUCTURE APPEARS TO BE ENDANGERED. TAKE ALL NECESSARY PRECAUTIONS TO PROPERLY SUPPORT THE STRUCTURE. DO NOT RESUME OPERATIONS UNTIL SAFETY IS RESTORED.
11. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXTENT OF DEMOLITION WITH THE OWNER AND THE LANDLORD AND BRING ANY DISCREPANCIES TO BOTH PARTIES ATTENTION PRIOR TO FINALIZING THE BID AND COMMENCEMENT OF WORK.
12. A FIRE EXTINGUISHER MUST BE KEPT ON THE PREMISES AT ALL TIMES.
13. EXCEPT WHERE NOTED OTHERWISE, MAINTAIN POSSESSION OF MATERIALS BEING DEMOLISHED. IMMEDIATELY REMOVE FROM SITE.
14. PROVIDE TEMPORARY SERVICES AS NECESSARY FOR CONTINUOUS OPERATION FOR ALL LIFE/SAFETY DEVICES.
15. WHERE THE EXISTING CONCRETE SLAB IS TO BE PATCHED AND REPAIRED, THE GENERAL CONTRACTOR SHALL MAINTAIN THE EXISTING FIRE RATING OF THE EXISTING SLAB, PATCH WORK TO BE STRUCTURALLY SOUND AND CAPABLE OF SUPPORTING LIVE LOADS FOR MERCANTILE OCCUPANCIES AS PER LOCAL CODES AND JURISDICTION.
16. ARRANGE & PAY FOR DISCONNECTING, REMOVING & CAPPING UTILITY SERVICES WITHIN AREAS OF DEMOLITION, DISCONNECT & STUB-OFF. NOTIFY AFFECTED UTILITY COMPANY & BUILDING MANAGER IN ADVANCE & OBTAIN APPROVAL BEFORE STARTING THIS WORK.
17. DEMOLISH IN AN ORDERLY AND CAREFUL MANNER AS REQUIRED TO ACCOMMODATE NEW WORK, INCLUDING THAT REQUIRED FOR CONNECTION TO THE EXISTING BUILDING. PROTECT EXISTING FOUNDATIONS AND SUPPORTING STRUCTURAL MEMBERS. PHASE DEMOLITION IN ACCORDANCE WITH CONSTRUCTION SCHEDULE.
18. G.C. TO COORDINATE ALL WORK BELOW SLAB W/ LL & SHALL PATCH & REPAIR ANY/ALL DAMAGE THAT MAY OCCUR DURING DEMO WORK.
19. PROTECT ALL ADJACENT SURFACES THAT ARE TO REMAIN DURING DEMOLITION. PATCH AND REPAIR ALL DAMAGED ADJACENT SURFACES THAT ARE TO REMAIN AND PREPARE TO RECEIVE NEW FINISH PER ELEVATIONS.
20. REFER TO THE NEW CONSTRUCTION PLAN TO ENSURE PROPER DEMOLITION IN RELATION TO NEW CONSTRUCTION.
21. DO NOT DEMOLISH LOAD BEARING WALLS THAT WILL COMPROMISE THE STRUCTURAL INTEGRITY OF THE BUILDING. NOTIFY ARCHITECT OF STRUCTURAL ISSUES ARISING FROM DEMOLITION.
22. DEMOLITION INCLUDES CORING/SAW CUTTING OF SLAB FOR ELECTRICAL. COORDINATE WITH ELECTRICAL DRAWINGS FOR NEW CONSTRUCTION. COORDINATE WITH LANDLORD PRIOR TO ANY SLAB WORK. A VAPOR BARRIER MUST BE MAINTAINED.
23. WHERE DEMOLITION/NEW WORK OCCURS ADJACENT TO EXISTING TO REMAIN, PATCH AND REPAIR ADJACENT CONDITIONS FOR A UNIFORM APPEARANCE.
24. VERIFY CONDITIONS PRIOR TO COMMENCEMENT OF WORK AND NOTIFY ARCHITECT OF DISCREPANCIES.VERIFY FLOOR IS LEVEL THROUGHOUT. NOTIFY ARCHITECT OF DISCREPANCIES.
25. VERIFY FLOOR IS LEVEL THROUGHOUT. NOTIFY ARCHITECT OF DISCREPANCIES
26. FOLLOW LANDLORD DEMOLITION RULES AND REQUIREMENTS.
27. VERIFY LOCATIONS OF ALL EXISTING WALLS, COLUMNS AND LEASE LINE PRIOR TO COMMENCEMENT OF WORK. NOTIFY ARCHITECT OF DISCREPANCIES.
28. REMOVE AND CAP ALL EXISTING FLOOR POWER AND COMMUNICATION OUTLETS THROUGHOUT PER ELECTRICAL CODE REQUIREMENTS.
29. REMOVE AND CAP ALL EXISTING ELECTRICAL CONDUIT THROUGHOUT PER ELECTRICAL CODE REQUIREMENTS.
30. COORDINATE REMOVAL OF MECHANICAL EQUIPMENT WITH NEW WORK AND MECHANICAL DRAWINGS.
31. COORDINATE W/ OWNER & VENDORS ANY EQUIPMENT THAT SHALL BE SALVAGED IN EXISTING STORE. DO NOT PERTAIN TO ANY OTHER TENANT EQUIPMENT UNLESS SPECIFIED.
32. REDUNDANT FIXINGS TO BE REMOVED AND MADE GOOD

17 GENERAL NOTES
SCALE: NTS

1 LEASE LINE.
2 EXISTING NEUTRAL PIER TO REMAIN.
3 EXISTING STOREFRONT GLAZING AND BASE TO BE REMOVED. PATCH EXISTING MALL BULKHEAD AS REQUIRED AND PAINT TO MATCH EXISTING LANDLORD COLOR. SEE A02.0, A04.1, A05.1-A05.3 FOR MORE INFORMATION.
4 EXISTING ENTRANCE DOOR, FRAME, AND HARDWARE TO BE REMOVED.
5 EXISTING RAISED PLATFORM TO BE DEMOLISHED.
6 EXISTING STOREFRONT SOFFIT AND MEP EQUIPMENT TO BE DEMOLISHED. REFERENCE A02.0 FOR NEW SOFFIT DEPTH.
7 REMOVE STOREFRONT TILES AND ENSURE FLOOR FINISH IS FLUSH AND LEVEL IN PREPARATION FOR NEW JD FLOORING. REFER TO SHEETS A02.1 & A07.1.
8 EXISTING ROLLING GRILLE TO BE DEMOLISHED.
9 EXISTING EAS FLOOR PEDESTALS TO BE DEMOLISHED.
10 EXISTING STRUCTURAL COLUMN TO REMAIN. ANY EXISTING BUILDOUTS AROUND EXISTING COLUMNS TO BE DEMOLISHED AS INDICATED. GC TO PROTECT COLUMNS IN PLACE DURING CONSTRUCTION PROCESS.
11 EXISTING NEUTRAL PIER TO BE DEMOLISHED AS INDICATED. LL TO CONFIRM THAT ANY ATTACHED EXISTING FIRE ALARMS CAN BE RELOCATED.
12 EXISTING STOREFRONT BUILDOUTS TO BE DEMOLISHED. GC TO CONFIRM THAT EXISTING BUILDOUTS ARE NON-STRUCTURAL.
13 EXISTING ENTRANCE AND ROLLING GRILLE TO BE DEMOLISHED IN PREPARATION FOR NEW GLAZING. ENTRANCE HEIGHT TO BE INCREASED AS NEEDED TO ACCOMMODATE GLAZING.
14 REMOVE EXISTING FLOOR FINISHES AND ENSURE FLOOR FINISH IS FLUSH AND LEVEL IN PREPARATION FOR NEW JD FLOORING. REFER TO SHEET A07.1.
15 EXISTING DEMISING WALL TO BE DEMOLISHED. GC TO CONFIRM FLOORING BETWEEN SPACES IS SMOOTH AND HAS NO CHANGE IN HEIGHT.
16 GC TO VERIFY IF CONCRETE IS IN GOOD CONDITION. FLOORS MUST BE SMOOTH AND LEVEL WITH NO ELEVATION DIFFERENCES GREATER THAN 1/4" HIGH. GC TO PROVIDE LEVELER TO ANY GOUGES OR SCARS. GC TO SEAL EXISTING CONCRETE FLOOR. CREATE SMOOTH TRANSITION TO ADJACENT FLOOR FINISH.
17 REFER TO ELECTRICAL AND MECHANICAL PLANS FOR ELECTRICAL AND MECHANICAL DEMOLITION SCOPE.
18 EXISTING FIRE SPRINKLER HEAD AND ASSOCIATED DROP TO BE MODIFIED PER SPRINKLER CONTRACTOR SHOP DRAWINGS.
19 EXISTING CEILING AND DECORATIVE ELEMENTS TO BE REMOVED TO PREPARE FOR AN OPEN TO DECK CEILING CONCEPT PER JD SPORT DESIGN.
20 EXISTING LIGHTING TO BE REMOVED IN ITS ENTIRETY THROUGHOUT ENTIRE SPACE U.O.N. WIRES, CONDUITS, AND ASSOCIATED ITEMS TO BE REMOVED TO SOURCE.
21 EXISTING FIXTURES AND PERIMETER FIXTURES TO BE REMOVED THROUGHOUT.
22 TRENCHING AS REQUIRED TO PROVIDE POWER FOR CASHWRAP. COORDINATE WITH A04.2, A02.1, AND E-201. SEE DETAIL 20/A01.1 FOR PATCH CONCRETE SLAB. COORDINATE ALL TRENCHING ON SITE WITH LANDLORD'S REPRESENTATIVE PRIOR TO WORK START AS SLAB MAY NEED TO BE X-RAYED.
23 EXISTING INTERIOR PARTITION WALL AND PERIMETER FIXTURES TO BE REMOVED.
24 EXISTING FITTING ROOM TO BE DEMOLISHED. REMOVE EXISTING PARTITION WALLS AND FURNISHINGS. EXISTING FLOORING IN FITTING ROOM TO BE REMOVED. FLOOR TO BE LEVELED AND PREPPED TO RECEIVE JD FLOOR FINISH.
25 EXISTING DEMISING WALL TO BE PARTIALLY DEMOLISHED FOR NEW EGRESS DOOR.
26 EXISTING ELECTRICAL PANELS TO BE RELOCATED. REFER TO A02.0, ELECTRICAL DRAWINGS FOR MORE INFORMATION.
27 EXISTING RESTROOM TO BE DEMOLISHED. REMOVE EXISTING FLOORING, CEILING, LAVATORY, WATER CLOSET, GRAB BARS, AND ALL RESTROOM ACCESSORIES. SERVICES TO BE CAPPED OFF AS NEEDED.
28 EXISTING WATER HEATER TO REMAIN.
29 EXISTING RESTROOM TO BE PARTIALLY DEMOLISHED. EXISTING FIXTURES & FITTINGS TO BE REMOVED AND RELOCATED TO COMPLY WITH ADA REQUIREMENTS. GC TO ADD FRP-1. EXISTING FLOORING TO BE REMOVED. SEE A02.0 AND A06.3 FOR MORE INFORMATION.
30 EXISTING DOOR, FRAME, AND HARDWARE TO BE REMOVED.
31 EXISTING DOOR AND FRAME TO REMAIN. GC TO PATCH AND REPAIR AS NECESSARY. GC TO PROVIDE NEW DETEX HARDWARE. (MODEL: DETEX ECL-230X-TDB)
32 EXISTING ELECTRICAL PANELS AND ELECTRICAL EQUIPMENT TO REMAIN. REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.
33 TRENCHING AS REQ. FOR NEW RESTROOM PLUMBING, MOP SINK, AND DRINKING FOUNTAIN. COORDINATE WITH A02.0, A06.3, AND PLUMBING DRAWINGS FOR MORE INFORMATION. SEE DETAIL 20 FOR PATCH CONCRETE SLAB. COORDINATE ALL TRENCHING WITH JD-PM AND ON-SITE LANDLORD'S REPRESENTATIVE PRIOR TO WORK START AS SLAB MAY NEED TO BE X-RAYED.
34 EXISTING COUNTER AND SINK TO REMAIN. EXISTING SHELVING TO BE DEMOLISHED. COUNTER HEIGHT TO BE ASSESSED ON SITE. ADA ADJUSTMENTS TO BE MADE AS REQUIRED.
35 EXISTING COUNTER ABOVE SINK TO BE DEMOLISHED. PATCH AND REPAIR AS NECESSARY.
36 EXISTING TRANSFORMER TO BE REMOVED. GC TO ADVISE IF TRANSFORMER NEEDS TO BE RELOCATED.
37 EXISTING ELECTRICAL PANELS TO BE REMOVED. GC TO ADVISE IF ELECTRICAL PANELS NEED TO BE RELOCATED.
38 EXISTING SHOPFRONT ENTRANCE, ROLLING GRILLE, AND ASSOCIATED BUILDOUTS TO BE DEMOLISHED IN PREPARATION FOR NEW DRYWALL.

9 KEY NOTES
SCALE: NTS

SYMBOL	DESCRIPTION
	EXISTING CONSTRUCTION TO BE DEMOLISHED/RELOCATED
	EXISTING PARTITION TO REMAIN (FIELD VERIFY EXACT LOCATION)
	LEASE LINE (FIELD VERIFY EXACT LOCATION)
	NEW TEMPORARY BARRICADE WALL
	EXISTING BARRICADE DOORS
	TRENCHING AT 4" DIAMETER HOLE MAX

1 LEGEND
SCALE: NTS

NORTH

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CLEVELAND
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GLENDORA
IRVINE
ORLANDO
PHOENIX
SAN FRANCISCO

Seal:

12-29-2025

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:
JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

DEMOLITIONS

Sheet #:
A01.1

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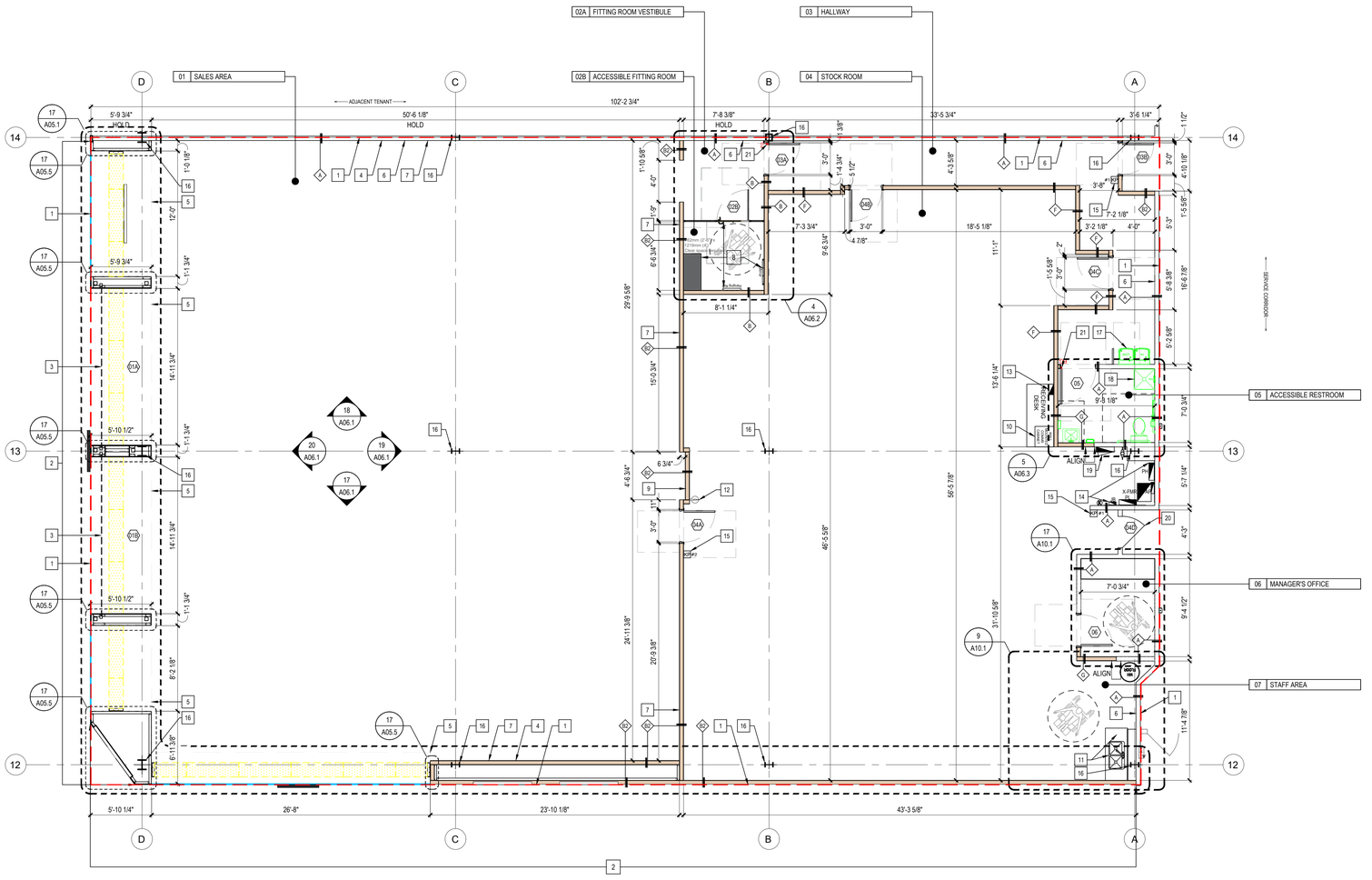

18 CONSTRUCTION PLAN
SCALE: 3/16" = 1'-0"

NORTH

FINISH	AREA
LEVEL 0: NO FINISH. THIS SIMPLY THE DRYWALL HUNG AND NOT TAPED OR FINISHED.	
LEVEL 1: DRYWALL IS TAPED, AND A THIN COAT OF JOINT COMPOUND IS APPLIED. THIS LEVEL IS SUITABLE FOR AREAS THAT WON'T BE SEEN OR WHERE THERE'S A HIGH TOLERANCE FOR IMPERFECTIONS.	STOCKROOM
LEVEL 2: ONE OR TWO THIN COATS OF JOINT COMPOUND ARE APPLIED OVER THE TAPE AND FASTENERS, WITH SOME SANDING. THIS LEVEL IS SUITABLE FOR AREAS WHERE WALL COVERINGS OR TILE WILL BE APPLIED.	
LEVEL 3: ALL JOINTS AND CORNERS ARE TAPED AND FINISHED WITH TWO COATS OF JOINT COMPOUND, WITH SANDING TO CREATE A SMOOTH SURFACE. THIS LEVEL IS SUITABLE FOR AREAS WHERE PAINT OR WALLPAPER WILL BE APPLIED.	FITTING ROOM AND FITTING ROOM VESTIBULE
LEVEL 4: ALL JOINTS AND CORNERS ARE TAPED AND FINISHED WITH THREE COATS OF JOINT COMPOUND, AND THE ENTIRE SURFACE IS SANDED FOR A SMOOTH FINISH. THIS LEVEL IS SUITABLE FOR AREAS THAT WILL BE PAINTED WITH FLAT OR EGGSHELL PAINT.	SALES AREA, RESTROOM, MANAGER'S OFFICE, STAFF AREA, HALLWAY.
LEVEL 5: ALL JOINTS AND CORNERS ARE TAPED AND FINISHED WITH THREE COATS OF JOINT COMPOUND, AND THE ENTIRE SURFACE IS SKIM-COATED WITH A THIN LAYER OF JOINT COMPOUND TO MINIMIZE TEXTURE. THIS LEVEL IS THE HIGHEST QUALITY AND IS SUITABLE FOR AREAS THAT WILL BE PAINTED WITH HIGH-GLOSS PAINT OR HAVE A MIRROR-SMOOTH FINISH.	

17 DRYWALL FINISH LEGEND
SCALE: NTS

1. THE GC SHALL VERIFY DIMENSIONS OF THE EXISTING SPACE & OF ANY EXISTING CONSTRUCTION TO REMAIN BY ACTUAL MEASUREMENT BEFORE ANY WORK IS PERFORMED. IF MEASUREMENTS DIFFER FROM DIMENSIONS INDICATED ON THESE PLANS, THE GC IS TO NOTIFY THE TENANT AND ARCHITECT IMMEDIATELY. THE GC IS RESPONSIBLE FOR CORRECTING ANY & ALL DISCREPANCIES AT NO ADDITIONAL EXPENSE TO TENANT.
2. THE GC SHALL PATCH & REPAIR ALL EXISTING SURFACES AS NECESSARY BEFORE APPLYING NEW FINISHES. ALL SOFT, POROUS, FLAKING OR OTHERWISE DEFECTIVE FINISHES SHALL BE REMOVED BEFORE APPLICATION OF NEW MATERIALS. OPENINGS, VOIDS, OR UNFINISHED SURFACES CREATED BY REMOVAL OR MODIFICATION OF EXISTING WORK SHALL BE FILLED OR PATCH & FINISHED AS NECESSARY TO MATCH EXISTING CONDITIONS FOR NEW FINISHES REQ. SPECIFICALLY, FLOOR SURFACES AT ENTRY SHALL BE LEVELED TO ASSURE SMOOTH SURFACE TRANSITION BETWEEN EXISTING & NEW FLOOR FINISH MATERIALS. REFER TO A07.1 FOR FLOOR FINISH NOTES.
3. GC SHALL VERIFY THAT DEMISING WALLS EXTEND TO STRUCTURE ABOVE AND ALL PENETRATIONS ARE SEALED TIGHT, AS REQUIRED BY LANDLORD AND SHALL PROVIDE ALL WORK REQUIRED TO CORRECT DEFICIENT CONDITIONS
4. THE GC IS RESPONSIBLE TO MAINTAIN THE ARCHITECTURAL, STRUCTURAL AND FIRE RATING INTEGRITY OF THE LANDLORD'S DEMISING WALLS, FLOOR SLAB, BEAMS, COLUMNS, ROOF DECK, ETC.
5. ALL METAL STUDS ARE TO BE 20 GA. TYPICAL NON-LOAD BEARING PARTITIONS. SEE USG STEEL-FRAMED DRYWALL SYSTEMS "LIMITING HEIGHT - STEEL STUD ASSEMBLIES" CHART. USE THE L/240 ALLOWABLE DEFLECTION FIGURES ONLY
6. ALL GYPSUM BOARD TO BE 5/8" TYPE 'X' U.O.N.
7. THE GC SHALL COORDINATE WORK OF VARIOUS TRADES IN INSTALLATION OF INTERRELATED WORK. BEFORE INSTALLATION OR WORK BY ANY TRADE BEGINS, MAKE PROPER PROVISIONS TO AVOID INTERFERENCES. THIS SHALL INCLUDE WORK BY ANY OF THE TENANTS SUBCONTRACTORS AS WELL AS THOSE UNDER CONTRACT W/ THE GC
8. PROVIDE METAL BACKING STRIPS FOR ALL SIGNS, HOOKS, TOILET ROOM ACCESSORIES & ANY OTHER WALL MOUNTED EQUIPMENT. DOUBLE UP IF USING 6" FOR PERIMETER POST. COORDINATE ALL BLOCKING REQUIREMENTS NECESSARY FOR MILLWORK W/ MILLWORK.
9. ALL FRAMING LUMBER, PLYWOOD AND CONCEALED WOOD SHALL BE FIRE RETARDANT TREATED (F.R.T.) - NO WOOD IN CEILING PLENUM ABOVE SPRINKLER COVERAGE.
10. DIMENSIONS ARE FROM FACE OF GYPSUM WALL BOARD OR CENTERLINE OF COLUMN. ALL ELEVATIONS ARE FROM FINISH FLOOR ELEVATION
11. ALL INTERIOR FINISH & TRIM MATERIALS SHALL MEET APPLICABLE CODES FOR FLAME SPREAD RATINGS
12. MINIMUM DIMENSION FROM ANY CORNER OR WALL TO FRAMING STUD AT DOOR JAMB OPENING SHALL BE 4" (U.O.N.)
13. THE GC SHALL PROVIDE CAULK JOINTS WHERE GYP. BD. MEETS THE FLOOR OR ROOF DECK - PACK FLUTES AT DECK AS REQUIRED
14. PROVIDE DRYWALL TRIM AT ALL EXPOSED EDGES AND CORNERS
15. COORDINATE POWER REQUIREMENTS WITH FIXTURE VENDOR
16. PROVIDE IN WALL STUD BLOCKING PER BLOCKING DETAIL ON A10.6. REFER TO INTERIOR ELEVATIONS.
17. GC TO INFILL ALL TRENCHING LOCATIONS WITH NEW CEMENTOUS OVERLAY TO MATCH EXISTING ADJACENT FINISH.
18. PROVIDE RECORD DRAWINGS STORAGE TUBE IN STOCK ROOM PER SPECIFICATIONS SECTION #017700.
19. COORDINATE LOCATIONS OF ALL SAW CUTTING AND CORING IN CONCRETE FLOOR SLAB, WORK TO BE APPROVED BY THE LANDLORD PRIOR TO CUTTING. WHERE EXISTING, MAINTAIN VAPOR BARRIER

13 GENERAL NOTES
SCALE: NTS

1. LEASE LINE
2. NEW STOREFRONT SYSTEM, GLAZING, AND BASE. REFER TO STOREFRONT SHEETS A05.1, A05.2 AND A05.3 FOR MORE INFORMATION.
3. NEW MANUAL ROLLING GRILLE BY VENDOR AT STOREFRONT ENTRY. REFER TO STOREFRONT SHEETS A05.1-A05.3 FOR MORE INFORMATION.
4. REFER TO DETAIL 16/A10.4 FOR NEW DEMISING METAL STRAPPING.
5. NEW SOFFIT ABOVE. SEE SHEET A04.1 AND A05.2 FOR MORE INFORMATION.
6. EXISTING DEMISING WALL TO REMAIN. PATCH AND REPAIR AS REQUIRED TO MAINTAIN EXISTING FIRE RATING.
7. LOCATION OF SURFACE MOUNTED BLOCKING, REFER TO FIXTURE PLAN FOR ALL FIXTURE LOCATIONS; REFER TO SHEET A06.1 FOR HEIGHTS. SEE SHEET A10.2 FOR MORE INFORMATION.
8. FITTING ROOM DOORS, BENCH AND ACCESSORIES PROVIDED BY VENDOR AND INSTALLED BY GC. GC TO ALLOW SEMI-GLOSS PAINT TO CURE AFTER 10 DAYS. BLOCKING TO BE ADDED FOR WALL FIXED FITTING ROOM FIXTURES. SEE A06.1 AND A07.1 FOR MORE INFORMATION.
9. GC TO COORDINATE WALL MOUNTED BLOCKING FOR RECESSED DIGITAL SCREEN. GC MUST COORDINATE FIRE RATED BACKING FOR RECESS DIGITAL DISPLAY.
10. NEW WALL MOUNTED COMMS CABINET ABOVE RECEIVING DESK.
11. EXISTING STAFF AREA COUNTER AND SINK TO REMAIN. COUNTER HEIGHT TO BE ASSESSED ON SITE. ADA ADJUSTMENTS TO BE MADE AS REQUIRED.
12. PROVIDE PORTABLE FIRE EXTINGUISHERS OF TYPE 2A10BC. COORDINATE FINAL LOCATIONS & QUANTITIES WITH OWNERS CONSTRUCTION PROJECT MANAGER AND LOCAL FIRE MARSHAL.
13. NEW CONTROL PANEL FOR SECURITY EQUIPMENT ABOVE RECEIVING DESK. GC TO COORDINATE WITH NUTECH SHOP DRAWINGS FOR MORE INFORMATION.
14. EXISTING ELECTRICAL PANELS TO REMAIN. GC TO ENSURE ELECTRICAL PANELS ARE CODE COMPLIANT. REFER TO ELECTRICAL DRAWINGS FOR INFORMATION
15. NEW KEY PADS. GC TO COORDINATE WITH NUTECH SHOP DWGS FOR MORE INFORMATION. SHOP DRAWINGS TO BE COORDINATED.
16. EXISTING COLUMN TO REMAIN.
17. NEW HI-LOW DRINKING FOUNTAIN. GC TO PROVIDE GRAB BAR, SEE SHEET A06.3 AND PLUMBING DRAWINGS FOR MORE INFORMATION.
18. NEW MOP SINK. SEE PLUMBING DRAWINGS FOR MORE INFORMATION.
19. NEW ELECTRICAL PANEL. GC TO ENSURE ELECTRICAL PANEL IS CODE COMPLIANT. REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.
20. EXISTING DELIVERY/SERVICE DOOR AND FRAME TO REMAIN. GC TO PATCH AND REPAIR AS NECESSARY AND PROVIDE NEW DETEX (MODEL: DETEX ECL-230X-TDB). REFER TO DOOR SCHEDULE ON A09.1 FOR MORE INFORMATION.
21. INSTALL FINGER GUARD. SEE DOOR SCHEDULE.

9 KEY NOTES
SCALE: NTS

REFER TO 17/A10.4 FOR WALL TYPE CONSTRUCTION DETAILS *

- WALL TYPE 'A': EXISTING DEMISING/INTERIOR/EXTERIOR WALL OR WALL FURRING TO REMAIN.
- WALL TYPE 'A1': NEW DEMISING WALL OR WALL FURRING.
- WALL TYPE 'B': NEW FULL HEIGHT, NON RATED, SINGLE STUD PARTITION, GWB FINISHED ON BOTH SIDES.
- WALL TYPE 'C': NEW FULL HEIGHT, NON RATED, SINGLE STUD PARTITION, GWB FINISHED ON EXPOSED SIDE ONLY.
- WALL TYPE 'F': NEW PARTIAL HEIGHT, NON RATED, SINGLE STUD PARTITION, GWB FINISHED ON BOTH SIDES EXTENDED UP TO 12'-0" HIGH.
- WALL TYPE 'G': NEW PARTIAL HEIGHT, NON RATED, SINGLE STUD PARTITION, GWB FINISHED ON BOTH SIDES EXTENDED UP TO MATCH EXISTING WALL HEIGHT.
- DENOTES SOUND BATT INSULATION OF 42 STC OR BETTER IN WALL CAVITY
- DOOR TYPE, SEE A09.1 DOOR SCHEDULE

GENERAL NOTES:
- USE MOISTURE RESISTANT GYPSUM BOARD AT ALL WET LOCATIONS.
- SOUND BATT INSULATION WITH AN STC OF 42 OR BETTER TO BE INSTALLED IN ALL RESTROOM WALLS
- REFER TO THE METAL STUD SCHEDULE ON DRAWING SHEET A10.4 FOR GAUGE SIZES UNLESS NOTED OTHERWISE.

1 WALL LEGEND
SCALE: NTS

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12-29-2025

A Project for:

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CONSTRUCTION PLAN

Sheet #:
A02.0

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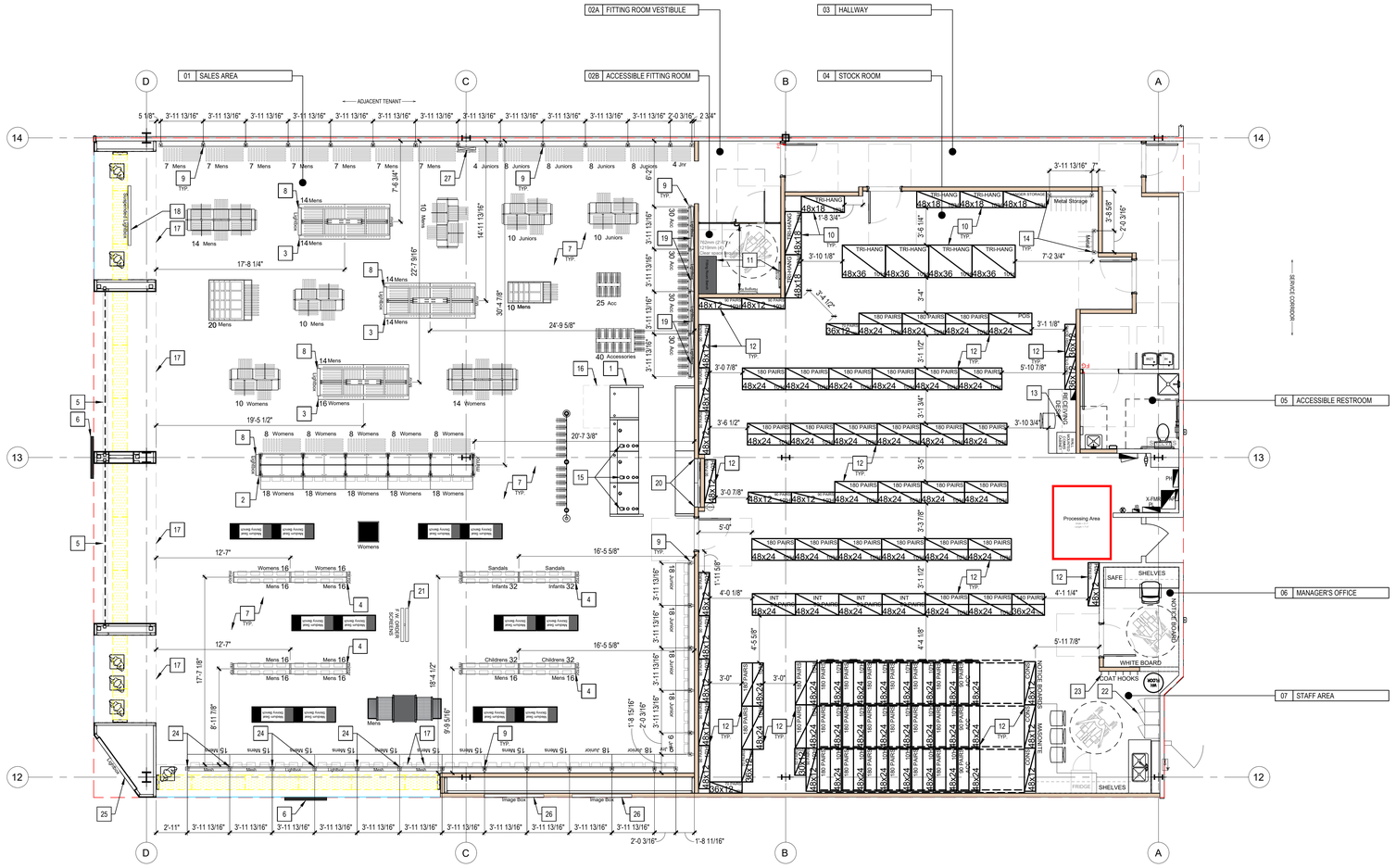

18 FIXTURE PLAN
SCALE: 3/16" = 1'-0"

1. G.C. TO VERIFY AND COORDINATE FINAL LOCATION OF FIRE-RATED IN-WALL BLOCKING REQUIREMENTS FOR WALL FIXTURE INSTALLATION w/ FIXTURE VENDOR.
2. G.C. TO MAINTAIN A MINIMUM CLEAR 36" AISLEWAY BETWEEN ALL FIXTURES AND / OR OTHER OBSTRUCTIONS. MAINTAIN MIN. 44" WIDE EGRESS PATH WHERE INDICATED ON EGRESS PLAN.
3. ALL FINISHES SHALL COMPLY w/ CLASS 'C' FLAME SPREAD REQUIREMENTS PER IFC SECTION 803, TABLE 803.3
4. STORE DISPLAY FIXTURES ARE FURNISHED SEPARATELY BY OWNER AND INSTALLED BY GC (FOIC)
5. FURNITURE TO BE PURCHASED BY OWNER AND INSTALLED BY GC (FOIC)
6. GC TO RECEIVE AND VERIFY QUANTITIES AND ANY DAMAGE UPON RECEIPT. GC TO NOTIFY OWNER IMMEDIATELY OF ANY DISCREPANCIES OR DAMAGE. IF CONTRACTOR HASN'T DOCUMENTED AND NOTIFIED JD OF ANY DAMAGES WITHIN 24 HRS. GC TO BE RESP. FOR REPLACEMENT AND TRANSPORTATION.
7. REFER TO LIGHT BOX INSTALLATION MANUAL FOR OWNER PROVIDED GC INSTALLED LIGHT BOXES. ALL LIGHT BOXES SHOWN ON PLANS ARE INSTALLED BY GC.
8. GC TO CAULK AROUND EDGES OF ALL LIGHTBOXES AND ILLUMINATED PORTAL FIXTURE TO PREVENT ANY LIGHT LEAKS. COORDINATE CAULK COLOR AND SPEC WITH JD PM.
9. **ALL POSTS WILL BE DELIVERED 9'-10 1/8" HIGH. ANY ALTERNATE HEIGHTS WILL NEED TO BE CUT DOWN ONSITE BY THE GC.**
10. **ALL DIMS TO BE VERIFIED IN FIELD PRIOR TO MANUFACTURE.**
11. **FOR NEW WALLS, PROVIDE METAL BACKING STRIPS. DOUBLE UP IF USING 6" FOR POST PERIMETER POST.**
12. **WHEN RETAINING EXISTING WALLS FRP BLOCKING TO BE PLACED CENTRALLY TO POST WALL FIXING POINT ABOVE AND BELOW. TO BE SECURELY FIXED AND DECORATED TO MATCH PROPOSED LOCAL FINISH.**
13. **REFER TO ELECTRICAL DRAWINGS FOR POWER/DATA REQUIREMENTS FOR ALL FIXTURES.**
14. SPRINKLER VENDOR TO CONFIRM COMMODITY RATING AND DENSITY DURING GC BIDDING PROCESS OR SPRINKLER ADJUSTMENTS CHANGE ORDERS WILL FALL BACK TO GC TO FUND.

17 GENERAL NOTES
SCALE: NTS

1. ACCESSIBLE CASHWRAP AND BACKWRAP COUNTERS FURNISHED BY OWNER AND INSTALLED BY G.C. REFER TO CASHWRAP DETAILS ON SHEET A10.6. SEE ELECTRICAL DRAWINGS FOR ALL ELECTRICAL REQUIREMENTS. RECESSED DIGITAL SCREEN DIMENSIONS ARE 4'-6 3/4" W X 4'-0 1/2" H. REFER TO 19/A10.6 FOR MORE INFORMATION.
2. H WALL TO BE BOLTED TO THE FLOOR AS PER MANUFACTURER'S SPECIFICATION. REFER TO ELECTRICAL DRAWINGS FOR POWER INFORMATION.
3. MOVEABLE CENTER WALLS (MCW). LIGHT BOX INSTALLED AS INDICATED. MIRRORS TO BE INSTALLED AT REAR SIDE. POWER REQUIRED FROM ABOVE VIA CURLY CABLE, TO BE FINISHED BLACK. REFER TO ELECTRICAL DRAWINGS.
4. CLEAR LACQUER FLIGHTCASE FIXTURE. REFER TO 7/A10.6 FOR MORE INFORMATION. ELECTRICAL FEED FROM ABOVE VIA CONDUIT AT THE BACK END OF FIXTURE, CONDUIT AND JBOX TO BE PAINTED BLACK PT-4. ON. MIRROR TO BE INSTALLED AT THE REAR.
5. NEW MANUAL ROLLING GRILLE BY VENDOR AT STOREFRONT ENTRY. REFER TO STOREFRONT SHEETS A05.1-A05.3 FOR MORE INFORMATION.
6. NEW ILLUMINATED JD LOGO SIGNAGE SUSPENDED WITH METAL RETURNS FINISH RAL 9004 /PT-6 30% GLOSS FACE FIXED ONTO STOREFRONT. SEE ELECTRICAL DRAWINGS FOR POWER INFORMATION.
7. SINGLE KIT COLOR. ALL FIXTURES AND PERIMETER FIXTURES TO BE CLEAR LACQUER.
8. LIGHTBOX PROVIDED BY OWNER AND INSTALLED BY GC.
9. TYPICAL PERIMETER POST 9'-10 1/8" HIGH. REFER TO SHEET A10.2 FOR MORE INFORMATION. METAL STRAPPING TO BE PROVIDED INSIDE OF THE WALL. REFER TO SHEET A04.2 AND ELECTRICAL DRAWINGS FOR POWER INFORMATION.
10. APPAREL FIXTURE. NEW APPAREL STOCK RACKING. RACKS TO BE 10'-0", PROVIDED BY OWNER AND INSTALLED BY VENDOR.
11. FITTING ROOM DOOR, BENCH, AND ACCESSORIES PROVIDED BY VENDOR AND INSTALLED BY G.C. SEE A06.2 FOR MORE INFORMATION.
12. NEW STOCK RACKING FOR FOOTWEAR AND CARDBOARD CONTAINERS. RACKS ARE 10'-0" HIGH. PROVIDED BY OWNER AND INSTALLED BY VENDOR.
13. NEW RECEIVING DESK AND SHELVING ABOVE PROVIDED AND INSTALLED BY GC. MUST ACCOMMODATE INSTALLATION OF A DETAGGER. REFER TO 3 & 4/A10.1 AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
14. METAL STORAGE. GC TO PROVIDE SURFACE MOUNTED BLOCKING AS REQUIRED. REFER TO DETAIL 22/A10.2.
15. GC TO INSTALL DETAGGERS PROVIDED BY OWNER AT CASHWRAP. GC TO INSTALL DETAGGERS PRIOR TO CASHWRAP FACE AT PRE DRILLED HOLES.
16. 30"X48" CLEARANCE FOR ACCESSIBLE CASHWRAP DESK.
17. NEW SOFFIT ABOVE. SEE SHEET A04.1 AND A05.2 FOR MORE INFORMATION.
18. SUSPENDED LIGHTBOX PROVIDED BY OWNER AND INSTALLED BY GC.
19. LIGHT BOX TO BE INSTALLED AT TOP AND BOTTOM USING EXTENDED RSP BAR BEHIND ALL ACCESSORY PERIMETER BAYS. PROVIDED BY OWNER AND INSTALLED BY GC. GC TO ALSO INSTALL THE LIGHTBOX SKIN. SKINS ARE PROVIDED BY OWNER.
20. NEW 55" DIGITAL SCREENS. REFER TO 19/A10.6 FOR MORE INFORMATION. SEE ELECTRICAL DRAWINGS FOR POWER INFORMATION. GC TO INSTALL 1/2" TRIM/SHROUD AROUND THE LED DISPLAYS. TRIM/SHROUD TO BE SUPPLIED BY OWNER'S VENDOR.
21. FOOTWEAR ORDERING SCREENS (FOS) TO BE SUSPENDED FROM THE DECK. BOTTOM OF SCREENS TO BE 9'-0" AFF. POWER AND DATA TO BE LOWERED TO BE BETWEEN TV'S. SEE DETAIL 1/A10.6. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION.
22. LOCKERS AND SPECIFICATIONS TO BE PROVIDED BY GC.
23. COAT HOOKS (ULINE H-8579) TO BE PROVIDED BY GC.
24. FLOOR TO CEILING POSTS. REFER TO A04.1 FOR HEIGHT INFORMATION. BLOCKING TO BE FIRE-TREATED AND MOUNTED INSIDE SOFFIT. REFER TO ELECTRICAL DRAWINGS FOR POWER INFORMATION. GC TO CUT ON SITE.
25. LIGHTBOX MOUNTED ON DISPLAY WALLS. GC TO PROVIDE FIRE TREATED BLOCKING IN WALL.
26. IMAGE BOX MOUNTED ON DISPLAY WALLS. GC TO PROVIDE FIRE TREATED BLOCKING IN WALL.
27. HALF-SIZE LIGHTBOX PROVIDED BY OWNER AND INSTALLED BY GC.

13 KEY NOTES
SCALE: NTS

CASH DESK REAR CUPBOARD CONFIGURATION

	SHELF/DOOR	BIN	RAIL	
CUPBOARD OPTIONS	900MM	450MM	900MM	

REAR COUNTER SIZES	1 PIECE	
	1 PIECE	
	1 PIECE	

CASH DESK SIZE										
2 BAY OR 1 BAY + ADA		1 BAY	2 BAY or ADA							
	REAR COUNTER	1 PIECE								
	CUPBOARDS	BIN	SHELF/DOOR	BIN						
3 BAY OR 2 BAY + ADA		1 BAY	2 BAY	3 BAY or ADA						
	REAR COUNTER	1 PIECE								
	CUPBOARDS	SHELF/DOOR	BIN	RAIL	BIN					
4 BAY OR 3 BAY + ADA		1 BAY	2 BAY	3 BAY	4 BAY or ADA					
	REAR COUNTER	1 PIECE		1 PIECE						
	CUPBOARDS	SHELF/DOOR	BIN	RAIL	BIN	SHELF/DOOR				
5 BAY OR 4 BAY + ADA		1 BAY	2 BAY	3 BAY	4 BAY	5 BAY or ADA				
	REAR COUNTER	1 PIECE			1 PIECE					
	CUPBOARDS	SHELF/DOOR	BIN	RAIL	SHELF/DOOR	RAIL	BIN			
6 BAY OR 5 BAY + ADA		1 BAY	2 BAY	3 BAY	4 BAY	5 BAY	6 BAY or ADA			
	REAR COUNTER	1 PIECE				1 PIECE				
	CUPBOARDS	SHELF/DOOR	BIN	RAIL	SHELF/DOOR	RAIL	BIN	SHELF/DOOR		

5 CASH DESK TABLE
SCALE: NTS

JUST LANDED FIXTURE SCHEDULE (MESH)

FIXTURE DESCRIPTION	RPS DESCRIPTION	DRAWING NUMBER	NOTES
00 ACC	FOOTWEAR FLOOR DISPLAY UNIT - MESH SET PANEL	FW71_T1_CL	Queue Barrier Panel
	FOOTWEAR FLOOR DISPLAY UNIT - POSTS	FW72_T1_CL	Queue Barrier Posts
FX-11 40 Accessories	MESH MID FLOOR ACCESSORIES GONDOLA - JL CL BASE	FM31_JL_CL	Accessory T-Stand - Mesh
FX-12 25 Acc	MESH MID FLOOR FOOTWEAR GONDOLA - JL CL BASE	FM33_JL_CL	Accessory I-Stand
	MESH FLIGHT CASE LARGE - INC POWER AND DATA (4no Power / Kettle and 2no Data Sockets in the top)	FM01_T1_CLM_DAT_A	Mesh Flight Case - 1 Meter - Clear Lacquer
	MESH FLIGHT CASE SMALL - 2no Power / Kettle / 2no Data Sockets in the top	FM02_T1_2CM	Mesh Flight Case - 1/2 Meter - Clear Lacquer
Mens	MESH TASTER TABLE FOOTWEAR CL	FM77_JL_CL	Taster Table - Clear Lacquer
Womens	MESH TASTER TABLE FOOTWEAR WOMENS LG	FM77_JL_CL	Taster Table - Clear Lacquer
Mens	TABLE NEST FOOTWEAR CL (Half / Full set available)	FM78_JL_CL	Nest Table - Clear Lacquer
Womens	TABLE NEST FOOTWEAR WOMENS LG (Half / Full set available)	FM78_JL_LG	Nest Table - Light Grey
16 Juniors FX-04 16 Mens	2 BAY MCW - MENS/JUNIOR ALL GRADES	AM92_JL_CL	MCW - 2 Meter - Clear Lacquer
24 Mens FX-03 24 Juniors	3 BAY MCW - MENS/JUNIOR ALL GRADES	AM92_JL_CL	MCW - 3 Meter - Clear Lacquer
16 Womens FX-04 16 Womens	2 BAY MCW - WOMENS ALL GRADES CL	AM71_JL_CL	MCW - 2 Meter - Clear Lacquer
24 Womens FX-03 24 Womens	3 BAY MCW - WOMENS ALL GRADES LG	AM72_JL_LG	MCW - 3 Meter - Light Grey
16 Womens FX-04 16 Mens	2 BAY MCW - SPLIT GENDER ALL GRADES	AM73_JL_SG_CL	MCW - 2 Meter - Split - Clear Lacquer
24 Mens FX-03 24 Womens	3 BAY MCW - SPLIT GENDER ALL GRADES	AM74_JL_SG	MCW - 2 Meter - Split
4 Mens FX-18 (LOW) 4 Juniors	LOWS LEVEL CASE MENS - HEX	AM97_JL_CL	
FX-06 10 Juniors	1200 GONDOLA JUNIOR (INC 7 BACK BARS)	AM93_JL_CL	1200 Gondola - Clear Lacquer
FX-05 14 Mens	1800 GONDOLA MENS (INC 7 BACK BARS)	AM94_JL_CL	1800 Gondola - Clear Lacquer
FX-15 8 Womens	WOMENS A FRAME RAIL INC GRAPHIC HOLDER - LG	AM76_JL_LG	
FX-16 6 Womens	WOMENS CURVED RAIL WITH PLINTH INC GRAPHIC HOLDER - LG	AM77_JL_LG	
FX-06 10 Womens	WOMENS GONDOLA INC GRAPHIC HOLDER - LG	AM79_JL_CL	1200 Gondola - Clear Lacquer
FX-08 20 Mens	TWO FOR UNIT MENS - 4 WIDE - SINGLE SIDED - HEX	AM98_JL_CL	Two For Unit - Clear Lacquer
FX-10 10 Mens	TWO FOR UNIT MENS - 2 WIDE - SINGLE SIDED - HEX	AM99_JL_CL	
FN-01	FOOTWEAR BENCH SEAT SKINNY SMALL	FW106_JL_CL	SLIM BENCH
FN-08	WOMENS FOOTWEAR BENCH SEAT PINK	FW128_JL_LG	Oval Bench
MOBILE SERVICE POINT	MOBILE SERVICE POINT (MSP)		
	DIGITAL PODIUMS	PA128_T1	
	NON DIGITAL PODIUM	PA127_T1	
4 Mens	MENS STORY TELLER RAIL 600MM LOW	AM103_JL_CL	1 per Storyteller
	MENS STORY TELLER RAIL 900MM HIGH	AM104_JL_CL	1 per Storyteller
4 Mens	MENS/JUNIORS MANNEQUIN PODIUM 600X600MM (ACRYLIC INSERT SUPPLIED SEPARATELY)	AM97_JL_CL	Used with Storyteller rails
4 Womens	WOMENS STORY TELLER RAIL 600MM LOW	AM81_JL_LG	1 per Storyteller
	WOMENS STORY TELLER RAIL 900MM HIGH	AM82_JL_LG	1 per Storyteller
4 Womens	WOMENS MANNEQUIN PODIUM 600X600MM (ACRYLIC INSERT SUPPLIED SEPARATELY)	AM97_JL_LG	Used with Storyteller rails

9 FIXTURE SCHEDULE
SCALE: NTS

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Seal:

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GENERAL ARRANGEMENT PLAN

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A02.1

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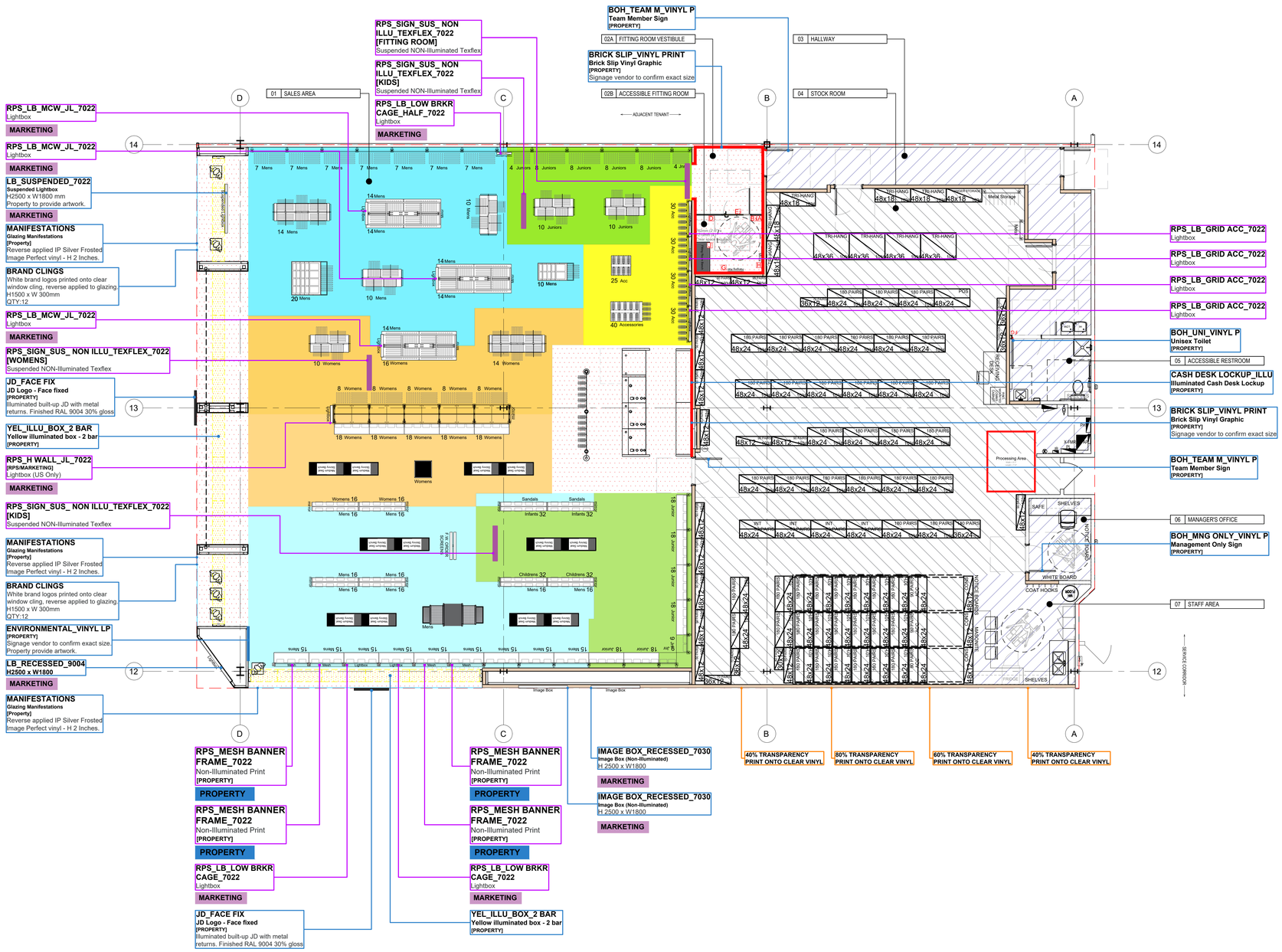
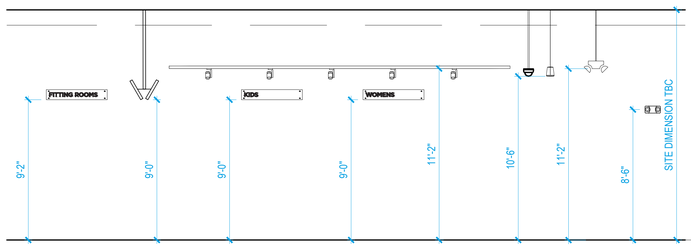


18 MERCHANDISE PLAN
SCALE: 3/16" = 1'-0"

SUSPENDED - RPS SIGNAGE, LIGHTING, CAMERAS, MOTION SENSORS, EAS, EM LIGHTS



17 DEPARTMENT KEY
SCALE: NTS

MERCHANDISING LEGEND

APPAREL	FOOTWEAR
Mens	Mens
Womens	Womens
Juniors/Infants	Juniors/Infants
Replica	

ACCESSORIES	ANCILLARY
Accessories	Retail Operations
	BOH Ancillary
	Stockroom

COLOR BOX LEGEND

REAL ESTATE
RPS ITEM
BESPOKE ITEM

DEPARTMENT AREAS	ft²	%
Textiles	1243 sq ft	24%
Footwear	1302 sq ft	25%
Accessories	173 sq ft	3%
Retail Operation	268 sq ft	5%
Ancillary BOH	321 sq ft	6%
Stockroom	1960 sq ft	37%
Total	**5267 sq ft**	100%

SIGNAGE & GRAPHICS LEGEND

VINYL PRINTS

BRICK SLIP_ VINYL PRINT	BRICK SLIP_VINYL PRINT (Durable vinyl graphic to match Ply Finish)
STAFF ROOM_ VINYL PRINT	Staff Room Vinyl Full cover digital print with matt over laminate
SSP_ VINYL PRINT	Satellite Service Point Graphic (SSP) (Durable vinyl graphic)

MERCHANDISING REQUIREMENTS

APPAREL

	Target	Achieved	+/-	Effective M	Split
Mens	184	183	-1	23	28%
Replica	0	0	0	0	0%
Womens	88	80	-8	10	12%
Junior	60	60	0	8	9%
Infants	0	0	0	0	0%
Total	332	**323**	-9	**40**	**49%**

FOOTWEAR

	Target	Achieved	+/-	Effective M	Split
Mens	255	263	8	18	21%
Womens	126	122	-4	7	8%
Junior	126	126	0	7	9%
Child	64	64	0	2	2%
Infants	64	64	0	2	2%
Total	635	**639**	4	**35**	**43%**

ACCESSORIES

Target	Achieved	+/-	Effective M	Split
180	185	5	**6**	**8%**
TOTAL EFFECTIVE M			**81.9 M**	**100%**

TOTAL STOCK CAPACITY		*17	Boxes +/-	Bays +/-
Required	10795			52
Achieved (Static)	7,690	69%		
Achieved (Roller)	3,510	31%	+/-	
Total :	11,200		405	4

TOTAL AREAS - Proposed		Gross Area % Split
Gross Area	6315 sqft	100%
Retail Area	3360 sqft	53 %
BOH Ancillary	626 sqft	10 %
BOH Stockroom	2028 sqft	32 %

STORE DATA	
Store Grade / Color Kit	Streamline
Color Kit	Single Color Kit
Refit / New	New
Store Type	Mall
Storefront Width	56'-0"
Store Width	60'-8"

RETAIL REQUIREMENTS	
Fitting Rooms	1 ADA
Tills	3 + 1 ADA
Lift	0
Escalators	0
Dumb Waiters	0
Footwear Ordering	2 sets

NORTH

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Seal:

12-29-2025

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:
JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

MERCHANDISE PLAN

Sheet #:
A03.1

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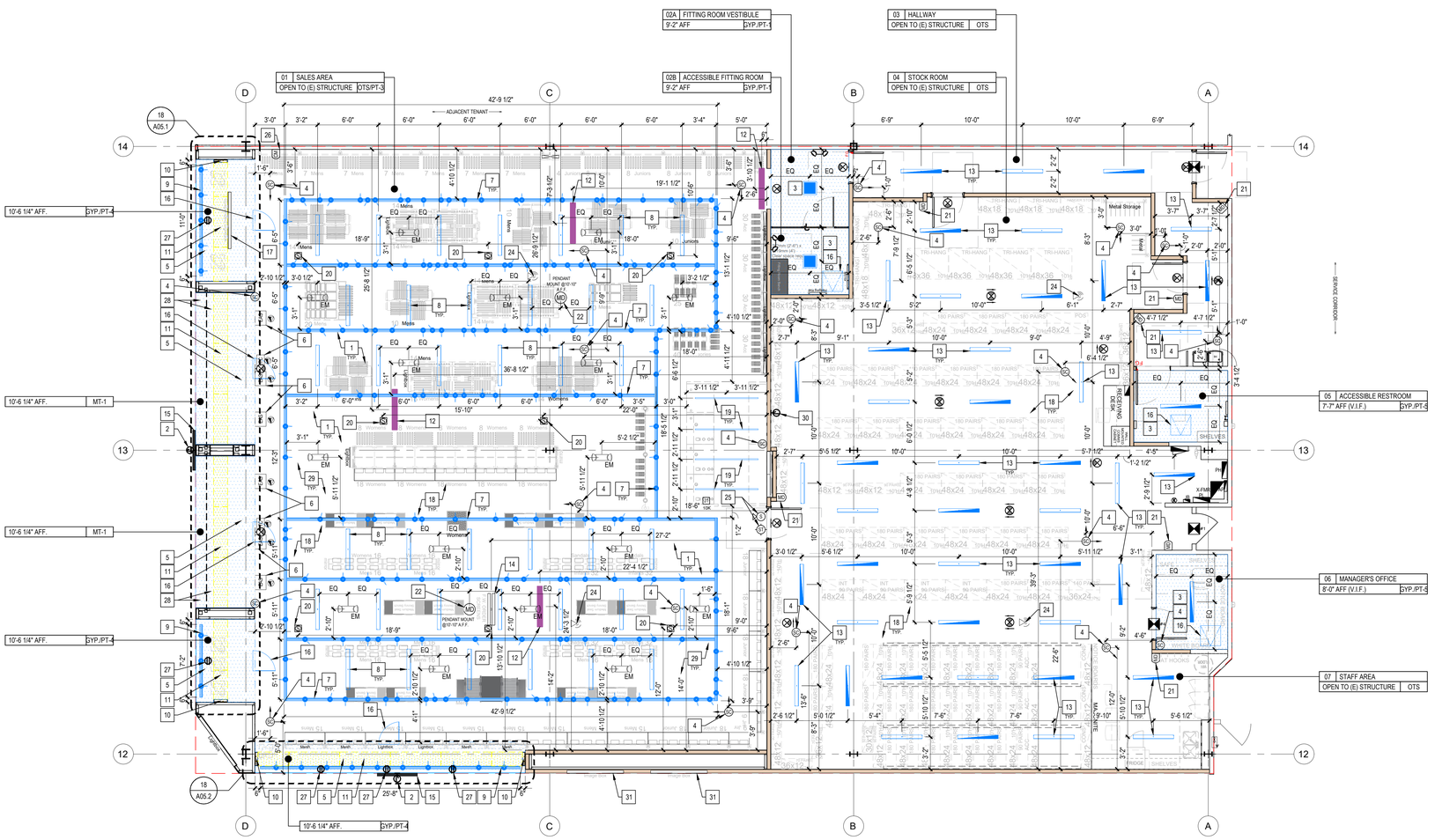


18 REFLECTED CEILING PLAN
SCALE: 3/16" = 1'-0"

LIGHTING SCHEDULE

SPECIALTY - ALL GRADES / REVISE

FIXTURE SYMBOL	FIXTURE TAG	DESCRIPTION	LOCATION	HEIGHT	FINISH	COMMENTS
	LT_03_IL_AG_SP	9' x 2.36" ATTAIN LED TUBE FIXTURE - 4000k / MODEL # AT-TP0-6-POT-40K-SL / MANUFACTURED - ATTAIN LED	CASHDESK	9' W/ CANOPY 9' - 10" W/O CANOPY	SILVER	- CENTERED ABOVE EACH CASHWRAP BAY - CENTERED ABOVE FROM FRONT OF CASHWRAP TO BACKSIDE OF BACKWRAP - HUNG FROM AIRCRAFT CABLES
	LT_06_IL_AG_SP	6-1/8"X5-7/8" TRACK HEAD HP / AT-HP-22-40-95-36-BK-J / MANUFACTURED - ATTAIN LED	SALES FLOOR	11' - 2" MOUNTED TO BLACK TRACK	BLACK	- 1 LIGHT PER DAY - 2 LIGHT PER EACH SIDE OF FLIGHTCASES - 2 LIGHT PER EACH FLOOR FIXTURES
	XTS4300-2	2'-24"X20-8" SINGLE CIRCUIT LINE VOLTAGE TRACK / LT SERIES / MANUFACTURED - CONTECH LIGHTING				
	LT_09_IL_SO_CR_SP	49.5"x2.36" LOW PROFILE T8 STRIP / AT-LPS-T8-8L / LAMP SPEC #T8X48/24/1K / LED 4FT T8 24.5W / MANUFACTURED - ATTAIN LED	SALES FLOOR / BOH	11' - 2" AFF	BLACK	6'-0" O.C. STAGGERED BETWEEN ROWS HEIGHTS VARY DEPENDING ON HEIGHT OF THE RACKING TYP. 18" ABOVE RACKING SPACING 10' - 0" O.C. CENTERED IN THE STOCKROOM RACKING
		JUST LANDED YELLOW LIGHTBOXES	STOREFRONT	PER PROJECT REQUIREMENTS	YELLOW ACRYLIC	RECESS / SURFACE MOUNTED. MAX LENGTH IS 5'-0" AND MIN. LENGTH IS 2'-0" WIDTH CANNOT BE ALTERED.

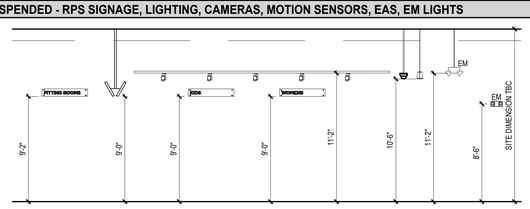
SPECIALTY STREAMLINE FITTING ROOM

FIXTURE SYMBOL	FIXTURE TAG	DESCRIPTION	LOCATION	HEIGHT	FINISH	COMMENTS
	FR_LT_01_SP	15"x15" WAFER LED FLUSH MOUNT - 3000k / MODEL # 58738WTWT / MANUFACTURED - MAXIM LIGHTING	FITTING ROOM AND FITTING ROOM VESTIBULE	9' - 2" SURFACE MOUNTED TO CEILING	BLACK	FITTING ROOM CUBICLES AND VESTIBULE SUSPENDED WITHIN FITTING ROOM VESTIBULE

RCP LEGEND

	Drop Plasterboard Ceiling @ 2800mm (9' 2") AFF. Painted finish.	Typical Plasterboard ceiling in fitting rooms & staffwelfare
	Just Landed Yellow Illumination.	
	Slim Yellow Illumination.	
	DIRECTIONAL SECURITY CAMERAS INSTALLED ON SUSPENDED DROP POLES (TO OPEN CEILINGS ONLY) @ 10'-10" / 3300mm OWNER SUPPLIED, NUTECH INSTALLED	CCTV Cameras Canada
EAS	EAS SYSTEM INFLIGHT RFID PRODUCT # 515636 QTY: ####. SUSPENDED (10'-8" / 3251mm) TO U/S AFF OWNER SUPPLIED / CONTROL TEK INSTALLED / ECHO COORDINATED	EAS system
PS	PENDANT SPEAKER 20W 25/8V 16"-10"/ 3302mm SUSPENDED TO U/S OK SURGWHI, 6, BLACK QTY: 6#6 POWER SUPPLIED BY: ECHO INSTALLED	Pendant speaker CANADA
F.W. ORDER SCREENS	FOOTWEAR ORDER SCREENS LCD SCREENS SUSPENDED @ 9' / 2743mm TO U/S 42" THIN BEVEL BLACK QTY: 2 SUSPENDED SALES FLOOR + 1 WALL-MOUNT STOCK ROOM OWNER SUPPLIED, ECHO INSTALLED	Double sided foot wear ordering screen
F.W. ORDER SCREENS	FOOTWEAR ORDER SCREENS LCD SCREENS SUSPENDED @ 9' / 2743mm TO U/S 42" THIN BEVEL BLACK QTY: 1 SUSPENDED SALES FLOOR + 1 WALL-MOUNT STOCK ROOM OWNER SUPPLIED, ECHO INSTALLED	Single sided foot wear ordering screen
	2 x 2' (610 x 610mm) ACCESS HATCH REQUIRED TO ALL ROOMS WITH NEW GYPSUM BOARD CEILING GC TO ENSURE HATCH DOES NOT CLASH WITH LIGHTING OR MECHANICAL LAYOUT.	Access hatch for any gypsum ceilings/bulkheads.
	2 x 2' (610 x 610mm) ACCESS PANEL REQUIRED FOR ENTRY BULKHEAD. GC TO ENSURE HATCH DOES NOT CLASH WITH LIGHTING OR MECHANICAL LAYOUT.	Access panel for entry bulkheads.
TC	TRAFFIC COUNTER. PROVIDE CONDUIT FOR DATA	
EAS	OVERHEAD EAS SYSTEM. PROVIDE CONDUIT FOR DATA	
	WIRELESS ACCESS POINT. PROVIDE CONDUIT FOR DATA. SEE DETAIL 3/A10.6.	
CM	CURTAIN WALL MOUNTED MOTION	
MD	WALL MOUNTED MOTION	
MD	360 MOTION CEILING MOUNTED	
S	ALARM SIREN	
SP	SECURITY ALARM STROBE LIGHT	
KP	KEY PAD	
S	KLIPSCH CA-800T BLACK SURFACE SPEAKER	
VT	REMOTE VOLUME CONTROL (10K POTENTIOMETER)	
	SURFACE MOUNT DOOR CONTACT	
	ILLUMINATED EXIT SIGN WITH 6" HIGH **RED** LETTERS AND LISTED/LABELED IN ACCORDANCE WITH UL 924. REFER TO ELECTRICAL DRAWINGS	
EM	BUG-EYE EMERGENCY LIGHT IN SALES AREA	
EM	BUG-EYE EMERGENCY LIGHT IN FITTING ROOM	

SUSPENDED - RPS SIGNAGE, LIGHTING, CAMERAS, MOTION SENSORS, EAS, EM LIGHTS



1. ALL CEILING HEIGHTS ARE FROM TOP OF FINISH FLOOR TO UNDERSIDE OF FINISH CEILING OR LIGHT FIXTURE - TYP. U.O.N.
2. THE GC SHALL SET ALL CEILING AND SOFFITS USING A LASER LEVEL TO ACHIEVE A CEILING THAT IS PLUMB, LEVEL AND SQUARE TO ALL WALLS AND SOFFITS
3. LATERAL BRACING FOR SUSPENDED CEILING MUST BE PROVIDED BY CEILING CONTRACTOR. ADDITIONAL HANGER RODS AND SAFETY WIRES FOR LIGHT FIXTURES, DUCTWORK, SPEAKERS, ETC. TO BE THE RESPONSIBILITY OF THE CEILING CONTRACTOR
4. THE GC TO VERIFY W/ LL, METHOD OF ATTACHMENT FOR ALL ITEMS ANCHORED TO, OR SUSPENDED FROM EXISTING STRUCTURE
5. ARCH. DRAWINGS DETERMINE THE LOCATION OF LUMINAIRES & SUPERSEDE ALL OTHERS, TYP. U.O.N. - REFER TO ELEC. DRAWINGS FOR EXACT FIXTURE TYPE & QUANTITIES PROVIDED
6. GC TO COORDINATE AIMING OF LIGHT FIXTURES WITH OWNER.
7. REFER TO MECHANICAL DRAWINGS FOR EXPOSED SUSPENDED MECHANICAL DUCTWORK DISTRIBUTION SYSTEM
8. PROVIDE ADEQUATE CLEARANCES FOR FIXTURES, DUCTS, CEILINGS AND RELATED PERTINENT ITEMS NECESSARY TO MAINTAIN SPECIFIC HEIGHTS ABOVE FINISH FLOOR
9. THE GC TO PROVIDE NECESSARY BLOCKING AND BRACING FOR FIXTURE INSTALLATION AND ALL ELECTRICAL COMPONENTS TO COMPLETE THE FINAL INSTALLATION OF ALL FIXTURE - COORDINATE WITH FIXTURE SUPPLIER.
10. NO CONNECTIONS TO LANDLORD'S ROOF DECK WILL BE PERMITTED. COORDINATE ANY NEW ROOF PENETRATIONS WITH LANDLORD AND LANDLORD'S ROOF CONTRACTOR
11. DIMENSIONS ARE FROM FACE OF GYP. BD. TYP. U.O.N.
12. COORDINATE ADDITIONAL CEILING ACCESS DOORS W/ PROJECT MANAGER AND AS REQUESTED BY LANDLORD TO MAINTAIN ACCESS TO LANDLORD EQUIPMENT. MAINTAIN ACCESS TO LANDLORD'S HVAC, ELECTRICAL, AND PLUMBING SYSTEMS, INCLUDING CLEANOUTS, VALVES DAMPERS, "J" BOXES, SMOKE DETECTORS, ETC.
13. ALL RIGID CONDUIT AND JUNCTION BOXES TO BE RUN TIGHT TO DECK IN A CLEAN AND ORDERLY FASHION.
14. PROVIDE UNISTRUT SPANNING FROM LANDLORD'S STRUCTURE AS REQUIRED.
15. PAINT UNISTRUT, HVAC DUCTS, LIGHTING ESCUTCHEON RINGS/CANOPIES, AND SALES FLOOR EMERGENCY LIGHTS TO MATCH CEILING PT-3
16. USE ZIP TIES FOR ALL CORD/WIRE MANAGEMENT. BLACK ZIP TIES TO BE USED FOR BLACK CEILINGS.
17. BOTTOM OF SUSPENDED TRACK LIGHTING AND LT_09 LINEAR LED FIXTURES AT SALES FLOOR TO BE 11'-2" AFF.
18. BOTTOM OF EMERGENCY LED LIGHTS AT SALES FLOOR TO BE 9'-0" AFF.
19. MOUNT RELOCATED STOCK ROOM LIGHTING AT SAME HEIGHT AFF AS EXISTING ADJACENT STOCK ROOM LIGHTING
20. MOUNT SPEAKERS ON WALL AT 11'-4" A.F.F IN THE GREY WALL FINISH.GC TO PROVIDE J-BOX AT EACH SPEAKER LOCATION. FOR JBOX REQUIREMENT FOR SPEAKERS, REFER TO THE ELECTRICAL PLANS.
21. BOTTOM OF FOOTWEAR ORDERING SCREENS AT 9'-0" AFF. AT SUSPENDED FOOTWEAR ORDERING SCREENS, GC TO PROVIDE UNISTRUT SPANNING FROM LANDLORD'S STRUCTURE AS REQUIRED.
22. LT_06 TRACK HEAD TO BE SUSPENDED FROM TRACK LIGHTING.
23. INDICATIVE LIGHTING LAYOUT SHOWING DESIGN INTENT & QTY. LIGHTING CONTRACTOR TO PERFORM LIGHTING CALCULATIONS FOR APPROVAL BY JD. LIGHTING CONSULTANT TO CONFIRM EMERGENCY LIGHTING REQUIREMENTS. BOH LIGHTING REQUIREMENTS AS PER JD SETTING OUT.
24. GC TO PROTECT ACRYLIC PANELS OF LIGHT BOXES DURING CONSTRUCTION. DO NOT APPLY TAPE TO ACRYLIC PANELS.
25. LIGHTING LAYOUT SHOWN FOR DESIGN INTENT AND QUANTITY. LIGHTING CONTRACTOR TO PERFORM LIGHTING CALCS FOR JD APPROVAL. ELECTRICAL ENGINEERS TO CONFIRM EM LIGHTING REQUIREMENTS PER CODE.
26. MODIFY EXISTING SPRINKLER SYSTEM THROUGHOUT THE AREA OF WORK IN ACCORDANCE TO CODE
27. GC TO PROVIDE BLACK SCRIM SHEET OVER INSULATION AND WOOD FRAMING.

17 GENERAL NOTES
SCALE: NTS

1. ALL EXPOSED DUCTWORK, CEILING STRUCTURE, PIPING, UNISTRUT, HVAC GRILLES, SPRINKLER PIPING; ETC TO BE PAINTED RAL 7012 / PT-3
2. PROVIDE JUNCTION BOX ABOVE SOFFIT AS REQUIRED TO ACCOMMODATE JD SIGNAGE.
3. 5/8" THICK GWB TYPE 'X' OVER SUSPENDED CEILING SYSTEM. REFER TO A07.1 FOR FINISH INFORMATION.
4. SECURITY CAMERA - REFER TO ELECTRICAL DWGS. CONFIRM LOCATIONS WITH LOSS PREVENTION PRIOR TO INSTALLATION. GC TO INSTALL CLINTON POLES AS PER MANUFACTURER'S SPECIFICATIONS. GC TO INSTALL PULL STRINGS FOR VENDOR TO RUN CABLES & DOOR FRAME CAMERAS AT ENTRANCE DOORS.
5. ⅝" TYP "X" GYP. BD. ON 3 ½" X 18 GA. METAL STUD CEILING JOISTS @ 16" O.C. BOTTOM OF SOFFIT @ 8'-7" AFF. REFER TO A07.1 FOR FINISH INFORMATION
6. EAS AND TRAFFIC COUNTER SYSTEM TO BE SUSPENDED ON THE BOTTOM OF CLINTON POLE @ 8'-7" REFER TO ELECTRICAL DRAWINGS. SHOP DRAWINGS TO BE COORDINATED.
7. TRACK LIGHTING TO BE MOUNTED WITH UNISTRUT SUSPENDED USING THREADED RODS @ 11'-2" AFF TO BOTTOM OF FIXTURE, THREADED RODS TO BE PROVIDED BY GC, SEE DETAILS 1/A10.5 AND 9/A10.5
8. LT_09 FIXTURE MOUNTED CENTRALLY WITHIN THE TRACK AT 6'-0" ON CENTER, HUNG BY AIRCRAFT CABLE. MINIMUM 1'-8" FROM TRACK AT EACH END. GC TO PROVIDE AIRCRAFT CABLE.
9. LIGHTING TRACK IN WINDOW TO BE SURFACE MOUNTED. SEE DETAIL 17/A05.2 FOR MORE INFORMATION.
10. YELLOW ILLUMINATED RETURN BOXES, SEE A05.1 - STOREFRONT PLAN AND ELEVATION TYP.
11. YELLOW ILLUMINATION CEILING BOX, SEE A05.1 - ENLARGED STOREFRONT RCP
12. SUSPENDED NON-ILLUMINATED TEXFLEX GENDERED SIGN AT 9'-0" AFF FROM BOTTOM OF SIGN, SEE 6/A10.6. FITTING ROOM SIGN AT 9'-0" IN FRONT OF OPENING, SEE 19/A06.1 FOR MORE INFORMATION.
13. STOCK ROOM LIGHTING TO BE INSTALLED AT 13'-0", GC TO VERIFY HEIGHT ON FIELD.
14. FOOTWEAR ORDERING SCREENS TO BE SUSPENDED FROM THE DECK. BOTTOM OF SCREENS @ 9'-0" A.F.F.
15. POWER AND DATA TO BE LOWERED TO BE BETWEEN TV'S. CONFIRM MOUNTING HEIGHT WITH JDPM. SEE ELECTRICAL DRAWINGS FOR MORE INFORMATION. SEE 15/A10.6 FOR MORE INFORMATION.
16. NEW ILLUMINATED JD LOGO SIGNAGE SUSPENDED WITH METAL RETURNS FINISH RAL 9004 /PT-6 30% GLOSS FACE FIXED ONTO STOREFRONT. SEE ELECTRICAL DRAWINGS FOR POWER INFORMATION.
17. 24"x24" ACCESS PANEL AT STOREFRONT SOFFIT, FITTING ROOM, OFFICE, AND EXPANDED RESTROOM. SEE 5/A10.5 FOR MORE INFORMATION. GC TO MATCH THE FINISH OF THE CEILING. COORDINATE ACCESS PANELS WITH INTERIOR ELEVATION 17/A06.1
18. SUSPENDED LIGHTBOX AT STOREFRONT. PROVIDE FIRE-TREATED BLOCKING WITHIN SOFFIT.
19. MINIMUM DUCT HEIGHT OF 12'-0" ABOVE FINISHED FLOOR. VERIFY LOCATION ON SITE. RAISE EXISTING SUPPLY AIR DUCT IF NECESSARY TO PROVIDE CLEARANCE FOR LIGHTING FIXTURES. SEE MECHANICAL DRAWINGS FOR MORE INFORMATION.
20. SUSPENDED LINEAR BOP EXTRUSION LIGHTING TYP. OF 3 TO BE HUNG AT 9'-10" AFF TO UNDERSIDE OF FIXTURE.
21. SPEAKERS TO BE PENDANT MOUNTED FROM TRACK LIGHT UNISTRUT OR LOWER BAR JOIST AT 12'-0" AFF. REFER TO WOOD MEDIA SHOP DRAWINGS AS WELL AS ELEC. DRAWINGS FOR POWER REQUIREMENTS.
22. WALL MOUNTED MOTION SENSOR. REFER TO NUTECH SHOP DRAWINGS AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
23. 360 MOTION CEILING MOUNTED. PLEASE REFER TO ELECTRICAL SHEETS FOR POWER REQUIREMENTS AND NUTECH SHOP DRAWINGS FOR MORE INFORMATION.
24. ~~GLASS BREAK SENSOR. REFER TO ELEC. DRAWINGS, NUTECH SHOP DRAWINGS FOR MORE INFORMATION.~~
25. CEILING MOUNTED ACCESS POINT. REFER TO ELECTRICAL DRAWINGS FOR POWER REQUIREMENTS. SHOP DRAWINGS TO BE COORDINATED.
26. ALARM SIREN AND ALARM STROBE. REFER TO ELECTRICAL DRAWINGS AND NUTECH SHOP DRAWINGS FOR MORE INFORMATION.
27. CURTAIN WALL MOUNTED MOTION SENSOR. REFER TO NUTECH SHOP DRAWINGS AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
28. NEW DUPLEX POWER AT CEILING FOR STOREFRONT. SEE A04.2 AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
29. BRAKE METAL O/ ¾" FRT PLYWOOD O/ 3 ½" X 18 GA. METAL STUD CEILING JOISTS @ 16" O.C. BOTTOM OF SOFFIT @ 8'-7" AFF. REFER TO A07.1 FOR FINISH INFORMATION
30. GC TO PROVIDE A SCRIM SHEET TO MATCH PT-3
31. J-BOX FOR CASHWRAP SIGN TO BE PLACED AT 2'-0" ABOVE THE RACKING. GC TO PROVIDE ACCESS PANEL.
32. NEW NON-ILLUMINATED IMAGE BOX.

13 KEY NOTES
SCALE: NTS

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CLEVELAND DENVER GLENDORA IRVINE ORLANDO PHOENIX SAN FRANCISCO

Seal:

REGISTERED ARCHITECT 30707 STATE OF TEXAS
12-29-2025

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:
JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

REFLECTED CEILING PLAN

Sheet #:
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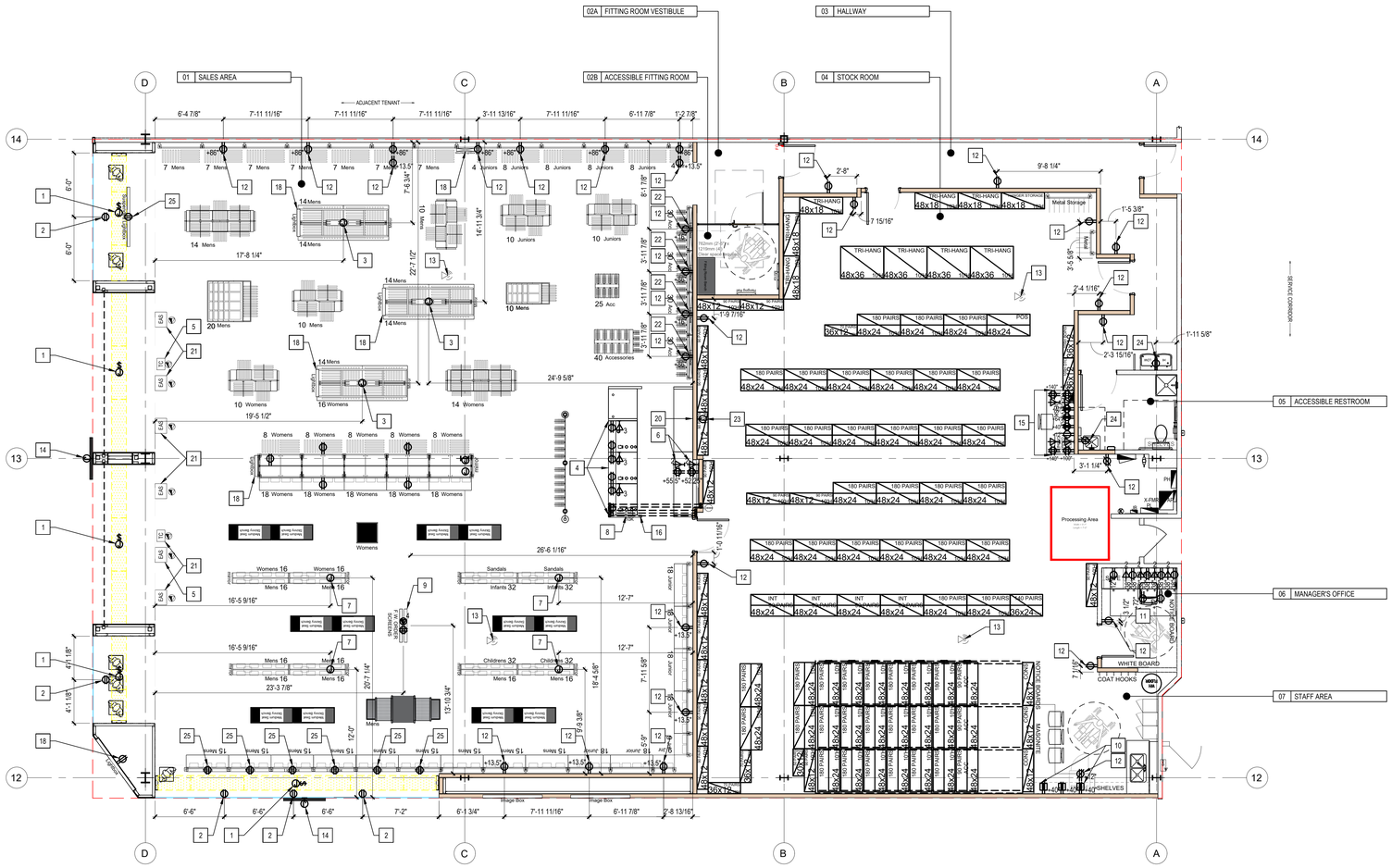

18 ARCHITECTURAL POWER PLAN
SCALE: 3/16" = 1'-0"

1. ALL DIMS TO BE CHECKED ON SITE PRIOR TO MANUFACTURE.
2. WHEN RETAINING EXISTING WALLS OUTLETS TO BE PLACED CENTRALLY TO POST WALL FIXING POINTS ABOVE AND BELOW. TO BE SECURELY FIXED AND FINISHED TO MATCH PROPOSED LOCAL FINISH.
3. G.C. TO CUT DOWN HEIGHT FOR H WALL HEIGHT (FROM BOTTOM) REINSTALL LEVELERS.
4. UNLESS NOTED OTHERWISE, RECEPTACLES SHALL BE PLACED CENTRALLY WITHIN EACH WALL PANEL BAY WHICH ALIGNS WITH THE PANEL AND PERIMETER POST LAYOUT.
5. FOR FLIGHT CASES, ELECTRIC SHOULD RUN THROUGH PIECE OF HARD CONDUIT DOWN CASE CLOSEST TO TO THE BACK WALL UNLESS ADJACENT TO A COLUMN. POWER TO BE RUN DOWN RAW COLUMN IN ENCLOSED CONDUIT AS APPLICABLE. IF COLUMN IS WRAPPED, POWER TO BE RUN BEHIND DRYWALL AND POWER IS TO BE PULLED FROM COLUMN BASE TO FLIGHT CASE BASE. RUN FLEX CONDUIT IN BETWEEN FLIGHT CASE PANELS AT BASE. PAINT CONDUIT CEILING COLOR.
6. REFER TO ELECTRICAL SHEETS FOR POWER INFORMATION. POWER SHOWN ON THIS PLAN FOR COORDINATION ONLY.
7. ALL PERIMETER OUTLETS TO BE CENTERED BETWEEN WALLS STANDARD POSTS.
8. GC TO INSTALL ELECTRIC/DATA IN CASHWRAP BEFORE INSTALLING THE CASHWRAP FRONT PT-5 PANELS.
9. ELECTRICAL AND DATA RECEPTACLE COVER PLATES TO BE:
   WHITE AT PT-1 WALLS THROUGHOUT THE SALES AREA AND PT-5 WALLS IN BACK OF HOUSE.
   BLACK AT WALLS WITH PT-4, PT-6, VN-1 PAINT/VINYL FINISH.
10. SALESFLOOR OUTLET PLATES MUST BE HORIZONTAL.
11. JD TO CONFIRM THAT PLATE COVERS IN FITTING ROOM WILL BE BLACK.

17 GENERAL NOTES
SCALE: NTS

1. POWER FOR YELLOW ILLUMINATED BOXES TO BE PROVIDED BY WALL MOUNTED J-BOX. GC TO COORDINATE WITH PORTAL LIGHT PANEL MFG AND PROVIDE DRIVER AND ALL NECESSARY ELEC CONNECTIONS AS REQ.
2. NEW DUPLEX POWER AT CEILING FOR STOREFRONT / SHOW WINDOW RECEPTACLE. SEE ELECTRICAL DWGS.
3. POWER FOR FIXTURES TO BE PROVIDED THROUGH CURLY WIRE CONDUIT FROM CEILING MOUNTED J-BOX.
4. POWER AND DATA FOR POS AT NEW CASHWRAP. COORDINATE WITH ELECTRICAL DWGS. (2) DUPLEX POWER AND (3) DROP DATA PER POS STATION.
5. CEILING MOUNTED DATA FOR TRAFFIC COUNTER. COORDINATE FINAL LOCATION WITH VENDOR IN FIELD
6. POWER AND DATA FOR EACH OF 2 RECESSED DIGITAL DISPLAYS BEHIND CASHWRAP. SEE ELEVATION 19/A06.1 AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
7. GC TO PROVIDE POWER THROUGH CEILING, PROVIDE CONDUIT TO BACK OF FIXTURE. COORDINATE FINAL LOCATIONS OF RECEPTACLES WITH FIXTURE AND IN FIELD WITH JD SPORTS PM.
8. LOCATION OF AUDIO VOLUME CONTROL. REQUIRES 1-GANG J-BOX WITH 1/2" CONDUIT STUB UP PROVIDED BY OTHERS
9. CEILING MOUNTED J-BOX FOR SUSPENDED FOOTWEAR ORDERING SCREEN (F.O.S.). AT BOTTOM OF ALL THREADS. GC TO PROVIDE (2) POWER AND (2) DATA CONNECTION PER SCREEN. SEE ELECTRICAL DWGS.
10. HIGH POWER & USB OUTLETS, HEIGHT AS INDICATED. GC TO VERIFY PLACEMENT. SEE ELECTRICAL DWGS.
11. HIGH POWER AND DATA, HEIGHT AS INDICTED. SEE OFFICE ELEVATIONS AND ELECTRICAL DWGS.
12. NEW WALL POWER/DATA AS INDICATED. FINISH, TYP. REFER TO GENERAL NOTE #9 FOR FINISH. OUTLETS IN THE SALES AREA TO BE PLACED HORIZONTALLY.
13. PROVIDE J-BOX AND CONDUIT SUSPENDED FROM CEILING DECK FOR ACCESS POINT. BOTTOM OF J-BOX AT 15'-0" AFF. SHOP DRAWINGS TO BE COORDINATED.
14. POWER FOR SIGNAGE TO BE PROVIDED WITH JUNCTION BOX AND LOCAL DISCONNECT SWITCH. COORDINATE FINAL LOCATION WITH SIGN VENDOR.
15. COORDINATE FINAL LOCATION OF DEVICES WITH BACKBOARD WITH OWNER
16. PROVIDE CONDUITS AS INDICATED ON PLAN. RUN CONDUITS WITHIN TRENCHED/CORED FLOOR AS SHOWN. COORDINATE FLOOR TRENCHING WITH MALL MANAGEMENT / LANDLORD PRIOR TO ROUGH-IN.
17. ~~POWER / RECEPTACLE DATA FOR SUSPENDED LED DIGITAL SCREEN TO BE PROVIDED BY J-BOX.~~
18. WIRE AND ASSEMBLE LIGHTBOX ONSITE AND PROVIDE POWER AS SHOWN. SEE E-201 FOR MORE INFORMATION.
19. ~~POWER FOR MOBILE SATELLITE SERVICE POINT TBD.~~
20. CUSTOM SIGNAGE BEHIND CASHWRAP. GC TO COORDINATE WITH SIGNAGE VENDOR FOR DIMENSIONS. SEE ELEC DRAWINGS FOR SIGNAGE JBOX REQUIREMENTS. GC TO COORDINATE MOUNTING HEIGHT WITH THE SIGNAGE VENDOR.
21. CEILING MOUNTED DATA FOR EAS PAD. COORDINATE FINAL LOCATION WITH VENDOR IN FIELD. SHOP DRAWINGS TO BE COORDINATED.
22. LIGHTBOXES BEHIND ACCESSORIES PERIMETER WALL BAYS TO BE INSTALLED BY GC.
23. J-BOX FOR CASHWRAP SIGN TO BE PLACED AT 2'-0" ABOVE THE RACKING. GC TO PROVIDE ACCESS PANEL.
24. GFCI OUTLET ABOVE RESTROOM SINK AND DRINKING FOUNTAIN.
25. POWER OUTLET PROVIDED IN THE SOFFIT, REFER TO ELECTRICAL DRAWINGS FOR MORE INFORMATION.

13 KEY NOTES
SCALE: NTS

SYMBOL	DESCRIPTION
	FLUSH FLOOR MOUNTED GROUNDED DUPLEX RECEPTACLE W/ COVER. SEE ELECTRICAL DRAWINGS.
	SINGLE WALL RECEPTACLE. SEE ELECTRICAL DRAWINGS AND A-505 FOR MOUNTING HEIGHT.
	DUPLEX WALL RECEPTACLE. SEE ELECTRICAL DRAWINGS FOR MOUNTING HEIGHT.
	QUAD WALL RECEPTACLE. SEE ELECTRICAL DRAWINGS FOR MOUNTING HEIGHT.
	WALL MOUNTED DATA RECEPTACLE. SEE ELECTRICAL DRAWINGS.
	FLUSH FLOOR MOUNTED DATA RECEPTACLE. SEE ELECTRICAL DRAWINGS.
	FLOOR TWISTLOCK OUTLET. SEE ELECTRICAL DRAWINGS.
JJJ	SECTIONAL WIREMOLD GANG BOX. SEE ELECTRICAL DRAWINGS.
J	WALL J-BOX. SEE ELECTRICAL DRAWINGS.
	LOOP VENT (SKIN CARE STUDIO). SEE PLUMBING DRAWINGS.
	WALL TWISTLOCK OUTLET. SEE ELECTRICAL DRAWINGS.
TS	TEMPERATURE SENSOR. SEE MECHANICAL DRAWINGS.
T	THERMOSTAT. SEE MECHANICAL DRAWINGS.
KP	KEY PAD. SEE ELECTRICAL DRAWINGS.
	USB OUTLET. SEE ELECTRICAL DRAWINGS.

NOTES:
1. *EXTRA FLOOR RECEPTACLE (ALWAYS ADD 6-8 OUTLETS TO FILL IN GAPS FOR FUTURE USE)

1 ARCHITECTURAL POWER SYMBOL LEGEND
SCALE: NTS

NORTH

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30297
STATE OF TEXAS
12-29-2025

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

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ARCHITECTURAL
POWER PLAN

Sheet #:
A04.2

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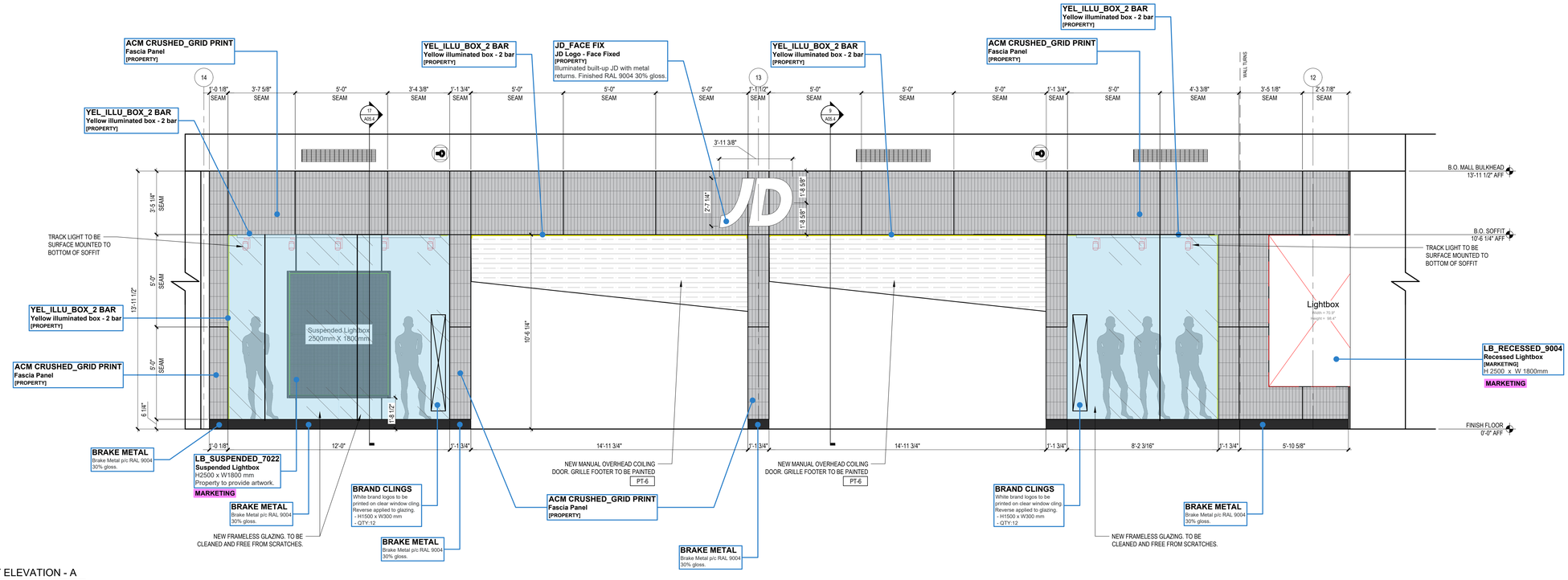
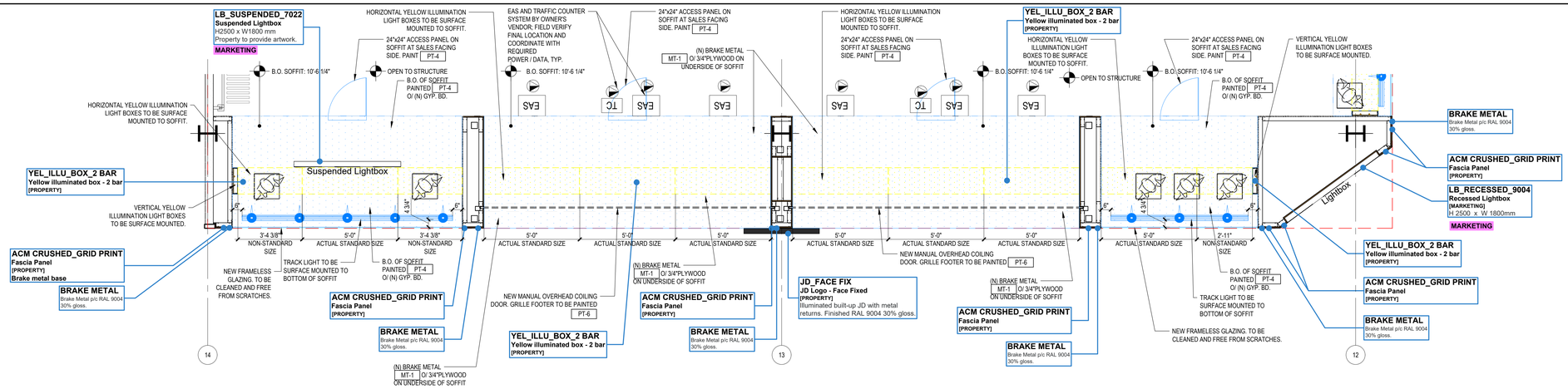
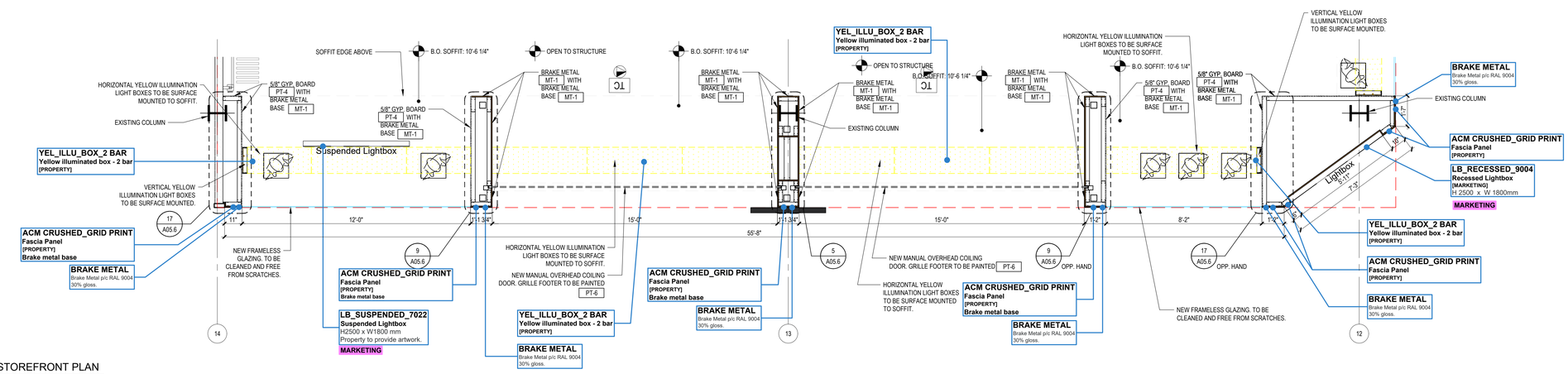


19 STOREFRONT ELEVATION - A
SCALE: 3/8" = 1'-0"



18 ENLARGED STOREFRONT REFLECTED CEILING PLAN
SCALE: 3/8" = 1'-0"



17 ENLARGED STOREFRONT PLAN
SCALE: 3/8" = 1'-0"

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SHOPFRONT

Sheet #:
A05.1

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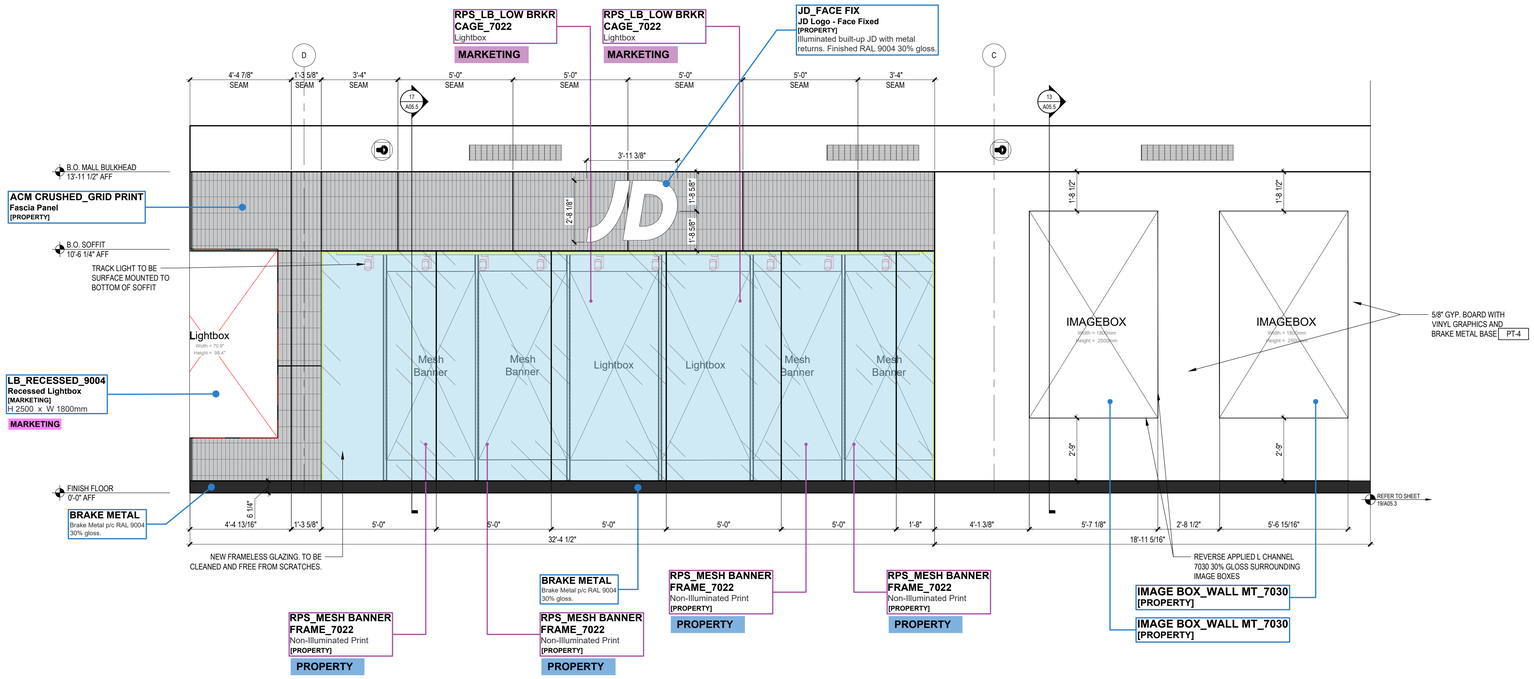
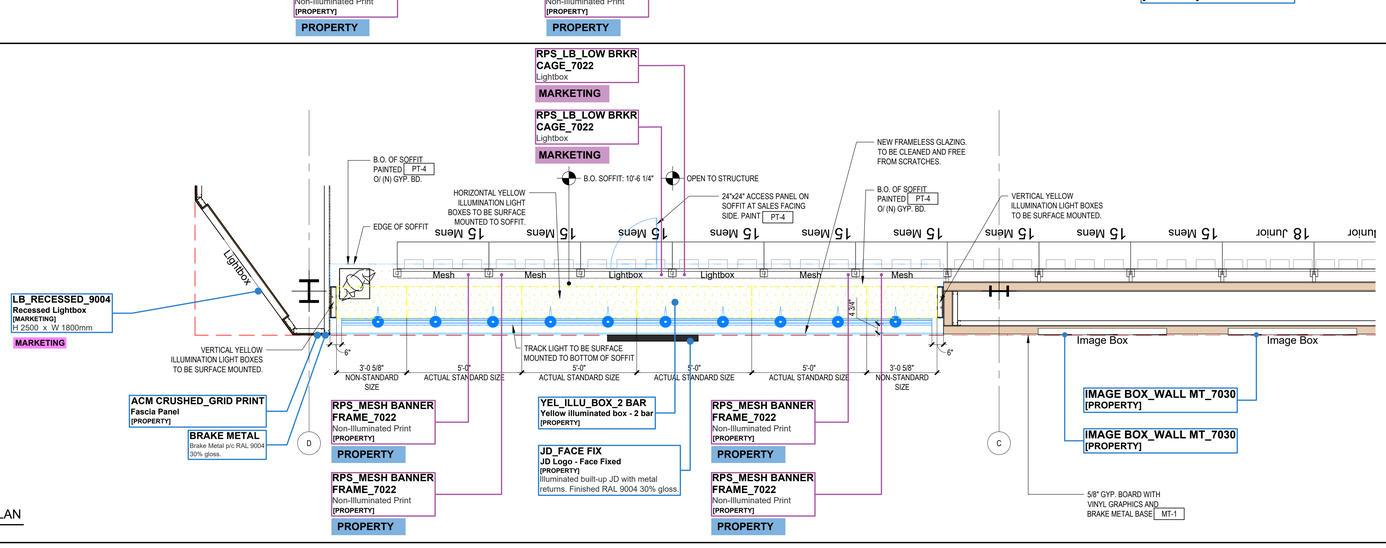
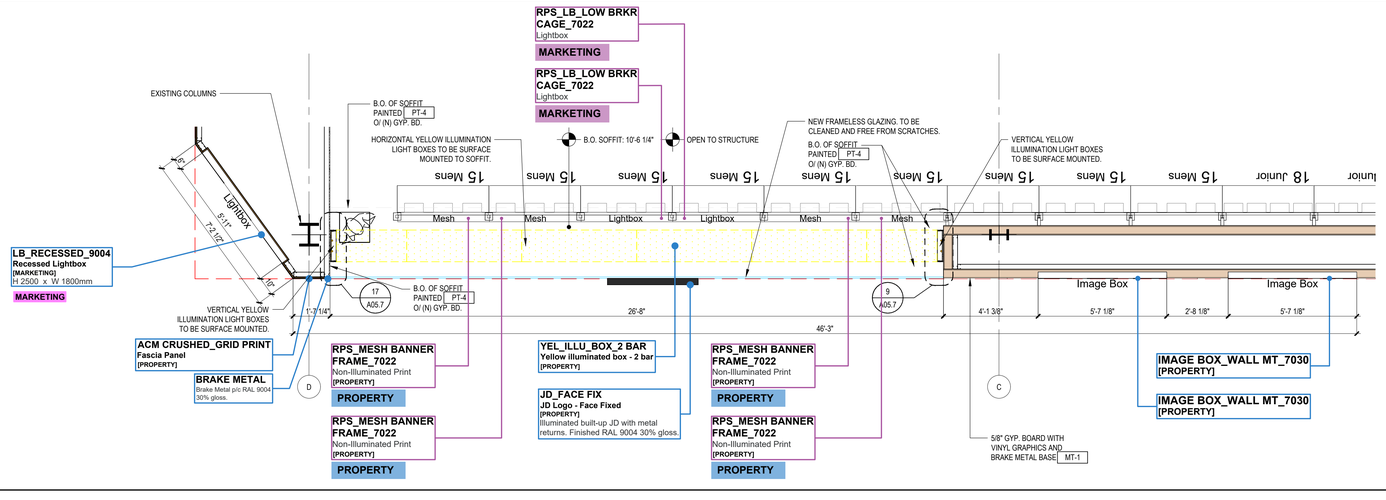


19 STOREFRONT ELEVATION - A
SCALE: 3/8" = 1'-0"



18 ENLARGED STOREFRONT REFLECTED CEILING PLAN
SCALE: 3/8" = 1'-0"



17 ENLARGED STOREFRONT PLAN
SCALE: 3/8" = 1'-0"

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SHOPFRONT

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A05.2

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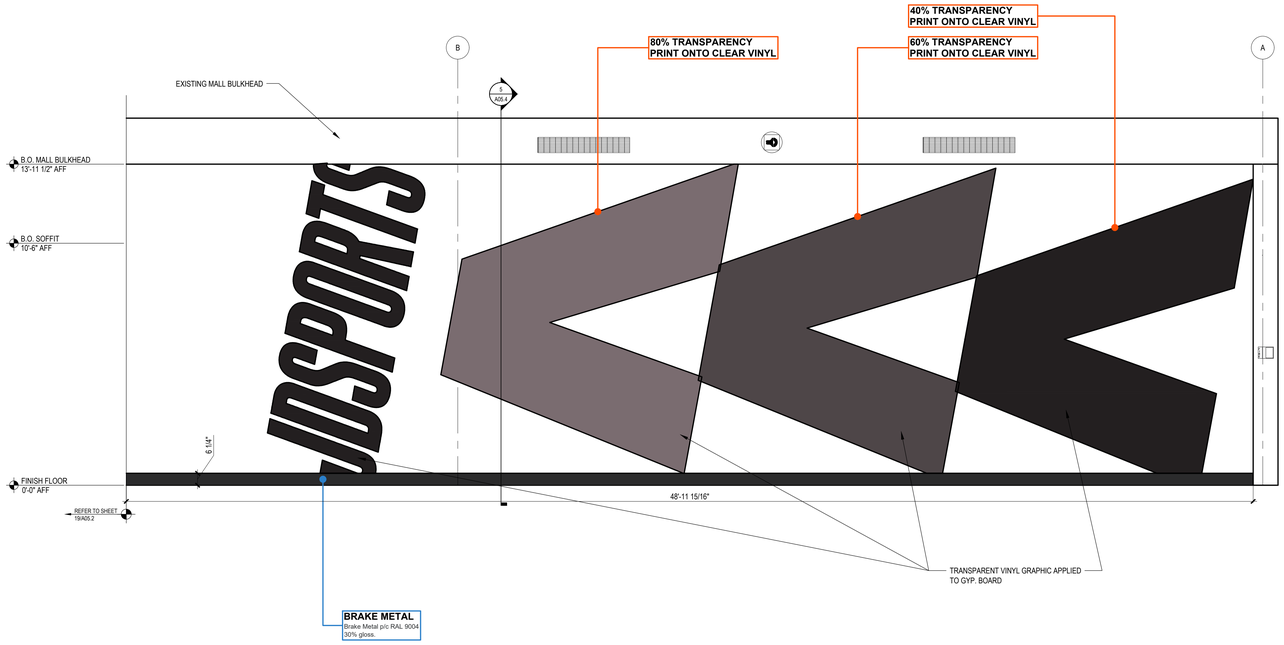
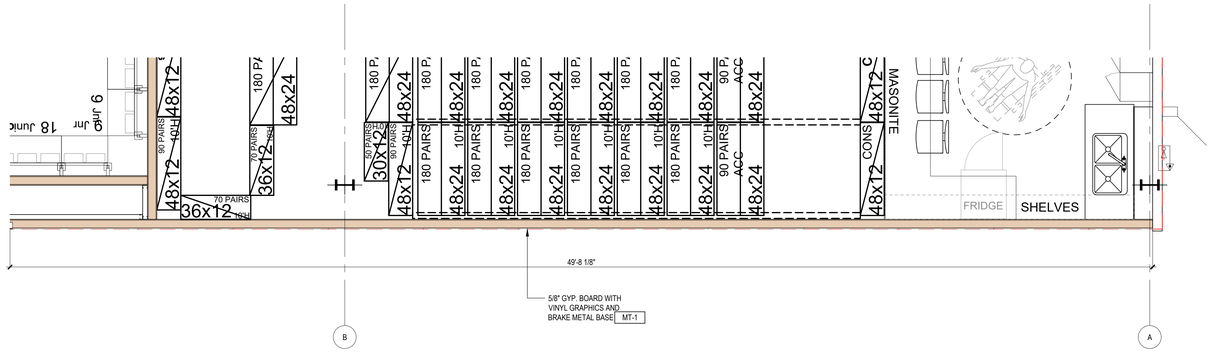


19 STOREFRONT ELEVATION - A
SCALE: 3/8" = 1'-0"

18 ENLARGED STOREFRONT REFLECTED CEILING PLAN
SCALE: 3/8" = 1'-0"



17 ENLARGED STOREFRONT PLAN
SCALE: 3/8" = 1'-0"

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SHOPFRONT

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A05.3

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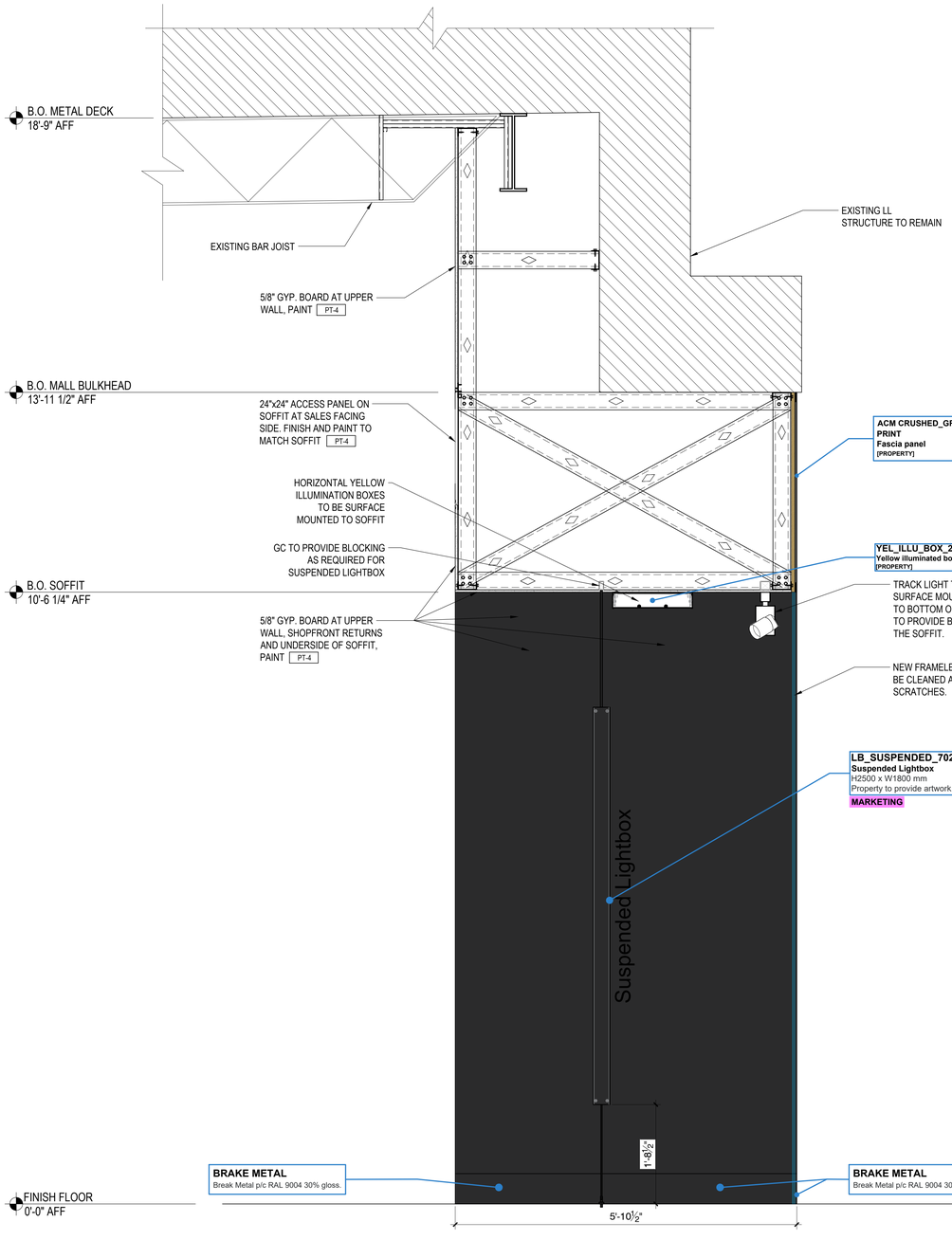
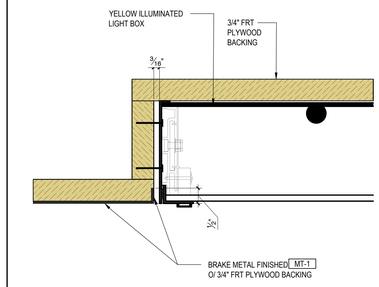
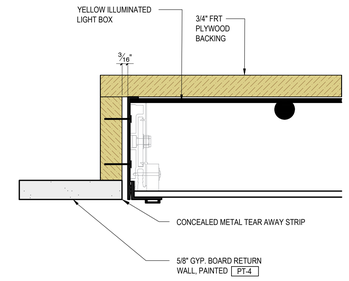


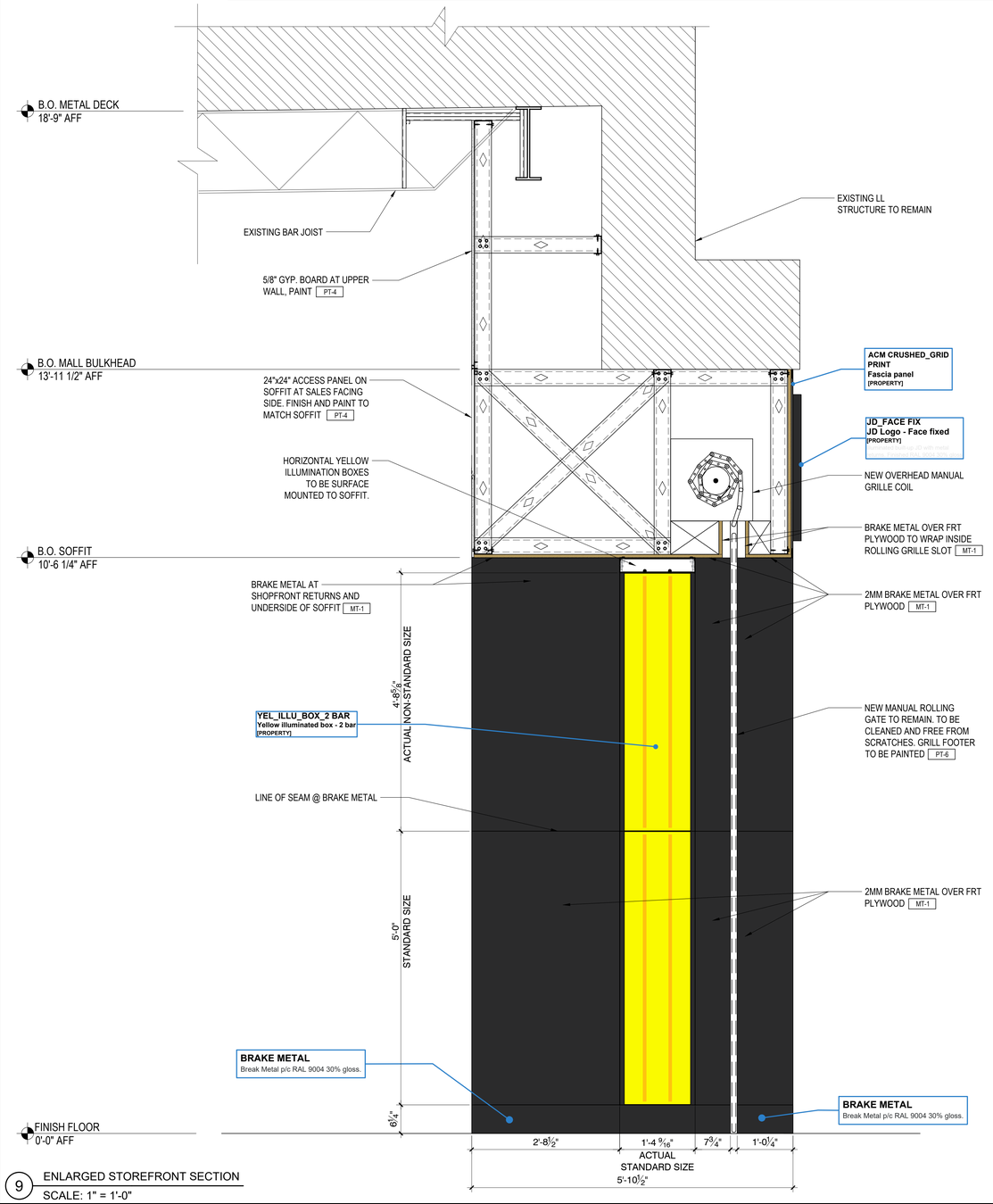
17 ENLARGED STOREFRONT SECTION
SCALE: 1" = 1'-0"



8 ENLARGED STOREFRONT SPACER DETAIL - BRAKE METAL
SCALE: 6" = 1'-0"



4 ENLARGED STOREFRONT SPACER DETAIL - GYP. BD.
SCALE: 6" = 1'-0"



9 ENLARGED STOREFRONT SECTION
SCALE: 1" = 1'-0"

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SHOPFRONT SECTIONS

Sheet #:
A05.4

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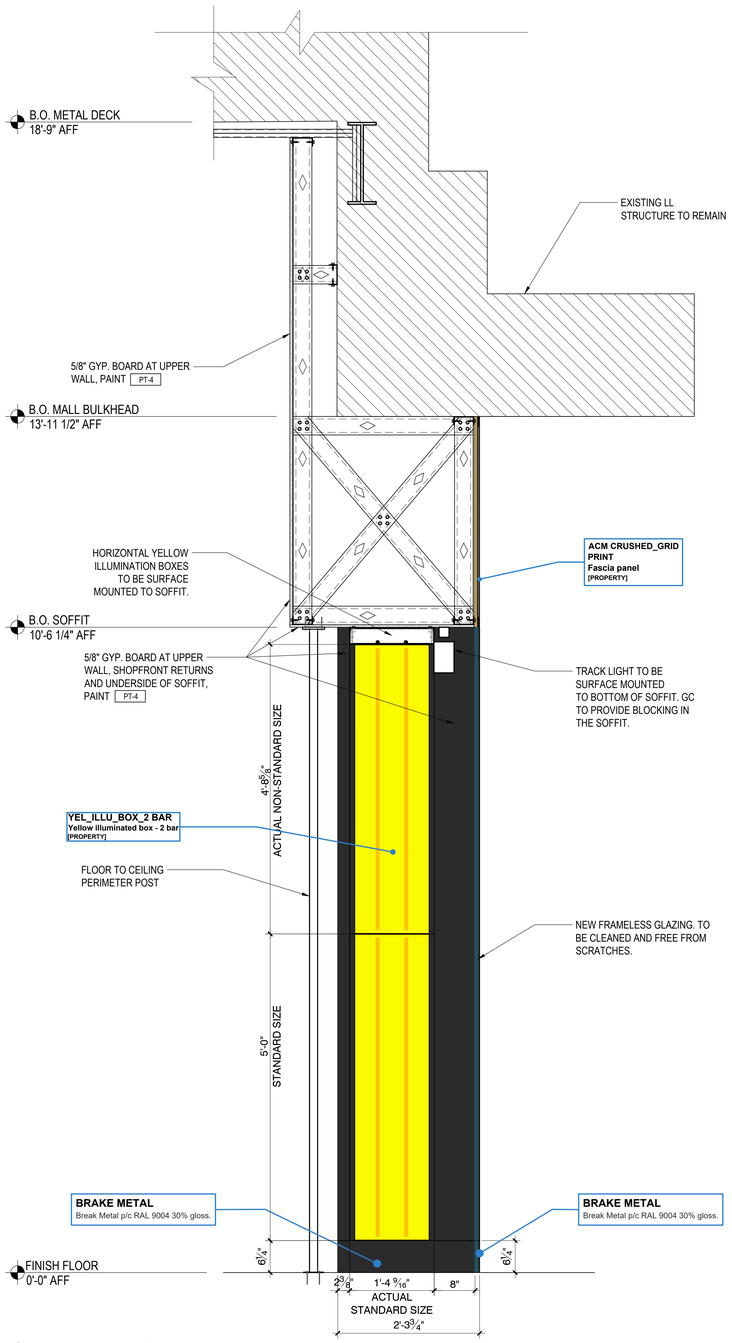
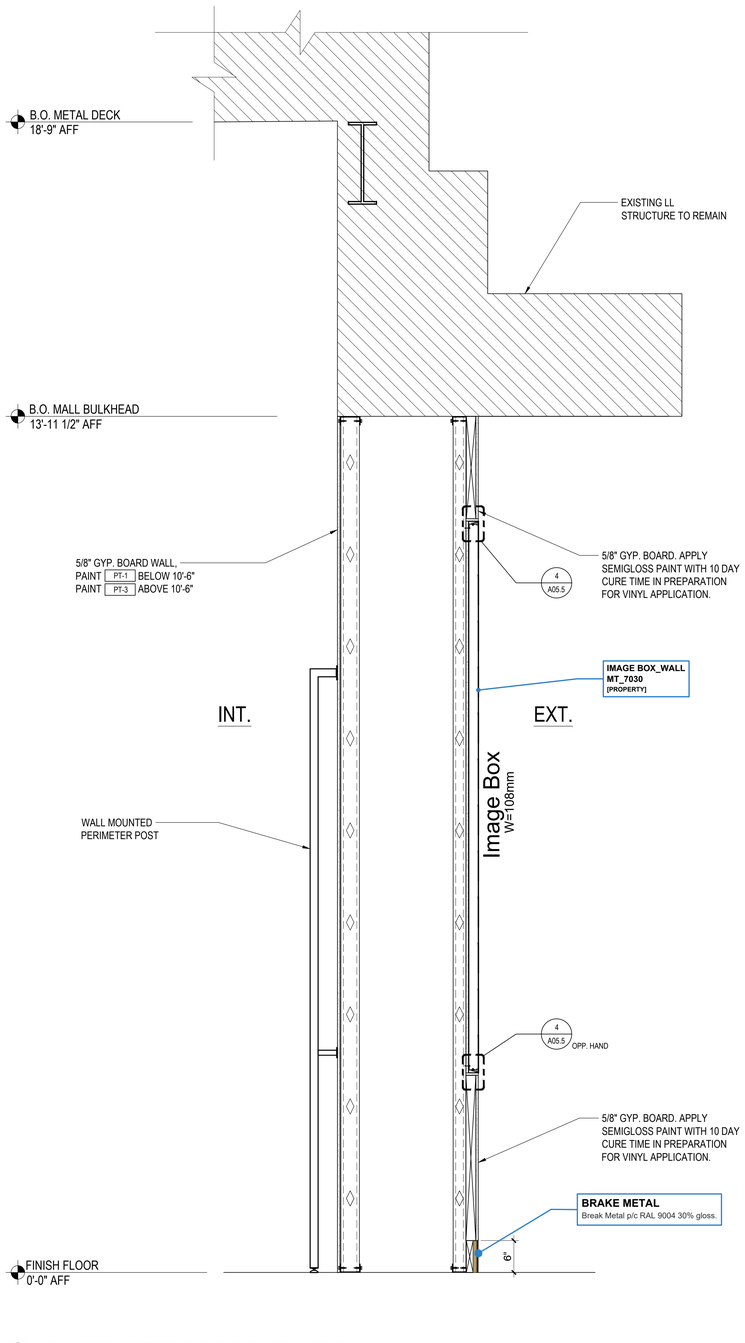
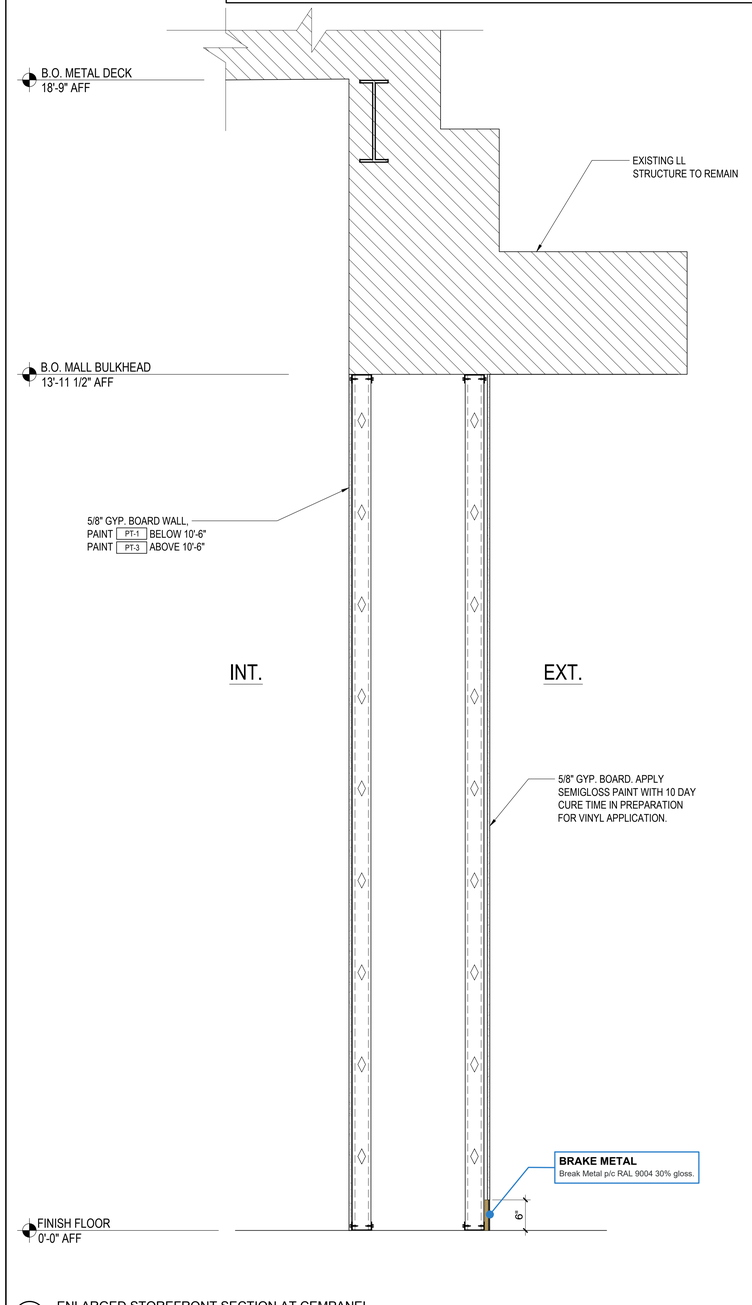


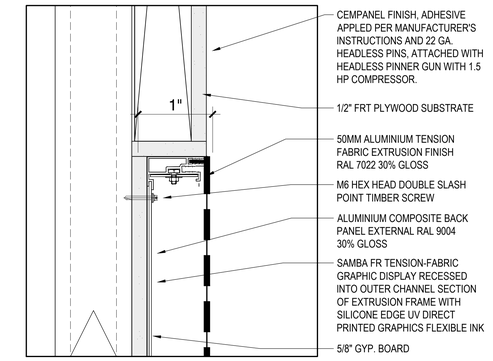
17 ENLARGED STOREFRONT SECTION
SCALE: 1" = 1'-0"



13 ENLARGED STOREFRONT SECTION AT IMAGE BOX
SCALE: 1" = 1'-0"



5 ENLARGED STOREFRONT SECTION AT CEMPANEL
SCALE: 1" = 1'-0"



4 ENLARGED IMAGE BOX SECTION
SCALE: 1" = 1'-0"

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SHOPFRONT SECTIONS

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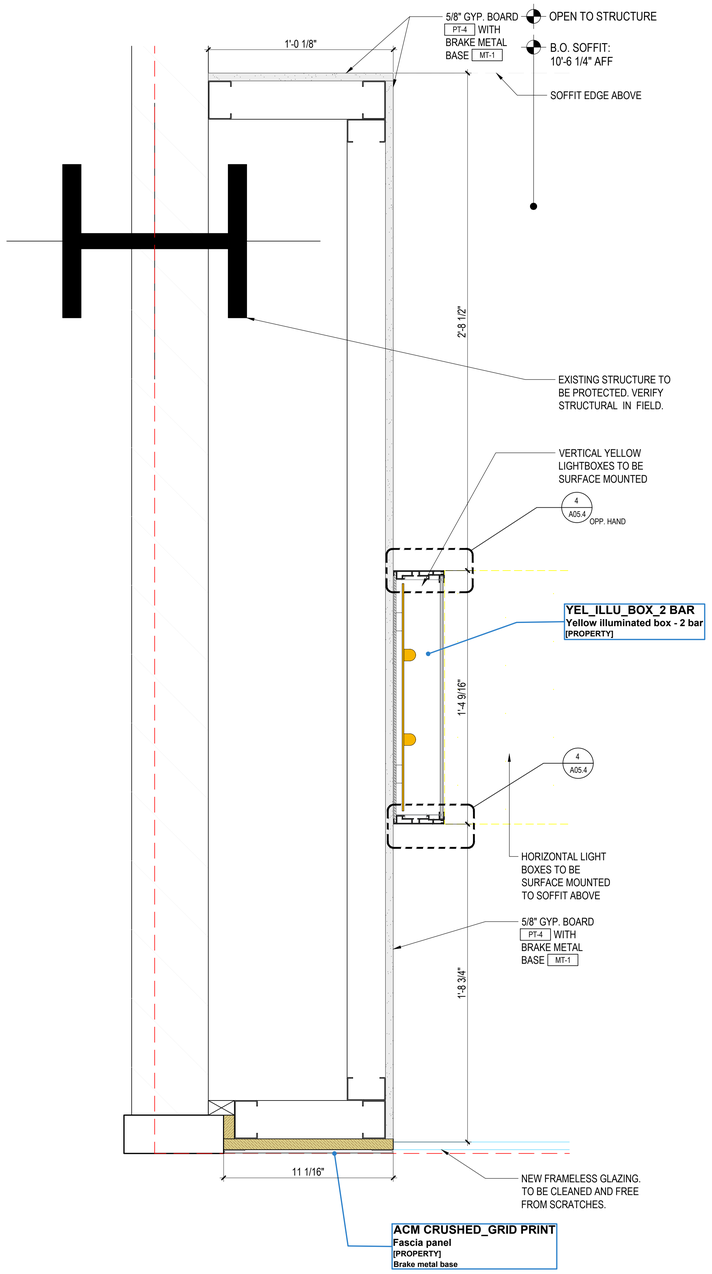
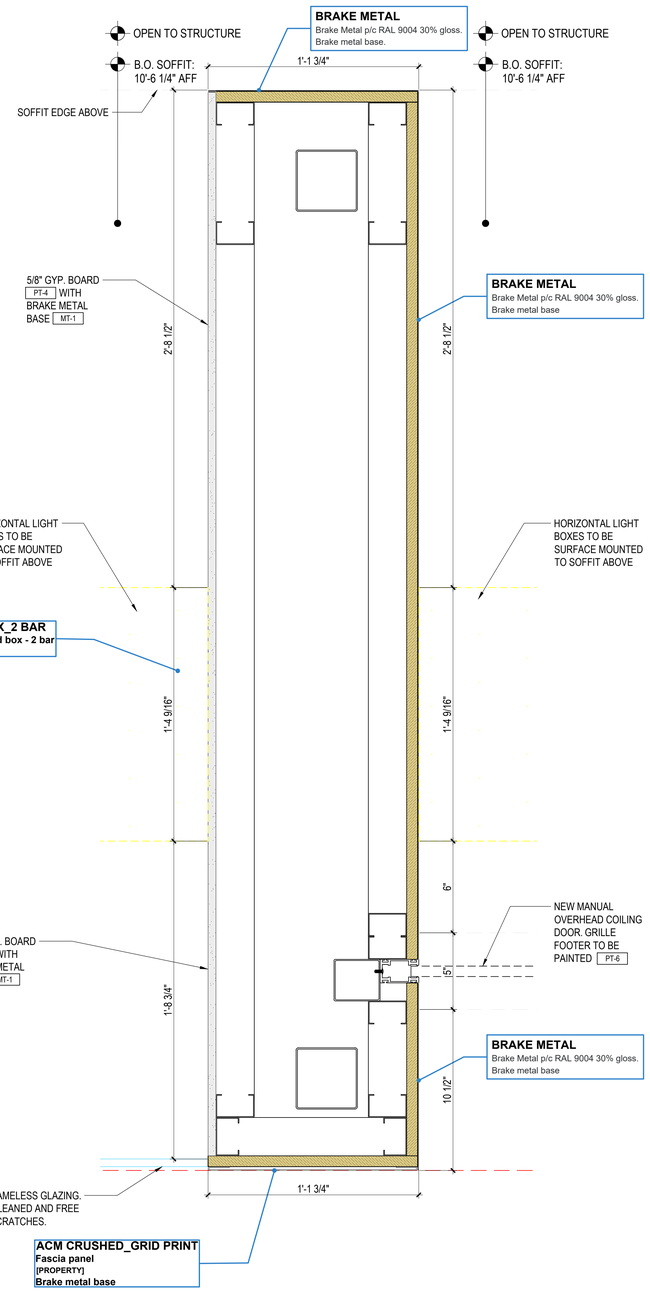
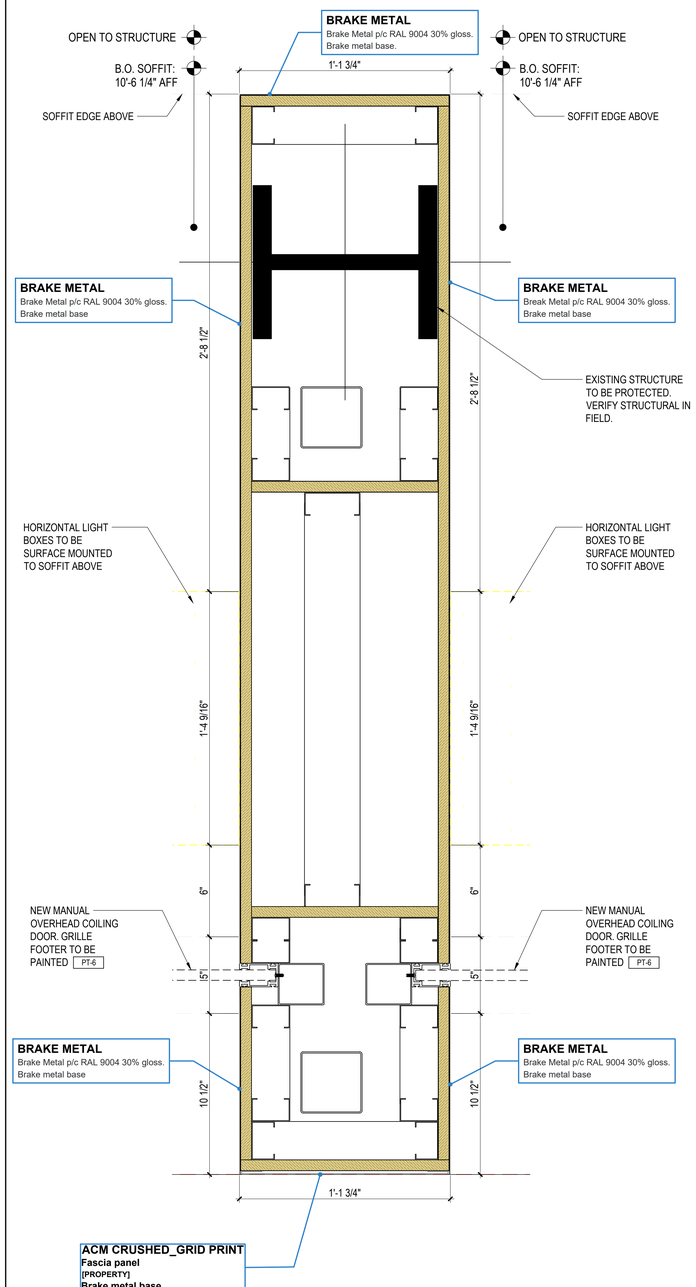


17 ENLARGED STOREFRONT DETAIL
SCALE: 3" = 1'-0"



9 ENLARGED STOREFRONT DETAIL
SCALE: 3" = 1'-0"



5 ENLARGED STOREFRONT DETAIL
SCALE: 3" = 1'-0"

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SHOPFRONT
DETAILS

Sheet #:
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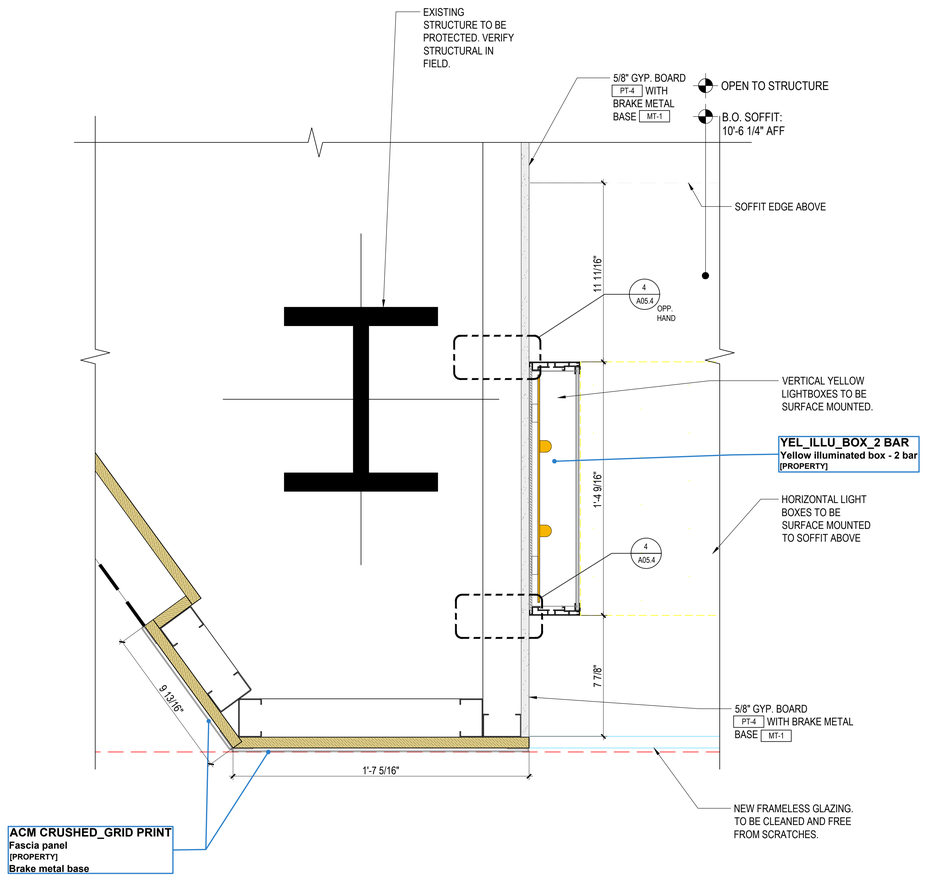
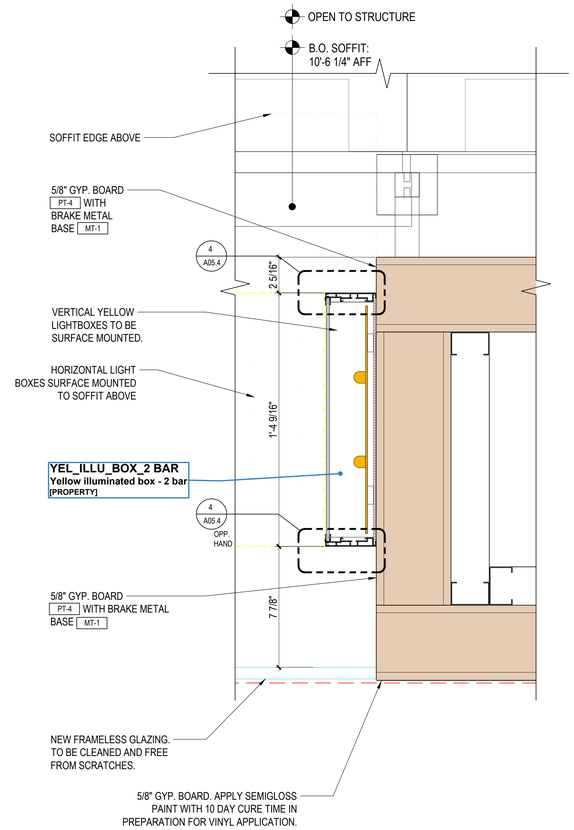


17 ENLARGED STOREFRONT DETAIL
SCALE: 3" = 1'-0"



9 ENLARGED STOREFRONT DETAIL
SCALE: 3" = 1'-0"

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SHOPFRONT DETAILS

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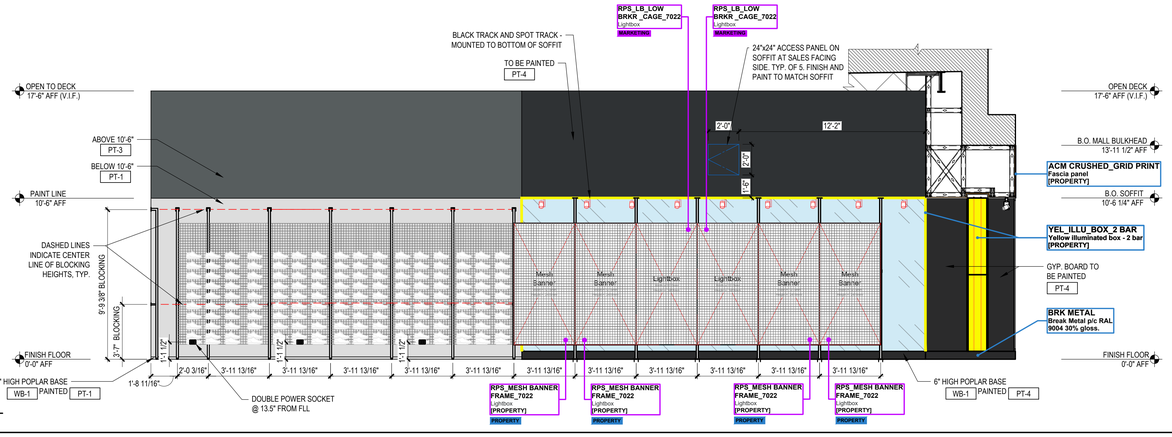
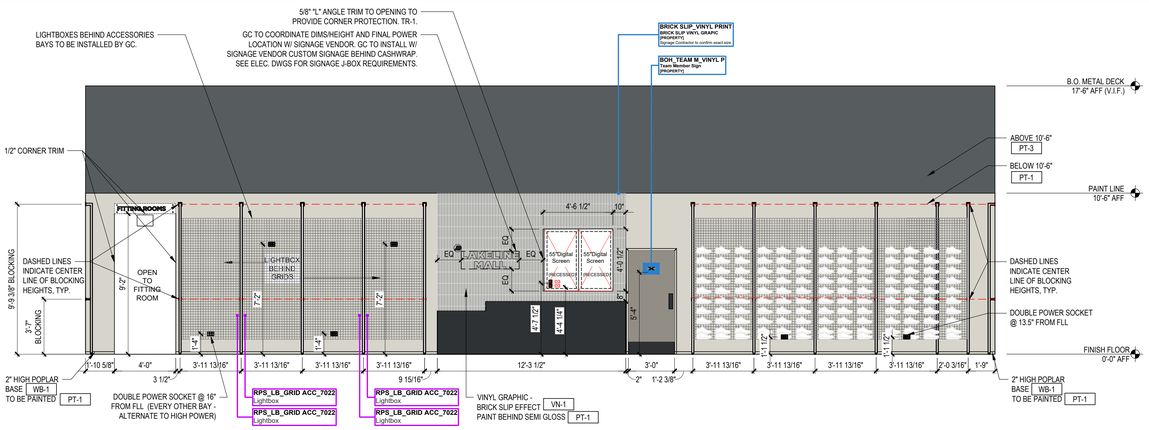


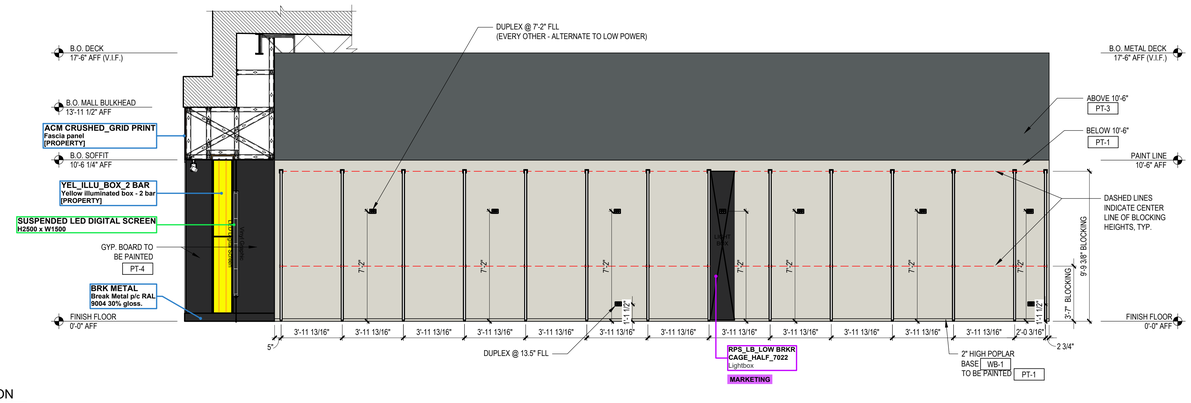
20 INTERNAL ELEVATION

Scale: 1/4" = 1'-0"



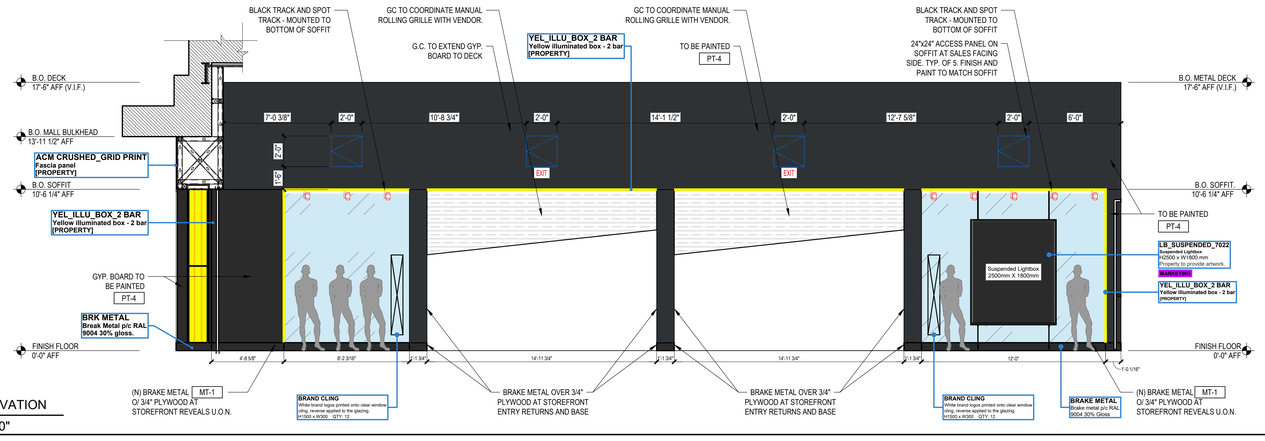
19 INTERNAL ELEVATION

Scale: 1/4" = 1'-0"



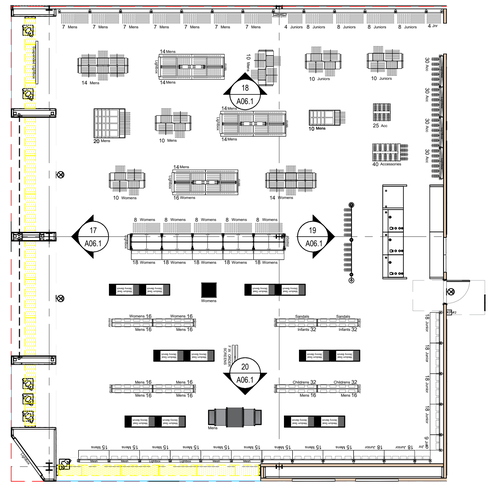
18 INTERNAL ELEVATION

Scale: 1/4" = 1'-0"



17 INTERNAL ELEVATION

Scale: 1/4" = 1'-0"



7 KEY PLAN

Scale: 1/8" = 1'-0"

1. TRACK LIGHT HEADS SHOWN IN ELEVATION IS ONLY FOR REFERENCE. REFER TO SHEET A04.1 FOR DETAILS.
2. REFER TO SHEET A04.1 FOR POSITIONING OF POWER AND DATA.
3. REFER TO SHEET A04.1 FOR PERIMETER POST SCHEDULE
4. ADD SEMIGLOSS PAINT BEHIND GRAPHICS AND CURE FOR (10) DAYS PRIOR TO INSTALLATION.

2 GENERAL NOTES

SCALE: 1/4" = 1'-0"

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INTERNAL ELEVATIONS

Sheet #:

A06.1

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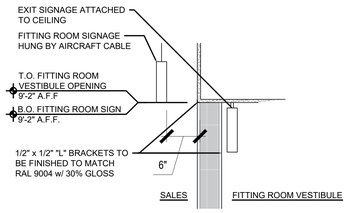
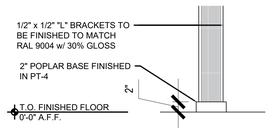


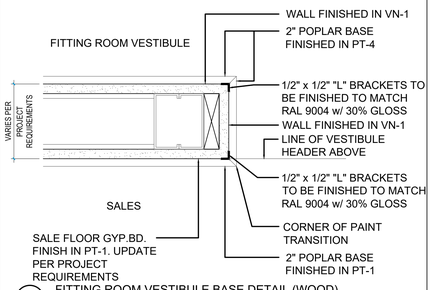
A1 FITTING ROOM VESTIBULE CEILING DETAIL

SCALE: 1" = 1'-0"



A2 F/R VESTIBULE OPENING BASE DETAIL (POPLAR)

SCALE: 1" = 1'-0"



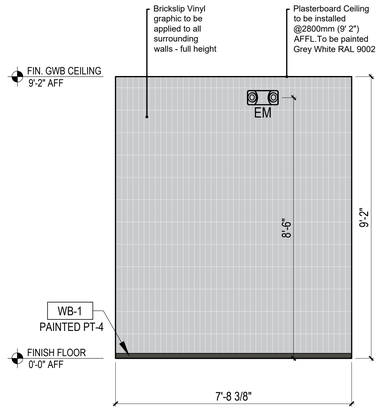
A3 FITTING ROOM VESTIBULE BASE DETAIL (WOOD)

SCALE: 3" = 1'-0"

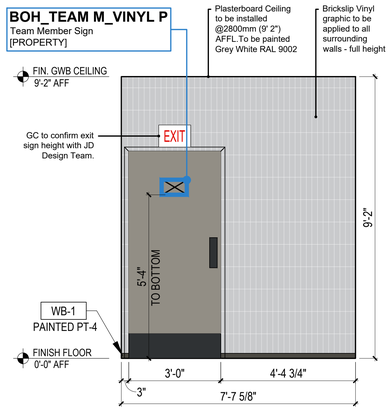
MODULAR FITTING ROOM COMPONENTS			
DESCRIPTION	TAG	QUANTITY	TRIAD ITEM CODE
A-STARTER - Front Upright	A	1	FR_A_JL_CL
B1 - FRONT FRAME AND BRACE (Standard (10 ½" Panel))	B1	1	FR_B1_JL_CL
B2-FRONT FRAME AND BRACE (Large 1'-6 ½" Panel)	B2	0	N/A
C-SIDE PANEL	C	0	FR_C_JL_CL
D-DDA INFILL FRAME (One size 3'-7 ⅜" to be cut & scribed onsite).	D	1	FR_D_JL_CL
E-DOOR (Door swing can be LHS or RHS)	E	0	FR_E_JL_CL
E2-DOOR - ADA (Door swing can be LHS or RHS)	E2	1	FR_E2_JL_CL
F-DOOR DRILLING TEMPLATE FRONT & REAR	F	0	FR_F_JL_CL
G-FITTING ROOM HANGING RAIL	G	1	FR_G_JL_CL
H-MIRROR	H	1	FR_H_JL_CL
I-FITTING ROOM BENCH (Standard Size)	I	0	FR_I_JL_CL
J-FITTING ROOM BENCH FAMILY	J	1	FR_J_JL_CL
K-RETURNS RAIL (LH)	K	0	FR_K_JL_CL
L-RETURNS RAIL (RH)	L	0	FR_L_JL_CL

C MODULAR FITTING ROOM COMPONENTS

SCALE: NTS



A



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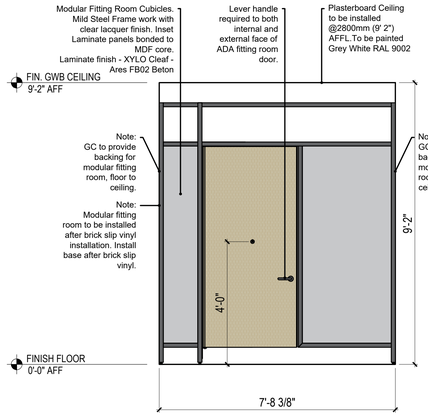

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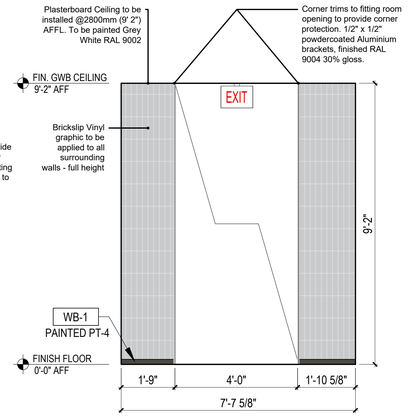


D

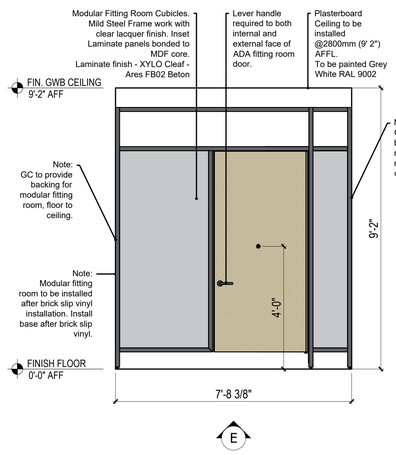
1. GC TO PAINT WALLS RECEIVING BRICK SLIP VINYL VN-1 SEMI GLOSS PAINT AND LET CURE FOR 10 DAYS.
2. APPLY BRICK SLIP VINYL AFTER CURING WALLS.
3. INSTALL MODULAR FITTING ROOM PANELS, DOORS, AND ACCESSORIES.
4. INSTALL POPLAR BASE AFTER INSTALLATION OF FITTING ROOM PANELS.
5. GC TO PROVIDE 3/4" PLYWOOD OR 10" 18G METAL STRAPPING AT MOUNTING POINTS.

- GENERAL NOTES

SCALE: N/A

18 FITTING ROOM VESTIBULE ELEVATION A, B, C, D

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



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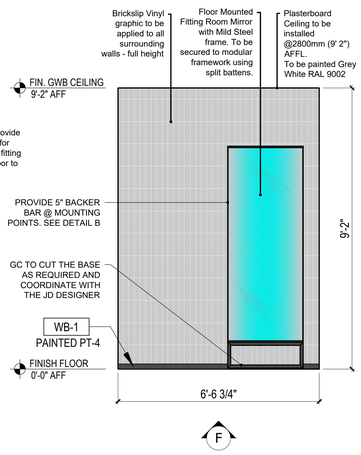

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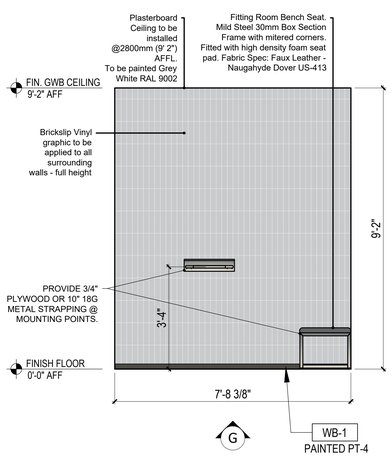

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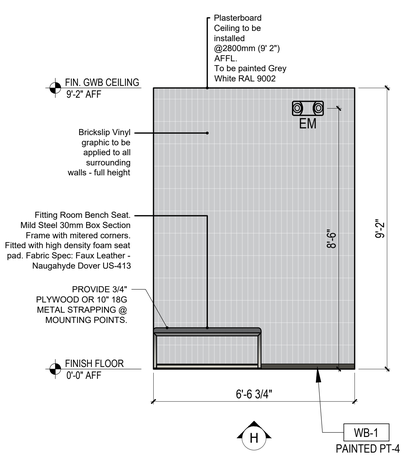
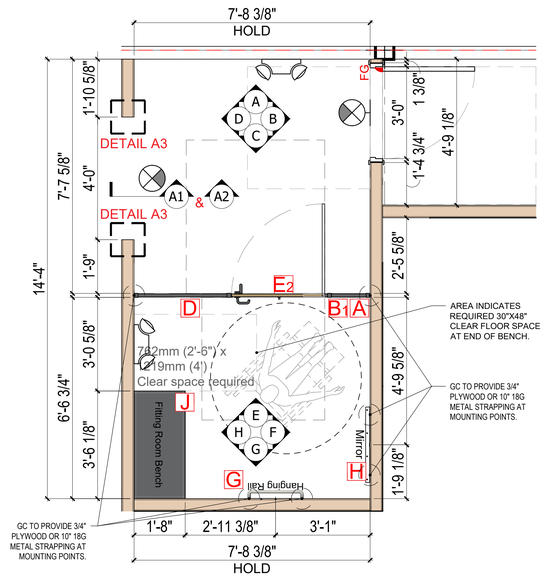


H

17 ACCESSIBLE FITTING ROOM ELEVATION E, F, G, H

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



4 FITTING ROOM KEY PLAN

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

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JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:
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FITTING ROOM ELEVATIONS

Sheet #:
A06.2

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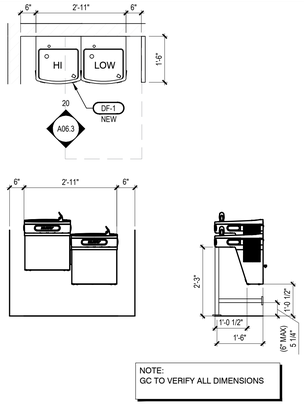


NOTE:
GC TO VERIFY ALL DIMENSIONS

20 DRINKING FOUNTAIN DETAIL
SCALE: 1/2" = 1'-0"

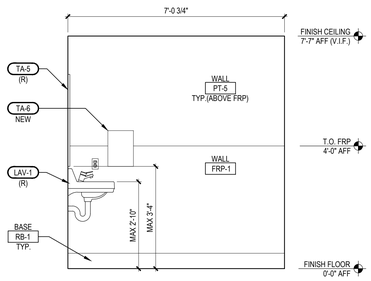
1. G.C. TO VERIFY ALL FIXTURES TO BE ADA COMPLIANT. CORRECT AS NECESSARY.
2. UNDER SINK PIPING WILL REQUIRE INSULATION

16 GENERAL NOTES
SCALE: 1/2" = 1'-0"

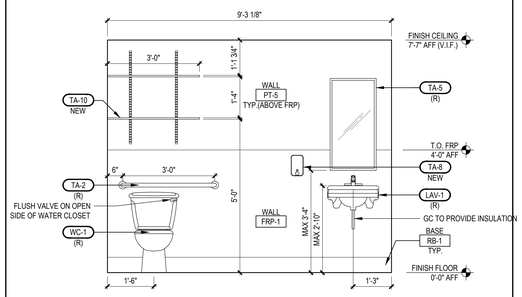
MARK	QTY.	DESCRIPTION	SUPPLIED BY	INSTALLED BY	REMARK
WC-1	1	WATER CLOSET REFER TO PLUMBING DRAWINGS. (1 EXISTING, REINSTALLED)	(E)	(E)	2,4
LAV-1	1	WALL MOUNTED LAVATORY - REFER TO PLUMBING DRAWINGS (1 EXISTING, RELOCATED)	(E)	(E)	2,3,4
TA-2	1	36" H.C. GRAB BAR (1 EXISTING, RELOCATED)	(E)	(E)	1,4
TA-3	1	42" H.C GRAB BAR; BOBRICK #B-6806X42 (1 NEW)	-	G.C.	1,4
TA-4	1	TOILET TISSUE HOLDER; BOBRICK B-264 SURFACE MOUNTED (1 NEW)	-	G.C.	4
TA-5	1	MIRROR (1 EXISTING, REINSTALLED)	(E)	(E)	4
TA-6	1	PAPER TOWEL DISPENSER; BOBRICK CLASSIC SERIES VERTICAL FOLDED PAPER TOWEL DISPENSER (1 NEW)	G.C.	G.C.	4
TA-7	1	SANITARY NAPKIN DISPOSAL; BOBRICK B-270 (1 NEW)	G.C.	G.C.	4
TA-8	1	SOAP DISPENSER; GOJO ADX-7 MANUAL SOAP DISPENSER (1 NEW)	G.C.	G.C.	4
TA-9	1	TOILET SEAT COVER DISPENSER; BOBRICK B-221 (1 NEW)	G.C.	G.C.	4
TA-10	1	PLASTIC LAMINATE WALL MOUNTED SHELVING (1 NEW)	G.C.	G.C.	4
DF-1	1	HI / LOW DRINKING FOUNTAIN; ELKAY EZSTL8LC - REFER TO PLUMBING DRAWINGS (1 NEW)	G.C.	G.C.	2
MB-1	1	MOP SINK - REFER TO PLUMBING DRAWINGS (1 NEW)	G.C.	G.C.	2
REMARKS					

1. 1-1/2" STAINLESS STEEL GRAB BAR WITH 1-1/2" CLEARANCE BETWEEN GRAB BAR AND WALL SURFACE. PROVIDE BLOCKING AS REQUIRED FOR A SECURE MOUNTING.
2. REFER TO PLUMBING DRAWINGS
3. PROVIDE TRAP WRAP FOR DRAIN PIPES AND INSULATE THE HOT AND COLD WATER LINES
4. REFER TO 17/- FOR MOUNTING LOCATIONS AND HEIGHTS AND DOOR / DOOR JAMB SIGNS.
5. RELOCATE EXISTING FIXTURE IN EXISTING RESTROOM SO THAT OPERABLE PARTS ARE NO MORE THAN 40" MAXIMUM AFF.

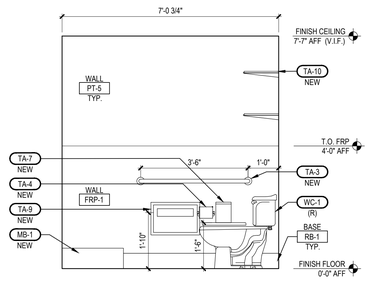
12 FIXTURE AND ACCESSORY SCHEDULE
SCALE: 1/2" = 1'-0"



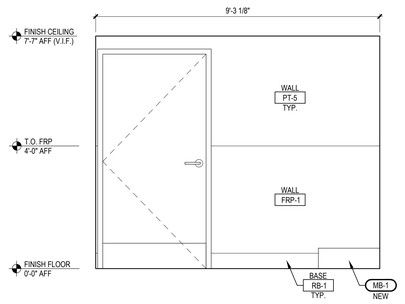
4 RESTROOM ELEVATION
SCALE: 1/2" = 1'-0"



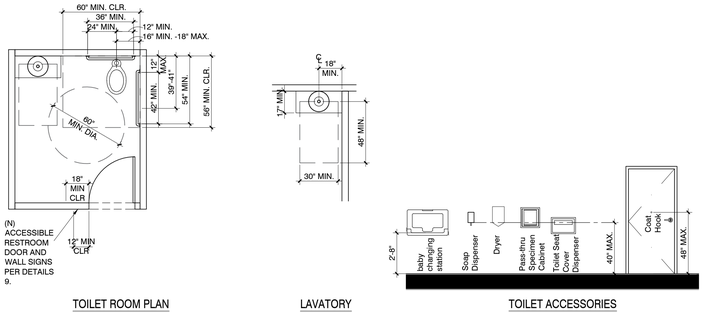
3 RESTROOM ELEVATION
SCALE: 1/2" = 1'-0"



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

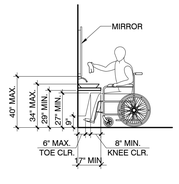


1 RESTROOM ELEVATION
SCALE: 1/2" = 1'-0"

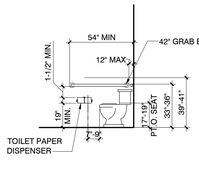


TOILET ROOM PLAN LAVATORY TOILET ACCESSORIES

GENERAL NOTE FOR GRAB BAR: FOR GRAB BAR MOUNTING SEE DETAIL 17/A00.4 FOR MORE INFORMATION



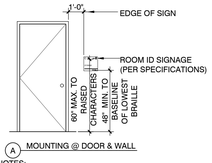
LAVATORY CLEARANCES



TOILET STALL CLEARANCES

NOTE: THESE FIGURES ARE ILLUSTRATIVE ONLY AND DO NOT DELINEATE THE ONLY MEANS OF COMPLIANCE. REFER TO PLANS FOR EXACT LAYOUT OF TOILET ROOMS.

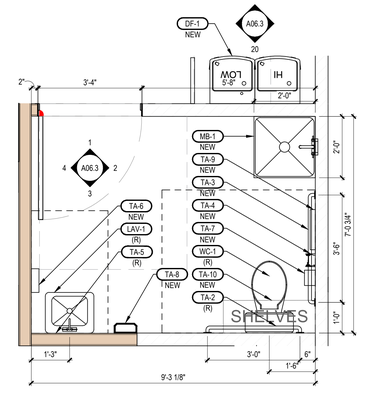
17 TOILET ROOM REQUIREMENTS
SCALE: 1/4" = 1'-0"



A MOUNTING @ DOOR & WALL

NOTES:

1. DOOR SIGN: SHALL BE CENTERED ON DOOR & MOUNTED 58" MIN. TO 60" MAX. FROM THE ABOVE THE FLOOR TO THE CENTERLINE OF THE SYMBOL (W/ADHESIVE ONLY - CAULK EDGES W/CLEAR SILICONE) @ THE CENTER OF THE SIGN.
2. ROOM SIGN: RAISED & BRAILLED CHARACTERS & PICTORIAL SYMBOL SIGNS (PICTOGRAMS). LETTERS & NUMERALS SHALL BE RAISED 1/32", UPPERCASE, SANS SERIF OR SIMPLE SERIF TYPE, & SHALL BE ACCOMPANIED WITH GRADE 2 BRAILLE. RAISED CHARACTERS SHALL BE 5/8" HIGH MIN, 2" HIGH MAX.
3. FINISH CONTRAST: THE CHARACTERS & BACKGROUND OF SIGNS SHALL BE EGGSHELL, MATTE, OR OTHER NON-GLARE FINISH.
4. CHARACTERS & SIGNS: SHALL BE INSTALLED ON THE WALL ADJACENT TO THE LATCH SIDE OF THE DOOR.



NOTE:
GC TO VERIFY IN FIELD TO ENSURE LAVATORIES MEET ACCESSIBILITY CLEARANCES.

5 ENLARGED RESTROOM PLAN
SCALE: 1/2" = 1'-0"

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RESTROOM ELEVATIONS

Sheet #:
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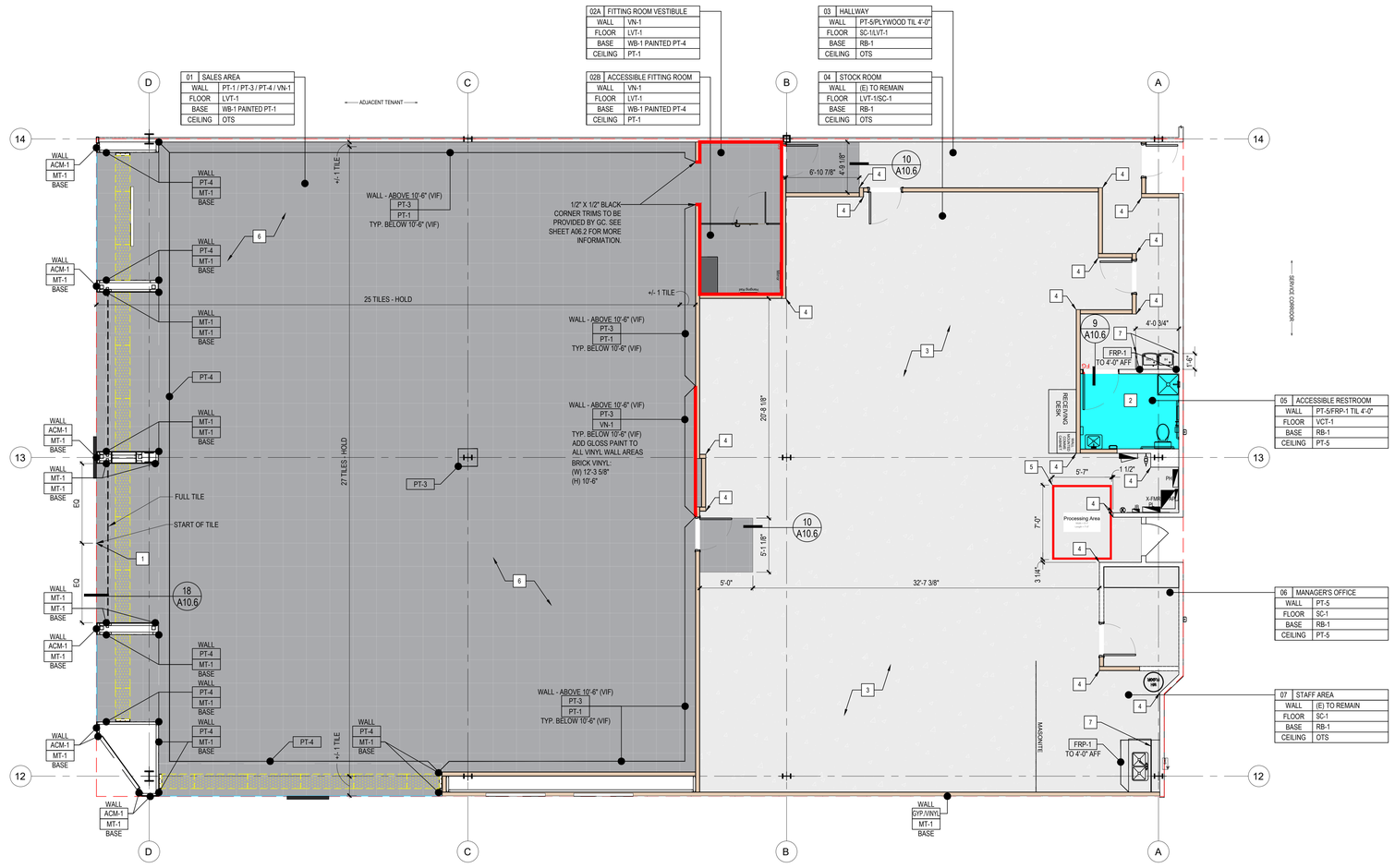

NORTH

1. ALL SALES FLOOR FINISHES TO EXTEND TO HEIGHT REFERENCED ON ELEVATIONS. PAINT EXPOSED SURFACES ABOVE PT-3, U.O.N.
2. FOR CEILING FINISHES SEE SHEET A07.1; FOR ALL ITEMS ABOVE 10'-6", PAINT PT-3
3. CEILING PAINT NOT REQUIRED AT STOCKROOM, TYP.
4. FOR STOREFRONT FINISHES SEE SHEET A05.1 SERIES
5. ELECTRICAL AND DATA RECEPTACLE COVER PLATES TO BE: WHITE AT PT-1 WALLS THROUGHOUT THE SALES AREA AND PT-5 IN BACK OF HOUSE, PAINT BLACK AT WALLS WITH PT-4, PT-6, PAINT/ FINISH.
6. METAL SCREEDS TO BE SST UON
7. ALL FLOOR TILES TO BE SLIP RESISTANT IN ACCORDANCE WITH ALL ACCESSIBILITY CODES OR STRICTEST GOVERNING CODE
8. COORDINATE FINISH PURCHASES WITH OWNER VENDORS
9. PROVIDE LEVEL 4 FINISH AT SALES FLOOR WALLS, REFER TO SPECIFICATIONS FOR REQUIREMENTS.
10. WALLS / SUBSTRATE BEHIND THE SHOPFRONT, ELEMENTS-LIGHTBOXES, DIBOND PANELS AND CEMPANELS TO BE PAINTED PT-4.
11. EXAMINE ALL SURFACES TO BE PAINTED UNDER THIS CONTRACT AND SEE THAT THE WORK OF OTHER TRADES HAVE BEEN LEFT OR INSTALLED IN A SATISFACTORY CONDITION TO RECEIVE PAINT OR SPECIFIED FINISH.
12. PAINTER SHALL BE RESPONSIBLE FOR THE REMOVAL OF HARDWARE, SWITCH AND OUTLET COVERS, ETC, AND REINSTALLATION OF SAME AFTER PAINTING.
13. AT COMPLETION OF PAINTING, LEAVE ADDITIONAL STOCK OF PAINT IN CASE TOUCH UPS / REPAIRS ARE NEEDED. ALL PAINT SPOTS REMOVED, AND ALL AREAS THOROUGHLY CLEANED. ANY DIRT OR DEBRIS CAUSED BY WORK SHALL BE CLEANED UP AS WORK PROGRESS.
14. RETOUCH OR REFINISH SURFACES DAMAGED BY SUBSEQUENT WORK AS DIRECTED BY GENERAL CONTRACTOR. THE COST OF SUCH RESTORATION WORK SHALL BE BORNE BY THE CONTRACTOR.
15. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING PROPER PROTECTION AGAINST DAMAGE TO EXISTING FURNITURE, ADJACENT FINISHED WORK, FLOORING, ETC. IF APPLICABLE.
16. GC TO PROVIDE FINAL TAKE OFFS FOR FINISHES BASED ON VERIFIED FIELD CONDITIONS
17. GC TO REFER TO MFG RECOMMENDATIONS AND INSTALL INSTRUCTIONS FOR SLAB PREPARATION AND EXPANSION JOINT LOCATIONS WHERE NECESSARY.
18. ADD SEMIGLOSS BEHIND BRICK SLIP VINYL AND GRAPHICS TO LET IT CURE FOR (10) DAYS PRIOR TO INSTALL.
19. INSTALL POPLAR BASE AFTER INSTALLATION OF FITTING ROOM PANELS.

17 GENERAL NOTES
SCALE: NTS

1 FLOORING START POINT AT THE ENTRY.

2 PROVIDE WATERPROOFING MEMBRANE AT ALL WET AREAS. EXTEND A MINIMUM 6" AFF UP WALLS.

3 GC TO VERIFY IF CONCRETE IS IN GOOD CONDITION. FLOORS MUST BE SMOOTH AND LEVEL WITH NO ELEVATION DIFFERENCES GREATER THAN 1/4" HIGH. GC TO PROVIDE LEVELER TO ANY GOUGES OR SCARS. GC TO SEAL EXISTING CONCRETE FLOOR. CREATE SMOOTH TRANSITION TO ADJACENT FLOOR FINISH.

4 LOCATION OF CORNER GUARD (GRAINGER STAINLESS STEEL SELF-ADHESIVE)

5 NEW FLOOR PAINT FOR PROCESSING AREA TO BE CLEARLY MARKED ON FLOOR WHERE DIMENSIONED. GC TO OBTAIN HARD-WEARING PAINT, 2" THICK.

6 PAINT ALL THREADS ON FRONT OF STORE AND SALES FLOOR TO MATCH THE CEILING PAINT PT-3. LEAVE CONDUITS RAW.

7 ADD FRP AT NEW DRINKING FOUNTAIN.

13 KEYNOTES
SCALE: NTS

SYMBOL	DESCRIPTION
WALL / FLOOR / BASE / CEILING	WALL FINISH, SEE FINISH SCHEDULE & INTERIOR ELEVATIONS FLOOR FINISH, SEE FINISH PLAN & SCHEDULE BASE FINISH CEILING FINISH, SEE FINISH SCHEDULE
100 ROOM	ROOM NUMBER, SEE ROOM FINISH SCHEDULE ROOM NAME

9 WALL LEGEND
SCALE: NTS

GENERAL NOTES

POWER AND DATA COVER PLATES

Socket & Data cover plates to match wall colour.

WALL COLOUR		COVER PLATE
PT-1, PT-5	Light Grey/ White	White (DO NOT PAINT)
PT-4, PT-6, VN-1	Dark Grey, Black, Brick Slip	Black

BASEBOARD

Baseboard required to sales floor and back of house unless otherwise stated. All external and internal corner junctions to be chamfered. Baseboard finish to match wall finishes throughout the sales floor unless otherwise specified.

SALES FLOOR BASE	51mm (2") Poplar painted to match wall colour
FITTING ROOM BASE	2" Poplar Base
BOH BASE	Grey Colored Vinyl Base

5 FINISH LEGEND GENERAL NOTES
SCALE: NTS

JUST LANDED FINISH SCHEDULE

WALL FINISHES

PAINT

PT - #	SAMPLE	DESCRIPTION	VENDOR	SUPPLIED	INSTALLED	LOCATION	DESCRIPTION/NOTES
PT - 1		SW 7667 "ZIRCON"	SHERWIN WILLIAMS	GC	GC	SALES FLOOR PERIMETER WALLS BELOW THE PAINT LINE	RAL 7047 - EQUIVALENT WALLS - MATTE FINISH WALLS RECEIVING VINYL - SEMIGLOSS FINISH BASEBOARDS - SEMIGLOSS FINISH
PT - 3		SW 7075 "WEB GRAY"	SHERWIN WILLIAMS	GC	GC	SALES FLOOR CEILING/ DECK/COLUMNS AND ABOVE PAINTLINE	RAL 7012 EQUIVALENT WALL - MATTE FINISH WALLS RECEIVING VINYL - SEMIGLOSS FINISH BASEBOARD - SEMIGLOSS FINISH
PT - 4		SW 6992 "INKWELL"	SHERWIN WILLIAMS	GC	GC	BACKSIDE OF STOREFRONT/ WINDOW BED/ COLUMNS	RAL 7021 EQUIVALENT WALL - MATTE FINISH BASEBOARD - SEMIGLOSS FINISH
PT - 5		SW 7005 "PURE WHITE"	SHERWIN WILLIAMS	GC	GC	MANAGER'S OFFICE, STAFF ROOM, RESTROOMS, PUBLIC CORRIDORS	WALL - MATTE FINISH WALLS RECEIVING VINYL - SEMIGLOSS FINISH BASEBOARD - SEMIGLOSS
PT - 6		SW 6991 "BLACK MAGIC"	SHERWIN WILLIAMS	GC	GC	STOREFRONT, FASCIA GLAZING FRAMES, DOOR FRAMES	RAL 9004 30% GLOSS WALL - MATTE FINISH WALLS RECEIVING VINYL - SEMIGLOSS FINISH BASEBOARD - SEMIGLOSS FINISH
VINYL/WALL COVERINGS							
VN - 1		BRICK SLIP VINYL	VENDOR	OWNER	GC	BACKWRAP WALL FITTING ROOM WALLS (PROJECT SPECIFIC)	WALLS RECEIVING VINYL SHALL BE FINISHED IN SEMIGLOSS
VN - 2		CUSTOM	VENDOR	VENDOR	VENDOR	32ft(1) ROOM, SIG TO PROVIDE ARTWORK	WALLS RECEIVING VINYL SHALL BE FINISHED IN SEMIGLOSS
T-1		BRICK SLIP TILE	VENDOR	VENDOR	GC	BACKWRAP WALL FITTING ROOM WALLS (PROJECT SPECIFIC)	WALLS RECEIVING TILE w 3/8" GROUT. GROUT MAPEI 113 CEMENT GROUT
FRP - 1		FIBERGLASS REINFORCED PLASTIC	LOCALLY SOURCED	GC	GC	BOH COMMON AREA, RESTROOMS, DRINKING FOUNTAINS	
FLOORING							
LVT - 1		SVART VINYL TILE - PRINTED CONCRETE AGGRAGE EFFECT	TARKETT	OWNER	GC	SALES FLOOR AND PORTIONS OF THE ENTRY TO BOH	
CT-1		CERAMIC TILE	REEIN	OWNER	GC	WALLS FLOOR AND PORTIONS OF THE ENTRY TO BOH	APPLIES ONLY WHEN NOTED DLE SIZE 456 x 596 (1'-11 5/8" x 1'-11 1/4") TILE THICKNESS 9MM (3/8")
SC - 1		SEALED CONCRETE	LOCALLY SOURCED	GC	GC	STOCK ROOM AND STAFFROOM	MANAGER'S OFFICE FOR STREAMLINE LOCATIONS
VCT - 1		51861 OR EQ	ARMSTRONG OR EQ	GC	GC	RESTROOM	
MP - 1		CARPET BLACK	LOCALLY SOURCED	GC	GC	MANAGERS OFFICE	GC TO PROVIDE LOCAL SPECS FOR CONSTRUCTION PM & DESIGNER APPROVAL
MM-1		WALK-OFF MAT	LOCALLY SOURCED	GC	GC	ENTRY	GC TO PROVIDE CUT SHEET FOR FINAL APPROVAL. APPLIED ON AT EXTERIOR LOCATIONS
T-1		BLACK PX321 COLORBODY PORCELAIN	DAL TILE	GC	GC	EXTERIOR STOREFRONTS ONLY	LOCAL TILE THICKNESS 5/10" BUTT JOINT
METAL							
ACM - 1		ACM PANELS WITH GRID PRINT	VENDOR	OWNER	GC	STOREFRONT FINISH	
MT - 1		BRAKE METAL FINISHED IN RAL 9004 w 30% GLOSS	LOCALLY SOURCED	GC	GC	STOREFRONT AND SHOW WINDOW	
BASE							
WB - 1		2" POPLAR BASE	LOCALLY SOURCED	GC	GC	SALES FLOOR FITTING ROOM AND VESTIBULE	FITTING ROOM AND VESTIBULE BASE MAY VARY PENDING ON GRADE
RB - 1		RUBBER BASE	LOCALLY SOURCED	GC	GC	STOCKROOM PUBLIC CORRIDOR	
MISC							
FM - 1		FORMICA "BLACK MATE"	LOCALLY SOURCED	GC	GC	STAFF ROOM AND MANAGERS OFFICE TABLE TOP FINISHES.	STAFF ROOM TABLETOP 4" RETURN

1 FINISH LEGEND
SCALE: NTS

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FLOORING
& FINISHES

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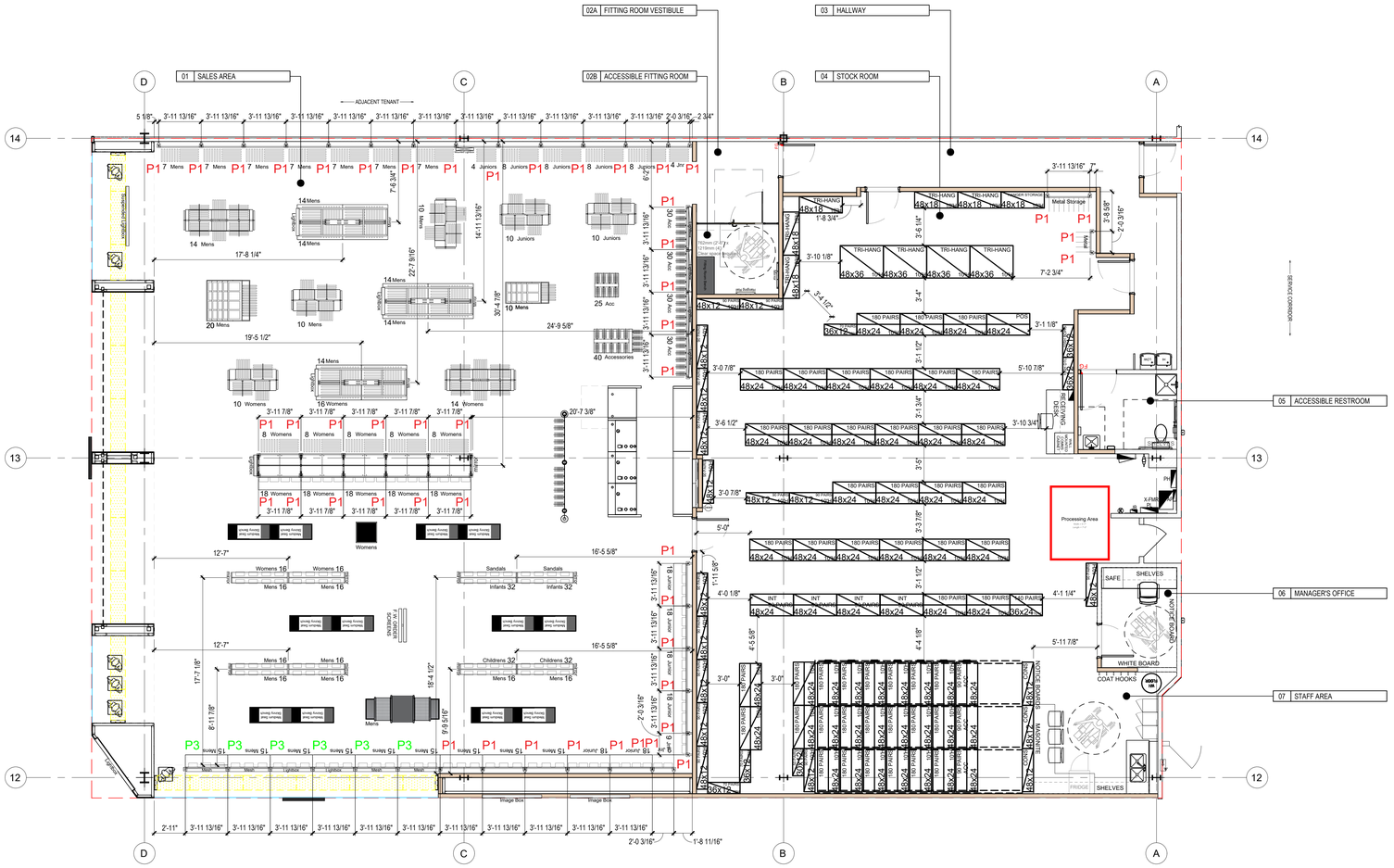

18 FIXTURES AND FITTINGS
SCALE: 3/16" = 1'-0"

PERIMETER FIXTURES LEGEND			
CODE	QTY	DETAILS	HEIGHT
P1	48	Standard Post - Clear Lacquer	9' 10 1/8" 3000mm
P2	0	Standard Post - Light Grey RAL 7035	9' 10 1/8" 3000mm
P3	6	Floor to ceiling posts - Clear Lacquer	(site dim)
P4	0	Floor to ceiling posts - Light Grey RAL 7035	(site dim)
P5	0	Standard Post - Clear Lacquer	9' 2 1/4" 2800mm
P6	0	Standard Post - Light Grey RAL 7035	9' 2 1/4" 2800mm
EXT	0	Extension Brackets	(site dim)
NOTE:			
All post will be delivered 3000mm/9'-10 1/8" high. Alternate heights to be cut down by the General Contractor.			
ALL DIMS TO BE CHECKED ON SITE PRIOR TO MANUFACTURE For setting out and pattress requirements - For new walls, pattress 18mm/ $\frac{13}{16}$" ply with 20mm/ $\frac{13}{16}$" chamfer concealed within walls where possible. - When retaining existing walls pattress to be placed centrally to post wall fixing points above and below. To be securely fixed and decorated to match proposed local finish			
- Where floor to ceiling posts are over 10'-6" / 3200mm, steel to have break line at 10'-6" / 3200mm FFFL with a spigot fixing - Structural engineer to confirm pattress height for floor to ceiling posts.			

17 FIXTURE LEGEND
SCALE: NTS

NORTH

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FIXTURES AND FITTINGS

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A08.1

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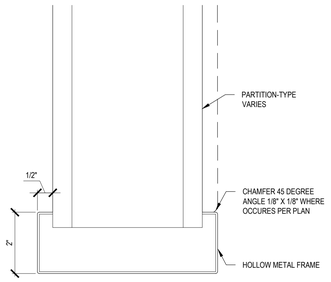


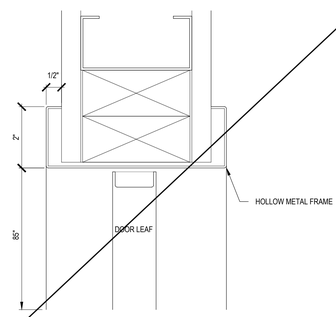
20 HOLLOW METAL FRAME CASED OPENING
SCALE: 6" = 1'-0"

DOOR #	ROOM NAME	DOOR								FRAME					REMARKS
		TYPE	HDWR. SET	WIDTH	HEIGHT	THICKNESS	MAT'L	FINISH	RATING	HEAD	JAMB	THRSLD	MAT'L	FINISH	
01A	SALES AREA	F	---	14'-11 3/4"	10'-6 1/4"	---	---	---	---	---	---	---	---	---	COORDINATE WITH ROLLING GRILLE VENDOR. TACTILE "EXIT" SIGN @ 60" AFF TO CENTER OF SIGN ON SALES AREA SIDE.
01B	SALES AREA	F	---	14'-11 3/4"	10'-6 1/4"	---	---	---	---	---	---	---	---	---	COORDINATE WITH ROLLING GRILLE VENDOR. TACTILE "EXIT" SIGN @ 60" AFF TO CENTER OF SIGN ON SALES AREA SIDE.
02B	ACCESSIBLE FITTING ROOM	A	SEE VENDOR DWGS	3'-0 3/4"	7'-0"	1.417"	SOLID CORE WOOD	PREFINISHED	---	SEE VENDOR DWGS	SEE VENDOR DWGS	---	WOOD	PREFINISHED	DOOR AND HARDWARE BY VENDOR, GC TO PROVIDE HEAD AND JAMB. JAMBS TO BE PAINTED PT-1. GC TO COORDINATE WITH JD PM.
03A	HALLWAY	C	5	3'-0"	7'-0"	1 3/4"	HOLLOW METAL	PT-1	---	18/A09.1	19/A09.1	---	METAL	PT-1	SIGN "STAFF ONLY" VESTIBULE SIDE. PAINT TO HAVE SEMIGLOSS FINISH.
03B	HALLWAY EGRESS DOOR	C	4	3'-0"	7'-0"	1 3/4"	HOLLOW METAL	PT-1	---	18/A09.1	19/A09.1	---	METAL	PT-1	NEW PANIC HARDWARE AS PER GROUP 4. TACTILE "EXIT" SIGN @60" AFF TO CENTER OF SIGN. KEY PAD. SURFACE MOUNT DOOR CONTACT. GC TO VERIFY REQUIREMENTS WITH MALL MANAGER PRIOR TO PAINTING DOOR. PAINT TO HAVE SEMIGLOSS FINISH.
04A	STOCK ROOM	C	5	3'-0"	7'-0"	1 3/4"	HOLLOW METAL	PT-1	---	18/A09.1	19/A09.1	---	METAL	PT-1	SIGN "STAFF ONLY" SALES AREA SIDE. PAINT TO HAVE SEMIGLOSS FINISH.
04B	STOCK ROOM	C	5	3'-0"	7'-0"	1 3/4"	HOLLOW METAL	PT-5	---	18/A09.1	19/A09.1	---	METAL	PT-5	SIGN "STAFF ONLY" HALLWAY SIDE. PAINT TO HAVE SEMIGLOSS FINISH.
04C	STOCK ROOM	C	5	3'-0"	7'-0"	1 3/4"	HOLLOW METAL	PT-5	---	18/A09.1	19/A09.1	---	METAL	PT-5	SIGN "STAFF ONLY" HALLWAY SIDE. PAINT TO HAVE SEMIGLOSS FINISH.
04D	EXISTING SERVICE DOOR	(E)	4	3'-0" V.I.F.	7'-0" V.I.F.	V.I.F.	V.I.F.	(E)	V.I.F.	V.I.F.	V.I.F.	V.I.F.	V.I.F.	(E)	NEW PANIC HARDWARE AS PER GROUP 4. TACTILE "EXIT" SIGN @60" AFF TO CENTER OF SIGN. KEY PAD. SURFACE MOUNT DOOR CONTACT. GC TO VERIFY REQUIREMENTS WITH MALL MANAGER PRIOR TO PAINTING DOOR. PAINT TO HAVE SEMIGLOSS FINISH.
05	ACCESSIBLE RESTROOM	C	6	3'-0"	7'-0"	1 3/4"	HOLLOW METAL	PT-5	---	18/A09.1	19/A09.1	9/A10.6	METAL	PT-5	SIGNAGE FURNISHED & INSTALLED BY GC. SEE DETAIL 17/A06.3. PROVIDE NEW LOCKSET: PRIVACY LOCK WITH INDICATOR; CAL-ROYAL INDLEV-20 PRIVACY INDICATOR - 26D. PAINT TO HAVE SEMIGLOSS FINISH.
06	MANAGER'S OFFICE	C	3.1	3'-0"	7'-0"	1 3/4"	HOLLOW METAL	PT-5	---	18/A09.1	19/A09.1	---	METAL	PT-5	SIGNAGE BY OWNER - INSTALLED BY GC. SURFACE MOUNT DOOR CONTACT. PAINT TO HAVE SEMIGLOSS FINISH.

10 DOOR SCHEDULE
SCALE: NTS

ABBREVIATION LEGEND

AA	AUDIBLE ALARM
AC	ALARM CONTRACT
AL	ALUMINUM
CGL	CLEAR GLASS
CONC	CONCRETE
CPT	CARPET
CWGL	CLEAR WIRE GLASS
DV	DOOR VIEWER
HM	HOLLOW METAL
MHO	MAGNETIC HOLD OPEN
WD	WOOD
GL	GLASS PER SPECIFICATION

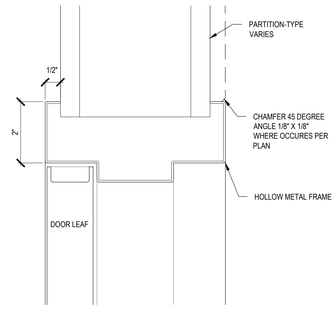


19 HOLLOW METAL FRAME DOOR JAMB
SCALE: 6" = 1'-0"

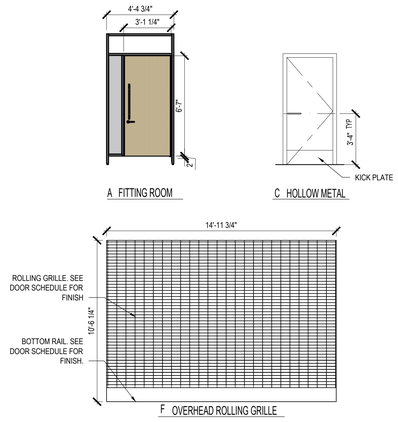
15 NOT USED
SCALE: NTS

HARDWARE SET #3: BOH_STAFF	MFG.
BUTT HINGES: 4 ½" x 4 ½"; BUTT; FINISH: US26D (3 EACH)	MCKINNEY OR EQUAL
PULL PLATE: #8311; FINISH: SATIN ALUMINUM	IVES OR EQUAL
PUSH PLATE: #8200; SIZE: 3 1/2" X 15"; FINISH: SATIN ALUMINUM	IVES OR EQUAL
SILENCERS: SR64 (3 EACH)	IVES OR EQUAL
FLOOR STOP: ROCKWOOD DOME STOP 441 (1 EACH); FINISH: US26D	ROCKWOOD
CLOSER w/ HOLD OPEN: HAGER 5200 ADJ 1-6 ALM (1 EACH)	HAGER
TRIM PROTECTOR: #R111LPB; FINISH: US26D	ROCKWOOD
HARDWARE SET #3.1: OFFICE	
BUTT HINGES: 4 ½" x 4 ½"; BUTT; FINISH: US26D (3 EACH)	MCKINNEY OR EQUAL
STOREROOM FUNCTION CYLINDRICAL LOCKSET (HAGER 3580 SFIC WTN 26D)	HAGER
SILENCERS: SR64 (1 EACH)	IVES OR EQUAL
FLOOR STOP: ROCKWOOD DOME STOP 441 (1 EACH); FINISH: US26D	ROCKWOOD
CLOSER w/ HOLD OPEN: #DC6200 (1 EACH); PAINT TO MATCH DOOR COLOR	CORBIN-RUSSWIN
TRIM PROTECTOR: #R111LPB; FINISH: US26D	ROCKWOOD
CLOSER w/ HOLD OPEN: HAGER 5200 ADJ 1-6 ALM (1 EACH)	HAGER
TRIM PROTECTOR: #R111LPB; FINISH: US26D	ROCKWOOD
LOCKSET: HAGER 3580 SFICWTN26D	G.C.
HARDWARE SET #4: BOH EGRESS	MFG.
BUTT HINGES: 4 ½" x 4 ½"; BUTT; FINISH: US26D (3 EACH)	MCKINNEY OR EQUAL
(DETEX) ECL-230X-TDB (FOR EXTERIOR EGRESS DOORS); ONE (1) 3-POINT DEAD BOLT	DETEX
SILENCERS: SR64 (3 EACH)	IVES OR EQUAL
NEW FLOOR OR WALL STOP (WHERE APPLICABLE): 445 / 446 OR 402 ½ (408 ½); (1 EACH); FINISH: US26D	IVES OR EQUAL
CLOSER w/ HOLD OPEN: HAGER 5200 ADJ 1-6 ALM (1 EACH)	HAGER
PEEPHOLE: RESIDENTIAL TYPE MOUNTED AT 60" A.F.F.	BID
DOOR SEAL: #222AV	PEMKO
SMOKE GASKET AROUND ENTIRE PERIMETER	BID
DOORBELL	
HARDWARE SET #5: BOH / STOCK	MFG.
BUTT HINGES: 4 ½" x 4 ½"; BUTT; FINISH: US26D (3 EACH)	MCKINNEY OR EQUAL
PULL PLATE: #8311; FINISH: SATIN ALUMINUM	IVES OR EQUAL
PUSH PLATE: #8200; SIZE: 3 1/2" X 15"; FINISH: SATIN ALUMINUM	IVES OR EQUAL
SILENCERS: SR64 (3 EACH)	IVES OR EQUAL
FLOOR STOP: ROCKWOOD DOME STOP 441 (1 EACH); FINISH: US26D	ROCKWOOD
CLOSER w/ HOLD OPEN: HAGER 5200 ADJ 1-6 ALM (1 EACH)	HAGER
KICKPLATE: B400 8X34 B4E CS 32D	IVES OR EQUAL
HARDWARE SET #6: RESTROOM	MFG.
BUTT HINGES: 4 ½" x 4 ½"; BUTT; FINISH: US26D (3 EACH)	MCKINNEY OR EQUAL
LOCKSET: PRIVACY LOCK WITH INDICATOR. CAL-ROYAL INDLEV-20 PRIVACY INDICATOR - 26D.	CAL-ROYAL
SILENCERS: SR64 (1 EACH)	IVES OR EQUAL
FLOOR STOP: ROCKWOOD DOME STOP 441 (1 EACH); FINISH: US26D	ROCKWOOD
CLOSER w/ HOLD OPEN: HAGER 5200 ADJ 1-6 ALM (1 EACH)	HAGER
TRIM PROTECTOR: #R111LPB; FINISH: US26D	ROCKWOOD
BUMPER GUARDS: SERIES 40; COLOR: POLAR WHITE (3 EACH); FURNISHED BY OWNER; INSTALLED BY GC	BOSTON BUMPERS

2 DOOR HARDWARE SCHEDULE
SCALE: NTS



18 HOLLOW METAL FRAME DOOR HEAD
SCALE: 6" = 1'-0"



10 DOOR STYLES
SCALE: 1/4" = 1'-0"

1. THIS PROJECT SHALL COMPLY WITH ALL BARRIER FREE GUIDELINES AND LOCAL ACCESS CODE REQUIREMENT REQUIREMENTS.
2. THRESHOLDS SHALL BE NO HIGHER THAN 1/2" ABOVE THE FLOOR. EDGE TO BE BEVELED WITH A SLOPE NO GREATER THAN 1 IN 2.
3. DOOR HARDWARE SHALL BE OF THE LEVER OR PUSH TYPE, MOUNTED 30" TO 44" ABOVE THE FLOOR AND BE OPERABLE WITH A MAXIMUM EFFORT OF 5 LBS. FOR INTERIOR DOORS. EXTERIOR DOOR - 8 1/2" POUNDS MAX. PRESSURE FIRE DOOR - 15 POUNDS MAX. PRESSURE.
4. ACCESSIBLE DOORS MUST BE MINIMUM 3'-0"W X 6'-8"H. MODIFY IF REQUIRED.
5. PROVIDE 18" CLEAR SPACE AT STRIKE/PULL SIDE ON INTERIOR DOORS, AND 12" CLEAR AT STRIKE/PUSH SIDE OF DOORS W/ CLOSERS AND 24" CLEAR AT STRIKE/PULL SIDE ON EXTERIOR DOOR
6. FLOOR SHALL BE LEVEL THROUGHOUT.
7. CLOSERS: FURNISHED AND INSTALLED BY GENERAL GC. DOOR CLOSERS TO BE MOUNTED ON SWING SIDE OF DOORS. DOOR CLOSERS TO HAVE A MAXIMUM OPENING FORCE OF 5 LBS (INTERIOR HINGED DOORS). EXTERIOR DOOR - 8 1/2" POUNDS MAX. PRESSURE, FIRE DOOR - 15 POUNDS MAX. PRESSURE THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 110 DEGREES MIN., THE DOOR SHALL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3 IN. FROM THE LATCH, MEASURED TO THE LEADING EDGE OF THE DOOR.
8. GENERAL GC SHALL PROVIDE KICKPLATES ON BACK OF HOUSE DOORS AS INDICATED IN DOOR SCHEDULE. VERIFY TYPE AND STYLE WITH OWNER TO MATCH FRAME FINISH 12" X 34".
9. GC SHALL VERIFY WITH SUPPLIER THAT ALL HARDWARE MEETS BARRIER FREE REQUIREMENTS.
10. ALL DOOR HINGES TO BE STEEL BALL BEARING, FULL MORTISE TYPE.
11. ALL METAL DOOR FRAMES TO BE PROVIDED WITH SILENCERS.
12. ALL INTERIOR DOORS TO BE PROVIDED WITH COMMERCIAL GRADE WALL OR FLOOR STOPS.
13. GENERAL GC TO SUBMIT TYPE-WRITTEN SHOP DRAWINGS AND PRODUCT LITERATURE FOR ALL DOORS AND HARDWARE SPECIFIED.
14. GENERAL GC SHALL ENSURE ALL EXISTING DOORS TO REMAIN TO BE IN GOOD OPERATING ORDER AND TO MEET ALL LOCAL BUILDING CODES AND BARRIER FREE REQUIREMENTS. GENERAL GC TO RESTORE DOORS AND HARDWARE TO "LIKE NEW" CONDITION. GC TO PROVIDE NEW HARDWARE.
15. EXTERIOR HINGES TO HAVE NON-REMOVEABLE PINS.
16. ALL RATED DOORS TO BE SUPPLIED WITH THRESHOLDS AND SMOKE SEAL PER SPECIFICATIONS AND CODE.
17. EQUIVALENT HARDWARE MUST BE APPROVED BY THE PROJECT MANAGER.
18. GC TO CORE/DRILL FITTING ROOM DOORS ON SITE FOR HINGES AND LEVER.
19. ALL FIRE RATINGS SUBJECT TO APPROVAL FROM LOCAL AUTHORITY/FIRE OFFICER.
20. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO MANUFACTURE.
21. ALLOW FOR PATTRESSING WHERE REQUIRED. REFER TO STANDARD DETAILS.
22. ALLOW FOR CEILING BARRIERS ABOVE PARTITIONS AS REQUIRED IN ORDER TO RETAIN PARTITION TYPE ACOUSTIC PERFORMANCE. ALL SERVICES WHICH PENETRATE BARRIERS TO BE SEALED AS REQUIRED.
23. FIRE DAMPERS TO BE INSTALLED AS PER FIRE OFFICER RECOMMENDATIONS.
24. INSTALL FINGER GUARD

1 DOOR HARDWARE SCHEDULE
SCALE: NTS

17 HOLLOW METAL FRAME FITTING ROOM DOOR HEAD (NOT USED)
SCALE: 6" = 1'-0"

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A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:
JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

DOOR & WALL SCHEDULE

Sheet #:
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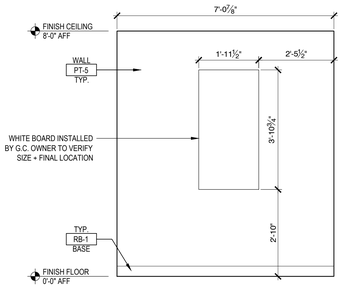
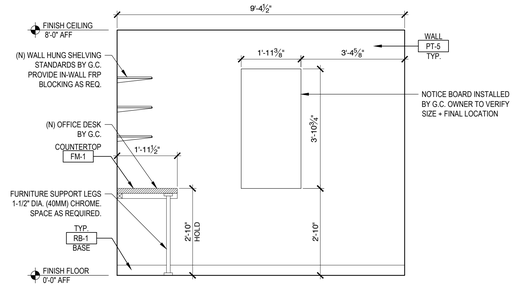
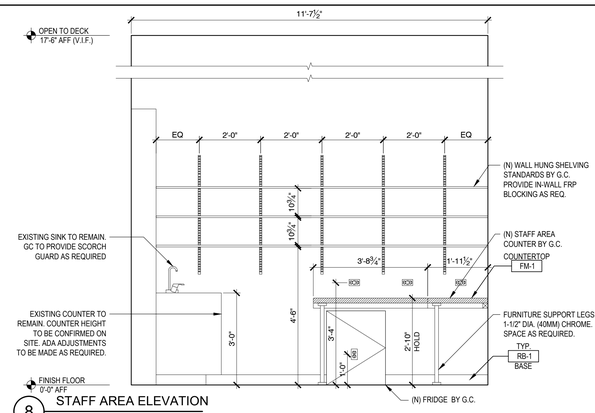


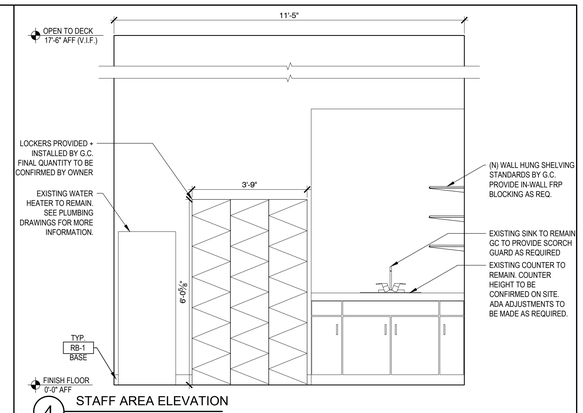
20 MANAGER'S OFFICE ELEVATION
SCALE: 1/2" = 1'-0" (1:24)



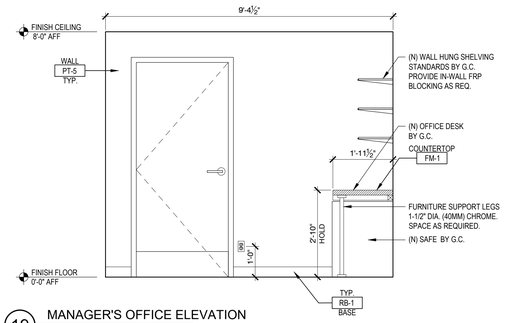
16 MANAGER'S OFFICE ELEVATION
SCALE: 1/2" = 1'-0" (1:24)



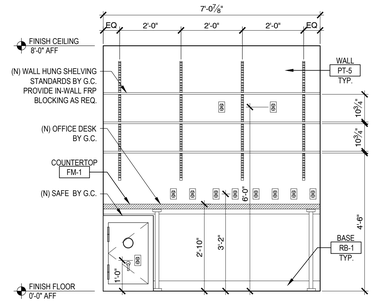
8 STAFF AREA ELEVATION
SCALE: 1/2" = 1'-0" (1:24)



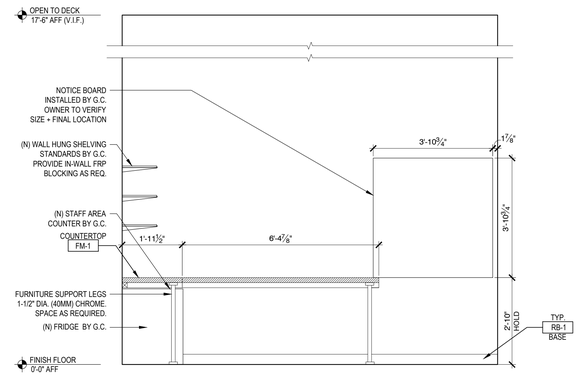
4 STAFF AREA ELEVATION
SCALE: 1/2" = 1'-0" (1:24)



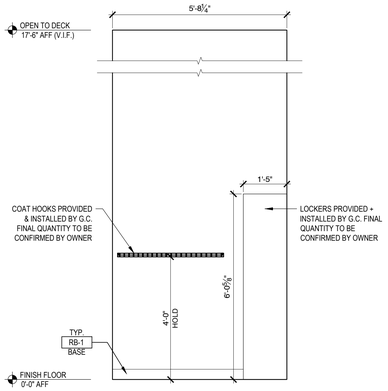
19 MANAGER'S OFFICE ELEVATION
SCALE: 1/2" = 1'-0" (1:24)



15 MANAGER'S OFFICE ELEVATION
SCALE: 1/2" = 1'-0" (1:24)

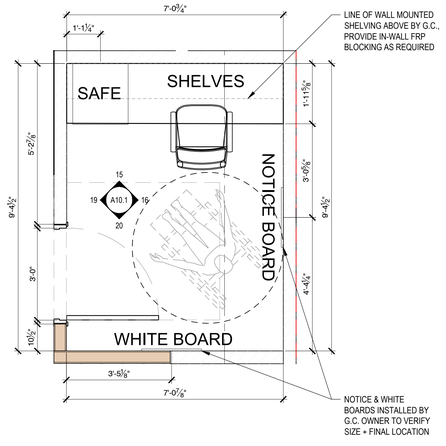


7 STAFF AREA ELEVATION
SCALE: 1/2" = 1'-0" (1:24)



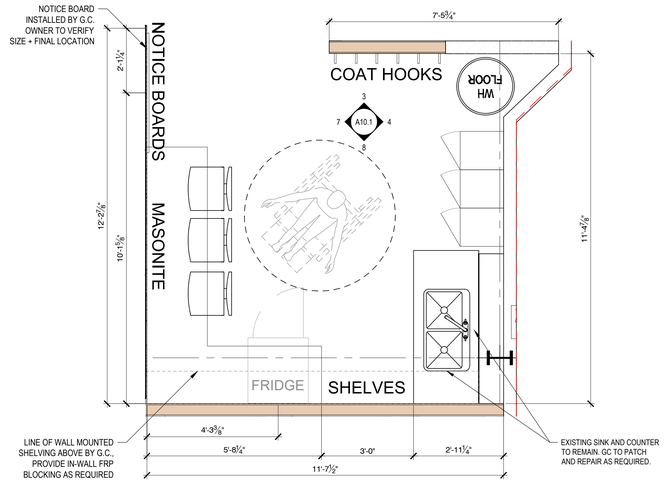
3 STAFF AREA ELEVATION
SCALE: 1/2" = 1'-0" (1:24)

NOTE: SEE CONSTRUCTION FLOOR PLAN FOR DOOR NUMBER IDENTIFIERS.

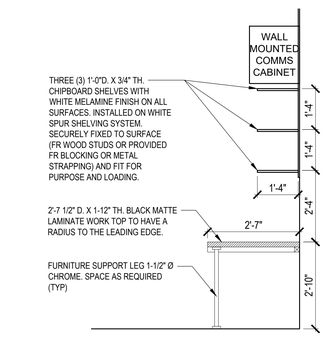


17 ENLARGED MANAGER'S OFFICE PLAN
SCALE: 1/2" = 1'-0" (1:24)

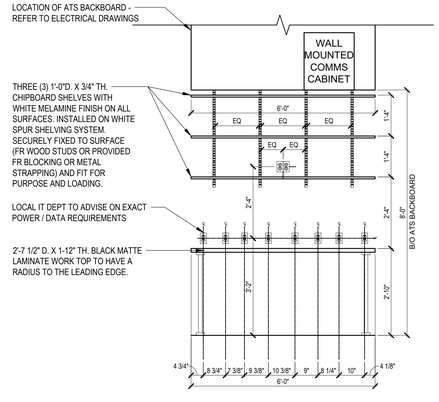
NOTE: SEE CONSTRUCTION FLOOR PLAN FOR DOOR NUMBER IDENTIFIERS.



9 ENLARGED STAFF AREA PLAN
SCALE: 1/2" = 1'-0" (1:24)



4 RECEIVING DESK SECTION
SCALE: 1/2" = 1'-0"_XREF



3 RECEIVING DESK ELEVATION
SCALE: 1/2" = 1'-0"_XREF

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LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:
JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

STAFF AREA
ELEVATIONS
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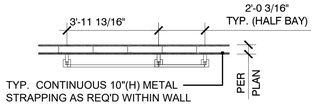
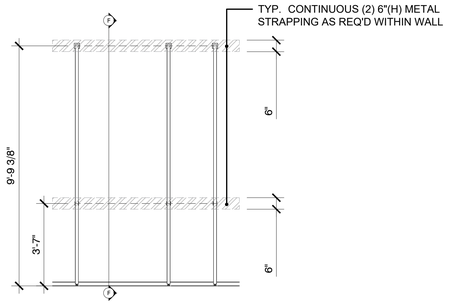


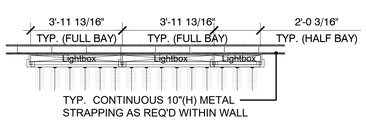
20A PERIMETER POST STRAPPING PLAN DETAIL

SCALE: 3/8" = 1'-0"



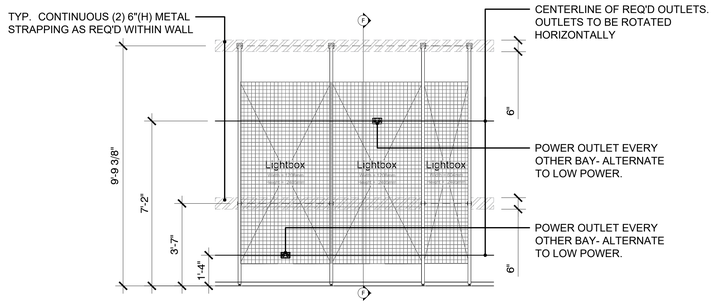
20 PERIMETER POST STRAPPING ELEVATION

SCALE: 3/8" = 1'-0"



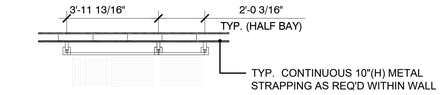
12A PERIMETER POST ACCESSORIES WALL POWER AND STRAPPING PLAN DETAIL

SCALE: 3/8" = 1'-0"



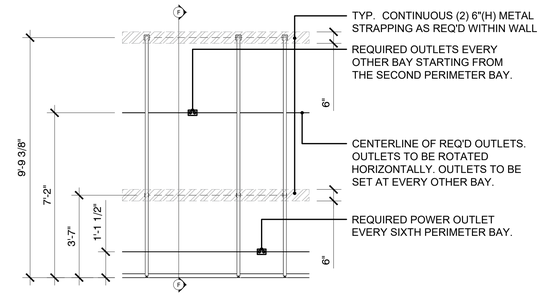
12 PERIMETER POST ACCESSORIES WALL POWER AND STRAPPING ELEVATION

SCALE: 3/8" = 1'-0"



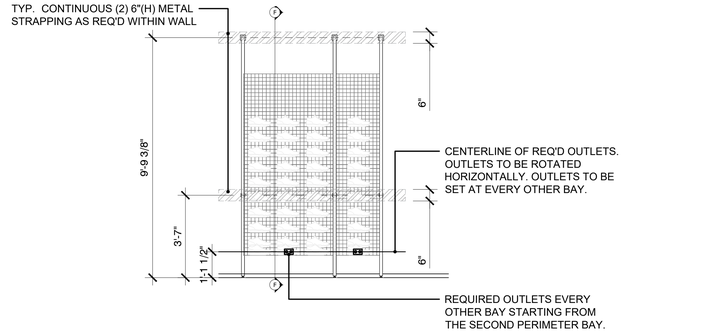
18A PERIMETER POST APPAREL WALL POWER AND STRAPPING PLAN DETAIL

SCALE: 3/8" = 1'-0"



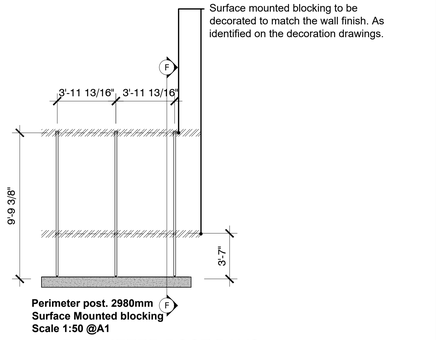
18 PERIMETER POST APPAREL WALL POWER AND STRAPPING ELEVATION

SCALE: 3/8" = 1'-0"



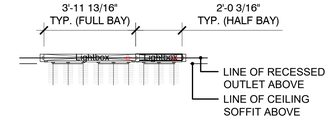
10 PERIMETER POST FOOTWEAR WALL POWER AND STRAPPING ELEVATION

SCALE: 3/8" = 1'-0"



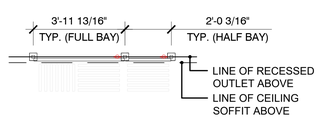
22 PERIMETER POST BAYS

SCALE AS NOTED



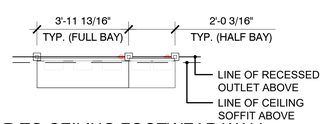
17A FLOOR TO CEILING ACCESSORIES WALL POWER AND STRAPPING PLAN DETAIL

SCALE: 3/8" = 1'-0"



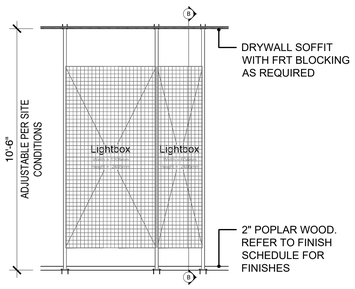
13A FLOOR TO CEILING APPAREL WALL POWER AND STRAPPING PLAN DETAIL

SCALE: 3/8" = 1'-0"



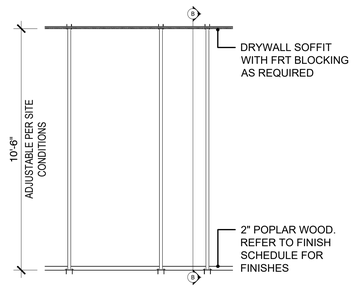
9A FLOOR TO CEILING FOOTWEAR WALL POWER AND STRAPPING PLAN DETAIL

SCALE: 3/8" = 1'-0"



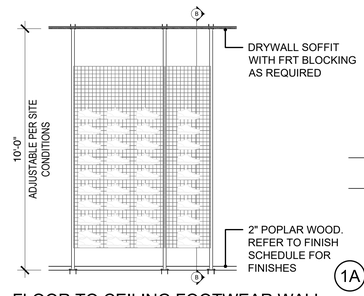
17 FLOOR TO CEILING ACCESSORIES WALL POWER AND STRAPPING ELEVATION

SCALE: 3/8" = 1'-0"



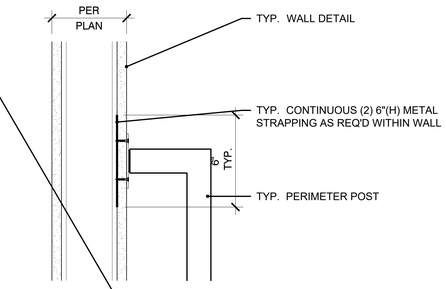
13 FLOOR TO CEILING APPAREL WALL POWER AND STRAPPING ELEVATION

SCALE: 3/8" = 1'-0"



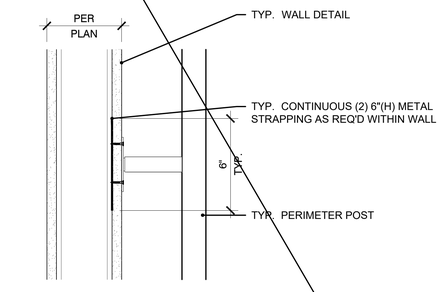
9 FLOOR TO CEILING FOOTWEAR WALL POWER AND STRAPPING ELEVATION

SCALE: 3/8" = 1'-0"



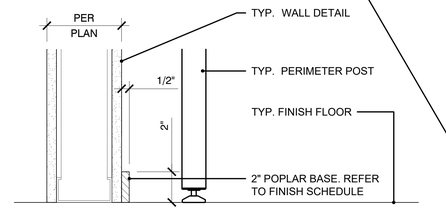
2-C PERIMETER POST UPPER STRAPPING DETAIL

SCALE: 3" = 1'-0"



2B PERIMETER POST LOWER STRAPPING DETAIL

SCALE: 3" = 1'-0"

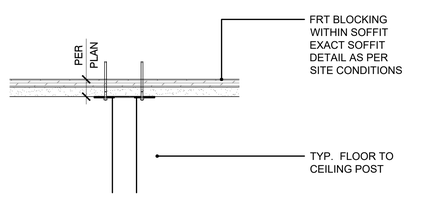


2A PERIMETER POST/WALL BASE DETAIL

SCALE: 3" = 1'-0"

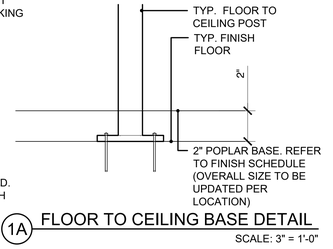
2 WALL SECTION A-A

SCALE: 3" = 1'-0"



1B FLOOR TO CEILING POST SOFFIT DETAIL

SCALE: 3" = 1'-0"



1A FLOOR TO CEILING BASE DETAIL

SCALE: 3" = 1'-0"

1 WALL SECTION B-B

SCALE: 3" = 1'-0"

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Seal:

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:

JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

TYPICAL DETAILS

Sheet #:

A10.2

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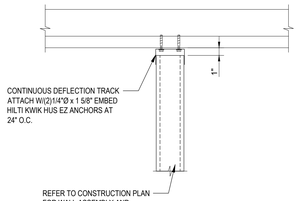
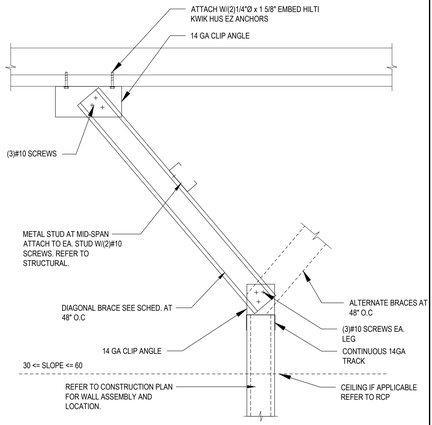
REFERENCE STRUCTURAL DRAWINGS. DETAILS SHOWN FOR REFERENCE ONLY.

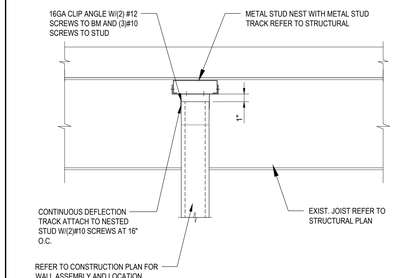


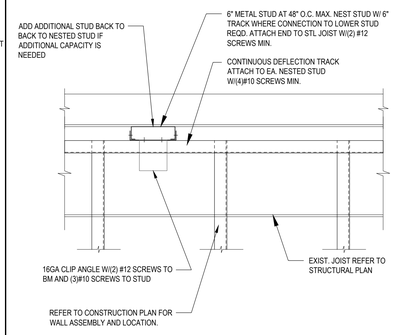
GC TO COORDINATE ALL HILTI HUS-EZ ANCHOR LOCATIONS WITH X-RAY PRIOR TO PERFORMING ANY FRAMING WORK!!



19 ATTACHMENT DETAILS @ METAL DECK (FOR REFERENCE ONLY)
SCALE: 1-1/2" = 1'-0"

REFERENCE STRUCTURAL DRAWINGS. DETAILS SHOWN FOR REFERENCE ONLY.





11 ATTACHMENT DETAILS @ STEEL BEAMS (FOR REFERENCE ONLY)
SCALE: 1-1/2" = 1'-0"

3 NOT USED
SCALE: NTS

STUD DESIGNATION	STUD DEPTH	FLANGE WIDTH	STUD GUAGE	STUD SPACING	MAXIMUM WALL HEIGHT OR MAXIMUM HEIGHT TO DIAGONAL BRACE
362S162-33	3-5/8"	1-5/8"	20	16"	17'-6"
362S162-43	3-5/8"	1-5/8"	18	16"	19'-0"
362S162-54	3-5/8"	1-5/8"	16	16"	20'-6"
600S162-33	6"	1-5/8"	20	16"	26'-6"
600S162-43	6"	1-5/8"	18	16"	28'-6"
600S162-54	6"	1-5/8"	16	16"	30'-0"
800S162-33	8"	1-5/8"	20	16"	32'-2"
800S162-43	8"	1-5/8"	18	16"	35'-4"
800S162-54	8"	1-5/8"	16	16"	38'-1"

LIGHT GAUGE FRAMING - CROSS REFERENCE GUIDE

MIL. THICKNESS - GAUGE NUMBER CROSS REFERENCE

25 GA.	18 MIL	16 GA.	54 MIL
22 GA.	27 MIL	14 GA.	68 MIL
20 GA.	33 MIL	12 GA.	97 MIL
18 GA.	43 MIL		

EXAMPLE CROSS REFERENCE

3 5/8", 18 GA. STRUCTURAL MTL STUD - 362 S 162 - 43 METAL STUD

- 362: STUD DEPTH =3.625" =3 5/8"
- S: (S=STUD) (T=TRACK)
- 162: FLANGE WIDTH =1.625" =1 5/8"
- 43: STUD THICKNESS =43 MIL (18 GA.)

LIGHT GAUGE FRAMING SCREW CONNECTIONS

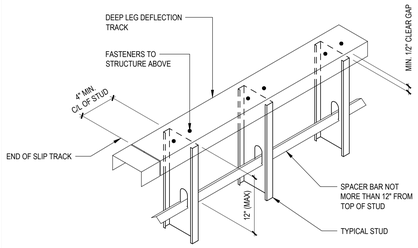
UNLESS NOTED, LIGHT GAUGE FRAMING CONNECTIONS SHALL BE MADE USING #8 SCREWS.

AT LOCATIONS WHERE SHEATHING MATERIAL IS PLACED AGAINST THE SCREW HEADS OF LIGHT GAUGE METAL FRAMING CONNECTIONS, PANCAKE HEAD SCREWS SHALL BE USED SO THAT THE SHEATHING MATERIAL REMAINS STRAIGHT AND SMOOTH.

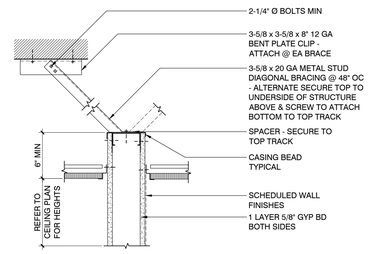
METAL STUD ICC # ESR-1166

4 STUD FRAMING SCHEDULE
SCALE: 1'-0" = 1'-0"

NOTES:
1. NESTED TRACKS (20 GAGE MINIMUM) OR SLOTTED TRACK (20 GAGE MINIMUM) TO ALLOW 1" DEFLECTION.
2. STUDS CUT 1" SHORT TO ALLOW FOR 1" DEFLECTION
3. FINISH MATERIALS (WHERE OCCUR) HELD 1" SHORT OF TOP OF TRACK TO ALLOW FOR 1" DEFLECTION. DO NOT SCREW FINISH MATERIALS INTO TOP TRACK - FASTEN INTO STUDS ONLY.
4. APPLY OR PATCH FIREPROOFING (WHERE INDICATED) AFTER INSTALLATION OF TRACK OR STRAPS
5. ACOUSTICAL SEALANT IN 1" DEFLECTION GAP AT PARTITIONS WITH ACOUSTICAL INSULATION
6. HILTI FASTENERS OR APPROVED EQUAL

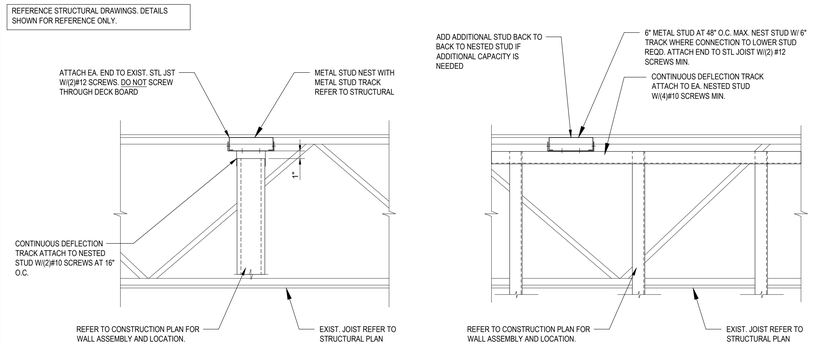


7 DEFLECTION TRACK (FOR REFERENCE ONLY)
SCALE: 3" = 1'-0"

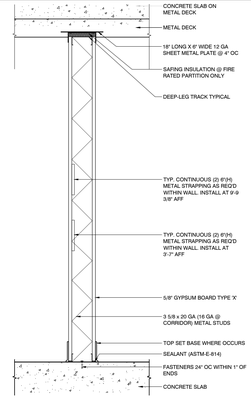


3 FULL HEIGHT PARTITION WITH BRACING (FOR REFERENCE ONLY)
SCALE: 1-1/2" = 1'-0"

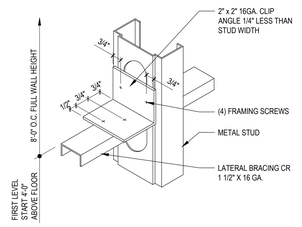
REFERENCE STRUCTURAL DRAWINGS. DETAILS SHOWN FOR REFERENCE ONLY.



18 ATTACHMENT DETAILS @ METAL JOISTS (FOR REFERENCE ONLY)
SCALE: 1-1/2" = 1'-0"

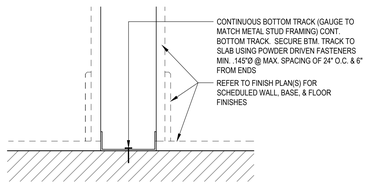


16 DEMISING WALL SECTION WITH BLOCKING
SCALE: 1" = 1'-0" (1:12)

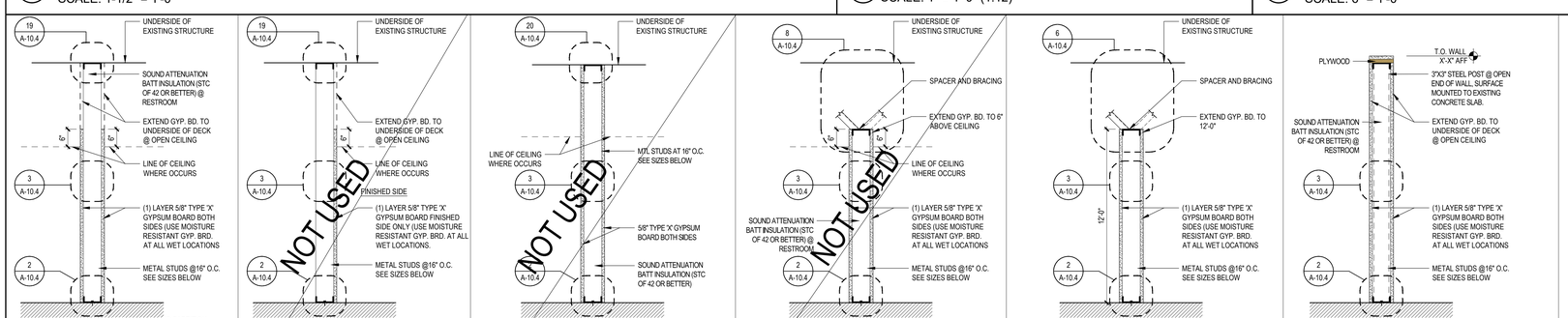


6 LATERAL BRACING SUPPORT (FOR REFERENCE ONLY)
SCALE: 6" = 1'-0"

POWDER DRIVEN FASTENERS - ICC #ESR-1663



2 TYPICAL CONNECTION @ FLOOR (FOR REFERENCE ONLY)
SCALE: 3" = 1'-0"



FULL HEIGHT, NON RATED, SINGLE STUD PARTITION, GWB BOTH SIDES
B 3-5/8" METAL STUD - GYP. BOARD 6" ABOVE CEILING OR 12'-0" WHERE NO CEILING OCCURS ON STOCKROOM SIDE / FULL HT. GYP. BD. ON HALLWAY SIDE. PROVIDE CHICKEN WIRE ABOVE 12' ON STOCKROOM SIDE
B1 6" METAL STUD
B2 3-5/8" METAL STUD (20-GAUGE MIN. FOR STRUCTURE HEIGHT UP TO 20'-6" MAX), GYP. BOARD TO UNDERSIDE OF STRUCTURE.

FULL HEIGHT, NON RATED, SINGLE STUD PARTITION, GWB ONE SIDE
C 3-5/8" METAL STUD
C1 6" METAL STUD

FULL HEIGHT, RATED #U419, SINGLE STUD PARTITION, GWB BOTH SIDES
R 3-5/8" METAL STUD
R1 6" METAL STUD
CONSTRUCT WALL PER UL #U419.INCLUDING BUT IS NOT LIMITED TO SEALING ALL VOIDS & CRACKS W/ 'UL' LISTED APPROVED FIRE SAFING SEALANT

FULL HEIGHT, NON RATED, SINGLE STUD PARTITION, GWB BOTH SIDES, WITH BRACING AT CEILING
E 3-5/8" METAL STUD - GYP. BOARD 6" ABOVE CEILING

FULL HEIGHT, NON RATED, SINGLE STUD PARTITION, GWB BOTH SIDES, WITH BRACING AT CEILING
F 3-5/8" METAL STUD 12'-0" TALL - GYP. BOARD 12'-0" TALL

PARTIAL HEIGHT, NON RATED, SINGLE STUD PARTITION, GWB BOTH SIDES
G 3-5/8" METAL STUD
BOTH SIDES EXTENDED UP TO MATCH EXISTING WALL HEIGHT (MAXIMUM OF 8'-0" HIGH).

17 WALL TYPES
SCALE: 1" = 1'-0"

GENERAL WALL TYPE NOTES:
- USE WATER RESISTANT GYPSUM BOARD AT ALL WET LOCATIONS
- SOUND BATT INSULATION WITH AN STC OF 42 OR BETTER TO BE INSTALLED IN ALL DEMISING WALLS AND RESTROOM WALLS.
- REFER TO METAL STUD SCHEDULE ON THIS SHEET FOR GAUGE SIZES UNLESS NOTED OTHERWISE.

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LAKELINE MALL

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CEDAR PARK, TX 78613

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JD SPORTS

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INDIANAPOLIS, IN 46235

TYPICAL CEILING DETAILS

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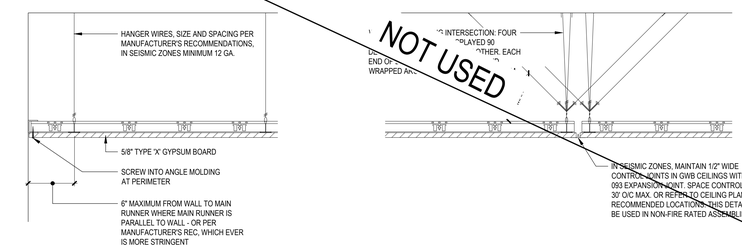
LOCATE BRACING AT 12'-0" ON CENTER EACH DIRECTION AND WITHIN 6'-0" OF PERIMETER PARTITION OR PER MANUFACTURER RECOMMENDATIONS, WHICH EVER IS MORE STRINGENT

U.S.G. DRYWALL SUSPENSION SYSTEM:
- DGLW-26, 12' X 1 1/2" X 1 1/2" HEAVY DUTY MAIN TEE
- DGLW-424, 4' X 1 1/2" X 1 1/2" CROSS TEE - INSTALL PER MANUFACTURER RECOMMENDATIONS - OR OWNER APPROVED USG OR ARMSTRONG ALTERNATE SYSTEM

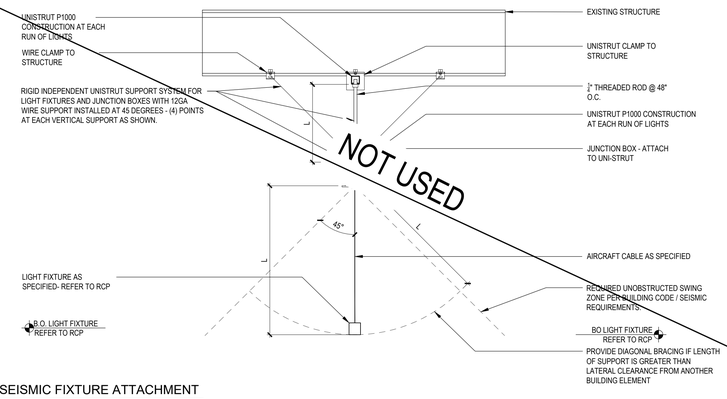
ICC-ESR-1222

LARR#: RR 25764



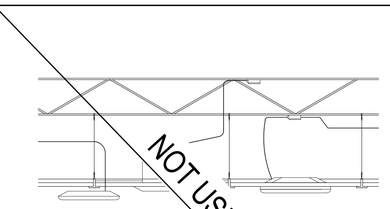
PERIMETER SUPPORT

8 SEISMIC SUSPENDED GYP. BD. CEILING DETAIL
SCALE: 1'-0" = 1'-0"

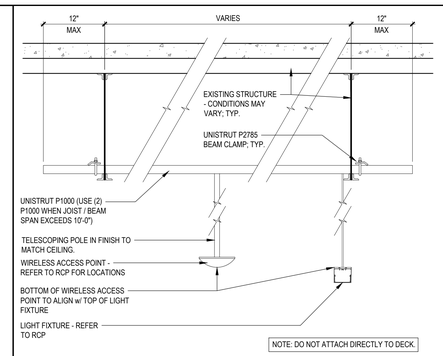


7 SEISMIC FIXTURE ATTACHMENT
SCALE: 1" = 1'-0"

19 NOT USED
SCALE: NTS

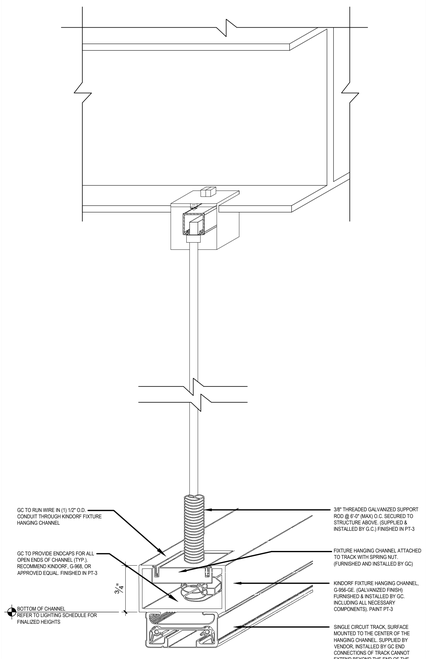


6 SEISMIC FIXTURE ATTACHMENT DETAIL
SCALE: 1'-0" = 1'-0"

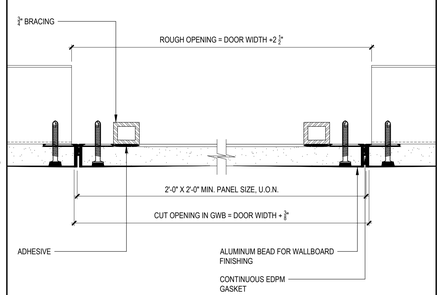


2 WIRELESS ACCESS POINT MOUNTING DETAIL
SCALE: 1" = 1'-0"

17 NOT USED
SCALE: NTS



9 TYP. CEILING TRACK DETAIL
SCALE: N.T.S.

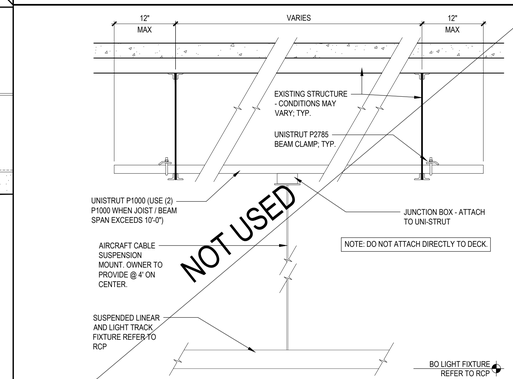


BAUCO PLUS II SINGLE LEAF WALL OR CEILING ACCESS PANEL WITH TOUCH LATCH

ROUGH OPENING DIMENSIONS ARE AN ADDITIONAL 2-1/2" TO THE DOOR PANEL WIDTH
CUT OPENING DIMENSIONS ARE AN ADDITIONAL 1/4" TO THE DOOR PANEL WIDTH

WWW.ACCESSPANELSOLUTIONS.COM (877-592-0033)

5 ACCESS PANEL AT GYP. BD. CEILINGS
SCALE: 6" = 1'-0"



1 LIGHT FIXTURE MOUNTING DETAIL
SCALE: 1" = 1'-0"

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TYPICAL CEILING DETAILS

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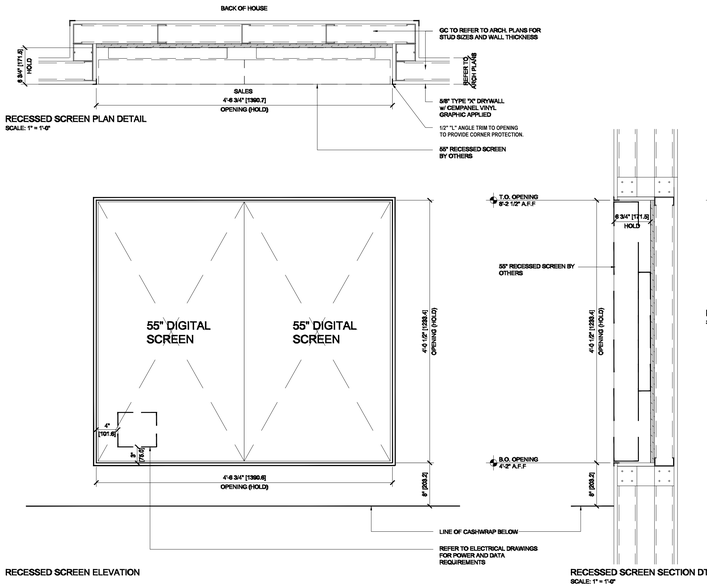
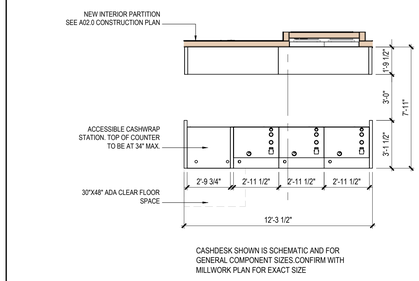
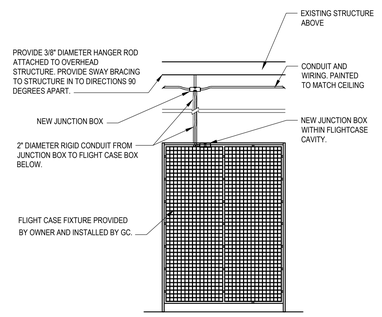


19 55" RECESSED DIGITAL SCREEN
SCALE: 1" = 1'-0"

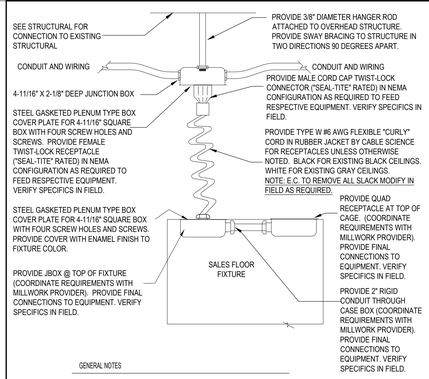
8 NOT USED
SCALE: N.T.S.



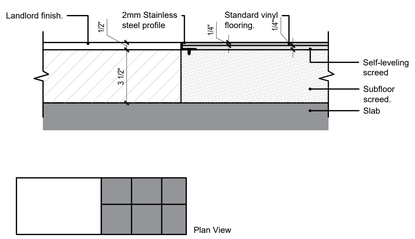
4 CASH WRAP PLAN
SCALE: 1/4" = 1'-0"



7 FLIGHTCASE POWER DETAIL
SCALE: 3/8" = 1'-0"

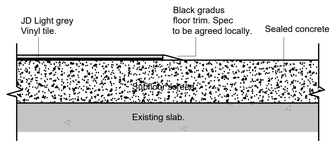


3 DROP CORD FURNITURE FEED JD MCW
SCALE: 1/4" = 1'-0"

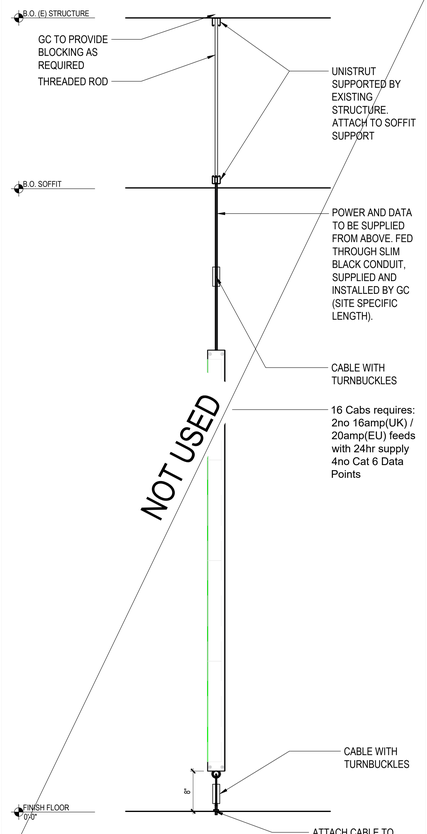


18 LANDLORD FINISH TO LUXURY VINYL TILE
SCALE: 3" = 1'-0"

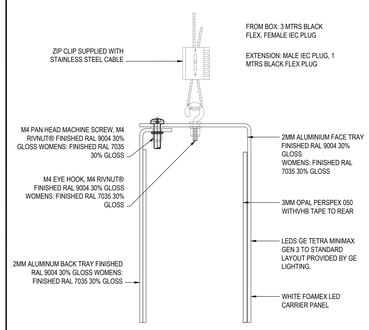
14 NOT USED
SCALE: N.T.S.



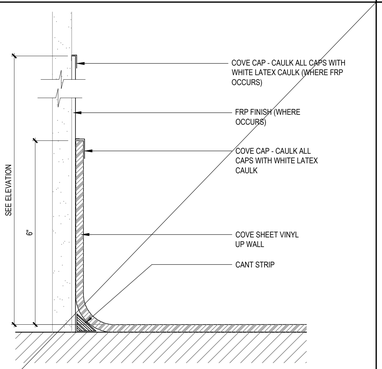
10 VINYL TILE TO BACK BOH SEALED CONCREAT
SCALE: 3" = 1'-0"



5 SUSPENDED LED DIGITAL SCREEN
SCALE: 1" = 1'-0"

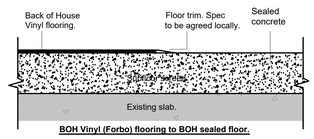


2 SUSPENDED GENDER SIGNAGE (NON-ILLUM)
SCALE: 1/4" = 1'-0"



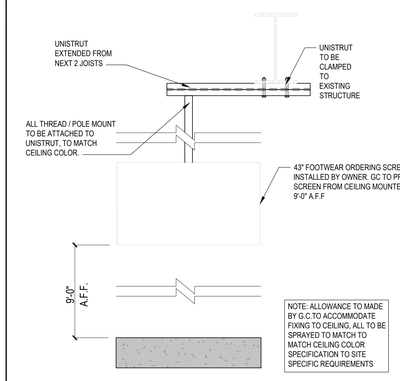
17 SHEET VINYL COVE BASE
SCALE: 6" = 1'-0"

13 NOT USED
SCALE: N.T.S.



BOH Vinyl (Forbo) flooring to BOH sealed floor.

9 BOH VINYL FLOORING TO SEALED CONCREAT
SCALE: 3" = 1'-0"



1 FOOTWEAR ORDERING SCREEN POLE MOUNT
SCALE: 3/4" = 1'-0"

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12-29-2025

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:
JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

TYPICAL
INTERIOR DETAILS

Sheet #:
A10.6

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HVAC GENERAL NOTES

1. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMIT FEES, INSPECTIONS, AND LICENSES REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
2. CONTRACTOR MUST BE REGISTERED, HAVE NECESSARY LICENSES, OBTAIN NECESSARY PERMITS, AND HAVE CONSENT FROM ALL GOVERNMENTAL AGENCIES TO CARRY OUT THE WORK OF THE CONTRACT.
3. ALL WORK AND MATERIALS SHALL BE INSTALLED IN ACCORDANCE WITH CURRENT SMACNA STANDARDS, CURRENT ASHRAE GUIDELINES, AND ALL APPLICABLE STATE AND LOCAL BUILDING CODES.
4. CONTRACTOR SHALL REMOVE AND HAUL AWAY FROM THE PREMISES ALL UNUSED MATERIALS AND DEBRIS RESULTING FROM THE PERFORMANCE OF THE CONTRACT AND SHALL BEAR THE COST OF DISPOSAL.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND PATCHING OF WALLS, ROOF, AND FLOORS, INCLUDING SAW CUTTING AND CORE DRILLING. ANY CUTTING AND DRILLING REQUIRED OF STRUCTURAL ELEMENTS THAT IS NOT SHOWN ON THE DRAWINGS SHALL BE BROUGHT TO THE OWNERS REPRESENTATIVES ATTENTION PRIOR TO PERFORMING THE WORK. CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS AND SIZES OF SUCH A CUTTING AND DRILLING FOR APPROVAL. CONTRACTOR SHALL COORDINATE ALL WORK PERFORMED BY OTHERS WITH GENERAL CONTRACTOR.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE PRIOR TO SUBMITTING THEIR BID AND TO HAVE EXAMINED AND FAMILIARIZED THEMSELVES WITH THE SITE CONDITIONS. THEY SHALL COMPARE THE DRAWINGS AND SPECIFICATIONS WITH THE RESULTS OF THEIR EXAMINATION OF THE SITE AND CONFIRM THAT ALL REQUIREMENTS FOR COMPLETE H.V.A.C. MAY BE FULFILLED. NO EXTRA PAYMENTS WILL BE ALLOWED TO THE H.V.A.C. CONTRACTOR DUE TO UNFAMILIARITY WITH THE SITE CONDITIONS.
7. CONTRACTOR SHALL SUBMIT BID BASED ON THE DRAWINGS, AND PROVIDE ALTERNATE BID FOR VALUE-ENGINEERED COST SAVINGS. CONTRACTOR SHALL EVALUATE DUCT CONSTRUCTION FOR AIR DISTRIBUTION MAIN TRUNKS AND PROVIDE VALUE-ENGINEERED ALTERNATE FOR COST SAVINGS TO THE OWNER.
8. THE TENANT RESERVES THE RIGHT TO ACCEPT AND/OR REJECT ANY OR ALL BIDS.
9. TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE MATERIALS BEFORE, DURING, AND AFTER INSTALLATION. IN THE EVENT OF DAMAGE, IMMEDIATELY REPAIR ALL DAMAGED AND DEFECTIVE WORK TO THE APPROVAL OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
10. AS BUILT DRAWINGS SHOWING DIMENSIONS AND LOCATIONS OF PIPES, DUCTS, AND EQUIPMENT SHALL BE SUBMITTED TO THE ARCHITECT, ENGINEER, TENANT, AND OWNER AT CONCLUSION OF CONSTRUCTION.
11. THE ARCHITECT/ENGINEER SHALL HAVE THE RIGHT TO ACCEPT AND/OR REJECT MATERIALS, EQUIPMENT, AND/OR WORKMANSHIP, AND SHALL APPROVE ONLY WHEN THE CONTRACTOR HAS COMPLIED WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
12. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ARCHITECT/ENGINEER FOR APPROVAL PRIOR TO ORDERING OR INSTALLING EQUIPMENT OR MATERIALS. SHOP DRAWINGS SHALL CLEARLY IDENTIFY SUBSTITUTIONS ON EQUIPMENT AND MATERIALS, AND SHALL CLEARLY IDENTIFY ALL PERTINENT DATA TO SUBSTANTIATE THE EQUALITY OF THE PRODUCT. THIS CONTRACTOR SHALL SUBMIT TO-SCALE DUCTWORK SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
13. WORKMANSHIP SHALL BE OF THE BEST QUALITY AND ONLY COMPETENT MECHANICS, SKILLED IN THEIR RESPECTIVE TRADES, SHALL BE EMPLOYED.
14. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THEIR WORK WITH ALL OTHER TRADES. THIS INCLUDES COORDINATING THE LOCATION AND SIZE OF ALL OPENINGS, LOCATIONS OF EQUIPMENT, PADS, AND CHANGES IN ELEVATION OF DUCTWORK, PIPING, AND OTHER EQUIPMENT.
15. ALL MECHANICAL TRIMFINISHES SHALL BE COLORED AS PER ARCHITECT REQUIREMENTS. CONTRACTOR SHALL VERIFY COLOR REQUIREMENTS WITH THE ARCHITECT PRIOR TO ORDERING AIR INLETS/OUTLETS, WALL LOUVERS, AND THERMOSTATS.
16. COORDINATE THE LOCATIONS OF ALL CEILING DIFFUSERS, REGISTERS, AND GRILLES WITH THE ARCHITECTURAL REFLECTED CEILING PLAN, ELECTRICAL LIGHTING LAYOUT, AND ARCHITECTURAL ROOM ELEVATIONS.
17. FIELD-BUILT SLEEPERS OR PLATFORMS FOR ROOF-MOUNTED EQUIPMENT, ROOF PENETRATIONS, CUTTING, AND PATCHING BY GENERAL CONTRACTOR.
18. LINE VOLTAGE WIRING, CONDUIT, DISCONNECT SWITCHES, AND FINAL TERMINATIONS BY ELECTRICAL CONTRACTOR. LOW VOLTAGE WIRING, CONDUIT, AND FINAL TERMINATIONS BY MECHANICAL CONTRACTOR.
19. ALL LINE VOLTAGE CONTROLS INCLUDING STARTERS, RELAYS, CONTACTORS, TRANSFORMERS, ETC. SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
20. CONDENSATE DRAIN AND GAS PIPING SHALL BE BY PLUMBING CONTRACTOR.
21. CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS AND CONTROL DEVICES FOR THE COMPLETE INSTALLATIONS OF AN AUTOMATIC TEMPERATURE CONTROL SYSTEM.
22. CONTRACTOR SHALL INSTALL ROOFTOP EQUIPMENT AT A MINIMUM OF 10 FEET FROM ANY EDGE OF THE BUILDING WHEN PARAPET WALLS ARE LOWER THAN 42" ABOVE ROOF DECK. WHERE SUCH INSTALLATION IS NOT POSSIBLE, CONTRACTOR SHALL PROVIDE A 42" HIGH SAFETY RAIL.
23. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL FITTINGS, TRANSITIONS, DAMPERS, VALVES, AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
24. ALL NEW H.V.A.C. EQUIPMENT, DUCTWORK, PIPING, VALVES, AND CONTROL COMPONENTS SHALL BE PLACED AND LABELED WITH A PERMANENT LAMINATED PLASTIC LABEL. SUBMIT LABELING TO ENGINEER FOR APPROVAL AS A FORMAL SUBMITTAL.
25. CONNECT MAIN DUCT TO AIR CONDITIONING UNIT WITH WEATHERPROOF FLEXIBLE CONNECTION. PROVIDE SUN SHIELD OVER ENTIRE FLEXIBLE CONNECTION IF EXPOSED TO WEATHER. FLEXIBLE CONNECTIONS SHALL BE 12" IN LENGTH.
26. CONTRACTOR SHALL FURNISH TO TENANT AND PLACE INTO STORAGE FOR TENANT ONE COMPLETE SET OF REPLACEMENT FILTERS AND DRIVE BELTS FOR ALL NEW H.V.A.C. EQUIPMENT ON THIS PROJECT.
27. FURNISH AND INSTALL FIRE, SMOKE, OR COMBINATION FIRE/SMOKE DAMPERS WHERE SHOWN ON PLANS OR AS REQUIRED FOR A COMPLETE INSTALLATION. CONTRACTOR SHALL COORDINATE WITH FIRE-RATED CEILING AREAS AND WALLS AS INDICATED ON ARCHITECTURAL DRAWINGS AND LOCAL CODE REQUIREMENTS. THIS NOTE SHALL TAKE PRECEDENCE OVER ANY OMISSIONS ON THE DRAWINGS.
28. CONTRACTOR SHALL FURNISH AND INSTALL DUCT ACCESS DOORS AND CEILING ACCESS PANELS AT LOCATIONS AS NECESSARY TO SERVICE DAMPERS TO PROVIDE MAINTENANCE FOR EQUIPMENT. ALL CEILING ACCESS PANEL LOCATIONS SHALL BE VERIFIED WITH THE ARCHITECT PRIOR TO INSTALLATION.
29. CONTRACTOR SHALL PROVIDE & INSTALL DUCT MOUNTED SMOKE DETECTORS IN AIR DISTRIBUTION SYSTEMS WHERE AIRFLOW IS GREATER THAN 2000 CFM. MECHANICAL CONTRACTOR SHALL WIRE DUCT SMOKE DETECTOR TO SHUT DOWN FAN, AND ELECTRICALFIRE ALARM CONTRACTOR SHALL WIRE IT TO THE FIRE ALARM SYSTEM FOR SUPERVISION AND SHUTDOWN.
30. CONTRACTOR SHALL FURNISH AND INSTALL SUPPORTS, HANGERS, UPPER & LOWER ATTACHMENTS, AND ANCHORS REQUIRED TO INSTALL ALL MATERIALS AND EQUIPMENT FURNISHED AND INSTALLED UNDER THIS CONTRACT. DUCTWORK AND PIPING SHALL NOT BE SUPPORTED FROM THE ROOF DECK. UPPER ATTACHMENTS FOR HANGING DUCT SHALL BE SUPPORTED FROM BEAMS, JOISTS OR SUPPLEMENTARY STRUCTURAL MEMBERS PROVIDED BY MECHANICAL CONTRACTOR.
31. PROVIDE TURNING VANES AT ALL MITERED ELBOWS, OPPOSED BLADE BALANCING DAMPERS WITH LOCKING QUADRANTS AT BRANCH DUCTS, VOLUME DAMPERS, SPLITTER DAMPERS, AND ANY OTHER APPLICABLE DEVICES NECESSARY FOR MINIMUM DUCT RESISTANCE AND PROPER AIR BALANCING. ALL DAMPERS OR SPLITTERS SHALL BE SUFFICIENTLY STIFFENED TO PREVENT NOISE OR VIBRATION AND SHALL BE FITTED WITH AN ACCESSIBLY-LOCATED ADJUSTER.
32. CONTRACTOR SHALL FURNISH AND INSTALL DAMPERS, LINKAGES, AND ACTUATORS REQUIRED FOR AIR FLOW CONTROL SYSTEM. DAMPERS SHALL BE OPPOSED BLADE WITH RUBBER GASKETS. ACTUATORS SHALL BE "BELIMO" NO-LINKAGE TYPE OR "HONEYWELL" WITH LINKAGE. ACTUATOR MOTORS SHALL BE 24 VOLT WITH SPRING RETURN AND MANUAL OVERRIDE FOR EMERGENCY.
33. ALL DUCT SIZES ARE CLEAR INSIDE DIMENSIONS. DUCTWORK SHALL BE INSULATED OR LINED AS SHOWN ON DRAWINGS. ALL DUCTWORK EXPOSED ON ROOF SHALL BE INTERNALLY LINED UNLESS OTHERWISE INDICATED OR SPECIFIED.
34. ALL SUPPLY AND RETURN AIR DUCTWORK CONCEALED ABOVE CEILINGS SHALL BE INSULATED AND WRAPPED WITH TWO INCH FIBERGLASS INSULATION WITH FOIL FACED VAPOR BARRIER. REFRIGERANT SUCTION PIPING SHALL BE INSULATED WITH ARMAFLEX AND JACKETED WHEN EXPOSED TO THE OUTDOORS. CONDENSATE DRAIN PIPING SHALL BE INSULATED WITH ARMAFLEX.
35. CONTRACTOR TO PROVIDE 1" ACOUSTICAL FIBERGLASS DUCT LINER FOR APPROXIMATELY 10'-0" FROM UNITS ON BOTH SUPPLY AND RETURN DUCTS.
36. ROUND AND RECTANGULAR DUCTWORK ARE INTERCHANGEABLE TO AVOID OBSTRUCTIONS IF CROSS-SECTIONAL AREAS ARE EQUIVALENT. CONTRACTOR IS TO VERIFY THE EXACT AVAILABLE CEILING SPACE AND INTERCHANGE THE DUCT SIZE TO FIT THE CEILING SPACE WITHOUT ADDITIONAL COST.
37. INSTALL VOLUME CONTROL DAMPERS AT EACH SUPPLY DIFFUSER AND WHERE NECESSARY TO CONTROL AIR FLOW IN THE DUCT SYSTEMS.
38. EXHAUST TERMINATIONS SHALL BE MINIMUM 10'-0" AWAY FROM OR 3'-0" ABOVE ANY FRESH AIR INTAKE, OPERABLE WINDOWS, AND DOORS, AND MINIMUM 10'-0" ABOVE GRADE.
39. PROVIDE BACKDRAFT DAMPER FOR ALL EXHAUST AIR INLETS UNLESS OTHERWISE NOTED PER CODE.
40. PROVIDE ALL FRESH AIR INTAKES AND EXHAUST OUTLETS WITH HOOD WITH 1/4" GALVANIZED MESH SCREENS.
41. ALL CEILING DIFFUSERS ARE 4-WAY UNLESS OTHERWISE NOTED. DIFFUSERS AND REGISTERS SHALL BE TITUS, KRUEGER, ADP, METALAIRE, ANEMOSTAT OR EQUAL.
42. ALL EXPOSED MATERIALS WITHIN A RETURN AIR PLENUM SHALL BE NON-COMBUSTIBLE OR SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84.
43. CONTRACTOR IS RESPONSIBLE FOR SIZING REFRIGERANT LINES PER MANUFACTURER'S RECOMMENDATIONS, FIELD MEASURED TOTAL EQUIVALENT LENGTHS, AND VERTICAL LIFTS, AND PROVIDE ALL NECESSARY COMPONENTS.
44. ALL MATERIALS AND EQUIPMENT PROVIDED AND/OR INSTALLED UNDER THIS CONTRACTOR SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF BENEFICIAL OCCUPANCY. ANY DEFECTS IN MATERIALS AND/OR WORKMANSHIP OCCURRING DURING TIME PERIOD SHALL BE REPAIRED OR REPLACED BY THIS CONTRACTOR AT NO COST TO THE OWNER. WARRANTY FOR COMPRESSORS SHALL BE (5) YEARS, AND WARRANTY FOR HEAT EXCHANGERS SHALL BE (10) YEARS.
45. CONTRACTOR SHALL SUBMIT A COMPLETE BALANCE REPORT FOR APPROVAL. THE REPORT SHALL INCLUDE THE REQUIREMENTS DESCRIBED IN THE TEST AND BALANCE SPECIFICATION SECTION. CONTRACTOR SHALL FURNISH SEPARATE BALANCE REPORTS FOR GENERAL H.V.A.C. SYSTEMS AND KITCHEN EXHAUST/MAKEUP AIR SYSTEMS, IF APPLICABLE. THERE SHOULD BE NO OUTSTANDING ITEMS ON THE REPORTS PRIOR TO CITY FINAL INSPECTION.

DESIGN CONDITIONS

LOCATION: CEDAR PARK, TX

OUTSIDE: SUMMER: 99.5°F DB / 76.7°F WB
WINTER: 27.6°F DB

INSIDE: SUMMER: 74°F (MAXIMUM) 50% RH.
WINTER: 70°F (MINIMUM).

TEMPERATURE SETTINGS:

OCCUPIED COOLING
74°F 7:30AM - 10:00PM MONDAY-SATURDAY
8:00AM - 8:00PM SUNDAY
UNOCCUPIED COOLING
84°F 10:00PM - 7:30AM MONDAY-SATURDAY
8:00PM - 8:00AM SUNDAY
OCCUPIED HEATING
70°F 7:30AM - 10:00PM MONDAY-SATURDAY
8:00AM - 8:00PM SUNDAY
UNOCCUPIED HEATING
60°F 10:00PM - 7:30AM MONDAY-SATURDAY
8:00PM - 8:00AM SUNDAY

SHEET INDEX

DRAWING NUMBER	DRAWING TITLE
M0.1	MECHANICAL LEGEND, NOTES, AND ABBREVIATIONS
M0.2	MECHANICAL SCHEDULES
M0.3	MECHANICAL SPECIFICATIONS
M2.0	MECHANICAL DEMOLITION PLAN
M2.1	MECHANICAL FLOOR PLAN
M6.1	MECHANICAL DETAILS

LEGEND

SYMBOL & ABBREVIATION	DESCRIPTION
DET	DETAIL
DH	DUCT HEATER
DISCH	DISCHARGE
DMPR	DAMPER
DP	DEW POINT
DPS	DIFFERENTIAL PRESSURE SENSOR
DR	DRAIN
DUC	DOOR UNDERCUT
DWG	DRAWING
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECON	ECONOMIZER
ECU	EVAPORATIVE COOLING UNIT
EER	ENERGY ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
(E)	EXISTING
EFF	EFFICIENCY
EQUIP	EQUIPMENT
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EH	ELECTRIC HEATER
EVAP	EVAPORATIVE COOLER
EWT	ENTERING WATER TEMPERATURE
EXCH	EXCHANGER
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FC	FAN COIL UNIT
FD	FIRE DAMPER
FLEX	FLEXIBLE
FLR	FLOOR
FL SW	FLOW SWITCH
FLTR	FILTER
FPM	FEET PER MINUTE
FPT	FAN POWERED TERMINAL
FSD	FIRE SMOKE DAMPER
FSS	FLOW SENSING SWITCH
FURN, FAU	FURNACE AIR UNIT
GA	GAGE/GAUGE
GC	GENERAL CONTRACTOR
HP	HEAT PUMP
HSTAT	HUMIDISTAT
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
HW	HOT WATER
HWP	HOT WATER PUMP
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HWT	HOT WATER TANK
HZ	FREQUENCY
ID	INSIDE DIAMETER
IN WC	INCHES, WATER COLUMN
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LVR	LOUVER
LWT	LEAVING WATER TEMPERATURE
MCA	MINIMUM CIRCUIT AMPACITY
MFR	MANUFACTURER
MECH	MECHANICAL
MOCP	MAXIMUM OVERCURRENT PROTECTION
(N)	NEW
NA	NOT APPLICABLE
NC	NOISE CRITERIA, NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA/OSA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
OD	OUTSIDE DIAMETER
P	PUMP
PD	PRESSURE DROP
PH	PHASE
PPM	PARTS PER MILLION
PREFAB	PRE-FABRICATED
PRV	PRESSURE REDUCING VALVE, POWER ROOF VENTILATOR
PSI	POUNDS PER SQUARE INCH
PTAC	PACKAGED TERMINAL AIR CONDITIONER
R	THERMAL RESISTANCE
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RM	ROOM
RPM	REVOLUTION PER MINUTE
RTU	ROOF TOP UNIT
REV	REVOLUTION, REVISION
RV	RELIEF VALVE
S/S	STAINLESS STEEL
SENS	SENSIBLE
SF	SAFETY FACTOR
SMK	SMOKE
STN	STRAINER
TCV	TEMPERATURE CONTROL VALVE
TDV	TRIPLE DUTY VALVE
TEMP	TEMPERATURE
TONS	TONS OF REFRIGERATION
TSTAT	THERMOSTAT
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLTS
VAV	VARIABLE AIR VOLUME
VSC	VARIABLE SPEED CONTROLLER
VVT	VARIABLE VOLUME TERMINAL
WB	WET BULB TEMPERATURE
WT	WEIGHT

LEGEND

SYMBOL & ABBREVIATION	DESCRIPTION
SA/SUP	SUPPLY AIR (RISE/DROP)
RA/RET	RETURN AIR DUCT (RISE/DROP)
EA/EXH	EXHAUST AIR DUCT (RISE/DROP)
CD/SR	CEILING DIFFUSER/SUPPLY REGISTER (ARROWHEAD REPRESENTS NUMBER OF THROW) (4-WAY TYPICAL IF NO ARROWS)
RR/RG	RETURN REGISTER/GRILLE
ER/EG	EXHAUST REGISTER/GRILLE
	RECTANGULAR DUCT ELBOW WITH TURNING VANES
FC	FLEXIBLE CONNECTION
MVD	MANUAL VOLUME DAMPER
FD	FIRE DAMPER
(L)	DUCT LINING (1" THICK UNLESS OTHERWISE NOTED)
	SINGLE LINE DUCT BRANCH TAKE-OFF
	DUCT TRANSITION (RECTANGULAR TO ROUND)
FLEX	FLEXIBLE DUCT
T-STAT	PROGRAMABLE THERMOSTAT
TS	TEMPERATURE SENSOR
HS	HUMIDITY SENSOR
CO_2	CO_2 SENSOR
SD	DUCT SMOKE DETECTOR
FD	FIRE DAMPER
FSD	COMBINATION FIRE/SMOKE DAMPER
ZD	ZONE DAMPER
CD	CONDENSATE DRAIN
DIA.	DIAMETER
DL	DOOR LOUVER
UC	DOOR UNDERCUT (3/4" MINIMUM)
POC	POINT OF CONNECTION
	FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR.
	FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
	FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.

SD-1 — (SD-SUPPLY DIFFUSER, RD-RETURN DIFFUSER, E-EXHAUST)
100 — AIR QUANTITY IN CFM

AC-1 — MECHANICAL EQUIPMENT DESIGNATION / DESIGNATED NUMBER

A/C , AC, ACU	AIR CONDITIONING UNIT
ADD	ADDITION
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AFS	AIR FLOW SENSOR
AHU	AIR HANDLER UNIT
ALT	ALTERNATE
AMB	AMBIENT
AMP	AMPERE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AP	ACCESS PANEL
AS	AIR SEPARATOR
AV	AIR VENT
BAPR	BAROMETRIC PRESSURE
BARO	BAROMETER
BBD	BOILER BLOW DOWN
BCV	BUTTERFLY CHECK VALVE
BDD	BACK DRAFT DAMPER
BFP	BACK FLOW PREVENTER
BFV	BACK FLOW VALVE
BHP	BRAKE HORSEPOWER
BLDG	BUILDING
BLR	BOILER
BP	BOILING POINT
BTU	BRITISH THERMAL UNIT
BV	BALL VALVE
BYP	BY PASS
CA	COMPRESSED AIR
CAV	CONSTANT AIR VOLUME
CB	CIRCUIT BREAKER
C/C,CC	COOLING COIL
CD	CONDENSATE DRAIN
CLG.	CEILING
CO2	CARBON DIOXIDE
CONN.	CONNECT/CONNECTION
CONT.	CONTINUATION
CONTR	CONTRACTOR
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CHKV	CHECK VALVE
CHWP	CHILLED WATER PUMP
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CKT	CIRCUIT
CLG	CEILING
CO	CARBON MONOXIDE, CLEAN-OUT
CO2	CARBON DIOXIDE
COEFF	COEFFICIENT
COL	COLUMN
COND	CONDENSER, CONDENSING
CONT	CONTINUOUS
COP	COEFFICIENT OF PERFORMANCE (HEATING)
CCP	COOLING COIL PUMP
CP	CONDENSATE PUMP
CT	COOLING TOWER
CTR	COOLING TOWER RETURN
CTS	COOLING TOWER SUPPLY
CU	CONDENSING UNIT
CV	CONTROL VALVE
CW	COLD WATER
CWP	COLD WATER PUMP
CWR	COLD WATER RETURN
CWS	COLD WATER SUPPLY
dB	DECIBEL
DB	DRY BULB TEMPERATURE
DCV	DEMAND CONTROLLED VENTILATION
DDC	DIRECT DIGITAL CONTROL
DEG	DEGREE
DEPT	DEPARTMENT

mcgarchitecture.com
CLEVELAND DENVER GLENDORA IRVINE ORLANDO PHOENIX SAN FRANCISCO
Seal:
ACIES ENGINEERING
400 N. McCarthy Blvd, ste 250
Milpitas, CA 95035
ph: (408) 522-5255
fx: (408) 522-5260
info@acies.net

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TEXAS REGISTRATION #: F-6950
EXPIRATION: 08/31/2025
STATE OF TEXAS KEITH HUEN 153861 LICENSED PROFESSIONAL ENGINEER
EXPIRATION: 06/30/2026

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:
JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

MECHANICAL
LEGEND, NOTES
& ABBREVIATION

Sheet #:
M0.1

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AIR DISTRIBUTION SCHEDULE

DIFFUSER TAG	TYPE	MINIMUM AIR FLOW	MAXIMUM AIR FLOW	NECK SIZE	FACE SIZE	MOUNTING	BORDER TYPE	MANUFACTURER / MODEL	DEFLECTION	REMARKS
SD-1	PERFORATED SUPPLY DIFFUSER	0	175	6"Ø	24"X24"	CEILING	SURFACE MOUNT	TITUS PCS	-	1,4,5
SD-2	PERFORATED SUPPLY DIFFUSER	0	175	6"Ø	12"X12"	CEILING	SURFACE MOUNT	TITUS PCS	-	1,4,5
SG-1	SUPPLY GRILLE	0	250	8"x6"	10"X8"	DUCT	SURFACE MOUNT	TITUS 300RS	0°	1-3
SG-2	SUPPLY GRILLE	0	460	12"x8"	14"X10"	DUCT	SURFACE MOUNT	TITUS 300RS	0°	1-3
TG-1	TRANSFER GRILLE	-	-	12"x8"	14"X10"	WALL	SURFACE MOUNT	TITUS 300RL	-	1
TG-2	TRANSFER GRILLE	-	-	36"x28"	38"X30"	WALL	SURFACE MOUNT	TITUS 300RL	-	1

1. COORDINATE FINISH WITH ARCHITECT.
2. DOUBLE DEFLECTION GRILLE.
3. MANUAL VOLUME DAMPER.
4. OPPOSED BLADE DAMPER.
5. PROVIDE RAPID MOUNT IN HARD LID CEILING AREAS.

EXISTING VAV BOX SCHEDULE

EQUIP. TAG	MANUFACTURER & MODEL	SERVICE	LOCATION	AIRFLOW (CFM)		VAV SIZE	REHEAT COIL	REMARKS
				MAXIMUM	MINIMUM		MAXIMUM HEATING AIRFLOW (CFM)	
(E)VAV-1	TITUS DMFV-04	SALES AREA	CEILING	1275	-	14"Ø	-	1-4
(E)VAV-2	TITUS DESV-14	STOCK AREA	CEILING	2150	-	14"Ø	-	1-4
(E)VAV-3	TITUS DESV-16	SALES AREA/ FITTING ROOM/ HALLWAY/ STOCK AREA	CEILING	3380	1130	16"Ø	1130	1-4

1. EXISTING VAV BOX TO REMAIN AND REUSE. CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION AND SPECIFICATION OF THE UNIT. CONTRACTOR SHALL REFURBISH THE VAV UNIT IN 100% FULLY WORKING CONDITION. REPAIR OR REPLACE AS NEW IF UNSALVAGEABLE. CONTRACTOR SHALL REPLACE ALL CONTROLS, THERMOSTATS, AND ACTUATORS WITH NEW TO MATCH LATEST MALL STANDARD
2. ADJUST THE AIRFLOW OF THE EXISTING VAV BOX AS INDICATED.
3. USE ONLY LANDLORD-APPROVED BAS CONTRACTOR TO FURNISH AND INSTALL VAV BOX CONTROLLERS, THERMOSTATS, ZONE SENSORS, AND ALL ASSOCIATED CONTROL WIRING.
4. PROVIDE ALL REQUIRED ACCESSORIES PER MALL STANDARD. COORDINATE WITH MALL ENGINEER.

EXHAUST FAN SCHEDULE

EQUIP. TAG	MANUFACTURER & MODEL	SERVICE	LOCATION	AIR FLOW (CFM)	TOTAL STATIC PRESSURE (in H2O)	FAN SPEED (RPM)	MCA (A)	MOCP (A)	SONES	ELECTRICAL SERVICE (V/PH/Hz)	OPERATING WEIGHT (LBS)	REMARKS
EF-1	GREENHECK SP-A200	RESTROOM	CEILING	70	0.5	900	0.6	15	4.0	115/1/60	30	1-5

1. CEILING MOUNTED EXHAUST FAN.
2. PROVIDE BACKDRAFT DAMPER AND SCREEN.
3. SPEED CONTROLLER.
4. DISCONNECT SWITCH TO BE CFURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
5. INTERLOCK WITH LIGHT SWITCH.

CHECKLIST FOR EXISTING SYSTEM

1. CHEMICALLY CLEAN CONDENSER COILS
2. LUBE ALL BEARINGS AND LINKAGES AS REQUIRED
3. CHECK ALL MOTORS, SHEAVE AND DRIVES. REPLACE IF REQUIRED.
4. REPLACE ALL FAN BELTS
5. CHECK OIL LEVELS WHERE POSSIBLE
6. CHECK REFRIGERANT CHARGES.
7. VISUALLY INSPECT ALL SYSTEMS FOR REFRIGERANT, OIL OR WATER LEAKS
8. CHECK OPERATING PRESSURES AND TEMPERATURES ON COOLING EQUIPMENT.
9. CHECK CONTROL SETTINGS
10. CHECK OPERATION OF SAFETY CONTROLS
11. CHECK GENERAL OPERATION OF EQUIPMENT
12. CHECK AIR COOLED CONDENSERS FOR DIRT
13. CHECK ALL SEALS AND PACKING
14. CHECK STARTER CONTACT POINTS
15. CHECK AND TIGHTEN ELECTRICAL CONNECTIONS
16. CHECK OPERATION OF CYLINDER UNLOADERS
17. CHECK SOLENOID AND EXPANSION VALVES FOR CORRECT OPERATION
18. CHECK ALL DAMPERS FOR PROPER POSITION AND OPERATION.
19. CALIBRATE CONTROLS AS REQUIRED
20. CHECK VOLTAGE AND AMPERAGE OF MAIN EQUIPMENT
21. CHANGE FILTERS. FILTERS MUST BE PLEATED AND MINIMUM MERV 8 RATING
22. CHECK CONDENSATE DRAIN CONNECTION, DRAIN PAN & PROPER SLOPING 1/ 4" PER FOOT. DECLOG IF NECESSARY. ADJUSTING SLOPING AS REQUIRED.
23. CHECK LOW AMBIENT CONTROLS AND OPERATIONS
24. CHECK FANS AND BLOWERS FOR PROPER POSITION AND SET SCREW TIGHTNESS
25. INSPECT, REPAIR OR REPLACE OUTDOOR DUCTS AS NEEDED.
26. INSPECT AND REPAIR FILTER RACK TO PERMIT REMOVAL OF FILTER WITHOUT SPECIAL TOOLS. THEN REPLACE ALL NEW AIR FILTERS PRIOR TO OCCUPANCY.
27. INSPECT ALL OUTDOOR DAMPERS & ECONOMIZER DAMPERS, APPLY SILICON GREASE TO LOOSEN UP THE JOINTS & REBALANCE DAMPERS AS REQUIRED.
28. INSPECT, CLEAN AND REPAIR CONDENSATE DRAIN PAN, CONNECTION, PIPE & SUPPORTS. DECLOG ALL PIPING FOR PROPER DRAIN. ENSURE CONDENSATE PIPING IS PROPERLY SLOPING AT 1/ 4" PER FOOT BY ADJUSTING THE EXISTING PIPE SUPPORTS. PROVIDE SUPPORTS AS NECESSARY FOR PROPER DRAINING.
29. REPORT ALL DIAGNOSTIC & TROUBLE SHOOTING FINDINGS TO GENERAL CONTRACTOR/MANAGER, IF EXISTING ROOFTOP UNITS, OUTDOOR CONDENSER UNITS & INDOOR FAN COIL UNITS FOUND NOT MEETING HEATING/COOLING SUPPLY AIR TEMPERATURE, CONTRACTOR SHALL PROVIDE IMMEDIATE PROPOSED SERVICE SOLUTIONS & MITIGATIONS.

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CLEVELAND
DENVER
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Seal:

ACIES ENGINEERING
400 N. McCarthy Blvd, ste 250
Milpitas, CA 95035
ph: (408) 522-5255
fx: (408) 522-5260
info@acies.net

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TEXAS REGISTRATION #: F-6950
EXPIRATION: 08/31/2025

STATE OF TEXAS
KEITH HUEN
153861
LICENSED
PROFESSIONAL ENGINEER
EXPIRATION: 06/30/2026

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:

JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

MECHANICAL
SCHEDULES

Sheet #:

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MECHANICAL SPECIFICATION

SECTION 1500 - HEATING, VENTILATION AND AIR CONDITIONING

1.00 - GENERAL

1.01 DESCRIPTION OF WORK

FURNISH AND INSTALL COMPLETE AND OPERATIONAL HVAC SYSTEM AS SHOWN ON THE DRAWING AND SPECIFIED HEREIN. WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

A. PACKAGED HEATING & COOLING ROOFTOP UNITS.

B. POWER VENTILATORS.

C. AIR DISTRIBUTION METAL DUCTS.

D. HYDRONIC PIPING.

E. HANGERS AND SUPPORTS FOR DUCTWORK, PIPING AND HVAC EQUIPMENT.

F. THERMAL AND ACOUSTIC INSULATION.

G. SEISMIC RESTRAINTS AND BRACING.

H. AUTOMATIC TEMPERATURE CONTROL SYSTEM.

H. DEMOLITION AND REMOVAL OF EXISTING HVAC EQUIPMENT AS REQUIRED.

1.02 RELATED WORK INCLUDED UNDER OTHER SECTIONS

A. FIRE PROTECTION, SECTION 15300.

B. PLUMBING, SECTION 15400.

C. LINE VOLTAGE AND POWER WIRING, ELECTRICAL SECTION 16000.

1.03 EXAMINATION OF SITE

VISIT SITE BEFORE SUBMITTING BID AND CHECK LOCATION OF ALL EXISTING CONDITIONS WHICH WILL AFFECT THIS WORK, VERIFY DIMENSIONS AND LOCATIONS SHOWN ON DRAWINGS AND COVER ALL COSTS. CONTRACTOR SHALL ASSUME REASONABLE VARIATIONS OR MINOR OMISSIONS AND SHALL COMPLETED PROPOSED WORK WITHOUT ADDITIONAL COST. FAILURE TO VISIT SITE WILL NOT LESSEN RESPONSIBILITY OR ENTITLE ADDITIONAL COMPENSATION FOR WORK NOT INCLUDED IN PROPOSAL.

1.04 DRAWINGS

THE ACCOMPANYING DRAWINGS SHALL BE CONSIDERED PART OF THESE SPECIFICATIONS. WORK AND MATERIALS SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS AND VICE VERSA SHALL BE EXECUTED AS IF SPECIFICALLY MENTIONED OR SHOWN IN BOTH. THE DRAWINGS SHALL BE CONSIDERED AS SCHEMATIC IN NATURE AND MINOR MODIFICATIONS OF THE WORK TO COMPLY WITH THE STRUCTURE AS FOUND SHALL BE MADE.

1.05 RULES AND REGULATIONS

A. ALL WORK AND MATERIAL SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE STATE FIRE MARSHAL AND OTHER APPLICABLE STATE AND LOCAL RULES AND REGULATIONS.

B. NOTHING IN THESE DRAWINGS OR SPECIFICATIONS SHALL BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

C. FURNISH WITHOUT ANY EXTRA CHARGE ANY ADDITIONAL MATERIAL AND LABOR WHEN REQUIRED TO COMPLY WITH THESE LAWS, ORDINANCES AND CODES REGARDLESS OF WHETHER SHOWN OR MENTIONED IN THESE SPECIFICATIONS OF DRAWINGS.

1.06 SUBMITTALS

A. SUBMIT FOR REVIEW A COMPLETE AND ALL-INCLUSIVE LIST OF EQUIPMENT AND MATERIALS PROPOSED FOR USE; (1) SOFT COPY, ACCOMPANIED BY MANUFACTURER'S DATA SHEETS. DATA SHALL BE FORWARDED IN A SINGLE PACKAGE WITHIN 15 DAYS AFTER AWARD OF CONTRACT. SUBMIT PORTABLE DOCUMENT FORMAT (PDF) AND ONE REPRODUCIBLE SHOP DRAWING SHOWING PROPOSED DUCTWORK INSTALLATION. INCLUDE SIZES, LOCATIONS AND OTHER REQUIRED INFORMATION TO COORDINATE INSTALLATION WITH OTHER TRADES.

B. WITHIN 5 DAYS AFTER AWARD OF CONTRACT, SUBMIT PDF & A COPY OF A LETTER STATING ANY MATERIALS THAT CONTRACTOR WISHES TO SUBSTITUTE, TO THE OWNER FOR APPROVAL. INCLUDE SUCH INFORMATION AS MANUFACTURER'S NAME, TYPE OF MATERIAL, CERTIFIED RATINGS, OVERALL APPEARANCE, AND NECESSARY INFORMATION TO EXPLAIN FUNCTION AND OPERATION OF MATERIAL. ALL PROPOSED SUBSTITUTIONS SHALL BE EQUAL IN QUALITY, DESIGN, UTILITY AND APPEARANCE TO MATERIAL, EQUIPMENT OR METHOD SPECIFIED.

1.07 AS-BUILT DRAWINGS

A SET OF HVAC PRINTS OR ACCESS TO A PRINT SHOP/PDFS WILL BE FURNISHED TO THE CONTRACTOR ON WHICH HE/SHE SHALL INDICATE THE INSTALLATION "AS-BUILT" AS THE WORK PROGRESSES. UPON COMPLETION OF THE WORK, A SET OF REPRODUCIBLE DRAWINGS SHALL BE OBTAINED FROM THE OWNER AT COST, AND ALL CHANGES AS NOTED ON THE RECORD SET OF PRINTS SHALL BE INCORPORATED THEREON. THIS SET OF REPRODUCIBLES, ALONG WITH ONE SET OF PDF'S, SHALL BE DELIVERED TO THE OWNER UPON COMPLETION AND BEFORE FINAL ACCEPTANCE OF THE PROJECT.

1.08 GUARANTEE

THE CONTRACTOR SHALL LEAVE THE ENTIRE INSTALLATION IN COMPLETE WORKING ORDER FREE FROM ANY DEFECTIVE MATERIAL, WORKMANSHIP OR FINISH. HE SHALL GUARANTEE TO REPAIR OR REPLACE, WITHOUT CHARGE, DEFECTS DUE TO FAULTY WORKMANSHIP OR MATERIAL FOR A PERIOD OF ONE YEAR FROM THE DATE OF FILING OF THE NOTICE OF COMPLETION.

1.09 OPERATION MANUALS AND OWNER INSTRUCTIONS

A. PROVIDE COMPLETE OPERATION AND MAINTENANCE MANUALS COVERING ALL MECHANICAL SYSTEMS AND EQUIPMENT THAT HAVE BEEN INSTALLED. A HARD COPY & SOFT COPY OF THE MANUAL SHALL BE PROVIDED TO AN OWNER.

B. PROVIDE INSTRUCTIONS TO STORE PERSONNEL AS TO OPERATION OF ALL HVAC EQUIPMENT AND THERMOSTATS. INSTRUCTION PERIOD TO COMMENCE FOR MINIMUM OF (2) HOURS AND SHALL BE SCHEDULED AT OWNER'S CONVENIENCE. ALSO, PROVIDE STORE MANAGER WITH OPERATION MANUAL.

1.10 CUTTING AND PATCHING

A. CONTRACTOR SHALL DO ALL CUTTING, DRILLING AND PATCHING WHICH MAY BE REQUIRED FOR THE INSTALLATION OF THE WORK UNDER THIS SECTION OF THE SPECIFICATIONS.

B. PATCHING SHALL BE OF THE SAME WORKMANSHIP, MATERIAL, AND FINISH AND SHALL MATCH ACCURATELY ALL SURROUNDING CONSTRUCTION IN A MANNER SATISFACTORY TO THE OWNER. NO CUTTING OF THE STRUCTURE SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE OWNER.

2.00 - DUCTWORK

2.01 MATERIALS

2.01.1 METAL AIR DUCTS

A. SHEET METAL RECTANGULAR AND ROUND DUCTWORK, PLENUMS, AND CASINGS SHALL BE FABRICATED IN STRICT ACCORDANCE WITH LATEST EDITION OF SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" BASED ON INDICATED STATIC-PRESSURE CLASS.

B. MATERIAL FOR DUCTWORK SHALL BE HOT DIPPED GALVANIZED (G60) STEEL OF GAUGES SHOWN IN THE SMACNA HVAC DUCT CONSTRUCTION STANDARDS. ALL DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH PRESSURE CLASSIFICATION SCHEDULES OF NO LESS THAN CLASS +/- 2" W.G., AND SHALL BE SEALED TO THE DUCT SEALING REQUIREMENTS OF CLASS "C" MINIMUM.

C. SELECT TRANSVERSE JOINT AND LONGITUDINAL SEAM TYPES, FIGURES 1-4 AND 1-5 RESPECTIVELY, AND FABRICATE RECTANGULAR DUCTWORK ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE".

D. SELECT ELBOWS, TRANSITIONS, OFFSETS, BRANCH CONNECTIONS, TEES AND LATERALS, AND OTHER FITTING TYPES, AND FABRICATE ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE".

E. TRANSITIONS IN SIZE OF DUCTS SHALL BE MADE BY UNIFORMLY TAPERING SECTIONS HAVING 1 INCH INCREASE IN WIDTH FOR EACH 7 INCHES OF RUN UNLESS CONSTRUCTION LIMITATIONS REQUIRE A MORE ABRUPT TRANSITION.

F. COMPLY WITH SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE", CHAPTER 4, "HANGERS AND SUPPORTS" FOR UPPER AND LOWER ATTACHMENTS. FIGURES 4.2 AND 4.4 RESPECTIVELY. REFER TO TABLES 4.1 AND 4.2 FOR RECTANGULAR AND ROUND MINIMUM HANGER SIZE AND SPACING.

G. SHEET METAL ROUND DUCT SHALL BE UNITED MCGILL, SEMCO INC., LINX IND., OR EQUAL SPIRAL SEAM DUCTS WITH GASKET "UNISEAL" CONNECTION FOR EXPOSED INSTALLATIONS, AND SPIRAL OR LONGITUDINAL SEAM WITH BEADED SLEEVE JOINT CONNECTIONS FOR CONCEALED INSTALLATIONS.

FITTINGS SHALL BE "UNIFORM" MACHINE FORMED WITH CONTINUOUS WELDS.

H. SUPPLY AND RETURN AIR DUCTWORK SHALL BE EXTERNALLY INSULATED WITH 1 ½" THICK, 1-1/2 PCF DENSITY OR AS REQUIRED BY LOCAL ENERGY CODE. INSULATION SHALL BE OWENS-CORNING SOFT DUCT WRAP OR EQUAL CONSISTING OF A BLANKET OF GLASS FIBER INSULATION FACTORY-LAMINATED TO FRK VAPOR RETARDER FACING. INSULATION SHALL MEET THE REQUIREMENTS OF NFPA 90A AND 90 B AND OTHER MECHANICAL ENERGY CODES.

2.01.2 FACTORY-MADE AIR DUCTS

A. FACTORY-MADE AIR DUCTS SHALL BE APPROVED FOR THE USE INTENDED. EACH SECTION OF A FACTORY-MADE AIR DUCT SHALL BE IDENTIFIED BY THE MANUFACTURER WITH A LABEL INDICATING CLASS DESIGNATION. THESE DUCTS SHALL BE LISTED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE TERMS OF THEIR LISTING, *AND SHALL BE APPROVED FOR USE WITHOUT LENGTH LIMITATIONS BY THE AUTHORITY HAVING JURISDICTION.*

B. ACOUSTICAL FLEXIBLE DUCT SHALL BE UL 181 LISTED, CLASS 1, 2-PLY VINYL FILM SUPPORTED BY HELICALLY WOUND SPRING-STEEL WIRE, FIBROUS-GLASS INSULATION TO MEET LOCAL CODE R-VALUES, AND FINISHED WITH A POLYETHYLENE VAPOR- BARRIER FILM. INTERIOR VINYL FILM SHALL BE PERFORATED FOR SOUND ATTENUATION. FLEXIBLE DUCT SHALL BE RATED TO +10"/-1" W.G., 4000 FPM, AND -20 TO 210°F TEMPERATURE RANGE. FLEXIBLE DUCT CLAMP CONNECTORS SHALL BE STAINLESS-STEEL BAND WITH CADMIUM HEX SCREW TO TIGHTEN BAND WITH A WORM-GEAR ACTION. FLEXIBLE DUCTS SHALL BE ALLOWED ONLY AT THE FINAL CONNECTION TO AIR OUTLETS/INLETS AT A LENGTH OF 5 FEET MAXIMUM.

C. INSULATED ALUMINUM FLEXIBLE DUCT SHALL BE UL 181 LISTED, CLASS 0, INTERLOCKING SPIRAL OF ALUMINUM FOIL, FIBROUS-GLASS INSULATION SHALL MEET LOCAL CODE R-VALUE, AND SHALL BE FINISHED WITH A POLYETHYLENE VAPOR-BARRIER FILM. ALUMINUM FLEXIBLE DUCT SHALL BE RATED TO +/- 8" W.G., 5000 FPM VELOCITY, AND -20 TO 250°F TEMPERATURE RANGE.

D. INSULATED WIRE FLEXIBLE DUCT SHALL BE UL 181 LISTED, CLASS 1, 2-PLY VINYL FILM SUPPORTED BY HELICALLY WOUND SPRING-STEEL WIRE, FIBROUS-GLASS INSULATION SHALL MEET LOCAL CODE R-VALUES, AND SHALL BE FINISHED WITH A POLYETHYLENE VAPOR-BARRIER FILM. FLEXIBLE DUCTS SHALL BE RATED TO +10/-1" W.G., 4000 FPM VELOCITY, AND -20 TO 210°F TEMPERATURE RANGE. FLEXIBLE DUCT CLAMP CONNECTORS SHALL BE STAINLESS-STEEL BAND WITH CADMIUM HEX SCREW TO TIGHTEN BAND WITH A WORM-GEAR ACTION.

E. PROVIDE SNAP-LOCK SEAMS FOR ROUND DUCTS 12"Ø OR LESS PER SMACNA "HVAC DUCT CONSTRUCTION STANDARDS - SEAMS - ROUND DUCT AND FITTINGS". SNAP LOCK DUCTS SHALL BE SEALED PER CLASS B; ALL TRANSVERSE JOINTS AND LONGITUDINAL SEAMS SHALL BE SEALED.

F. INSTALLATION OF FACTORY-MADE AIR DUCT JOINTS AND ATTACHMENTS SHALL BE IN STRICT ACCORDANCE WITH LATEST EDITION OF SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE".

G. SELECT TRANSITIONS, BRANCH CONNECTIONS, TEES AND LATERALS, AND OTHER FITTING TYPES, AND FABRICATE ACCORDING TO SMACNA'S "HVAC DUCT CONSTRUCTION STANDARDS - METAL AND FLEXIBLE" BASED ON INDICATED STATIC-PRESSURE CLASS.

H. SELECT SIZING PRACTICES IN ACCORDANCE TO THE AIR CONDITIONING CONTRACTORS OF AMERICA (ACCA), MANUALS D & Q. IN PRACTICE LIMIT VELOCITIES TO 700 FPM MAX. FOR SUPPLY AND RETURN AIR DUCTS, AND INCREASE DUCT SIZES BY ONE SIZE (EVEN NUMBER) LARGER THAN METAL AIR DUCTS.

I. FACTORY-MADE DUCTS SHALL NOT BE USED FOR VERTICAL RISERS IN AIR DISTRIBUTION DUCT SYSTEMS. SUCH A DUCT SHALL NOT PENETRATE CONSTRUCTION WHERE FIRE DAMPERS ARE REQUIRED.

2.01.3 DUCTWORK ACCESSORIES

A. DAMPER OPERATORS
- A.1. DUCTS WITH EXTERNAL INSULATION: VENTLOCK #637, DURADYNE, YOUNG, OR APPROVED EQUAL.
- A.2. DUCTS WITH INTERNAL INSULATION AND/OR NO INSULATION: VENTLOCK #635, DURADYNE, YOUNG, OR APPROVED EQUAL.

B. FLEXIBLE CONNECTIONS: VENTFABRICS "VENTGLAS", DURADYNE, OR APPROVED EQUAL, U.L. 181 APPROVED WITH METAL ATTACHMENT.

C. AIR EXTRACTOR: TITUS AG-225, KRUEGER EX-88C, OR APPROVED EQUAL.

D. TURNING VANES SHALL COMPLY WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS. ALL RECTANGULAR DUCT WITH MITERED ELBOWS SHALL BE FITTED WITH TURNING VANES.

E. SPIN-IN-FITTINGS ARE NOT ALLOWED. USE UNITED MCGILL BELLMOUTH FITTING FOR ROUND DUCT TAPS.

F. ACCESS DOORS IN DUCTWORK: SHALL BE VENTLOCK, DUCTMATE OR APPROVED EQUAL, STAMPED OR FORMED INSULATED ACCESS DOORS COMPLETE WITH ALL HARDWARE AND SEALANT.

G. JOINT SEALING:
- G.1. THE FOLLOWING ITEMS ARE TO BE SEALED WITH HARDCAST DT TAPE AND ADHESIVE:
  - G.1.a. LONGITUDINAL AND TRANSVERSE SEAMS OF RECTANGULAR DUCTWORK.
  - G.1.b. ALL ROUND FITTINGS AND JOINT CONNECTORS USE FTA-20 FOR INDOOR USE AND RTA-20 FOR OUTDOOR USE.
- G.2. FLEXIBLE DUCT AT DIFFUSERS SHALL USE INTEGRAL STAINLESS STEEL DRAW BAND AND PRESSURE SENSITIVE TAPE, HARDCAST P-301 OR EQUAL.

H. BRACINGS, HANGERS, NUTS, ETC. SHALL BE GALVANIZED.

I. CURVED ELBOWS SHALL HAVE CENTERLINE RADIUS EQUAL TO ONE AND ONE-HALF TIMES DUCT WIDTH IN PLANE OF TURN.

J. SQUARE ELBOWS SHALL HAVE TURNING VANES. MITER ELBOWS (NOT SQUARE) SHALL HAVE SPLITTER VANES 3 INCHES O.C.

K. VOLUME DAMPERS SHALL BE CONSTRUCTED TO SMACNA STANDARDS AND SHALL BE YOUNG REGULATOR MODEL 4040 FOR ROUND DUCTS AND SERIES 820 FOR RECTANGULAR DUCTS.

L. CONTRACTOR SHALL PROVIDE MANUAL VOLUME DAMPERS AT ALL BRANCH DUCTWORK IN SUPPLY AIR, RETURN AIR AND OUTSIDE AIR SYSTEMS (WHETHER SHOWN ON PLANS OR NOT) WHERE REQUIRED FOR AIR BALANCING OF HVAC SYSTEMS. ALL ACCESSIBLE VOLUME CONTROLS SHALL HAVE LOCKING QUADRANTS. ALL INACCESSIBLE CONTROLS (DAMPERS, ETC.) SHALL BE PROVIDED WITH PERMANENT EXTENSIONS TO ACCESSIBLE SPACES. BRANCH VOLUME CONTROLS ARE IN ADDITION TO VOLUME CONTROLS AT THE REGISTERS AND DIFFUSERS.

M. DIFFUSERS, GRILLES AND REGISTERS: AIR INLETS, OUTLETS SHALL BE PROPERLY SET IN PLACE. REGISTERS AND GRILLES SHALL BE TIGHTLY SEALED. EACH REGISTER AND DIFFUSER SHALL BE EQUIPPED WITH A VOLUME DAMPER OR AIR EXTRACTOR. PAINT INTERIOR SURFACE OF ALL UNITS FLAT BLACK. FACE AND TRIM OF ALL UNITS SHALL BE FINISHED. SIZE, FINISH, FRAMES, ACCESSORIES, CAPACITY AND PATTERN AS SHOWN ON DRAWINGS.

2.02 EXECUTION

A. ASSEMBLE AND INSTALL DUCTWORK IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES WHICH WILL ACHIEVE AIR TIGHT (MAX. 5 % LEAKAGE) AND NOISELESS (NO OBJECTIONABLE NOISE) SYSTEMS, CAPABLE OF PERFORMING EACH INDICATED SERVICE. INSTALL EACH RUN WITH MINIMUM OF JOINTS.

B. ALIGN DUCTWORK ACCURATELY AT CONNECTIONS, WITHIN 1/8" MISALIGNMENT TOLERANCE AND WITH INTERNAL SURFACES SMOOTH.

C. SUPPORT DUCTS RIGIDLY WITH SUITABLE TIES, BRACES, HANGERS AND ANCHORS OF TYPE WHICH WILL HOLD DUCT TRUE TO SHAPE AND WILL PREVENT BUCKLING.

D. PROVIDE ALL NECESSARY OFFSETS AND TRANSITIONS AS REQUIRED IN THE INSTALLATION OF THE WORK, ALTHOUGH SOME MAY NOT BE SPECIFICALLY SHOWN ON THE PLANS. OFFSET ALL DUCTS AS REQUIRED TO INCREASE HEAD ROOM UNDER THEM, TO IMPROVE THE APPEARANCE OF EXPOSED DUCTS, AND TO AVOID INTERFERENCE WITH THE WORK OF OTHER TRADES.

E. LOCATE DUCTWORK RUNS, EXCEPT AS OTHERWISE INDICATED, VERTICALLY AND HORIZONTALLY AND AVOID DIAGONAL RUNS WHEREVER POSSIBLE.

F. HOLD DUCTS CLOSE TO WALLS OVERHEAD CONSTRUCTION, COLUMNS, AND OTHER STRUCTURAL AND PERMANENT ENCLOSURE ELEMENTS OF BUILDING.

G. WHERE DUCTS PASS THROUGH INTERIOR PARTITIONS AND EXTERIOR WALLS, CONCEAL SPACE BETWEEN CONSTRUCTION OPENING AND DUCT OR DUCT-PLUS-INSULATION WITH SHEET METAL FLANGES OF SAME GAGE AS DUCT.

H. WHERE DUCTS PASS THROUGH TIME-RATED FIRE RESISTIVE CONSTRUCTION, ALL OPENINGS AROUND THE DUCTS SHALL BE SEALED WITH FIRE STOPPING MATERIAL, EXCEPT WHERE FIRE DAMPERS ARE SHOWN, NOTED OR REQUIRED.

I. PROVIDE ANGLE, CHANNEL, OR EQUAL TYPE FRAMES FOR ALL MANUAL AND AUTOMATIC DAMPERS AND INSTALL AS REQUIRED.

J. COORDINATE DUCT INSTALLATIONS WITH INSTALLATION OF ACCESSORIES, DAMPERS, COIL FRAMES, EQUIPMENT, CONTROLS AND OTHER ASSOCIATED WORK OF DUCTWORK SYSTEM.

K. SUPPORT DUCTWORK IN MANNER COMPLYING WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" HANGER AND SUPPORTS SECTION.

3.00 - HYDRONIC & DIRECT EXPANSION PIPING

3.01 MATERIALS

A. HOT, CHILLED, AND CONDENSER WATER SERVICE PIPING ABOVE GROUND OF NOMINAL DIAMETER 2-1/2" OR LESS SHALL BE DRAWN-TEMPER COPPER PIPE, ASTM B88, TYPE L, WITH WROUGHT-COPPER FITTINGS, AND 95/5 LEAD FREE SOLDERED JOINTS.

B. REFRIGERANT PIPING SHALL BE TYPE L HARD COPPER ACR TUBING WITH WROUGHT COPPER, SOLDER JOINT FITTINGS, SILVER SOLDERED. ALL REFRIGERANT PIPING SHALL BE INSULATED EXCEPT WHERE THE UNINSULATED AREA DOES NOT RESULT IN AN ENERGY LOSS TO THE SYSTEM OR AN ADVERSE EFFECT TO THE SYSTEM FROM STRAY HEAT. PIPE INSULATION SHALL BE ARMSTRONG ARMAFLEX, OWENS-CORNING FLEXIBLE TUBING, RUBICON OR APPROVED EQUAL. THICKNESS SHALL BE 3/4" ON INTERIOR PIPING AND 1" ON EXTERIOR PIPING. INSULATED PIPING EXPOSED TO WEATHER SHALL BE PROVIDED WITH ARMSTRONG ARMAFLEX FINISH AND ALL-WEATHER SERVICE JACKET FOR OUTDOOR APPLICATIONS VALVES, STRAINERS, SIGHT GLASS, FILTER DRIERS, OIL SEPARATORS, ETC. SHALL BE MANUFACTURED BY SPORLAN VALVE CO.

C. COPPER PIPING SHALL HAVE SOLDERED JOINTS OF 250 PSIG PRESSURE RATING.

D. CONDENSATE DRAIN PIPE SHALL BE COPPER TYPE M, ASTM B88, WROUGHT COPPER FITTINGS, SOLDERED JOINTS.

E. GATE VALVES, 2-INCH AND SMALLER: MSS SP-80; CLASS 125, BODY AND BONNET OF ASTM B 62 CAST BRONZE; WITH THREADED OR SOLDER ENDS, SOLID DISC, SILICON BRONZE ALLOY STEM, BRASS PACKING GLAND, "TEFLON" IMPREGNATED PACKING, AND MALLEABLE IRON HANDWHEEL. PROVIDE CLASS 150 VALVES MEETING THE ABOVE WHERE SYSTEM PRESSURE REQUIRES.

F. BALL VALVES, 2-INCH AND SMALLER: MSS SP-110; RATED FOR 150 PSI SATURATED STEAM PRESSURE, 600 PSI WOG PRESSURE; TWO-PIECE CONSTRUCTION; WITH BRONZE BODY CONFORMING TO ASTM B 62, STANDARD PORT, CHROME-PLATED BRASS BALL, REPLACEABLE "TEFLON" OR "TFE" SEATS AND SEALS, BLOWOUT-PROOF STEM, AND VINYL-COVERED STEEL HANDLE. PROVIDE SOLDER ENDS FOR CONDENSER WATER, CHILLED WATER; AND THREADED ENDS FOR HEATING HOT WATER.

G. PLUG VALVES, 2-INCH AND SMALLER: RATED AT 150 PSI WOG; BRONZE BODY, WITH STRAIGHT- AWAY PATTERN, SQUARE HEAD, AND THREADED ENDS

H. GLOBE VALVES, 2-INCH AND SMALLER: MSS SP-80; CLASS 125; BODY AND SCREWED BONNET OF ASTM B 62 CAST BRONZE; WITH THREADED OR SOLDER ENDS, BRASS OR "TEFLON" DISC, SILICON BRONZE ALLOY STEM, BRASS PACKING GLAND, "TEFLON" IMPREGNATED PACKING, AND MALLEABLE IRON HANDWHEEL. PROVIDE CLASS 150 VALVES MEETING THE ABOVE WHERE SYSTEM PRESSURE REQUIRES.

I. SWING CHECK VALVES, 2-INCH AND SMALLER: MSS SP-80; CLASS 125, CAST-BRONZE BODY AND CAP CONFORMING TO ASTM B 62; WITH HORIZONTAL SWING, Y-PATTERN, AND BRONZE OR "TEFLON" DISC; AND HAVING THREADED OR SOLDER ENDS. PROVIDE VALVES CAPABLE OF BEING REGROUND WHILE THE VALVE REMAINS IN THE LINE. PROVIDE CLASS 150 VALVES MEETING THE ABOVE SPECIFICATIONS, WITH THREADED END CONNECTIONS, WHERE SYSTEM PRESSURE REQUIRES OR WHERE CLASS 125 VALVES ARE NOT AVAILABLE.

J. BALANCING VALVES, 2 ½" AND SMALLER: BRONZE BODY, BALL TYPE, 125-PSIG WORKING PRESSURE, 250°F MAXIMUM OPERATING TEMPERATURE, AND HAVING THREADED ENDS. VALVES SHALL HAVE CALIBRATED ORIFICE OR VENTURI, CONNECTIONS FOR PORTABLE DIFFERENTIAL PRESSURE METER WITH INTEGRAL SEALS, AND BE EQUIPPED WITH A MEMORY STOP TO RETAIN SET POSITION.

K. AUTOMATIC FLOW-CONTROL VALVES: GRAY-IRON BODY, FACTORY SET TO MAINTAIN CONSTANT FLOW WITH PLUS OR MINUS 5 PERCENT OVER SYSTEM PRESSURE FLUCTUATIONS, AND EQUIPPED WITH A READOUT KIT INCLUDING FLOW METER, PROBES, HOSES, FLOW CHARTS, AND CARRYING CASE. EACH VALVE SHALL HAVE AN IDENTIFICATION TAG ATTACHED BY CHAIN, AND BE FACTORY MARKED WITH THE ZONE IDENTIFICATION, VALVE NUMBER, AND FLOW RATE.

L. MANUAL AIR VENT: BRONZE BODY AND NONFERROUS INTERNAL PARTS; 150-PSIG WORKING PRESSURE; 225°F OPERATING TEMPERATURE; MANUALLY OPERATED WITH SCREWDRIVER OR THUMBSCREW; WITH 1/8" DISCHARGE CONNECTION AND ½" INLET CONNECTION.

M. AUTOMATIC AIR VENT: DESIGNED TO VENT AUTOMATICALLY WITH FLOAT PRINCIPLE; BRONZE BODY AND NONFERROUS INTERNAL PARTS; 150-PSIG WORKING PRESSURE; 240°F OPERATING TEMPERATURE; WITH ¼" DISCHARGE CONNECTION AND ½" INLET CONNECTION.

N. Y-PATTERN STRAINERS: 125-PSIG WORKING PRESSURE; CAST-IRON BODY (ASTM A 126, CLASS B), THREADED CONNECTIONS FOR 2" AND SMALLER, BOLTED COVER, PERFORATED STAINLESS-STEEL BASKET, AND BOTTOM DRAIN CONNECTION.

O. FLEXIBLE CONNECTORS: STAINLESS-STEEL BELLOWS WITH WOVEN, FLEXIBLE, BRONZE, WIRE-REINFORCING PROTECTIVE JACKET; 150-PSIG MINIMUM WORKING PRESSURE AND 250°F MAXIMUM OPERATING TEMPERATURE. CONNECTORS SHALL HAVE FLANGED- OR THREADED-END CONNECTIONS TO MATCH EQUIPMENT CONNECTED AND SHALL BE CAPABLE OF 3/4-INCH (20-MM) MISALIGNMENT.

P. INSULATE ALL WATER PIPING WITH DENSITY FIBROUS GLASS INSULATION WITH WHITE KRAFT BONDED TO ALUMINUM FOIL. THICKNESS AND R-VALUE AS PER TABLE 120.3-A OF CEC STANDARDS. FITTINGS SHALL BE INSULATED WITH PRE-MOLDED FIBERGLASS INSULATION. THE INTEGRITY OF THE VAPOR BARRIER SHALL BE MAINTAINED THROUGHOUT THE INSTALLATION. TAPE AND SEAL ALL JOINTS WITH VAPOR BARRIER TAPE.

3.02 EXECUTION:

A. INSTALL HANGERS, SUPPORTS, CLAMPS, AND ATTACHMENTS TO SUPPORT PIPING PROPERLY FROM BUILDING STRUCTURE; COMPLY WITH MSS SP-69. ARRANGE FOR GROUPING OF PARALLEL RUNS OF HORIZONTAL PIPING TO BE SUPPORTED TOGETHER ON TRAPEZE TYPE HANGERS WHERE POSSIBLE. INSTALL SUPPORTS WITH MAXIMUM SPACING COMPLYING WITH MSS SP-69. WHERE PIPING OF VARIOUS SIZES IS TO BE SUPPORTED TOGETHER BY TRAPEZE HANGERS, SPACE HANGERS FOR SMALLEST PIPE SIZE OR INSTALL INTERMEDIATE SUPPORTS FOR SMALLER DIAMETER PIPE.

B. INSTALL HANGERS AND SUPPORTS COMPLETE WITH NECESSARY INSERTS, BOLTS, RODS, NUTS, WASHERS AND OTHER ACCESSORIES. EXCEPT AS OTHERWISE INDICATED FOR EXPOSED CONTINUOUS PIPE RUNS, INSTALL HANGERS AND SUPPORTS OF SAME TYPE AND STYLE AS INSTALLED FOR ADJACENT SIMILAR PIPING.

C. PREVENT ELECTROLYSIS IN SUPPORT OF COPPER TUBING BY USE OF HANGERS AND SUPPORTS WHICH ARE COPPER PLATED, OR BY OTHER RECOGNIZED INDUSTRY METHODS.

D. INSTALL HANGERS AND SUPPORTS TO ALLOW CONTROLLED MOVEMENT OF PIPING SYSTEMS AND TO PERMIT FREEDOM OF MOVEMENT BETWEEN PIPE ANCHORS, AND TO FACILITATE ACTION OF EXPANSION JOINTS, EXPANSION LOOPS, EXPANSION BENDS AND SIMILAR UNITS.

E. INSTALL HANGERS AND SUPPORTS SO THAT PIPING LIVE AND DEAD LOADING AND STRESSES FROM MOVEMENT WILL NOT BE TRANSMITTED TO CONNECTED EQUIPMENT.

F. INSTALL HANGERS AND SUPPORTS TO PROVIDE INDICATED PIPE SLOPES, AND SO THAT MAXIMUM PIPE DEFLECTIONS ALLOWED BY ANSI B31 PRESSURE PIPING CODES ARE NOT EXCEEDED.

G. INSULATED PIPING: COMPLY WITH THE FOLLOWING INSTALLATION REQUIREMENTS.
- G.1. CLAMPS: ATTACH CLAMPS, INCLUDING SPACERS, TO PIPING WITH CLAMPS PROJECTING THROUGH INSULATION; DO NOT EXCEED PIPE STRESSES ALLOWED BY ANSI B31.
- G.2. SHIELDS: WHERE LOW-COMPRESSIVE-STRENGTH INSULATION OR VAPOR BARRIERS ARE INDICATED ON WATER PIPING, INSTALL COATED PROTECTIVE SHIELDS.
- G.3. SADDLES: WHERE INSULATION WITHOUT VAPOR BARRIER IS INDICATED, INSTALL PROTECTION SADDLES.

H. ALL CONNECTIONS BETWEEN DISSIMILAR METALS SHALL UTILIZE DIELECTRIC INSULATING FITTINGS, COUPLINGS AND UNIONS.

4.00 - EQUIPMENT

4.01 AIR DEVICES

DIFFUSERS, GRILLES AND REGISTERS: TITUS, KRUEGER, METALAIRE, OR THERMAFUSER WHERE SHOWN. FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR. PROVIDE VOLUME DAMPERS AND PAINT INTERIOR FLAT BLACK. SIZE, FINISH, FRAME TYPES AND ACCESSORIES AS SHOWN ON THE DRAWINGS.

4.02 FIRE DAMPERS & SMOKE FIRE DAMPERS

A. PROVIDE FIRE DAMPERS WITH ACCESS DOORS INSTALLED WHERE REQUIRED BY ALL LOCAL CODES. IN GENERAL, FIRE DAMPERS ARE REQUIRED WHERE DUCTS PIERCE FIRE-RATED FLOORS, CEILINGS, WALLS AND SHAFTS. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL FIRE RATED ASSEMBLIES.

B. FIRE DAMPERS SHALL BE EQUAL TO AIR BALANCE INC., MODEL NO. 119BLX, OR 119CL, OR AS APPROVED, FOR RECTANGULAR AND ROUND DUCTS. DAMPERS SHALL MEET THE REQUIREMENTS FOR NFPA BULLETIN NO. 90A, AND SHALL BE TESTED IN ACCORDANCE WITH UL 555 TEST CRITERIA. FIRE DAMPERS SHALL BE LABELED AND LISTED BY UL.

C. IF APPLICABLE, FIRE DAMPERS SHALL COMPLY WITH UL-555-2006, 7TH EDITION AND SHALL BE MARKED "FOR USE IN DYNAMIC SYSTEMS" OR "FOR USE IN STATIC SYSTEMS" AS REQUIRED.

D. COMBINATION SMOKE FIRE DAMPERS SHALL BE INSTALLED WHERE DUCTWORK PENETRATES FIRE RATED WALLS SURROUNDING AN EXIT CORRIDOR, OR WHERE OTHERWISE REQUIRED BY CODE.

4.03 AIR CONDITIONING EQUIPMENT

A. FURNISH AND INSTALL AIR CONDITIONING EQUIPMENT AS SPECIFIED ON THE DRAWINGS AND IN EQUIPMENT SCHEDULES.

B. DESCRIPTION: FACTORY ASSEMBLED AND TESTED; DESIGNED FOR ROOF OR SLAB INSTALLATION; AND CONSISTING OF COMPRESSORS, CONDENSERS, EVAPORATOR COILS, CONDENSER AND EVAPORATOR FANS, REFRIGERATION AND TEMPERATURE CONTROLS, FILTERS, AND DAMPERS.

C. CASING: MANUFACTURER'S STANDARD CONSTRUCTION WITH CORROSION-PROTECTION COATING AND EXTERIOR FINISH, HINGED PANELS OR ACCESS DOORS WITH NEOPRENE GASKETS FOR INSPECTION AND ACCESS TO INTERNAL PARTS, MINIMUM 1/2-INCH THICK THERMAL INSULATION, KNOCKOUTS FOR ELECTRICAL AND PIPING CONNECTIONS, EXTERIOR CONDENSATE DRAIN CONNECTION, AND LIFTING LUGS.

D. EVAPORATOR FANS: FORWARD CURVED, CENTRIFUGAL, BELT DRIVEN WITH ADJUSTABLE SHEAVES OR DIRECT-DRIVE FANS; AND WITH PERMANENTLY LUBRICATED MOTOR BEARINGS.

E. EXHAUST/RELIEF FANS: FORWARD-CURVED, CENTRIFUGAL OR PROPELLER TYPE, DIRECTLY DRIVEN WITH PERMANENTLY LUBRICATED MOTOR BEARINGS.

F. CONDENSER FANS: PROPELLER TYPE, DIRECTLY DRIVEN WITH PERMANENTLY LUBRICATED MOTOR BEARINGS.

G. REFRIGERANT COILS: ALUMINUM-PLATE FIN AND SEAMLESS COPPER TUBE IN GALVANIZED STEEL CASING WITH EQUALIZING-TYPE VERTICAL DISTRIBUTOR.

H. COMPRESSORS: SERVICEABLE, SEMI-HERMETIC, OR FULLY HERMETIC COMPRESSORS WITH INTEGRAL VIBRATION ISOLATORS AND CRANKCASE HEATERS.

I. SAFETY CONTROLS: FOR SEMI-HERMETIC COMPRESSORS PROVIDE MANUAL-RESET TYPE SAFETY CONTROLS FOR LOW PRESSURE, HIGH PRESSURE, AND COMPRESSOR MOTOR OVERLOAD PROTECTION.

J. TIMED-OFF CONTROL: AUTOMATIC-RESET CONTROL SHUTS COMPRESSOR OFF AFTER 5 MINUTES.

K. HEAT EXCHANGERS: MANUFACTURER'S STANDARD CONSTRUCTION FOR GAS-FIRED HEAT EXCHANGERS AND BURNERS WITH THE FOLLOWING CONTROLS:
- K.1. REDUNDANT, DUAL GAS VALVES (2-STAGE HEATING).
- K.2. INTERMITTENT PILOT IGNITION.
- K.3. ELECTRONIC-SPARK IGNITION SYSTEM.
- K.4. HIGH-LIMIT CUTOUT.
- K.5. FORCED-DRAFT PROVING SWITCH.

L. ELECTRIC HEAT: MANUFACTURER'S STANDARD CONSTRUCTION, ELECTRIC RESISTANCE, FACTORY WIRED FAR SINGLE-POINT WIRING CONNECTION, WITH OVERCURRENT AND OVERHEAT PROTECTION DEVICES.

M. ECONOMIZER CONTROL: RETURN- AND OUTSIDE-AIR DAMPERS, OUTSIDE-AIR FILTER, FULLY MODULATING ELECTRONIC-CONTROL SYSTEM WITH ADJUSTABLE MIXED-AIR THERMOSTAT AND AUTOMATIC CHANGEOVER THROUGH ADJUSTABLE DRY BULB/ENTHALPY-CONTROL DEVICE.

N. VARIABLE-AIR-VOLUME CONTROL: ELECTRIC DISCHARGE-AIR-TEMPERATURE STEP CONTROLLER AND ELECTRONIC-CONTROL SYSTEM.

O. LOW AMBIENT CONTROL: HEAD-PRESSURE CONTROL, DESIGNED TO OPERATE AT TEMPERATURES AS LOW AS 30°F.

P. THERMOSTAT: STAGED HEATING AND COOLING WITH MANUAL OR AUTOMATIC CHANGEOVER ON STANDARD SUBBASE.

Q. SMOKE DETECTORS: PHOTOELECTRIC DUCT DETECTOR LOCATED IN SUPPLY/RETURN-AIR DISTRIBUTION PLENUM, TO DE-ENERGIZE UNIT.

R. IN BUILDINGS THAT DO NOT HAVE FIRE ALARM SYSTEMS, PROVIDE AUDIBLE AND VISUAL ALARM EQUAL TO AIR PRODUCTS AND CONTROL INC. MODEL MS-RH/P/A IN AN APPROVED LOCATION.

S. ELECTRICAL CONVENIENCE OUTLET: FACTORY WIRED 115-V, AC FUSED OUTLET, SEPARATELY FUSED, LOCATED IN UNIT CABINET.

T. OPERATING CONTROLS: FACTORY-INSTALLED MICROPROCESSOR CONTROLS AND MONITORS UNIT AND COMMUNICATES WITH CENTRAL CONTROL PROCESSOR.
- T.1. CONTROL OUTPUTS: 2-STAGE HEATING, 2-STAGE COOLING; AND AUTOMATIC OR CONTINUOUS FAN OPERATION AND ECONOMIZER DAMPER OPERATION.
- T.2. CONTROL SENSORS: RETURN-AIR-TEMPERATURE SENSOR, FAN AIRFLOW-PROVING SWITCH, DIRTY-FILTER SWITCH, DISCHARGE-AIR-TEMPERATURE SENSOR, ROOM- TEMPERATURE SENSOR, AND NIGHT-SETBACK-OVERRIDE SWITCH.
- T.3. CONTROL FEATURES: DAY/OCCUPIED MODES FOR HIGH OR LOW ENTHALPY AND NIGHT/UNOCCUPIED MODE.

U. DEMAND CONTROL VENTILATION: HVAC SYSTEM WITH DCV, CO2 SENSOR SHALL BE INSTALLED IN THE SPACE. DEMAND VENTILATION CONTROLS SHALL MAINTAIN CO2 CONCENTRATIONS LESS THAN OR EQUAL TO 600 PPM PLUS THE OUTDOOR AIR CO2 CONCENTRATION IN ALL ROOMS WITH CO2 SENSORS.

4.04 INSULATION (INSTALLED PER MANUFACTURER'S RECOMMENDATIONS)

A. HEATING AND COOLING DUCTWORK LOCATED IN INTERIOR LOCATIONS
- A.1. INSULATE WITH OWENS-CORNING FIBERGLASS ALL SERVICE FACED DUCT WRAP TYPE 150 WITH FACTORY APPLIED FLAME RETARDANT FOIL REINFORCED KRAFT FACING (FRK-25 UL LABELSD), OR APPROVED EQUAL.
  INSTALLED THERMAL RESISTANCE SHALL BE A MINIMUM OF: R-8 FOR DUCTWORKS INSTALLED IN THE OUTDOORS, SPACE BETWEEN ROOF AND INSULATED CEILING, SPACE UNDER ROOF WITH FIXED VENT OPENING TO OUTSIDE, UNCONDITIONED CRAWLSPACE, AND UNCONDITIONED SPACES, OR R-4.2 FOR DUCTWORKS BURIED IN CONCRETE SLAB, OR INSTALLED WITHIN THE INDIRECTLY CONDITIONED SPACE SUCH AS THE SPACE BETWEEN THE CEILING AND INSULATED ROOF, WHERE THERE IS NO FIXED VENTS OR OPENINGS TO THE OUTDOORS OR TO THE UNCONDITIONED SPACES.

B. ACOUSTICAL DUCTWORK, PLENUM, AND CASING LINER
- B.1. PROVIDE INTERNALLY LINED DUCTWORK WHERE INDICATED ON DRAWINGS. ACOUSTICAL DUCT LINER SHALL BE JOHNS MANVILLE LINACOUSTIC RC DUCT LINER, OR EQUAL, MATTE FACE, SUITABLE FOR VELOCITIES FROM 1500 TO 4000 FPM, IN COMPLIANCE W/ UL723 AND UL181. SECURE LINER TO DUCTWORK WITH ADHESIVE AND MECHANICAL FASTENERS PER SMACNA DUCT LINER APPLICATION STANDARD.
- B.2. FIBERGLASS DUCT AND PLENUM INSULATION ARE TO BE APPLIED ONLY WITH MANUFACTURER'S APPROVED ADHESIVES, MASTICS AND MECHANICAL FASTENING DEVICES.

C. HEATING AND COOLING DUCTWORK LOCATED ON THE ROOF
- C.1. INSULATE WITH RIGID BOARD INSULATION WITH A MINIMUM R VALUE OF R-8 AS REQUIRED PER CODE. COAT EXTERIOR OF INSULATION WITH PERFORATED SHEET METAL LINER, SUITABLE FOR VELOCITIES FROM 1500 TO 4000 FPM, IN COMPLIANCE W/ UL723 AND UL181.
- C.2. WHERE INTERNAL INSULATION IS APPLIED, DUCT AND PLENUM SIZES AS SHOWN ON THE DRAWINGS SHALL BE INSIDE CLEAR DIMENSIONS.

D. SOFT FLEXIBLE DUCT
- *D.1. R-8 FOR DUCTWORKS INSTALLED IN THE OUTDOORS, SPACE BETWEEN ROOF AND INSULATED CEILING, SPACE UNDER ROOF WITH FIXED VENT OPENING TO OUTSIDE, UNCONDITIONED CRAWLSPACE, AND UNCONDITIONED SPACES, OR R-4.2 FOR DUCTWORKS INSTALLED WITHIN THE INDIRECTLY CONDITIONED SPACE SUCH AS THE SPACE BETWEEN THE CEILING AND INSULATED ROOF, WHERE THERE IS NO FIXED VENTS OR OPENINGS TO THE OUTDOORS OR TO THE UNCONDITIONED SPACES*
- D.2. FOIL FACED FIBERGLASS, OWENS CORNING TYPE 75 OR EQUAL, FLAME SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE DEVELOPMENT RATING OF NOT MORE THAN 50 UNLESS SHOWN OTHERWISE. ALL INSULATION SHALL BE EXTERNAL TO DUCTWORK.

E. DUCT LINER
- E.1. FOR EXTERIOR DUCTS: FIBERGLASS WITH FIRE RATED BLACK COATING, OWENS CORNING AEROFLEX TYPE 150.
- E.2. FOR OTHER LOCATIONS SHOWN ON DRAWINGS: AEROFLEX TYPE 150, AS ABOVE, EXCEPT 1 INCH THICK. FLAME SPREAD RATING OF NOT MORE THAN 25 AND SMOKE DEVELOPED RATING OF NOT MORE THAN 50.
- E.3. AN EPA-APPROVED BIOCIDE IN THE AIRSTREAM COATING ENABLES OWENS-CORNING DUCT LINERS TO RESIST FUNGAL OR BACTERIAL GROWTH WHEN SUBJECTED TO MICROBIAL ATTACK DESCRIBED IN ASTM C 665 AND STANDARD PRACTICES ASTM G 21 (FUNGUS TEST) AND G 22 (BACTERIA TEST).

4.05 TEMPERATURE CONTROL SYSTEM

A. ALL UNITARY HEATING OR COOLING SYSTEMS, INCLUDING HEAT PUMPS, NOT CONTROLLED BY A CENTRAL ENERGY MANAGEMENT CONTROL SYSTEM (EMCS) SHALL HAVE A SETBACK PROGRAMMABLE THERMOSTAT.
- A.1. SETBACK CAPABILITIES: ALL THERMOSTATS SHALL HAVE A CLOCK MECHANISM THAT ALLOWS THE BUILDING OCCUPANT TO PROGRAM THE TEMPERATURE SETPOINTS FOR AT LEAST FOUR PERIODS WITHIN 24 HOURS.

B. HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC RESISTANCE HEATERS SHALL HAVE CONTROLS:
- B.1. THAT PREVENT SUPPLEMENTARY HEATER OPERATION WHEN THE HEATING LOAD CAN BE MET BY THE HEAT PUMP ALONE; AND
- B.2. IN WHICH THE CUT-ON TEMPERATURE FOR COMPRESSION HEATING IS HIGHER THAN THE CUT-ON TEMPERATURE FOR SUPPLEMENTARY HEATING, AND THE CUT-OFF TEMPERATURE FOR COMPRESSION HEATING IS HIGHER THAN THE CUT-OFF TEMPERATURE FOR SUPPLEMENTARY HEATING.

C. ALL UNITARY SINGLE ZONE, AIR CONDITIONERS, HEAT PUMPS, AND FURNACES, THE THERMOSTAT SHALL COMPLY WITH THE REQUIREMENTS CALIFORNIA ENERGY COMMISSION, T-24, PART 6, REFERENCE JOINT APPENDIX JA5, ALSO KNOWN AS THE OCCUPANT CONTROLLED SMART THERMOSTATS, WHICH ARE CAPABLE OF RECEIVING DEMAND RESPONSE SIGNALS IN THE EVENT OF GRID CONGESTION AND SHORTAGES DURING HIGH ELECTRICAL DEMAND PERIODS.

D. CONTRACTOR SHALL POST IN THE OCCUPIED SPACE TYPEWRITTEN INSTRUCTIONS ON OPERATION OF ALL CONTROLS.

4.06 SEISMIC RESTRAINTS AND BRACING

A. ALL HVAC EQUIPMENT, DUCTWORK, PIPING AND WIRING CONDUITS SHALL BE INSTALLED TO MEET THE LATERAL BRACING REQUIREMENTS FOR THE APPLICABLE SEISMIC ZONE. PROVIDE SEISMIC RESTRAINTS IN ACCORDANCE WITH SEISMIC HAZARD LEVEL (SHL) A OF THE "SEISMIC RESTRAINT MANUAL: GUIDELINES FOR MECHANICAL SYSTEMS" DATED 2009, AS PUBLISHED BY S.M.A.C.N.A. AND ALSO IN ACCORDANCE WITH APPLICABLE LOCAL BUILDING CODES.

B. ALL ROOFTOP EQUIPMENT SHALL HAVE PROPER ANCHORING AND RESTRAINT SYSTEMS AND SHALL BE SECURED TO A ROOF CURB, EQUIPMENT PAD, OR OTHER STRUCTURAL MEMBER TO PREVENT LATERAL, VERTICAL, OR OVERTURNING MOVEMENT WITHOUT SACRIFICING ANY RESILIENT VIBRATION ISOLATION REQUIREMENTS.

3.02 TESTING AND BALANCING (SEE ALSO, SECTION 15990)

BALANCING OF THE AIR CONDITIONING SYSTEM WILL BE PERFORMED BY AN INDEPENDENT TEST AND BALANCING AGENCY. THE MECHANICAL CONTRACTOR SHALL COOPERATE WITH THE SELECTED TEST AND BALANCE AGENCY IN THE FOLLOWING MANNER:

A. PROVIDE SUFFICIENT TIME BEFORE FINAL COMPLETION DATE SO THAT TEST AND BALANCING CAN BE ACCOMPLISHED.

B. PROVIDE IMMEDIATE LABOR AND TOOLS TO MAKE CORRECTIONS WHEN REQUIRED WITHOUT UNDUE DELAY. INSTALL BALANCING DAMPERS AS REQUIRED BY TEST AND BALANCE AGENCY.

C. THE CONTRACTOR SHALL PUT ALL HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS AND EQUIPMENT INTO FULL OPERATION AND SHALL CONTINUE THE OPERATION OF SAME DURING EACH WORKING DAY OF TESTING AND BALANCING.

D. TESTING AND BALANCING AGENCY SHALL BE KEPT INFORMED OF ANY MAJOR CHANGES MADE TO SYSTEM DURING CONSTRUCTION AND SHALL BE PROVIDED WITH COMPLETE AS-BUILT DRAWINGS.

E. THE MECHANICAL CONTRACTOR SHALL INCLUDE THE COSTS OF DAMPERS, PULLEY AND BELT CHANGES IN HIS CONTRACT.

3.03 SPECIAL CONDITIONS

A. AIR CONDITIONING EQUIPMENT ON ROOF: THE EXACT EQUIPMENT LOCATIONS ON THE ROOF SHALL BE FIELD VERIFIED BY CONTRACTOR. THE INTENT OF THE DESIGN IS TO UTILIZE A MANUFACTURER-SUPPLIED ROOF CURB THAT WOULD SUPPORT THE NEW EQUIPMENT.

B. CONTRACTOR SHALL CONFORM TO MANUFACTURER'S PUBLISHED INSTALLATION AND ASSEMBLY GUIDE. INSTALLATION SHALL CONFORM TO STRUCTURAL ENGINEERS'S REQUIREMENTS.

C. STRUCTURAL SUPPORT FOR THE AIR CONDITIONING UNIT: THE OWNER SHALL ENGAGE A LICENSED STRUCTURAL ENGINEER TO DESIGN THE STRUCTURAL SUPPORT FOR THE AIR CONDITIONING UNIT ON THE ROOF. THE MECHANICAL CONTRACTOR IS TO COORDINATE ALL WORK WITH THE STRUCTURAL ENGINEER.

D. ALL REQUIRED PENETRATIONS OF EXISTING ROOFING SYSTEM SHALL BE MADE BY LANDLORD'S ROOFING CONTRACTOR AT OWNER'S EXPENSE AFTER NOTIFICATION TO LANDLORD FOR APPROVAL.

END OF SECTION

TESTING, ADJUSTING, & BALANCING SPECIFICATION

SECTION 159900 - TESTING, ADJUSTING AND BALANCING

1.00 - GENERAL

1.01 DESCRIPTION

THE TESTING AND BALANCING WORK WILL BE PERFORMED UNDER A SEPARATE CONTRACT FROM THE HVAC WORK. THE WORK DESCRIBED IN THIS SECTION SHALL BE PERFORMED BY AN INDEPENDENT TEST AND BALANCE AGENCY, SPECIALIZING IN TESTING AND BALANCING OF HVAC SYSTEMS AND SHALL BE A MEMBER OF AABC, NEBB, OR APPROVED EQUAL ORGANIZATION.

1.02 SCOPE OF WORK

A. TEST, ADJUST, AND BALANCE HOT, CHILLED, AND CONDENSER WATER SYSTEMS, AIR MOVING EQUIPMENT, AND AIR SUPPLY, RETURN, AND EXHAUST SYSTEMS AS HEREIN SPECIFIED.

B. EACH PIECE OF AIR CONDITIONING AND HEATING EQUIPMENT AND THE AIR DISTRIBUTIONS SYSTEMS SHALL BE TESTED AND ADJUSTED TO INSURE PROPER FUNCTIONING OF ALL CONTROL, PROPER DISTRIBUTION OF AIR, MAINTENANCE OF TEMPERATURE, ELIMINATION OF DRAFTS, NOISE AND VIBRATION, AND LEFT IN FIRST CLASS OPERATING CONDITION. THE AIR SYSTEM SHALL BE READJUSTED IF REQUIRED FOR COMFORT OF EACH ROOM.

C. THE MECHANICAL CONTRACTOR WILL MAKE ANY CHANGES IN THE PULLEYS, BELTS, DAMPERS, VANES, BAFFLES AND OTHER BALANCING DEVICES REQUIRED FOR CORRECT BALANCE OF SYSTEM AS RECOMMENDED BY T&B AGENCY AND TO THE SATISFACTION OF THE OWNER.

1.03 SUBMITTALS

A. PROVIDE (1) HARD COPY & (1) SOFT COPY OF TEST AND BALANCE REPORT TO THE OWNER FOR REVIEW AND APPROVAL, LETTER SIZE, 3-RING BINDER MANUAL COMPLETE WITH INDEX PAGE AND INDEXING TABS. THE REPORT SHALL INCLUDE A SET OF REDUCED DRAWINGS WITH AIR OUTLETS AND EQUIPMENT IDENTIFIED TO CORRESPOND WITH THE MECHANICAL PLANS.

B. THE CERTIFIED TAB REPORTS SHALL INCLUDE INSTRUMENT TYPE AND MAKE, SERIAL NUMBER, DATES OF USE, AND DATES OF CALIBRATION. INSTRUMENTS USED FOR TESTING AND BALANCING MUST HAVE BEEN CALIBRATED WITHIN A PERIOD OF SIX (6) MONTHS AND CHECKED FOR ACCURACY PRIOR TO START OF WORK.

2.00 EXECUTION

2.01 EXAMINATION

A. EXAMINE THE CONTRACT DOCUMENTS TO BECOME FAMILIAR WITH PROJECT REQUIREMENTS AND TO DISCOVER CONDITIONS IN SYSTEMS' DESIGNS THAT MAY PRECLUDE PROPER TAB OF SYSTEMS AND EQUIPMENT.

B. EXAMINE SYSTEMS FOR INSTALLED BALANCING DEVICES, SUCH AS TEST PORTS, GAGE COCKS, THERMOMETER WELLS, FLOW-CONTROL DEVICES, BALANCING VALVES AND FITTINGS, AND MANUAL VOLUME DAMPERS. VERIFY THAT LOCATIONS OF THESE BALANCING DEVICES ARE ACCESSIBLE.

C. EXAMINE THE APPROVED SUBMITTALS FOR HVAC SYSTEMS AND EQUIPMENT.

D. EXAMINE EQUIPMENT PERFORMANCE DATA INCLUDING FAN AND PUMP CURVES.

E. EXAMINE SYSTEM AND EQUIPMENT INSTALLATIONS AND VERIFY THAT FIELD QUALITY-CONTROL TESTING, CLEANING, AND ADJUSTING SPECIFIED IN INDIVIDUAL SECTIONS HAVE BEEN PERFORMED.

F. EXAMINE HVAC EQUIPMENT AND FILTERS AND VERIFY THAT BEARINGS ARE GREASED, BELTS ARE ALIGNED AND TIGHT, AND EQUIPMENT WITH FUNCTIONING CONTROLS IS READY FOR OPERATION.

G. EXAMINE TERMINAL UNITS SUCH AS VARIABLE-AIR-VOLUME BOXES, AND VERIFY THAT THEY ARE ACCESSIBLE AND THEIR CONTROLS ARE CONNECTED AND FUNCTIONING.

H. EXAMINE STRAINERS. VERIFY THAT STARTUP SCREENS ARE REPLACED BY PERMANENT SCREENS WITH INDICATED PERFORATIONS.

I. EXAMINE SYSTEM PUMPS TO ENSURE ABSENCE OF ENTRAINED AIR IN THE SUCTION PIPING.

J. EXAMINE OPERATING SAFETY INTERLOCKS AND CONTROLS ON HVAC EQUIPMENT.

K. REPORT DEFICIENCIES DISCOVERED BEFORE AND DURING PERFORMANCE OF TAB PROCEDURES.

L. OBSERVE AND RECORD SYSTEM REACTIONS TO CHANGES IN CONDITIONS. RECORD DEFAULT SET POINTS IF DIFFERENT FROM INDICATED VALUES.

2.02 PREPARATION

A. PREPARE A TAB PLAN THAT INCLUDES STRATEGIES AND STEP-BY-STEP PROCEDURES.

B. COMPLETE SYSTEM-READINESS CHECKS AND PREPARE REPORTS. VERIFY THE FOLLOWING:
- B.1. PERMANENT ELECTRICAL-POWER WIRING IS COMPLETE.
- B.2. HYDRONIC SYSTEMS ARE FILLED, CLEAN, AND FREE OF AIR.
- B.3. AUTOMATIC TEMPERATURE-CONTROL SYSTEMS ARE OPERATIONAL.
- B.4. EQUIPMENT AND DUCT ACCESS DOORS ARE SECURELY CLOSED.
- B.5. BALANCE, SMOKE, AND FIRE DAMPERS ARE OPEN.
- B.6. ISOLATING AND BALANCING VALVES ARE OPEN AND CONTROL VALVES ARE OPERATIONAL.
- B.7. CEILINGS ARE INSTALLED IN CRITICAL AREAS WHERE AIR-PATTERN ADJUSTMENTS ARE REQUIRED AND ACCESS TO BALANCING DEVICES IS PROVIDED.
- B.8. WINDOWS AND DOORS CAN BE CLOSED SO INDICATED CONDITIONS FOR SYSTEM OPERATIONS CAN BE MET.

2.03 GENERAL PROCEDURES

A. PREPARE TEST REPORTS FOR BOTH FANS AND OUTLETS. OBTAIN MANUFACTURER'S OUTLET FACTORS AND RECOMMENDED TESTING PROCEDURES. CROSSCHECK THE SUMMATION OF REQUIRED OUTLET VOLUMES WITH REQUIRED FAN VOLUMES.

B. FOR VARIABLE-AIR-VOLUME SYSTEMS, DEVELOP A PLAN TO SIMULATE DIVERSITY.

C. DETERMINE THE BEST LOCATIONS IN MAIN AND BRANCH DUCTS FOR ACCURATE DUCT-AIRFLOW MEASUREMENTS.

D. CHECK AIRFLOW PATTERNS FROM THE OUTDOOR-AIR LOUVERS AND DAMPERS AND THE RETURN- AND EXHAUST-AIR DAMPERS THROUGH THE SUPPLY-FAN DISCHARGE AND MIXING DAMPERS.

E. LOCATE START-STOP AND DISCONNECT SWITCHES, ELECTRICAL INTERLOCKS, AND MOTOR STARTERS.

F. VERIFY THAT MOTOR STARTERS ARE EQUIPPED WITH PROPERLY SIZED THERMAL PROTECTION.

G. CHECK DAMPERS FOR PROPER POSITION TO ACHIEVE DESIRED AIRFLOW PATH.

H. CHECK FOR AIRFLOW BLOCKAGES.

I. CHECK CONDENSATE DRAINS FOR PROPER CONNECTIONS AND FUNCTIONING.

J. CHECK FOR PROPER SEALING OF AIR-HANDLING-UNIT COMPONENTS.

K. VERIFY THAT THE AIR DUCT SYSTEMS ARE SEALED.

L. PERFORM THE FOLLOWING MINIMUM TEST AND BALANCE:
- L.1. TEST AND ADJUST SUPPLY, RETURN, AND EXHAUST FANS TO DESIGN REQUIREMENTS.
- L.2. CHANGE SHEAVES AND BELTS AS REQUIRED TO OBTAIN DESIGN AIR QUANTITIES.
- L.3. TEST AND RECORD MOTOR ELECTRICAL CHARACTERISTICS, RPM, SERVICE FACTOR, MEASURE VOLTAGE, FULL LOAD AMPERES AND CONNECTED LOAD AMPERAGE. CHECK AND RECORD STARTER HEATERS SIZES AND RATING, REPLACEMENT BELTS SIZES, ETC.
- L.4. MAKE PITOT TUBE TRAVERSE (MINIMUM OF 16 POINT) OF MAIN SUPPLY DUCTS AND OBTAIN DESIGN CFM AT FANS. SEAL ALL TEST HOLES WITH SUITABLE HOLE PLUGS.
- L.5. TEST AND RECORD SYSTEM STATIC PRESSURES, SUCTION, AND DISCHARGE.
- L.6. TEST AND ADJUST SYSTEM FOR DESIGN CFM RECIRCULATED AIR.
- L.7. TEST AND ADJUST SYSTEM FOR DESIGN CFM OUTSIDE AIR.
- L.8. TEST AND RECORD ENTERING AIR TEMPERATURES. (D.B. HEATING AND COOLING)
- L.9. TEST AND RECORD ENTERING AIR TEMPERATURES. (W.B. COOLING)
- L.10. TEST AND RECORD LEAVING AIR TEMPERATURES. (D.B. COOLING)
- L.11. TEST AND RECORD LEAVING AIR TEMPERATURES. (W.B. COOLING)
- L.12. ADJUST ALL MAIN SUPPLY AND RETURN AIR DUCTS TO PROPER DESIGN CFM.
- L.13. ADJUST ALL ZONES TO PROPER DESIGN CFM, SUPPLY, AND RETURN.
- L.14. TEST AND ADJUST EACH DIFFUSER, GRILLES, AND REGISTER TO WITHIN 10% OF DESIGN REQUIREMENTS.
- L.15. EACH GRILLE, DIFFUSER, AND REGISTER SHALL BE IDENTIFIED AS TO LOCATION AND AREA. SIZE, TYPE, FLOW FACTOR, AND MANUFACTURER OF DIFFUSERS, GRILLES, REGISTERS, AND ALL TESTED EQUIPMENT SHALL BE IDENTIFIED AND LISTED.
- L.16. READINGS AND TESTS OF DIFFUSERS, GRILLES, AND REGISTERS SHALL INCLUDE REQUIRED FPM VELOCITY AND TEST RESULTANT VELOCITY, REQUIREMENT CFM AND TEST RESULTANT CFM AFTER ADJUSTMENTS.
- L.17. IN COOPERATION WITH THE TEMPERATURE CONTROL CONTRACTOR'S REPRESENTATIVE, SETTING ADJUSTMENTS OF AUTOMATICALLY OPERATED DAMPERS TO OPERATE AS SPECIFIED, INDICATED, AND/OR NOTED. THE BALANCE AGENCY SHALL CHECK ALL CONTROLS FOR PROPER CALIBRATIONS AND LIST ALL CONTROLS REQUIRED ADJUSTMENT BY THE TEMPERATURE CONTROL CONTRACTOR.
- L.18. ALL DIFFUSERS, GRILLES, AND REGISTERS SHALL BE ADJUSTED TO MINIMIZE DRAFTS IN ALL AREAS.

M. ALL EQUIPMENT SHALL BE IDENTIFIED BY EQUIPMENT SERVICE TAG, MANUFACTURER, MODEL NUMBER, AND SERIAL NUMBER, MOTOR HORSEPOWER, MOTOR NAMEPLATE VOLTAGE, MOTOR RPM, ACTUAL AND DESIGN STATIC PRESSURE, ACTUAL OUTLET VELOCITY, ACTUAL CFM, DESIGN CFM.

N. EACH AIR OUTLET SHALL BE TAGGED AND IDENTIFIED WITH MANUFACTURER, MODEL NUMBER, SIZE, VELOCITY, CORRECTION FACTOR, ACTUAL CFM, DESIGN CFM.

O. TRAVERSE READING OF MAIN SUPPLY, RETURN AND OUTSIDE AIR DUCTS TO ESTABLISH TOTAL AIRFLOW QUANTITIES.

P. TEST AND RECORD TEMPERATURES FROM MAIN SUPPLY AIR TRUNK, MIXED AIR DURING THE FULL HEATING AND FULL COOLING CYCLE AND ECONOMIZER CYCLE.

2.04 DEFICIENCIES IN SYSTEM

BALANCING CONTRACTOR SHALL REPORT IN WRITING TO THE OWNER ANY DISCREPANCIES ON ITEMS NOT INSTALLED IN ACCORDANCE WITH CONTRACT DOCUMENTS, ALL DEFICIENCIES IN HVAC SYSTEM, AND OTHER DEFICIENCIES. THE OWNER WILL REIMBURSE THE BALANCING CONTRACTOR IF ADDITIONAL WORK IS REQUIRED FOR HIS/HER PHASE OF WORK.

2.05 WARRANTY

THE TEST AND BALANCE AGENCY SHALL INCLUDE AN EXTENDED WARRANTY OF 90 DAYS, AFTER COMPLETION OF WORK, DURING WHICH TIME THE OWNER, AT THEIR DISCRETION, MAY REQUEST A RECHECK OR RESETTING OF ANY OUTLET, SUPPLY AIR FAN, OR EXHAUST FAN AS LISTED IN TEST REPORT.

END OF SECTION

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ORLANDO
PHOENIX
SAN FRANCISCO

Seal:

ACIES ENGINEERING
400 N. McCarthy Blvd, ste 250
Milpitas, CA 95035
ph: (408) 522-5255
fx: (408) 522-5260
info@acies.net

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TEXAS REGISTRATION #: F-6950
EXPIRATION: 08/31/2025

STATE OF TEXAS
KEITH HUEN
153861
LICENSED PROFESSIONAL ENGINEER
EXPIRATION: 06/30/2026

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:

JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

MECHANICAL SPECIFICATIONS

Sheet #:

M0.3

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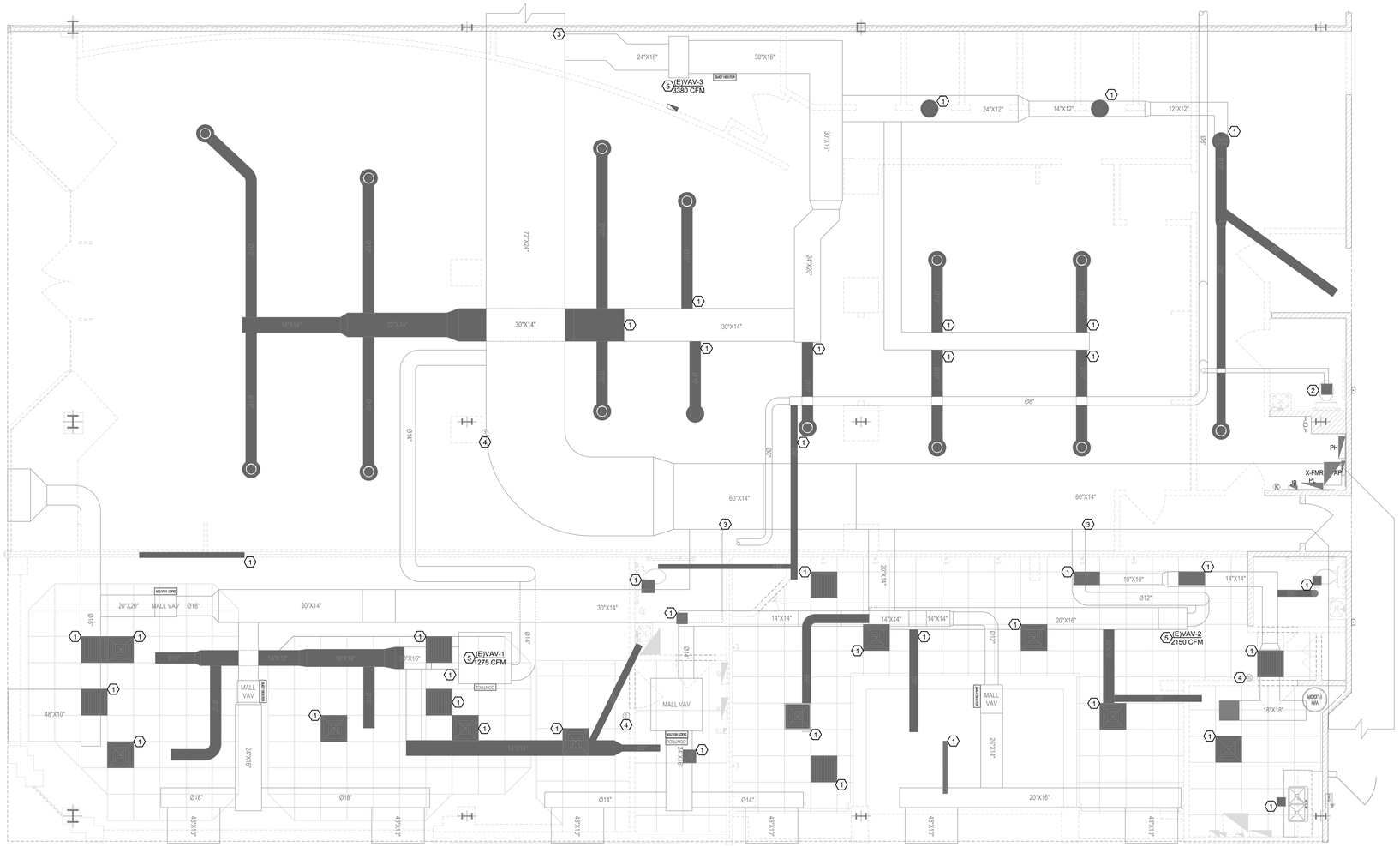

GENERAL NOTES

A. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR SITE INVESTIGATION PRIOR COMMENCEMENT OF WORK, AND SHALL INFORM ARCHITECT OF ANY DISCREPANCY.

DEMOLITION NOTE:

A. MECHANICAL CONTRACTOR TO COORDINATE WITH ONSITE PM REGARDING DEMOLITION AND REMOVAL OF ALL EXISTING UNUSED HVAC EQUIPMENT.

B. REFER TO ARCHITECTURAL DEMOLITION REFLECTED CEILING PLAN FOR ADDITIONAL INFORMATION.

C. REMOVE EXISTING CEILING GRILLES & DUCTWORK AS SHOWN SHADED.

D. ALL LANDLORD AND OTHER TENANT'S EXISTING DUCTWORKS SHALL REMAIN AS-IS. VERIFY LOCATION ON SITE.

E. REFER TO ELECTRICAL CONTRACTOR FOR SAFE-OFF AND DISCONNECT ALL MECHANICAL EQUIPMENT BEFORE DEMOLITION WORKS.

KEY NOTES (X)

1. REMOVE EXISTING AIR DEVICE AND ASSOCIATED DUCTWORK BACK TO MAIN. SEAL DUCT OPENING TO AIR TIGHT WHERE NECESSARY. VERIFY LOCATION ON SITE.
2. EXISTING CEILING MOUNTED EXHAUST FAN TO BE REMOVED. THE ASSOCIATED DUCTWORK TO REMAIN AND BE REUSED.
3. EXISTING SUPPLY MAIN TRUNK LINE TO REMAIN AND BE REUSED
4. REMOVE EXISTING VAV BOX THERMOSTAT. REFER TO M2.1 FOR THE NEW LOCATION.
5. EXISTING VAV BOX AND ITS SUPPLY DUCT TO REMAIN AND REUSE. CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION OF THE VAV BOX AND SUPPLY DUCTWORK.

MECHANICAL DEMOLITION PLAN | SCALE 1/4"=1'-0" | 1

NOTES | SCALE NONE | 2

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Seal:

ACIES ENGINEERING
400 N. McCarthy Blvd, ste 250
Milpitas, CA 95035
ph: (408) 522-5255
fx: (408) 522-5260
info@acies.net
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STATE OF TEXAS
KEITH HUEN
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LICENSED
PROFESSIONAL ENGINEER
EXPIRATION: 06/30/2026

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:

JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

MECHANICAL
DEMOLITION PLAN

Sheet #:

M2.0

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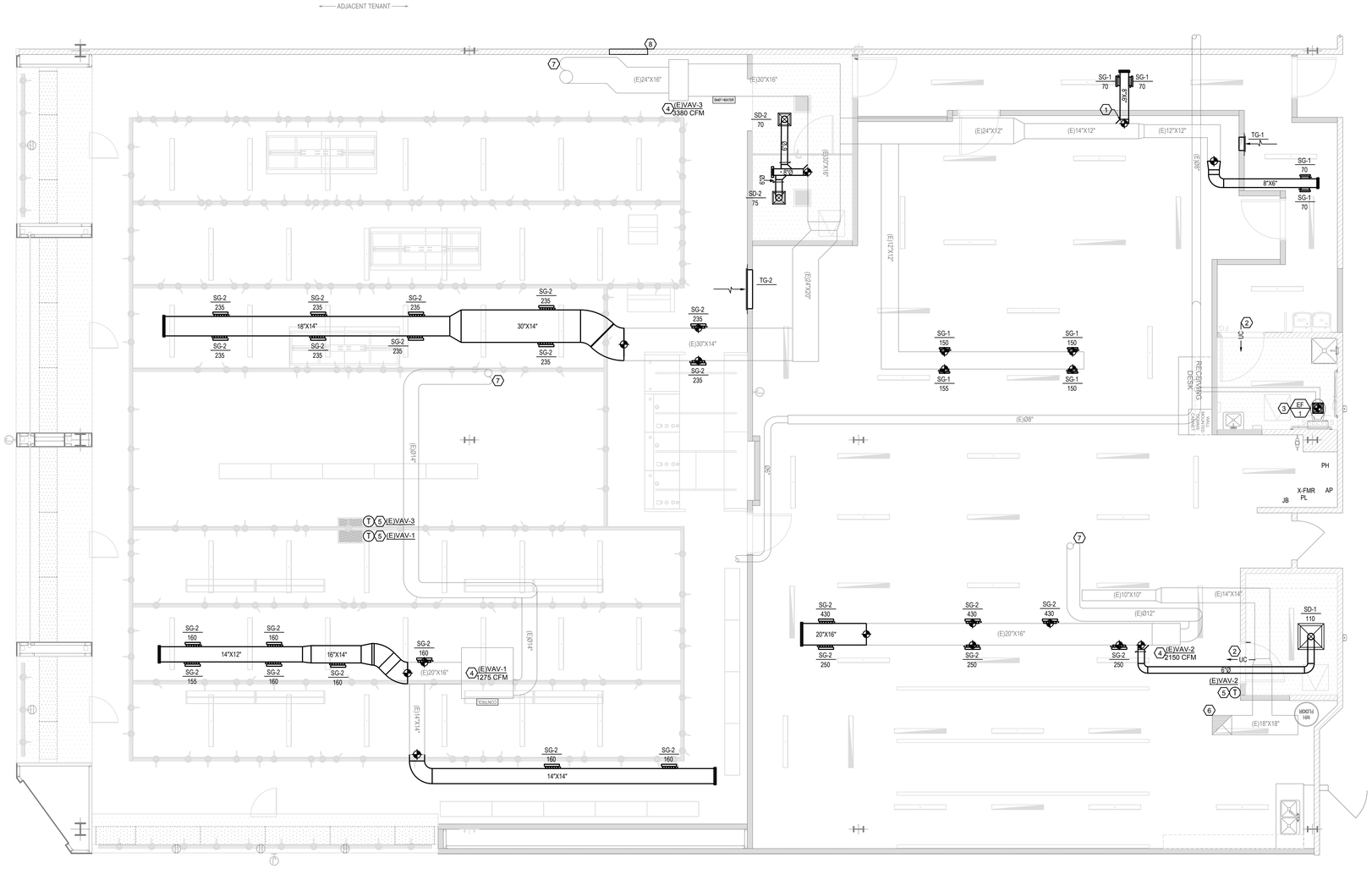

MECHANICAL FLOOR PLAN | SCALE 1/4"=1'-0" | 1

GENERAL NOTES

1. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR SITE INVESTIGATION PRIOR COMMENCEMENT OF WORK, AND SHALL INFORM ARCHITECT OF ANY DISCREPANCY.
2. COORDINATE DUCT ROUTING WITH EXISTING PIPING, CONDUITS AND STRUCTURAL MEMBERS. DUCTWORK INSULATION SHALL BE AT LEAST 3" FROM LIGHT HOUSINGS. OFFSET AS REQUIRED.
3. EXHAUST OUTLET TO BE MIN. 10 FEET AWAY FROM ALL BUILDING OPENINGS & OUTSIDE AIR INTAKE.
4. LABEL ALL ROOFTOP UNITS AND EQUIPMENT WITH EQUIPMENT TAG.
5. DO NOT ROUTE DUCTWORK OR PIPING ABOVE ELECTRICAL PANELS. VERIFY NO EXISTING DUCTWORK OR PIPING ARE INSTALLED ABOVE PANELS. RELOCATE AS NECESSARY.
6. MALL ROOMS/AREAS MUST HAVE A RETURN AIR PATH BACK TO HVAC UNIT SERVING THE SPACE. CONTRACTOR TO VERIFY FIELD CONDITION ON SITE AND COMPLY WITH THIS REQUIREMENT.
7. ALL EXPOSED DUCTWORK SHALL BE MOUNTED AT A MINIMUM 12'-0" A.F.F.
8. EXISTING DUCTWORK. IF NOT ALREADY AT MINIMUM HEIGHT, RAISE DUCT HEIGHT TO MINIMUM 12'-0" A.F.F.
9. PROVIDE OPPOSED BLADE DAMPER IN HARD LID CEILING OR ON DUCTWORK WHERE TYPICAL VOLUME DAMPER WOULD BE INACCESSIBLE.

KEY NOTES (X)

1. POINT OF CONNECTION. (TYPICAL)
2. MIN. 3/4" UNDERCUT DOOR.
3. NEW CEILING EXHAUST FAN. RECONNECT THE (E)EXHAUST DUCT TO THE NEW EXHAUST FAN. EXTEND DUCTWORK IF NEEDED.
4. EXISTING VAV BOX AND ITS SUPPLY DUCT TO REMAIN AND REUSE. CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION OF THE VAV BOX AND SUPPLY DUCTWORK.
5. PROVIDE NEW THERMOSTAT FOR VAV BOX AS INDICATED ON PLANS. COORDINATE TSTAT REQUIREMENTS AND CONNECTIONS TO LANDLORD BUILDING AUTOMATION SYSTEM WITH LANDLORD PRIOR TO INSTALLATION.
6. EXISTING EXHAUST RISER TO REMAIN. CONTRACTOR TO VERIFY THE EXACT LOCATION.
7. CONNECT TO (E)SUPPLY MAIN
8. PROVIDE A NEW TRANSFER AIR CUTOUT. COORDINATE THE LOCATION WITH THE MALL ENGINEER PRIOR TO INSTALLATION.

NOTES | SCALE NONE | 2

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CLEVELAND DENVER GLENDORA IRVINE ORLANDO PHOENIX SAN FRANCISCO
Seal:
ACIES ENGINEERING
400 N. McCarthy Blvd, ste 250
Milpitas, CA 95035
ph: (408) 522-5255
fx: (408) 522-5260
info@acies.net
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TEXAS REGISTRATION #: F-6950
EXPIRATION: 08/31/2025
STATE OF TEXAS KEITH HUEN 153861 LICENSED PROFESSIONAL ENGINEER
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A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY
Client:
JD SPORTS

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MECHANICAL
FLOOR PLAN

Sheet #:
M2.1

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DUCT CONSTRUCTION MINIMUM SHEET METAL THICKNESSES

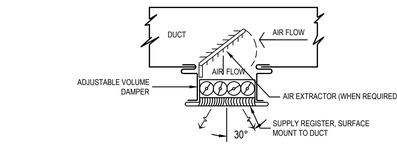
RECTANGULAR DUCTS

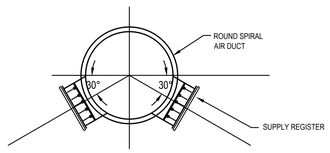
MAXIMUM SIZE (INCHES)	STEEL (MINIMUM THICKNESS, NOMINAL)	ALUMINUM (MINIMUM THICKNESS, NOMINAL)
THROUGH 12	0.022 INCH (26 GAGE, GALV.)	0.020 INCH (NO. 24 B&S GAGE)
13 THROUGH 30	0.028 INCH (24 GAGE, GALV.)	0.025 INCH (NO. 22 B&S GAGE)
31 THROUGH 54	0.034 INCH (22 GAGE, GALV.)	0.032 INCH (NO. 20 B&S GAGE)
55 THROUGH 84	0.040 INCH (20 GAGE, GALV.)	0.040 INCH (NO. 18 B&S GAGE)
OVER 84	0.052 INCH (18 GAGE, GALV.)	0.051 INCH (NO. 16 B&S GAGE)

ROUND DUCTS

MAXIMUM SIZE (INCHES)	SPIRAL SEAM DUCT	LONGITUDINAL SEAM DUCT	FITTINGS
	STEEL (MINIMUM THICKNESS, NOMINAL)	STEEL (MINIMUM THICKNESS, NOMINAL)	STEEL (MINIMUM THICKNESS, NOMINAL)
THROUGH 12	0.019 INCH (28 GAGE, GALV.)	0.022 INCH (26 GAGE, GALV.)	0.022 INCH (26 GAGE, GALV.)
13 THROUGH 18	0.022 INCH (26 GAGE, GALV.)	0.028 INCH (24 GAGE, GALV.)	0.028 INCH (24 GAGE, GALV.)
19 THROUGH 28	0.028 INCH (24 GAGE, GALV.)	0.034 INCH (22 GAGE, GALV.)	0.034 INCH (22 GAGE, GALV.)
29 THROUGH 36	0.034 INCH (22 GAGE, GALV.)	0.040 INCH (20 GAGE, GALV.)	0.040 INCH (20 GAGE, GALV.)
37 THROUGH 52	0.040 INCH (20 GAGE, GALV.)	0.052 INCH (18 GAGE, GALV.)	0.052 INCH (18 GAGE, GALV.)

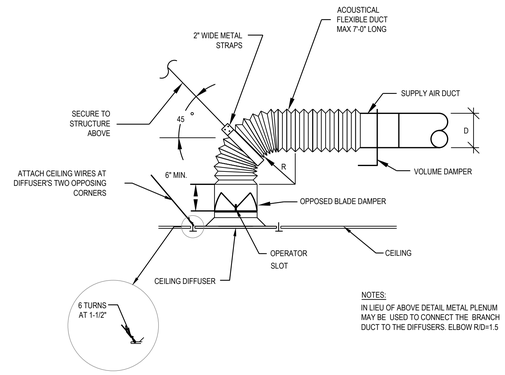
SHEET METAL DUCT GAGES — NOT TO SCALE — 4





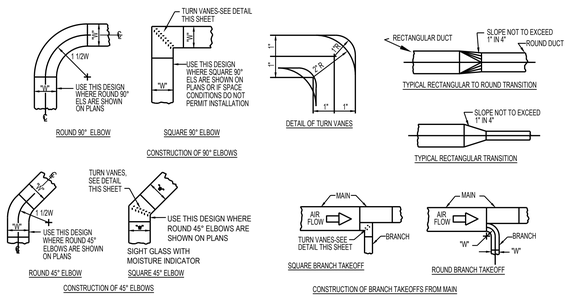
NOTES:
- REGISTER CONTAINS CONTROL AT GRILLE GRILLE
- FLANGES MUST COVER DUCT FLANGES
- SEE FLOOR PLAN DRAWINGS FOR DUCT SIZE AND LOCATION OF REGISTERS

DUCT MOUNTED DIFFUSER/REGISTER — 3



NOTES:
IN LIEU OF ABOVE DETAIL METAL PLENUM MAY BE USED TO CONNECT THE BRANCH DUCT TO THE DIFFUSERS. ELBOW R/D=1.5

CEILING DIFFUSER — NOT TO SCALE — 2



INSTALLATION NOTES

1. ALL DUCTS SHALL BE CONSTRUCTED AND ERECTED IN A NEAT AND WORKMANLIKE MANNER.
2. DUCTS SHALL BE CONSTRUCTED OF THE WEIGHTS, GAGES AND MATERIAL SHOWN IN THE SCHEDULE ON THESE DRAWINGS.
3. THE DIMENSION SHOWN FOR ALL DUCTS SHOWN IN PLAN GIVE THE WIDTH FIRST AND THEN THE HEIGHT.
4. DUCT RISERS SHOULD BE SUPPORTED BY ANGLES AT EVERY FLOOR.
5. AIR TURN SHALL BE INSTALLED IN ALL ABRUPT ELBOWS TO PREVENT TURBULENCE.
6. DUCTS SHALL BE SECURELY ATTACHED TO THE BUILDING CONSTRUCTION IN AN APPROVED MANNER.
7. DIVERGING TRANSITION PIECES SHALL BE MADE AS GRADUAL AS POSSIBLE.
8. INSTALL FIRE DAMPERS IN ACCORDANCE WITH UL 555.
9. ACCESS PANELS SHOULD BE PLACED BEFORE AND/OR AFTER EQUIPMENT INSTALLED IN THE DUCT.
10. DUCT AREA SHOULD NOT BE DECREASED MORE THAN 10 PERCENT WHEN OBSTRUCTIONS CANNOT BE AVOIDED, AND THEN A STREAMLINED FITTING SHOULD BE USED.
11. FLEXIBLE FABRIC CONNECTIONS (OR EQUAL) SHOULD BE USED ON BOTH INLETS AND OUTLETS OF ALL FANS AND AIR HANDLING UNITS.
12. JOINTS AND SEAMS OF SUPPLY DUCTS SHALL BE FASTENED SECURELY AND MADE AIR TIGHT.

DUCT CONSTRUCTION DETAIL — NOT TO SCALE — 5

SINGLE HANGER MAX LOAD

STRAP	WIRE OR ROD
1" X 22 GA. - 260 LBS	(12 GA.) 0.106" 80 LBS
1" X 20 GA - 260 LBS	(10 GA.) 0.135" 80 LBS
1" X 18 GA - 420 LBS	0.162" 160 LBS
1" X 16 GA. - 700 LBS	1/4" 270 LBS
1-1/2" X 16 GA. - 1100 LBS	3/8" 680 LBS

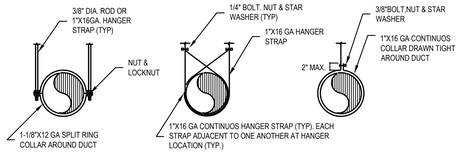
MINIMUM HANGER SIZES FOR ROUND DUCT

DIA. (IN)	MAXIMUM SPACING	WIRE DIA.	ROD	STRAP
6-10	12'	ONE 12 GA.	1/4"	1" X 22 GA.
11-18	12'	TWO 12 GA. OR ONE 8 GA.	1/4"	1" X 22 GA.
19-24	12'	TWO 10 GA.	1/4"	1" X 22 GA.

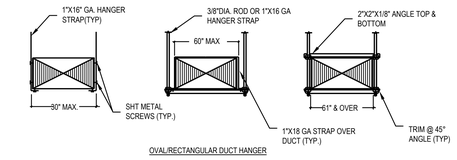
NOTES:
1. REFER TO SPECIFICATIONS FOR HANGER SPACINGS.
2. 2 ATTACHMENTS TO OVERHEAD STRUCTURE SHALL BE MADE IN ACCORDANCE WITH STRUCTURAL ENGINEERS REQUIREMENTS AND WEIGHT LIMITATIONS. ALL ATTACHMENT METHODS TO STRUCTURE SHALL BE SUBMITTED TO STRUCTURAL ENGINEER FOR REVIEW.

THESE TWO HANGERS ARE FOR DUCTS 25" & LARGER (MAY BE USED ON SMALLER DUCTS)

THIS HANGER IS FOR DUCTS 24" DIA & SMALLER



ROUND DUCT HANGER



OVAL/RECTANGULAR DUCT HANGER

DUCT SUPPORTS — NOT TO SCALE — 1

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400 N. McCarthy Blvd, ste 250
Milpitas, CA 95035
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11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

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Client:

JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

MECHANICAL DETAILS

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M6.1

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DEMOLITION NOTES

1. WHERE REMOVAL OF AN EXISTING WORK (I.E., OUTLET, CONDUIT, WIRING ETC.) WILL RESULT IN LOSS OF CIRCUIT CONTINUITY, THE REMAINING ISOLATED PORTIONS OF THE CIRCUIT SHALL BE RECONNECTED TO THE NEAREST AVAILABLE AND APPROPRIATE EXISTING OUTLETS.
2. WHERE EXISTING WIRING OR EQUIPMENT IS TO BE ABANDONED, IT SHALL BE REMOVED AND THIS WORK SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING:
   A. REMOVE WIRES AND CABLES BACK TO SOURCE
   B. REMOVE AND RELOCATE LIGHTING FIXTURES
   C. REMOVE DEVICES AND EQUIPMENT
   D. REMOVE EXPOSED CONDUITS
   E. CUT OFF & CAP ABANDONED CONDUIT; STUBS SHALL NOT EXTEND ABOVE FLOOR
   F. REMOVE OTHER ITEMS NOT INCLUDED IN ITEMS (A) THRU (D)
3. WHERE EXISTING WIRING, DEVICES AND EQUIPMENT ARE REMOVED, SUCH ITEMS SHALL NOT BE RE-USED UNLESS SPECIFICALLY DIRECTED AND APPROVED BY OWNER.
4. REFER TO DEMOLITION NOTES ON ARCHITECTURAL DRAWINGS, REGARDING EXISTING LIGHT FIXTURES.
5. REROUTE ALL CONDUITS THAT ARE TO REMAIN IN SERVICE AND WHICH CONFLICT WITH EQUIPMENT INSTALLATION.
6. WHEREVER EXISTING ELECTRICAL DEVICES, CONDUITS, CABLES, OR OTHER ITEMS CONFLICT WITH REMODEL WORK, WHETHER SHOWN OR NOT, RELOCATE THESE ITEMS.
7. PATCH AND PAINT TO MATCH EXISTING, IN ALL AREAS AFFECTED BY REMOVAL OF ELECTRICAL EQUIPMENT AND DEVICES.
8. DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL DEVICES IN EXISTING CEILINGS AND WALLS WHICH ARE REQUIRED TO BE DEMOLISHED, WHETHER SHOWN OR NOT. MAINTAIN CIRCUITS TO ALL REMAINING DEVICES.
9. REMOVE ALL EQUIPMENT, DEVICES, WIRING AND EXPOSED CONDUIT NOT BEING USED.
10. VERIFY ALL DEMOLITION WORK REQUIRED BY THE LANDLORD WITH LANDLORD'S REPRESENTATIVE PRIOR TO BID.
11. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY POWER DURING CONSTRUCTION PHASE OF PROJECT.
12. VERIFY IF ALL EXISTING ELECTRICAL EQUIPMENT MEETS ALL CODES AND MATCHES THE TOWNSHIP AND CHARACTERISTICS OF THE EQUIPMENT INDICATED IN THE DRAWINGS AND SPECIFICATIONS. REPLACE EXISTING EQUIPMENT WITH NEW, AS REQUIRED.

FIRE ALARM NOTES

1. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL REQUIRED FIRE ALARM DEVICES AND CONNECTION FOR A COMPLETE AND OPERABLE SYSTEM PER ALL LOCAL JURISDICTION AND CODE REQUIREMENTS ON A DESIGN BUILD BASIS.
2. FURNISH AND INSTALL ALL CODE COMPLYING AND LANDLORD APPROVED FIRE AND SMOKE DETECTION EQUIPMENT AND MATERIALS WITHIN TENANT'S PREMISES AND EXTERIOR CONDUIT AND FIRE ALARM CABLE TO THE NEAREST MALL CENTRAL FIRE DETECTION INTERFACE JUNCTION BOX, WORK SHALL ALSO INCLUDE AN OCCUPANT NOTIFICATION VOICE ALARM SYSTEM WITH SPEAKERS, STROBE DEVICES AND POWER MODULES.
3. PROVIDE MONITORING/DETECTION FUNCTIONS FOR THE FOLLOWING:
   A. SPRINKLER SYSTEM FLOW SWITCH AND VALVE SHUTOFF.
   B. SMOKE/FIRE DETECTION SYSTEM DEVICES IN TENANT INSTALLED AIR-HANDLING EQUIPMENT.
   C. ANY REQUIRED AREA SMOKE DETECTORS AND PULL STATIONS.
4. INSTALLED FA DEVICES, EQUIPMENT AND MATERIALS SHALL MATCH EXISTING AS THE MALL BASE BUILDING SYSTEM.
5. ANNUNCIATOR JUNCTION BOX MODULE SHALL BE THE FINAL CONNECTION OF FA CABLE TO MALL CENTRAL FIRE DETECTION/NOTIFICATION. FIELD VERIFY EXACT LOCATION WITH THE ARCHITECT.

SHEET INDEX

DWG NO.	DRAWING TITLE
E-001	ELECTRICAL GENERAL INFORMATION
E-003	ELECTRICAL SPECIFICATIONS
E-041	ELECTRICAL COMPLIANCE FORMS
E-101	ELECTRICAL LIGHTING PLAN
E-201	ELECTRICAL POWER PLAN
E-401	ELECTRICAL ONE LINE DIAGRAM AND PANEL SCHEDULES

GENERAL NOTES

1. CODE COMPLIANCE IS MANDATORY. NOTHING IN THESE DRAWINGS AND SPECIFICATIONS PERMITS WORK NOT CONFORMING TO THE REGULATORY REQUIREMENTS. WHERE WORK IS SHOWN TO EXCEED MINIMUM CODE REQUIREMENTS, COMPLY WITH DRAWINGS AND SPECIFICATIONS. ALL WORK AND MATERIALS SHALL COMPLY WITH THE LATEST RULES, CODES AND REGULATIONS, SEE SPECIFICATIONS PARAGRAPH 1.02.
2. ALL DEVICES AND EQUIPMENT INSTALLED OUTDOORS OR EXPOSED TO THE WEATHER SHALL BE OF WEATHERPROOF CONSTRUCTION.
3. ALL SINGLE AND GANGED PLATES SHALL BE THERMOPLASTIC AND SHALL MATCH THE DEVICE IN COLOR. COORDINATE DEVICE COLOR WITH THE ARCHITECT PRIOR TO INSTALLATION. GANG DEVICES AT GROUP LOCATIONS UNDER A SINGLE COVER PLATE.
4. THE ELECTRICAL PLANS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL OF THE ARCHITECTURAL DETAIL OR SPECIFICS OF ELECTRICAL CONSTRUCTION. TAKE ALL DIMENSIONS FROM THE ARCHITECTURAL DRAWINGS. PRIOR TO ROUGH-IN, CONTRACTOR TO REVIEW ALL SUBMITTALS OF EQUIPMENT PROVIDED BY OTHER TRADE AND MAKE NECESSARY ADJUSTMENTS.
5. ALL CONNECTIONS TO MECHANICAL EQUIPMENT SHALL BE MADE WITH A MINIMUM OF 24" OF WEATHERPROOF FLEXIBLE CONDUIT TO PREVENT SOUND AND VIBRATION TRANSMISSION TO THE STRUCTURE.
6. COORDINATE ALL MOTOR OVERLOADS AND/OR FUSES FURNISHED BY THIS CONTRACT WITH THE ACTUAL EQUIPMENT INSTALLED. SIZE OVERLOADS BASED ON MOTOR NAMEPLATE FULL LOAD CURRENT AND SERVICE FACTOR. FUSES FOR MOTOR AND TRANSFORMER CIRCUITS SHALL BE DUAL ELEMENT. FUSES FOR OTHER "NON-INRUSH" LOADS SHALL BE FAST ACTING. ALL FUSES SHALL BE CURRENT LIMITING CLASS RK5 OR CLASS L UNLESS OTHERWISE NOTED.
   FUSES SHALL BE PROVIDED WITH REJECTION TYPE FUSE HOLDERS.
7. GROUNDING CONDUCTORS ARE GENERALLY NOT SHOWN. GROUND AND BOND TOGETHER ALL EQUIPMENT, RACEWAYS, MOTORS, PANELBOARDS AND SWITCHBOARDS, ETC. IN ACCORDANCE WITH NEC (NATIONAL ELECTRICAL CODE) ARTICLE 250. BONDING OF ALL INTERIOR METAL PIPING SHALL BE IN ACCORDANCE WITH NEC ARTICLE 250 AS FOLLOWS:
   A. ALL INTERIOR METAL WATER PIPING SHALL BE BONDED TO ONE OR MORE GROUNDING ELECTRODES USED. THE BONDING JUMPER SHALL BE SIZED IN ACCORDANCE WITH NEC ARTICLE 250.
   B. INTERIOR METAL PIPING THAT MAY BECOME ENERGIZED (i.e. GAS PIPING, ETC.), SHALL BE BONDED TO ONE OR MORE GROUNDING ELECTRODES USED. THE BONDING JUMPER SHALL BE SIZED IN ACCORDANCE WITH NEC ARTICLE 250, USING THE RATING OF THE CIRCUIT THAT MAY ENERGIZE THE PIPING SYSTEM.
   C. INTERIOR METAL PIPING SYSTEM SEPARATED BY A PLUMBING EQUIPMENT (I.E. METER, WATER HEATER) SHALL BE PROVIDED WITH A BONDING JUMPER SIZED PER NEC ARTICLE 250. ALL GROUNDING ELECTRODE INSTALLED IN THE BUILDING (SINGLE OR MULTIPLE SERVICES) SHALL BE BONDED TOGETHER TO FORM A SINGLE GROUNDING ELECTRODE SYSTEM
8. INSTALL ALL WALL MOUNTED POWER, TELEPHONE AND DATA OUTLETS AT +15" A.F.F. TO BOTTOM OF THE BOX, UNLESS OTHERWISE NOTED. INSTALL ALL LIGHTING CONTROL SWITCHES, FIRE ALARM PULL STATIONS, AND WALL TELEPHONE JACKS AT +48" A.F.F. TO TOP OF THE BOX, UNLESS OTHERWISE NOTED.
9. CONDUCTOR PENETRATION OF FIRE RATED PORTIONS OF A STRUCTURE SHALL BE EFFECTIVELY SEALED AND SLEEVED WITH STEEL FLEX 3 FEET EACH SIDE OF THE PENETRATION, OR OTHER APPLIED METHODS.
10. FIRE ALARM CABLE SHALL BE INSTALLED IN CONDUIT WHERE REQUIRED BY CODE.
11. RECESSED LIGHT FIXTURES INSTALLED WHERE THERE ARE INSULATION IS REQUIRED TO BE I.C. RATED.
12. ALL LIGHT SWITCHES NOT WITHIN SIGHT OF THE LUMINAIRES SHALL BE EQUIPPED WITH A PILOT LIGHT, EVEN IF NOT SHOWN IN THE DRAWINGS.
13. CONTRACTOR TO PROVIDE ALL REQUIRED SEISMIC SUPPORT WIRES FOR THE LIGHTING FIXTURES. PENDANT FIXTURES SHALL BE PROVIDED WITH SEISMIC SUPPORT WIRES SO AS NOT TO HIT ANYTHING ON A 45 DEGREE SWING AND AS REQUIRED BY THE AHJ.
14. ALL EQUIPMENT SHALL BE UL LISTED AND SHALL BE INSTALLED AS PER THEIR LISTINGS. INSTALLATION INSTRUCTION FOR ALL UL LISTED EQUIPMENT SHALL BE MADE AVAILABLE TO THE BUILDING INSPECTOR AT THE TIME OF INSPECTION. ALL DEVICES AND EQUIPMENT INSTALLED OUTDOORS OR EXPOSED TO THE WEATHER SHALL BE OF WEATHERPROOF CONSTRUCTION. ALL RECEPTACLES SHALL COMPLY WITH THE LATEST EDITION OF THE NEC, EVEN IF NOT SPECIFICALLY IDENTIFIED IN THE DRAWINGS (GFCI, AFCI, TAMPER RESISTANT, HOSPITAL GRADE, ETC.)
15. CONTRACTOR TO SUBMIT LOAD SUMMARY (SERVICE CARE SHEET) TO THE ELECTRIC UTILITY COMPANY FOR COORDINATION TO THE EXISTING SERVICE LATERAL/ENTRANCE CONDUCTOR AND ASSOCIATED UTILITY TRANSFORMER.
16. STRUCTURAL STEEL FIREPROOFING THAT WERE DAMAGED DURING CONSTRUCTION SHALL BE PATCHED AND REPAIRED BY THIS CONTRACTOR.
17. CONTRACTOR SHALL VERIFY FIELD CONDITIONS BEFORE SUBMITTING BID.
18. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, CERTIFICATES, ETC. REQUIRED.
19. WHERE REQUIRED, CONTRACTOR SHALL OBTAIN AND PAY FOR BOTH ROUGH AND FINAL UNDER-WRITERS OR OTHER APPROVED INSPECTION AGENCY CERTIFICATES "ELECTRICAL INSPECTION". THESE CERTIFICATES SHALL BE PRESENTED WITH REQUEST FOR FINAL PAYMENT.
20. IT IS THE INTENT OF THESE PLANS TO PROVIDE A COMPLETE OPERATING ELECTRICAL SYSTEM. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL WIRING, EQUIPMENT, MATERIAL. ETC. REQUIRED, EXCEPT WHERE SPECIFICALLY NOTED AS BEING FURNISHED BY OTHERS. SHOULD THERE BE ANY QUESTIONS CONCERNING RESPONSIBILITY, THEY SHALL BE ADDRESSED TO ARCHITECT PRIOR TO BID. NO EXTRA CHARGES WILL BE ALLOWED.
21. ELECTRICAL SERVICE SHALL BE COORDINATED WITH THE EXISTING FIELD CONDITIONS.
22. CONSULT WITH CONTRACTORS FURNISHING HVAC EQUIPMENT TO VERIFY LOADS AND SECURE EXACT LOCATIONS (REFER TO HVAC DRAWINGS). WIRE AND CONNECT TO ALL HVAC EQUIPMENT. INCLUDING CONTROLS AND THERMOSTATS.
23. CONTRACTOR SHALL MAKE ALL FINAL CONNECTIONS TO ALL CONTROLS, OWNER-SUPPLIED EQUIPMENT, MECHANICAL AND PLUMBING EQUIPMENT AS REQUIRED.
24. CIRCUIT NUMBER ON THE DRAWINGS ARE FOR IDENTIFICATION ONLY AND DO NOT INDICATE THE POSITION ON THE PANEL BOARD. CONNECT THE CIRCUITS WITH THE LIGHTEST LOADS AND THE RECEPTACLE CIRCUITS NEAR THE TOP OF THE PANEL, AND THE MORE HEAVILY LOADED CIRCUITS NEAR THE BOTTOM. BALANCE ALL CIRCUITS EVENLY BETWEEN PHASE SO THAT FEEDER WIRES CARRY APPROXIMATELY EQUAL CURRENT. ALL PHASES MUST BE BALANCED WITHIN 10% OR LESS. CONTRACTOR SHALL REBALANCE IF NECESSARY.
25. BRANCH CIRCUIT CONDUCTORS SHALL NOT BE LESS THAN NO. 12AWG. THE INSULATION SHALL BE COLOR CODED. AND SHALL BE 600 VOLT. TYPE THHN/THWN COPPER.
26. CABLES IN HIGH TEMPERATURE AREAS SHALL HAVE INSULATION TYPE SUITABLE FOR THE TEMPERATURE. CABLES USED IN SPACES FOR ENVIRONMENTAL AIR SHALL CONFORM WITH APPLICABLE NEC REQUIREMENTS.
27. ALL WIRING USED IN RETURN OR DISCHARGE AIR PLENUMS SHALL BE PLENUM RATED OR INSTALLED PER METHODS APPROVED BY THE LATEST EDITION OF THE NEC FOR SUCH APPLICATION.
28. BRANCH CIRCUITS FOR POWER AND LIGHTING SHALL NOT BE LESS THAN #12 AWG. OR AS NOTED. WIRES ARE TO BE SIZED FOR THE APPROPRIATE VOLTAGE DROPS.
29. ALL EQUIPMENT AND LIGHT FIXTURES WIRING SHALL NOT BE LESS THAN #12 AWG TYPE SFF-2. AND FLEXIBLE CORDS SHALL NOT BE LESS THAN #12 AWG TYPE S.
30. CONTROL WIRING SHALL NOT BE LESS THAN #14 AWG UNLESS OTHERWISE NOTED.
31. HOMERUNS SHOWN ARE SCHEMATIC. CONTRACTOR MAY ORIGINATE HOMERUNS FROM DIFFERENT LOCATIONS. ALL WIRE INCLUDING HOMERUNS SHALL BE DELINEATED ON AS-BUILT DRAWINGS. ALL HOMERUN TO TENANT PANELS SHALL BE IN RIGID STEEL CONDUIT OR EMT.
32. ALL CONDUITS PASSING THROUGH PARTITIONS ARE TO BE APPROPRIATELY SLEEVED AND SEALED.
33. ALL SLAB PENETRATIONS SHALL BE INSTALLED AND FIRE RATED PER NATIONAL STATE AND LOCAL CODES.
34. DO NOT MAKE ANY CHANGES OR SUBSTITUTIONS WITHOUT SPECIFIC WRITTEN APPROVAL FROM THE ARCHITECT OR ENGINEER.
35. GUARANTEE ALL WORK, MATERIAL AND EQUIPMENT FOR A PERIOD OF ONE YEAR FROM THE DATE OF APPROVAL AND FINAL ACCEPTANCE.
36. THIS DESIGN IS BASED ON INITIAL DESIGN DATA. GENERAL CONTRACTOR TO SUPPLY AND INSTALL FEEDERS, FUSES AND CIRCUIT BREAKERS TO MATCH THE ACTUAL NAMEPLATE RATING OF ALL EQUIPMENT. THIS SHALL BE INCLUDED IN THE INITIAL BID PROPOSAL AND NO EXTRAS SHALL BE ENTERTAINED.
37. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT. MATERIALS AND LABOR TO COMPLETE ALL ELECTRICAL WORK IN A NEAT AND WORKMANLIKE MANNER AND IN ACCORDANCE WITH GOOD COMMERCIAL PRACTICE INCLUDING THE INSTALLATION OF ALL THE EQUIPMENT MATERIALS AND SYSTEMS AND THE FINAL CONNECTIONS TO THE OWNER'S EQUIPMENT AND FIXTURES AS REQUIRED BY THE OWNER. THE CONTRACTOR SHALL ALSO FURNISH TEMPORARY WIRING AND LIGHTING T0 PROVIDE A MINIMUM OF 25 FC IN WORK AREAS FOR USE OF ALL THE TRADES DURING CONSTRUCTION AND THE INSTALLATION OF THE OWNERS FIXTURES. THE CONTRACTOR IS RESPONSIBLE TO REMOVE ALL TEMPORARY WIRING UPON COMPLETION OF CONSTRUCTION OF ALL TRADES.
38. CONTRACTOR SHALL LABEL ALL JUNCTION BOX, OUTLETS, LIGHT SWITCH, ETC. WITH CIRCUIT NUMBER ON INTERIOR OF COVER PLATE.
39. CONTRACTOR SHALL PROVIDE SEISMIC RESTRAINTS AND SUPPORTS FOR ALL FLOOR AND CEILING MOUNTED ELECTRICAL EQUIPMENT TO RESIST EARTHQUAKE EFFECTS DETERMINED IN ACCORDANCE WITH THE BUILDING CODE.
40. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL ALL SUPPLEMENTARY SUPPORT, INCLUDING SUPPORT STEEL AS REQUIRED TO HANG ALL EQUIPMENT AND LIGHTING FROM THE EXISTING STRUCTURE IN ACCORDANCE WITH THE ARCHITECTURAL/STRUCTURAL SUPPORT AND LOADING CRITERIA.
41. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO PROVIDE FULLY DIMENSIONED COORDINATION DRAWINGS FOR ALL OF HIS RESPECTIVE WORK. THESE DRAWINGS MUST BE FULLY COORDINATED WITH ALL EXISTING CONDITIONS. ALL HVAC, PLUMBING, FIRE PROTECTION, ELECTRICAL, LIGHTING, STRUCTURAL AND ARCHITECTURAL SYSTEMS PRIOR TO PREPARING COMPOSITE MULTI DISCIPLINE COORDINATION DRAWINGS.
42. ALL DISCONNECTING MEANS AND EQUIPMENT INDICATED ON THE DRAWING SHALL BE IDENTIFIED BY NAMEPLATE IN COMPLIANCE WITH THE NEC 110-22.
43. ALL WIRING FOR THE EMERGENCY LIGHTING AND EMERGENCY SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEC ARTICLE 700.
44. THE WIRING METHODS AND MATERIALS INDICTED IN THE SPECIFICATIONS AND ON THE DRAWINGS SHALL BE INSTALLED AND CONNECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEC ARTICLE 300.
45. THE ELECTRICAL SERVICE AND DISTRIBUTION SYSTEM AS INDICATED ON THE RISER DIAGRAM AND MATERIALS INDICATED IN THE SPECIFICATIONS SHALL BE IN COMPLIANCE WITH THE REQUIREMENTS OF THE NEC ARTICLE 230.
46. ALL OVER CURRENT PROTECTION SHALL BE IN COMPLIANCE WITH THE NEC SECTION 240.
47. ALL GROUNDING REQUIREMENT S OF THE COMPLETE ELECTRICAL DISTRIBUTION SYSTEM AND AS INDICATED IN THE SPECIFICATIONS SHALL BE IN ACCORDANCE WITH NEC ARTICLE 250.
48. PRIOR TO ANY REQUIRED CUTTING AND PATCHING OF CONCRETE FLOOR AND/OR CUTTING OF ROOF. CONTRACTOR SHALL COORDINATE WITH BUILDING ENGINEER. SEAL ALL EXTERIOR AND FIREWALL PENETRATIONS.
49. FOR ALL LIGHTING FIXTURES MOUNTED IN HUNG CEILING THE GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL INDIVIDUAL SUPPORT AT EACH CORNER OF RECESSED LIGHTING TROFFER CONNECTED TO BUILDING STEEL ABOVE ALL CONDUIT AND MC CABLE MOUNTED ABOVE HUNG CEILING SHALL BE INDIVIDUALLY SUPPORTED IN THE SAME FASHION AS PER NEC REQUIREMENTS.
50. NO "DOUBLING UP" ON CIRCUIT BREAKERS OR CONDUCTOR SPLICES WITH IN PANEL BOARDS SHALL BE PERMITTED. THE CONTRACTOR SHALL PROVIDE JUNCTION BOXES ADJACENT TO PANELBOARDS AS REQUIRED TO SPLICE COMMON CIRCUITS CONNECTORS.
51. DO NOT SCALE FROM THESE DRAWINGS.
52. PLANS ARE PREPARED WITH REQUIRED BRANCH CIRCUITS INDICATED BY CIRCUITS NUMBERS. PROVIDE AND INSTALL ALL CONDUITS. CONDUCTORS, BOXES, MISCELLANEOUS FITTINGS, ETC. FOR A COMPLETE AND OPERABLE SYSTEM (HOME RUN SHOWN). BRANCH CIRCUIT INSTALLATION SHALL COMPLY WITH SPECIFICATIONS AND NEC.
53. NATIONALLY RECOGNIZED TESTING LABORATORY SHALL LIST ALL EQUIPMENT IN COMPLIANCE WITH 02 NEC ART. 110.3.
54. ALL CONDUITS SHALL MAINTAIN FIVE (5) FEET CLEARANCE IN FRONT OF HVAC SUPPLY AND RETURN.
55. CONTRACTOR TO PROVIDE CONDUIT EXPANSION COUPLINGS AND BONDING JUMPERS WHERE REQUIRED . REFER TO STRUCTURAL DRAWINGS FOR EXPANSION JOINT LOCATION.
56. PROVIDE IDENTIFIED HANDLE TIES FOR ALL MULTI-WIRE BRANCH CIRCUITS PER NEC 210.4(B).
57. THE WORKING SPACES ABOUT THE ELECTRICAL EQUIPMENT SHALL BE MAINTAINED PER NEC 110.26(A) AND THE UTILITY COMPANY REQUIREMENTS. THE DEDICATED EQUIPMENT SPACE SHALL BE MAINTAINED PER NEC 110.26(E).
58. THE CONTRACTOR FOR THIS WORK IS REQUIRED TO READ THE SPECIFICATIONS AND REVIEW DRAWINGS OF ALL DIVISIONS OF WORK AND IS RESPONSIBLE FOR THE COORDINATION OF THIS WORK AND THE WORK OF ALL SUBCONTRACTORS WITH ALL DIVISIONS OF WORK. IT IS THIS CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL SUBCONTRACTORS WITH A COMPLETE SET OF BID DOCUMENTS.

58\. NO ELECTRICAL CONDUITS, WIRING, OR OUTLETS SHALL BE INSTALLED WITHIN THE DEMISING WALL SEPARATING THE TENANTS. ALL ELECTRICAL OUTLETS, SWITCHES, AND ASSOCIATED WIRING SHALL BE LOCATED ON EITHER SIDE OF THE DEMISING WALL BUT NOT DIRECTLY WITHIN IT.

59\. A NOTICE PERIOD OF TWO DAYS SHOULD BE PROVIDED TO THE SHOPPING CENTER OPERATIONS TEAM FOR ANY INTENDED UTILITY INTERRUPTIONS. SHOPPING CENTER OPERATIONS TEAM SHOULD BE INFORMED ABOUT THE SPECIFIC DATE, TIME AND DURATION OF THE PLANNED INTERRUPTION, ALONG WITH THE AFFECTED AREAS OR ZONES.

60\. CONDUIT SUPPORTS SHALL BE SECURELY FASTENED TO STRUCTURAL ELEMENTS SUCH AS WALLS, COLUMNS AND CEILINGS. CONDUITS SHALL NOT BE SUPPORTED OR ATTACHED TO THE ROOF OR DECK STRUCTURE IN ANY MANNER.

LIGHTING FIXTURE SCHEDULE

TAG	DESCRIPTION	MANUFACTURER	(QTY)LAMP	VOLTS	WATTS	NOTES (SEE BELOW)
LT01	SURFACE MOUNTED 15" LED LOW PROFILE SQUARE DOWNLIGHT	MAXIM LIGHTING 58738WT	LED	120V	30W	
LT03	SUSPENDED 6' LINEAR TUBE	ATTAINLED AT-TPD-6-PDT-40-SL	LED	UNV 120/277V	44W	0-10V DIMMING
T	SUSPENDED TRACK WITH CONNECTIONS	CONTECH LIGHTING LT-[#]FT-B (VERIFY LENGTHS)	--	120V	--	PROVIDE WITH CURRENT LIMITER. SEE LIGHTING PLAN FOR RATINGS.
LT06	3" LED TRACK HEAD	ATTAINLED AT-HP-22-40-95-38-BK-J	LED	120V	22W	PHASE DIMMING
LT09	4' SUSPENDED LOW PROFILE LINEAR LED STRIP W/ LED T8 LAMP	ATTAINLED AT-LPS-T8-BL (LOW PROFILE STRIP) TCP LPT824B241K (LED T8 LAMP)	LED	UNV 120-277V	24.5W	
LT12	4' SUSPENDED LOW PROFILE LINEAR LED STRIP W/ LED T8 LAMP	ATTAINLED AT-LPS-T8-BL (LOW PROFILE STRIP) TCP LPT824B241K (LED T8 LAMP)	LED	UNV 120-277V	24.5W	
LT12E	SIMILAR TO TYPE 'LT12' EXCEPT WITH EM BATTERY PACK	ATTAINLED AT-LPS-T8-BL (LOW PROFILE STRIP) TCP LPT824B241K (LED T8 LAMP) IOTA ILBLP CP3-HE SD HV (EM BALLAST)	LED	UNV 120-277V	24.5W	
EM	DUAL HEAD EMERGENCY LIGHT WITH EM BATTERY PACK	BEGHELLI BBX-SE-HO-BLK	LED	UNV 120/277V	10.8W	FIXTURE OPERATES UPON LOSS OF AC POWER FOR MIN. 90 MINUTES IN COMPLIANCE WITH UL 924. PROVIDE SEPARATE STEM MOUNT, BOTTOM OF FIXTURE MOUNTED AT 11'2". FINISH PER ARCHITECT.
EM1	DUAL HEAD EMERGENCY LIGHT WITH EM BATTERY PACK	EXITRONIX LED-90	LED	UNV 120/277V	2.2W	FIXTURE OPERATES UPON LOSS OF AC POWER FOR MIN. 90 MINUTES IN COMPLIANCE WITH UL 924.
(E) K	EXISTING SQUARE FIXTURE	EXISTING FIXTURE	(E)	120V	(E)	REPLACE EXISTING T8 FLUORESCENT LAMPS WITH COMPATIBLE LED LAMPS.
X1	LED EXIT SIGN	COOPER LIGHTING EU-S-70-R	LED	UNV 120-277V	3.6W	- PROVIDE WITH EM BATTERY PACK OPTION - SEE LIGHTING PLAN FOR NUMBER OF FACES

NOTES:
1. ALL FIXTURES AND LAMPS ARE FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR, UON. CONTRACTOR TO COORDINATE WITH OWNER FOR REQUIRED VENDOR.
2. ALL FIXTURES (NEW OR EXISTING) SHALL BE PROVIDED WITH A DISCONNECT SWITCH PER C.E.C. REQUIREMENTS.
3. CONTRACTOR IS RESPONSIBLE FOR FIXTURE COMPATIBILITY WITH FINISH FLOOR / WALL / CEILING / T-BAR TYPE. COORDINATE WITH ARCHITECT PRIOR TO RELEASE OF ORDER.
4. CONTRACTOR TO PROVIDE ALL REQUIRED FIXTURE SEISMIC SUPPORT WIRES.
5. CONTRACTOR TO PROVIDE DIMMER CONTROL THAT IS COMPATIBLE TO THE FIXTURE DIMMING TYPE.
6. REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT.

LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
$a		20A, 120/277V, SPST SWITCH. LOWER CASE LETTER INDICATES SWITCHLEG CONTROLLED BY SWITCH. PROVIDE ONE PER SWITCHLEG.
$3		20A, 120/277V, THREE WAY SWITCH.
$P		20A, 120/277V, SPST SWITCH WITH PILOT LIGHT.
$BP		20A, 120/277V BY-PASS SWITCH, N.O. MOMENTARY SPST SWITCH.
$TM		TIMER SWITCH, DIGITAL, 20A, 120V.
$T		HP RATED TOGGLE SWITCH WITH THERMAL OVERLOADS, 1 HP, 120V, UON
		DIMMER SWITCH, VA RATING AS SHOWN AND AS REQUIRED.
ob		15A, 120/277V DUAL TECH (UON) VACANCY SWITCH SENSOR. LOWER CASE LETTER INDICATES SWITCHLEG CONTROLLED BY SWITCH. ONE LETTER = SINGLE ZONE TWO LETTERS = DUAL ZONE
		SECURITY CAMERA.
OS OS		CEILING / WALL MOUNTED DUAL TECH OCCUPANCY SENSOR (UON). H = HALLWAY COVERAGE TYPE. LOWER CASE LETTER INDICATES SWITCHLEG CONTROLLED BY SENSOR.
RC		ROOM CONTROLLER. LOWER CASE LETTER INDICATES SWITCHLEG CONTROLLED BY CONTROLLER.
PL		PLUG LOAD CONTROLLER. COMPATIBLE WITH ROOM CONTROLLER.
PP		POWER/RELAY PACK. LOWER CASE LETTER INDICATES SWITCHLEG CONTROLLED BY SWITCH.
ETC		EMERGENCY LIGHTING TRANSFER CONTROL DEVICE.
		DUPLEX RECEPTACLE, 120V, 20A. WALL MOUNTED UON. (WP= WEATHERPROOF, D=DEDICATED)
		DUPLEX RECEPTACLE, 20A, 120V, GFCI.
		DUPLEX RECEPTACLE, 20A, 120V, ABOVE COUNTER.
		QUADRUPLEX/DUPLEX RECEPTACLE, 20A, 120V, ISOLATED GROUND.
		QUADRUPLEX RECEPTACLE, 20A, 120V.
		QUADRUPLEX/DUPLEX CORD DROP RECEPTACLE, 20A, 120V.
		CEILING MOUNTED RECEPTACLE, 20A, 120V
		SPLIT-WIRED DUPLEX RECEPTACLE OUTLET, 15A, 120V.
		SPLIT-WIRED DOUBLE DUPLEX RECEPTACLE OUTLET, 15A, 120V.
		FLOOR BOX WITH DUPLEX RECEPTACLE, 20A, 120V
		SINGLE RECEPTACLE. SEE EQUIPMENT SCHEDULE AND NOTES FOR NEMA CONFIG.
		USB CHARGER AND TAMPER RESISTANT RECEPTACLE, 20A, 120V. ABOVE COUNTER, SHADED = GFI AS REQUIRED.
P		POWER POLE. SEE DETAIL FOR MORE INFORMATION.
		FUSED DISCONNECT SWITCH WITH DUAL ELEMENT FUSES PER EQUIPMENT NAME PLATE RATING.
		FUSED DISCONNECT SWITCH WITH MOTOR STARTER AND DUAL ELEMENT FUSES PER EQUIPMENT NAME PLATE RATING.
		NON-FUSIBLE DISCONNECT SWITCH.
M		MOTOR OUTLET AND FLEX CONNECTION TO MOTOR.
M		METER, METER SOCKET.
		CIRCUIT BREAKER.
		GROUNDING ELECTRODE SYSTEM: UFER, GROUND ROD, U.G. WATER PIPE, STRUCTURAL STEEL.
		PANELBOARD, SURFACE / RECESSED MOUNTED.
J		JUNCTION BOX: WALL MOUNTED, SIZE TO CODE, TAPE AND TAG WIRES.
J		JUNCTION BOX: CEILING MOUNTED, SIZE TO CODE, TAPE AND TAG WIRES.
S		SECURITY OUTLET: BOX + 1/2"C STUB TO CEILING SPACE.
FB		FIRE BELL. S.A.D. FOR MOUNTING HEIGHT.
T		LINE VOLTAGE THERMOSTAT. S.M.D.
		CABLE TV OUTLET.
		TELEPHONE / DATA / COMBINATION DATA AND TELEPHONE OUTLET.
CR		CARD READER.
		HVAC SMOKE DUCT DETECTOR, S.M.D.
FSD		FIRE SMOKE DAMPER, SMD
	A	AMPERE
	AIC	AMPERE INTERRUPTING CAPACITY
	AFF	ABOVE FINISHED FLOOR
	AHJ	AUTHORITY HAVING JURISDICTION
	AWG	AMERICAN WIRE GAUGE
	C	CONDUIT
	CEC	CALIFORNIA ELECTRICAL CODE
	CU	COPPER
	D	ONE WAY DISTANCE OF FEEDER OR BRANCH CIRCUIT
	(E) / (N) / (RL)	EXISTING / NEW / RELOCATED
	EF	EXHAUST FAN
	EM	EMERGENCY
	GC	GENERAL CONTRACTOR
	GFI	GROUND FAULT INTERRUPTER
	G, GND	GROUND
	HP	HORSEPOWER
	ISC	SHORT CIRCUIT CURRENT
	MCB	MAIN CIRCUIT BREAKER
	MLO	MAIN LUG ONLY
	NEC	NATIONAL ELECTRICAL CODE
	NL	NIGHT LIGHT
	P	POLE
	PH	PHASE
	PROVIDE	FURNISH, INSTALL, CONNECT
	(R) / (RR)	REMOVE / REMOVE AND RELOCATE
	RMC	RIGID METAL CONDUIT
	S.A.D.	SEE ARCHITECTURAL DRAWINGS
	S.M.D.	SEE MECHANICAL DRAWINGS
	S.P.D.	SEE PLUMBING DRAWINGS
	UON	UNLESS OTHERWISE NOTED
	V	VOLTS
	VA	VOLT AMPERE
	VD	VOLTAGE DROP
	VFD	VARIABLE FREQUENCY DRIVE
	WP	WEATHERPROOF
	+42	SUBSCRIPT LOCATED NEXT TO THE DEVICE MEANS 42"AFF TO CENTER OF DEVICE

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ACIES ENGINEERING
400 N. McCarthy Blvd, ste 250
Milpitas, CA 95035
ph: (408) 522-5255
fx: (408) 522-5260
info@acies.net
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TEXAS REGISTRATION #: F-6950
EXPIRATION: 08/31/2026

STATE OF TEXAS
WILSON LEE
90532
LICENSED PROFESSIONAL ENGINEER
EXPIRATION: 06/30/2026

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:

JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

ELECTRICAL GENERAL INFORMATION

Sheet #:

E-001

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ELECTRICAL SPECIFICATIONS

PART 1: GENERAL

1.01 SCOPE OF WORK
A. FURNISH AND INSTALL ALL MATERIALS AND EQUIPMENT AND PROVIDE ALL LABOR, TOOLS, TRANSPORTATION, SUPERINTENDENCE AND SERVICES REQUIRED AND NECESSARY TO COMPLETE THE WORK SHOWN ON THE CONTRACT DOCUMENTS, DRAWINGS, AND/OR SPECIFIED HEREIN. ALSO INCLUDE ALL OTHER WORK AND MISCELLANEOUS ITEMS, NOT SPECIFICALLY MENTIONED, BUT REASONABLY INFERRED FOR A COMPLETE INSTALLATION INCLUDING ALL ACCESSORIES AND APPURTENANCES REQUIRED FOR TESTING THE SYSTEM. IT IS THE INTENT OF THE DRAWINGS AND SPECIFICATIONS THAT ALL SYSTEMS BE COMPLETE, AND READY FOR OPERATION.

1.02 REGULATORY REQUIREMENT
A. CODE COMPLIANCE IS MANDATORY. NOTHING IN THESE DRAWINGS AND SPECIFICATIONS PERMITS WORK NOT CONFORMING TO THESE CODES. WHERE WORK IS SHOWN TO EXCEED MINIMUM CODE REQUIREMENTS, COMPLY WITH DRAWINGS AND SPECIFICATIONS. ALL WORK AND MATERIALS SHALL COMPLY WITH THE LATEST RULES, CODES AND REGULATIONS, INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
1. OCCUPATIONAL SAFETY AND HEALTH ACT STANDARDS (OSHA),
2. 2020 NATIONAL ELECTRICAL CODE
3. 2021 INTERNATIONAL EXISTING BUILDING CODE
4. 2021 INTERNATIONAL MECHANICAL CODE
5. 2021 INTERNATIONAL PLUMBING CODE
6. 2021 INTERNATIONAL FIRE CODE
7. 2021 INTERNATIONAL ENERGY CONSERVATION CODE
8. LOCAL UTILITY COMPANIES
9. NFPA #101: LIFE SAFETY CODE.
10. STATE FIRE MARSHAL
11. LOCAL UTILITY COMPANIES
12. LANDLORD REQUIREMENTS

ANY OTHER LOCAL CODES, ORDINANCES AND JURISDICTIONS.

1.03 LICENSE, FEES, AND PERMITS
ELECTRICAL CONTRACTOR SHALL PAY FOR ALL LICENSES, PERMITS AND INSPECTION FEES REQUIRED BY THE AUTHORITY HAVING JURISDICTION AND SHALL ARRANGE FOR ALL REQUIRED INSPECTION OF ELECTRICAL WORK & ELECTRICAL EQUIPMENT (IN DE-ENERGIZED STATE IF REQUIRED BY THE AHJ).

1.04 SAFETY AND INDEMNITY
A. THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. NO ACT, SERVICE, DRAWING REVIEW OR CONSTRUCTION REVIEW BY THE OWNER, THE ENGINEERS OR THEIR CONSULTANTS, IS INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES, IN, ON, OR NEAR THE CONSTRUCTION SITE.

1.05 DRAWINGS AND SPECIFICATIONS
A. ALL DRAWINGS AND ALL DIVISIONS OF THESE SPECIFICATIONS SHALL BE CONSIDERED AS A WHOLE AND WORK OF THIS DIVISION SHOWN ANYWHERE THEREIN SHALL BE FURNISHED UNDER THIS DIVISION. DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF EQUIPMENT AND WIRING. MOST DIRECT ROUTING OF CONDUITS AND WIRING IS NOT ASSURED. EXACT REQUIREMENTS SHALL BE GOVERNED BY CONDITIONS OF THE JOB. CONSULT ALL OTHER DRAWINGS IN PREPARATION OF THE BID. EXTRA LENGTHS OF WIRING OR ADDITION OF PULL OR JUNCTION BOXES, ETC., NECESSITATE BY SUCH CONDITIONS SHALL BE INCLUDED IN THE BID.

1.06 CONDITIONS AT SITE
A. VISIT SITE OF THE WORK, COMPARE IT WITH THE DRAWINGS AND SPECIFICATIONS AS TO THE CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED, ASCERTAIN AND CHECK ALL CONDITIONS AND ELEVATIONS AND TAKE ALL MEASUREMENTS WHICH MAY AFFECT THE WORK. NO ALLOWANCE SHALL SUBSEQUENTLY BE MADE FOR ANY EXTRA EXPENSE OR CLAIMS DUE TO FAILURE OR NEGLECT UNDER THIS REQUIREMENT TO MAKE SUCH EXAMINATION, INCLUDING EXAMINATION OF RESTRICTED WORKING CONDITIONS OR SUCH OTHER DIFFICULTIES VISUALLY OBSERVED DURING SITE VISIT. CONTRACTOR IS RESPONSIBLE FOR BECOMING COMPLETELY FAMILIAR WITH THE ARCHITECTURAL AND STRUCTURAL CONDITIONS AND LIMITATIONS WHICH WILL EXIST IN THE BUILDING AND TO PROVIDE ALL LABOR, TOOLS AND MATERIALS REQUIRED TO PRODUCE A COMPLETELY CONCEALED INSTALLATION AS INDICATED ON THE PLANS, SPECIFICATIONS, AND REQUIRED BY THE CODE.
THE ELECTRICAL CONTRACTOR SHALL EXAMINE THE SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS. NO EXTRA PAYMENT WILL BE ALLOWED FOR WORK REQUIRED BECAUSE OF THIS CONDITIONS, WHETHER SPECIFICALLY MENTIONED OR NOT.

1.07 WORKMANSHIP AND CONTRACTOR'S QUALIFICATIONS
A. ONLY QUALITY WORKMANSHIP WILL BE ACCEPTED. HAPHAZARD OR POOR INSTALLATION WILL BE CAUSE FOR REJECTION OF WORK.

1.08 SUBMITTALS
A. SUBMITTALS, UNLESS OTHERWISE NOTED, SHALL BE A SINGLE PACKAGE OF SIX (6) COPIES SUBMITTED TO OWNER FOR REVIEW. WORK SHALL NOT COMMENCE UNLESS SUBMITTALS HAVE BEEN REVIEWED FOR GENERAL CONFORMANCE BY THE ENGINEER OF RECORD..
B. SUBMIT CUTSHEETS, MATERIAL DATA, AND SHOP DRAWINGS, AS NOTED BELOW. FOR REVIEW WITHIN FIFTEEN (15) DAYS AFTER AWARD OF CONTRACT. SUBMITTALS REQUIRED AS FOLLOWS:
1. BASIC ELECTRICAL MATERIALS INCLUDING BUT IS NOT LIMITED TO:
A.)WIRING DEVICES - RECEPTACLES, SWITCHES, FACEPLATES
B.)WIRES, CONNECTORS, TAPES, SPLICES, TERMINATIONS, AND ACCESSORIES
C.)RACEWAYS AND ACCESSORIES
D.)DEVICE IDENTIFICATION
2. ELECTRICAL EQUIPMENT
A.)POWER DISTRIBUTION EQUIPMENT - PANELBOARDS, SWITCHBOARDS, SWITCHGEAR, DISCONNECT SWITCHES, CIRCUIT BREAKERS, TRANSFORMERS, GENERATORS, INVERTERS, UPS, POWER DISTRIBUTION UNITS, ETC.
B.)SERVICE ENTRANCE EQUIPMENT - BUS DUCT, TERMINATION CANS, METERED SWITCHBOARDS, ETC.
C.)SUPPORTS (SEISMIC & STRUCTURAL), HOUSEKEEPING CONCRETE PADS.
3. LIGHTING
A.)LIGHT FIXTURES AND SUPPORT HARDWARE/DEVICES. CONTRACTOR IS RESPONSIBLE FOR MOUNTING COMPATIBILITY OF LIGHTING FIXTURE WITH CEILING (I.E. TYPE OF T-BAR, HARD CEILING, SPECIALTY CEILING)
B.)LAMPS AND BALLASTS - INCLUDE BALLASTS CERTIFICATION. BALLAST SHALL HAVE LOCAL DISCONNECTS.
C.)POLES, CONCRETE POLE BASES.
D.)CONTROLS - OCCUPANCY SENSORS, PHOTOCELL, LIGHTING CONTACTORS, LIGHTING CONTROL PANELS, DIMMERS, ETC.
E.)FIXTURE AND ASSEMBLY WATTAGES
C. SUBMIT COMPLETE TEST REPORTS AND ANALYSIS FOR REVIEW WITHIN FIFTEEN (15) DAYS AFTER TESTING.
D. SUBMIT VERIFIED PUNCHLIST TWO (2) WEEKS AFTER ISSUANCE DATE. INDICATE PUNCHLIST ITEMS THAT HAVE BEEN COMPLETED BY CONTRACTOR. INCLUDE DATE FOR REPUNCH.

1.09 SUBSTITUTIONS
A. ONE OR MORE MAKES OF MATERIALS OR METHODS MAY HAVE BEEN SPECIFIED TO ESTABLISH THE STANDARD OF QUALITY, WORKMANSHIP, FINISH, AND DESIGN REQUIRED, BUT OTHER MATERIALS OR METHODS EQUAL OR BETTER IN QUALITY, WORKMANSHIP, FINISH, DESIGN, AND GUARANTEED PERFORMANCE, MAY BE SUBMITTED FOR REVIEW AND APPROVAL AS SUBSTITUTION. ALL SUBSTITUTIONS ARE SUBJECT TO REVIEW AND APPROVAL BY ARCHITECT, ENGINEER, AND OWNER.
B. SUBSTITUTIONS SHALL BE REQUESTED IN A WRITTEN FORM AND SHALL BE ACCOMPANIED WITH A SIGNED STATEMENT THAT PROPOSED SUBSTITUTION IS EQUAL, OR BETTER THAN SPECIFIED. ADDITIONAL DOCUMENTATION TO SUBSTANTIATED PROPOSED SUBSTITUTION MAY BE REQUIRED BY OWNER, ARCHITECT, AND ENGINEER. CONTRACTOR SHALL SUBMIT AS DIRECTED.
C. CONTRACTOR SHALL ACCOMPANY REQUEST FOR SUBSTITUTION LETTER WITH A COMPLETED CSI SUBSTITUTION FORM INCLUDE THE COMPARISON FOR FOLLOWING:
1. ELECTRICAL RATING, FINISHES, PERFORMANCE DATA,
2. SPARE PARTS
3. COSTS AND SCHEDULE
D. A WRITTEN SIGNED STATEMENT FROM THE GENERAL CONTRACTOR SHALL ACCOMPANY SUBSTITUTION REQUEST FORM ASSURING THAT:
1. HE HAS VERIFIED DIMENSIONS WITH PROJECT CONDITIONS AND HAS COORDINATED WITH OTHER TRADES. SUBSTITUTION DOES NOT AFFECT DIMENSIONS SHOWN ON DRAWINGS.
2. HE SHALL PAY AND BURDEN THE COSTS FOR CHANGES TO THE PROJECT INCLUDING RE-DESIGN, RE-ENGINEERING AND REVIEW OF SUBSTITUTION. ONLY ONE (1) ENGINEERING REVIEW TIME IS ALLOWED FOR EACH PRODUCT SUBSTITUTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL REVIEW TIME AND SHALL PAY ARCHITECT AND ENGINEER'S TIME AT THEIR PROFESSIONAL RATE SCHEDULE.
3. HE HAS CONFIRMED THAT THE PROPOSED SUBSTITUTION WILL HAVE NO ADVERSE AFFECT ON OTHER TRADES, THE CONSTRUCTION COST & SCHEDULE, OR SPECIFIED WARRANTY REQUIREMENTS.
4. HE HAS CONFIRMED THAT MAINTENANCE AND SERVICE PARTS WILL BE LOCALLY AVAILABLE FOR THE PROPOSED SUBSTITUTION.
E. COST SAVINGS RESULTING FROM SUBSTITUTION SHALL BE RETURNED TO THE CONTRACT OR THE OWNER IF THE SUBSTITUTION IS PERMITTED.
F. NO WORK INVOLVING MATERIALS SUBMITTED FOR SUBSTITUTION SHALL PROCEED UNTIL WRITTEN ACCEPTANCE IS RECEIVED FROM THE OWNER. THE OWNER IS THE FINAL JUDGE OF ACCEPTABILITY OF PREFERRED SUBSTITUTIONS.

1.10 COORDINATION
A. COORDINATE WORK WITH OTHER TRADES TO AVOID CONFLICT AND TO PROVIDE CORRECT ROUGH-IN AND CONNECTION FOR EQUIPMENT FURNISHED UNDER OTHER TRADES THAT REQUIRE ELECTRICAL CONNECTIONS. ELECTRICAL CONTRACTOR TO REVIEW THE SUBMITTALS OF EQUIPMENT PROVIDED BY OTHER TRADES AND CONFIRM ITS WIRING REQUIREMENT WITH WHAT IS SHOWN IN THE ELECTRICAL DRAWINGS. INFORM CONTRACTORS OF OTHER TRADES OF THE REQUIRED ACCESS TO AND CLEARANCES AROUND ELECTRICAL EQUIPMENT TO MAINTAIN SERVICEABILITY AND CODE COMPLIANCE.
B. VERIFY EQUIPMENT DIMENSIONS AND REQUIREMENTS WITH PROVISIONS SPECIFIED UNDER THIS SECTION. CHECK ACTUAL JOB CONDITIONS BEFORE FABRICATING WORK. REPORT NECESSARY CHANGES IN TIME TO PREVENT NEEDLESS WORK. CHANGES OR ADDITIONS, SUBJECT TO ADDITIONAL COMPENSATION, WHICH ARE MADE WITHOUT WRITTEN AUTHORIZATION AND AN AGREED PRICE, SHALL BE AT THE CONTRACTOR'S RISK AND EXPENSE.

1.11 CUTTING AND PATCHING
A. ALL CUTTING AND PATCHING REQUIRED FOR WORK OF THIS DIVISION IS INCLUDED HEREIN. COORDINATION WITH GENERAL CONTRACTOR AND OTHER TRADES IS IMPERATIVE. CONTRACTOR SHALL BEAR THE RESPONSIBILITY FOR AND THE ADDED EXPENSE OF ADJUSTING FOR IMPROPER HOLES, SUPPORTS, ETC.
B. CONTRACTOR IS RESPONSIBLE FOR CONCRETE/ASPHALT SAW-CUTTING, REMOVAL AND DISPOSAL. PROVIDE PATCHING TO MATCH REQUIRED FINISH GRADE.
C. PROVIDE ROOF PENETRATION AND ROOF PATCHING. ALL PENETRATIONS IN EXTERIOR WALL AND BASEMENT FLOOR/WALL SHALL BE PROVIDED WITH AN APPROVED WATERPROOFING SYSTEM/ASSEMBLY.
D. FIRESTOP ALL PENETRATIONS THROUGH RATED WALLS AND RATED FLOOR/CEILING ASSEMBLIES

1.12 ACCEPTANCE AND DEMONSTRATION
A. UPON COMPLETION OF THE WORK, AT A TIME TO BE DESIGNATED BY THE OWNER, THE CONTRACTOR SHALL DEMONSTRATE FOR THE OWNER THE OPERATION OF THE ELECTRICAL INSTALLATION, INCLUDING ANY AND ALL SPECIAL ITEMS INSTALLED BY HIM OR INSTALLED UNDER HIS SUPERVISION.
B. PROPERLY SET LIGHTING CONTROL PANELS, AUTOMATIC TIME SWITCHES, ETC. TO PERFORM SWITCHING OPERATIONS IN ACCORDANCE WITH SCHEDULES PROVIDED BY THE OWNER'S REPRESENTATIVE, AND DEMONSTRATE (USING THE MANUFACTURER'S OPERATING INSTRUCTIONS) HOW TO OVERRIDE CONTROLS AND/OR TEST TIME SWITCHES PROGRAMMING.

1.13 RECORD DRAWINGS AND EQUIPMENT DATA
A. MAINTAIN ONE SET OF CLEAN WORKING DRAWINGS AT THE JOB SITE AND ENTER DAILY SUCH "AS-BUILT" INFORMATION AS FEEDER AND SERVICE ROUTES, PULL BOX LOCATIONS AND CHANGES IN LAYOUT OR ARRANGEMENT WHICH OCCUR DURING CONSTRUCTION. DELIVER COMPLETED "RED LINE AS-BUILTS" DRAWINGS TO THE OWNER.
B. SUBMIT TO THE OWNER'S REPRESENTATIVE A SET OF "AS BUILT" DRAWINGS IN VELLUM AND CAD FILE. AS BUILT COMMENTS SHALL BE WRITTEN IN A LEGIBLE MANNER IN THE SAME STYLE AS THE CONTRACT DOCUMENTS. ALSO SUBMIT THREE COPIES OF DATA SHEETS OR OTHER CURRENT MANUFACTURERS' PUBLICATIONS FOR EACH ITEM OF ELECTRICAL EQUIPMENT FURNISHED FOR THE PROJECT INCLUDING AT LEAST THESE DATA:
1. TECHNICAL DESCRIPTION AND REPLACEABLE PARTS LIST.
2. PHYSICAL DESCRIPTION AND INSTALLATION INSTRUCTIONS.
3. USER'S MANUAL AND OPERATING INSTRUCTIONS.
4. MANUFACTURER'S WARRANTY.

1.14 CLEAN-UP
A. RID THE PREMISES OF SCRAP MATERIALS, TRASH AND DEBRIS BOTH DURING CONSTRUCTION AND AT COMPLETION OF THE PROJECT. LEAVE THE BUILDING AND SURROUNDING AREA IN A CLEAN AND ORDERLY CONDITION.

1.15 GUARANTEE
A. GUARANTEE THE INSTALLATION FREE FROM DEFECTS OF WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER DATE OF CERTIFICATION OF FINAL PAYMENT AND PROMPTLY REMEDY ANY DEFECTS DEVELOPING DURING THIS PERIOD, WITHOUT CHARGE.

1.16 TEMPORARY SERVICES
A. PROVIDE ADEQUATE AND SAFE TEMPORARY ELECTRICAL POWER AND LIGHTING THROUGHOUT THE CONSTRUCTION AND FINISHING OF THE PREMISES. IN ADDITION TO SPECIAL OR UNUSUAL REQUIREMENTS, PROVIDE AT LEAST THESE ITEMS:
1. THREE (3) 20-AMP CIRCUITS FOR CONSTRUCTION POWER TOOLS. PROVIDE GFI TEMPORARY CIRCUITS WITH COVERPLATES TO MEET OSHA REQUIREMENTS.
2. THREE OR MORE LIGHT STRINGS SUSPENDED APPROXIMATELY ONE FOOT BELOW THE HEIGHT OF FINISH CEILING WITH LAMPS SPACED NOT MORE THAN TWELVE FEET ON CENTERS. STRINGS SHALL BE RUN THE LENGTH OF THE STORE SPACE PARALLEL TO THE DEMISING WALLS, WITH ONE STRING WITHIN EIGHT FEET OF EACH WALL AND ONE (OR MORE) INTERMEDIATE STRING(S) ARRANGED TO LIMIT THE SPACING BETWEEN ROWS TO SIXTEEN FEET OR LESS.
3. FLOOD LIGHTING AND TASK LIGHTING FOR PAINTING AND OTHER FINISH WORK.
4. TEMPORARY POWER REQUIRED FOR TESTING OF BUILDING EQUIPMENT (ELEVATOR, ETC.)
B. WHERE SCOPE INCLUDES THE REMOVAL OF EXTERIOR LIGHTING, CONTRACTOR SHALL PROVIDE TEMPORARY EXTERIOR LIGHTING UNTIL THE NEW EXTERIOR LIGHTING HAS BEEN ACCEPTED BY THE OWNER. TEMPORARY EXTERIOR LIGHTING SHALL COMPLY WITH IESNA STANDARDS FOR SECURITY LIGHTING.
C. WHERE SCOPE INCLUDES THE DISABLING OF A FIRE ALARM SYSTEM, CONTRACTOR SHALL PROVIDE A FIRE WATCH. FIRE WATCH SHALL COMPLY WITH NFPA AND LOCAL FIRE MARSHAL REQUIREMENTS.
D. WHEN PERMANENT ELECTRICAL SERVICE IS OPERABLE, DISCONNECT AND REMOVE FROM THE PREMISES THE MATERIALS AND EQUIPMENT USED FOR TEMPORARY POWER AND LIGHTING. RESTORE MODIFICATIONS AND REPAIR DAMAGE CAUSED BY THE INSTALLATION, USE OR REMOVAL OF TEMPORARY SERVICE PROVISIONS.

PART 2: PRODUCTS

2.01 MATERIAL APPROVAL
A. ALL MATERIALS MUST BE NEW AND BEAR UNDERWRITER'S LABORATORIES LABEL. MATERIALS THAT ARE NOT COVERED BY UL TESTING STANDARDS SHALL BE TESTED AND APPROVED BY AN INDEPENDENT TESTING LABORATORY OR A GOVERNMENTAL AGENCY. MATERIAL NOT IN ACCORDANCE WITH THESE SPECIFICATIONS MAY BE REJECTED EITHER BEFORE OR AFTER INSTALLATION.
ALL EQUIPMENT AND MATERIALS SHALL BE INSTALLED AS PER THEIR LISTINGS.

2.02 BASIC ELECTRICAL MATERIALS
A. CONDUITS AND RACEWAYS
1. RIGID STEEL: HOT-DIPPED GALVANIZED.
2. INTERMEDIATE METAL CONDUIT (IMC): HOT-DIPPED GALVANIZED.
3. ELECTRICAL METALLIC TUBING (EMT): ELECTRO-GALVANIZED.
4. RIGID NON METALLIC CONDUIT (PVC SCHEDULE 40)
5. WIREWAY: CODE GAUGE STEEL, WITH KNOCKOUTS AND HINGED COVER, CORROSION RESISTANT GRAY BAKED ENAMEL FINISH.
6. PROVIDE FITTINGS AND ACCESSORIES APPROVED FOR THE PURPOSE EQUAL IN ALL RESPECTS TO THE CONDUIT OR RACEWAY. EMT CONNECTORS AND COUPLINGS SHALL BE STEEL SETSCREW TYPE INDOORS AND STEEL COMPRESSION TYPE IN WET LOCATIONS AND OUTDOORS.

B. WIRES AND CABLES
1. FOR POWER AND LIGHTING SYSTEM 600V OR LESS:
A.) FOR WIRE SIZES #8 AND SMALLER: USE INSULATED PRESSURE TYPE (WITH LIVE SPRING) RATED 105 DEGREES C, 600V, FOR BUILDING WIRING OR FIXTURES. FOR WIRE SIZE #6 AND LARGER: USE T&B OR EQUIVALENT COMPRESSION TYPE WITH 3M #33+ OR PLYMOUTH "SLIPKNOT GREY" TAPE INSULATION.
B.)CONDUCTOR: MINIMUM SIZE #12 AWG.
i. #12 AND #10 AWG SOLID OR STRANDED COPPER
ii. #8 AWG AND LARGER SHALL BE STRANDED COPPER.
C.)INSULATION TYPE:
i. #12 TO #1 AWG: THWN FOR WET OR UNDERGROUND AND THHN FOR DRY LOCATIONS.
ii. #1/0 THROUGH #4/0 AWG: XHHW (55 MILS).
iii. #250 MCM AND LARGER: XHHW (65 MILS).
iv. GROUNDING WIRE: TW.
v.) METAL CLAD (MC) CABLES: CONDUCTORS SHALL BE MADE FROM CLASS B COPPER. SIZES 14 AWG, 12 AWG,, AND 10 AWG MAY BE EITHER SOLID OR STRANDED. 8 AWG AND LARGER SHALL BE STRANDED. THE CONDUCTORS SHALL BE CONSTRUCTED WITH THHN/THWN-2 INSULATION RATED FOR 90 DEGREES, C, DRY OR WET AT 600 VOLTS MAX. A COPPER GROUNDING CONDUCTOR SHALL BE CABLED WITH THE PHASE CONDUCTORS. THE GROUND CONDUCTOR SHALL HAVE GREEN INSULATION. ARMOR SHALL BE INTERLOCKED ALUMINUM, HELICALLY FORMED AROUND THE CONDUCTOR ASSEMBLY AND 45% LIGHTER THAN STEEL MC CABLE. WHEN MC CABLE IS USED IN PATIENT CARE SPACES, THE METALLIC ARMOR SHALL ITSELF QUALIFY AND BE LISTED AS AN EQUIPMENT GROUNDING CONDUCTOR, IN ACCORDANCE WITH NEC 250.118.
2. FOR SIGNAL AND COMMUNICATIONS CIRCUIT:
A.)SPECIAL CABLES SHALL BE AS SPECIFIED ON DRAWINGS.
B.)CONDUCTORS FOR GENERAL USE SHALL BE STRANDED COPPER CONDUCTOR, #16 AWG MINIMUM, WITH THWN INSULATION FOR UNDERGROUND OR WET LOCATIONS AND THHN INSULATION FOR DRY LOCATIONS.
3. ACCEPTABLE PRODUCTS: GENERAL ELECTRIC, ANACONDA, OKONITE, PARANITE OR TRIANGLE PRODUCTS CONFORMING OR EXCEEDING APPLICABLE IPCEA STANDARDS.

C. OUTLET BOXES, JUNCTION AND PULLBOXES
1. OUTLET BOXES: 4" SQUARE X 1-1/2" DEEP (OR LARGER) GALVANIZED SHEET STEEL KO-TYPE WITH PLASTER RING AND COVER FOR GENERAL INTERIOR USE AND CAST METAL TYPE FS OR FD WITH MATCHING SCREW COVERS FOR EXTERIOR AND EXPOSED INTERIOR LOCATIONS (GASKETED IN DAMP OR WET LOCATIONS).
2. JUNCTION BOXES (FLOOR BOX NOT INCLUDED) SHALL BE SAME AS OUTLET BOXES UP TO 42 CU. IN. AND CODE-GAUGE STEEL IN LARGER SIZES WITH SURFACE OR FLUSH-TYPE SCREW-MOUNTED TRIMCOVERS, BOTH BOXES AND COVERS INHIBITOR-PRIMED AND PAINTED INSIDE OUT.
3. PULL BOXES SHALL BE SAME AS JUNCTION BOXES UNLESS INDICATED OTHERWISE ON THE DRAWINGS, WITH COVERS.
4. TELEPHONE OUTLET BOXES SHALL BE THE TYPE AND SIZE REQUIRED BY THE SERVING TELEPHONE COMPANY BUT NOT SMALLER THAN 4-11/16" SQUARE X 2-1/8" DEEP WITH SINGLE-GANG RING AND SIERRA #S-754N SPLIT PLATE BUSHING.
5. UNDERGROUND AND SITE JUNCTION BOXES, HANDHOLES, AND MANHOLES
A.)SHALL BE MADE UP OF PRECAST CONCRETE WITH TRAFFIC RATED STEEL COVERS. EXTENSIONS SHALL BE PROVIDED AS NECESSARY TO MEET REQUIRED COVERAGE FOR DUCT BANKS.
B.)PROVIDE 10" X 17' (MIN) FOR PULLBOXES, 36" X 60" (MIN) FOR HANDHOLES, AND 6'X8'X6' (MIN) MANHOLES.

D. WIRING DEVICES AND PLATES
1. WIRING DEVICES AND PLATES SHALL BE LISTED FOR SPECIFIC USE.
2. ALL POWER RECEPTACLES AND SWITCHES FOR GENERAL PURPOSE CIRCUITS SHALL BE NEMA SPECIFICATION GRADE, RATED AS FOLLOWS:
A.)GENERAL PURPOSE RECEPTACLES: NEMA 5-15R OR 5-20R
B.)LAB BENCH RECEPTACLES: NEMA 5-20R
C.)DEDICATED RECEPTACLES: NEMA 5-20R
3. SWITCHES: TWENTY (20) AMPERE.
A.)IN MECHANICAL AND ELECTRICAL EQUIPMENT ROOMS, ILLUMINATED LIGHT SWITCHES SHALL BE PROVIDED.
4. ALL GENERAL PURPOSE 20A, 120/250 V RECEPTACLES AND 120/277 V SWITCHES SHALL CONFORM TO NEMA WD-1 SPECIFICATIONS.
5. RECEPTACLES SHALL BE GFCI PROTECTED AND/OR AFCI PROTECTED AND/OR TAMPER RESISTANT AND/OR WEATHER RESISTANT AS REQUIRED PER NEC. EVEN IF NOT SPECIFICALLY CALLED FOR IN THIS DRAWING. PROVIDE WP COVER AS REQUIRED PER NEC.

6. UNLESS OTHERWISE INDICATED, WIRING DEVICES AND COVER PLATES SHALL BE FURNISHED AND INSTALLED IN COLOR AS DIRECTED BY THE ARCHITECT OR OWNER.
A.)OUTLETS SERVED FROM AN EMERGENCY POWER SYSTEM SHALL BE RED.
B.)OUTLETS SERVED FROM THE NORMAL POWER SYSTEM SHALL BE CONFIRMED WITH ARCHITECT.
C.)OUTLETS SERVED FROM AN ISOLATED GROUND SHALL BE ORANGE WITH ISOLATED GROUND (TRIANGULAR) MARKING.

E. CONDUIT HANGERS
1. FOR INDIVIDUAL CONDUIT RUNS NOT DIRECTLY FASTENED TO THE STRUCTURE, USE ROD HANGERS MANUFACTURED BY CADDY, UNISTRUT OR POWERSTRUT. FOR MULTIPLE CONDUIT RUNS, USE UNISTRUT OR POWERSTRUT TRAPEZE TYPE CONDUIT SUPPORT DESIGNED FOR MAXIMUM DEFLECTION NOT GREATER THAN 1/8".

2.03 PANELBOARDS
A. UNLESS OTHERWISE NOTED ACCEPTABLE MANUFACTURERS ARE EATON CUTLER HAMMER, SQUARE D, SIEMENS, GENERAL ELECTRIC, OR APPROVED EQUAL. ELECTRICAL EQUIPMENT ARE BASED ON THE FOLLOWING:
1. LIGHTING AND APPLIANCE PANELBOARDS - SQUARE D NF AND NQOD OR EQUAL
2. POWER PANELBOARDS - SQUARE D, I LINE OR EQUAL
A.)CONSTRUCTION: CABINETS SHALL BE OF CODE GAUGE, GALVANIZED STEEL, SURFACE OR FLUSH MOUNTED AS INDICATED. DOORS SHALL BE OF COLD-ROLLED STEEL WITH CONCEALED HINGES AND FLUSH CATCH AND LOCK. ALL PANELS SHALL BE KEYED ALIKE. PANELS LOCATED ADJACENT TO EACH OTHER SHALL HAVE IDENTICALLY SIZED ENCLOSURE AND TRIMS. MINIMUM PANEL WIDTH SHALL BE 20". FINISH EXPOSED PART WITH ONE COAT OF PRIMER AND ONE COAT OF LIGHT GREY ENAMEL SUITABLE FOR OVER PAINTING IN FIELD IF DESIRED.
B.)BUS BARS: PROVIDE GROUND BLOCK WITH FULL COMPLEMENT OF TERMINALS IN ADDITION TO INSULATED NEUTRAL BUS. FUTURE BREAKER SPACES SHALL HAVE COMPLETE PROVISION INCLUDING BUSSES AND CONNECTING HARDWARE. BUS MATERIAL SHALL BE COPPER OR ALUMINUM FOR INDOOR TYPE AND COPPER FOR OUTDOOR TYPE PANELBOARD.
C.)CIRCUIT BREAKERS: SHALL BE QUICK-MAKE, QUICK-BREAK, MOLDED CASE TYPE:
i. SHALL BE SQUARE D TYPE "QOB" LINE, BOLT-ON TYPE, WITH MINIMUM SYMMETRICAL INTERRUPTING CAPACITY AS SHOWN.
ii. PROVIDE MULTI-POLE UNITS WITH COMMON TRIP ELEMENT.
B. IDENTIFICATION: PROVIDE SCREWED-ON (NO ADHESIVES) BAKELITE OR PHOTO-ETCHED METALLIC NAMEPLATE IDENTIFICATION ON OUTSIDE OF EACH PANEL SHOWING PANEL DESIGNATION, VOLTAGE, PHASE, PANEL SOURCE AND MAIN FEEDER BREAKER SIZE (EXAMPLE: "PANEL LA1, 200A, 208Y/120V, 3PH, 4W, FED FROM 200A CB IN PANEL LA") IN MINIMUM 1/8" HIGH LETTERS. EACH PANEL SHALL CONTAIN A METAL-FRAMED CIRCUIT DIRECTORY INSIDE COVER, WITH PLASTIC PROTECTOR.
C. COMPLETE SHOP DRAWINGS ARE REQUIRED. DIMENSIONS SHALL MATCH FLOOR PLANS AND ELEVATIONS.

2.04 LOAD CENTERS (FOR RESIDENTIAL ONLY OR IF ALLOWED BY THE ENGINEER OF RECORD)
A. LOAD CENTERS TO BE FURNISHED AND INSTALLED AT LOCATIONS AS SHOWN ON THE DRAWINGS. LOAD CENTERS SHALL BE OF THE TYPE APPROVED, INDICATED, AND SPECIFIED HEREIN.
B. ENCLOSURE SHALL BE FABRICATED OF COLD ROLLED STEEL FOR NEMA 1 AND GALVANNEALED STEEL OR EQUIVALENT RUST-RESISTANT STEEL FOR NEMA 3R. INDOOR TYPE L ENCLOSURES SHALL HAVE A FLUSH FRONT, WITH FINISH TO BE AS SELECTED BY ARCHITECT. WHEN USED, OUTDOOR TYPE 3R ENCLOSURES SHALL HAVE A HASP TO SECURE THE COVER. A DIRECTORY LABEL SHALL BE PROVIDED WITH CIRCUITS IDENTIFIED AS INDICATED ON THE SCHEDULE
C. BUS BAR CONNECTIONS TO THE BRANCH CIRCUIT BREAKERS SHALL BE THE DISTRIBUTED PHASE TYPE AND SHALL ACCEPT PLUG-ON CIRCUIT BREAKERS. 300-400 A LOAD CENTERS SHALL ACCEPT A 150 A MAXIMUM BOLT-ON BREAKER IN ADDITION TO PLUG-ON TYPES. C. SHORT CIRCUIT CURRENT RATINGS AMPERE RMS SYMMETRICAL SHORT CIRCUIT RATINGS SHALL BE COORDINATED WITH PG&E.
D. CIRCUIT BREAKERS SHALL BE SQUARE D TYPE QO (PLUG-ON) THERMAL MAGNETIC TRIP OR APPROVED EQUAL, WITH AN INTEGRAL CROSSBAR TO ENSURE SIMULTANEOUS OPENING OF ALL POLES IN MULTI-POLE CIRCUIT BREAKERS. CIRCUIT BREAKERS SHALL HAVE AN OVERCENTER, TRIPFREE, TOGGLE-TYPE OPERATING MECHANISM WITH QUICK-MAKE, QUICK-BREAK ACTION AND POSITIVE HANDLE INDICATION. HANDLES SHALL HAVE ON, OFF, AND "TRIPPED" POSITIONS. IN ADDITION, TRIP INDICATION SHALL INCLUDE A VISI-TRIP INDICATOR APPEARING IN THE WINDOW OF THE CIRCUIT BREAKER CASE (THROUGH 125 AMPERES). CIRCUIT BREAKERS SHALL BE UL LISTED IN ACCORDANCE WITH UL STANDARD 489 WITH CURRENT RATINGS AS NOTED ON THE PLANS. INTERRUPTING RATINGS SHALL BE SELECTED TO PROVIDE THE REQUIRED LOAD CENTER SHORT CIRCUIT CURRENT RATING.
E. MANUFACTURERS: PANELBOARDS SHALL BE GENERAL ELECTRIC TYPE "AQ" OR TYPE "AE" OR EQUIVALENT PRODUCTS OF EATON, SQUARE-D OR SIEMENS-ITE.

2.05 SERVICE ENTRANCE EQUIPMENT
A. SERVICE ENTRANCE EQUIPMENT ARE SUBJECT TO THE REQUIREMENTS OF THE UTILITY COMPANIES PROVIDING SERVICES TO PROJECT SITE. EQUIPMENT SHOWN ON THE CONSTRUCTION DOCUMENTS IS A GENERAL GUIDELINE AND SHALL BE ADJUSTED TO MEET SPECIFIC UTILITIES REQUIREMENTS. CONTRACTOR TO PROVIDE METERING EQUIPMENT SUBMITTALS FOR UTILITY COMPANY REVIEW AND APPROVAL PRIOR TO ORDERING OF EQUIPMENT.
B. ENCLOSURES, PULL SECTIONS, AND TERMINATIONS SHALL BE TOTALLY ENCLOSED, DEAD FRONT, FREE-STANDING, FRONT AND REAR ALIGNED. ACCESSIBILITY SHALL BE FROM THE FRONT. THE EQUIPMENT SHALL BE NEMA TYPE 1 OR NEMA TYPE 3R NON-WALK-IN RAINPROOF. THE FRAMEWORK SHALL BE STEEL, SECURED TOGETHER TO SUPPORT ALL COVER PLATES, BUSSING, AND COMPONENT DEVICES DURING SHIPMENT AND INSTALLATION. ALL COVERS SHALL HAVE UTILITY SEALING PROVISIONS WHERE REQUIRED BY THE UTILITY.
C. THE ENTIRE SERVICE ENTRANCE EQUIPMENT SHALL BE SUITABLE FOR OPERATION AT THE SPECIFIED AVAILABLE FAULT CURRENT. THE EQUIPMENT SHALL BE LABELED TO INDICATE THE MAXIMUM AVAILABLE FAULT CURRENT RATING, TAKING INTO ACCOUNT THE STRUCTURE, BUSSING, MAIN DISCONNECTS, AND TENANT MAIN DISCONNECTS.
D. THE METERING EQUIPMENT THROUGH BUS SHALL BE TIN-PLATED ALUMINUM. THE BUSSING SHALL BE OF SUFFICIENT CROSS-SECTIONAL AREA TO MEET UL STANDARD 891 FOR TEMPERATURE RISE. THE THROUGH BUS SHALL EXTEND THE FULL LENGTH OF THE EQUIPMENT AND BE 100% RATED THROUGHOUT THE LINE-UP. TAPERED BUS IS NOT ACCEPTABLE. THERE SHALL BE PROVISIONS FOR FUTURE SPLICING OF ADDITIONAL SECTIONS FROM EITHER END. THE NEUTRAL BUS SHALL ALSO BE 100% RATED. THE GROUND BUS SHALL BE SIZED PER UL STANDARD 891, AND OF THE SAME MATERIAL AS THE THROUGH BUS. BUS CONNECTIONS SHALL BE BOLTED WITH GRADE 5 BOLTS AND CONICAL SPRING WASHERS.
E. UTILITY COMPARTMENTS SHALL BE ARRANGED IN HOT SEQUENCE. THE METERING COMPARTMENTS SHALL BE BARRIERED AND COVERS SHALL HAVE SEALING PROVISIONS. THE METERING COMPARTMENTS SHALL MEET EUSERC STANDARDS, OR THE APPLICABLE UTILITIES STANDARDS.
F. THE MAIN DISCONNECT SHALL BE CIRCUIT BREAKER. EQUIPMENT GROUND FAULT SHALL BE PROVIDED WHEN REQUIRED PER THE NATIONAL ELECTRICAL CODE (NEC), OR WHEN REQUESTED BY THE CUSTOMER.
G. METER SOCKETS SHALL BE RING TYPE METER SOCKETS SHALL BE RATED AS NOTED IN THE DRAWINGS. THE METER SOCKET SHALL HAVE PROVISIONS FOR A EUSERC APPROVED TEST BLOCK. THE METER SOCKET SHALL PLUG ON TO A VERTICAL BUS ASSEMBLY ON THE LINE SIDE AND BE CABLED FROM THE LOAD SIDE OF THE METER SOCKET TO THE LINE SIDE OF THE TENANT MAIN DISCONNECT.
H. BRANCH DEVICES - CIRCUIT BREAKERS SHALL BE COMMON TRIP FOR SIMULTANEOUS OPENING OF ALL POLES. BREAKERS SHALL HAVE AN OVER-CENTER, TRIP-FREE, TOGGLE-TYPE OPERATING MECHANISM WITH QUICK-MAKE, QUICK-BREAK ACTION AND POSITIVE HANDLE INDICATION. CIRCUIT BREAKERS SHALL BE UL LISTED IN ACCORDANCE WITH UL STANDARD 489 AND SHALL BE RATED FOR THE MAXIMUM VOLTAGE SPECIFIED AND WITH CONTINUOUS CURRENT RATINGS AS NOTED ON THE PLANS. THE CIRCUIT BREAKERS SHALL BE CURRENT LIMITING.
I. COMMERCIAL MULTI-METERING SHALL BE TOTALLY ENCLOSED, DEAD FRONT, FREE-STANDING, FRONT AND REAR ALIGNED. ACCESSIBILITY SHALL BE FROM THE FRONT. THE EQUIPMENT SHALL BE NEMA TYPE 1 OR NEMA TYPE 3R NON-WALK-IN RAINPROOF. THE FRAMEWORK SHALL BE STEEL, SECURED TOGETHER TO SUPPORT ALL COVER PLATES, BUSSING, AND COMPONENT DEVICES DURING SHIPMENT AND INSTALLATION. ALL COVERS SHALL HAVE UTILITY SEALING PROVISIONS WHERE REQUIRED BY THE UTILITY.

2.06 CIRCUIT BREAKERS:
A. CIRCUIT BREAKERS INTENDED FOR USE WITH AIR CONDITIONING, HEATING, AND REFRIGERATION EQUIPMENT HAVING MOTOR GROUP COMBINATIONS AND MARKED AS SUCH SHALL HAVE THE HACR MARKING. CIRCUIT BREAKERS INTENDED TO SWITCH LIGHTING ON A REGULAR BASIS SHALL BE LISTED AND MARKED WITH "SWD" TO INDICATE ITS SUITABILITY.
B. 480V CIRCUIT BREAKERS RATED AT 1000A AND ABOVE SHALL BE EQUIPPED WITH GROUND FAULT PROTECTION. THIRD PARTY GFI TESTING OF GFI CIRCUIT BREAKERS SHALL BE PROVIDED.
C. FOR CIRCUIT BREAKERS RATED 1200A AND ABOVE, COMPLY WITH NEC 240.87

2.07 INDIVIDUALLY MOUNTED MOTOR CONTROLLERS
A. FOR POLYPHASE MOTORS: MAGNETIC STARTER OR COMBINATION MOTOR CIRCUIT PROTECTOR AND MAGNETIC STARTER, WITH 3-LEG OVERLOAD PROTECTION. PROVIDE TWO INTERLOCK CONTACTS OF THE INTERCHANGEABLE OPEN-CLOSE TYPE. PROVIDE HAND-OFF-AUTOMATIC SELECTOR SWITCH, MOTOR RUNNING PILOT LIGHT AND RESET BUTTON IN COVER. CIRCUITS 300V AND OVER SHALL BE PROVIDED WITH 120V CONTROL TRANSFORMERS.
B. STARTERS FOR FRACTIONAL HORSEPOWER 120V MOTORS SHALL BE MANUAL TYPE UNLESS SHOWN OTHERWISE, EQUIPPED WITH BUILT-IN OVERLOAD PROTECTION.
C. ACCEPTABLE MANUFACTURERS: GENERAL ELECTRIC, SIEMENS, SQUARE D, EATON, AND ALLEN BRADLEY.

2.08 DISCONNECT SWITCHES
A. SAFETY SWITCHES: HEAVY DUTY TYPE, 480 OR 240V, HORSEPOWER RATED FOR MOTORS, FUSED OR NON-FUSED AS REQUIRED.
B. PROVIDE FUSE AS SHOWN IN CONSTRUCTION DOCUMENTS. MOUNT IN ENCLOSURE WITH NEMA RATING AS REQUIRED FOR THE SPECIFIC APPLICATION.
C. ACCEPTABLE MANUFACTURERS: GENERAL ELECTRIC, SQUARE D OR EATON

PART 3: EXECUTION

3.01 GENERAL
A. ELECTRICAL SYSTEM LAYOUTS INDICATED ON THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND SHALL BE FOLLOWED AS CLOSELY AS ACTUAL CONSTRUCTION AND WORK OF OTHER TRADES WILL PERMIT. GOVERN EXACT ROUTING OF CABLE AND WIRING AND THE LOCATIONS OF OUTLETS BY THE STRUCTURE AND EQUIPMENT SERVED. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS.
B. CONSULT ALL OTHER DRAWINGS, VERIFY SCALES AND REPORT ANY DIMENSIONAL DISCREPANCIES OR OTHER CONFLICTS WITH OWNER BEFORE SUBMITTING BID.
C. ALL HOME RUNS TO PANELBOARDS ARE INDICATED AS STARTING FROM THE OUTLET NEAREST THE PANEL AND CONTINUING IN THE GENERAL DIRECTION OF THAT PANEL. CONTINUE SUCH CIRCUITS TO THE PANEL AS THOUGH THE ROUTES WERE COMPLETELY INDICATED. TERMINATE HOMERUNS OF SIGNAL, ALARM, AND COMMUNICATION SYSTEMS IN A SIMILAR MANNER.
D. AVOID CUTTING AND BORING HOLES THROUGH STRUCTURE OR STRUCTURAL MEMBERS WHEREVER POSSIBLE. OBTAIN PRIOR APPROVAL OF OWNER AND CONFORM TO ALL STRUCTURAL REQUIREMENTS WHEN CUTTING OR BORING THE STRUCTURE IS NECESSARY AND PERMITTED.
E. FURNISH AND INSTALL ALL NECESSARY HARDWARE, HANGERS, BLOCKING, BRACKETS, BRACING, RUNNERS, ETC. REQUIRED FOR EQUIPMENT SPECIFIED UNDER THIS SECTION. INSTALLATION SHALL MEET SEISMIC 4 REQUIREMENTS.
F. ALL LIGHTING FIXTURES SHALL BE PROVIDED WITH REQUIRED SEISMIC SUPPORT WIRES.
G. PROVIDE NECESSARY BACKING REQUIRED TO INSURE RIGID MOUNTING OF OUTLET BOXES.
H. ELECTRICAL INSTALLATION IN PUBLIC LOCATIONS SHALL BE ACCESSIBLE AND INSTALLATION SHALL COMPLY WITH AMERICAN DISABILITIES ACT (ADA) REQUIREMENTS. ELECTRICAL INSTALLATION SHALL COMPLY WITH APPLICABLE CODES AS LISTED IN CONSTRUCTION DOCUMENTS.

3.02 WIRING METHODS
A. INSTALL ALL WIRING IN RACEWAY, OR USE MC CABLE WHERE APPROVED BY ALL APPLICABLE CODES AND REGULATIONS AND ONLY IF IT MEETS OWNERS/BUILDING STANDARDS AND GUIDELINES. SEE FLOOR PLAN NOTES. CONDUIT SHALL BE RIGID STEEL, IMC OR EMT AS FOLLOWS:
1. ABOVE GROUND: USE RIGID STEEL, IMC OR EMT.
2. WET LOCATIONS: RIGID STEEL OR IMC ONLY.
3. LOCATIONS SUBJECT TO MECHANICAL INJURY: RIGID STEEL OR IMC ONLY.
4. DRY LOCATIONS AND NOT SUBJECT TO MECHANICAL INJURY: EMT, IMC OR RIGID STEEL CONDUIT.
5. UNDERGROUND: USE RIGID STEEL AT LAST TRANSITION TO ABOVE GROUND.
C. USE FLEXIBLE CONDUITS OR MC CABLE IN THE FOLLOWING APPLICATIONS:
1. FINAL CONNECTIONS TO MOTOR.
2. FINAL CONNECTIONS INTO AND OUT OF THE TRANSFORMER.
3. FINAL CONNECTIONS TO VIBRATING EQUIPMENT.
4. INTER-CONNECTIONS BETWEEN ALL LIGHT FIXTURES (NOT TO INCLUDE HOMERUN FROM FIXTURE OR DEVICE TO PANELBOARD, WHICH MUST BE RIGID).
5. FINAL CONNECTIONS WHERE RIGID CONDUIT IS NOT PRACTICAL.
6. IN WALLS (FOR LIGHT SWITCHES AND 120V POWER RECEPTACLES AND HVAC CONTROL EQUIPMENT).
D. FLEXIBLE METALLIC CONDUIT OR MC CABLE MUST BE THE SAME SIZE AS THE RIGID CONDUIT TO WHICH IT IS CONNECTED.
E. THE CONNECTION TO OUTDOOR EQUIPMENT MUST BE WEATHERPROOF, I.E. LIQUIDTIGHT OR SEALTIGHT.
F. MINIMUM SIZE OF CONDUIT SHALL BE 1/2" FOR INDIVIDUAL LIGHTING FIXTURE CONNECTIONS OR TO INDIVIDUAL LIGHT SWITCHES IF APPROVED BY ALL APPLICABLE CODES. MINIMUM SIZE FOR ALL OTHER LOCATIONS SHALL BE 3/4". IF HVAC CONTROL WIRING IS REQUIRED TO BE RUN IN CONDUIT, IT SHALL BE A 3/4" MINIMUM, UNLESS OTHERWISE NOTED ON DRAWINGS. ALL IN/UNDER FLOOR CONDUITS SHALL BE 3/4" MINIMUM SIZE.
G. USE OF RIGID NON METALLIC CONDUIT IS LIMITED TO OUTDOOR, UNDERGROUND UP TO THE LAST PULLBOX PRIOR TO ENTERING OR TRANSITIONING TO ABOVE GROUND. TRANSITION SHALL BE TAPED WRAPPED RIGID STEEL CONDUIT.

3.03 INSTALLATION OF CONDUITS
A. GENERAL:
1. RUN ALL CONDUITS CONCEALED UNLESS OTHERWISE NOTED OR SHOWN. RUN ALL CONDUIT PARALLEL TO OR AT RIGHT ANGLES TO CENTER LINES OF COLUMNS AND BEAMS. CONDUITS ABOVE CEILINGS SHALL NOT OBSTRUCT REMOVAL OF CEILING TILES, LIGHTING FIXTURES, AIR DIFFUSERS, ETC. CONDUITS SHALL NOT CROSS ANY DUCT SHAFT OR AREA DESIGNATED AS FUTURE DUCT SHAFT HORIZONTALLY. CONDUIT RISERS WHEN ALLOWED IN DUCT SHAFT MUST BE COORDINATED WITH MECHANICAL WORK TO AVOID ANY CONFLICT. CONDUITS SHALL MAINTAIN 5 FEET CLEARANCE IN FRONT OF HVAC SUPPLY AND RETURN OPENINGS. GENERAL USE OF CONDUIT:
a.) RIGID - INSTALL IN TRAFFIC AREA, EXPOSED, FROM FINISHED FLOOR TO 8 FEET
b.) EMT - ABOVE EIGHT FEET OF FINISHED FLOOR, CONCEALED
c.) PVC - UNDERGROUND, NOT ALLOWED IN MEDICAL INSTALLATION
B. CONDUIT SUPPORTS:
1. SUPPORT CONDUITS WITH UNDERWRITER'S LABORATORIES LISTED STEEL CONDUIT SUPPORTS AT INTERVALS REQUIRED BY THE NATIONAL ELECTRIC CODE. WIRES OR SHEET METAL STRIPS ARE NOT ACCEPTABLE FOR CONDUIT SUPPORT. USE CONDUIT HANGERS FOR ALL CONDUITS NOT DIRECTLY FASTENED TO STRUCTURE AND FOR ALL MULTIPLE CONDUIT RUNS. DO NOT ATTACH ANY CONDUIT TO MECHANICAL DUCTS OR PIPES.
2. INDIVIDUAL CONDUITS 1/2" AND 3/4" SIZE FOR LIGHTING MAY BE SUPPORTED FROM CEILING SUPPORT WIRES WITH CADDY CLIPS ONLY IF ACCEPTABLE TO LOCAL CODE. ONLY ONE CONDUIT IS PERMITTED TO BE ATTACHED TO ANY CEILING SUPPORT WIRE. HANG SUCH CONDUIT SO AS NOT TO AFFECT LEVEL OF CEILING.
3. AVOID ATTACHING CONDUIT TO FAN PLENUMS. WHEN IT IS NECESSARY TO SUPPORT CONDUIT FROM FAN PLENUM, PROVIDE A LENGTH OF FLEXIBLE CONDUIT BETWEEN PORTION ATTACHED FAN PLENUM AND PORTION ATTACHED TO THE BUILDING TO MINIMIZE TRANSMISSION OF VIBRATION TO THE BUILDING STRUCTURE.
C. CONDUIT PENETRATION:
1. PENETRATING FIRE RATED FLOOR OR WALL: INSTALL CONDUIT IN CONDUIT SLEEVE OR FRAMED OPENING. SEAL PENETRATION WITH FIRE RETARDANT SEALANT TO MATCH CONSTRUCTION FIRE RATING.
2. PENETRATING ROOF OR EXTERIOR WALL: AVOID PENETRATING ROOF OR EXTERIOR WALL WHERE POSSIBLE. WHERE PENETRATIONS ARE NECESSARY, BUILDING WEATHERPROOF INTEGRITY MUST BE PRESERVED.
3. PENETRATING SOUND INSULATED OR AIR PLENUM WALL: INSTALL CONDUIT IN CONDUIT SLEEVE AND SEAL PENETRATION AS DETAILED ON THE DRAWINGS.
4. PENETRATING NON-FIRE RATED DRY WALL: CONDUIT SLEEVES ARE NOT REQUIRED. PENETRATIONS MUST BE SEALED WITH PLASTER PRIOR TO PAINTING. PENETRATIONS MADE AFTER WALL FINISH IS APPLIED MUST BE AS SMALL AS POSSIBLE AND PROVIDED WITH ESCUTCHEONS, ONE ON EACH SIDE OF WALL.
5. PENETRATING SUSPENDED CEILING: CUT HOLE AS SMALL AS POSSIBLE TO PERMIT CONDUIT PENETRATION. PROVIDE ESCUTCHEON FOR EACH CONDUIT BELOW CEILING.

3.04 CONNECTIONS TO EQUIPMENT
A. GENERAL
1. FURNISH AND INSTALL REQUIRED POWER SUPPLY CONDUIT AND WIRING TO ALL EQUIPMENT IDENTIFIED IN THE CONSTRUCTION DOCUMENTS.
2. PROVIDE PIGTAIL ADAPTOR FOR WIRE TERMINATION EXCEEDING LUG SIZES.
3. FURNISH AND INSTALL A DISCONNECT SWITCH IMMEDIATELY AHEAD OF AND ADJACENT TO EACH MAGNETIC MOTOR STARTER OR APPLIANCE UNLESS THE MOTOR APPLIANCE IS LOCATED ADJACENT AND WITHIN SIGHT OF THE SERVING PANELBOARD, CIRCUIT BREAKER OR SWITCH. VERIFY ALL EQUIPMENT NAMEPLATE CURRENT RATINGS PRIOR TO INSTALLATION.
4. INSTALL ALL ROUGH-IN WORK FOR EQUIPMENT FROM APPROVED SHOP DRAWINGS TO SUIT THE SPECIFIC REQUIREMENTS OF THE EQUIPMENT.
5. FURNISH AND INSTALL MANUAL THERMAL PROTECTION FOR ALL MOTORS NOT INTEGRALLY EQUIPPED WITH THERMAL PROTECTION.
6. FURNISH CONTROL POWER TO EACH CONTROL PANEL AND TIME SWITCH REQUIRING A SOURCE OF POWER TO OPERATE.

3.05 INSTALLATION OF WIRES
A. PULL NO WIRE INTO ANY PORTION OF THE CONDUIT SYSTEM UNTIL ALL CONSTRUCTION WORK WHICH MIGHT DAMAGE THE WIRE HAS BEEN COMPLETED.
B. INSTALL ALL WIRE CONTINUOUS FROM OUTLET TO OUTLET OR TERMINAL TO TERMINAL. SPLICES IN CABLES WHEN REQUIRED SHALL BE MADE IN HANDHOLES, PULL BOXES OR JUNCTION BOXES. MAKE BRANCH CIRCUIT SPLICES IN OUTLET BOXES WITH 8" OF CORRECTLY COLOR-CODED TAILS LEFT IN THE BOX.
C. SPLICES IN WIRES AND CABLES SHALL BE MADE UTILIZING MATERIALS AND METHODS DESCRIBED HEREIN BEFORE.
D. MAKE ALL GROUND, NEUTRAL AND LINE CONNECTIONS TO RECEPTACLE AND WIRING DEVICE TERMINALS AS RECOMMENDED BY MANUFACTURER. PROVIDE GROUND JUMPER FROM OUTLET BOX TO GROUND TERMINAL OF DEVICES WHEN THE DEVICE IS NOT APPROVED FOR GROUNDING THROUGH THE MOUNTING SCREWS.
E. 120V AND 277V BRANCH CIRCUITS SHALL BE PROVIDED WITH DEDICATED NEUTRAL.
F. PROVIDE BRADY WIRE MARKERS WHERE NUMBER OF CONDUCTORS IN A BOX EXCEEDS FOUR.

3.06 WIRE COLOR CODE:
A. COLOR CODING SHALL BE CONTINUOUS FOR WIRE #12 THROUGH #6 AWG. PHASE CONDUCTORS #4 AND LARGER AND CONDUCTORS OF ANY SIZE IN CABLE ASSEMBLIES MAY HAVE COLORED PHASING TAPE AT TERMINATIONS. COLOR CODE WIRES AS FOLLOWS:

1. VOLTAGE	120/208V	(277/480V)
A.)PHASE A	BLACK	(BROWN)
B.)PHASE B	RED	(PURPLE, OR MATCH BUILDING STANDARD)
C.)PHASE C	BLUE	(YELLOW)
D.)NEUTRAL	WHITE	(GRAY, GREY)
E.)GROUND	GREEN	(GREEN)
F.)ISOLATED GROUND	GREEN WITH ORANGE STRIPE	(GREEN WITH ORANGE STRIPE)

3.07 IDENTIFICATION
A. PROVIDE NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT AND ALL SIMILAR EQUIPMENT AND DEVICES. NAMEPLATES SHALL BE SCREWED (NO ADHESIVES) ENGRAVED BAKELITE OR PHOTO-ETCHED METALLIC NAMEPLATE IDENTIFICATION SHOWING PANEL DESIGNATION, VOLTAGE AND PHASE IN MINIMUM 1/4" HIGH LETTERS.
B. PROVIDE "DYMO" LABELS ON ALL LIGHTING SWITCHES AND CONVENIENCE AND SPECIAL PURPOSE RECEPTACLES TO SHOW PANEL AND CIRCUIT NUMBER TO WHICH THE DEVICE IS CONNECTED.
C. EACH PANELBOARD SHALL CONTAIN A METAL-FRAMED CIRCUIT DIRECTORY INSIDE COVER, WITH PLASTIC PROTECTOR. CONDUCTOR COLOR IDENTIFICATION USED SHALL BE PERMANENTLY POSTED AT EACH PANELBOARD OR SIMILAR DISTRIBUTION EQUIPMENT.
D. PANELBOARD SCHEDULE: AFTER COMPLETION OF WORK, PROVIDE ELECTRONIC UPDATED PANELBOARD SCHEDULES FOR ALL PANELBOARDS. USE EXCEL FORMAT.

3.08 GROUNDING
A. ELECTRICAL SERVICE AND SEPARATELY DERIVED ALTERNATING CURRENT SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH NEC ART 250.
B. GROUND NON-CURRENT CARRYING METAL PARTS OF ELECTRICAL EQUIPMENT ENCLOSURES, FRAMES, CONDUCTOR RACEWAYS OR CABLE TRAYS TO PROVIDE A LOW IMPEDANCE PATH FOR LINE-TO-GROUND FAULT CURRENT AND TO BAND ALL NON-CURRENT CARRYING METAL PARTS TOGETHER. PROVIDE GROUND CONDUCTOR IN EACH RACEWAY SYSTEM IN ADDITION TO CONDUCTORS SHOWN. EQUIPMENT GROUND CONDUCTOR SHALL BE ELECTRICALLY AND MECHANICALLY CONTINUOUS FROM THE ELECTRICAL CIRCUIT SOURCE TO THE EQUIPMENT TO BE GROUNDED. SIZE GROUND CONDUCTORS PER NEC ART 250 UNLESS LARGER CONDUCTORS ARE SHOWN ON DRAWINGS.
C. GROUNDING CONDUCTORS SHALL BE IDENTIFIED WITH GREEN INSULATION. WHERE GREEN INSULATION IS NOT AVAILABLE ON LARGER SIZES, BLACK INSULATION SHALL BE USED AND SUITABLY IDENTIFIED WITH GREEN TAPE AT EACH JUNCTION BOX OR DEVICE ENCLOSURE.

3.09 REMODELING WORK
A. EXISTING ELECTRICAL WIRING WHICH WILL NOT BE MADE OBSOLETE AND WHICH WILL BE DISTURBED DUE TO CONSTRUCTION CHANGES REQUIRED BY THIS CONTRACT SHALL BE RESTORED TO OPERATING CONDITION. WHERE CONSTRUCTION CHANGES REQUIRE, OUTLETS AND CONDUIT RUNS SHALL BE RELOCATED. EXTEND CONDUITS AND PULL IN NEW WIRING OR INSTALL JUNCTION BOXES AND SPLICE IN NEW WIRING.

B. OUTLETS FROM WHICH FIXTURES, SWITCHES, RECEPTACLES, AND/OR OTHER ELECTRICAL DEVICES ARE MOVED AND WHICH ARE NOT REPLACED OR REUSED SHALL BE REMOVED, WHERE OUTLETS BOXES, ETC., ARE COMPLETELY REMOVED, THE CONTRACTOR SHALL CUT OFF CONDUITS AND REMOVE WIRING.
C. WHERE CONDUITS EXTENDING THROUGH FLOORS ARE TO BE ABANDONED, THE CONTRACTOR SHALL CUT AND CAP OR PLUG CONDUIT, AND THE CONDUIT SHALL NOT PROTRUDE ABOVE THE FLOOR.
D. WHERE EXISTING CONDUIT IS TO BE ABANDONED, THE CONDUIT SHALL BE REMOVED IF IT IS EXPOSED, IN A CRAWL SPACE OR IN ACCESSIBLE CEILING. WHERE IT IS IMPOSSIBLE TO REMOVE THE CONDUIT, IT SHALL BE CUT OFF AND CAPPED OR PLUGGED.
E. REMOVE ALL EXISTING WIRING NOT TO BE REUSED OR REQUIRED. MAINTAIN CONTINUITY TO CIRCUITS THAT ARE TO REMAIN.
F. THE CONTRACTOR SHALL BE HELD FULLY RESPONSIBLE FOR THE PROPER RESTORATION OF ALL EXISTING SURFACES REQUIRING PATCHING, PLASTERING, PAINTING AND/OR OTHER REPAIRS DUE TO THE INSTALLATION OF ELECTRICAL WORK UNDER THE TERMS OF THIS SPECIFICATION. CLOSE ALL OPENINGS, REPAIR ALL SURFACES, ETC., AS REQUIRED.
G. FIRESTOP ALL PENETRATIONS.
H. MAINTAIN CIRCUIT CONTINUITY TO AREAS OUTSIDE OF THIS WORK. PROVIDE NEW CONDUIT AND CONDUCTORS AS REQUIRED TO MAINTAIN CONTINUITY AND MAINTAIN AREA AS EXISTING.

3.10 ELECTRICAL ACCEPTANCE TESTING
A. PERFORM PHYSICAL AND VISUAL INSPECTION OF ELECTRICAL INSTALLATION. ENSURE THAT ALL WIRES HAVE BEEN TERMINATED, CONNECTIONS TIGHTENED, AND OPENINGS ARE PROTECTED.
B. PERFORM PHASE ROTATION, CONTINUITY TEST, AND PHASE BALANCE
1. VOLTAGE READINGS SHALL BE TAKEN AT VARIOUS TEST POINTS, OR AT THE DISCRETION OF THE AHJ.
2. VOLTAGE, PHASE, AND AMP READINGS SHALL BE TAKEN ON ALL THREE PHASES UNDER LOAD CONDITIONS.
3. VERIFY THAT MOTORS ARE ROTATING IN THE CORRECT DIRECTION. VERIFY THAT EACH PHASE LOAD IS WITHIN 20% OF EACH OTHER. ADJUST AS NECESSARY.
C. INSULATION TEST
1. PERFORM MEGGER AND RECORD INSULATION RESISTANCE, 1000 VOLT MEGGER FOR ONE MINUTE. MAKE TESTS WITH CIRCUITS ISOLATED FROM SOURCE AND LOAD.
A.)600V CONDUCTORS SIZE #4/0 AND LARGER
B.)MCC, SWITCHGEAR, SWITCHBOARD, AND PANELBOARD BUSS BARS
C.)MOTOR AND TRANSFORMER WINDINGS
D. TESTING SHALL BE PER NEMA ACCEPTANCE STANDARDS.
E. PROVIDE OVERCURRENT PROTECTIVE DEVICE COORDINATION STUDY, INCLUDING SHORT-CIRCUIT CALCULATIONS.
F. PROVIDE ARC-FLASH HAZARD WARNING LABEL AND CALCULATIONS AS REQUIRED BY AHJ AND PER CEC 110.16.
G. SUBMIT TEST RESULTS TO ENGINEER. EQUIPMENT THAT HAVE FAILED TESTS SHALL BE REPLACED WITHIN 2 WEEKS AND PRIOR TO PROJECT COMPLETION.

END OF SECTION

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Seal:

ACIES ENGINEERING
400 N. McCarthy Blvd, ste 250
Milpitas, CA 95035
ph: (408) 522-5255
fx: (408) 522-5260
info@acies.net

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TEXAS REGISTRATION #: F-6950
EXPIRATION: 08/31/2026

STATE OF TEXAS
WILSON LEE
90532
LICENSED PROFESSIONAL ENGINEER
EXPIRATION: 06/30/2026

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:
JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

ELECTRICAL SPECIFICATIONS

Sheet #:
E-003

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COMcheck Software Version COMcheckWeb
Interior Lighting Compliance Certificate

Project Information

Energy Code: 2021 IECC
Project Title: JD Sports - Lakeline Mall, Cedar Park, TX
Project Type: Alteration

Construction Site:
11200 Lakeline Mall Drive
Space 2-25
Cedar Park, Texas 78613

Owner/Agent:

Designer/Contractor:
Wilson Lee
Acies Engineering
400 N. McCarthy Blvd
Suite 250
Milpitas 95035
408-522-5260
info@acies.net

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-Fitting Room Vestibule (Retail:Dressing/Fitting Room)	74	0.51	38
2-Stockroom (Common Space Types:Storage >=50 - <=1000 sq.ft.)	2054	0.38	781
3-Accessible Fitting Room (Retail:Dressing/Fitting Room)	55	0.51	28
4-Hallway (Common Space Types:Corridor/Transition <8 ft wide)	276	0.41	113
5-Sales Area (Retail:Sales Area)	3368	1.05	3536
Allowance: Furniture, clothing, cosmetics highlighting / Fix. ID: LT06	3350 (a)	1.05	3518 (b)
6-Manager's Office (Common Space Types:Office - Enclosed)	73	0.74	54
7-Restroom (Common Space Types:Restrooms)	73	0.63	46
8-Staff Area (Common Space Types:Conference/Meeting/Multipurpose)	143	0.97	139
		Supplemental Allowed Watts (null) =	1000
		Total Allowed Watts =	9252

(a) Area claimed may exceed total floor area when Retail Merchandise Highlighting allowance(s) are specified.
(b) Allowance is (B x C) or the actual wattage of the fixtures given in Proposed Power section, whichever is less.
(c) Supplemental watts must be associated with retail merchandise highlighting fixtures.

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
Fitting Room Vestibule (Retail: Dressing/Fitting Room, 74 sq.ft.)				
LED: LT01: Surface 15" LED Downlight: Other:	1	1	30	30
Stockroom (Common Space Types: Storage >=50 - <=1000 sq.ft., 2054 sq.ft.)				
LED: LT12/LT12E: Suspended 4' LED Strip: Other:	1	37	24	906
Accessible Fitting Room (Retail: Dressing/Fitting Room, 55 sq.ft.)				
LED: LT01: Surface 15" LED Downlight: Other:	1	1	30	30
Hallway (Common Space Types: Corridor/Transition <8 ft wide, 276 sq.ft.)				
LED: LT12/LT12E: Suspended 4'LED Strip: Other:	1	6	24	147

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixture	D Fixture Watt.	E (C X D)
Sales Area (Retail: Sales Area, 3368 sq.ft.)				
LED: LT03: Suspended 6' Linear Downlight: Other:	1	4	44	176
LED: LT09: Suspended 4' Arch Linear: Other:	1	38	24	931
Track Head: LT06: 3" Track Head: Wattage based on current limiting device capacity	0	0	5640	5640
Manager's Office (Common Space Types: Office - Enclosed, 73 sq.ft.)				
LED: LT12E: Suspended 4'LED Strip: Other:	1	1	24	24
Restroom (Common Space Types: Restrooms, 73 sq.ft.)				
LED: LT12E: Suspended 4'LED Strip: Other:	1	1	24	24
Staff Area (Common Space Types: Conference/Meeting/Multipurpose, 143 sq.ft.)				
LED: LT12/LT12E: Suspended 4'LED Strip: Other:	1	2	24	49
			Total Proposed Watts =	7958

Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2021 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Wilson Lee - PE — Name - Title
Signature
12/16/2025 — Date

COMcheck Software Version COMcheckWeb
Inspection Checklist

Energy Code: 2021 IECC

Requirements: 100.0% were addressed directly in the COMcheck software
Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** E-101

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3.1 [EL22][1]	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** E-101
C405.2.1, C405.2.1.1 [EL18][1]	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multipurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, corridors, warehouse storage areas, and other spaces <= 300 sqft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** E-101
C405.2.1.2 [EL19][1]	Occupancy sensors control function in warehouses: In warehouses, the lighting in aisleways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more within 20 minutes of when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor. Lights not turned off by occupant sensors is done so by time-switch.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** E-101
C405.2.1.3 [EL20][1]	Occupant sensor control function in open plan office areas: Occupant sensor controls in open office spaces >= 300 sq.ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq.ft. within the space, 2) general lighting in each zone permitted to turn on upon occupancy in control zone, 3) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 4) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.2, C405.2.2.1 [EL21][2]	Each area not served by occupancy sensors (per C405.2.1.1) have time-switch controls and functions detailed in sections C405.2.2.1.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** E-101

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.4, C405.2.4.1, C405.2.4.2 [EL23][2]	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 Daylight-responsive controls for applicable spaces, C405.2.3.1 Daylight responsive control function and section C405.2.3.2 Sidelit zone.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.5 [EL27][1]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** E-101
C405.7 [EL26][2]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.8 [EL27][2]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.9.1, C405.9.2 [EL28][2]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.10 [EL29][2]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** E-401
C405.1.1 [EL30][2]	At least 90% of dwelling unit permanently installed lighting shall have lamp efficacy >= 65 lm/W or luminaires with efficacy >= 45 lm/W or comply with C405.2.4 or C405.3.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.11, C405.11.1 [EL31][2]	50% of 15/20 amp receptacles installed in enclosed offices, conference rooms, copy rooms, break rooms, classrooms and workstations and >25% of branch circuit feeders for modular furniture will have automatic receptacle control in accordance with C405.11.1.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** E-201

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C303.3, C408.2.5.2 [FI17][1]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.1.1 [FI57][1]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5 [FI16][1]	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.3 [FI33][1]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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CLEVELAND DENVER GLENDORA IRVINE ORLANDO PHOENIX SAN FRANCISCO

Seal:

ACIES ENGINEERING
400 N. McCarthy Blvd, ste 250
Milpitas, CA 95035
ph: (408) 522-5255
fx: (408) 522-5260
info@acies.net
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TEXAS REGISTRATION #: F-6950
EXPIRATION: 08/31/2026

STATE OF TEXAS WILSON LEE 90532 LICENSED PROFESSIONAL ENGINEER
EXPIRATION: 06/30/2026

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:
JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

ELECTRICAL
COMPLIANCE FORMS

Sheet #:
E-041

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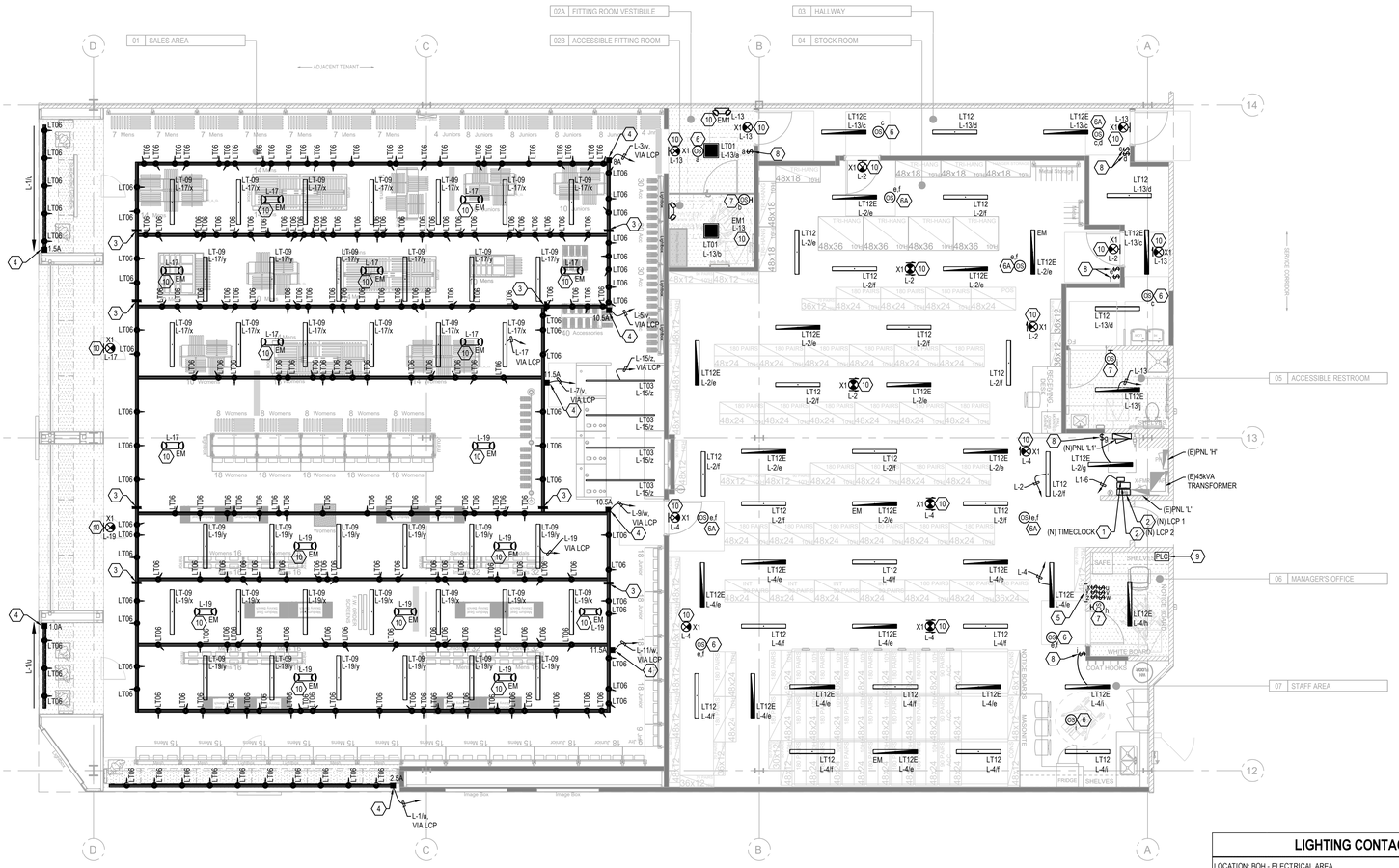
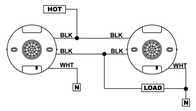
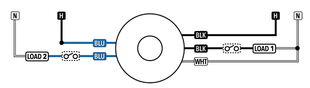


LINE VOLTAGE CEILING MOUNT OCCUPANCY SENSOR WIRING DIAGRAM

SENSORS IN PARALLEL

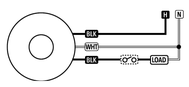


DUAL RELAY



STANDARD WIRING:
BLACK* - LINE INPUT 1
BLACK* - LOAD OUTPUT 1 — *BLACK WIRES CAN BE REVERSED
BLUE** - LINE INPUT 2
BLUE** - LOAD OUTPUT 2 — **BLUE WIRES CAN BE REVERSED
WHITE - NEUTRAL

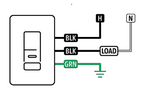
SINGLE RELAY



STANDARD WIRING:
BLACK* - LINE INPUT
BLACK* - LOAD OUTPUT — *BLACK WIRES CAN BE REVERSED
WHITE - NEUTRAL

WALL OCCUPANCY SENDOR WIRING DIAGRAM

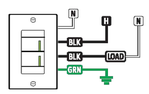
SINGLE RELAY



STANDARD WIRING:
BLACK* - LINE INPUT
BLACK* - LOAD OUTPUT

WALL MANUAL SWITCH WIRING DIAGRAM

SINGLE RELAY



STANDARD WIRING:
BLACK - LINE INPUT
BLACK - LOAD OUTPUT

GENERAL NOTES:

A. SEE GENERAL NOTES ON SHEET E-001.

B. INSTALLATIONS OF CONDUITS AND WIRES SHALL BE CONCEALED ABOVE THE CEILING AND BEHIND WALLS. WHERE NOT POSSIBLE, CONTRACTOR SHALL OBTAIN APPROVAL FOR EXPOSED LOCATIONS PRIOR TO ROUGH IN. USE WIREMOLD IN EXPOSED AREAS.

C. PROVIDE 2#12 AWG + 1#12 AWG G WIRE (MIN.) IN 3/4"C. FOR LIGHTING CIRCUITS UNLESS OTHERWISE NOTED.

D. COORDINATE INSTALLATION OF LIGHT FIXTURES WITH MECHANICAL WORK AND OTHER TRADES.

E. ALL EMERGENCY BATTERY PACK IN EMERGENCY LIGHT FIXTURES SHALL BE WIRED AHEAD OF ALL LIGHT SWITCHES, OCCUPANCY SENSORS AND LIGHTING CONTROLS. FIXTURE SHALL RETAIN LOCAL ON/OFF CONTROL.

F. THE CONTRACTOR SHALL COORDINATE THE EXACT MOUNTING LOCATION OF ALL LIGHT FIXTURES, LIGHT SWITCHES AND ANY OTHER DEVICE LOCATIONS SHOWN ON THIS PLAN WITH THE ARCHITECTURAL FLOOR PLAN, ARCHITECTURAL REFLECTED CEILING PLAN, AND ARCHITECTURAL INTERIOR ELEVATIONS. LOCATIONS SHOWN IN ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE. DEVICES NOTE LOCATED ON THE ARCHITECTURAL DRAWINGS SHALL BE COORDINATED WITH THE ARCHITECT IN THE FORM OF RFI (REQUEST FOR INFORMATION). CONTRACTOR SHALL ASSUME THAT THE DEVICES ARE TO BE MOUNTED CENTERED ON THE WALLS, SECTION OF WALLS, WINDOWS, ETC. AND THAT ADDITIONAL MOUNTING BRACKETS AND ACCESSORIES SHALL BE A PART OF THE BID PROPOSAL.

G. FINAL EMERGENCY AND EXIT SIGN REQUIREMENTS TO BE INSTALLED PER FIRE INSPECTOR'S DIRECTION. CONTRACTOR SHALL PROVIDE ADDITIONAL EMERGENCY AND EXIT LIGHTING AS REQUIRED.

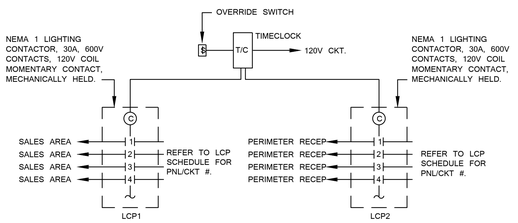
H. ALL EXPOSED CONDUIT AND JUNCTION BOXES RUNNING TO SALES AREA LIGHTING SHALL BE PAINTED PT-3 BLACK.

I. LCP TIMECLOCK SHALL PROVIDE CONTROLS FOR THE DESIGN ZONE, INCLUDING BUT NOT LIMITED TO; STOREFRONT SIGNAGE, SHOW WINDOW LIGHTING, SHOW WINDOW RECEPTACLES, AND ENTRY LIGHTING. PROVIDE NECESSARY PLUG LOAD RELAY PACKS RECEPTACLE CONTROLS.

KEY NOTES: (X)

1. INTERMATIC MECHANICAL TIME SWITCH MODEL ET90215C IN NEMA 1 ENCLOSURE FOR AUTO-SHUTOFF OF SALES AREA LIGHTING, DISPLAY, AND SIGNAGE.
2. 16 AND 12 POLE NEMA 1 LIGHTING CONTACTOR, 30A, 600V CONTACTS, 120V COIL MOMENTARY CONTACT, MECHANICALLY HELD.
3. PROVIDE BREAK IN TRACK CIRCUITRY.
4. PROVIDE POWER TO TRACK LIGHTING THROUGH END FEED CURRENT LIMITERS. CURRENT LIMITER SIZE AS SHOWN. HOMERUN: 2#10 AWG + 1#10 AWG GND WIRE IN 3/4"C.
5. LIGHTING CONTROL SWITCHBANK FOR SALES LIGHTING. SWITCH SHALL HAVE LOCAL INDICATOR LIGHTS SHOWING THE CURRENT STATE OF THE CONTROLLED LIGHTING. PROVIDE WALL SWITCH ON/OFF; SENSOR SWITCH sPODMRA OR EQUAL.
6. PROVIDE CEILING PASSIVE DUAL TECH OCCUPANCY SENSOR, SENSOR SWITCH CMR-PDT OR EQUAL.
6A. PROVIDE CEILING PASSIVE DUAL TECH, DUAL RELAY OCCUPANCY SENSOR, SENSOR SWITCH CMR-PDT-2P OR EQUAL.
7. PROVIDE WALL OCCUPANCY SENSOR, SENSOR SWITCH #WSX OR EQUAL.
8. PROVIDE WALL SWITCH ON/ OFF, SPODMRA OR EQUAL.
9. INSTALL A COMPATIBLE PLUG LOAD CONTROLLER FOR SWITCHED RECEPTACLES IN MANAGER'S OFFICE.
10. EMERGENCY FIXTURE SHALL BE CONNECTED TO AN UNSWITCHED CIRCUIT SERVING THE AREA.

TIME CLOCK WIRING DIAGRAM



LIGHTING CONTACTOR PANEL 'LCP1'

LOCATION: BOH - ELECTRICAL AREA

CONTACT #	PNL / CKT#	DESCRIPTION	REMARKS
1	L-1	SALES TRACK LIGHTING	PROVIDE DIMMING SWITCH FOR LOCAL CONTROL LOCATED IN MANAGER'S OFFICE
2	L-3	SALES TRACK LIGHTING	
3	L-5	SALES TRACK LIGHTING	PROVIDE DIMMING SWITCH FOR LOCAL CONTROL LOCATED IN MANAGER'S OFFICE
4	L-7	SALES TRACK LIGHTING	
5	L-9	SALES TRACK LIGHTING	PROVIDE DIMMING SWITCH FOR LOCAL CONTROL LOCATED IN MANAGER'S OFFICE
6	L-11	SALES TRACK LIGHTING	
7	L-15	CASH DESK LIGHTING	PROVIDE DIMMING SWITCH FOR LOCAL CONTROL LOCATED IN MANAGER'S OFFICE
8	L-17	GENERAL SALES LIGHTING	PROVIDE DIMMING SWITCH FOR LOCAL CONTROL LOCATED IN MANAGER'S OFFICE
9	L-19	GENERAL SALES LIGHTING	PROVIDE DIMMING SWITCH FOR LOCAL CONTROL LOCATED IN MANAGER'S OFFICE
10	L-21	ILLUMINATED CHANNEL LED	
11	L-23	ILLUMINATED CHANNEL LED	
12	L-25	ILLUMINATED CHANNEL LED	
13	L-37	STOREFRONT SIGNAGE	
14	L-39	STOREFRONT SIGNAGE	
15		SPARE	
16		SPARE	

LIGHTING CONTACTOR PANEL 'LCP2'

LOCATION: BOH - ELECTRICAL AREA

CONTACT #	PNL / CKT#	DESCRIPTION	REMARKS
1	L1-1	PERIMETER FIXTURE RECEPTACLES	
2	L1-3	PERIMETER FIXTURE RECEPTACLES	
3	L1-5	PERIMETER FIXTURE RECEPTACLES	
4	L1-7	PERIMETER FIXTURE RECEPTACLES	
5	L1-9	PERIMETER FIXTURE RECEPTACLES	
6	L-28	H WALL RECEPTACLES	
7	L-30	H WALL RECEPTACLES	
8	L-6	SHOW WINDOW RECEP	
9	L-8	SHOW WINDOW RECEP	
10	L-10	SHOW WINDOW RECEP	
11		SPARE	
12		SPARE	

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CLEVELAND DENVER GLENDORA IRVINE ORLANDO PHOENIX SAN FRANCISCO
Seal:
ACIES ENGINEERING
400 N. McCarthy Blvd, ste 250
Milpitas, CA 95035
ph: (408) 522-5255
fx: (408) 522-5260
info@acies.net
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EXPIRATION: 08/31/2026
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EXPIRATION: 06/30/2026

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JD SPORTS #1526
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11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY
Client:
JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

ELECTRICAL LIGHTING PLAN

Sheet #:
E-101

ELECTRICAL LIGHTING PLAN | SCALE 3/16"=1'-0" | 1

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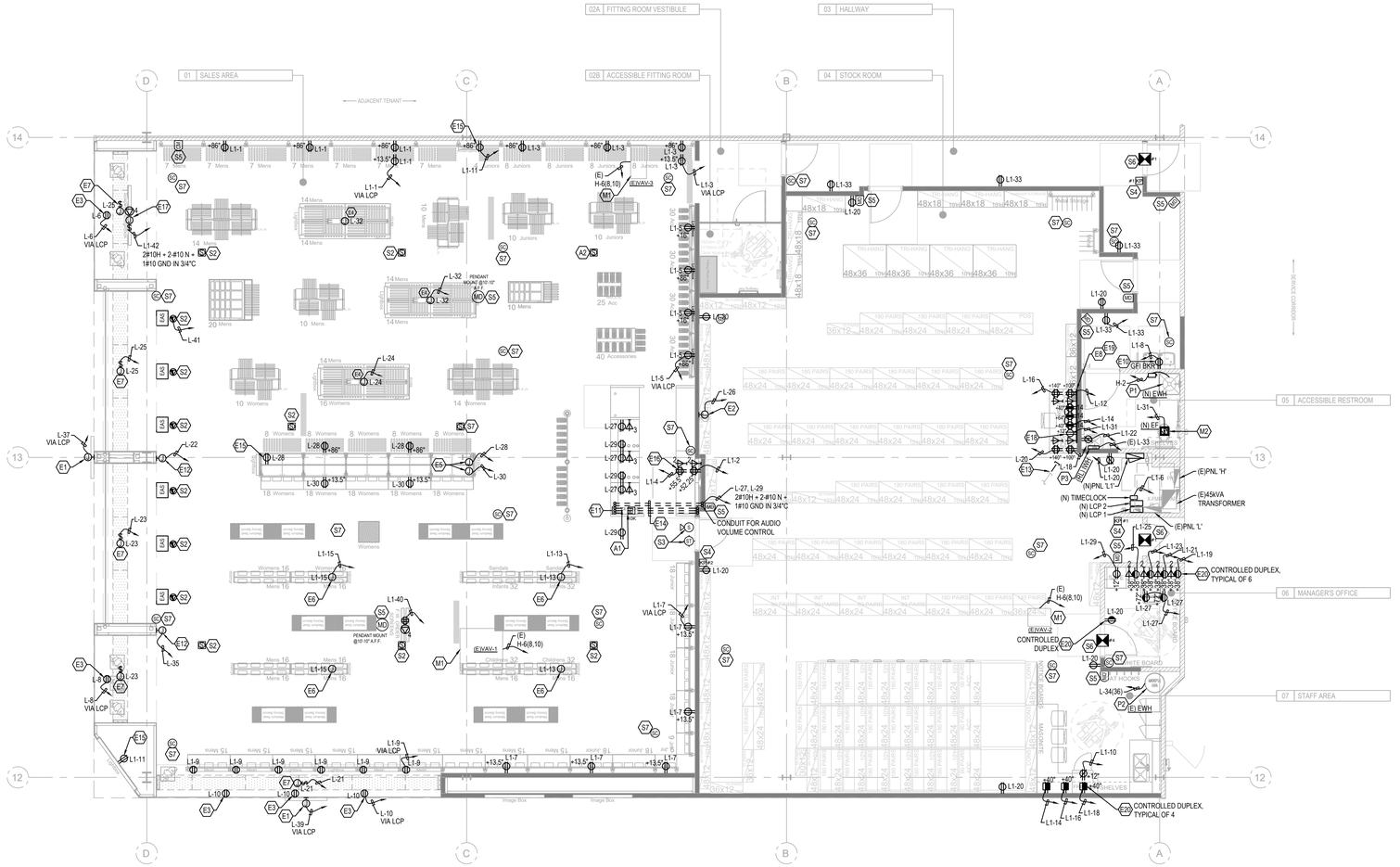

POWER KEY NOTES: (X)

E1. PROVIDE JUNCTION BOX FOR SIGNAGE. SIGNAGE PROVIDED WITH LOCAL DISCONNECT SWITCH. COORDINATE EXACT REQUIREMENTS WITH SIGNAGE VENDOR DRAWINGS PRIOR TO ROUGH-IN.

E2. PROVIDE HARDWIRED POWER CONNECTION FOR CASHWRAP JD SIGN. POWER SUPPLY AND LOCAL DISCONNECT PROVIDED BY SIGNAGE VENDOR. CONTRACTOR TO REQUEST COPY OF SIGNAGE SHOP DRAWINGS AND FIELD VERIFY EXACT LOCATION WITH PROJECT MANAGER PRIOR TO ROUGH-IN.

E3. PROVIDE SHOW WINDOW RECEPTACLES AND CONNECT TO NEW CIRCUIT AS SHOWN.

E4. PROVIDE POWER TO SALES FIXTURE FROM JUNCTION BOX MOUNTED AT TOP OF FIXTURE. POWER PROVIDED VIA CURLY WIRE DROPPED FROM CEILING MOUNTED JUNCTION BOX. COORDINATE EXACT REQUIREMENTS WITH ARCHITECTURAL PLANS AND MILLWORK VENDOR.

E5. PROVIDE POWER TO SALES FIXTURE FROM JUNCTION BOX MOUNTED AT TOP OF FIXTURE. ROUTE 3/4" GALVANIZED CONDUIT FROM JUNCTION BOX AT STRUCTURE ABOVE. COORDINATE EXACT REQUIREMENTS WITH ARCHITECTURAL PLANS AND MILLWORK VENDOR.

E6. PROVIDE POWER TO SALES FIXTURE FROM JUNCTION BOX MOUNTED AT TOP OF FIXTURE. ROUTE 3/4" CONDUIT FROM JUNCTION BOX AT STRUCTURE ABOVE. COORDINATE FINAL LOCATIONS OF JUNCTION BOXES WITHIN FIXTURE IN FIELD WITH JD SPORTS PM.

E7. PROVIDE JUNCTION BOX INSIDE THE SOFFIT WITH WHIP AND DRIVER TO POWER THE INTERNALLY ILLUMINATED VERTICAL CHANNEL SIGN. PROVIDE ALL LOCAL DISCONNECT SWITCH AND LOCATE IN A NON-VISIBLE ACCESSIBLE LOCATION. COORDINATE WITH PORTAL LIGHT PANEL MANUFACTURER FOR EXACT LOCATION AND REQUIREMENTS PRIOR TO ROUGH-IN.

E8. TELEPHONE TERMINAL BOARD: 8'-0" WIDE X 4'-0" HIGH X 3/4" FIRE RETARDANT PLYWOOD BACKBOARD. BACKBOARD SHALL BE PAINTED TO MATCH ADJACENT WALL FINISH. PLYWOOD MARKINGS SHALL NOT BE PAINTED OVER FOR INSPECTION. PROVIDE CODE APPROVED GROUNDING FOR TELEPHONE/DATA AND CAT V SERVICE. PROVIDE GROUND BUS BAR MOUNTED ON THE BACKBOARD AND #6 INSULATED GROUND WIRE RUN TO THE POWER GROUNDING SYSTEM. REFER TO DETAIL ON DWG. E-401 FOR MOUNTING HEIGHT AND ADDITIONAL INFORMATION.

E9. PROVIDE CABLING AND JUNCTION BOX FOR WIRELESS ACCESS POINT. JUNCTION BOX SHOULD BE AT A MAXIMUM HEIGHT OF 15'. HOMERUN THE CABLES TO A.T.S. BACKBOARD. COORDINATE FINAL LOCATION AND REQUIREMENTS WITH IT DRAWINGS PRIOR TO ROUGH-IN.

E10. PROVIDE POWER CONNECTION AS REQUIRED FOR DRINKING FOUNTAIN AND PROVIDE GFCI PROTECTION AT BREAKER.

E11. PROVIDE (1) 1-1/4"C. WITH PULL STRING PER P.O.S. FROM DATA OUTLET LOCATION AND STUB TO ACCESSIBLE CEILING. ROUTE CABLING EXPOSED ON CEILING SPACE IN CLEAN AND CONCEALED MANNER. PROVIDE CABLE SUPPORTS (J-HOOKS, ETC.) FOR CABLE MANAGEMENT.

E12. PROVIDE J-BOX AND NEMA-1 DISCONNECT FOR ROLLING GRILLE DOOR IF NONE EXISTING: 120V, 20A, SPST MOTOR RATED SWITCH. LOCATE ADJACENT TO MOTOR IN A NON-VISIBLE ACCESSIBLE LOCATION. COORDINATE INSTALLATION AND REQUIREMENTS IN FIELD WITH JD SPORTS PM.

E13. EXTEND EXISTING TELECOM SERVICE CONDUIT TO LOCATION OF THE NEW TELEPHONE BACKBOARD AS SHOWN. FIELD VERIFY EXACT LOCATION OF THE EXISTING CONDUIT AND MATCH THE CONDUIT SIZE.

E14. PROVIDE CONDUITS AS INDICATED ON PLAN. RUN CONDUITS WITHIN TRENCHED FLOOR AS SHOWN. COORDINATE SLAB CORING WITH MALL MANAGEMENT / LANDLORD PRIOR TO ROUGH-IN.

E15. WIRE AND ASSEMBLE LIGHT BOX ONSITE AND PROVIDE POWER AS SHOWN. COORDINATE INSTALLATION AND REQUIRMENTS IN FIELD WITH JD SPORTS PM.

E16. PROVIDE POWER AND DATA CONNECTIONS FOR DIGITAL DISPLAY. FIELD VERIFY EXACT LOCATION AND REQUIREMENT WITH PROJECT MANAGER PRIOR TO ROUGH-IN.

E17. PROVIDE POWER AND DATA CONNECTIONS FOR SUSPENDED DIGITAL SCREEN AT STOREFRONT AS SHOWN. PROVIDE JUNCTION BOX WITH DISCONNECT SWITCH. CONFIRM NEMA RECEPTACLE CONFIGURATION WITH JD SPORTS REPRESENTATIVE PRIOR TO WORK.

E18. PROVIDE 120V CURCUIT FOR DETAGGER AT RECEIVING DESK. VERIFY EXACT MOUNTING HEIGHT AND LOCATION WITH JDS PM.

E19. COORDINATE ALL HEIGHTS, REQUIREMENTS AND LOCATIONS WITH JD PM AND ARCHITECT PRIOR TO ROUGH-IN. REFER TO TEL/COM DETAIL FOR MORE INFORMATION.

E20. PROVIDE PERMANENTLY LABELLED SPLIT WIRED/ CONTROLLED RECEPTACLE FOR NORMAL AND AUTOMATIC SHUT-OFF CONTROL OF PLUG LOADS. CONTROLLED OUTLET SHALL SHUT OFF WHEN OCCUPANCY SENSOR REPORTS A VACANT STATE FOR MAX 20 MINS. PROVIDE COMPATIBLE POWER PACK, NLIGHT NPP20-PL OR EQUAL.

M1. EXISTING VAV TO REMAIN. MAINTAIN EXISTING POWER CONNECTION TO EXISTING CIRCUIT SERVING THE UNIT. FIELD VERIFY EXACT LOCATION AND MAINTAIN COMPLETE AND OPERABLE SYSTEM.

M2. PROVIDE POWER CONNECTION FOR NEW EXHAUST FAN UNIT TO CIRCUIT AS SHOWN. PROVIDE 20A, 120V ELECTRICAL CONNECTION WITH TOGGLE DISCONNECT SWITCH. INTERLOCK FAN WITH THE LIGHTING CONTROLS.

P1. PROVIDE POWER CONNECTION FOR NEW WATER HEATER. PROVIDE 30A DISCONNECT SWITCH WITH 20A FUSE IF NOT FACTORY PROVIDED. HOMERUN: 2-#12 CU + 1-#12 CU GND. IN 3/4"C.

P2. EXISTING WATER HEATER TO REMAIN. RECONNECT POWER TO NEW CIRCUIT AS SHOWN ON PLAN. FIELD VERIFY EXACT LOCATION AND EXISTING POWER REQUIREMENTS AND MAINTAIN COMPLETE AND OPERABLE SYSTEM. EXTEND AND RECONNECT EXISTING CONDUIT/FEEDER AS REQUIRED.
PROVIDE HOMERUN: 3-#12 + 1#12CU GND IN 3/4" CONDUIT OR MATCH EXISTING FEEDER SIZES.

P3. RELOCATED INSTANT WATER HEATER IWH. RECONNECT POWER TO EXISTING CIRCUIT AS SHOWN ON PLAN. FIELD VERIFY EXACT LOCATION, EXACT EXISTING POWER REQUIREMENTS AND MAINTAIN COMPLETE AND OPERABLE SYSTEM. EXTEND AND RECONNECT EXISTING CONDUIT/FEEDER AS REQUIRED.
PROVIDE HOMERUN: 2-#12 CU + 1-12 CU GND IN 3/4"C OR MATCH EXISTING FEEDER SIZES.

SECURITY KEY NOTES: (X)

S1. PROVIDE CEILING MOUNTED DATA OUTLET FOR TRAFFIC COUNTER. DATA/POWER SHOULD ROUTE DOWN ALL THREAD TO TC OR OUT OF THE SOFFIT TO AVOID PUBLIC VIEW. COORDINATE FINAL LOCATION AND REQUIREMENTS WITH VENDOR.

S2. PROVIDE CEILING MOUNTED DATA OUTLET FOR EAS SYSTEM. DATA/POWER SHOULD ROUTE DOWN ALL THREAD TO EAS OR OUT OF THE SOFFIT TO AVOID PUBLIC VIEW. COORDINATE FINAL LOCATION AND REQUIREMENTS WITH VENDOR.

S3. COORDINATE INSTALLATION OF WIRING FOR SIREN AND STROBE LIGHT WITH SECURITY VENDOR. CONTRACTOR TO CONFIRM WITH VENDOR THAT EXPOSED INSTALLATION OF WIRING IN CEILING SPACE IS ACCEPTABLE.

S4. COORDINATE INSTALLATION OF WIRING FOR ALARM KEYPAD WITH SECURITY VENDOR. CONTRACTOR TO CONFIRM WITH VENDOR THAT EXPOSED INSTALLATION OF WIRING IN CEILING SPACE IS ACCEPTABLE.

S5. COORDINATE INSTALLATION OF WIRING FOR MOTION DETECTOR WITH SECURITY VENDOR. CONTRACTOR TO CONFIRM WITH VENDOR THAT EXPOSED INSTALLATION OF WIRING IN CEILING SPACE IS ACCEPTABLE.

S6. COORDINATE INSTALLATION OF WIRING FOR DOOR CONTACT SENSOR. CONTRACTOR TO CONFIRM WITH VENDOR THAT EXPOSED INSTALLATION OF WIRING IN CEILING SPACE IS ACCEPTABLE.

S7. COORDINATE INSTALLATION OF WIRING FOR EACH CAMERA DOME LOCATION. CONTRACTOR TO CONFIRM WITH VENDOR THAT EXPOSED INSTALLATION OF WIRING IN CEILING SPACE IS ACCEPTABLE.

AUDIO KEY NOTES: (X)

A1. PROVIDE SINGLE-GANG JUNCTION BOX FOR AUDIO VOLUME CONTROL WITH 1/2" CONDUIT FROM ITS LOCATION AND STUB TO ACCESSIBLE CEILING. ROUTE CONDUIT VIA SHARED TRENCH FOR DATA/POWER CONDUITS. ROUTE WIRING EXPOSED ON CEILING SPACE IN CLEAN AND CONCEALED MANNER. SEE AUDIO VENDOR INSTALLATION DRAWINGS FOR ADDITIONAL INFORMATION.

A2. PROVIDE ALL NECESSARY WIRING FOR WALL/ CEILING MOUNTED SPEAKER. ROUTE WIRING EXPOSED ON CEILING SPACE IN CLEAN AND CONCEALED MANNER. SEE AUDIO VENDOR INSTALLATION DRAWINGS FOR ADDITIONAL INFORMATION.

GENERAL NOTES:

A. SEE GENERAL NOTES ON SHEET E-001.

B. INSTALLATIONS OF LINE VOLTAGE POWER CONDUITS AND WIRES SHALL BE CONCEALED ABOVE THE CEILING AND BEHIND WALLS. WHERE NOT POSSIBLE, CONTRACTOR SHALL OBTAIN APPROVAL FOR EXPOSED LOCATIONS PRIOR TO ROUGH IN. USE WIREMOLD IN EXPOSED AREAS. REFER TO GENERAL NOTE E-001(5B). FOR ELECTRICAL DEVICES INSTALLED WITHIN THE DEMISING WALL.

C. COORDINATE ALL ELECTRICAL CONDUIT ROUTING TO AVOID CONFLICT WITH OTHER TRADES.

D. COORDINATE LOCATION OF MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL CONTROLS INFORMATION.

E. REFER TO MECHANICAL CONTROLS DIAGRAM FOR ADDITIONAL SCOPE OF WORK, SUCH AS POWER FOR THERMOSTATS, AND OTHER WORK REQUIRED BY ELECTRICAL CONTRACTOR AND NOT SPECIFICALLY MENTIONED IN ELECTRICAL DRAWINGS.

F. FIELD VERIFY EXACT LOCATION AND ELECTRICAL REQUIREMENTS OF ALL HVAC EQUIPMENT WITH MECHANICAL CONTRACTOR PRIOR TO ORDERING RELATED ELECTRICAL EQUIPMENT

G. ALL PERMANENTLY CONNECTED (HARD-WIRED) APPLIANCES SHALL BE SERVED WITH DISCONNECTING MEAN WITHIN SIGHT OF THE UNIT, OR THE SERVING CIRCUIT BREAKER IN THE PANEL SHALL BE CAPABLE OF BEING LOCKED IN OPEN POSITION AS REQUIRED PER CEC 422.31.

H. ALL TRENCHING, CUTTING AND PATCHING OF EXISTING CONCRETE SLAB FLOOR, AS REQUIRED FOR THE INSTALLATION OF THE ELECTRICAL SYSTEMS SHOWN SHALL BE BY ELECTRICAL CONTRACTOR. PAINT ALL PATCHING TO MATCH ADJACENT EXISTING SURFACE.

I. ANY CONNECTION TO THE LANDLORD'S FIRE ALARM SYSTEM MUST BE MADE BY THE LANDLORD'S CONTRACTOR AT THE TENANT CONTRACTOR'S EXPENSE.

J. ELECTRICAL CONTRACTOR IS RESPONSIBLE TO INQUIRE WITH THE LANDLORD'S REPRESENTATIVE AND LOCAL FIRE MARSHAL ON ANY FIRE ALARM SYSTEMS IN USE AT THE BUILDING OR AS OTHERWISE REQUIRED BY FIRE MARSHAL PRIOR TO BID. IF THE FIRE ALARM SYSTEM IS NOT ADEQUATELY DESCRIBED ON THE DRAWINGS, THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO INFORM THE GENERAL CONTRACTOR AND INCLUDE THE COST AS A SEPARATE LINE ITEM IN THE BID. NO ADDITIONAL MONIES SHALL BE AWARDED FOR TIE-IN REQUIREMENTS TO A LANDLORD'S FIRE ALARM SYSTEM THAT IS IN EXISTENCE AT THE TIME OF THE BID, WITHOUT A SEPARATE LINE ITEM FOR THE FIRE ALARM SYSTEM AT THE TIME OF THE BID.

K. COORDINATE ALL ROOF PENETRATIONS WITH THE LANDLORD. WRITTEN PERMISSION FROM THE LANDLORD SHALL BE RECEIVED PRIOR TO ANY WORK BEING PERFORMED. ALL ROOF PENETRATIONS TO BE BY LANDLORD'S CONTRACTOR AT TENANT'S ELECTRICAL CONTRACTOR'S EXPENSE.

L. NO HANGERS, SUPPORTS, JUNCTION BOXES, ETC. SHALL BE ATTACHED TO THE ROOF DECK.

M. RECEPTACLE AND FACEPLATE COLORS SHALL BE FIELD VERIFIED WITH ARCHITECT TO MATCH ADJACENT WALL FINISH.

N. REFER TO WALL FINISH PLAN A-125 FOR POWER / DATA FINISH INFORMATION.

O. FOR ALL DATA OUTLET LOCATIONS, PROVIDE 3/4" CONDUITS WITH PULLWIRE ALONG THE WALL FROM THE DEVICE LOCATION AND STUB-OUT THE CONDUIT TO THE ACCESSIBLE CEILING SPACE. CABLING SHALL BE INSTALLED EXPOSED ON CEILING SPACE IN CLEAN AND CONCEALED MANNER. PROVIDE CABLE SUPPORTS (J-HOOKS, ETC.) FOR CABLE MANAGEMENT.

P. ALL EXPOSED CONDUIT AND JUNCTION BOXES RUNNING TO SALES FIXTURES SHALL BE PAINTED PT-3 BLACK.

Q. ALL OUTLETS THAT ARE LOCATED ON THE SALES FLOOR PERIMETER WALL AND H-WALL MUST BE INSTALLED AT A HORIZONTAL ORIENTATION.

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Seal:

ACIES ENGINEERING
400 N. McCarthy Blvd, ste 250
Milpitas, CA 95035
ph: (408) 522-5255
fx: (408) 522-5260
info@acies.net
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TEXAS REGISTRATION #: F-6950
EXPIRATION: 08/31/2026

STATE OF TEXAS
WILSON LEE
90532
LICENSED
PROFESSIONAL ENGINEER
EXPIRATION: 06/30/2026

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:

JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

ELECTRICAL
POWER PLAN

Sheet #:

E-201

ELECTRICAL POWER PLAN | SCALE 3/16"=1'-0" | 1

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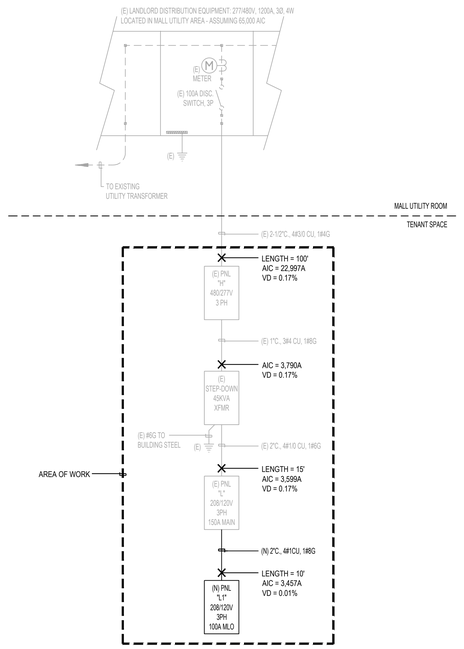
GENERAL NOTES:

1. ALL ELECTRICAL EQUIPMENTS AND FEEDERS ARE EXISTING UNLESS OTHERWISE NOTED AS "(N)" FOR NEW.
2. RE-TORQUE ALL EXISTING TERMINATIONS PER MANUFACTURER RECOMMENDATION.
3. ONLY U.L LISTED EQUIPMENT SHALL BE USED.
4. PROVIDE ALL NECESSARY SIGNAGE, LABELING AND PLAQUES AS REQUIRED BY CEC 230.70(B), 695 & 700.
5. ELECTRICAL CONTRACTOR TO PROVIDE MAIN LUGS & ADAPTOR LUGS AS NEEDED FOR CONNECTIONS AT PANEL BOARDS AND EQUIPMENT.
6. ELECTRICAL CONTRACTOR TO PROVIDE ALL FUSES AS REQUIRED.
7. INSTALL ENGRAVED BAKELITE NAMEPLATE ON SERVICE DISCONNECT SWITCH IN LANDLORD'S SWITCHGEAR WITH DEMISED PREMISES' SPACE NUMBER.
8. PROVIDE UPDATED TYPEWRITTEN PANEL DIRECTORY ATTACHED TO THE BACKSIDE OF THE PANEL ENCLOSURE DOOR.



ELECTRICAL ONE LINE DIAGRAM | SCALE: NTS | 4

VOLTAGE DROP CALCULATION (208/120V SYSTEM)

BRANCH CIRCUIT: 3% MAX

LOAD PER PHASE (KVA)	MAXIMUM SIZE CB (A)	WIRE SIZE (AWG)	GROUND WIRE SIZE (AWG)	MAXIMUM LENGTH OF BRANCH CIRCUIT PER UTILIZATION VOLTAGE (120V, 1PH)	(208V, 1PH)	(208V, 3PH)	NOTES AND REMARKS
< 1.92	20	#12	#12	56 FT.	85 FT.	113 FT.	A
		#10	#10	94 FT.	141 FT.	188 FT.	A
		#8	#8	144 FT	217 FT.	289 FT.	A
		#6	#6	230 FT.	345 FT.	460 FT.	A
< 1.44	20	#12	#12	75 FT.	113 FT.	150 FT.	A
		#10	#10	125 FT.	188 FT.	250 FT.	A
		#8	#8	192 FT	289 FT.	385 FT.	A
		#6	#6	306 FT.	460 FT.	613 FT.	A
< 1.26	20	#12	#12	86 FT.	129 FT.	172 FT.	
		#10	#10	143 FT.	215 FT.	286 FT.	
		#8	#8	220 FT	330 FT.	440 FT.	
< 1.08	20	#12	#12	100 FT.	150 FT.	200 FT.	
		#10	#10	167 FT.	250 FT.	334 FT.	
		#8	#8	256 FT	385 FT.	514 FT.	
< 0.9	20	#12	#12	120 FT.	180 FT.	240 FT.	
		#10	#10	200 FT.	300 FT.	401 FT.	
< 0.72	20	#12	#12	150 FT.	225 FT.	300 FT.	
		#10	#10	250 FT.	376 FT.	501 FT.	

1. CONTRACTOR SHALL REFER TO THIS TABLE PRIOR TO START OF BRANCH CIRCUIT ROUGH-IN.
2. CONTRACTOR SHALL USE THE APPROPRIATE WIRE SIZE IN CONJUNCTION WITH THE LENGTH OF THE PROPOSED FIELD VERIFIED ROUTING OF BRANCH CIRCUIT WIRING (INCLUDING VERTICAL & LATERAL RUN, ROUTED PARALLEL / PERPENDICULAR TO THE BUILDING STRUCTURE). SEE PANEL SCHEDULE FOR THE CORRESPONDING KVA LOAD PER PHASE OF A PARTICULAR BRANCH CIRCUIT.
4. RESISTANCE VALUES ARE FOR UNCOATED COPPER WIRES IN STEEL CONDUIT, 75 DEGREE C., OPERATING AT 60 HZ.

NOTES:
A = THE VALUES IN "120V, 1PH" COLUMN ARE TO BE USED FOR GENERAL PURPOSE RECEPTACLE LOADS.

VOLTAGE DROP CALCULATION (480/277V SYSTEM)

BRANCH CIRCUIT: 3% MAX

LOAD PER PHASE (KVA)	MAXIMUM SIZE CB (A)	WIRE SIZE (AWG)	GROUND WIRE SIZE (AWG)	MAXIMUM LENGTH OF BRANCH CIRCUIT PER UTILIZATION VOLTAGE (277V, 1PH)	(480V, 1PH)	(480V, 3PH)	NOTES AND REMARKS
< 4.43	20	#12	#12	130 FT.	195 FT.	260 FT.	
		#10	#10	217 FT.	325 FT.	433 FT.	
		#8	#8	333 FT	500 FT.	667 FT.	
< 4.0	20	#12	#12	144 FT.	216 FT.	288 FT.	
		#10	#10	240 FT.	360 FT.	480 FT.	
		#8	#8	369 FT	554 FT.	738 FT.	
< 3.5	20	#12	#12	164 FT.	247 FT.	329 FT.	
		#10	#10	274 FT.	411 FT.	549 FT.	
		#8	#8	422 FT	633 FT.	844 FT.	
< 2.5	20	#12	#12	230 FT.	346 FT.	461 FT.	
		#10	#10	384 FT.	576 FT.	768 FT.	
		#8	#8	590 FT	886 FT.	1182 FT.	
< 2.0	20	#12	#12	288 FT.	432 FT.	576 FT.	
		#10	#10	480 FT.	720 FT.	960 FT.	
< 1.5	20	#12	#12	384 FT.	576 FT.	786 FT.	
		#10	#10	639 FT.	960 FT.	1280 FT.	
< 1.0	20	#12	#12	575 FT.	864 FT.	1152 FT.	
		#10	#10	959 FT.	1440 FT.	1920 FT.	

1. CONTRACTOR SHALL REFER TO THIS TABLE PRIOR TO START OF BRANCH CIRCUIT ROUGH-IN.
2. CONTRACTOR SHALL USE THE APPROPRIATE WIRE SIZE IN CONJUNCTION WITH THE LENGTH OF THE PROPOSED FIELD VERIFIED ROUTING OF BRANCH CIRCUIT WIRING (INCLUDING VERTICAL & LATERAL RUN, ROUTED PARALLEL / PERPENDICULAR TO THE BUILDING STRUCTURE). SEE PANEL SCHEDULE FOR THE CORRESPONDING KVA LOAD PER PHASE OF A PARTICULAR BRANCH CIRCUIT.
4. RESISTANCE VALUES ARE FOR UNCOATED COPPER WIRES IN STEEL CONDUIT, 75 DEGREE C., OPERATING AT 60 HZ.

NOTES:

VOLTAGE DROP TABLE | SCALE: NTS | 3

(E)PANEL 'H'

VOLTAGE: 277/480 | WIRE: 4 | MOUNTING: SURFACE | NOTES:
BUS RATING: 100A | PHASE: 3 | A/C RATING: 42,000
MAIN REQUIREMENT: MLO | TYPE: NEMA 1 | CONDITION: EXISTING

CKT#	NOTES	LOAD	CB P	CB T	LOAD DESCRIPTION	LOAD KVA	PHASE	LOAD KVA	LOAD DESCRIPTION	CB P	CB T	LOAD	NOTES	CKT#
1							A	3.00	**EWH**	1	20	D	N	2
3	E		3	100	MAIN CIRCUIT BREAKER		B		SPACE					4
5							C	4.00				M		6
7		ML				12.51	A	4.00	VAV 1, 2, 3	3	30	M	E	8
9	E	ML	3	70	45KVA TRANSFORMER FEEDING PANEL 'L'	12.35	B	4.00				M		10
11		ML				12.88	C		SPACE					12
13					SPACE		A		SPACE					14
15					SPACE		B		SPACE					16
17					SPACE		C		SPACE					18

CONNECTED LOAD

PHASE A	19.51	KVA
PHASE B	16.35	KVA
PHASE C	16.87	KVA
TOTAL	52.73	KVA

NOTES:

DEMAND LOAD CALCULATION

DEMAND LOAD	SUBTOTAL	NEC DEMAND FACTOR	
CONTINUOUS LOAD (C)	0.00	125%	0.00
DEDICATED LOAD (D)	3.00	100%	3.00
GENERAL RECEPTACLE (G)	0.00	100% of 1st 10kVA & 50% of remaining	0.00
KITCHEN EQUIPMENT (K)	0.00	65%	0.00
LARGEST MOTOR LOAD (M)	0.00	125% of largest motor load + 100% remaining	59.16
		TOTAL DEMAND KVA	62.16
		AMPS @120/208, 3 PHASE, 4WIRE	**74.77**

(E)PANEL 'L'

VOLTAGE: 120/208 | WIRE: 4 | MOUNTING: SURFACE | NOTES:
BUS RATING: 150A | PHASE: 3 | A/C RATING: 10,000
MAIN REQUIREMENT: 150A MAIN | TYPE: NEMA 1 | CONDITION: EXISTING

CKT#	NOTES	LOAD	CB P	CB T	LOAD DESCRIPTION	LOAD KVA	PHASE	LOAD KVA	LOAD DESCRIPTION	CB P	CB T	LOAD	NOTES	CKT#
1	E	C	1	20	**SALES TRACK LIGHTING**	**0.60**	A	**0.62**	**BOH STOCKROOM LIGHTING 1**	1	20	C	E	2
3	E	C	1	20	**SALES TRACK LIGHTING**	**0.96**	B	**0.59**	**BOH STOCKROOM LIGHTING 2**	1	20	C	E	4
5	E	C	1	20	**SALES TRACK LIGHTING**	**1.26**	C	**0.36**	**SHOW WINDOW RECEPT**	1	20	G	E	6
7	E	C	1	20	**SALES TRACK LIGHTING**	**1.44**	A	**0.36**	**SHOW WINDOW RECEPT**	1	20	G	E	8
9	E	C	1	20	**SALES TRACK LIGHTING**	**1.26**	B	**0.36**	**SHOW WINDOW RECEPT**	1	20	G	E	10
11	E	C	1	20	**SALES TRACK LIGHTING**	**1.38**	C	**0.36**	**TEL/DATA BACKBOARD RECEP**	1	20	G	E	12
13	E	C	1	20	**FITTING, HALLWAY, RESTROOM LTG.**	**0.28**	A	**0.54**	**RECEIVING DESK RECEP**	1	20	G	E	14
15	E	C	1	20	**CASH DESK LIGHTING**	**0.18**	B	**0.36**	**TEL/DATA BACKBOARD RECEP**	1	20	G	E	16
17	E	C	1	20	**GENERAL SALES LIGHTING**	**0.86**	C	**0.36**	**TEL/DATA BACKBOARD RECEP**	1	20	G	E	18
19	E	C	1	20	**GENERAL SALES LIGHTING**	**0.81**	A	**0.36**	**TEL/DATA BACKBOARD RECEP**	1	20	G	E	20
21	E	C	1	20	**ENTRY ILLUMINATED CHANNEL LED**	**0.60**	B	**0.40**	**ROLL UP DOOR 1**	1	20	G	E	22
23	E	C	1	20	**ENTRY ILLUMINATED CHANNEL LED**	**0.60**	C	**0.40**	**MOVABLE CENTER WALL SALES FIXTURE**	1	20	G	E	24
25	E	C	1	20	**ENTRY ILLUMINATED CHANNEL LED**	**0.60**	A	**0.70**	**CASHWRAP SIGN**	1	20	G	E	26
27	**E**	G	1	20	**CASHWRAP RECEP**	**0.36**	B	**0.54**	**H-WALL SALES FIXTURE**	1	20	G	E	28
29	**E**	G	1	20	**CASHWRAP RECEP**	**0.36**	C	**0.36**	**H-WALL SALES FIXTURE**	1	20	G	E	30
31	**E**	M	1	20	**EF-1**	**0.18**	A	**0.80**	**MOVABLE CENTER WALL SALES FIXTURE**	1	20	G	E	32
33	**E**	D	1	20	WH, A/C CONTROLS, HEATER	0.36	B	**1.04**	**(E) ELECTRICAL WATER HEATER**	**2**	**20**	D	N	34
35	**E**	D	1	20	**ROLL UP DOOR 2**	**0.40**	C	**1.04**				D		36
37	**E**	C	1	20	**SIGN**	**0.50**	A	**4.72**						38
39	**E**	C	1	20	**SIGN**	**0.50**	B	**4.85**	**PANEL 'L1'**	**3**	**100**		N	40
41	E	D	1	20	**EAS**	**0.18**	C	**4.96**						42

CONNECTED LOAD

PHASE A	12.51	KVA
PHASE B	12.35	KVA
PHASE C	12.88	KVA
TOTAL	37.73	KVA

NOTES:
E - EXISTING BREAKER TO REMAIN
N - PROVIDE NEW BREAKER OF SAME MANUFACTURER AND AIC RATING AS EXISTING BREAKERS
GFI - PROVIDE GFCI TYPE CIRCUIT BREAKER
LO - PROVIDE LOCK-ON BREAKER

DEMAND LOAD CALCULATION

DEMAND LOAD	SUBTOTAL	NEC DEMAND FACTOR	
CONTINUOUS LOAD (C)	13.03	125%	16.28
DEDICATED LOAD (D)	3.60	100%	3.60
GENERAL RECEPTACLE (G)	35.11	100% of 1st 10kVA & 50% of remaining	22.55
KITCHEN EQUIPMENT (K)	0.00	65%	0.00
LARGEST MOTOR LOAD (M)	0.18	125% of largest motor load + 100% remaining	0.18
		TOTAL DEMAND KVA	42.62
		AMPS @ 120/208, 3 PHASE, 4WIRE	**118.29**

(N)PANEL 'L1'

VOLTAGE: 120/208 | WIRE: 4 | MOUNTING: SURFACE | NOTES:
BUS RATING: 100A | PHASE: 3 | A/C RATING: 10,000
MAIN REQUIREMENT: MLO | TYPE: NEMA 1 | CONDITION: NEW

CKT#	NOTES	LOAD	CB P	CB T	LOAD DESCRIPTION	LOAD KVA	PHASE	LOAD KVA	LOAD DESCRIPTION	CB P	CB T	LOAD	NOTES	CKT#
1		G	1	20	PERIMETER FIXTURE RECEP	0.72	A	0.36	CASHWRAP DIGITAL LED SCREEN	1	20	G		2
3		G	1	20	PERIMETER FIXTURE RECEP	0.72	B	0.36	CASHWRAP DIGITAL LED SCREEN	1	20	G		4
5		G	1	20	PERIMETER FIXTURE RECEP	0.72	C	0.18	TIME CLOCK	1	20	D		6
7		G	1	20	PERIMETER FIXTURE RECEP	0.90	A	0.40	DRINKING FOUNTAIN	1	20	D	GFI	8
9		G	1	20	PERIMETER FIXTURE RECEP	1.08	B	0.35	UNDERCOUNTER REFRIGERATOR	1	20	K	GFI	10
11		G	1	20	LIGHT BOX	0.36	C		SPARE	1	20			12
13		G	1	20	FLIGHT CASE SALES FIXTURE	0.36	A	0.18	STAFF AREA RECEPT	1	20	G		14
15		G	1	20	FLIGHT CASE SALES FIXTURE	0.36	B	0.18	STAFF AREA RECEPT	1	20	G		16
17			1	20	SPARE		C	0.18	STAFF AREA RECEPT	1	20	G		18
19		G	1	20	MANAGER'S OFFICE	0.18	A	1.26	BOH STOCKROOM RECEPT	1	20	G		20
21		G	1	20	MANAGER'S OFFICE	0.18	B	0.18	RESTROOM RECEPT	1	20	G		22
23		G	1	20	MANAGER'S OFFICE	0.18	C	0.36	MAINTENANCE ROOF RECEPT	1	20	G		24
25		G	1	20	MANAGER'S OFFICE	0.18	A		SPARE	1	20			26
27		G	1	20	MANAGER'S OFFICE	0.36	B		SPARE	1	20			28
29		G	1	20	MANAGER'S SAFE RECEPT	0.18	C		SPACE					30
31		G	1	20	RECEIVING DESK DATA/GER RECEPT	0.18	A		SPACE					32
33		G	1	20	BOH HALLWAY RECEPT	0.72	B		SPACE					34
35			1	20	SPARE		C		SPACE					36
37			1	20	SPARE		A		SPARE					38
39			1	20	SPARE		B	0.36	FOOTWARE ORDER SCREEN	1	20	G		40
41			1	20	SPARE		C	2.80	SUSPENDED DIGITAL LED RECEPT STOREFRONT	1	30	G		42

CONNECTED LOAD

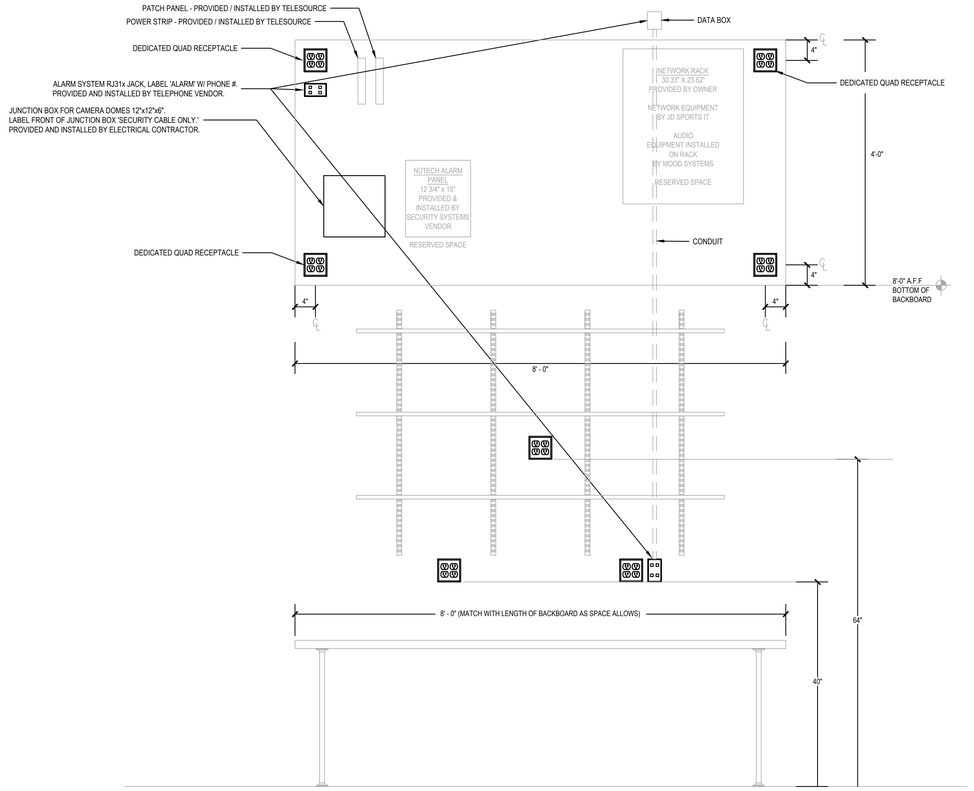
PHASE A	4.72	KVA
PHASE B	4.85	KVA
PHASE C	4.96	KVA
TOTAL	14.53	KVA

NOTES:
E - EXISTING BREAKER TO REMAIN
N - PROVIDE NEW BREAKER OF SAME MANUFACTURER AND AIC RATING AS EXISTING BREAKERS
GFI - PROVIDE GFCI TYPE CIRCUIT BREAKER
LO - PROVIDE LOCK-ON BREAKER

DEMAND LOAD CALCULATION

DEMAND LOAD	SUBTOTAL	NEC DEMAND FACTOR	
CONTINUOUS LOAD (C)	0.00	125%	0.00
DEDICATED LOAD (D)	0.58	100%	0.58
GENERAL RECEPTACLE (G)	13.60	100% of 1st 10kVA & 50% of remaining	11.80
KITCHEN EQUIPMENT (K)	0.35	65%	0.22
LARGEST MOTOR LOAD (M)	0.00	125% of largest motor load + 100% remaining	0.00
		TOTAL DEMAND KVA	12.60
		AMPS @120/208, 3 PHASE, 4WIRE	**34.99**

ELECTRICAL PANEL SCHEDULES | SCALE: NTS | 2



GENERAL NOTES:
1. GENERAL CONTRACTOR TO PROVIDE EQUIPMENT AS NOTED.
2. ALL CONDUIT SHALL BE SURFACE MOUNTED ELECTRICAL METALLIC TUBING (EMT), UON. NO CONDUIT SHALL BE RUN ON THE MIDDLE OF THE BACKBOARD.
3. ALL CONDUIT RUNS SHALL INCLUDE NYLON BUSHINGS AT EXPOSED ENDS, WITH PULL STRINGS LABELED AT EACH END.
4. REFER TO PLAN FOR NUMBER AND LOCATION OF DEVICES. EXACT DIMENSION OF LOW VOLTAGE RACKS SHALL BE COORDINATED WITH JD SPORTS.
5. CONTRACTOR TO REFER TO SHOP DRAWINGS FROM VENDORS FOR EXACT CALL OUTS OR RUNS TO AND FROM THE A.T.S. BACKBOARD.
6. DETAIL IS TYPICAL IN NATURE. ALL LOCATIONS AND REQUIREMENTS SHALL BE COORDINATED WITH JD REPRESENTATIVE AND VENDORS PRIOR TO ROUGH-IN.

A.T.S. BACKBOARD ELEVATION (FOR REFERENCE ONLY) | SCALE: NTS | 1

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CLEVELAND DENVER GLENDORA IRVINE ORLANDO PHOENIX SAN FRANCISCO
Seal:
ACIES ENGINEERING
400 N. McCarthy Blvd, ste 250
Milpitas, CA 95035
ph: (408) 522-5255
fx: (408) 522-5260
info@acies.net

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TEXAS REGISTRATION #: F-6950
EXPIRATION: 08/31/2026
STATE OF TEXAS WILSON LEE 90532 LICENSED PROFESSIONAL ENGINEER
EXPIRATION: 06/30/2026

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:
JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

ELECTRICAL
ONE LINE DIAGRAM
AND PANEL SCHEDULES

Sheet #:
E-401

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ELECTRIC WATER HEATER SIZING

FIXTURE ID	FIXTURE TYPE	QTY	DEMAND @ 120°F	DEMAND @ 140°F	TOTAL
SS-1	SERVICE SINK	1	-	15 GPH	15 GPH

KW INPUT = (GPH) (TEMP. RISE) (8.33 LB/GALLON OF WATER) / THERMAL EFFICIENCY x 3412 BTU/HKW

KW INPUT = (12 GPH) (80°F) (8.33 LB/GALLON OF WATER) / 98% x 3412 BTU/HKW

= 2.39 kW

TOTAL:	15 GPH
DEMAND FACTOR:	0.8
TOTAL HOT WATER DEMAND:	12 GPH
MIN. TEMPERATURE RISE:	80°F

ELECTRIC STORAGE WATER HEATER

QUANTITY	1
MANUFACTURER	A.O. SMITH
MODEL	DEL-6
RECOVERY RATE	15 GPH @ 80°F TEMPERATURE RISE
ELECTRICAL INPUT	3 KW, 277V, 1PH
CAPACITY	6 GALLONS

PLUMBING FIXTURE SCHEDULE

FIXT ID	DESCRIPTION	MANUFACTURER	MODEL	ROUGH-IN W	ROUGH-IN V	ROUGH-IN CW	ROUGH-IN HW	REMARKS
(E) WC	EXISTING WATER CLOSET (ADA, TANK TYPE)	-	-	4"	2"	3/4"	-	EXISTING TO REMAIN AND BE REUSED.
(E) L	EXISTING LAVATORY	-	-	2"	2"	1/2"	1/2"	EXISTING TO REMAIN AND BE REUSED.
(E) IWH	EXISTING INSTA-HOT WATER HEATER	EEMAX	SP2412	-	-	1/2"	1/2"	EXISTING TO REMAIN AND BE REUSED.
SS-1	SERVICE SINK	FIAT	TSB3000 STOCKTON 24"x24"	3"	2"	3/4"	3/4"	GREY TERRAZO FINISH. FURNISH W/ HOSE & HOSE BRACKET, BUMPER GUARD, FITTING, WALL GUARDS & CHICAGO 897-RCF FAUCET W/ VACUUM BREAKER
DF-1	DRINKING FOUNTAIN	ELKAY	EZST L8LC	2"	1-1/2"	1/2"	1/2"	SELF-CONTAINED, WALL HUNG, BI-LEVEL STATION WITH OPTIONAL FILTER. ELECTRICAL: 115V/60Hz, 5A. FURNISH WITH WALL CARRIER. MOUNT PER ADA REQUIREMENTS.
EWH	ELECTRIC WATER HEATER	AO SMITH	DEL-6	-	-	3/4"	3/4"	6 GALLON TANK, 277V/1PH/60Hz, 3kW ELEMENT, 15 GPH RECOVERY AT 80°F RISE. FACTORY INSTALLED P&T VALVE TO DRAIN TO SS-1. MAXIMUM THERMOSTAT SETTING OF 110°F. 90 LB OPERATING WEIGHT. PROVIDE HOLD-RITE NO. 30-SWHP-WM WALL MOUNTED PLATFORM.
ET-1	EXPANSION TANK	AMTROL	ST-12	-	-	3/4"	-	4.4 GALL TANK VOLUME, MAX. OPERATING PRESSURE 150PSI, MAX. OPERATING TEMPERATURE 200°F.
WHA	WATER HAMMER ARRESTOR	JAY R SMITH	5200 SERIES	-	-	SAME AS PIPE SIZE	-	SEE WATER HAMMER ARRESTER SIZING TABLE FOR CORRECT MODEL AND FIXTURE UNIT COUNT THE PISTON UNIT IS SEAMLESS. FACTORY CHANGED AND IS MAINTENANCE FREE AND DOES NOT REQUIRE ACCESS PANELS.
TP-1	TRAP PRIMER	PPP INC.	PR-500	-	-	1/2"	-	PROVIDE 12"x12" WALL ACCESS PANEL.
FD-1	FLOOR DRAIN	ZURN	Z-415S	3"	2"	-	-	NICKEL BRONZE STRAINER, CAST IRON, NO-HUB, WITH 1/2" TRAP PRIMER CONNECTION. PROVIDE WIDE FLANGED FOR EPOXY FLOORING.
WCO	WALL CLEANOUT	ZURN	Z-1468	SAME AS PIPE SIZE	-	-	-	NO HUB, POLISHED CHROME.

PLUMBING FIXTURE LOAD CALCULATION

FIXTURE ID	QTY	DESCRIPTION	SANITARY F.U. EACH	SANITARY F.U. TOTAL	COLD WATER F.U. EACH	COLD WATER F.U. TOTAL	HOT WATER F.U. EACH	HOT WATER F.U. TOTAL
DF-1	1	DRINKING FOUNTAIN	1	1	1	1	-	-
SS-1	1	SERVICE SINK	3	3	3	3	3	3
FD-1	1	FLOOR DRAIN	2	2	-	-	-	-
TOTAL:				6.0		4.0		3.0

UTILITY LOAD

	CURRENT LOAD	REQUIRED PIPE SIZE	REMARKS
SANITARY SEWER	4 F.U.	3"	1
COLD WATER	4 F.U. FLUSH TANK = 3 GPM	3/4"	2

1. VERIFY IN FIELD THE EXACT SIZE AND LOCATION OF THE EXISTING SANITARY SEWER SYSTEM.
2. VERIFY IN FIELD THE EXACT SIZE, LOCATION, AND PRESSURE OF THE EXISTING WATER SUPPLY SYSTEM.

BASED ON THE TEXAS IHB PLUMBING CODE 2021

HANGERS AND SUPPORTS

MATERIALS	TYPE OF JOINTS	HORIZONTAL	VERTICAL
CAST-IRON HUBLESS	SHIELDED COUPLING	EVERY OTHER JOINT, UNLESS OVER 4 FEET THEN SUPPORT EACH JOINT	BASE AND EACH FLOOR, NOT TO EXCEED 15 FEET
COPPER & COPPER ALLOY	SOLDERED, BRAZED, THREADED, OR MECHANICAL	3/4 INCH AND SMALLER, 5 FEET 1 INCH TO 2 INCHES, 6 FEET 2-1/2 INCHES AND LARGER, 10 FEET	EACH FLOOR, NOT TO EXCEED 10 FEET
STEEL PIPE FOR GAS	THREADED UP TO 3½" WELDED 4" OR LARGER	3/4 INCH AND 1 INCH, 5 FEET 1-1/4 INCHES AND LARGER, 10 FEET	1/2 INCH, 6 FEET; 3/4 INCH AND 1 INCH, 8 FEET; 1-1/4 INCHES EVERY FLOOR LEVEL
SCHEDULE 40 PVC DWV AND ABS	SOLVENT CEMENTED	ALL SIZES, 4 FEET; ALLOW FOR EXPANSION EVERY 30 FEET	BASE AND EACH FLOOR; PROVIDE MID-STORY GUIDES; PROVIDE FOR EXPANSION EVERY 30 FEET

LEGEND

SYMBOL	ABBREVIATION	DESCRIPTION
	CW	COLD WATER PIPING
	HW	HOT WATER PIPING
	HWR	HOT WATER RECIRCULATION PIPING
	SS	SOIL OR WASTE PIPING BELOW GRADE
SS	SS	SOIL OR WASTE PIPING ABOVE GRADE
V	V	VENT PIPING
CD	CD	CONDENSATE DRAIN PIPING
D	ID	INDIRECT DRAIN PIPING
	WHA	WATER HAMMER ARRESTOR
	P.O.C.	POINT-OF-CONNECTION
		CAPPED
		UNION
	UP	PIPE UP
	DN	PIPE DOWN
	DN	PIPE TEE DOWN
		SHUT-OFF VALVE
	CV	CHECK VALVE
	RED	REDUCER
	PUMP	
	FCO/GCO	FLOOR CLEANOUT OR GRADE CLEANOUT
	CO/WCO	WALL CLEANOUT
	BLIND PLUG	REMOVABLE PLUG FOR CONDENSATE PIPING
		GAS COCK WITH UNION
	PRV	PRESSURE REDUCING VALVE
	T&P	TEMPERATURE & PRESSURE RELIEF VALVE
	AFF	ABOVE FINISHED FLOOR
	BFF	BELOW FINISHED FLOOR
	BG	BELOW GROUND
	(E)	EXISTING
	(N)	NEW
	NTS	NOT TO SCALE
	IE	INVERT ELEVATION
	V.I.F.	VERIFY IN FIELD
	(F)	FUTURE
	FU	FIXTURE UNIT
	AHJ	AUTHORITY HAVING JURISDICTION

MATERIAL SPECIFICATIONS

SERVICES		CAST IRON NO-HUB	GALV. STEEL SCH 40	BLACK STEEL SCH 40	TYPE L COPPER	TYPE K COPPER	TYPE M COPPER	REMARKS
COLD WATER	ABOVE GROUND				●			(5)
	BELOW GROUND					●		(2)
HOT WATER	ABOVE GROUND				●			(4)(5)
	BELOW GROUND					●		(4)
WASTE	ABOVE GROUND	●						(1)(5)
	BELOW GROUND	●						(1)(2)
VENT	ABOVE GROUND	●						(1)(5)
	BELOW GROUND	●						(1)(2)
NATURAL GAS	INDOOR			●				(5)
	OUTDOOR		●					(3)
INDIRECT WASTE	INDOOR						●	(5)
	OUTDOOR						●	
CONDENSATE DRAIN	INDOOR						●	(4)(5)
	OUTDOOR						●	

(1) FIELD VERIFY IF ABS DWV PLASTIC IS ALLOWED BY LOCAL AHJ PRIOR TO SUBSTITUTION.
(2) PROTECT PIPING WITH APPROVED POLY WRAP OR PVC 10 MIL PIPE TAPE.
(3) COATED WITH YELLOW ANTI-RUST PAINT.
(4) INSULATED.
(5) FOR PLENUM RETURN ONLY, ALL PIPING WITHIN PLENUM TO BE FIRE RATED APPROVED INSULATION.

WATER HAMMER ARRESTER SIZING

PDI SYMBOL MODEL #	A	B	C	D
	5005	5010	5020	5030
FIXTURE UNIT RATING	1-11	12-32	33-60	61-113

FIGURE NUMBERS ARE THOSE OF JAY R SMITH HYDROTOL SERIES

HOT WATER PIPE INSULATION

FLUID TEMPERATURE RANGE (°F)	CONDUCTIVITY RANGE (BTU-INCH PER SQFT PER °F)	INSULATION MEAN RATING TEMPERATURE (°F)	NOMINAL PIPE DIAMETER (IN INCHES) < 1	1 TO < 1.5	1 TO < 4	4 TO < 8	≥ 8
			INSULATION THICKNESS REQUIRED (IN INCHES)				
105-140	0.21 - 0.28	100	1.0	1.0	1.5	1.5	1.5

ALL INSULATION SHALL BE WITH R VALUES OF 4.0 TO 4.6. BASED ON TABLE C403.2.10 TEXAS IHB ENERGY CODE 2021

GENERAL NOTES

1. PLUMBING CONTRACT DRAWINGS ARE IN PART DIAGRAMMATIC, COVERING THE SCOPE OF WORK AND GENERAL ARRANGEMENT OF THE EQUIPMENT, PIPING, ETC., AND THE APPROXIMATE SIZE OF EQUIPMENT AND MATERIALS. THE CONTRACTOR SHALL FOLLOW THESE DRAWINGS IN LAYING OUT THE PLUMBING WORK. PLUMBING CONTRACTOR SHALL CONSULT GENERAL, SPRINKLER, HEATING/VENTILATING/AIR CONDITIONING CONTRACT AND ELECTRICAL DRAWINGS TO BE FAMILARIZED WITH THE WORK AND TO VERIFY THE SPACES IN WHICH THE PLUMBING WORK WILL BE INSTALLED.
2. BECAUSE OF THE NATURE AND SCALE OF THE DRAWINGS, CERTAIN BASIC PLUMBING ITEMS SUCH AS UNIONS, FITTINGS, ELBOWS, ETC., MAY NOT BE SHOWN. WHERE SUCH ITEMS ARE REQUIRED BY OTHER SECTIONS OF THE SPECIFICATIONS, OR WHERE THEY ARE REQUIRED BY THE NATURE OF THE WORK OR BY CODES AND REGULATIONS, THEY SHALL BE FURNISHED AND INSTALLED AT NO ADDITIONAL COST TO THE OWNER. THE DRAWINGS INDICATE GENERAL LOCATIONS OF PIPING, EQUIPMENT, DUCTWORK AND SIMILAR. THE EXACT LOCATION TO BE DETERMINED BY THE CONTRACTOR TO BEST FIT THE LAYOUT OF THE JOB.
3. ALL EQUIPMENT SHALL BE TIGHTLY COVERED AND PROTECTED AGAINST DIRT, WATER, AND CHEMICAL OR MECHANICAL INJURY OR THEFT. PLUMBING FIXTURES SHALL BE COVERED WITH HEAVY PAPER COVERINGS AFTER INSTALLATION AND SHALL BE THOROUGHLY CLEANED AFTER COMPLETION OF THE PROJECT.
4. ALL MATERIALS SUCH AS VALVES, FITTINGS, PIPING, EQUIPMENT, PUMPS, COILS, ETC., SHALL BE PROPERLY PROTECTED, AND ALL PIPING OPENINGS SHALL BE TEMPORARILY CLOSED BY THE CONTRACTOR FOR THE WORK UNDER THEIR CHARGE, ON A DAILY BASIS, AT THE END OF EACH WORKING DAY, SO AS TO PREVENT OBSTRUCTION AND DAMAGE. THE ABOVE REQUIREMENTS ARE MANDATORY.
5. THE CONTRACTOR SHALL SEE THAT ALL MATERIALS, INSTALLATION AND WORKMANSHIP IS PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF ALL APPLICABLE CODES, LAWS, OR ORDINANCES OF THE STATE OF TEXAS, AND WILLIAMSON COUNTY AND LOCAL CODES, CITY OF CEDAR PARK LAWS OR ORDINANCES, INCLUDING ALL STATE OR LOCAL BOARD OF HEALTH, FEDERAL AND STATE ENVIRONMENTAL PROTECTION REGULATIONS, STATE ENERGY CODES AND UTILITY REGULATORY AGENCIES.
6. ALL WORK SHALL BE FURTHER PERFORMED IN ACCORDANCE WITH THE NATIONAL BOARD OF FIRE UNDERWRITERS, THE PLUMBING AND BUILDING CODES, NATIONAL ELECTRICAL CODE, THE OCCUPATIONAL SAFETY AND HEALTH ACT, THE AMERICAN GAS ASSOCIATION, AND ALL SUCH OTHER SPECIFIC CODES AS MAY BE REFERRED TO IN THE INDIVIDUAL SECTIONS OF THE SPECIFICATIONS.
7. PIPE SIZES SHOWN ON THE DRAWINGS ARE THE MINIMUM SIZES ALLOWED REGARDLESS OF THE CODE MINIMUM, EXCEPT WHEN THE CODE MINIMUM SIZE IS LARGER THAN THAT SHOWN.
8. THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF CONTRACT PRINTS ON THE CONSTRUCTION SITE AT ALL TIMES, ON WHICH HE/SHE SHALL ACCURATELY RECORD THE ACTUAL INSTALLATION OF ALL PLUMBING WORK. AS WORK PROGRESSES, MARK CHANGES MADE WHETHER RESULTING FROM JOB CONDITIONS, ADDENDA, FORMAL CHANGE ORDERS OR OTHER INSTRUCTIONS ISSUED BY THE ENGINEER.
9. THE PLUMBING CONTRACTOR SHALL INDICATE PROGRESS BY COLORING IN VARIOUS PIPES, FIXTURES, AND ASSOCIATED APPURTENANCES EXACTLY AS THEY ARE ERECTED AND INSTALLED.
10. MARK ALL PIPE SIZES AND LOCATIONS DURING CONSTRUCTION. ALSO, MARK LOCATIONS OF ALL VALVES AND VARIOUS EQUIPMENT, APPARATUS, AND ASSOCIATED APPURTENANCES AS ERECTED WEEKLY DURING CONSTRUCTION.
11. AT THE COMPLETION OF THE JOB THESE PRINTS, INCORPORATING CHANGES, ADDENDA AND ADDED DATA NOTED ON MARKED-UP PRINTS, INCLUDING DIMENSIONED LOCATIONS OF UNDERGROUND PIPING BEYOND LIMITS OF BUILDING, SHALL BE SUBMITTED TO THE ENGINEER FOR FINAL REVIEW AND COMMENT. THE PRINTS WILL BE RETURNED WITH APPROPRIATE COMMENTS AND RECOMMENDATIONS. THESE CORRECTED PRINTS TOGETHER WITH CORRELATED PRINTS INDICATING ALL THE REVISIONS, ADDITIONS AND DELETIONS OF WORK, SHALL FORM THE BASIS FOR PREPARING A SET OF RECORD DRAWINGS.
12. WHERE PIPING, AND OTHER PLUMBING APPURTENANCES PASS THROUGH FIRE PARTITIONS, FIRE WALLS, OR FLOORS, INSTALL A FIRE-STOP THAT PROVIDES AN EFFECTIVE BARRIER AGAINST THE SPREAD OF FIRE, SMOKE AND GASES. FIRE-STOP MATERIAL SHALL BE UL APPROVED, PACKED TIGHT AND COMPLETELY FILL CLEARANCES BETWEEN RACEWAYS AND OPENINGS. FLOOR, EXTERIOR WALL, AND ROOF SEALS SHALL ALSO BE MADE WATERTIGHT AS APPROVED BY THE ADMINISTRATIVE AUTHORITY.
13. ARRANGE AND INSTALL PIPING APPROXIMATELY AS INDICATED, STRAIGHT, PLUMB AND AS DIRECT AS POSSIBLE. FORM RIGHT ANGLES OR PARALLEL LINES WITH BUILDING WALLS. KEEP PIPES CLOSE TO WALLS, PARTITIONS AND CEILINGS, OFFSETTING ONLY WHERE NECESSARY TO FOLLOW WALLS AND AVOID INTERFERENCE WITH OTHER MECHANICAL ITEMS. LOCATE GROUPS OF PIPES PARALLEL TO EACH OTHER; SPACE THEM AT A DISTANCE TO PERMIT ACCESS FOR SERVICING VALVES.
14. GRADE DRAINAGE AT UNIFORM SLOPE OF NOT LESS THAN 1/4" PER FOOT TOWARD THE POINT OF DISPOSAL. WHEN APPROVED BY ADMINISTRATIVE AUTHORITY, PIPE SIZE 4" AND LARGER MAY HAVE A SLOPE OF NOT LESS THAN 1/8" PER FOOT.
15. WHERE CHANGES IN PIPE SIZES OCCUR, USE ONLY REDUCING FITTINGS.
16. FOR DRAINAGE PIPING CHANGES IN DIRECTION, USE LONG SWEEP WHERE POSSIBLE, OTHERWISE, SHORT SWEEP 1/4 BENDS, OR COMBINATION WYE AND 1/8 BENDS; USE SANITARY TEE BRANCHES ONLY FOR HORIZONTAL BRANCHES DISCHARGING TO STACKS.
17. INSTALL SECTIONALIZING VALVES AND ON EACH BRANCH LINE TO MULTI-FIXTURE GROUPS. LOCATE VALVES IN A READILY ACCESSIBLE LOCATION, DO NOT CONCEAL. DO NOT LOCATE VALVE SYSTEMS BELOW HORIZONTAL UNLESS INDICATED ON PLANS. LOCATE ANGLE STOP VALVES BELOW THE SINK OR WATER CLOSET.
18. PROVIDE PIPING AND FIXTURE TRAPS. CONNECT TO FIXTURES AND OTHER EQUIPMENT INDICATED OR SPECIFIED AS REQUIRING SOIL, WASTE, DRAIN AND VENT FACILITIES.
19. LAY ALL PIPING TRUE TO LINE AND GRADE, FIT ENDS TOGETHER, MATCH SO THAT SEWER OR DRAIN WILL HAVE SMOOTH AND UNIFORM INSERT. FOLLOW LOCATIONS AND ELEVATIONS AT SITE. AS THE PIPE LAYING PROGRESSES, CLEAR PIPE INTERIOR OF CEMENT, DIRT, AND OTHER FOREIGN MATERIALS. DURING WORK STOPPAGE PERIODS, PROVIDE EFFECTIVE PLUGS OR COVERS FOR OPEN ENDS OF PIPE AND DRAINS.
20. PROVIDE CLEANOUTS WHERE INDICATED AND AT INTERVALS OF 100' OR AS REQUIRED BY LOCAL PLUMBING CODE AND WHERE REQUIRED AT CHANGES OF DIRECTIONS OF SOIL AND WASTE STACKS. INSTALL CLEANOUTS SO AS TO BE ACCESSIBLE FOR EASY REMOVAL AND TO PROVIDE CLEARANCE FOR RODDING. CLEANOUTS SHALL BE THE SAME SIZE AS PIPE SERVED EXCEPT THAT NO CLEANOUT NEED BE LARGER THAN FOUR INCHES.
21. EXTEND VENT PIPES 12 INCHES ABOVE ROOF AND 10FT MINIMUM AWAY FROM ANY FRESH AIR INTAKES AND AT LEAST 24 INCHES AWAY FROM A PARAPET WALL.
22. SANITARY VENT PIPING SHALL BE GRADED SO THAT THE AIRFLOW TO THE OUTSIDE WILL BE CONTINUOUSLY UPWARD.
23. MAKE TIGHT CONNECTION BETWEEN WATER CLOSET FLANGES AND EARTHENWARE FIXTURE BY MEANS OF AN APPROVED MOLDED WAX RING OR SETTING COMPOUND AND BOLTING.
24. VENTS: PROVIDE FLASHING FOR STACKS PASSING THROUGH ROOF. MAKE WATER-TIGHT AT ROOF WITH 4LB. SHEET LEAD; EXTEND INTO ROOFING FELTS AT LEAST 24" FROM PIPES. EXTEND LEAD COLLAR UP AROUND OUTSIDE AND TURN DOWN INSIDE VENTS AT THE TOP. DO NOT LOCATE VENT THROUGH ROOF LESS THAN 24 INCHES FROM A PARAPET WALL.
25. ALL PLUMBING FIXTURES AND PIPING ARE TO BE LISTED BY AN APPROVED LISTING AND TESTING AGENCY AND PROPERLY LABELED.
26. COORDINATE ALL LOCATIONS, SIZES, AND ELEVATIONS OF ALL SLEEVES THROUGH WALLS, BEAMS, SLABS AND FOOTING WITH STRUCTURAL AND ARCHITECTURAL DRAWINGS. ALL PIPES SLEEVING THROUGH FOOTINGS SHALL HAVE A SLEEVE DIAMETER OF TWO PIPE SIZES OVER THE PIPE PASSING THROUGH THE FOOTING. NO PIPE TO BE PLACED THROUGH FOOTING UNLESS APPROVED BY THE STRUCTURAL ENGINEER.
27. ALL PIPES SHALL BE PROTECTED AT THE POINT THEY CROSS BUILDING EXPANSION JOINT, EITHER WITH AN EXPANSION FITTINGS OR IN ANOTHER MANNER ACCEPTABLE TO THE ENGINEER.
28. PLUMBING CONTRACTOR SHALL CONNECT ALL GAS PIPING TO ALL GAS RELATED UNITS PER PLAN WITH LISTED AND APPROVED GAS SHUT-OFF VALVE, SEDIMENT TRAP, AND UNION.
29. FAUCET CONTROLS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 POUNDS.
30. PENETRATION OF FLOOR/CEILING ASSEMBLIES AND ASSEMBLIES REQUIRED TO HAVE A FIRE-RESISTANCE RATING SHALL BE PROTECTED IN ACCORDANCE WITH THE BUILDING CODE.
31. WHERE WATER PRESSURE WITHIN A BUILDING EXCEEDS 80 PSI, AN APPROVED LEAD-FREE WATER-PRESSURE REDUCING VALVE CONFORMING TO ASSE 1003 WITH STRAINER SHALL BE INSTALLED TO REDUCE THE PRESSURE IN THE BUILDING WATER DISTRIBUTION PIPING TO 80 PSI STATIC OR LESS.
32. DISINFECTION OF POTABLE WATER SYSTEM SHALL COMPLY WITH THE LOCAL AND THE TEXAS IHB PLUMBING CODE 2021.
33. PROPER ACCESS MUST BE PROVIDED FOR THE TESTING AND MAINTENANCE OF THE BACKFLOW PREVENTER.
34. ALL OVERHEAD PIPING SHALL MAINTAIN AT LEAST 5'-0" CLEARANCE IN FRONT OF THE HVAC SUPPLY AND RETURN OPENINGS.
35. PLASTIC PIPES ARE NOT PERMITTED TO BE INSTALLED WITHIN THE AIR PLENUM SPACE.
36. ANY UNUSED PLUMBING EQUIPMENT, PIPING, ETC., WITHIN OR SERVING THE PREMISES MUST BE COMPLETELY REMOVED TO POINT OF ORIGIN. DO NOT ABANDON IN PLACE.
36. INSTALL MAIN SHUT OFF VALVE ON DOMESTIC WATER LINE INSIDE SPACE WHERE IT IS EASILY ACCESSIBLE, OR AS NOTED ON PLANS.
37. PRIOR OF WORK, THE GENERAL CONTRACTOR AND PLUMBER SHALL PERFORM SCOPING AND THOROUGH INVESTIGATION OF EXISTING SANITARY SEWER SYSTEM TO DETERMINE THE EXACT CONDITION OF PIPING, INVERT ELEVATION AND ROUTING. THE GENERAL CONTRACTOR SHALL SUBMIT A SKETCH OR REPORT TO THE ARCHITECT AND ENGINEER.
38. NO PLUMBING PIPING SHALL BE DIRECTLY EMBEDDED IN CONCRETE OR MASONRY.
39. ALL PIPING BURIED BELOW GRADE MUST BE INSULATED. IN ADDITION, ALL PIPING BELOW GRADE MUST BE INSTALLED IN A WATERPROOF AND NON-CRUSHABLE CASING OR SLEEVE. THE INTERNAL CROSS-SECTION OR DIAMETER OF THE CASING OR SLEEVE SHALL BE LARGE ENOUGH TO ALLOW FOR INSULATION OF THE HOT WATER PIPING. PRE-INSULATED PIPE WITH AN INTEGRATED PROTECTION SLEEVE WILL ALSO MEET THIS REQUIREMENT.
40. PER TEXAS PLUMBING CODE AND TEXAS HEALTH AND SAFETY CODE, ALL NON-COMPLIANT PLUMBING FIXTURES THAT DO NOT COMPLY WITH LOW FLOW FIXTURE REQUIREMENTS WILL NEED TO BE UPGRADED, EVEN IF NO WORK IS PROPOSED ON THEM.
41. CONTROL VALVES SHALL PROVIDE SCALD AND THERMAL SHOCK PROTECTION AND SHALL HAVE A MAXIMUM MIXING TEMPERATURE OF 120°F PER UPC 408.3.
42. SHOWER AND TUB-SHOWER COMBINATIONS SHALL HAVE INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE OR THE THERMOSTATIC MIXING VALVE TYPE PER UPC 408.9.

SHEET INDEX

DWG NO.	DRAWING TITLE
P-001	PLUMBING GENERAL NOTES, LEGEND, AND FIXTURE SCHEDULE
P-002	PLUMBING SPECIFICATIONS
P-100	PLUMBING DEMOLITION PLAN
P-101	PLUMBING FLOOR PLAN
P-301	PLUMBING DETAILS

mcgarchitecture.com
CLEVELAND DENVER GLENDORA IRVINE ORLANDO PHOENIX SAN FRANCISCO

Seal:

ACIES ENGINEERING
400 N. McCarthy Blvd, ste 250
Milpitas, CA 95035
ph: (408) 522-5255
fx: (408) 522-5260
info@acies.net

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TEXAS REGISTRATION #: F-6950
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EXPIRATION: 06/30/2026

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY
Client:
JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

PLUMBING
GENERAL NOTES,
LEGEND AND
FIXTURE SCHEDULE

Sheet #:
P-001

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SEISMIC RESTRAINT GUIDELINES FOR PIPING

1. ALL SEISMIC RESTRAINTS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S SEISMIC RESTRAINT GUIDELINES MANUAL AND ALL CERTIFIED SUBMITTAL DATA.

2. TRANSVERSE BRACE SPACING SHALL NOT EXCEED 50 FEET UP TO 0.25g, 40 FEET UP TO 1.0g, AND 20 FEET UP TO 2.0g FOR STEEL AND COPPER PIPE WITH WELDED OR BRAZED CONNECTIONS. LONGITUDINAL SPACING SHALL NOT EXCEED 80 FEET UP TO 1.0g, AND 40 FEET UP TO 2.0g FOR STEEL AND COPPER PIPE WITH WELDED OR BRAZED CONNECTIONS.

3. STEEL AND COPPER PIPE WITH SCREWED CONNECTIONS BRACE SPACING SHALL NOT EXCEED 1/2 THE SPACING LISTED IN NOTE 2 GUIDELINES. FOR PVC, PVDF, FRP, AND OTHER SPECIALTY PIPING, BRACE SPACING SHALL NOT EXCEED 1/2 THE SPACING LISTED IN NOTE 2. ALL PIPE MUST BE CONSIDERED FULL OF WATER WHEN DETERMINING SEISMIC BRACE REQUIREMENTS UNLESS SPECIFICALLY ENGINEERED OTHERWISE.

4. TRANSVERSE RESTRAINT FOR ONE PIPE SECTION MAY ALSO ACT AS A LONGITUDINAL RESTRAINT FOR A PIPE SECTION OF THE SAME SIZE CONNECTED PERPENDICULAR TO IT IF THE RESTRAINT IS INSTALLED WITHIN 24-INCHES OF THE ELBOW OR TEE OR COMBINED STRESSES ARE WITHIN ALLOWABLE LIMITS AT LONGER DISTANCES.

5. HOLD DOWN CLAMPS MUST BE USED TO ATTACH PIPE TO ALL TRAPEZE MEMBERS BEFORE APPLYING RESTRAINTS.

6. BRANCH LINES MAY NOT BE USED TO RESTRAIN MAIN LINES.

7. PROVIDE REINFORCED CLEVIS BOLTS WHEN REQUIRED.

8. PIPING CROSSING BUILDING SEISMIC OR EXPANSION JOINTS, PASSING FROM BUILDING TO BUILDING, OR SUPPORTED FROM DIFFERENT PORTIONS OF THE BUILDING SHALL BE INSTALLED TO ALLOW DIFFERENTIAL SUPPORT DISPLACEMENTS WITHOUT DAMAGING THE PIPE, EQUIPMENT CONNECTIONS, OR SUPPORT CONNECTIONS. PIPE OFFSETS, LOOPS, ANCHORS, AND GUIDES SHALL BE INSTALLED AS REQUIRED TO PROVIDE SPECIFIED MOTION CAPABILITY AND LIMIT MOTION OF ADJACENT PIPING.

9. PROVIDE APPROPRIATELY SIZED OPENINGS IN WALLS, FLOORS, AND CEILINGS FOR ANTICIPATED SEISMIC MOVEMENT. PROVIDE FIRE SEAL SYSTEMS IN FIRE-RATED WALLS.

10. GAS PIPING LESS THAN 1" I.D. NEED NOT BE BRACED.

11. WHERE RIGIDLY SUPPORTED PIPES ARE CONNECTED TO EQUIPMENT WITH VIBRATION ISOLATION, THOSE CONNECTIONS MUST BE CAPABLE OF ACCOMMODATING SEISMIC DISPLACEMENTS. CONVERSELY, WHEN SMALLER UNSUPPORTED PIPES ARE CONNECTED TO RIGIDLY SUPPORTED EQUIPMENT, (i.e., COILS, etc.); THOSE JOINTS MUST BE CAPABLE OF ACCOMMODATING MOVEMENT OF THE PIPES.

12. RIGID PIPING SYSTEMS MAY NOT BE BRACED TO DISSIMILAR PARTS OF THE BUILDING OR TO DISSIMILAR BUILDING SYSTEMS WHICH MAY RESPOND DIFFERENTLY DURING AN EARTHQUAKE. DO NOT BRACE A SYSTEM TO TWO INDEPENDENT STRUCTURES SUCH AS CEILING AND WALL.

13. SEISMICALLY RESTRAIN ALL FUEL OIL PIPING, GAS PIPING, MEDICAL GAS PIPING, AND COMPRESSED AIR PIPING FOR FUEL OIL AND ALL GAS PIPING THAT IS 1" I.D. OR LARGER. TRANSVERSE RESTRAINTS MUST BE AT 20' MAXIMUM AND LONGITUDINAL RESTRAINTS AT 40' MAXIMUM SPACING.

14. PIPING LOCATED IN BOILER ROOMS, MECHANICAL EQUIPMENT ROOMS, AND REFRIGERATION EQUIPMENT ROOMS THAT IS 1-1/4" I.D. AND LARGER MUST BE SEISMICALLY RESTRAINED.

15. ALL OTHER PIPING 2-1/2" DIAMETER AND LARGER MUST BE SEISMICALLY RESTRAINED.

16. SEISMIC RESTRAINTS MAY NOT BE USED FOR ALL PIPING SUSPENDED BY INDIVIDUAL HANGERS 12" OR LESS AS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE SUPPORT WHERE THE HANGER IS ATTACHED. HOWEVER, IF THE 12" LIMIT IS EXCEEDED BY ANY HANGER IN THE RUN, SEISMIC BRACING IS REQUIRED FOR THE RUN.

17. THE 12" EXEMPTION APPLIES FOR TRAPEZE SUPPORTED SYSTEMS IF THE TOP OF EACH ITEM SUPPORTED BY THE TRAPEZE QUALIFIES.

18. WHERE THERMAL EXPANSION IS A CONSIDERATION, GUIDES AND ANCHORS MAY BE USED AS TRANSVERSE AND LONGITUDINAL RESTRAINTS PROVIDED THEY HAVE A CAPACITY EQUAL TO OR GREATER THAN THE RESTRAINT LOADS IN ADDITION TO THE LOADS INDUCED BY EXPANSION OR CONTRACTION.

19. STEEL STRUTS SHALL BE 1-5/8" WIDE IN VARYING HEIGHTS AND MIG-WELDED COMBINATIONS AS REQUIRED TO MEET LOAD CAPACITIES AND DESIGNS INDICATED. A MATERIAL HEAT CODE, PART NUMBER, AND MANUFACTURER'S NAME SHALL BE STAMPED ON ALL STRUT AND FITTINGS TO MAINTAIN TRACEABILITY TO MATERIAL TEST REPORTS.

20. SEISMIC RETRAINTS FOR PIPING SYSTEMS SHALL WITHSTAND A LATERAL FORCE EQUAL TO 50% OF THE WEIGHT OF THE PIPING SYSTEM AND ITS CONTENTS. SEISMIC BRACING SHALL CONFORM TO THE CURRENT ADOPTED EDITION OF THE CALIFORNIA BUILDING CODE AND THE ADMINISTRATIVE CODE, AND SHALL BE INSTALLED IN ACCORDANCE WITH SMACNA GUIDELINES FOR SEISMIC RESTRAINT, LATEST EDITION.

21. SPECIAL PIPE HANGER AND SUPPORT PROVISIONS REQUIRED FOR CONTROL OF PIPE EXPANSION, VIBRATION, AND SOUND TRANSMISSION IN CERTAIN PIPING SHALL BE DONE IN ACCORDANCE WITH GOOD SOUND ATTENUATION PRACTICE.

22. SUPPORT CHANNELS, FRAMES, BRACKETS, AND LEGS OF SPECIAL SUPPORTS SHALL BE OF UNISTRUT, SUPERSTRUT, OR ACCEPTED EQUAL, WITH CHANNELS, ATTACHING CLIPS, PIPE CLAMPS, AND OTHER REQUIRED ACCESSORIES.

23. PLASTIC PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH CODE REQUIREMENTS (REVIEW WITH JURISDICTION). SHIMS SHALL BE PROVIDED TO PREVENT PIPE SAG BETWEEN FITTINGS.

24. SPACING OF TRAPEZE HANGERS SHALL BE DETERMINED BY THE SMALLEST PIPE ON THE TRAPEZE. SIZES OF RODS FOR TRAPEZES SHALL BE GOVERNED BY THE LARGEST PIPE ON THE TRAPEZE.

25. TRAPEZE HANGERS SHALL NOT BE LIGHTER THAN 16 GAUGE AND, WHEN EXPOSED TO WEATHER, NOT LIGHTER THAN 12 GAUGE. PIPING THAT RUNS IN PARTITIONS AND IS NOT SUPPORTED FROM CEILING OR FLOOR SHALL BE SECURELY AND INDEPENDENTLY FASTENED TO THE PARTITION MEMBERS WITH CLAMPS OR BRACKETS.

26. LATERAL MOTION OF PIPING WILL NOT CAUSE DAMAGING IMPACT WITH SURROUNDING SYSTEMS (e.g. OTHER PIPE, DUCT, EQUIPMENT, SPRINKLER HEADS, etc.) OR CAUSE LOSS OF SYSTEM VERTICAL SUPPORT.

27. VERTICAL SUPPORT CONNECTIONS CANNOT DEVELOP MOMENTS (e.g. SWIVEL JOINTS, EYE BOLTS, VIBRATION ISOLATION HANGERS, etc.).

28. VERTICAL CAST IRON RISERS ATTACHED WITH SHIELD AND CLAMP ASSEMBLIES MUST BE STIFFENED AT THE CONNECTION POINTS OF ANY UNSUPPORTED SECTION OF PIPE.

29. VERTICAL RISERS IN AN OPEN SHAFT MUST BE ATTACHED TO THE SUPPORTS WITH CONNECTIONS SIZED TO ACCEPT THE HORIZONTAL SEISMIC LOADS.

30. WHERE EARTHQUAKE LOADS ARE APPLICABLE IN ACCORDANCE WITH THE BUILDING CODE, PLUMBING PIPING SUPPORTS SHALL BE DESIGNED AND INSTALLED FOR THE SEISMIC FORCES IN ACCORDANCE WITH THE BUILDING CODE.

31. HANGERS, ANCHORS AND SUPPORTS SHALL SUPPORT THE PIPING AND THE CONTENTS OF THE PIPING. HANGERS AND STRAPPING MATERIAL SHALL BE OF APPROVED MATERIAL THAT WILL NOT PROMOTE GALVANIC ACTION. HANGERS AND ANCHORS SHALL BE ATTACHED TO THE BUILDING CONSTRUCTION IN AN APPROVED MANNER.

32. RIGID SUPPORT SWAY BRACING SHALL BE PROVIDED AT CHANGES IN DIRECTION GREATER THAN 45 DEGREES FOR PIPE SIZES 4 INCHES AND LARGER.

33. ANCHORAGE SHALL BE PROVIDED TO RESTRAIN DRAINAGE PIPING FROM AXIAL MOVEMENT.

34. FOR PIPE SIZES GREATER THAN 4 INCHES, RESTRAINTS SHALL BE PROVIDED FOR DRAIN PIPES AT ALL CHANGES IN DIRECTION AND AT ALL CHANGES IN DIAMETER GREATER THAN 2 PIPE SIZES.

35. NON-STRUCTURAL COMPONENTS LOCATED WITHIN SEISMIC DESIGN CATEGORY 'B' OR LESS, SEISMIC RESTRAINT IS NOT REQUIRED.

36. NON-STRUCTURAL COMPONENTS LOCATED WITHIN SEISMIC DESIGN CATEGORY 'C' AND HAVING AN *IMPORTANCE FACTOR* EQUAL TO 1.0, SEISMIC RESTRAINT IS NOT REQUIRED. SDC 'C' CORRESPONDS TO BUILDINGS OF OCCUPANCY GROUPS *IV* (HOSPITALS, POLICE STATIONS, FIRE AND RESCUE STATIONS, EMERGENCY CENTERS - SEISMIC RESTRAINTS ARE REQUIRED.

SPECIFICATIONS

1.00 - GENERAL

SECTION 15400 - PLUMBING

1.01 DESCRIPTION OF WORK

FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES REQUIRED FOR AND/OR REASONABLY INCIDENTAL TO THE COMPLETION OF THE FOLLOWING WORK.

A. SANITARY WASTE AND VENT PIPING SYSTEM INCLUDING CONNECTIONS TO BUILDING SEWER AS SHOWN.

B. DOMESTIC HOT AND COLD WATER SYSTEMS INCLUDING WATER HEATER, AND RELATED ACCESSORIES AND CONTROLS. CONNECTION TO BUILDING WATER AS SHOWN.

C. PLUMBING FIXTURES, TRIM AND ACCESSORIES INCLUDING INSTALLATION AND SUPPORT.

D. FLASHING AND SEALING OF ROOF AND EXTERIOR WALL PENETRATIONS FOR WATER TIGHTNESS.

E. CAULKING AND SEALING OF FLOOR AND WALL PENETRATIONS AND FORMED SHAFT PENETRATIONS.

F. BACKING FOR SECURING FIXTURES, TRIM AND PIPING.

G. ACCESS DOORS WHERE SHOWN OR REQUIRED BY CODE.

H. HANGERS, SUPPORTS, AND GUIDES.

I. CLEANUP OF DEBRIS AND FINAL CLEANUP OF DRAINS, FIXTURES AND EQUIPMENT.

J. RECORD DRAWINGS AND OPERATING MANUALS.

K. LICENSE, PERMITS AND ASSOCIATED FEES.

L. CUTTING, DRILLING AND PATCHING FOR ALL SURFACES IN RELATION TO PLUMBING WORK.

M. CONDENSATE DRAINS FROM HVAC EQUIPMENT, AND GAS PIPING

1.02 RELATED WORK INCLUDED UNDER OTHER SECTIONS

A. HVAC AND ELECTRICAL WORK. 15500 AND 16000
B. FIRE PROTECTION WORK 153000 (IF APPLICABLE)

1.03 EXAMINATION OF SITE

A. VISIT SITE BEFORE SUBMITTING BID AND CHECK LOCATION OF ALL EXISTING CONDITIONS WHICH WILL AFFECT THIS WORK, VERIFY DIMENSIONS AND LOCATIONS SHOWN ON DRAWINGS AND COVER ALL COSTS. CONTRACTOR SHALL ASSUME REASONABLE VARIATIONS OR MINOR OMISSIONS AND SHALL COMPLETE PROPOSED WORK WITHOUT ADDITIONAL COST. FAILURE TO VISIT SITE WILL NOT LESSEN RESPONSIBILITY OR ENTITLE ADDITIONAL COMPENSATION FOR WORK NOT INCLUDED IN PROPOSAL.

B. VISIT SITE OF THE WORK, COMPARE IT WITH THE DRAWINGS AND SPECIFICATIONS AS TO THE CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED, ASCERTAIN AND CHECK ALL CONDITIONS AND ELEVATIONS AND TAKE ALL MEASUREMENTS WHICH MAY AFFECT THE WORK. NO ALLOWANCE SHALL SUBSEQUENTLY BE MADE FOR ANY EXTRA EXPENSE OR CLAIMS DUE TO FAILURE OR NEGLECT UNDER THIS REQUIREMENT TO MAKE SUCH EXAMINATION, INCLUDING EXAMINATION OF RESTRICTED WORKING CONDITIONS OR SUCH OTHER DIFFICULTIES VISUALLY OBSERVED DURING SITE VISIT. CONTRACTOR IS RESPONSIBLE FOR BECOMING COMPLETELY FAMILIAR WITH THE ARCHITECTURAL AND STRUCTURAL CONDITIONS AND LIMITATIONS WHICH WILL EXIST IN THE BUILDING AND TO PROVIDE ALL LABOR, TOOLS AND MATERIALS REQUIRED TO PRODUCE A COMPLETELY CONCEALED INSTALLATION AS INDICATED ON THE PLANS, SPECIFICATIONS, AND REQUIRED BY THE CODE.

C. A REDUCTION OF PIPE AREA THAT OFFERS AN OBSTRUCTION TO FLOW THROUGH THE DRAIN SHALL BE PROHIBITED.

1.04 DRAWINGS

THE ACCOMPANYING DRAWINGS SHALL BE CONSIDERED PART OF THESE SPECIFICATIONS. WORK AND MATERIALS SHOWN ON THE DRAWINGS AND NOT MENTIONED IN THE SPECIFICATIONS AND VICE VERSA SHALL BE EXECUTED AS IF SPECIFICALLY MENTIONED OR SHOWN IN BOTH. THE DRAWINGS SHALL BE CONSIDERED AS SCHEMATIC IN NATURE AND MINOR MODIFICATIONS OF THE WORK TO COMPLY WITH THE STRUCTURE AS FOUND SHALL BE MADE.

1.05 RULES AND REGULATIONS

A. ALL WORK AND MATERIAL SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE STATE FIRE MARSHAL AND OTHER APPLICABLE STATE AND LOCAL RULES AND REGULATIONS. NOTHING IN THESE DRAWINGS OR SPECIFICATIONS SHALL BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

B. FURNISH WITHOUT ANY EXTRA CHARGE ANY ADDITIONAL MATERIAL AND LABOR WHEN REQUIRED TO COMPLY WITH THESE LAWS, ORDINANCES AND CODES REGARDLESS OF WHETHER SHOWN OR MENTIONED IN THESE SPECIFICATIONS OF DRAWINGS.

C. ALL WORK AND MATERIAL SHALL BE IN ACCORDANCE WITH THE LANDLORD'S MECH/ELECT. DESIGN CRITERIA. ALL CONTRACTORS SHALL OBTAIN A COPY FROM THE LANDLORD'S TENANT COORDINATOR OR MALL OPERATIONS MANAGER AND BECOME FAMILIAR WITH THE REQUIREMENTS CONTAINED WITHIN PRIOR TO BIDDING THE JOB. WHERE LANDLORD'S REQUIREMENTS CONFLICT WITH CODES OR ORDINANCES THE STRICTEST INTERPRETATION SHALL APPLY.

1.06 SUBMITTALS

A. SUBMIT FOR REVIEW TO THE OWNER A "COMPLETE AND ALL-INCLUSIVE" LIST OF EQUIPMENT AND MATERIALS PROPOSED FOR USE (IN PDF), ACCOMPANIED BY MANUFACTURER'S DATA SHEETS. DATA SHALL BE FORWARDED IN A SINGLE PACKAGE WRITTEN 15 DAYS AFTER AWARD OF CONTRACT. SUBMIT SIX BLACKLINE PRINTS AND ONE REPRODUCIBLE SHOP DRAWING SHOWING PROPOSED PLUMBING INSTALLATION. INCLUDE SIZES, LOCATIONS AND OTHER REQUIRED INFORMATION TO COORDINATE INSTALLATION WITH OTHER TRADES.

B. WITHIN 5 DAYS AFTER AWARD OF CONTRACT, SUBMIT PDF OF A LETTER STATING ANY MATERIALS THAT CONTRACTOR WISHES TO SUBSTITUTE, TO THE OWNER FOR APPROVAL. INCLUDE SUCH INFORMATION AS MANUFACTURER'S NAME, TYPE OF MATERIAL, CERTIFIED RATINGS, OVERALL APPEARANCE, AND NECESSARY INFORMATION TO EXPLAIN FUNCTION AND OPERATION OF MATERIAL. ALL PROPOSED SUBSTITUTIONS SHALL BE EQUAL IN QUALITY, DESIGN, UTILITY AND APPEARANCE TO MATERIAL, EQUIPMENT OR METHOD SPECIFIED.

1.07 AS-BUILT DRAWINGS

A SET OF PLUMBING PLANS WILL BE FURNISHED TO THE CONTRACTOR ON WHICH HE SHALL INDICATE THE INSTALLATION "AS-BUILT" AS THE WORK PROGRESSES. UPON COMPLETION OF THE WORK, A SET OR REPRODUCIBLE DRAWINGS SHALL BE OBTAINED FROM THE OWNER AT COST, AND ALL CHANGES AS NOTED ON THE RECORD SET OF PRINTS SHALL BE INCORPORATED THEREON. THIS SET OF REPRODUCIBLE, ALONG WITH ONE SET OF BLUEPRINTS, SHALL BE DELIVERED TO THE OWNER UPON COMPLETION AND BEFORE FINAL ACCEPTANCE OF THE PROJECT.

1.08 GUARANTEE

THE CONTRACTOR SHALL LEAVE THE ENTIRE INSTALLATION IN COMPLETE WORKING ORDER FREE FROM ANY DEFECTIVE MATERIAL, WORKMANSHIP OR FINISH. HE SHALL GUARANTEE TO REPAIR OR REPLACE, WITHOUT CHARGE, DEFECTS DUE TO FAULTY WORKMANSHIP OR MATERIAL FOR A PERIOD OF ONE YEAR FROM THE DATE OF FILING OF THE NOTICE OF COMPLETION.

1.09 OPERATION MANUALS AND OWNER INSTRUCTIONS

A. PROVIDE COMPLETE OPERATION AND MAINTENANCE MANUALS COVERING ALL PLUMBING SYSTEMS AND EQUIPMENT THAT HAVE BEEN INSTALLED. THREE (3) COPIES OF THE MANUAL SHALL BE BOUND IN HARDBACK BINDERS.

B. PROVIDE INSTRUCTIONS TO OWNER AS TO OPERATION OF ALL EQUIPMENT. INSTRUCTION PERIOD TO COMMENCE FOR MINIMUM OF (2) HOURS AND SHALL BE SCHEDULED AT OWNER'S CONVENIENCE.

1.10 CUTTING AND PATCHING

A. THE CONTRACTOR SHALL DO ALL CUTTING, DRILLING AND PATCHING WHICH MAY BE REQUIRED FOR THE INSTALLATION OF THE WORK UNDER THIS SECTION OF THE SPECIFICATIONS.

B. PATCHING SHALL BE OF THE SAME WORKMANSHIP, MATERIAL, AND FINISH AND SHALL MATCH ACCURATELY ALL SURROUNDING CONSTRUCTION IN A MANNER SATISFACTORY TO THE OWNER. NO CUTTING OF THE STRUCTURE SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE OWNER.

2.00 - MATERIALS - PIPING

BUILDING DRAIN AND VENT PIPING MATERIALS SHALL COMPLY WITH THE LOCAL AUTHORITY HAVING JURISDICTION. ALL SANITARY SYSTEM MATERIALS SHALL BE LISTED BY AN APPROVED LISTING AGENCY.

A. INTERIOR UNDERGROUND STORM, SANITARY AND WASTE PIPING:
SERVICE WEIGHT CAST IRON NO-HUB C.I. PIPE AND FITTINGS,
COMPLYING WITH CISPI STANDARDS, OR ABS DWV SCH40 IF ALLOWED BY THE LOCAL AUTHORITY HAVING JURISDICTION.

B. INTERIOR DOMESTIC WATER PIPING ABOVE GROUND:
3" AND SMALLER - TYPE L HARD TEMPERED COPPER WITH SOLDER END FITTINGS. 95-5 TIN AND ANTIMONY SOLDER JOINTING (LEAD-FREE).

C. DOMESTIC WATER PIPING BELOW GROUND:
TYPE K COPPER PIPE SHALL BE USED. WHEN PIPING IS INSTALLED WITHIN A BUILDING AND UNDER A CONCRETE SLAB, IT SHALL BE INSTALLED WITHOUT JOINTS. WHEN JOINTS ARE UNAVOIDABLE, THEY SHALL BE BRAZED.

a. PROTECTIVE PIPE COVERING SHALL BE FACTORY OR FIELD APPLIED ACCORDINGLY TO MANUFACTURERS WRITTEN INSTRUCTIONS.
b. 2 ½" OR LARGER: PRODUCTS SHALL BE POLYKEN NO. 1027 PRIMER AND POLYKEN NO. 910 TAPE COATING, 10 MIL, MINIMUM 1" OVERLAP REQUIRED.
c. 2" AND SMALLER: PRODUCTS SHALL BE 10 MIL PLASTIC SLEEVE PROTECTOR.

D. CONDENSATE DRAIN PIPING:
COPPER WATER TUBE ASTM B88, TYPE "M", SOLDER WITH 95-5 SOLDER, LEAD-FREE TYPE.

E. GAS PIPING: GALVANIZED STEEL, SCH 40 AND FITTINGS FOR OUTDOOR. BLACK STEEL, SCH 40 AND FITTINGS FOR INDOOR ABOVE GROUND. 3" AND SMALLER STEEL PIPES SHALL BE THREADED, 4" AND LARGER STEEL PIPES ARE TO BE WELDED. USE APPROVED POLYETHYLENE YELLOW PIPING (PE) FOR ALL OUTDOOR UNDERGROUND PIPING WITH 14 GAGE TRACER WIRE AND SHALL NOT COME IN CONTACT WITH PE PIPING. PE PIPE MUST BE JOINED BY HEAT FUSION METHOD OF CONNECTING PIPE AND FITTINGS OR APPROVED MECHANICAL FITTINGS.

F. PLASTIC PIPE, PLASTIC PIPE FITTINGS, AND COMPONENTS OTHER THAN THOSE FOR GAS SHALL COMPLY WITH NSF 14. CAST-IRON SOIL PIPE AND HUBLESS COUPLINGS SHALL BE THIRD PARTY CERTIFIED IN ACCORDANCE WITH ASTM C1277 AND CISPI 310.

2.01 PIPE FLASHING

4 LBS. LEAD WITH COUNTERFLASHING RING BY GLENCO, STONEMAN ENGINEERING OR APPROVED EQUAL. CONTRACTOR SHALL VERIFY COMPATIBILITY WITH ROOFING MATERIALS.

2.02 VALVES

A. GATE VALVES: RED & WHITE 204 OR EQUAL, 3" AND SMALLER.
B. CHECK VALVES: RED & WHITE 238 OR EQUAL, 3" AND SMALLER.
C. BALL VALVES: NIBCO 580-70 OR EQUAL, 3" AND SMALLER.

2.03 PLUMBING FIXTURES AND TRIM:

A. PLUMBING FIXTURES TO BE FURNISHED AND INSTALLED UNDER THIS CONTRACT. SEE PLUMBING FIXTURE SCHEDULE.

B. ALL WATER CLOSETS SHALL NOT EXCEED 1.28 GALLONS PER FLUSH. DUAL-FLUSH WATER CLOSETS SHALL HAVE EFFECTIVE VOLUME FLUSH NOT TO EXCEED 1.28 GPF. IT'S THE AVERAGE FLUSH VOLUME OF TWO REDUCED FLUSHES AND ONE FULL FLUSH.

C. WALL MOUNT URINALS SHALL NOT EXCEED 0.125 GALLONS PER FLUSH.

D. WHERE NON-WATER URINALS ARE INSTALLED, THEY SHALL HAVE A WATER DISTRIBUTION LINE ROUGH-IN TO EACH INDIVIDUAL URINAL LOCATION IN THE EVENT OF A RETROFIT.

2.04 PIPE HANGERS AND SUPPORTS

A. SUPERSTRUT, GRINNELL, OR APPROVED EQUAL.
B. INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS.
C. PIPE HANGERS SHALL HAVE NON-METALLIC FELT OR ELASTOMERIC LINER OR WRAP APPLIED TO THE PIPE FOR ELECTROLYTIC PROTECTION WHERE HANGERS AND SUPPORTS ARE USED TO SUPPORT COPPER TUBING OR PIPE. THE LINER OR WRAP SHALL BE DESIGNED TO ALLOW EXPANSION OR CONTRACTION OF THE PIPING.

2.05 PIPE SLEEVES

A. SHALL BE PROVIDED TO PROTECT ALL PIPING THROUGH CONCRETE AND MASONRY WALLS. ANNULAR SPACES BETWEEN SLEEVES AND PIPES SHALL BE FILLED OR CAULKED IN AN APPROVED MANNER. ANNULAR SPACES BETWEEN SLEEVES AND PIPES IN FIRE-RESISTANCE-RATED ASSEMBLIES SHALL BE FILLED OR TIGHTLY CAULKED IN ACCORDANCE WITH THE BUILDING CODE. ALL UNDERSLAB CAST IRON PIPING SHALL BE COVERED WITH POLYETHYLENE SLEEVE (POLYWRAP) AND CONTRACTOR MUST FOLLOW MANUFACTURER'S MANUAL FOR PROPER INSTALLATION.

B. OPENINGS INTO A DRAINAGE OR VENT SYSTEM, EXCEPTING THOSE OPENINGS TO WHICH PLUMBING FIXTURES ARE PROPERLY CONNECTED OR WHICH CONSTITUTE VENT TERMINALS, SHALL BE PERMANENTLY PLUGGED OR CAPPED IN AN APPROVED MANNER, USING THE APPROPRIATE MATERIALS.

C. PIPING PASSING UNDER OR THROUGH WALLS SHALL BE PROTECTED FROM BREAKAGE. VOIDS AROUND PIPING PASSING THROUGH CONCRETE FLOORS ON THE GROUND SHALL BE SEALED. SLEEVES SHALL BE PROVIDED TO PROTECT PIPING THROUGH CONCRETE NO MASONRY WALLS, AND CONCRETE FLOORS. NO PLUMBING PIPING SHALL BE DIRECTLY EMBEDDED IN CONCRETE OR MASONRY. IN EXTERIOR WALLS, ANNULAR SPACE BETWEEN SLEEVES AND PIPES SHALL BE SEALED AND MADE WATERTIGHT.

2.06 TEMPERATURE AND PRESSURE RELIEF VALVE

TEMPERATURE & PRESSURE RELIEF VALVE SHALL DISCHARGE FULL LINE SIZE TO AN APPROVED WASTE RECEPTOR THROUGH AN AIR GAP AS INDICATED ON PLANS OR 6" MINIMUM, 12" MAXIMUM.

2.07 SCALD GUARD PROTECTION

PROVIDE AND INSTALL LAVATORY SCALD PROTECTION FOR WASTE PIPING AND HOT WATER PIPING IN COMPLIANCE WITH ASME A112.18.9 .

2.08 DOMESTIC PIPING INSULATION

A. PROVIDE AND INSTALL "INSULATION PROTECTION SHIELD" FOR PIPING WITH FOAM OR FIBERGLASS INSULATION.

B. INSULATE ALL RAINWATER PIPING WITH 1" THICK FIBERGLASS INSULATION BELOW THE DECK UP TO 25 FEET OF HORIZONTAL RUN.

C. INSULATE ALL HORIZONTAL WASTE PIPING (HUNG) WITH 1-1/2" THICK FIBERGLASS INSULATION ABOVE NOISE SENSITIVE AREAS ONLY. INSULATE ALL EXPOSED WATER PIPING AT THE TRASH ENCLOSURE.

D. INSULATE ALL DOMESTIC WATER PIPING OUTSIDE THE BUILDING OR ON ROOF WITH 1-1/2" THICK ARMSTRONG ARMAFLEX OR APPROVED EQUAL, AND SECTIONS BUTTED FIRMLY TOGETHER.

E. INSULATE ALL CONDENSATE DRAIN PIPING WITH 1/2" THICK ARMSTRONG ARMAFLEX OR EQUAL, AND SECTIONS BUTTED FIRMLY TOGETHER.

F. INSULATE ALL HOT WATER PIPING AND HOT WATER RETURN PIPING. THE INSULATION FOR HOT WATER AND RETURN PIPING SHALL HAVE A MINIMUM WALL THICKNESS OF NOT LESS THAN 1" FOR A PIPE UP TO 1" DIAMETER, 1.25" FOR 1-1/4" PIPE, 1.5" FOR 1-1/2" PIPE, 2" FOR 2" PIPE OR MORE IN DIAMETER. THE FIRST EIGHT FEET OF HOT AND COLD OUTLET PIPING, INCLUDING PIPING BETWEEN STORAGE TANK AND A HEAT TRAP, FOR A NON-RECIRCULATING STORAGE SYSTEM.

G. PROVIDE AND INSTALL SCALD GUARD PROTECTION/INSULATION UNDER SINKS WITH EXPOSED P-TRAPS AND HOT WATER SUPPLIES.

H. ALL OUTDOOR INSULATION SHALL BE PROTECTED WITH ALUMINUM JACKET.

I. ABS PIPING EXPOSED TO SUNLIGHT THAT IS PROTECTED BY WATER BASED SYNTHETIC LATEX PAINTS. PVC PIPING SHALL NOT BE EXPOSED TO DIRECT SUNLIGHT. PVC PIPING EXPOSED TO SUNLIGHT THAT IS PROTECTED BY WATER BASED SYNTHETIC LATEX PAINTS. PVC PIPING WRAPPED WITH NOT LESS THAN 0.04 INCH THICK TAPE OR OTHERWISE PROTECTED FROM UV DEGRADATION.

J. PIPING SUBJECT TO OPERATION AT TEMPERATURES THAT WILL FORM CONDENSATION ON THE EXTERIOR OF THE PIPE SHALL BE THERMALLY INSULATED.

K. PLASTIC PIPES IN PLENUM SPACES SHALL BE INSULATED WITH APPROVED FIRE BARRIER PLENUM WRAP. FIRE WRAP SHALL HAVE FLAME SPREAD RATING OF 25 OR LESS AND SMOKE DEVELOPED RATING OF 50 OR LESS IN ACCORDANCE WITH ASTM E 84.

2.09 CLEANOUT

A. ACCESSIBLE CLEANOUT SHALL BE PROVIDED AT THE BASE OF EACH WASTE STACK AND RAINWATER LEADERS. ADDITIONAL CLEANOUT SHALL BE PROVIDED IN A DRAINAGE LINE FOR EACH HORIZONTAL CHANGE OF DIRECTION EXCEEDING 135 DEGREES. CLEANOUT MUST BE PROVIDED ON A HORIZONTAL DRAIN LINE EXCEEDING 5FT OR MORE IN LENGTH SERVING SINKS OR URINALS. AN APPROVED TYPE OF 2-WAY CLEANOUT FITTING SHALL BE INSTALLED OUTSIDE OF A BUILDING AT THE LOWER END OF A BUILDING DRAIN AND EXTENDED TO GRADE. CLEANOUT SHALL HAVE A CLEARANCE OF NOT LESS THAN 24" BY 24" IN FRONT OF THE CLEANOUT. CLEANOUT SHALL BE PROVIDED FOR PRESSURE DRAINAGE SYSTEMS.

B. CONDENSATE DRAIN LINES SHALL BE CONFIGURED OR PROVIDED WITH A CLEANOUT TO PERMIT THE CLEARING OF BLOCKAGES AND FOR MAINTENANCE WITHOUT REQUIRING THE DRAIN LINE TO BE CUT.

2.10 WATER HEATER

A. PROVIDE ANCHORS AND STRAPS TO RESIST HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION.

B. STRAPPING SHALL BE LOCATED UPPER 1/3 AND LOWER 1/3 OF ITS VERTICAL DIMENSIONS. STRAPS SHALL BE A MINIMUM 2"X16 GAGE PROPERLY SECURED TO WALL STUDS. ELEVATE WATER HEATER AT LEAST 4" MINIMUM ABOVE THE FINISHED FLOOR WITH AN APPROVED BASE. PROVIDE A 22 GAGE WATER TIGHT DRAIN PAN, CORROSION RESISTANT, AT THE BOTTOM OF THE WATER HEATER. DRAIN PAN SHALL HAVE A 3/4" DRAIN LINE TO BE DISCHARGED INTO AN APPROVED RECEPTOR BY MEANS OF AN AIR GAP. A PROPERLY SIZED THERMAL EXPANSION TANK SHALL BE PROVIDED AT THE WATER HEATER. HOT WATER SUPPLY FOR THE LAVATORIES AND HAND SINKS SHALL NOT EXCEED 110°F TEMPERATURE.

C. HOT WATER DELIVERED FROM PUBLIC-USE LAVATORIES SHALL BE LIMITED TO A MAXIMUM TEMPERATURE OF 110 DEGREES FAHRENHEIT BY A DEVICE THAT IS IN ACCORDANCE WITH ASSE 1070 OR CSA B125.3. THE WATER HEATER THERMOSTAT SHALL NOT BE CONSIDERED A CONTROL FOR MEETING THIS PROVISION.

D. APPLIANCES LOCATED ON ROOFS OR OTHER ELEVATED LOCATIONS EXCEEDING 15 FEET IN HEIGHT SHALL BE ACCESSIBLE. INSIDE ACCESS TO THE ROOF SHALL BE PROVIDED WITH A PERMANENT LADDER.

2.11 TRENCHING

A. TRENCHES DEEPER THAN THE FOOTING OF A BUILDING OR STRUCTURE, AND PARALLELING THE SAME, SHALL BE LOCATED NOT LESS THAN 45 DEGREES FROM THE BOTTOM EXTERIOR EDGE OF THE FOOTING.

2.12 CONDENSATE CONTROL

A. WHERE AN EQUIPMENT OR APPLIANCE IS INSTALLED IN A SPACE WHERE DAMAGE IS CAPABLE OF RESULTING FROM CONDENSATE OVERFLOW, AN OVERFLOW DRAIN LINE SHALL BE PROVIDED. AN ADDITIONAL WATERTIGHT PAN OF CORROSION-RESISTANT MATERIAL, WITH A SEPARATE LINE, INSTALLED BENEATH THE COOLING COIL, FURNACE, OR THE APPLIANCE TO CATCH THE OVERFLOW CONDENSATE DUE TO A CLOGGED PRIMARY CONDENSATE DRAIN. IN THE EVENT A DRAIN PAN IS TO BE MOUNTED LOWER THAN THE DRAIN DISCHARGE LOCATION, A WATER LEVEL DETECTING DEVICE SHALL BE PROVIDED THAT WILL SHUT OFF THE EQUIPMENT OR APPLIANCE DUE TO A CLOGGED PRIMARY CONDENSATE DRAIN.

3.00 - INSTALLATION AND EXECUTION

3.01 GENERAL

A. CAST-IRON HUBLESS WITH STAINLESS STEEL SHIELDED COUPLING SHALL BE SUPPORTED HORIZONTALLY AT EVERY OTHER JOINT, UNLESS OVER 4 FEET, THEN SUPPORT EACH JOINT ADJACENT TO JOINT, NOT TO EXCEED 18", BRACE AT NOT MORE THAN 40FT INTERVALS, SUPPORT AT EACH HORIZONTAL BRANCH CONNECTION. HANGERS SHALL NOT BE PLACED ON THE COUPLING. SUPPORT VERTICAL PIPES AT THE BASE AND EACH FLOOR NOT TO EXCEED 15FT. HANGERS AND SUPPORTS FOR ALL PIPING SHALL COMPLY WITH THE LATEST STATE PLUMBING CODE.

3.02 SPECIAL REQUIREMENTS, RESPONSIBILITIES AND TESTING

B. INSTALL PIPING GENERALLY LEVEL, FREE OF TRAPS AND UNNECESSARY BENDS, TO CONFORM WITH BUILDING REQUIREMENTS. PIPE TO BE FREE OF DEFECTS, AND INSTALLED TO AVOID ANY POSSIBLE GALVANIC ACTION BY ISOLATING DISSIMILAR METALS.

C. TEST AND RECORD AVAILABLE DOMESTIC WATER PRESSURE IN STATIC AND DYNAMIC CONDITIONS FOR DYNAMIC TESTING RECORD PRESSURE AND FLOW RATE IN GALLONS PER MINUTE. TRANSMIT THIS INFORMATION TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

D. PROVIDE ALL TESTS SPECIFIED HEREINAFTER AND AS OTHERWISE REQUIRED. PROVIDE ALL TEST EQUIPMENT, INCLUDING TEST PUMPS, GAUGES, INSTRUMENTS AND OTHER EQUIPMENT REQUIRED. PRESSURE GAUGES USED SHALL BE GRADUATED IN INCREMENTS NOT GREATER THAN 5 POUNDS PER SQUARE INCH.. NO PLUMBING OR DRAINAGE SYSTEM OR PART THEREOF SHALL BE COVERED, CONCEALED, OR PUT INTO USE UNLESS IT HAS BEEN SPECIFIED. CONDUCT ALL TESTS IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE, AND OBTAIN THE NECESSARY JURISDICTIONAL AUTHORITY INSPECTIONS.

D. APPLY A WATER TEST TO THE WASTE, AND VENT SYSTEMS WHETHER IN ITS ENTIRETY OR IN SECTIONS; IF APPLIED TO THE ENTIRE SYSTEM, TIGHTLY CLOSE ALL OPENINGS IN THE PIPING EXCEPT THE HIGHEST OPENING, AND FILL THE SYSTEM WITH WATER TO THE POINT OF OVERFLOW. IF THE SYSTEM IS TESTED IN SECTIONS, TIGHTLY PLUG EACH OPENING EXCEPT FOR THE HIGHEST OPENING OF THE SECTION UNDER TEST, AND FILL EACH SECTION WITH WATER, BUT TEST WITH NO LESS THAN A 10' HEAD OF WATER. IN TESTING SUCCESSIVE SECTIONS, TEST AT LEAST THE UPPER 10' OF THE NEXT PRECEDING SECTION SO THAT NO JOINT OR PIPE IN THE BUILDING (EXCEPT THE UPPERMOST 10' OF THE SYSTEM) SHALL HAVE BEEN SUBMITTED TO A TEST OF LESS THAN A 10' HEAD OF WATER. KEEP WATER IN THE SYSTEM OR IN THE PORTION UNDER TEST FOR AT LEAST 24 HOURS BEFORE INSPECTION STARTS, WITH THE SYSTEM TIGHT AT ALL POINTS.

E. DOMESTIC WATER SYSTEM SHALL BE TESTED AND PROVED TIGHT UNDER A PRESSURE OF NOT LESS THAN 120 PSI. PIPING MUST STAND THE TEST FOR A PERIOD OF 24 HOURS WITHOUT LEAKING.

F. CHLORINATION OF THE DOMESTIC COLD AND HOT WATER PIPING SYSTEMS IN ACCORDANCE WITH STANDARD TESTING PROCEDURES AND LOCAL HEALTH DEPARTMENT REQUIREMENTS. TESTING BY A FIRM SUCH AS BENNET-MARINE OR EQUAL. SUBMIT CERTIFICATE OF SATISFACTORY TEST RESULTS.

G. UPON COMPLETION OF TESTING, CERTIFY TO THE ARCHITECT, IN WRITING THAT THE SPECIFIED TESTS HAVE BEEN PERFORMED AND THAT THE INSTALLATION COMPLIES WITH THE SPECIFIED REQUIREMENTS.

H. GAS PIPING SYSTEM SHALL BE TESTED WITH 60 PSIG NITROGEN AIR FOR 30 MINUTES.

I. WHERE THE SERVING GAS SUPPLIER DELIVERS GAS AT A PRESSURE GREATER THAN 2 PSI FOR PIPING SYSTEMS SERVING APPLIANCES DESIGNED TO OPERATE AT A GAS PRESSURE OF 14" W.C. OR LESS, OVERPRESSURE PROTECTION DEVICES SHALL BE INSTALLED.

J. NO PLUMBING OR DRAINAGE SYSTEM, BUILDING SEWER, PRIVATE SEWER DISPOSAL SYSTEM, OR PART THEREOF, SHALL BE COVERED, CONCEALED, OR PUT INTO USE UNTIL IT HAS BEEN TESTED, INSPECTED, AND ACCEPTED.

K. WHERE PIPES ARE INSTALLED IN CEILINGS ABOVE SUCH AREAS, THE CEILING SHALL BE OF THE REMOVABLE TYPE, OR SHALL BE PROVIDED WITH ACCESS PANELS IN ORDER TO FORM A READY ACCESS FOR INSPECTION OF PIPING.

L. ALL PIPING BE VIBRATION ISOLATED FROM THE STRUCTURE.

M. PIPING CONNECTIONS SHALL NOT BE SUBJECT TO UNDUE STRAINS OR STRESSES AND PROVISIONS SHALL BE MADE FOR EXPANSION, CONTRACTION AND STRUCTURAL SETTLEMENT TO PREVENT SEPARATION OF THE JOINT OR PHYSICAL DAMAGE. AN APPROVED EXPANSION OR FLEXIBLE PIPE FITTINGS SHALL BE PROVIDED AND ACCESSIBLE.

N. WHERE LOCAL CONDITIONS INCLUDE EARTHQUAKE, TORNADO, UNSTABLE GROUND, OR FLOOD HAZARDS, SPECIAL CONSIDERATION SHALL BE PROVIDED TO INCREASE STRENGTH AND FLEXIBILITY OF PIPING SUPPORTS AND CONNECTIONS.

3.03 PIPING INSTALLATION

A. MAKE CHANGES IN SIZE OF PIPE WITH REDUCING FITTINGS; BUSHINGS WILL NOT BE PERMITTED EXCEPT FOR BELL SHAPED COPPER BUSHINGS.

B. INSTALL DIELECTRIC INSULATING UNIONS IN WATER PIPING BETWEEN COPPER PIPING AND FERROUS PIPING OR EQUIPMENT - EPCO, OR EQUAL.

C. INSTALL EXPOSED POLISHED CHROME CONNECTIONS FROM FIXTURES OR EQUIPMENT WITH SPECIAL CARE. SHOW NO TOOL MARKS OR THREADS AT FITTINGS.

D. CAP OPENINGS IN PIPING DURING CONSTRUCTION.

E. PROVIDE 85% RED BRASS PIPE IPS, IN CONNECTION TO FAUCETS, FLUSH VALVES, HOSE BIBBS OR SIMILAR ITEMS REQUIRING RIGID PIPING. EXTEND BRASS PIPE FROM FIXTURE TO POINT WHERE PIPING CAN BE SECURELY FASTENED TO BUILDING CONSTRUCTION. ALL EXPOSED PIPING AND STOP VALVES IN CONNECTION TO FIXTURES SHALL BE CHROME PLATED BRASS.

F. INSTALL UNIONS ADJACENT TO VALVES AND WHERE NECESSARY TO FACILITATE DISASSEMBLY OF PIPING.

G. ESCUTCHEONS: FIT EXPOSED PIPES PASSING THROUGH FLOORS, WALLS OR CEILINGS WITH ESCUTCHEONS. MANUFACTURE SPECIAL SIZES OF ESCUTCHEONS FROM STEEL AND PRIME COAT SAME. CUT IN ROUND, RECTANGULAR OR SQUARE SPACE TO PROVIDE A CLEAN APPEARANCE ACCEPTABLE TO THE ARCHITECT.

H. SUPPORT PIPING INDEPENDENTLY OF EQUIPMENT TO WHICH IT IS CONNECTED.

I. MAKE COPPER SOLDER JOINTS WITH 95/5 SOLDER, OR SILFOS; CLEAN SURFACES TO BE JOINED FREE OF OIL, GREASE, RUST OR OXIDES AND APPLY FLUX TO EACH JOINT BEFORE HEATING ASSEMBLY.

J. ROUGH-IN AND MAKE FINAL CONNECTIONS TO ALL OTHER EQUIPMENT FURNISHED UNDER OTHER DIVISIONS, REQUIRING PLUMBING CONNECTIONS.

K. ALL PIPING SHALL BE VIBRATION ISOLATED FROM THE STRUCTURE.

L. NO WATER SUPPLY SYSTEM OR PORTION THEREOF SHALL BE COVERED OR CONCEALED UNTIL IT FIRST HAS BEEN TESTED, INSPECTED, AND APPROVED.

3.04 SUBSTITUTIONS

A. ONE OR MORE MAKES OF MATERIALS AND METHODS MAY HAVE BEEN SPECIFIED TO ESTABLISH THE STANDARD OF QUALITY, WORKMANSHIP, FINISH AND DESIGN REQUIRED, BUT OTHER MATERIALS OR METHODS EQUAL OR BETTER IN QUALITY, WORKMANSHIP, FINISH, DESIGN, AND GUARANTEED PERFORMANCE, MAY BE SUBMITTED FOR REVIEW AND APPROVAL AS SUBSTITUTION. ALL SUBSTITUTIONS ARE SUBJECT TO REVIEW AND APPROVAL BY ARCHITECT, ENGINEER, AND OWNER.

B. SUBSTITUTIONS SHALL BE REQUESTED IN A WRITTEN FORM AND SHALL BE ACCOMPANIED WITH A SIGNED STATEMENT THAT PROPOSED SUBSTITUTION IS EQUAL, OR BETTER THAN SPECIFIED. ADDITIONAL DOCUMENTATION TO SUBSTANTIATED PROPOSED SUBSTITUTION MAY BE REQUIRED BY OWNER, ARCHITECT, AND ENGINEER. CONTRACTOR SHALL SUBMIT AS DIRECTED.

C. CONTRACTOR SHALL ACCOMPANY REQUEST FOR SUBSTITUTION LETTER WITH A COMPLETED SUBSTITUTION FORM INCLUDE THE COMPARISON FOR FOLLOWING:
1. PERFORMANCE DATA
2. DIMENSIONS
3. COSTS AND DELIVERY SCHEDULE
4. LISTED AND APPROVED

D. A WRITTEN SIGNED STATEMENT FROM THE GENERAL CONTRACTOR SHALL ACCOMPANY SUBSTITUTION REQUEST FORM ASSURING THAT:

1. DIMENSIONS HAS BEEN VERIFIED WITH PROJECT CONDITIONS AND HAS COORDINATED WITH OTHER TRADES. SUBSTITUTION DOES NOT AFFECT DIMENSIONS SHOWN ON DRAWINGS.

2. HE/SHE SHALL PAY AND BURDEN THE COSTS FOR CHANGES TO THE PROJECT INCLUDING REDESIGN, REENGINEERING AND REVIEW OF SUBSTITUTION. ONLY ONE ENGINEERING REVIEW TIME IS ALLOWED FOR EACH PRODUCT SUBSTITUTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL REVIEW TIME AND SHALL PAY ARCHITECT AND ENGINEER'S TIME AT THEIR PROFESSIONAL RATE SCHEDULE.

3. HE/SHE HAS CONFIRMED THAT THE PROPOSED SUBSTITUTION WILL HAVE NO ADVERSE AFFECT ON OTHER TRADES, THE CONSTRUCTION SCHEDULE, OR SPECIFIED WARRANTY REQUIREMENTS.

4. HE/SHE HAS CONFIRMED THAT MAINTENANCE AND SERVICE PARTS WILL BE LOCALLY AVAILABLE FOR THE PROPOSED SUBSTITUTION.

E. COST SAVINGS RESULTING FROM SUBSTITUTION SHALL BE RETURNED TO THE CONTRACT OR THE OWNER IF THE SUBSTITUTION IS PERMITTED.

F. NO WORK INVOLVING MATERIALS SUBMITTED FOR SUBSTITUTION SHALL PROCEED UNTIL WRITTEN ACCEPTANCE IS RECEIVED FROM THE OWNER. THE OWNER IS THE FINAL JUDGE OF ACCEPTABILITY OF PREFERRED SUBSTITUTIONS.

3.05 COORDINATION

A. COORDINATE WORK WITH OTHER TRADES TO AVOID CONFLICT AND TO PROVIDE CORRECT ROUGH-IN AND CONNECTION FOR EQUIPMENT FURNISHED UNDER OTHER TRADES THAT REQUIRE PLUMBING CONNECTIONS. INFORM CONTRACTORS OF OTHER TRADES OF THE REQUIRED ACCESS TO AND CLEARANCES AROUND EQUIPMENT TO MAINTAIN SERVICE ABILITY AND CODE COMPLIANCE.

B. VERIFY EQUIPMENT DIMENSIONS AND REQUIREMENTS WITH PROVISIONS SPECIFIED UNDER THIS SECTION. CHECK ACTUAL JOB CONDITIONS BEFORE FABRICATING WORK. REPORT NECESSARY CHANGES IN TIME TO PREVENT NEEDLESS WORK. CHANGES OR ADDITIONS, SUBJECT TO ADDITIONAL COMPENSATION, WHICH ARE MADE WITHOUT WRITTEN AUTHORIZATION AND AN AGREED PRICE, SHALL BE AT THE CONTRACTOR'S RISK AND EXPENSE.

3.06 MARKING AND IDENTIFICATION

ALL DOMESTIC COLD WATER, HOT WATER, SANITARY SEWER, SANITARY VENT, CONDENSATE DRAIN, AND NATURAL GAS PIPING SHALL HAVE VISIBLE PERMANENT LABELS AT EVERY 20 FEET, THE DIRECTION OF NORMAL FLOW SHALL BE CLEARLY SHOWN, AT LEAST ONCE PER ROOM, AND SHALL BE VISIBLE FROM THE FLOOR LEVEL. THE MINIMUM SIZE OF THE LETTERS SHOWN ON TABLE 6-1 BELOW. VALVES SHALL BE LABELED WITH STENCILED OR STAMPED METAL TAGS BEARING THE NAME OF THE SYSTEM THEY CARRY.

TABLE 6-1

PIPE SIZE (INCHES)	SIZE OF LETTER (INCHES)
½ - 1¼	½
1½ - 2	¾
2½ - 6	1¼
8 - 10	2½

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Seal:

ACIES ENGINEERING
400 N. McCarthy Blvd, ste 250
Milpitas, CA 95035
ph: (408) 522-5255
fx: (408) 522-5260
info@acies.net
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TEXAS REGISTRATION #: F-6950
EXPIRATION: 08/31/2025

STATE OF TEXAS
KEITH HUEN
153861
LICENSED PROFESSIONAL ENGINEER
EXPIRATION: 06/30/2026

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:
JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

PLUMBING
SPECIFICATIONS

Sheet #:
P-002

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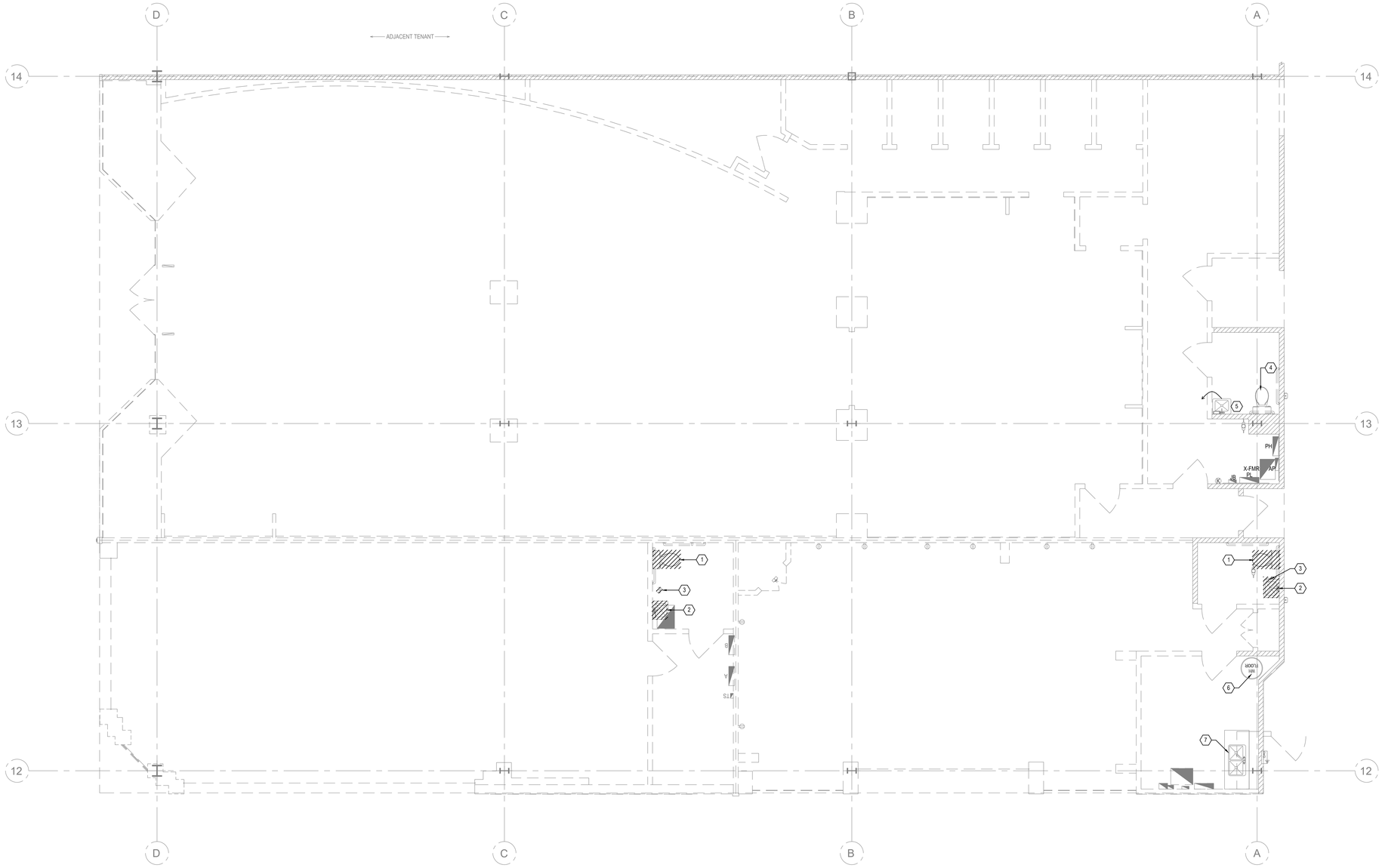

PLUMBING DEMOLITION FLOOR PLAN | SCALE 1/4"=1'-0" | 1

GENERAL NOTES:

1. PLUMBING CONTRACTOR SHALL AVOID LOCATING OR MOUNTING OVERHEAD PLUMBING LINES DIRECTLY ABOVE THE ELECTRICAL PANELS OR EQUIPMENT.
2. PLUMBING CONTRACTOR SHALL INSTALL AND ROUTE OVERHEAD PLUMBING LINES AT LEAST 5' AWAY FROM ROOFTOP UNITS, SUPPLY, AND RETURN GRILLE/DUCT ROOF PENETRATIONS.
3. PLUMBER TO COORDINATE WITH OTHER TRADES PRIOR OF INSTALLATION OF PIPING ABOVE THE CEILING. PLUMBER TO REROUTE PIPING AS NEEDED TO AVOID EXISTING HVAC DUCTS AND ELECTRICAL COMPONENTS.

PLUMBING KEY NOTES: (X)

1. EXISTING WATER CLOSET AND ASSOCIATED FIXTURES TO BE DEMOLISHED. REMOVE ALL ASSOCIATED PIPING IN WALL / BELOW FLOOR AND HARD-CAP EXISTING UNUSED PLUMBING LINE BELOW FLOOR / ABOVE CEILING.
2. EXISTING LAVATORY, ASSOCIATED FIXTURES AND INSTA-HOT WATER HEATER TO BE DEMOLISHED. REMOVE ALL ASSOCIATED PIPING IN WALL / BELOW FLOOR AND HARD-CAP EXISTING UNUSED PLUMBING LINE BELOW FLOOR / ABOVE CEILING.
3. EXISTING FLOOR DRAIN AND ASSOCIATED FIXTURES TO BE DEMOLISHED. REMOVE ALL ASSOCIATED PIPING BELOW FLOOR AND HARD-CAP EXISTING UNUSED PLUMBING LINE BELOW FLOOR. PATCH / REPAIR FLOOR AS REQUIRED.
4. EXISTING WATER CLOSET TO REMAIN. CONTRACTOR TO VERIFY THE LOCATION AND CONDITION ON SITE.
5. EXISTING LAVATORY AND EXISTING INSTA-HOT WATER HEATER TO REMAIN AND BE RELOCATED ON THE SHOWN LOCATION ON P-101. CONTRACTOR TO VERIFY THE LOCATION AND CONDITION ON SITE.
6. EXISTING WATER HEATER TO REMAIN. SHOWN FOR REFERENCE ONLY.
7. EXISTING SINK TO REMAIN. SHOWN FOR REFERENCE ONLY.

NOTES | SCALE - | 2

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Seal:

ACIES ENGINEERING
400 N. McCarthy Blvd, ste 250
Milpitas, CA 95035
ph: (408) 522-5255
fx: (408) 522-5260
info@acies.net
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EXPIRATION: 08/31/2025

STATE OF TEXAS
KEITH HUCH
153861
LICENSED
PROFESSIONAL ENGINEER
EXPIRATION: 06/30/2026

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:

JD SPORTS

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INDIANAPOLIS, IN 46235

PLUMBING
DEMOLITION FLOOR PLAN

Sheet #:

P-100

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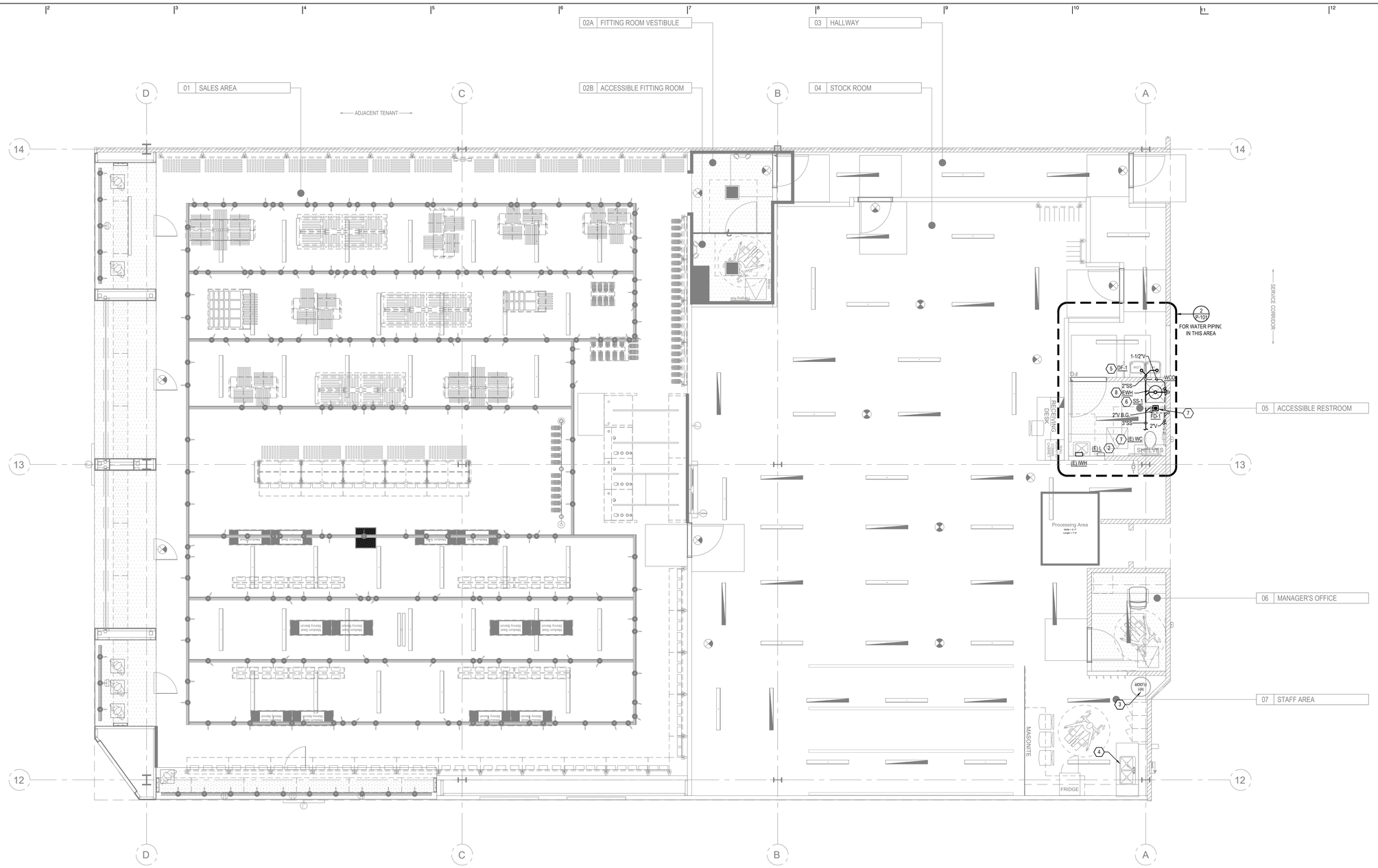


PLUMBING FLOOR PLAN | SCALE 1/4"=1'-0" | 1

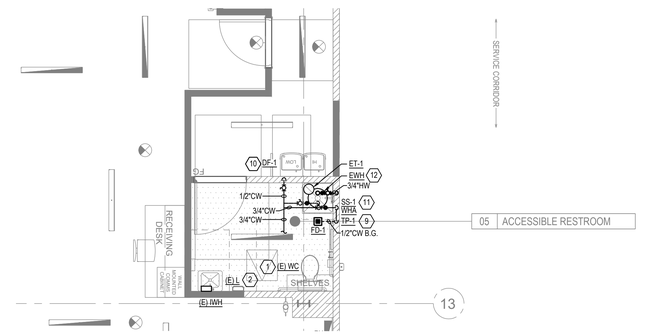
GENERAL NOTES:

1. PLUMBING CONTRACTOR SHALL AVOID LOCATING OR MOUNTING OVERHEAD PLUMBING LINES DIRECTLY ABOVE THE ELECTRICAL PANELS OR EQUIPMENT.
2. PLUMBING CONTRACTOR SHALL INSTALL AND ROUTE OVERHEAD PLUMBING LINES AT LEAST 5' AWAY FROM ROOFTOP UNITS, SUPPLY, AND RETURN GRILLE/DUCT ROOF PENETRATIONS.
3. PLUMBER TO COORDINATE WITH OTHER TRADES PRIOR OF INSTALLATION OF PIPING ABOVE THE CEILING. PLUMBER TO REROUTE PIPING AS NEEDED TO AVOID EXISTING HVAC DUCTS AND ELECTRICAL COMPONENTS.
4. PLUMBING CONTRACTOR SHALL VERIFY IN FIELD EXACT LOCATION AND SIZE OF EXISTING WATER MAIN PRIOR OF ACTUAL WORK.
5. PROVIDE AND INSTALL SUPPLY STOP UNDER SINKS, LAVATORIES AND TOILETS AT EASILY
6. ACCESSIBLE LOCATION. PROVIDE AND PROPERLY INSTALL ESCUTCHEON CHROME PLATES.
7. PROVIDE AND INSTALL ACCESS PANEL FOR ISOLATION VALVES AND TRAP PRIMER.

PLUMBING KEY NOTES: (X)

1. EXISTING WATER CLOSET TO REMAIN AND BE REUSED. CONTRACTOR TO VERIFY THE LOCATION AND CONDITION ON SITE.
2. REINSTALLED LAVATORY AND INSTA-HOT WATER HEATER. RECONNECT TO ITS EXISTING PLUMBING LINES. CONTRACTOR TO VERIFY IN FIELD THE SIZE AND LOCATION OF THE PIPE PRIOR OF ACTUAL WORK. EXTEND AS NEEDED.
3. EXISTING WATER HEATER SERVING BREAK ROOM SINK TO REMAIN. SHOWN FOR REFERENCE ONLY.
4. EXISTING BREAK ROOM SINK TO REMAIN. SHOWN FOR REFERENCE ONLY.
5. 2"SS DN AND 1-1/2"V UP FOR DRINKING FOUNTAIN (DF-1). EXTEND AS NEEDED AND CONNECT TO THE EXISTING SEWER AND VENT LINE, SAME SIZE OR LARGER IN THIS AREA. CONTRACTOR TO VERIFY IN FIELD THE EXACT LOCATION, SIZE, AND INVERT ELEVATION PRIOR OF ACTUAL WORK. TRENCHING WILL BE NEEDED TO RUN SEWER LINE UNDERGROUND.
6. 3"SS DN AND 2"V UP FOR MOP SINK (SS-1). EXTEND AS NEEDED AND CONNECT TO THE EXISTING SEWER AND VENT LINE, SAME SIZE OR LARGER IN THIS AREA. CONTRACTOR TO VERIFY IN FIELD THE EXACT LOCATION, SIZE, AND INVERT ELEVATION PRIOR OF ACTUAL WORK. TRENCHING WILL BE NEEDED TO RUN SEWER LINE UNDERGROUND.
7. 3"SS DOWN AND 2"V UP FOR FLOOR DRAIN (FD-1).
8. PROVIDE FULL T&P RELIEF DRAIN LINE FOR NEW ELECTRIC WATER HEATER AND TERMINATE INDIRECTLY INTO A MOP SINK WITH MINIMUM 1" AIR GAP.
9. 1/2"CW DN IN WALL TO TRAP PRIMER. PROVIDE ACCESS PANEL FOR THE TRAP PRIMER.
10. 1/2"CW DN IN WALL, STUB-OUT TO DRINKING FOUNTAIN. CONNECT TO EXISTING COLD WATER LINE, SAME SIZE OR LARGER IN THIS AREA.
11. 3/4"CW AND 3/4"HW DN IN WALL TO MOP SINK (SS-1). CONNECT TO THE NEAREST EXISTING COLD WATER LINE AND HOT WATER LINE FROM NEW EWH. CONTRACTOR TO VERIFY IN FIELD THE EXACT LOCATION AND SIZE PRIOR OF ACTUAL WORK.
12. INSTALL NEW ELECTRIC WATER HEATER ON WALL MOUNTED PLATFORM. PROVIDE 3/4"CW AND 3/4"HW TO/FROM WATER HEATER.

NOTES | SCALE - | 3



WATER PIPING FLOOR PLAN | SCALE 1/4"=1'-0" | 2

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400 N. McCarthy Blvd, ste 250
Milpitas, CA 95035
ph: (408) 522-5255
fx: (408) 522-5260
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A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

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PLUMBING
FLOOR PLAN

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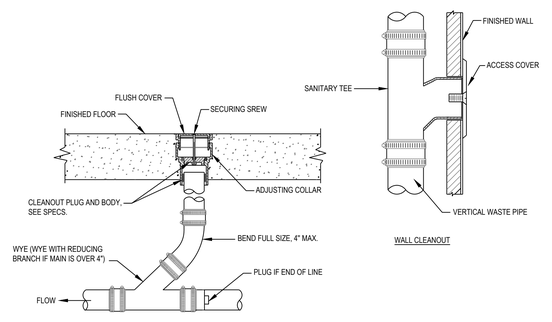
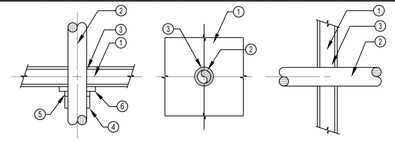


WALL CLEANOUT

FLOOR CLEANOUT

CLEANOUT DETAIL — SCALE: NTS — 4



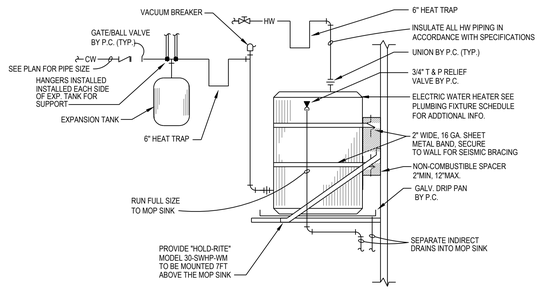
PACK SPACE BETWEEN PIPING AND PENETRATION OPENING WITH MATERIAL APPROVED BY UNDERWRITERS LABORATORIES FOR THROUGH PENETRATION FIRE STOP SYSTEMS. MATERIALS, METHODS, AND INSTALLATION SHALL BE IN ACCORDANCE WITH UL APPROVED LISTING AND SHALL BE DESIGNED TO ACT AS A FIRESTOP AS WELL AS A COLD SMOKE, NOXIOUS GAS AND WATER SEALANT. SUBMIT LISTING NUMBERS AND DETAILS FROM UL FIRE RESISTANT DIRECTORY FOR ALL SUCH SYSTEMS TO BE USED. INSULATE PIPES 3 FEET TO EITHER SIDE OF PENETRATION WITH MATERIAL SPECIFIED IN THE UL FIRE RESISTANCE DIRECTORY IF REQUIRED TO OBTAIN THE T- AND F- RATINGS.

1. WALL AND FLOOR
2. PIPE OR INSULATED PIPE
3. FIRE BARRIER - "3M PRODUCTS INC." FIRE BARRIER CAULK CP25 WB+, MOLDABLE PUTTY+, FIRE BARRIER 2001 SILICONE SEALANT
4. PIPE COVERING FOR FLAME RETARDANT POLYPROPYLENE PIPING FIRE STOPPING ASSEMBLY.
5. STEEL COLLAR FOR FRPP FIRE STOPPING ASSEMBLY.
6. PACKING MATERIAL FOR FRPP FIRE STOPPING ASSEMBLY.

USE FOLLOWING APPLICABLE UL SYSTEMS FOR THE CONSTRUCTION TYPES LISTED.

CONSTRUCTION TYPE	THROUGH PENETRATION FIRESTOP SYSTEM NUMBERS
CONCRETE FLOORS	C-AJ-5002 (1 HR), C-AJ-5003 (1 HR)
CONCRETE OR MASONRY WALLS	C-AJ-5002 (1 HR), C-AJ-5003 (1 HR)

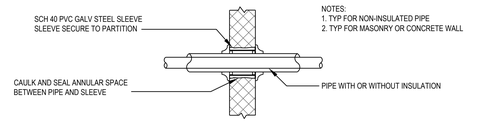
PIPE THROUGH FIRE RATED WALL AND FLOOR — SCALE: NTS — 3



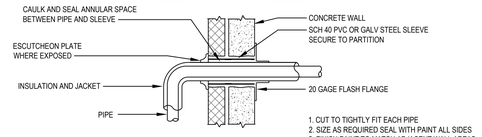
NOTES

1. DRAIN PAN : MIN 1-1/2" DEEP, MIN THICKNESS 24 GAUGE AND SUFFICIENT SIZE AND SHAPE TO RECEIVE ALL DRIPPING OR CONDENSATE FROM WATER HEATER.
2. WATER HEATER TO BE MOUNTED MINIMUM 7 FEET ABOVE FINISH FLOOR.
3. INSULATE ALL HOT WATER PIPING.
4. HOT WATER SUPPLY SHALL NOT EXCEED 110DEG F.

ELECTRIC WATER HEATER — SCALE: NTS — 6



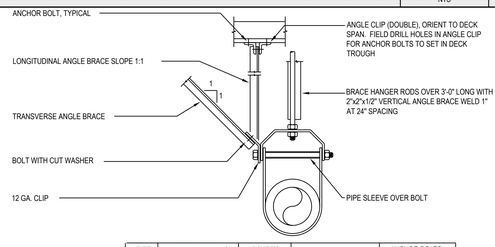
NOTES:
1. TYP FOR NON-INSULATED PIPE
2. TYP FOR MASONRY OR CONCRETE WALL



1. CUT TO TIGHTLY FIT EACH PIPE
2. SIZE AS REQUIRED SEAL WITH PAINT ALL SIDES
3. FINISH PAINT TO MATCH ADJACENT WALL AREAS
4. FASTEN TO WALL WITH FLATHEAD SCREWS

NOTE:
WHERE PIPING IS EXPOSED AT FINISHED WALLS, FLUSH MOUNT SLEEVE AND PROVIDE ESCUTCHEON CHROME PLATE.

PIPE THROUGH WALL — SCALE: NTS — 2



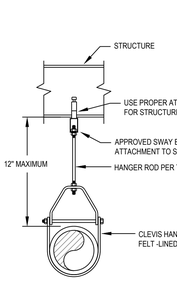
PIPE SIZE	ANGLE BRACE *	BOLT TO ANGLE	ANGLE CLIP **	ANCHOR BOLTS,*** OR INSERTS
2"	2"x2" 16 GA.	1/2"	3"x3"x1/2"x1'-4"	1/2
3, 4	2"x2" 16 GA.	1/2"	3"x3"x1/2"x1'-4"	1/2
5, 6	2.5"x2.5" 16 GA.	1/2"	5"x3"x1/2"x1'-4"	1/2
8	3"x3" 12 GA.	1/2"	2-5x3x1/2x1'-4"	2
10	3"x3" 12 GA.	1"	2-5x3x1/2"x1'-4"	2

* 2"x 2"x12 GA. CHANNEL MAY BE USED

** BENT PLATE OF EQUAL THICKNESS MAY BE SUBSTITUTED FOR LONGITUDINAL ANGLE CLIP TO FACILITATE ANCHORAGE TO SLAB TROUGHS. PROVIDE EQUAL NUMBER OF ANCHOR BOLTS TO THAT SHOWN.

*** PROVIDE MINIMUM EMBEDMENT OF 1 1/2" ABOVE TOP OF METAL DECK FOR ALL ANCHOR BOLTS.

SEISMIC SUPPORTS FOR PIPES — SCALE: NTS — 5



ADJUSTABLE CLEVIS HANGER

HORIZONTAL COPPER PIPING		
PIPE SIZE	ROD SIZE	MAXIMUM SPACING
½" - ¾"	⅜"	5'
1" - 1½"	⅜"	6'
2"	⅜"	8'
2½" - 4"	½"	10'

HORIZONTAL CAST IRON PIPING		
PIPE SIZE	ROD SIZE	MAXIMUM SPACING
1½" - 2"	⅜"	EVERY OTHER JOINT, UNLESS OVER 4 FT THEN SUPPORT EACH JOINT
3" - 4"	½"	
6" - 8"	¾"	

HORIZONTAL GAS PIPING		
PIPE SIZE	ROD SIZE	MAXIMUM SPACING
¾" - 1"	⅜"	5'
1¼" - 2"	⅜"	10'
3" - 4"	⅝"	10'
6" - 8"	¾"	10'

OVERHEAD PIPE SUPPORT — SCALE: NTS — 1

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ACIES ENGINEERING
400 N. McCarthy Blvd, ste 250
Milpitas, CA 95035
ph: (408) 522-5255
fx: (408) 522-5260
info@acies.net
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TEXAS REGISTRATION #: F-6950
EXPIRATION: 08/31/2025

STATE OF TEXAS
KEITH HUCH
153861
LICENSED
PROFESSIONAL ENGINEER
EXPIRATION: 06/30/2026

A Project for:

JD SPORTS #1526
LAKELINE MALL

11200 LAKELINE MALL DR.
CEDAR PARK, TX 78613

PORTFOLIO REFERENCE ONLY

Client:

JD SPORTS

3308 N. MITTHOEFFER ROAD
INDIANAPOLIS, IN 46235

PLUMBING DETAILS

Sheet #:

P-301

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