Joe Frogge

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
07/29/2025

DRAWING INDEX

7/21/2025	6/18/2025	SHEET #	SHEET NAME
●	●	G-0.0	COVER SHEET, CODE INFO, PROJECT DATA, & DIRECTORY
	●	G-0.1	SPECIFICATIONS & GENERAL NOTES
	●	G-0.2	DIVISION OF WORK & SYMBOL LEGEND
	●	D-1.1	DEMOLITION PLANS
	●	A-0.1	SCHEDULES
●	●	A-1.1	CONSTRUCTION PLAN, SCHEDULES, & NOTES
	●	A-1.2	FITTING ROOM PLAN, ELEVATIONS & DETAILS
	●	A-1.3	TOILET ROOM PLAN, ELEVATIONS & DETAILS
	●	A-1.4	CONSTRUCTION DETAILS
	●	A-2.1	REFLECTED CEILING PLAN & DETAILS
	●	A-3.1	EXTERIOR ELEVATION
	●	A-4.1	INTERIOR ELEVATIONS
	●	A-5.1	FINISH PLAN
	●	A-6.1	LOW VOLTAGE PLAN
	●	F-1.1	FIXTURE PLAN, SCHEDULE & NOTES
	●	F-1.2	FIXTURE DETAILS
	●	F-2.1	INTERIOR SIGNAGE & GRAPHICS PLAN, & DETAILS
	●	E-001	ELECTRICAL COVER SHEET
	●	E-100	ELECTRIC LIGHTING PLAN
	●	E-101	ELECTRIC LIGHTING - DETAILS
	●	E-200	ELECTRIC POWER PLAN
	●	E-300	ELECTRIC POWER - SINGLE LINE DIAGRAM
	●	E-301	ELECTRIC PANEL SCHEDULES
	●	E-400	ENERGY COMPLIANCE
	●	E-500	ELECTRICAL SPECIFICATIONS
	●	E-501	ELECTRICAL SPECIFICATIONS
	●	M-001	MECHANICAL COVER SHEET
	●	M-101	MECHANICAL DUCTWORK PLAN
	●	M-401	ENERGY COMPLIANCE
	●	M-402	ENERGY COMPLIANCE
	●	M-501	MECHANICAL SPECIFICATIONS
	●	M-502	MECHANICAL SPECIFICATIONS
	●	M-601	MECHANICAL DETAILS
	●	M-602	MECHANICAL SPECIFICATIONS
	●	P-001	PLUMBING COVER SHEET
	●	P-101	PLUMBING PLAN
	●	P-501	PLUMBING SPECIFICATIONS
	●	P-601	PLUMBING DETAILS & SCHEDULES
●		S100	GENERAL NOTES AND FRAMING PLAN
●		S101	DETAILS

- SHEET INDEX

FIXTURES - GRAND + BENEDICTS
C: MOLLY CROUSER
T: 503.233.6222
E: MOLLYC@GRAND-BENEDICTS.COM

LIGHTING - CITY LIGHTING
C: TOM MISPAGEL
T: 314.534.1090
E: TMISPAGEL@CITYLIGHTING.COM

LOCKS / SAFE - REDFORD LOCK SECURITY SOLUTIONS
C: DAVID BOILORE
T: 313.401.7004
E: DBOILORE@REDLORDLOCK.COM

SIGNAGE - VICTORY SIGN INDUSTRIES
C: DANA REYNOLDS
T: 706.820.6820
E: DREYNOLDS@VICTORYSIGN.COM

STOCK ROOM FIXTURES - PIPP MOBILE STORAGE SYSTEMS, INC.
C: KATY LOWRY
T: 616.988.4063
E: KLOWRY@PIPPMOBILE.COM

SENSORMATIC - JOHNSON CONTROLS
C: MH TOTH
T: 269.271.8401
E: MH.TOTH@JCI.COM

- VENDOR CONTACTS

LANDLORD - TENANT COORDINATOR
SUMMIT WOODS CROSSING
1700 NW CHIPMAN RD
LEE'S SUMMIT, MO 64081
C: JOSH GALICA
E: JGALICA@RAINIERCOMPANIES.COM

TENANT / OWNER
CARHARTT INC.
5750 MERCURY DRIVE
DEARBORN, MI 48126
C: MARK KASTNER
T: 313.212.7021
E: MKASTNER@CARHARTT.COM

ARCHITECT
JOSEPH A. GEOGHEGAN JR.
ROBERT G. LYON & ASSOCIATES, INC.
5100 RIVER ROAD, SUITE 125
SCHILLER PARK, IL 60176
PLEASE CONTACT PROGRAM MANAGER FOR ALL INQUIRIES.

PROGRAM MANAGER
RGLA SOLUTIONS, INC.
5100 RIVER ROAD, SUITE 125
SCHILLER PARK, IL 60176
C: SANDI LEAMON / ADRIAN TAFOLLA
P: 847.707.7452 / 847.916.2728
E: SLEAMON@RGLA.COM / ATAFOLLA@RGLA.COM

MEP ENGINEER
KLH ENGINEERS, PSC
333 EAST MAIN, SUITE 175
LEXINGTON, KY 40507
C: JORDAN LAYCOCK
T: 859.547.0242
E: JLAYCOCK@KLHENGRS.COM

1 STRUCTURAL ENGINEER
WALLACE DESIGN COLLECTIVE, PC
1703 WYANDOTTE STREET, SUITE 200
KANSAS CITY, MO 64108
C: DARCEY SCHUMACHER
T: 816.820.0365
E: DARCEY.SCHUMACHER@WALLACE.DESIGN

- PROJECT DIRECTORY

UPON AWARDING THE GENERAL CONTRACTOR'S CONTRACT, THE GENERAL CONTRACTOR MUST INFORM THE OWNER (CARHARTT) IN WRITING OF ALL MATERIALS AND EQUIPMENT WITH LEAD TIMES OF 4 WEEKS OR GREATER

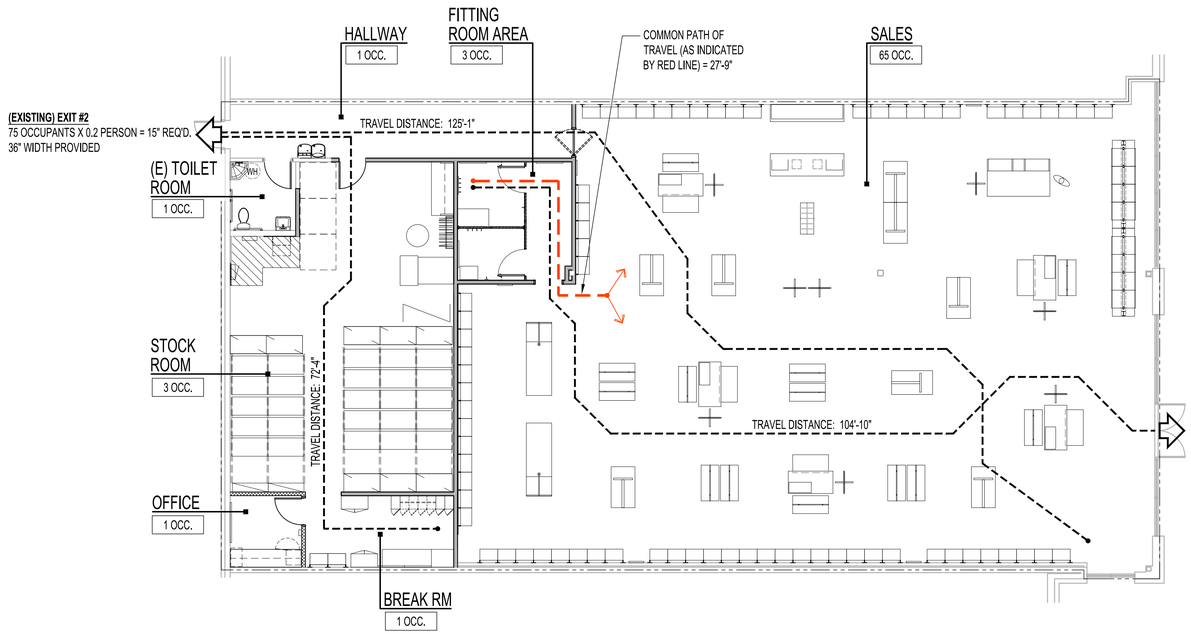
ALL CHANGE ORDERS TO BE APPROVED BY CARHARTT - MARK KASTNER - IN WRITING PRIOR TO PROCEEDING WITH WORK. ANY WORK COMPLETED WITHOUT AN APPROVED CHANGE ORDER WILL NOT BE PAID.

WORK UNDER SEPARATE PERMIT:
- SPRINKLER WORK
- FIRE ALARM
- STOREFRONT SIGNAGE

ALL MATERIAL SUBSTITUTIONS MUST OBTAIN OWNER AND ARCHITECT'S APPROVAL PRIOR TO COMMENCEMENT

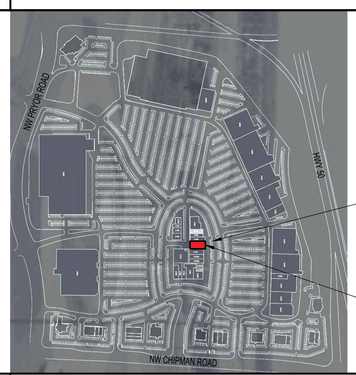
GC SHALL PROVIDE CARPENTER ON-SITE FOR ONE EIGHT-HOUR DAY AFTER TURNOVER FOR MISCELLANEOUS TASKS.

REQUIRED SUBCONTRACTORS:
VERIFY WITH MALL OPERATIONS MANAGER FOR ALL REQUIRED SUBCONTRACTORS.

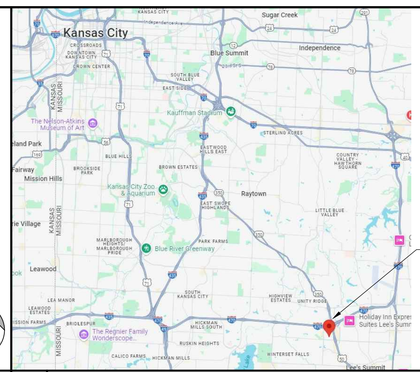


- EGRESS PLAN

SCALE 1/8"=1'-0"



- KEY PLAN



- VICINITY MAP

carhartt

SUMMIT WOODS CROSSING

1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

SCOPE OF WORK STATEMENT
THE INTENT OF THE SCOPE CONTAINED WITHIN THESE DOCUMENTS RELATES TO THE INTERIOR BUILD-OUT OF A MERCANTILE SPACE CONTAINED WITHIN AN EXISTING SHOPPING CENTER. PROPOSED WORK INCLUDES CONSTRUCTION AND INSTALLATION OF NEW NON-LOAD BEARING PARTITIONS, FIXTURES, FINISHES, LIGHTING, MECHANICAL, ELECTRICAL, AND PLUMBING.

PERMIT SCOPE INCLUDES
ONLY CHECKED BOXES
- ☒ BUILDING
- ☒ MECHANICAL
- ☒ ELECTRICAL
- ☒ PLUMBING
- ☐ SPRINKLER
- ☐ STOREFRONT SIGN

MALL TYPE
- ☐ COVERED MALL BUILDING
- ☒ EXTERIOR MALL
- ☐ STREET LOCATION

- SCOPE OF WORK

APPLICABLE CODES

BUILDING:	2018 INTERNATIONAL BUILDING CODE
ELECTRICAL:	2017 NATIONAL ELECTRICAL CODE
MECHANICAL:	2018 INTERNATIONAL MECHANICAL CODE
PLUMBING:	2018 INTERNATIONAL PLUMBING CODE
ACCESSIBILITY:	ICC/ANSI A117.1-2009
FIRE CODE:	2018 INTERNATIONAL FIRE CODE
ENERGY CODE:	2018 INTERNATIONAL ENERGY CONSERVATION CODE
EXISTING BUILDING CODE:	2018 INTERNATIONAL EXISTING BUILDING CODE

OCCUPANCY LOAD CALCULATIONS

GROSS AREA:	5,510 SQ.FT. (LEASED AREA)	
SALES AREA:	3,871 SQ.FT. / 60 SQ.FT. PER PERSON =	65
FITTING ROOM AREA:	181 SQ.FT. / 60 SQ.FT. PER PERSON =	3
TOILET ROOOM:	1 PRIVATE TOILET ROOM =	1
OFFICE	1 PRIVATE OFFICE =	1
HALLWAY	257 SQ.FT. / 300 SQ.FT. PER PERSON =	1
BREAK ROOM	181 SQ.FT. / 300 SQ.FT. PER PERSON =	1
STOCKROOM:	908 SQ.FT. / 300 SQ.FT. PER PERSON =	3
TOTAL OCCUPANCY:		75 PERSONS

BUILDING REQUIREMENTS

DESCRIPTION	CODE SECTION	REQUIREMENTS
USE GROUP:	IBC CHAPTER 3, SECTION 309	M (MERCANTILE)
NUMBER OF LEVELS:		LOCATED ON GROUND LEVEL OF 1 LEVEL
CONSTRUCTION TYPE:	IBC TABLE 601	TYPE II B
FIRE SPRINKLERS:	IBC SECTIONS 506.3, 903.1	FULLY SPRINKLERED
TENANT AREA:	IBC SECTION 507.3	5,510 SQ.FT. AREA OF WORK
OCCUPANT LOAD:	IBC SECTION 1004.1 & NFPA 101	75 PERSONS
NUMBER OF EXITS:	IBC TABLE 1006.3	2 REQUIRED
		2 PROVIDED
EXIT WIDTH:	IBC TABLE 1005.1	30" REQUIRED
		108" PROVIDED

- CODE AND BUILDING SUMMARY

STATEMENT OF COMPLIANCE
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY PROFESSIONAL KNOWLEDGE THEY CONFORM TO THE CODES AND ORDINANCES OF LEE'S SUMMIT, MO.

JOSEPH A. GEOGHEGAN JR.
LICENSE # : A-2008008193
EXPIRATION DATE: 12/31/2026
SEAL:

- CERTIFICATION STATEMENT

rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISIONS:	DATE:
ISSUE FOR PERMIT, LANDLORD, PRICING	06/18/25
REV 1 - PERMIT REVISIONS 1	07/21/25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

JOSEPH A. GEOGHEGAN JR. NUMBER 2006008193 ARCHITECT

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

COVER SHEET, CODE INFORMATION, PROJECT DATA, & DIRECTORY

DRAWN BY	SLS
CHECKED BY	SL
JOB NUMBER	25303
SHEET NAME	G-0.0

DIVISION 01: GENERAL REQUIREMENTS:

1. GENERAL: THESE DRAWINGS AND SPECIFICATIONS INCLUDING DESIGNS AND IDEAS REPRESENTED THEREON ARE AND SHALL REMAIN THE PROPERTY OF THE ARCHITECT; AND NO PART THEREOF SHALL BE COPIED, DISCLOSED TO OTHERS OR USED IN CONJUNCTION WITH ANY WORK OR PROJECT EXCEPT THOSE FOR WHICH THEY HAVE BEEN DEVELOPED AND PREPARED, WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT. VISUAL CONTACT WITH THE DRAWINGS AND SPECIFICATIONS SHALL CONSTITUTE CONCLUSIVE EVIDENCE OF ACCEPTANCE OF THESE RESTRICTIONS. THE TERM "GENERAL CONTRACTOR" USED IN THESE DOCUMENTS REFER TO TENANTS AS WELL AS LANDLORDS GENERAL CONTRACTOR.
   A. THE WORK UNDER THIS CONTRACT COMPRISES THE BUILD-OUT OF A NEW RETAIL STORE FOR CARHARTT (SEE PLANS FOR SQUARE FOOTAGE AND EXACT SCOPE OF WORK).
   B. THE LANDLORD/TENANT GENERAL CONTRACTORS SHALL VISIT THE SITE TO VERIFY ANY EXISTING CONDITIONS AND DIMENSIONS BEFORE SUBMITTING BIDS/PRICING AND REPORT TO THE ARCHITECT ANY DISCREPANCIES OR CONDITIONS WHICH MAY INTERFERE WITH THE EXECUTION OF THE DEPICTED WORK. EXTRAS WILL NOT BE ALLOWED FOR UNREPORTED DISCREPANCIES OR CONDITIONS.
   C. THE GENERAL CONTRACTOR SHALL CONTACT LOCAL UTILITY COMPANIES TO VERIFY ALL ELEVATIONS, SIZES, LOCATIONS AND CONNECTION POINTS FOR ALL UTILITIES AFFECTED BY THIS PROJECT. THE GENERAL CONTRACTOR SHALL COORDINATE AND OBTAIN ALL APPLICATIONS FOR, AND ENSURE ALL UTILITIES ARE TURNED ON PRIOR TO COMPLETION OF WORK.
   D. CONTRACTOR TO PROVIDE ALL SUB-CONTRACTORS WITH A COMPLETE SET OF THE MOST CURRENT CONSTRUCTION DOCUMENTS.

2. CONTRACTS: THE LATEST EDITION OF THE AMERICAN INSTITUTE OF ARCHITECTS - "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION (A201)" ARE HEREBY MADE A PART OF THESE DRAWINGS AND SPECIFICATIONS, AS WELL AS THE CONTRACT FOR CONSTRUCTION BY REFERENCE AND THEY SHALL BE LEGALLY ENFORCEABLE TO THE SAME DEGREE AND EXTENT AS IF THEY WERE REPRODUCED HEREON.

3. PERMITS & CERTIFICATES: ALL WORK SHALL COMPLY WITH STATE AND LOCAL REGULATIONS AND ORDINANCES, ANY OTHER APPLICABLE CODES AND SHOPPING CENTER CRITERIA.
   A. THE GENERAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND LICENSES AND ARRANGE FOR ALL INSPECTIONS BY LOCAL JURISDICTIONS.
   B. A COMPLETE UP TO DATE SET OF THE DRAWINGS, INCLUDING APPROVED SHOP DRAWINGS SHALL BE KEPT AT THE SITE FOR THE DURATION OF THE WORK. COPIES OR ORIGINALS, IF REQUIRED, OF ALL PERMITS AND APPROVALS, SHALL ALSO BE KEPT AT THE SITE.
   C. UPON COMPLETION OF THE WORK AND BEFORE FINAL PAYMENT IS MADE, THE CONTRACTOR SHALL SECURE AND DELIVER TO THE LANDLORD AND TENANT (COPY TO ARCHITECT) A PROPERLY ISSUED OCCUPANCY CERTIFICATE AND COPIES OF ANY OTHER REQUIRED APPROVALS BY ANY AND ALL AGENCIES HAVING JURISDICTION OVER THE WORK (INCLUDING THE LANDLORD).

4. INSURANCE: ALL CONTRACTORS (GENERAL AND SUBCONTRACTORS) SHALL COMPLY WITH THE LANDLORD'S AND TENANT'S REQUIREMENT FOR INSURANCE, BONDS AND WAIVERS OF LIEN.
   A. PRIOR TO COMMENCEMENT OF THE WORK, ALL CONTRACTORS AND SUBCONTRACTORS SHALL OBTAIN INSURANCE POLICIES AS OUTLINED BELOW. INSURANCE POLICIES ARE TO NAME THE TENANT, TENANT'S PROGRAM MANAGER (RGLA SOLUTIONS, INC.) TENANT'S ARCHITECT (ROBERT G. LYON & ASSOCIATES, INC.), LANDLORD AND THE LANDLORD'S GENERAL CONTRACTOR (IF APPLICABLE) AS ADDITIONALLY INSURED. CERTIFICATES OF INSURANCE SHALL BE SUBMITTED TO THOSE NAMED.
   B. WORKMAN'S COMPENSATION AND OCCUPATIONAL DISEASE INSURANCE.
      B.A. STATE: -STATUTORY-
      B.B. APPLICABLE FEDERAL (E.G.: LONGSHOREMEN, HARBOR WORK, WORK OUTSIDE THE UNITED STATES): -STATUTORY-
      B.C. EMPLOYER'S LIABILITY:
         $500,000.00 PER ACCIDENT
         $500,000.00 DISEASE
      B.D. BENEFITS REQUIRED BY UNION LABOR CONTRACTS AS APPLICABLE
   C. COMPREHENSIVE GENERAL LIABILITY (INCLUDING PREMISES - OPERATIONS: INDEPENDENT CONTRACTORS' PROTECTIVE; PRODUCTS AND COMPLETED OPERATIONS: BROAD FORM PROPERTY DAMAGE; AUTOMOBILE COVERAGE, AND CONTRACTUAL LIABILITY.)
      C.A. BODILY INJURY:
         $4,000,000.00 EACH OCCURRENCE
         $4,000,000.00 AGGREGATE
      C.B. PROPERTY DAMAGE (INCLUDING WATER DAMAGE AND SPRINKLER LEAKAGE, LEGAL LIABILITY).
         $4,000,000.00 EACH OCCURRENCE
         $4,000,000.00 AGGREGATE
      C.C. PRODUCTS AND COMPLETED OPERATIONS SHALL BE MAINTAINED FOR A MINIMUM OF ONE (1) YEAR AFTER FINAL PAYMENT AND CONTRACTOR SHALL CONTINUE TO PROVIDE EVIDENCE OF SUCH COVERAGE TO OWNER ON AN ANNUAL BASIS DURING THE AFOREMENTIONED PERIOD.
      C.D. PROPERTY DAMAGE LIABILITY INSURANCE SHALL INCLUDE COVERAGE FOR EXPLOSION AND COLLAPSE.
      C.E. CONTRACTUAL LIABILITY
         (HOLD HARMLESS COVERAGE):
         BODILY INJURY:
         $2,000,000.00 EACH OCCURRENCE
         PROPERTY DAMAGE:
         $2,000,000.00 EACH OCCURRENCE
         $2,000,000.00 AGGREGATE
      C.F. PERSONAL INJURY (WITH EMPLOYMENT EXCLUSION DELETED):
      C.G. $2,000,000.00 EACH PERSON
   D. COMPREHENSIVE AUTOMOBILE LIABILITY (OWNED, NON-OWNED, HIRED)
      D.A. BODILY INJURY:
         $2,000,000.00 EACH PERSON
         $2,000,000.00 EACH ACCIDENT
      D.B. PROPERTY DAMAGE:
         $2,000,000.00 EACH OCCURRENCE
   E. OTHER INSURANCE AND BONDS AS MAY BE REQUIRED BY THE LANDLORD (VERIFY REQUIREMENTS WITH THE LANDLORD).

5. CONTRACTOR (G.C.): THE GENERAL CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND TRANSPORTATION NECESSARY, WHETHER STATED OR IMPLIED, TO COMPLETE THE WORK AS DESCRIBED ON THESE DRAWINGS AND SPECIFICATIONS.
   A. REFER TO THE DIVISION OF WORK FOR A BREAKDOWN OF THE VARIOUS RESPONSIBILITIES OF ALL INVOLVED PARTIES. ALL CONTRACTORS, VENDORS AND TRADES ARE RESPONSIBLE FOR THE VARIOUS PROVISIONS OF THE SPECIFICATION AS IT APPLIES TO THEM.
   B. INSTALL ALL SYSTEMS, COMPONENTS, ASSEMBLIES, FIXTURES, HARDWARE AND FINISHES PER THE MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS.
   C. IMMEDIATELY REPAIR ALL DAMAGE TO ANY SYSTEMS OR COMPONENTS BEING MAINTAINED AT NO COST TO THE LANDLORD.
   D. PROTECT ALL PEOPLE
   E. ALL WORK SHALL BE COORDINATED WITH, AND IS SUBJECT TO APPROVAL BY, AND IS SUBJECT TO THE RULES OF THE LANDLORD. CONTRACTOR TO OBTAIN RULES AND REGULATIONS FROM LANDLORD.
   F. THE WORK UNDER THIS CONTRACT INCLUDES BOTH A FULL TIME SITE SUPERINTENDENT AND PROJECT MANAGER FOR THE DURATION OF CONSTRUCTION.

6. WORK BY TENANT: REFER TO THE DIVISION OF WORK FOR ANY TENANT FURNISHED AND SUPPLIED ITEMS.

7. WORK BY LANDLORD: REFER TO THE DIVISION OF WORK FOR ANY LANDLORD FURNISHED AND SUPPLIED ITEMS.

8. WORK BY GENERAL CONTRACTOR IS SUBJECT TO THE RULES OF THE LANDLORD. SUBMIT EVIDENCE OF SAME AS MAY BE REQUIRED, OBTAIN A LIST OF RULES AND REGULATIONS FROM THE LANDLORD.
   A. MINIMUM INTERFERENCE - ALL WORK SHALL BE PERFORMED SO AS TO CAUSE A MINIMUM OF INTERFERENCE WITH ANY OTHER TENANTS AND THE OPERATION OF THE LANDLORD'S ENTIRE PREMISES. CONTRACTOR SHALL TAKE ALL PRECAUTIONARY STEPS TO PROTECT THE FACILITIES ON THE PREMISES AND THE FACILITIES OF OTHERS AFFECTED BY PERFORMANCE OF THE WORK AND POLICE SAME PROPERLY.
   B. ALL MATERIALS AND PRODUCTS SPECIFIED SHALL BE NEW AND ARE TO BE INSTALLED IN ACCORD WITH MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS. GENERAL CONTRACTOR IS TO CONSTRUCT PROJECT IN ACCORD WITH THE DOCUMENTS. ANY DEVIATION FROM THE INTENT OF THE DOCUMENTS WITHOUT ARCHITECT APPROVAL IS THE CONTRACTOR'S OWN RISK.

9. TENANT SUPPLIED/TENANT'S GENERAL CONTRACTOR INSTALLED MATERIALS:
   A. THE GENERAL CONTRACTOR SHALL INCLUDE IN BASE BID THE COST TO UNLOAD AND STORE OWNER FURNISHED ITEMS FOR INSTALLATION BY THE GENERAL CONTRACTOR.
   B. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR FILING FREIGHT CLAIMS DIRECT WITH CARRIER, AND FOLLOWING THROUGH AS NECESSARY WITH ALL SUBSEQUENT PROCEDURES, INCLUDING INSPECTIONS AND REMOVAL OF DAMAGED MATERIAL. THIS APPLIES TO VISIBLE AND CONCEALED DAMAGES OF ALL OWNER SUPPLIED MATERIALS. FAILURE TO DO SO WILL RESULT IN BACK-CHARGE EXPENSES TO THE GENERAL CONTRACTOR.
   C. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL OWNER SUPPLIED MATERIALS THROUGHOUT THE COURSE OF THE PROJECT, AND IS TO MAKE REPAIRS AS REQUIRED.

10. APPLICATION FOR PAYMENT: SUBMIT (3) THREE COPIES OF EACH APPLICATION ON AIA G702 FORMS. PAYMENT MAY BE APPLIED FOR MONTHLY AND WILL BE BASED ON PERCENTAGE OF WORK COMPLETED LESS RETAINAGE.
   A. BEGINNING WITH PAY REQUEST #2, GENERAL CONTRACTOR SHALL SUBMIT A PARTIAL WAIVER OF LIEN EQUAL TO THE AMOUNT OF THE PREVIOUS PAY REQUEST FROM EACH SUBCONTRACTOR.
   B. UPON COMPLETION OF THE WORK AND PRIOR TO FINAL PAYMENT, THE GENERAL CONTRACTOR SHALL SUBMIT FINAL UNCONDITIONAL (NOTARIZED) WAIVERS OF LIEN FROM ALL SUBCONTRACTORS AND A FINAL NOTARIZED UNCONDITIONAL WAIVER OF LIEN FROM HIMSELF FOR THE FULL AMOUNT OF THE CONTRACT (INCLUDING ALL ADDITIONS AND CREDITS).

11. COORDINATION: THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL SUBCONTRACTORS AND TRADES.
   A. PROVIDE AND MAINTAIN AN UP-TO-DATE SCHEDULE OF WORK.
   B. SCHEDULE AND ADMINISTER MEETINGS AS AGREED TO BY THE OWNER AND ARCHITECT AND COMPOSE MINUTES TO THOSE MEETINGS.
   C. PROVIDE A FULL TIME QUALIFIED SUPERVISOR ON SITE
   D. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL OTHER CONTRACTORS AND VENDORS WORKING IN THE SPACE.

12. SUBMITTALS: SUBMITTALS SHALL BE PROVIDED FOR MATERIALS AND ASSEMBLIES LISTED IN EACH SECTION OF THIS SPECIFICATION:
   A. SHOP DRAWINGS AND SAMPLES: WHERE CALLED FOR IN DOCUMENTS, SUBMIT TO ARCHITECT FOR APPROVAL AS FOLLOWS.
      A.A. REPRODUCIBLE DRAWINGS: ONE SEPIA TRANSPARENCY.
      A.B. NON-REPRODUCIBLE DATA: TWO COPIES.
      A.C. SAMPLES: (2) EACH.
      A.D. CLEARLY MARK ALL SUBMISSIONS WITH DATA, PROJECT, CONTACT AND SUB-CONTRACTOR AND ALLOW SPACE FOR APPROVAL STAMP.
   B. PRODUCT DATA: SUBMIT MANUFACTURER'S TECHNICAL INFORMATION AND INSTALLATION INSTRUCTIONS FOR SPECIFIED MATERIALS, EXCEPT BULK MATERIALS, TO THE TENANT (COPY TO THE ARCHITECT).
   C. PRODUCT WARRANTY: SUBMIT MANUFACTURER'S PRODUCT AND MATERIAL INFORMATION TO TENANT (COPY TO THE ARCHITECT).

13. INSPECTION AND TESTING: THE GENERAL CONTRACTOR SHALL EMPLOY AND PAY FOR AN INDEPENDENT FIRM (APPROVED BY THE ARCHITECT) TO PERFORM INSPECTION AND TESTING REQUIRED BY THESE DRAWINGS AND SPECIFICATIONS.
   A. SUBMIT TESTING AND INSPECTION RESULTS TO THE ARCHITECT, AND TENANT FOR THEIR FILES.

14. TEMPORARY SERVICES: PROVIDE TEMPORARY SERVICES NECESSARY TO COMPLETE THE CONSTRUCTION INCLUDING (BUT NOT LIMITED TO): ELECTRICITY, LIGHTING, HVAC, TELEPHONE, FACSIMILE MACHINE, WATER SERVICE, SANITARY FACILITIES, FIRE PROTECTION EQUIPMENT, FENCES/BARRICADES AND SECURITY.
   A. GENERAL CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY BARRICADES, TEMPORARY CONSTRUCTION, DUSTSHIELDS, AND SCAFFOLDING REQUIRED TO COMPLETE THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BARRICADE MAINTENANCE, REMOVAL AND REPAIR, CLEANUP OR ANY RECONSTRUCTION REQUIRED AS A RESULT OF THE BARRICADE.
   B. GENERAL CONTRACTOR IS TO BE FAMILIAR WITH ALL LANDLORD CRITERIA. SPECIAL WORKING CONDITIONS PERTAINING TO BARRICADES, NOISE, DUST, TRASH REMOVAL, ETC. AND TO COORDINATE WITH LANDLORDS.
   C. GENERAL CONTRACTOR MUST HAVE A JOB PHONE ON PREMISES DURING ENTIRE CONSTRUCTION PERIOD AND PROVIDE NUMBER AND NAME OF CONTACT TO ARCHITECT AND TENANT IMMEDIATELY.

15. SITE ACCESS: COORDINATE SITE ACCESS, WORK HOURS, WORKER PARKING, LOADING AND UNLOADING AND STORAGE OF MATERIALS WITH THE LANDLORD.

16. JOB SAFETY REQUIREMENTS: THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING SAFETY DURING CONSTRUCTION. PROVIDE AND POST SAFETY RULES AT THE JOBSITE.

17. CLEANING/FINAL CLEANING: MAINTAIN SITE IN A CLEAN AND ORDERLY FASHION AT ALL TIMES. FINAL CLEAN THE ENTIRE SITE, DISPOSING OF ANY REMAINING DEBRIS AND TRASH, VACUUMING OR SWEEPING AND MOPPING FLOORS AND CLEANING ALL GLAZED, TILED, PAINTED, ETC. SURFACES FOR SUBSTANTIAL COMPLETION.
   A. GENERAL CONTRACTOR SHALL PAY FOR ALL SCAVENGER SERVICES, BE RESPONSIBLE FOR REMOVAL OF DEBRIS FOR ALL TRADES (INCLUDING OTHER CONTRACTORS AND VENDORS) AND FOR KEEPING THE JOB SITE CLEAN AT ALL TIMES.
   B. TENANT GENERAL CONTRACTOR TO PROVIDE FINAL DEEP CLEANING OF ALL WOOD, GLASS, AND METAL FIXTURES, STOREFRONT GLAZING INSIDE AND OUT, VACUUMING OF CARPET, MOPPING AND WAXING OF VCT FLOORING, MOPPING AND BUFFING OF SOLID VINYL FLOORING PRIOR TO TURN OVER TO OPERATING COMPANY.

18. RECORD DRAWINGS/O&M MANUALS: MAINTAIN, ON SITE, ONE SET OF CONTRACT DOCUMENTS TO BE UTILIZED FOR RECORD DRAWINGS. RECORD ALL REVISIONS OF WORK.
   A. UPON COMPLETION OF THE WORK AND BEFORE FINAL PAYMENT IS MADE, THE CONTRACTOR SHALL SECURE AND DELIVER TO THE TENANT (COPY TO THE ARCHITECT) ALL GUARANTEES AND/OR WARRANTIES ON ALL EQUIPMENT SUPPLIED AND/OR INSTALLED BY THE CONTRACTOR, AND HIS SUBCONTRACTORS.
   B. UPON COMPLETION OF THE WORK AND BEFORE FINAL PAYMENT IS MADE, THE CONTRACTOR SHALL SUBMIT (ON REPRODUCIBLE MYLAR) ONE SET OF AS-BUILT DRAWINGS INDICATING ALL CHANGES AND MODIFICATIONS MADE TO THE PROJECT DURING CONSTRUCTION.
      B.A. PROVIDE THE LANDLORD WITH COPIES OF RECORD DRAWINGS AND O & M MANUALS AS REQUIRED.

19. PUNCH LIST/CLOSE-OUT: UPON NOTIFICATION, THE ARCHITECT & TENANT SHALL PREPARE A PUNCH LIST OF THE PROJECT AND THE GENERAL CONTRACTOR SHALL MAKE GOOD ALL PUNCH LIST ITEMS TO THE SATISFACTION OF THE ARCHITECT / TENANT PRIOR TO FINAL PAYMENT.
   THE GENERAL CONTRACTOR SHALL:
   -FINAL CLEAN SITE.
   -RESOLVE ALL PUNCH LIST ITEMS.
   -TEST AND BALANCE HVAC SYSTEM.
   -SUBMIT TWO COPIES OF ALL O&M MANUALS.
   -SUBMIT COPIES OF MANUFACTURER'S WARRANTIES.
   -SUBMIT RECORD DRAWINGS.
   -LEAVE ON SITE ATTIC STOCK FOR CEILING TILE AND FLOOR TILE.

NOTE: THE GENERAL CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE FOR ANY EXPENSES INCURRED BY THE ARCHITECT FOR ADDITIONAL VISITS AS A RESULT OF PUNCH LIST ITEMS NOT CORRECTED BEFORE THE FOLLOW-UP VISIT.

20. GUARANTEE: THE GENERAL CONTRACTOR SHALL GUARANTEE THE WORK FOR ONE (1) YEAR AFTER THE SUBSTANTIAL COMPLETION OF ALL WORK.
   A. GUARANTEE/WARRANTY CERTIFICATES BY THE MANUFACTURER SHALL BE SUBMITTED AS APPROPRIATE.
   B. REFER TO OTHER SECTION OF THE SPECIFICATION FOR ADDITIONAL GUARANTEE/WARRANTY REQUIREMENTS.

DIVISION 02: SITE WORK:

1. REFER TO THE ARCHITECTURAL DRAWINGS FOR ANY NOTES RELATED TO DEMOLITION WORK.

2. THE GENERAL CONTRACTOR IS TO DEMOLISH AND REMOVE FROM THE PREMISES IN A MANNER ACCEPTABLE TO ANY JURISDICTIONAL AGENCIES, THE LANDLORD, AND THE APPROVAL OF THE ARCHITECT, ALL WORK SO INDICATED OR REQUIRED BY THE WORK OF THE CONTRACT DOCUMENTS OR AS MAY BE DIRECTED IN THE FIELD BY THE ARCHITECT. THE WORK WHICH IS TO BE REMOVED SHALL INCLUDE ANY EXISTING CONSTRUCTION, FURNISHINGS, EQUIPMENT OR FINISHES NOT TO REMAIN IN THE COMPLETED

3. LAYOUT WORK:
   A. GENERAL CONTRACTOR SHALL LOCATE ALL EXISTING UTILITY SERVICE LINES AND PROTECT THEM THROUGHOUT THE CONSTRUCTION PERIOD.
   B. GENERAL CONTRACTOR SHALL LAY OUT WORK AND BE RESPONSIBLE FOR ALL LINES, ELEVATIONS, MEASUREMENTS OF THE BUILDING UTILITIES, AND OTHER WORK EXECUTED UNDER THE CONTRACT.
   C. LANDLORD/ TENANT GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AS THEY MAY APPLY TO EXISTING CONDITIONS WITH PARTICULAR EMPHASIS ON DIMENSIONS MARKED "VERIFY" OR VERIFY IN FIELD (V.I.F.) NOTIFY ARCHITECT AND TENANT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND EXISTING CONDITIONS IN WRITTEN FORM. WORK.
   D. ANY DISCREPANCIES, ERRORS, OR OMISSIONS DISCOVERED IN THE CONTRACT DOCUMENTS BY THE CONTRACTOR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND TENANT BEFORE PROCEEDING WITH RELATED WORK. OTHERWISE, THE CORRECTION OF SUCH ITEMS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

DIVISION 03: CONCRETE WORK:

1. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR A SMOOTH TRANSITION BETWEEN STORE FLOORS AND ADJACENT FLOORS. STORE FLOOR MAY REQUIRE LATEX FEATHERING OR, WHERE POSSIBLE, GRINDING DOWN OF STORE SUBFLOOR TO ALLOW FOR A SMOOTH TRANSITION, IF FLOOR GRINDING IS NOT PERMITTED BY LANDLORD CONTACT ARCHITECT.

2. (WHEN APPLICABLE) NEW OR ADDITIONAL CONCRETE WORK STAIRS, STOOPS, RAMPS, ECT. REFER TO ALL DRAWINGS FOR ADDITIONAL CONCRETE SPECIFICATIONS.

DIVISION 04: MASONRY: (WHEN APPLICABLE)

1. REFER TO THE ARCHITECTURAL DRAWINGS FOR ADDITIONAL MASONRY SPECIFICATIONS.

2. PRODUCTS:
   A. LINTELS AND BOND BEAMS: (IF APPLICABLE)
      A.A. INSTALL LINTELS WHERE NOTED ON THE DRAWINGS.
      A.B. INSTALL BOND BEAMS WHERE NOTED ON THE DRAWINGS; REINFORCE AS DETAILED AND GROUT SOLID.
   B. REMOVE EXCESS MORTAR AND CLEAN SURFACES UPON COMPLETION OF MASONRY INSTALLATION.

DIVISION 05: METALS:

1. REFER TO THE ARCHITECTURAL DRAWINGS FOR SPECIFICATIONS RELATED TO STRUCTURAL METAL WORK.

2. (WHEN APPLICABLE) REFER TO ALL DRAWINGS FOR ADDITIONAL ARCHITECTURAL METAL WORK, RAILINGS, REFER HANDRAILS, ETC.

DIVISION 06: WOOD AND PLASTIC:

1. SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO, ROUGH CARPENTRY (WOOD BLOCKING) AND FINISH CARPENTRY (CABINETRY, WOOD TRIM, HARDWARE AND ACCESSORIES).

2. ROUGH CARPENTRY: WOOD BLOCKING
   A. PROVIDE SOLID BLOCKING IN STUD WALLS WHERE ALL FIXTURES OR DEVICES ARE TO BE MOUNTED. ALL WOOD BLOCKING SHALL BE FIRE RESISTANT TREATED.
   B. ALL DIMENSIONAL LUMBER TO BE FIRE RETARDANT WITH U.L. RATING "NON-COMBUSTIBLE.

3. FINISH CARPENTRY: CABINETRY, AND WOOD TRIM:
   A. ALL MILLWORK SHALL COMPLY WITH THE APPROPRIATE SPECIFICATIONS OF "THE ARCHITECTURAL QUALITY STANDARDS ILLUSTRATED" OF THE AMERICAN WOODWORK INSTITUTE (AWI) FOR "CUSTOM" GRADE MILLWORK.
   B. PAINT GRADE FINISH LUMBER SHALL BE `POPLAR' OR `BIRCH' SANDED SMOOTH AND FREE OF BLEMISHES OR ABRASIONS. ALL WOOD SHALL HAVE TIGHT AND UNIFORM JOINTS.
   C. MILLWORK CONTRACTOR SHALL VERIFY ALL DIMENSIONS AFFECTING HIS WORK IN THE FIELD PRIOR TO FABRICATION.
   D. FIXTURE MILLWORK AS NOTED ON DRAWINGS IS SUPPLIED BY TENANT AND INSTALLED BY TENANT GENERAL CONTRACTOR.
   E. SOME FIELD ASSEMBLY OF MILLWORK IS REQUIRED. FOLLOW SHOP DRAWING ACCOMPANYING MILLWORK. ALL FIELD ASSEMBLED MILLWORK TO BE SCRIBED AND JOINED ACCURATELY.
   F. INSTALLATION TO BE IN ACCORDANCE WITH MANUFACTURER'S SHOP DRAWINGS.
   G. MAKE ALL JOINTS INCONSPICUOUS MAINTAINING A UNIFORM FLUSH CONNECTION USING COMBINATION OF SCREWS, DOWELS AND GLUE. BLIND FASTEN WHERE POSSIBLE. WHERE BLIND FASTENINGS IS IMPOSSIBLE, DRILL HOLES UNIFORMLY, SET AND PUTTY HEADS AND FINISH AS APPLICABLE TO

4. PLASTIC LAMINATES:
   A. ALL LAMINATE SURFACES, EDGES AND ADJACENT MATERIALS TO BE FREE OF ALL ADHESIVES, MARKINGS, CHIPS AND SURFACE BLEMISHES. REMOVE WRAPPINGS.
   B. PLASTIC LAMINATES TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL EDGES TO BE FLUSH, TRUE AND STRAIGHT, WITHOUT GAPS. ADJACENT LAMINATED PANELS TO BE CONCEALED SPLINE JOINTS.
   C. LAMINATE TO BE INSTALLED OVER MEDIUM DENSITY PARTICLE BOARD. SPACKLE AND SAND SMOOTH TO AVOID TELEGRAPHING OF FASTENER LOCATIONS, BACKER, EDGES, ETC.
   D. ALL LAMINATE WORK TO BE FASTENED WITH CONCEALED MECHANICAL FASTENERS ATTACHED TO SUBSTRATE FRAMING AND WITH ADHESIVES. SET WITH BLOCKS AND CLAMPS UNTIL ADHESIVES HAVE DEVELOPED ADEQUATE BONDING STRENGTH.

DIVISION 07: THERMAL & MOISTURE PROTECTION:

1. SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO, VAPOR BARRIER, BUILDING INSULATION, MEMBRANE ROOFING SYSTEM, `EIFS' SYSTEM, FLASHING, COPING/FASCIA, AND SEALANTS.

2. BUILDING INSULATION (WHEN APPLICABLE).
   A. CEILING INSULATION - SOUND BATTS: 3 1/2" THICK SOUND ATTENUATION BATT INSULATION CONFORMING TO ASTM C665 AS MANUFACTURED BY OWENS CORNING FIBERGLASS "FIRECODE 60", R19.
   B. WALL INSULATION - THERMAL BATT - 1 1/2" THICK FOILFACED BATT INSULATION - TYPE 703, R 6.5
   C. WALL INSULATION - THERMAL BATT - 3 1/2" THICK FOILFACED BATT INSULATION - TYPE 705, R 15.2 (WHEN APPLICABLE)

DIVISION 08: DOORS, WINDOWS & GLASS:

1. SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO, WOOD AND METAL DOORS AND FRAMES, METAL WINDOWS, GLASS AND GLAZING AND HARDWARE.

2. WOOD AND STEEL DOORS (WHEN APPLICABLE):
   A. STEEL DOORS (EXTERIOR): GRADE III, EXTRA HEAVY DUTY, SEAMLESS COMPOSITE CONSTRUCTION, SHOP PRIMED, WITH INSULATED CORES AND FIRE RATED AS NOTED ON THE DRAWINGS. ACCEPTABLE MANUFACTURERS INCLUDE CECO, KEWANEE OR STEELCRAFT.
   B. WOOD DOORS (INTERIOR): 1 3/4" THICK SOLID CORE AND HOLLOW CORE CONSTRUCTION WITH WOOD VENEER FACES. FABRICATE DOORS IN ACCORDANCE WITH AWI STANDARDS.
      B.A. VENEER TO BE BIRCH, ROTARY SLICED WITH RANDOM MATCH GRAIN FOR PAINT FINISH.
      B.B. PROVIDE CUTOUTS FOR GLAZING AS NOTED ON THE DRAWINGS.

3. METAL FRAMES (WHEN APPLICABLE):
   A. METAL FRAMES (EXTERIOR): 16 GAUGE WITH INSULATED CORE, SHOP PRIMED, WELDED FRAMES AND 4" MASONRY HEAD.
   B. METAL FRAMES (INTERIOR): 16 GAUGE, SHOP PRIMED, KNOCK-DOWN TYPE FOR DRYWALL SLIP-ON ASSEMBLY, UNLESS OTHERWISE NOTED.

4. ALUMINUM DOORS AND WINDOWS (WHEN APPLICABLE):
   A. ALUMINUM SYSTEM SHALL MATCH EXISTING STOREFRONT SYSTEM. FOLLOW MANUFACTURER'S SPECIFICATIONS FOR FABRICATION AND INSTALLATION.
   B. ALUMINUM ENTRANCE DOORS SHALL MATCH EXISTING STOREFRONT SWINGING DOORS WITH INTERMEDIATE MULLIONS AS SHOWN ON THE DRAWINGS.
   C. COLOR TO MATCH EXISTING PROPERTY STOREFRONT.

5. HARDWARE: FURNISH AND INSTALL HARDWARE AS NOTED ON THE HARDWARE/DOOR SCHEDULE.

6. GLASS (WHEN APPLICABLE):
   A. GLASS (EXTERIOR) STOREFRONT TO MATCH EXISTING ADJACENT GLAZING. GLAZING TO BE TEMPERED WHERE REQUIRED BY CODE.
   B. ALL INTERIOR STOREFRONT GLASS TO BE PURCHASED BY G.C. GLASS SHALL BE 1/2" TEMPERED GLASS AS MANUFACTURED BY PPG INDUSTRIES
   C. FLOAT GLASS (INTERIOR, WHEN APPLICABLE): CLEAR, 1/4" THICKNESS.
   D. WIRE GLASS VISION PANEL (WHEN APPLICABLE) CLEAR FULLY TEMPERED, 1/4" THICKNESS
   E. PROVIDE NEOPREME GASKETS AND GLAZING TAPE AT ALL STOPS (INTERIOR GLAZING).
   F. MIRRORS TO HAVE ELECTROPLATED COPPER BACKS, EXPOSED MIRROR EDGES TO BE POLISHED AND CONCEALED EDGES TO BE PAINTED FLAT BLACK. USE NON-STAINING MIRROR MASTIC FOR CEMENTING MIRRORS TO WALL. MIRRORS CEMENTED TO WALL SHALL HAVE A CONTINUOUS BEAD OF SILICONE CEMENT AROUND ENTIRE EDGE OF MIRROR AND WALL.

DIVISION 09: FINISHES

1. SCOPE OF WORK INCLUDES, BUT IS NOT LIMITED TO: GYPSUM BOARD SYSTEMS, SUSPENDED ACOUSTICAL CEILINGS, RESILIENT FLOORING, CARPET, PAINTING AND WALL COVERING AND FLOOR COVERING.
   A. ALL EXIT WAY WALL AND CEILING FINISHES SHALL HAVE A FLAME SPREAD CLASSIFICATION OF NOT MORE THAN CLASS II AND FLAME SPREAD INDEX OF 75 OR LESS. ALL OTHER WALL AND CEILING FINISHES SHALL HAVE A FLAME SPREAD CLASSIFICATION OF NOT MORE THAN CLASS III AND FLAME SPREAD OF 200 OR LESS.

2. GYPSUM BOARD SYSTEMS: INCLUDES METAL STUDS AND GYPSUM BOARD WALLS AND ALL REQUIRED METAL BEADS, CORNER TRIM, FASTENING DEVICES, ETC.
   A. ALL GYPSUM BOARD WALLS AND CEILINGS SHALL BE BUILT IN ACCORDANCE WITH THE GUIDELINES OF THE MOST RECENT VERSION OF THE "GYPSUM CONSTRUCTION HANDBOOK" OF THE UNITED STATES GYPSUM COMPANY.
   B. GYPSUM BOARD SHALL BE 5/8" THICK, TYPE AS INDICATED ON THE DRAWINGS. ALL DRYWALL TO BE TAPED, RECEIVE THREE COATS SPACKLE, SANDED. ALL CORNERS AND EDGES TO HAVE METAL CORNER BEAD BEDDED AND SANDED FOR FINISH.
   C. METAL STUDS SHALL BE 20 GAUGE GALVANIZED STEEL `C' SHAPED. FASTENERS SHALL BE TYPE 'W' DRYWALL SCREWS. STRUCTURAL STUDS - CEE (WHEN REQUIRED) SHALL BE BY DALE/INCOR.
   D. PROVIDE SOUND INSULATION IN PARTITIONS WERE NOTED ON DRAWINGS.
   E. ACCESS DOORS, WHERE INDICATED OR AS REQUIRED, SHALL BE PROVIDED TO ALL CONTROL DEVICES, CLEAN OUTS, DAMPERS, AND THE MIXED AIR DISCHARGE AND INTAKE PLENUMS AT THE HVAC UNIT (VERIFY WITH LANDLORD) BY G.C.

3. SUSPENDED CEILING SYSTEM: (WHEN APPLICABLE)
   3.1. 2'X2' ACOUSTICAL CEILING AND GRID SYSTEM.
   A. CEILING TO BE INSTALLED IN STRICT COMPLIANCE WITH MANUFACTURER'S PUBLISHED SPECIFICATIONS AND CURRENT BULLETIN OF ACOUSTICAL MATERIALS ASSOCIATION -- JOB CONDITIONS.
   B. SUSPENSION SYSTEM TO BE RIGID CEILING GRID SYSTEM WITH CROSS FURRING CHANNELS - DIRECT SUSPENSION SYSTEM.
   C. ALL FIXTURES INSTALLED IN LAY-IN CEILING SHALL BE PLACED IN CENTER OF CEILING TILE UNLESS DIMENSIONED OTHERWISE.

4. RESILIENT FLOORING AND BASE: INCLUDES VINYL TILE, COMPOSITION TILE, VINYL BASE, AND (WHEN APPLICABLE) SHEET VINYL.
   A. PRODUCTS - AS INDICATED IN THE FINISH SCHEDULE.
   B. INSTALLATION:
      B.A. VINYL COMPOSITION, & VINYL TILE FLOORS TO BE PROPERLY PREPARED WITHOUT HOLES, CRACKS AND BUMPS TO INSURE A FIRST CLASS FLOOR INSTALLATION.
      B.B. VINYL COMPOSITION FLOOR TILE AND VINYL TILE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
      B.C. VINYL BASE ROLLED SMOOTH, CORNERS AND EDGES TO BE TRUE AND TIGHT, SEAM SEALER TO BE APPLIED. SIZE OF SMALLEST PIECE TO BE 8 INCH LENGTH.
      B.D. ALL VINYL BASE SHALL BE FURNISHED WITH PREFORMED INSIDE AND OUTSIDE CORNERS.
      B.E. CONCRETE SUBSTRATE - SHALL BE CLEAN, SMOOTH AND FREE OF DEFECTS.
      B.F. AFTER INSTALLATION, CLEAN, SEAL AND WAX FLOOR PER THE MANUFACTURER'S INSTRUCTION.
   C. DELIVER TO OWNER REPLACEMENT TILES IN THE AMOUNT OF 10% OF MATERIALS (ATTIC STOCK).

5. CERAMIC TILE (WHEN APPLICABLE)
   A. PREPARATION OF SURFACES:
      A.A. SUBSTRATE SHALL BE FURNISHED CLEAN, SMOOTH AND LEVELED TO A TOLERANCE OF NO MORE THAN 1/4" IN TEN FEET. JOINTS, CONSTRUCTION SEAMS, AND OTHER IRREGULARITIES ARE TO BE FILLED, LEVEL AND SMOOTH WITH QUALITY PRODUCTS MEETING INDUSTRY STANDARDS SPECIFIED BY THE NATIONAL TILE CONTRACTORS ASSOCIATES, INC. OR THE TILE COUNCIL OF AMERICA. ALL CONTAMINANTS SUCH AS GREASE, WAX, OIL, SEALERS CURING MEMBRANES, AND OLD ADHESIVE MUST BE COMPLETELY REMOVED. EXPANSION JOINTS MUST BE PROVIDED AS PER SPECIFICATIONS AND MATERIALS DETAILED BY TILE COUNCIL OF AMERICA INSTALLATION HANDBOOK, SEE EJ171-89.
      A.B. ALL CONCRETE MUST BE SCOURED (ALSO AFTER PATCHING OR LEVELING) WITH 3-1/2" OPEN GRIT PAPER TO LOOSEN DIRT AND REMOVE WEAK CONCRETE.
   B. INSTALLATION OF FLOORING:
      B.A. INSTALLATION PROCEDURES WILL BE THIN SET METHODS IN STRICT ACCORD WITH MANUFACTURER'S RECOMMENDATIONS CONTAINED IN EACH BOX OF MATERIAL. ACCEPTED METHODS BY THE TILE COUNCIL OF AMERICA INCLUDING USING THE PROPER TROWEL (1/4" X 3/8" X 1/4"), BEATING-IN AND BACK-BUTTERING. THESE TECHNIQUES, ESPECIALLY FOR LARGER TILE, MUST BE FOLLOWED TO OBTAIN PROPER TRANSFER AND LEVELNESS.
      B.B. CLOSE AREA TO NORMAL TRAFFIC FOR 24 HOURS (OR LONGER) DEPENDING ON TYPE OF MATERIAL AND MANUFACTURER'S RECOMMENDATION. FLOORING WILL BE PROTECTED FROM CONSTRUCTION TRAFFIC AFTER LAYING AND GROUTING.
      B.C. PROVIDE SETTING AND MATERIALS OBTAINED FROM ONE SOURCE FOR EACH TYPE AND COLOR OF GROUT AND SETTING MATERIALS.

6. CARPETING: (WHEN APPLICABLE)
   A. INSTALLATION:
      A.A. PREPARE SUBSTRATE FOR CARPET:
         CLEAN, SCRAPE, FILL AND LEVEL FLOOR AS REQUIRED FOR NEW CARPET.
      A.B. INSTALLATION TO BE DIRECTGLUE-DOWN METHOD, USING LATEX MASTIC - ROBERT SEAM SEALER #4015, CAPITAL ADHESIVES OR EQUAL.
      A.C. GENERAL CONTRACTOR TO INSTALL METAL ANGLE PER DETAIL ON DRAWINGS. MITER CUT CORNERS AND NAIL TO SUBFLOOR.
      A.D. ALL DEBRIS TO BE LEGALLY REMOVED FROM PREMISES. SEE NOTE #6.
      A.E. SEE SHT. A-1 FOR TRANSITION STRIP LOCATIONS AND FINISH SCHEDULE THIS SHT. FOR SPECS.
      A.F. CLEAN AND VACUUM AFTER INSTALLATION. ANY SCRAPS LARGER THAN 48" SHALL BE ROLLED AND TURNED OVER TO THE TENANT (ATTIC STOCK).

7. PAINTING:
   A. PAINT SHALL BE MANUFACTURER AND COLOR AS NOTED IN THE SCHEDULES.
   B. ALL SURFACES TO RECEIVE PAINT SHALL BE PROPERLY PREPARED AND SHALL BE CLEAN AND FREE OF DUST, BLEMISHES AND ABRASIONS PRIOR TO APPLICATION OF FINISH. G.C TO FOLLOW FLOOR COVERING MANUFACTURER SPECIFICATIONS FOR APPLYING PAINT & FURNISH & INSTALL MOISTURE BARRIER AS ACCEPTABLE TO PAINT MANUFACTURER IF TEST RESULTS DETERMINE THAT ADDITIONAL MOISTURE PROTECTION IS REQUIRED. ALL WORK SHALL BE PERFORMED AS PART OF INITIAL CONTRACT & SHALL BE INCLUDED IN INITIAL BID. EXTRAS WILL NOT BE ALLOWED.
   C. ALL SURFACES TO BE PAINTED SHALL RECEIVE ONE (1) COAT OF PRIMER AND TWO (2) FINISH COATS.
   D. PAINT COLORS-SEE FINISH SCHEDULE.
   E. GENERAL CONTRACTOR TO FILL AND TOUCH UP ALL NAIL HOLES IN WOOD TRIM.
   F. ALL ELECTRICAL PLATES AND DEVICES TO RECEIVE FINISH AS NOTED ON EMP SPECIFICATIONS.

8. ENGINEERED WOOD FLOORING:
   A. MATERIALS:
      A.A. PROVIDE MATERIALS AS NECESSARY FOR A COMPLETE INSTALLATION.
      A.B. UNDER FLOOR MATERIAL TO BE AS SPECIFIED IN FINISH SCHEDULE.
      A.C. FINISHES TO BE AS SPECIFIED IN THE FINISH SCHEDULE.
   B. INSTALLATION
      B.A. INSTALL PER MANUFACTURER'S DIRECTIONS.
      B.B. PROVIDE MOISTURE TEST
      B.C. PROVIDE MANUFACTURER RECOMMENDED MOISTURE BARRIER AS NEEDED

DIVISION 10: MISCELLANEOUS SPECIALTIES:

1. SCOPE OF WORK INCLUDES TOILET ROOM ACCESSORIES AND ANY OWNER SUPPLIED MISCELLANEOUS SPECIALTIES.

2. TENANT'S GENERAL CONTRACTOR (TGC) SHALL INSTALL OWNER SUPPLIED MISCELLANEOUS SPECIALTIES (AS NOTED).

3. ALL EXTERIOR ILLUMINATED STORE SIGNS SHALL BE FURNISHED AND INSTALLED BY TENANT SIGN CONTRACTOR. TENANT SIGN CONTRACTOR TO PROCURE ALL NECESSARY APPROVALS AND PERMITS, PRIOR TO FABRICATION AND/OR INSTALLATION OF SIGNS. GENERAL CONTRACTOR TO PROVIDE FINISHED SIGN FASCIA AND ACCESS TO BULKHEAD INTERIOR AS REQUIRED FOR ELECTRICAL WIRING AND CONNECTION. FINAL CONNECTION BY

\- SPECIFICATIONS

1. THE CONTRACTOR SHALL REVIEW DOCUMENTS AND VERIFY ALL DIMENSIONS AND FIELD CONDITIONS AND SHALL CONFIRM THAT WORK IS BUILDABLE AS SHOWN.

2. THE CONTRACTOR SHALL MAINTAIN FOR THE ENTIRE DURATION OF THE WORK, ALL EXITS, EXIT LIGHTING, FIRE PROTECTION DEVICES AND ALARMS, SPRINKLERS IN CONFORMANCE WITH ALL APPLICABLE CODES AND ORDINANCES.

3. CONTRACTOR SHALL NOT DISTURB THE DELIVERIES AND FUNCTION OF ADJACENT TENANTS OR BUILDING'S OPERATION DURING THE ENTIRE DURATION OF THE PROJECT.

4. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN. FLOOR PLAN PREPARED BY ARCHITECT SUPERSEDE ALL OTHERS. ALL DIMENSIONS MARKED OR NOTED "CLEAR" SHALL BE MAINTAINED AND SHALL ALLOW FOR THICKNESS OF ALL FINISHES.

5. THESE GENERAL CONDITIONS APPLY TO ALL DRAWINGS IN THIS SET AND SHALL EXTEND TO ANY CHANGES, EXTRAS OR ADDITIONS AGREED TO DURING THE COURSE OF THE WORK.

6. ALL WORK IS TO CONFORM WITH ARCHITECTS DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK AS REQUIRED TO FULFILL THE INTENTIONS OF THE DOCUMENTS.

7. ALL CONSTRUCTION SHALL CONFORM TO AND BE IN ACCORDANCE WITH, THE REQUIREMENTS OF ALL APPLICABLE MUNICIPAL, STATE AND FEDERAL REGULATIONS HAVING JURISDICTION

8. ALL WORK SHALL BE COMPLETED FOR THE AGREED CONTRACT PRICE WITHOUT RECOURSE TO LABOR STOPPAGES OR REVISIONS OF GOVERNING REGULATIONS, LAWS AND CODES. UNLESS NOTED BY THE CONTRACTOR(S) IN THE BID FOR THE PROJECT, ALL WORK SHALL BE COMPLETED AS SHOWN WITHOUT LIMITATIONS, EXCLUSIONS OR MODIFICATIONS.

9. AFTER THE JOB IS IN PROGRESS, THE CONTRACTOR(S) SHALL NOT PROCEED WITH ANY ADDITIONAL WORK OR CHANGES FOR WHICH ADDITIONAL COMPENSATION IS EXPECTED WITHOUT WRITTEN "CHANGE ORDER" AUTHORIZED BY THE TENANT/OWNER OR ARCHITECT IF APPOINTED AS THE OWNERS/TENANTS REPRESENTATIVE. FAILURE TO OBTAIN PRIOR AUTHORIZATION CAN INVALIDATE A CLAIM FOR ADDITIONAL COMPENSATION.

10. ALL CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLYING WITH THE LANDLORDS RULES AND REGULATIONS ON MATERIAL HANDLING, EQUIPMENT, DEBRIS, ELEVATOR AND/OR LOADING DOCK AVAILABILITY, AND ALL THERE TENANT CONSTRUCTION REGULATIONS.

11. MAINTAIN ALL EXISTING BUILDING SERVICES IN USE AT ALL TIMES UNLESS PERMISSION IS RECEIVED IN WRITING FROM THE LANDLORD TO TEMPORARILY INTERRUPT SERVICE. PERMANENTLY RECONNECT ALL SERVICES DISRUPTED BY THE PROJECT WORK WHETHER WITHIN OR OUTSIDE OF THE CONTRACT LIMIT LINES.

12. ALL WORK SHALL BE PERFORMED DURING REGULAR BUSINESS HOURS UNLESS AUTHORIZED IN WRITING BY THE LANDLORD AND/OR OWNER/TENANT.

13. IF APPLICABLE TO THE PROJECT, PASSENGER ELEVATORS SHALL NOT BE USED BY THE TRADES AT ANY TIME DURING THE PERFORMANCE OF THE WORK.

14. TIME IS OF THE ESSENCE AND THE CONTRACTOR(S) SHALL KEEP SUFFICIENT PERSONNEL ON THE JOB AT ALL TIMES TO PERFORM THE WORK IN THE MOST EXPEDITIOUS MANNER CONSISTENT WITH GOOD WORKMANSHIP, AND SOUND BUSINESS PRACTICE. THE CONTRACTOR(S) SHALL CONFIRM THAT ALL ITEMS WILL BE ORDERED, FABRICATED AND INSTALLED PRIOR TO THE AGREED UPON COMPLETION DATE. EXCEPTIONS WILL NOT BE ALLOWED WITHOUT WRITTEN AUTHORIZATION OF THE OWNERS/TENANTS REPRESENTATIVE PRIOR TO THE PLACEMENT OF THE ORDER.

15. THE CONTRACTOR(S) SHALL PROVIDE TEMPORARY WALLS, ENCLOSURES, AND DUST PROOF BARRICADES AS REQUIRED FOR SAFETY, TO CONTROL AND MINIMIZE DUST FROM DEMOLITION AND CONSTRUCTION OPERATIONS, AND TO EFFECTIVELY SEPARATE WORK AREAS FROM OTHER OCCUPIED AREAS. THE CONTRACTOR(S) SHALL EXERCISE ALL DUE CARE AND BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING CONDITIONS AND PROVIDE PROTECTION DEVICES TO MAINTAIN SAME. VERIFY WITH OWNER/TENANT AND LANDLORD ANY SPECIAL REQUIREMENTS TO PROTECT BUILDING SYSTEMS, EQUIPMENT OR COMPUTERS.

16. DO NOT CLOSE, OBSTRUCT, OR STORE MATERIAL IN WALKWAYS, PASSAGEWAYS, STAIRS OR OTHER MEANS OF EGRESS.

17. NO USE OF ARC WELDING BLOWTORCH EQUIPMENT SHALL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE OWNER/TENANT OR LANDLORD.

18. CONTRACTOR(S) MUST PROVIDE TEMPORARY LIGHTING FOR THE PERFORMANCE OF HIS WORK AS WELL THAT REQUIRED TO INSURE PUBLIC SAFETY IN OR AROUND THE PREMISES.

19. REMOVE DEBRIS AS WORK PROGRESSES. MAINTAIN THE PREMISES IN A NEAT AND CLEAN CONDITION. THE FURNISHING OF REFUSE CONTAINERS, CARTS, EQUIPMENT, LABOR AND THE SCHEDULING OF ELEVATOR AND/OR LOADING DOCK (IF APPLICABLE TO PROJECT) SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR(S). UPON COMPLETION OF ALL WORK, REMOVE ALL MATERIALS AND RUBBISH OF ANY SORT AND PROVIDE FINAL CLEAN UP OF PREMISES.

20. GENERAL CONTRACTOR IS TO COORDINATE ALL DELIVERIES WITH THE LANDLORD'S DESIGNATED REPRESENTATIVES

21. GENERAL CONTRACTOR IS TO ACQUIRE AND CONFORM TO THE LANDLORDS CRITERIA AND CONDITIONS FOR GENERAL CONTRACTORS.

22. TENANT GENERAL CONTRACTOR IS NOT PERMITTED TO ATTACH OR SUSPEND ANY COMPONENTS / EQUIPMENT TO THE BOTTOM CHORD OF JOISTS OR TO THE ROOF DECK. ALL WALL CONSTRUCTION SHALL BE SUPPORTED BY THE TOP CHORD OF THE STRUCTURAL JOISTS.

23. COORDINATE ALL FLOOR CUTS WITH THE OPERATIONS DIRECTOR FOR THE PROPERTY

24. ALL FIRE SPRINKLER WORK IS TO BE COMPLETED BY THE LANDLORD APPROVED SPRINKLER CONTRACTOR, AT THE GENERAL CONTRACTOR'S EXPENSE. COORDINATE THIS WORK WITH THE ON SITE LANDLORD REPRESENTATIVE.

25. TENANT'S GENERAL CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGES DONE TO THE LANDLORD / PROPERTY PROPERTY AT THEIR OWN EXPENSE.

26. SIGNAGE SHOP DRAWINGS MUST BE SUBMITTED FOR LANDLORD AND CITY REVIEW AND APPROVAL.

27. TENANT'S GENERAL CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION BARRICADE AND TRASH DUMPSTERS AT THEIR OWN EXPENSE AND SHALL BE COORDINATED WITH LANDLORD'S REPRESENTATIVE.

28. TENANT'S GENERAL CONTRACTOR IS RESPONSIBLE TO COMPLY WITH ALL LANDLORD / PROPERTY RULES AND REGULATIONS OR AS DIRECTED BY THE ON SITE LANDLORD REPRESENTATIVE.

29. TENANT'S GENERAL CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY ALL EXISTING CONDITIONS AND MUST NOTIFY THE ARCHITECT / OWNER IMMEDIATELY IF SITE CONDITIONS CONFLICT WITH THESE PLANS.

30. APPROVAL OF THE TENANT'S CONSTRUCTION DOCUMENTS AND SPECIFICATIONS DOES NOT RELEASE THE TENANT OR THE TENANT'S GENERAL CONTRACTOR FROM COMPLYING WITH THE LEASE AGREEMENT AND ALL APPLICABLE BUILDING CODES AND GOVERNING REGULATIONS.

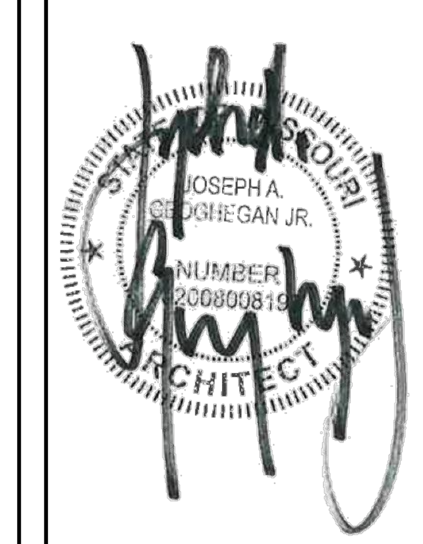
IT IS THE TENANT'S GENERAL CONTRACTOR'S RESPONSIBILITY TO IDENTIFY AND VERIFY EXACT LOCATION OF LEASE LINE WITH LANDLORD REPRESENTATIVE. CONTRACTOR MUST NOTIFY ARCHITECT / OWNER IMMEDIATELY OF ANY DISCREPANCIES.

\- GENERAL NOTES

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISIONS:	DATE:
ISSUE FOR PERMIT, LANDLORD, PRICING	06/18/25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com



carhartt

SUMMIT WOODS CROSSING

1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

SPECIFICATIONS &
GENERAL NOTES

DRAWN BY
SLS
CHECKED BY
SL
JOB NUMBER
25303
SHEET NAME
G-0.1

ACCESSIBILITY NOTES:

TENANT MUST COMPLY WITH TITLE III OF THE AMERICANS WITH DISABILITIES ACT (ADA) AND ALL LOCAL AND STATE CODES.

DOOR HARDWARE: HAND-ACTIVATED DOOR OPENING HARDWARE SHALL BE MOUNTED 2'-10" A.F.F. AND BE OPERABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE.

DOOR EFFORT: MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 8.5 POUNDS FOR EXTERIOR DOORS AND 5 POUNDS FOR INTERIOR DOORS.

SMOOTH DOOR BOTTOM: THE BOTTOM OF ALL DOORS SHALL (EXCEPT SLIDING AUTOMATIC) HAVE A SMOOTH UNINTERRUPTED SURFACE.

REQUIRED DOOR OPENING WIDTH & SIZE: ALL REQUIRED EXIT DOORWAYS SHALL HAVE A MIN. 32" CLEAR OPENING WITH THE DOOR AT 90° TO THE CLOSED POSITION. EVERY REQUIRED ENTRANCE OR PASSAGE DOORWAY SHALL BE OF A SIZE AS TO PERMIT THE INSTALLATION OF A DOOR NOT LESS THAN 3'-0" IN WIDTH & NOT LESS THAN 6'-8" IN HEIGHT.

THRESHOLD HEIGHT: MAXIMUM HEIGHT OF THRESHOLD SHALL BE 1/2" WITH VERTICAL CHANGE AT EDGE OF 1/2 WITH A MAXIMUM LEVEL OF 45 DEGREES CHANGE IN LEVEL BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NO GREATER THEN 1:2.

FAUCET LEVERS: ALL FAUCET CONTROLS FOR SINKS (EXISTING AND/OR NEW) ARE TO BE OPERABLE WITH LEVER TYPE CONTROLS.

PLUMBING PROTECTION: ALL EXPOSED PLUMBING IS TO BE WRAPPED WITH INSULATION.

DOOR OPERABILITY: LATCHING AND LOCKING DOORS THAT ARE HAND ACTIVATED AND WHICH ARE IN A PATH OF TRAVEL SHALL BE OPERABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE, PANIC BARS OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITH OUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE.

CHANGES IN LEVEL: ABRUPT CHANGES IN LEVEL ALONG ACCESSIBLE ROUTES SHALL NOT EXCEED 1/2" IN HEIGHT. WHEN CHANGES IN LEVEL DO OCCUR, THEY SHALL BE BEVELED WITH A SLOPE OF NO GREATER THAN 1:12, EXCEPT THAT LEVEL CHANGES NOT EXCEEDING 1/4 " MAY BE VERTICAL.

DOOR LANDING AREAS: THE FLOOR OR LANDING ON EACH SIDE OF AN ENTRANCE OR PASSAGE DOOR SHALL BE LEVEL AND CLEAR. THE LEVEL AND CLEAR AREA SHOULD BE LEVEL AND CLEAR IN THE LENGTH AND THE DIRECTION OF THE DOOR SWING AT LEAST 60", AND THE LENGTH ON THE OPPOSITE SIDE OF THE DOOR SWING AT 44" AS MEASURED PERPENDICULAR TO THE PLAN OF THE DOOR IN ITS CLOSED POSITION.

AVAILABLE SIDE ACCESS TO DOORS: THE WIDTH OF THE LEVEL AND CLEAR AREA ON THE SIDE TO WHICH THE DOOR SWINGS SHALL EXTEND 24" PAST THE STRIKE EDGE OF THE DOOR FOR EXTERIOR DOORS AND 24" PAST THE STRIKE EDGE FOR INTERIOR DOORS.

TOILET CONTROLS: TOILET FLUSH CONTROLS PROVIDED & INSTALLED AS PART OF THE WORK SHALL BE OPERABLE WITH ONE HAND, & SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. CONTROL FOR THE FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREAS. NO MORE THAN 44" ABOVE THE FLOOR. THE FORCE REQUIRED TO ACTIVATE THE CONTROLS SHALL BE NOT GREATER THAN 5 LBS.

OTHER FLUSH CONTROLS: OTHER FLUSH CONTROLS PROVIDED & INSTALLED AS PART OF THE WORK SHALL BE OPERABLE WITH ONE HAND, & SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. CONTROL FOR THE FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREAS. NO MORE THAN 44" ABOVE THE FLOOR. THE FORCE REQUIRED TO ACTIVATE THE CONTROLS SHALL BE NOT GREATER THAN 5 LBS.

ACCEPTABLE DEVICE/FIXTURE CONTROLS: FAUCET CONTROLS OR OTHER OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND & SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE THE CONTROLS SHALL BE NOT GREATER THAN 5 POUNDS. LEVER OPERATED, PUSH TYPE & ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGNS. SELF CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.

ELECTRICAL & MECHANICAL CONTROLS: THE CENTER OF RECEPTACLE OUTLETS SHALL BE NOT LESS THAN 15" ABOVE THE FINISHED FLOOR OR WORKING PLATFORM. THE CENTER OF THE GRIP OF THE OPERATING HANDLE OF SWITCHES INTENDED TO BE USED BY THE OCCUPANT OF THE ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANCES, HVAC EQUIPMENT SHALL BE NOT LESS THAN 36" OR MORE THAN 48" ABOVE THE FLOOR OR WORKING PLATFORM. THE CENTER OF FIRE ALARM INITIATING DEVICES (BOXES) SHALL BE LOCATED 48" ABOVE THE LEVEL OF THE FLOOR, WORKING PLATFORM, GROUND SURFACE, OR SIDEWALK.

FLOOR FINISHES: FLOOR SHALL BE SLIP RESISTANT.

ENTRY SIGNAGE: ALL DISABLED ACCESSIBLE ENTRANCES SHALL BE IDENTIFIED WITH AT LEAST ONE STANDARD SIGN AND WITH ADDITIONAL DIRECTIONAL SIGNS, AS REQUIRED, VISIBLE FROM APPROACHING PEDESTRIAN WAYS.

TELEPHONES & DRINKING FOUNTAINS: WHEN PROVIDED, AT LEAST ONE TELEPHONE & ONE DRINKING FOUNTAIN IN THE BUILDING SHALL BE ACCESSIBLE & USABLE BY THE PHYSICALLY DISABLED.

- ACCESSIBILITY GENERAL NOTES

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
# AX.X	ELEVATION TAG- SEE DWG. AS NOTED	# AX.X	DETAIL TAG- SEE DWG. AS NOTED	#	RCP KEY TAG- SEE DWG. AS NOTED	XXX SQ. FT. ROOM-NAME2 ROOM-NAME XXX	ROOM NUMBER TAG
# # AX.X # #	INTERIOR ELEVATION TAG- SEE DWG. AS NOTED	#	PARTITION TYPE TAG- SEE WALL TYPE LEGEND	#	ELEVATION KEY TAG- SEE DWG. AS NOTED		ELEVATION BENCHMARK
# AX.X	SECTION TAG- SEE DWG. AS NOTED	#	PLAN KEY TAG- SEE DWG. AS NOTED	#	FINISH KEY TAG- SEE DWG. AS NOTED		REVISION TAG

- SYMBOL LEGEND

DIVISION OF WORK

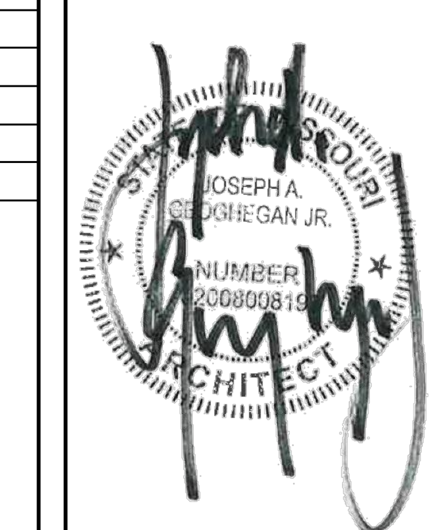
DESCRIPTION	EXIST. TO REMAIN	DOES NOT APPLY	GENERAL CONTRACTOR AND SUB. CONTRACTOR FURNISH	GENERAL CONTRACTOR AND SUB. CONTRACTOR INSTALL	OWNER FURNISH	OWNER INSTALL	LANDLORD FURNISH	LANDLORD INSTALL	REMARKS
DIVISION 01: GENERAL REQUIREMENTS									
AS APPLICABLE			●	●	●	●			
PERMITS			●						
DIVISION 02: SITE WORK									
BARRICADE / FENCE		●							
GRAPHICS (BARRICADE)		●							
DEMOLITION			●	●					
DIVISION 03: CONCRETE									
CHANNEL / CORE SLAB FOR IN FLOOR PLUMBING FIXTURE			●	●					
CHANNEL / CORE SLAB FOR NEW IN FLOOR ELECTRICAL/DATA CONDUIT			●	●					
CHANNEL, LEVEL AND SLOPE CONCRETE SLAB FOR FINISHES AND TRANSITIONS			●	●					
GRINDING AND POLISHING CONCRETE			●	●					
DIVISION 04: MASONRY									
STOREFRONT STONE REPAIR	●		●	●					
MASONRY FINISHES (SEE FINISH LEGEND ON A0.1)	●	●							
DIVISION 05: METALS									
STRUCTURAL FRAMING			●	●					
STRUCTURAL PANEL SYSTEM	●								
STRUCTURAL COLUMNS AND ANGLES	●								
DIVISION 06: WOOD & PLASTICS									
ROUGH CARPENTRY			●	●					
BLOCKING			●	●					
FINISH CARPENTRY			●	●					
DIVISION 07: THERMAL & MOISTURE CONTROL									
CAULK AND SEALANTS			●	●					
INSULATION (SOUND)			●	●					
DIVISION 08: DOORS, WINDOWS & GLASS									
STOREFRONT GLAZING / GLAZING SYSTEM	●								
STOREFRONT SYSTEM	●								
STOREFRONT DOOR AND HARDWARE	●		●	●					
INTERIOR DOORS, FRAMES & HARDWARE	●		●	●					
									SEE DOOR SCHEDULE
DIVISION 09: FINISHES									
PATCH AND REPAIR DEMISING WALL			●	●					VERIFY CONDITION
INTERIOR METAL STUD FRAMING AND DRYWALL			●	●					SEE A1.1
PATCH AND REPAIR EXISTING DRYWALL AS REQUIRED			●	●					PATCH AS REQUIRED
INTERIOR DRYWALL CEILING			●	●					SEE A2.1
FINISHES									SEE FINISH SCHEDULE A0.1
FLOORING TRANSITIONS			●	●					
DIVISION 10: MISCELLANEOUS SPECIALTIES									
COMING SOON GRAPHICS				●	●				SEE F2.1
PERMANENT VINYL GRAPHICS					●	●			SEE F2.1
INTERIOR GRAPHICS / SIGNAGE (NON-VINYL)				●	●				SEE F2.1
EXTERIOR AWNINGS		●							
DIVISION 11 AND 12: FURNITURE, FIXTURE AND EQUIPMENT									
UNLOADING FIXTURES				●					
STORE FIXTURES				●	●				SEE FIXTURE PLAN
GRAPHIC RAILS, BRACKETS & HARDWARE			●	●					
PROPS AND DISPLAY					●	●			
MANAGEMENT OF OWNER SUPPLIED ITEMS				●	●				
DIVISION 13 AND 14: SPECIAL CONSTRUCTION AND CONVEYING SYSTEMS									
NOT APPLICABLE		●							
DIVISION 16: ELECTRICAL									
LOW VOLTAGE CONDUITS	●		●	●					SEE A6.1 FOR NEW WORK
LOW VOLTAGE WIRING	●		●	●					SEE A6.1 FOR NEW WORK
LOW VOLTAGE WIRING - TERMINATIONS AT THE PATCH PANEL / SWITCH	●		●			●			SEE A6.1 FOR NEW WORK
LIGHTING			●	●					USE OWNER REQ'D VENDOR

- DIVISION OF WORK

rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISIONS:	DATE:
ISSUE FOR PERMIT, LANDLORD, PRICING	06/18/25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com



carhartt

SUMMIT WOODS CROSSING

1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

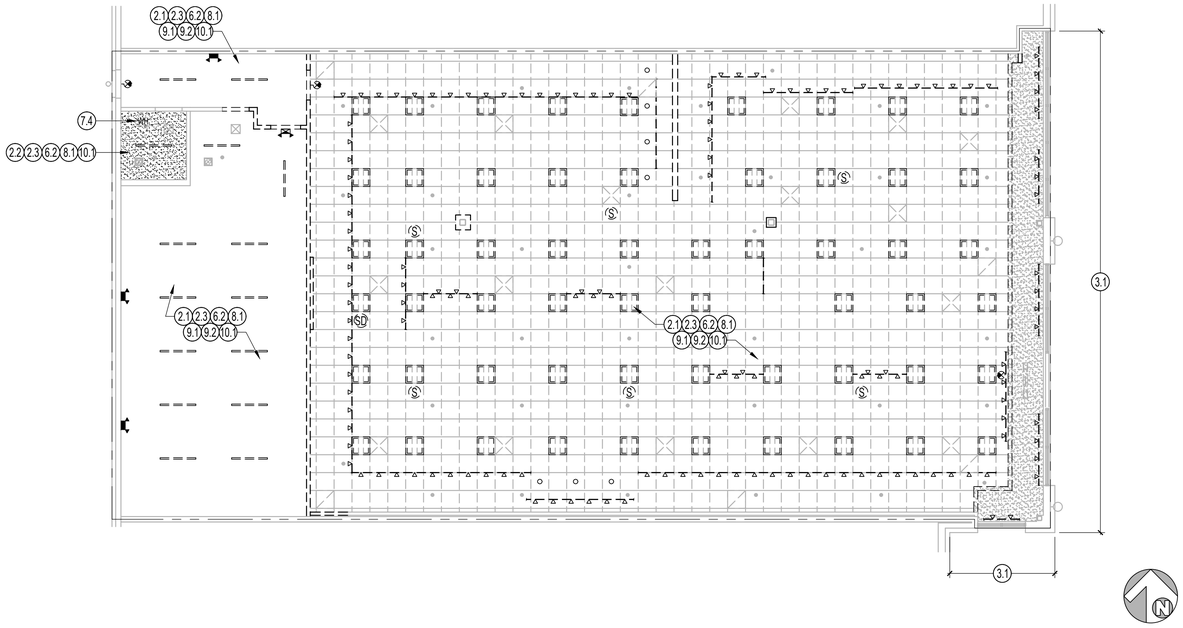
DIVISION OF WORK & SYMBOLS LEGEND

DRAWN BY
SLS

CHECKED BY
SL

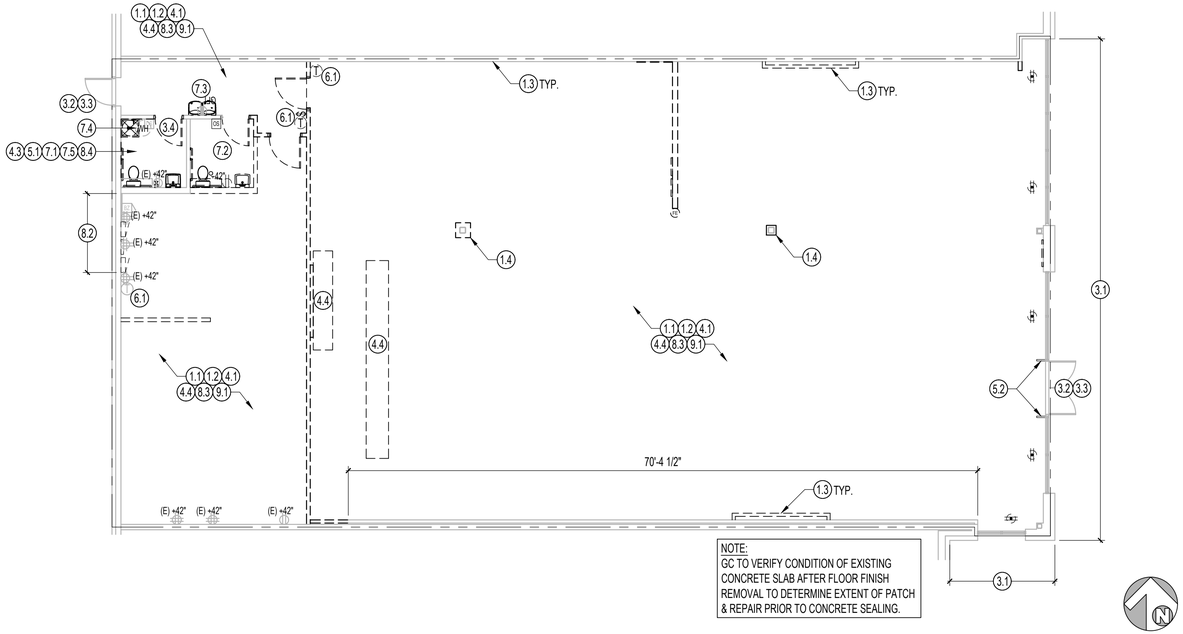
JOB NUMBER
25303

SHEET NAME
G-0.2



2 DEMOLITION CEILING PLAN

SCALE 1/8"=1'-0"



NOTE:
GC TO VERIFY CONDITION OF EXISTING CONCRETE SLAB AFTER FLOOR FINISH REMOVAL TO DETERMINE EXTENT OF PATCH & REPAIR PRIOR TO CONCRETE SEALING.

1 DEMOLITION FLOOR PLAN

SCALE 1/8"=1'-0"

1. DEMOLITION PLANS ARE FOR GENERAL SCOPE. GENERAL CONTRACTOR IS TO VERIFY ALL EXISTING CONDITION AND COORDINATE REQUIRED DEMOLITION WITH TENANT & TENANT'S ARCHITECT.
2. WHEN EXISTING MECHANICAL, ELECTRICAL AND PLUMBING FIXTURES AND/OR EQUIPMENT ARE TO BE REMOVED, THEY ARE TO BE DISCONNECTED AT THE SOURCE, UNLESS NOTED OR DIRECTED OTHERWISE. COORDINATE ALL WORK WITH MECHANICAL, ELECTRICAL AND PLUMBING PLANS.
3. ALL EXISTING DUCTWORK TO REMAIN UNLESS INDICATED ON MECHANICAL PLANS. ALL ABANDONED HVAC EQUIPMENT AND DUCTWORK SHALL BE REMOVED UPON DISCOVERY.
4. ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL, TELEPHONE OUTLETS, AND ALL ASSOCIATED WIRES IN WALLS TO BE REMOVED AND TERMINATE AT THE LAST OUTLET THAT REMAINS IN SERVICE.
5. ALL EMPTY OR ABANDONED CONDUIT AND JUNCTION BOXES TO BE REMOVED.
6. DEMOLITION CONTRACTOR SHALL REMOVE ALL EXISTING FLOOR COVERINGS AND/OR FINISHES, UNDERLAYMENT, GLUE AND ANY OTHER ADHESIVE; AND SHALL PATCH REPAIR CONCRETE SLAB AS REQUIRED TO ACCOMMODATE FINAL FLOOR PREP. REFER TO FINISH PLAN FOR ADDITIONAL INFORMATION.
7. ALL ABANDONED UTILITIES ARE TO BE REMOVED AS DIRECTED BY LANDLORD OR AS SPECIFIED BY MALL MANAGEMENT. COORDINATE WITH MALL MANAGEMENT OR LANDLORD AS NECESSARY.
8. ALL FIREPROOFING AT STRUCTURAL ELEMENTS SHALL REMAIN, UNLESS NOTED OTHERWISE. ANY FIREPROOFING REMOVED AND/OR DAMAGED DURING THE COURSE OF DEMOLITION SHALL BE REPLACED WITH THE SAME MATERIALS AND RATING AS THAT WHICH WAS REMOVED AT THE CONTRACTOR'S EXPENSE.
9. LANDLORD ROOFING CONTRACTOR - IF REQUIRED - IS TO REMOVE EXISTING ROOFING INSULATION AND ROOF DECK AS REQUIRED WHERE NEW ROOF TOP EQUIPMENT IS SPECIFIED. G.C. IS TO VERIFY EXACT LOCATION AND EXTENT IN THE FIELD. REFER TO MECHANICAL DRAWINGS.
10. PRIOR TO SAWCUTTING OF EXISTING SLAB, G.C. IS TO VERIFY WITH THE LANDLORD THE LOCATION OF ANY AND ALL EXISTING UTILITIES RUNNING THROUGH THE SPACE. IF IT IS DETERMINED THAT UTILITIES ARE PRESENT , BUT EXACT LOCATIONS ARE NOT KNOWN, THEN THE G.C. SHOULD XRAY THE SLAB.
11. USE CARE DURING DEMOLITION SO AS NOT TO DISTURB THE REMAINING WALLS, CEILINGS, PIPING AND DUCTWORK. EXISTING DUCTWORK TO BE REVISED BY SHEET METAL CONTRACTOR. GENERAL CONTRACTOR TO PROVIDE TEMPORARY SUPPORT FOR ALL EXISTING DUCTWORK AND SPRINKLER LINES AFFECTED BY THE REMOVAL.
12. TENANT RESERVES THE RIGHT TO RETAIN ITEMS AS DESIRED. THE CONTRACTOR SHALL REMOVE RETAINED ITEMS TO A STORAGE AREA AS DIRECTED BY THE TENANT OR HIS REPRESENTATIVE. ALL OTHER MATERIALS AND DEBRIS SHALL BE REMOVED FROM THE BUILDING SITE IMMEDIATELY.
13. CONTRACTORS ENGAGED SHALL BE PROTECTED BY THE PROPER INSURANCE AND SHALL FILE EVIDENCE THEREOF WITH THE OWNER'S AGENT, INCLUDING HOLD HARMLESS PROTECTION FOR THE TENANT AND ARCHITECT.
14. DEBRIS FROM THE DEMOLITION SHALL BE REMOVED PROMPTLY FROM THE BUILDING BY MEANS APPROVED BY THE LANDLORD.
15. DO NOT REMOVE ANY UTILITIES RUNNING THROUGH THE SPACE TO ADJACENT TENANTS.

B GENERAL DEMOLITION NOTES

1. FRAMING
   - 1.1. REMOVE INTERIOR PARTITIONS AND INTEGRATED DOORS, FIXTURES, FINISHES AND POWER (SHOWN DASHED) NOTIFY ARCHITECT IMMEDIATELY IF DEMOLITION EXPOSES ANY UNFORESEEN CONDITIONS.
   - 1.2. EXISTING WALLS TO REMAIN (SHOWN SOLID GREYSCALE). SEE SHEET A1.1
   - 1.3. AT DEMISING WALLS IN SALES AREA, G.C. SHALL REMOVE EXISTING BUILD-OUTS WHILE MAINTAINING INTEGRITY OF RATED DEMISING WALLS. G.C. SHALL CONTACT ARCHITECT IF GYP. BD. IS MISSING ON DEMISING WALLS.
   - 1.4. REMOVE BUILD-OUTS AT STRUCTURAL COLUMNS.

2. CEILINGS
   - 2.1. REMOVE ALL CEILINGS, SOFFITS, FINISHES & LIGHT FIXTURES THROUGHOUT, UNLESS OTHERWISE NOTED.
   - 2.2. EXISTING GYP. BD. CLNG TO REMAIN, TOILET ROOM. REMOVE ALL LIGHT FIXTURES & ABANDONED EQUIPMENT. PREPARE SURFACE FOR NEW FINISH.
   - 2.3. REMOVE ALL EXISTING EXIT & EMERGENCY LIGHTS.

3. DOORS / GLAZING
   - 3.1. EXISTING STOREFRONT SYSTEM TO REMAIN
   - 3.2. EXISTING DOOR TO REMAIN. SEE A-0.1 FOR NEW HARDWARE.
   - 3.3. REMOVE ALL EXISTING WEATHERSTRIPPING AND PREPARE DOOR SURFACE FOR NEW.
   - 3.4. REMOVE EXISTING DOOR & FRAME. PREPARE OPENING FOR NEW. SEE SHEET A-0.1

4. FIXTURES / FINISHES
   - 4.1. REMOVE ALL FINISHES, WALL BASE & TRIM THROUGHOUT INTERIOR (TYP. U.N.O). G.C. SHALL ENSURE INTEGRITY OF EXISTING GYP. BD. BENEATH. NOTIFY ARCHITECT IMMEDIATELY IF DEMOLITION EXPOSES ANY UNFORESEEN CONDITIONS.
   - 4.2. REMOVE ALL FLOORING, THROUGHOUT
   - 4.3. WITHIN THIS TOILET ROOM TO REMAIN, G.C. SHALL REMOVE ALL FINISHES.
   - 4.4. REMOVE FIXTURES THROUGHOUT SALES.

5. EQUIPMENT
   - 5.1. ALL TOILET ROOM ACCESSORIES TO BE REMOVED UNLESS OTHERWISE NOTED.
   - 5.2. REMOVE EXISTING SECURITY SYSTEM

6. MECHANICAL
   - 6.1. REMOVE / RELOCATE THERMOSTAT / TEMPERATURE SENSOR - SEE MECHANICAL SHEETS
   - 6.2. EXISTING MECHANICAL SYSTEM SHALL BE MODIFIED AS REQUIRED TO ACCOMMODATE NEW CEILING CONDITIONS. REMOVE ALL HVAC COMPONENTS NOT BEING RE-USED. (SEE MECHANICAL PLANS).

7. PLUMBING
   - 7.1. THIS TOILET ROOM ONLY - EXISTING TOILET, SINK & MOP SINK TO BE REMOVED. ASSOCIATED PLUMBING TO REMAIN AND RE-USED WITH NEW FIXTURES.
   - 7.2. THIS TOILET ROOM ONLY - EXISTING TOILET, SINK, FLOOR DRAIN. MOP SINK AND ALL ASSOCIATED PLUMBING TO BE REMOVED COMPLETELY.
   - 7.3. EXISTING DRINKING FOUNTAIN TO BE REMOVED. EXISTING WATER LINES / ELECTRICAL TO BE RE-USED IF FEASIBLE FOR NEW WATER HEATER. SEE PLUMBING DRAWINGS. SEE PLUMBING DRAWINGS.
   - 7.4. EXISTING WATER HEATER TO BE REMOVED. EXISTING WATER LINES / ELECTRICAL TO BE RE-USED IF FEASIBLE FOR NEW WATER HEATER. SEE PLUMBING DRAWINGS.
   - 7.5. EXISTING FLOOR DRAIN TO REMAIN.

8. ELECTRICAL
   - 8.1. REMOVE ALL LIGHTING THROUGHOUT. SEE SHEET A2.1
   - 8.2. EXISTING ELECTRICAL PANELS TO BE REMOVED. SEE ELECTRICAL SHEETS
   - 8.3. REMOVE EXISTING OUTLETS THROUGHOUT, INCLUDING ALL FLOOR OUTLETS UNLESS OTHERWISE NOTED. REMOVE WIRE TO SOURCE.
   - 8.4. EXISTING OUTLETS / OCCUPANCY SENSOR TO REMAIN THIS ROOM

9. LOW VOLTAGE COMMUNICATION SYSTEM
   - 9.1. ALL EXISTING ELECTRIC, VOICE AND DATA COMPONENTS ARE TO BE REMOVED, UNLESS NOTED OTHERWISE. SEE ELECTRICAL SHEETS. DO NOT REMOVE UTILITY PROVIDER DEVICES OR CABLING ON THE PRIMARY SIDE OF UTILITY PROVIDER DEVICES.
   - 9.2. REMOVE EXISTING SPEAKERS, CAMERAS AND SECURITY DEVICES THROUGHOUT

10. FIRE SUPPRESSION / SPRINKLER SYSTEM
    - 10.1. EXISTING SPRINKLER / HEAD LOCATION TO REMAIN IN PROPOSED 'OPEN TO DECK' & EXISTING GYP. CEILING AREAS. INSPECT AND ENSURE PROPER WORKING ORDER (TYP.) .C. SHALL PROTECT DURING CONSTRUCTION.

A KEY NOTES

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISIONS:	DATE:
ISSUE FOR PERMIT, LANDLORD, PRICING	06/18/25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
JOSEPH A. LONERGAN JR.
NUMBER A-2009008156
ARCHITECT

carhartt

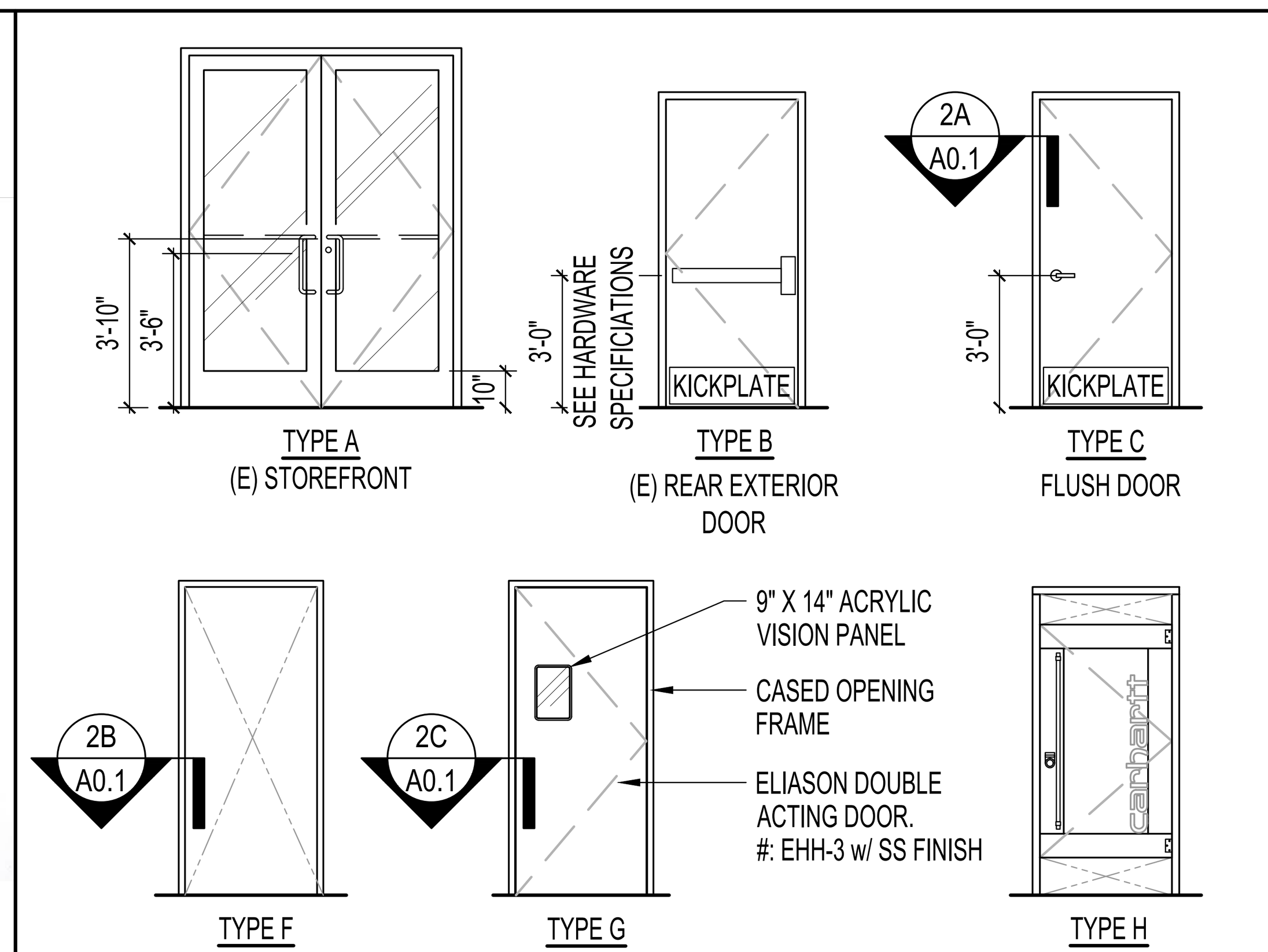
SUMMIT WOODS CROSSING

1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

DEMOLITION PLANS

DRAWN BY	SLS
CHECKED BY	SL
JOB NUMBER	25303
SHEET NAME	D1.1

9 MATERIAL BOARD



8 DOOR TYPES

1. NO SUBSTITUTIONS ON DOOR HARDWARE
2. MOUNT HARDWARE UNITS AT HEIGHTS INDICATED IN THE FOLLOWING PUBLICATIONS, EXCEPT AS SPECIFICALLY INDICATED AND/OR REQUIRED TO COMPLY WITH GOVERNING REGULATIONS INCLUDING ADA.
   A. "RECOMMENDED LOCATIONS FOR BUILDERS HARDWARE FOR STANDARD STEEL DOORS & FRAMES" BY DOOR & HARDWARE INSTITUTE
   B. "HARDWARE LOCATIONS FOR WOOD FLUSH DOORS" BY NWWDA INDUSTRY STANDARD INSTITUTE
   C. WHEN FLUSH BOLTS ARE PROVIDED, THE UPPER BOLT MECHANISM TO BE NO HIGHER THAT 6'-0" AFF
3. THE BOTTOM 10" OF ALL DOORS EXCEPT AUTOMATIC AND SLIDING SHALL HAVE SMOOTH UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION. WHERE NARROW FRAME DOORS ARE USED, A 10' H. SMOOTH PANEL SHALL BE INSTALLED ON THE PUSH SIDE OF THE DOOR, WHICH WILL ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION
4. ALL NEW AND EXISTING PASSAGE, LOCKSETS, ECT. TO HAVE LEVER HANDLES. REPLACE EXISTING HANDLES AS REQUIRED
5. DOOR HARDWARE CONSTRUCTION CORES TO REMAIN. OWNER TO REMOVE AND INSTALL FINAL CORES
6. EXIT DOORS SHALL BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT
7. THE FORCE REQUIRED TO OPEN A DOOR IN THE REQUIRED MEANS OF EGRESS SHALL BE IN ACCORDANCE WITH SECTION 7.2.1.4.5, NFPA 101 2006 EDITION
8. THE MAXIMUM FORCE FOR PUSHING OR PULLING ALL INTERIOR DOORS SHALL NOT EXCEED 5 POUNDS
9. DOOR HARDWARE MUST BE ADA COMPLIANT
10. ALL RATED DOORS SHALL HAVE SMOKE AND DRAFT CONTROL WITH GASKETS TO SEAL.

5 DOOR GENERAL NOTES

1. ALL FINISH MATERIALS TO BE CLASS 1: = FLAME SPREAD INDEX 0-25: SMOKE-DEVELOPED INDEX 200
2. G.C. SHALL VERIFY THAT THE MAXIMUM THRESHOLD HEIGHT DOES NOT EXCEED 1/2"
3. NEW WEATHER-STRIPPING TO BE INSTALLED ON ALL EXISTING EXTERIOR DOORS AS REQUIRED.

3 FINISH GENERAL NOTES

OPENING					DOOR					FRAME			KEY	REMARKS
MARK	STATUS	LOCATION	SIZE	TYPE	STATUS	HARDWARE	SIZE	MATERIAL	FINISH	STATUS	MATERIAL	FINISH		
101	EXISTING	ENTRY	6'-0" X 7'-0"	A	EXISTING	4	(2) 3'-0" X 7'-0"	ALUM. / GLASS	BLACK	EXISTING	ALUM.	BLACK	AA	1
102	NEW	FITTING RM AREA	3'-0" X 7'-0"	F	N/A	N/A	N/A	N/A	N/A	NEW	H.M.	P-1	-	
103	NEW	FITTING ROOM	3'-0" X 7'-0"	H	NEW	6	3'-0" X 5'-4" X 1 3/4"	WOOD/ LAMINATE	LAM	NEW	STEEL	N/A	AF	2
104	NEW	FITTING ROOM	3'-0" X 7'-0"	H	NEW	6	3'-0" X 5'-4" X 1 3/4"	WOOD/ LAMINATE	LAM	NEW	STEEL	N/A	AF	2
105	NEW	HALLWAY	3'-0" X 7'-0"	G	N/A	N/A	3'-0" X 7'-0" X 1 3/4"	WOOD	S.S.	NEW	H.M.	P-1	-	5
106	NEW	STOCKROOM	3'-0" X 7'-0"	C	NEW	2	3'-0" X 7'-0" X 1 3/4"	S.C.WOOD	P-1	NEW	H.M.	P-1	AF	
107	NEW	OFFICE	3'-0" X 7'-0"	C	NEW	2	3-0" X 7'-0" X 1 3/4"	S.C. WOOD	P-1	NEW	H.M.	P-1	AA	
108	EXISTING	TOILET ROOM	3'-0" X 7'-0"	C	NEW	1	3'-0" X 7'-0" X 1 3/4"	S.C.WOOD	P-1	NEW	H.M.	P-1	AF	4
109	EXISTING	REAR EXIT	3'-0" X 7'-0"	B	EXISTING	3	3'-0" X 7'-0"	H.M.	NOTE 3	EXISTING	H.M.	NOTE 3	AA	1, 3, 6

REMARK NOTES:
1. EXISTING DOOR & FRAME WITH NEW DOOR HARDWARE. SEE HARDWARE SCHEDULE.
2. FITTING ROOM DOORS TO BE OWNER PROVIDED, G.C. INSTALLED. REFER TO APPROVED VENDOR SHOP DRAWINGS FOR INSTALLATION. HARDWARE TO BE INSTALLED BY GC.
3. INTERIOR TO BE PAINTED P-1, EXTERIOR TO BE PAINT TO MATCH PROPERTY SPEC. INSTALL SUITE # ON EXTERIOR PER LANDLORD REQUIREMENTS.
4. UNDERCUT DOOR 1" FOR RETURN AIR PATH
5. SALES SIDE OF FRAME TO BE 'P-8', STOCK SIDE TO BE 'P-1'
6. PATCH HOLES / REPAIR DOOR

7 DOOR SCHEDULE

(108) SET 1 - TOILET ROOM :
HINGES: STANLEY # FBB199, 1 1/2 PR. PER DOOR 4 1/2" X 4 1/2" FINISH: 626 SATIN CHROME
LOCKSET: SCHLAGE ND73B RHO 626
DOOR STOPS: TRIMCO 1270CV (PULL SIDE WALL ONLY)
KICK PLATE: IVES 8"X34" STAINLESS STEEL, MFR# 8400 S 32D 8X24 (PUSH SIDE ONLY)
SILENCERS
CLOSER : LCN 4041 SUPER SMOOTHIE SURFACE CLOSER

(106) (107) SET 2 - OFFICE / STOCKROOM
HINGES: STANLEY # FBB199, 1 1/2 PR. PER DOOR 4 1/2" X 4 1/2" FINISH: STAINLESS STEEL
LOCKSET: SCHLAGE ND70B RHO 626
DOOR STOPS: TRIMCO 1270CV (PULL SIDE WALL ONLY)
KICK PLATE: IVES 8"X34" STAINLESS STEEL, MFR# 8400 S 32D 8X24 (PUSH SIDE ONLY)
SILENCERS
CLOSER : LCN 4041 SUPER SMOOTHIE SURFACE CLOSER
KICK PLATE: IVES 8"X34" STAINLESS STEEL, MFR# 8400 S 32D 8X24 (PUSH SIDE ONLY)

(109) SET 3 - REAR EXIT:
HARDWARE: 'DETEX' SELF CONTAINED DOOR ALARM W/ BATTERY #ECL-230D W/ STANDARD HARDWARE & IC7/IC7R. ADD EXTERIOR DOOR PULL
CYLINDER: TO ACCEPT SMALL FORMAT INTERCHANGEABLE CORE.
HINGES: EXISTING
DOOR STOPS: EXISTING
KICK PLATE: EXISTING
SILENCERS: EXISTING
CLOSER: EXISTING
PEEP HOLES: EXISTING
NOTE: ALL WEATHERSTRIPPING, THRESHOLD & SWEEP TO BE REPLACED

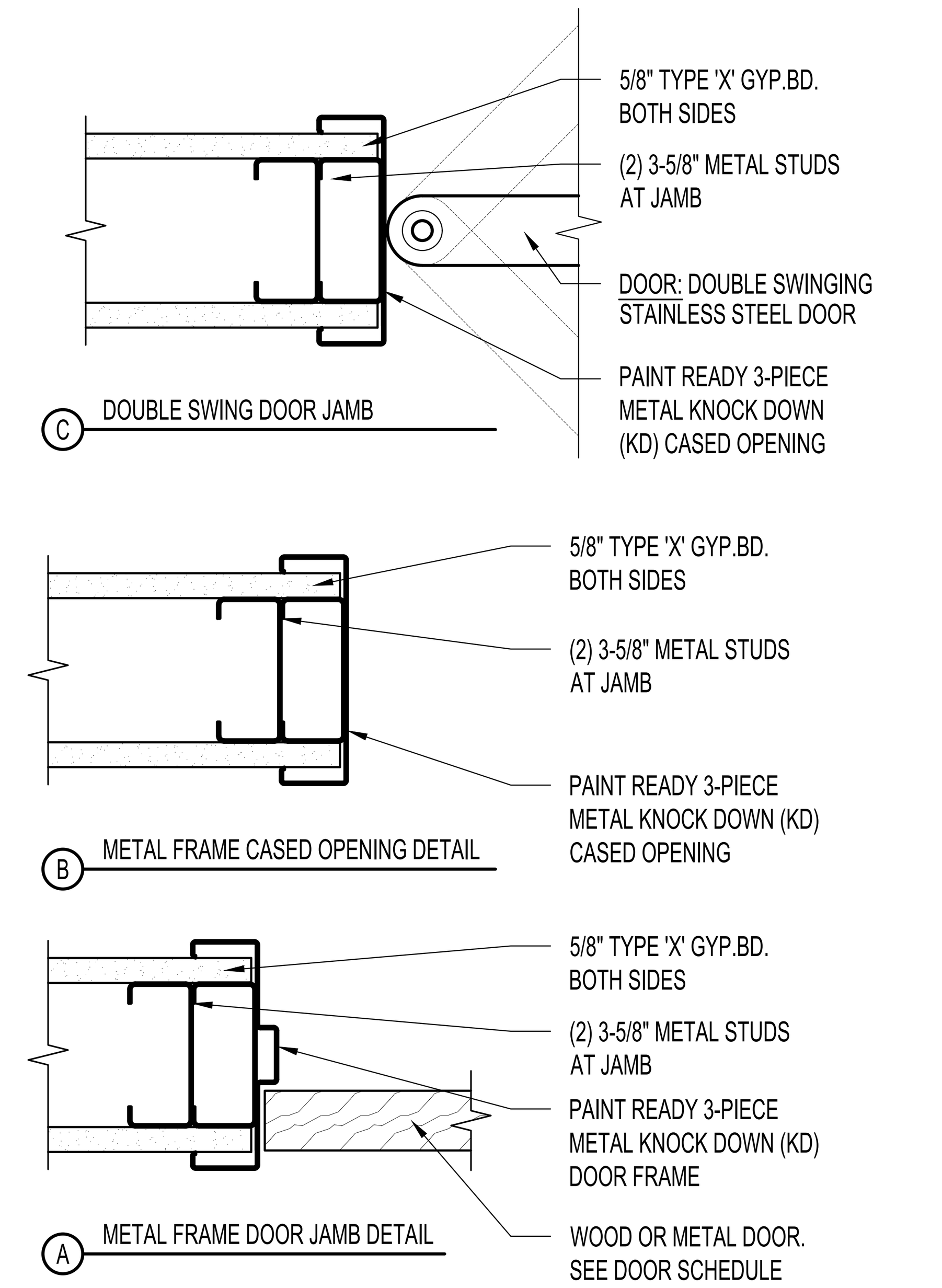
(101) SET 4 - ENTRY:
PULLS : EXISTING
HINGES : EXISTING
LOCKSET : REPLACE DEADLOCK LEVER WITH NEW (BLACK ANODIZED)
ADDITIONAL LOCKING:
STRIKES : EXISTING
CYLINDERS : REPLACE CYLINDER WITH NEW TO ACCEPT SMALL FORMAT INTERCHANGEABLE CYLINDER (BLACK ANODIZED)
CLOSER : EXISTING
ALUMINUM THRESHOLD : 'BARRIER FREE WITH WEATHER STRIPPING & BOTTOM SWEEP
NOTE: ALL WEATHERSTRIPPING, THRESHOLD & SWEEP TO BE REPLACED

SET 6 - FITTING ROOM *ALL HARDWARE IN FITTING ROOMS FURNISHED BY OWNER*
(103) (104) HINGES: SCHLAGE #S3P1011FRP622. 3 1/2" X 3 1/2" PLAIN BEARING 5/8" RADIUS. FINISH: 622 MATTE BLACK
DOOR PULLS: ROCKWOOD ASSA ABLOY. RM4160, BLACK POWDER COAT (BPC); TYPE 5 MOUNTING DETAIL (ONE ON EACH SIDE)
LOCKSET: SCHLAGE: B560B 622. IS-OCC, OS-OCC
DOOR STOPS: BALDWIN 4015.190; 4015 CONVEX WALL BUMPER; 190 SATIN BLACK (PULL SIDE WALL ONLY)
STRIKEPLATE:
SILENCER: ADD CONTINUOUS FELT/RUBBER STRIP IN BLACK FINISH. SPEC. T.B.D.

NOTE:
OWNER'S VENDOR WILL PROVIDE THE FOLLOWING KEYS:
AA : 7
AF : 12
AA (KNOX BOX) : 1

NOTE:
OWNER'S VENDOR WILL PROVIDE FINAL CORES FOR ALL LOCKING DOORS (IN THE FINAL DAYS OF CONSTRUCTION)

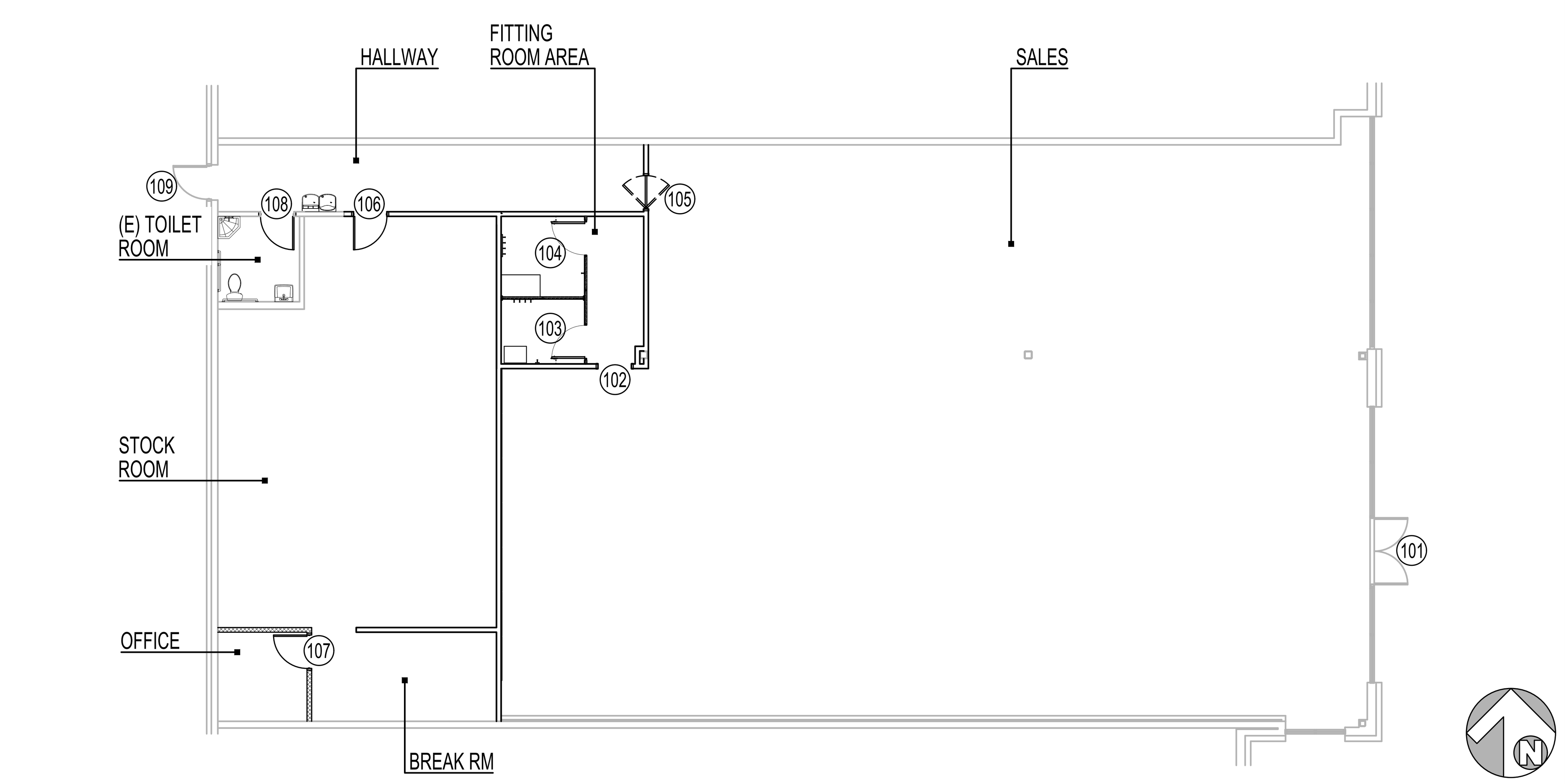
6 HARDWARE SCHEDULE



2 DOOR DETAILS — SCALE 3"=1'-0"

		FURN. & INST. BY G.C.	FURN. BY OWNER / INST. BY GC	EXISTING	MILLWORK	NOT USED
PAINT						
NOTE: ALL WALLS SHALL BE EGGSHELL, ALL DRYWALL CEILINGS SHALL BE FLAT, DOOR/JAMBS TO BE SATIN. BEFORE PURCHASE PROVIDE DRAW-DOWN TO ARCHITECT FOR APPROVAL						
P-1	PPG PAINTS ; PPG1008-2_STORM'S COMING	●				
P-2	PPG PAINTS ; PPG1001-6_KNIGHT'S ARMOR NOTE: DRY FALL *CANNOT* BE USED ON WALLS.	●				
P-5	BENJAMIN MOORE - OC-152 SUPER WHITE - FLAT	●				
P-8	SHERWIN WILLIAMS SW6991 (BLACK MAGIC)	●				
P-9	BENJAMIN MOORE MARDI GRAS GOLD. 2019-10	●				
WALL BASE						
B-1	1X4 WOOD BASE (3/4" X 3 1/2") - STAINED WITH VARATHANE PREMIUM WOOD STAIN "EARLY AMERICAN" WITH VARATHANE ULTIMATE POLYURETHANE WATER BASED TOP COAT "CRYSTAL CLEAR SATIN"	●				
B-2	FLEXCO TRADITIONAL 4" VINYL BASE; COLOR 34 BARLEY (6" IN TOILET ROOMS)	●				
B-4	1 X 4 (3/4" X 3 1/2") WOOD BASE- PAINT P-8 IN THE FIELD	●				
WALLCOVERINGS						
WC-1	PIONEER MILLWORKS - AMERICAN PRAIRIE REDWOOD - 4.5"W X RANDOM LENGTHS T&G, ONE FACE UNTOUCHED W/ WIREBRUSH LIGHT UNFINISHED. INSTALL OVER 3/4" PLYWOOD THAT HAS BEEN PAINTED P-8 CONTACT: JESSICA SHELDON 585.455.2711 JESSICA@PIONEERMILLWORKS.COM					●
WC-2	CDX PLYWOOD FROM FLOOR TO 48" A.F.F. PAINT TO MATCH WALLS ABOVE. SMOOTH EDGES (NO TRIMS REQUIRED)	●				
WC-3	MARLITE FIBER COMPOSITION PANEL; P-1100 WHITE	●				
WC-5	BODAQ - NS602 BLACK COPPER PATINA FILM. CONTACT: TOM BRASSELL 773.480.7031 TBRASSELL@GMAIL.COM PRODUCT IS SELF ADHESIVE. USE PRODUCT PRIMER. INSTALL PER MANUFACTURER INSTRUCTIONS.	●				
CORNER GUARDS						
CG-1	STEELWORKS 1 1/2"W X 1 1/2" D. X 48" L. PLAIN HOT ROLLED STEEL SOLID ANGLE. AVAILABLE AT LOWES.COM (USED AT SALES / FITTING ROOM AREAS ONLY) EASE EDGES	●				
CG-2	.36 X 1" X 48" SILVER METAL CORNER GUARD (OR EQUAL) ATTACH TO WALL WITH SCREWS & ADHESIVE. EASE EDGES	●				
FLOORING						
F-1	POLISHED CONCRETE - SEMI-GLOSS SHEET - 400 GRIT	●				
F-2	SEAL-KRETE - CLEAR-SEAL CONCRETE & GARAGE FLOOR SEALER OR EQUAL - SATIN FINISH	●				
F-4	ARMSTRONG IMPERIAL TEXTURE - COOL WHITE - 12" X 12" VCT	●				
F-5	MILLIKEN MOARAINE EXPLORER CARPET TILE - EXR231-133-6 MEASURE W/ GOLD (19.7" X 39.4" X 0.310"). CARPET TILES TO BE RANDOMIZED PRIOR TO INSTALL AND LAID OUT IN 1/3 STAGGERED RUNNING BOND	●				
ACOUSTICAL TILE						
ACT-1	TILE: 'SECOND LOOK' 24" DUNE TEGULAR EDGE 24" X 48" X 5/8" TILE COLOR: WHITE GRID: 15/16" GRID COLOR: WHITE OR APPROVED EQUAL. USE HEAVY DUTY MAIN TEE & CONNECTORS	●				

4 FINISH SCHEDULE



1 DOOR KEY PLAN — SCALE N.T.S.

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISIONS:	DATE:
ISSUE FOR PERMIT, LANDLORD, PRICING	06/18/25

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

SCHEDULES

DRAWN BY: SLS
CHECKED BY: SL
JOB NUMBER: 25303
SHEET NAME: A-0.1

1. ALL WOOD FURRING AND BLOCKING SHALL BE FIRE-RETARDENT TREATED - TYPICAL.
2. ALL DIMENSIONS TO BE TO FINISHED SURFACES UNLESS NOTED OTHERWISE. GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD AND COORDINATE DIMENSIONS WITH VARIOUS TRADES BEFORE FABRICATION OR PURCHASE OF FIXTURES, MILLWORK, COUNTERS, ETC.
3. REQUIREMENTS AND DESIGN DATA SHALL BE FOLLOWED ENTIRELY, REGARDLESS OF WHETHER THEY ARE GIVEN BY BOTH THE SPECIFICATIONS AND DRAWINGS OR BY EITHER ONE ONLY.
4. SHOP DRAWINGS PREPARED BY SUPPLIERS AND SUBCONTRACTORS SHALL BE REVIEWED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL TO ARCHITECT.
5. CONTRACTORS TO ASSUME FULL RESPONSIBILITY, UNRELIEVED BY REVIEW OF SHOP DRAWINGS AND BY SUPERVISION OR PERIODIC OBSERVATION OF CONSTRUCTION, FOR THE FOLLOWING:
   5.1. COMPLIANCE WITH CONTRACT DOCUMENTS.
   5.2. DIMENSIONS TO BE CONFIRMED AND CORRELATED ON THE JOB SITE AND BETWEEN INDIVIDUAL DRAWINGS OR SETS OF DRAWINGS.
   5.3. COORDINATION OF THE VARIOUS TRADES.
   5.4. SAFE CONDITIONS AT THE JOB SITE.
6. UNLESS OTHERWISE NOTED, ALL DETAILS, SECTIONS AND NOTES ON DRAWINGS ARE INTENDED TO BE TYPICAL FOR SIMILAR SITUATIONS ELSEWHERE.
7. GC TO PROVIDE FIRE EXTINGUISHERS TO MEET LOCAL CODE REQUIREMENTS.

A GENERAL NOTES

- LIGHT METAL STRUCTURAL PARTITION BOTTOM TRACKS MAY BE FASTENED TO CONCRETE SLAB USING LOW-VELOCITY POWER DRIVEN PINS FOLLOWING THE MANUFACTURER'S INSTALLATION RECOMMENDATIONS UNLESS NOTED OTHERWISE. THE FASTENING SYSTEM USED SHALL BE AS MANUFACTURED BY HILTI (ICBO REPORT NO. ESR-2269) OR APPROVED EQUAL. PINS SHALL HAVE A MINIMUM SHANK DIAMETER OF 0.157", A MINIMUM LENGTH OF 1-1/8", AND SHALL BE SPACED AT 16" O.C. MAXIMUM.
- THE TOP TRACK OF EACH FULL HEIGHT WALL SHALL BE ATTACHED DIRECTLY TO THE FRAMING WHEN THE WALL IS PERPENDICULAR TO FRAMING AND TO BLOCKING BETWEEN FRAMING @ 4'-0" O.C. WHEN THE WALL IS PARALLEL TO THE FRAMING.
- PROVIDE MIN. 2'-0" HIGH CEMENT BOARD @ FLOOR BEHIND ALL FIBERGLASS REINFORCED PANELS.
- PROVIDE CEMENT BOARD UNDER ALL WALL TILE WHERE APPLICABLE.
- ALL BRACING AND SUSPENDED COMPONENTS ARE FROM STRUCTURE (NOT FROM DECK). DO NOT PENETRATE THROUGH DECK ABOVE.
- GYPSUM BOARD SHALL BE ATTACHED WITH #6 SCREWS MINIMUM UNLESS NOTED OTHERWISE.

B PARTITION NOTES

NOTE:
A. COORDINATE WALL TYPE WITH SECTIONS AND PLANS. NOTIFY ARCHITECT OF DISCREPANCIES PRIOR TO ISSUING BIDS.
B. 5/8" WATER RESISTANT GYP. BD. IS TO BE USED IN ALL AREAS WHERE EXPOSED TO MOISTURE OR WATER SUCH AS TOILET ROOM, MOP SINKS, ETC.

NON-BEARING METAL STUD SCHEDULE

STUD SIZE*	SPACING	MAX. HEIGHT (W/ FLEXIBLE FINISH)
362S162-18	16" O.C.	13'-6"
362S162-33	16" O.C.	21'-1"
362S162-43	12" O.C.	25'-0"
600S162-33	16" O.C.	30'-0"

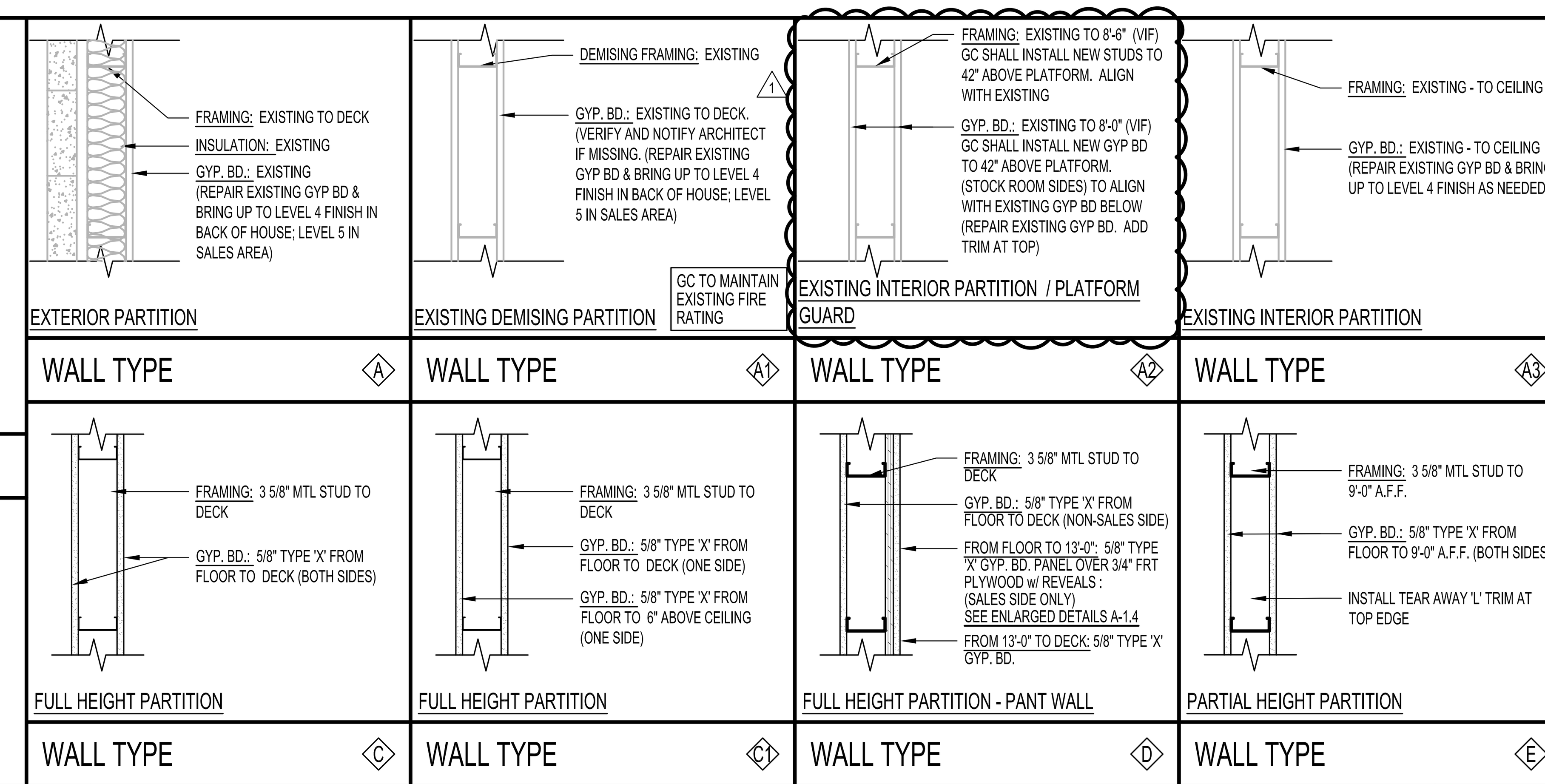
*STUDS BY ANGELES METAL SYSTEMS, ICBO NO.1715 OR APPROVED EQUAL

C STUD SCHEDULE

NOTE:
G.C. TO CALL CARHARTT PM DURING FRAMING STAGE TO DISCUSS ANY FIELD DIMENSIONS DISCREPANCIES PRIOR TO FRAMING. ESPECIALLY OVERALL SALES FLOOR AND STOCKROOM DIMENSIONS. FAILURE TO DO SO CAN RESULT IN G.C. RE-FRAMING AT THEIR EXPENSE

NOTE:
PRIOR TO FRAMING G.C. SHALL VERIFY NEW WALLS DO NOT CONFLICT WITH EXISTING HVAC DROPS & PIPES. FAILURE TO DO SO CAN RESULT IN G.C. RE-FRAMING AT THEIR EXPENSE

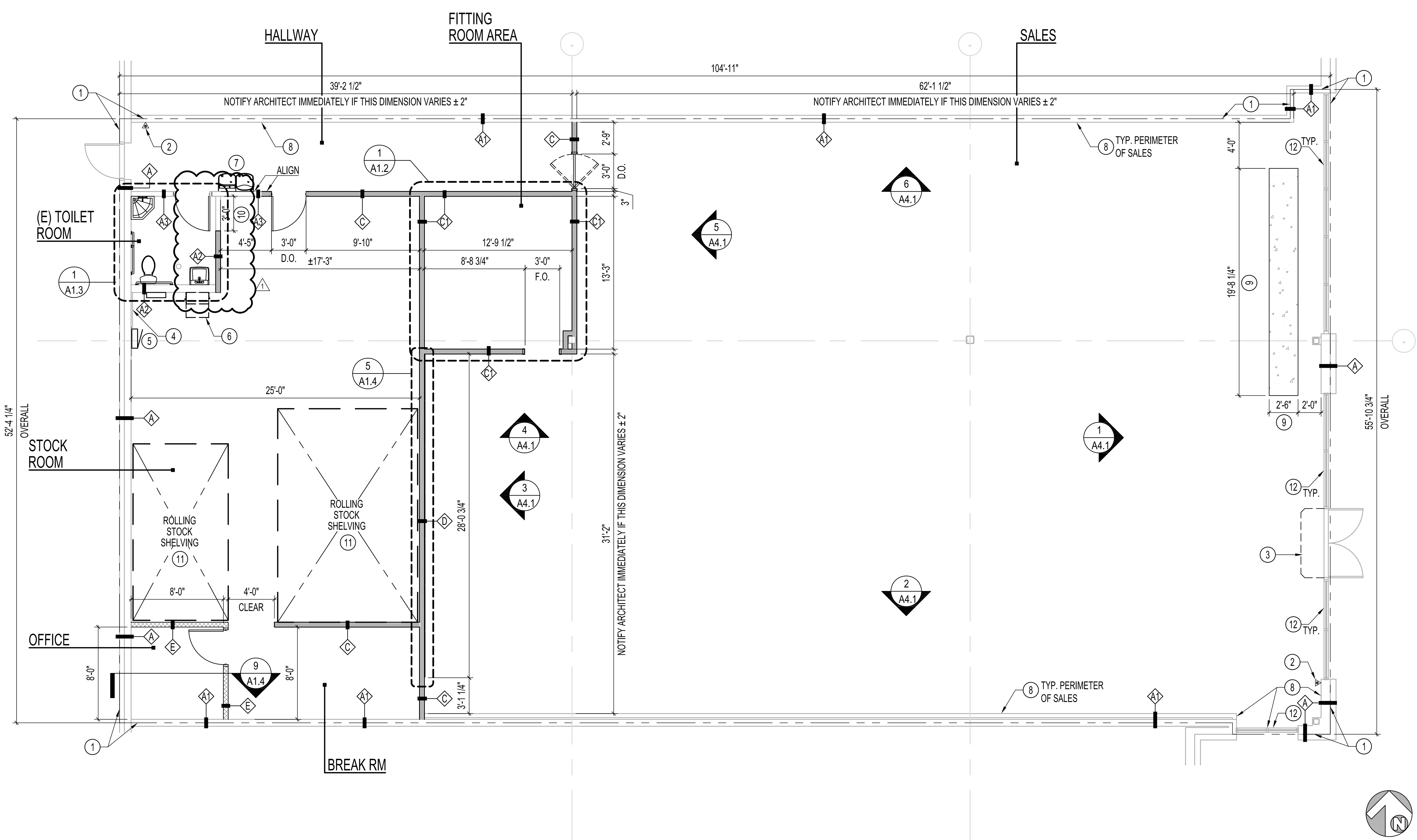
NOTE:
ALL EXISTING WALLS IN SALES AREA TO BE BROUGHT UP TO LEVEL 5 FINISH.



3 WALL TYPES — SCALE 1"=1'-0"

1. TENANT LEASE LINE
2. FIRE EXTINGUISHER - COORDINATE LOCATIONS WITH FIRE MARSHAL
3. SAWCUT GROOVE IN CONCRETE SLAB PER DETAIL 8/A1.4
4. EXISTING 3/4" 'CDX' F.T. PLYWOOD TO REMAIN
5. ELECTRICAL PANELS - SEE ELECTRICAL SHEETS. INSTALL 3/4" 'CDX' F.T. PLYWOOD IF NOT EXISTING
6. LOCATION OF NEW DATA RACK.
7. NEW WATER FOUNTAIN / BOTTLE FILLER
8. NOTIFY ARCHITECT IMMEDIATELY IF EXISTING STUDS OR GYP. BD. DOES NOT EXTEND TO DECK.
9. G.C. TO PROVIDE CONCRETE FOR BASE OF WINDOW FIXTURE. FORMWORK IS PROVIDED WITH FIXTURE. EACH BASE IS 30" W. X 6" H.
10. G.C. SHALL PROVIDE ACCESS TO WATER HEATER ON PLATFORM ABOVE MOP SINK.
11. G.C. TO ENSURE THAT CONCRETE IS LEVEL TO WITHIN 1/8" VARIATIONS AT AREAS UNDER ROLLING SHELVES. VERIFY EXACT LOCATIONS W/ FIXTURE PLAN. ROLLING SHELVES EQUIPMENT IS 2,000-3,000 PSI. VERIFY EXACT CONCRETE LEVELING REQUIREMENTS W/ ARCHITECT & SHELVING VENDOR PRIOR TO CONSTRUCTION.
12. G.C. SHALL INSTALL NEW SEALANT AT BOTTOM OF GLAZING AFTER TILE IS REMOVED.

- KEY NOTES



1 CONSTRUCTION PLAN / FINISH PLAN — SCALE 3/16" = 1'-0"

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISIONS:	DATE:
ISSUE FOR PERMIT, LANDLORD, PRICING	06/18/25
REV 1 - PERMIT REVISIONS	07/21/25

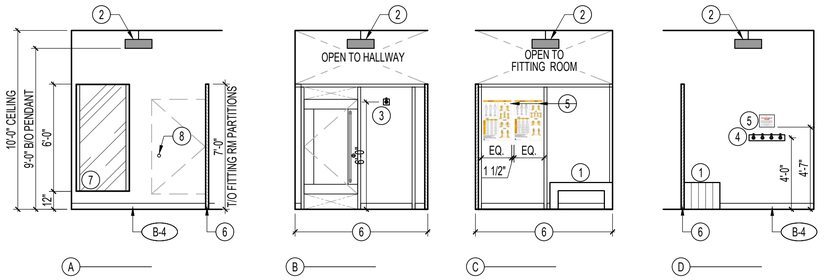
robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

CONSTRUCTION PLAN, SCHEDULE & NOTES

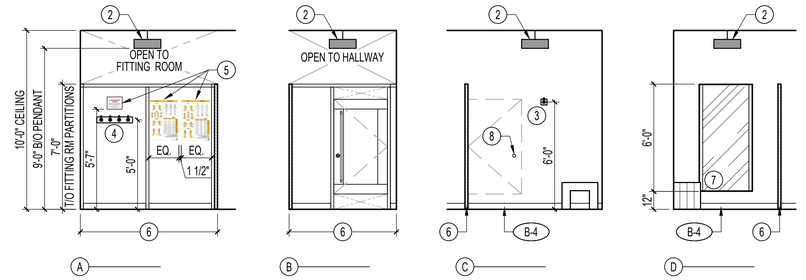
DRAWN BY: SLS
CHECKED BY: SL
JOB NUMBER: 25303
SHEET NAME: A-1.1

PROVIDE BLOCKING BEHIND WALL MOUNTED ACCESSORIES (TYP.)

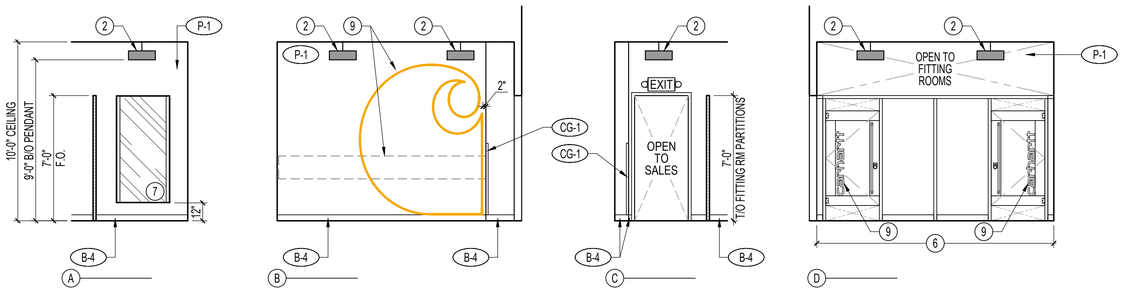


3 ELEVATIONS - ADA FITTING ROOM — SCALE 1/4"=1'-0"

PROVIDE BLOCKING BEHIND WALL MOUNTED ACCESSORIES (TYP.)



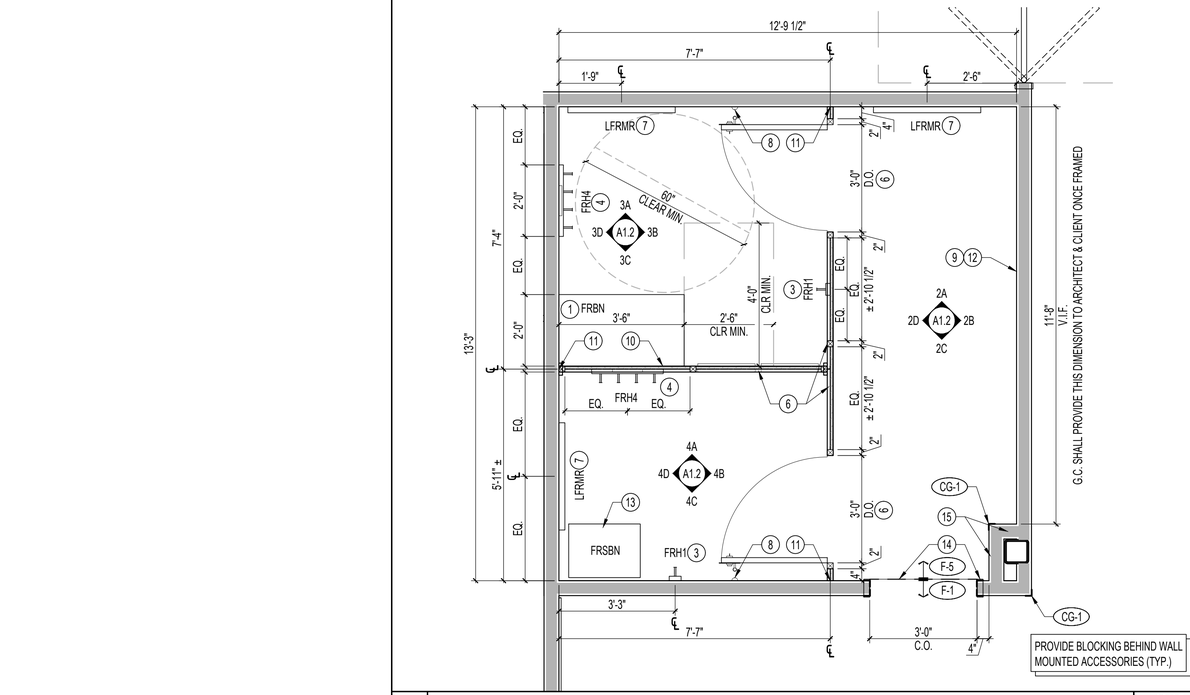
4 ELEVATIONS - FITTING ROOM — SCALE 1/4"=1'-0"



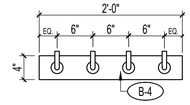
2 ELEVATIONS - FITTING ROOM HALLWAY — SCALE 1/4"=1'-0"

1. GC TO SECURE BENCH TO THE FLOOR & ADD CLEAR SEALANT TO WALL. CUT BASEBOARD TO ACCOMMODATE BENCH . BENCH IS 24" DEEP X 42" LONG X 18" HIGH
2. PENDANT LIGHT - SEE A2.1 & LIGHTING PLANS
3. (1) GC SUPPLIED HOOKS INSTALLED ON 'B-4'. HOOKS: SUNMALL INDUSTRIAL PIPE COAT HOOKS - BLACK. AVAILABLE AT AMAZON.COM
4. (4) GC SUPPLIED HOOKS INSTALLED ON 'B-4'. HOOKS: SUNMALL INDUSTRIAL PIPE COAT HOOKS - BLACK. AVAILABLE AT AMAZON.COM
5. G.C. TO INSTALL OWNER SUPPLIED GRAPHICS. SEE F2.1 FOR DETAILS.
6. OWNER SUPPLIED, G.C. INSTALLED FITTING ROOM POST/PARTITION SYSTEM. SEE APPROVED VENDOR SHOP DRAWINGS FOR INSTALLATION INSTRUCTIONS.
7. ILLUMINATED WALL MOUNTED FITTING ROOM MIRROR - STYLMARK MODEL 620096-03 BEVEL: LED-LIT SINGLE PANE MIRROR. 36" X 72" FINISH: 123-BUFFED SATIN BLACK - 3700K CORD & PLUG - NO SWITCH
8. WALL MOUNTED DOOR STOP
9. VINYL GRAPHIC. SEE F-2.1 FOR DETAILS.
10. G.C. TO INSTALL FITTING ROOM PANEL ON ADA FITTING ROO SIDE SO THE BENCH IS MNOUNTED TO A FLUSH SURFACE.
11. G.C. TO INSTALL BLOCKING WHERE FITTING ROOM PARTITIONS ATTACH TO WALL
12. NO DEVICES ARE TO BE INSTALLED ON THIS WALL.
13. THIS BENCH TO REMAIN LOOSE.
14. 'F-5' TRANSITION TO ALIGN WITH INSIDE CASED OPENING. SEE DETAIL SHEET A-5.1
15. FURR WALL TIGHT TO COLUMN.

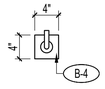
- KEY NOTES (#)



1 ENLARGED PLAN - FITTING ROOMS — SCALE 1/2"=1'-0"



B FITTING ROOM HOOK - FRH4 (4)

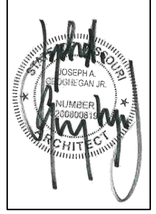


A FITTING ROOM HOOK - FRH1 (3)

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISIONS:	DATE:
ISSUE FOR PERMIT, LANDLORD, PRICING	06/18/25



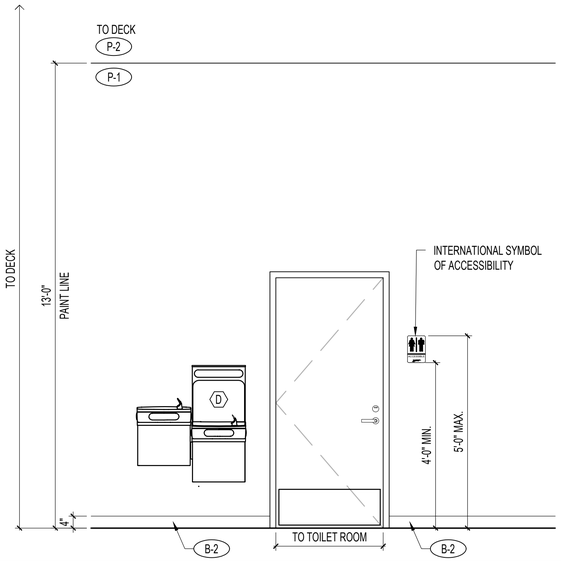
carhartt

SUMMIT WOODS CROSSING

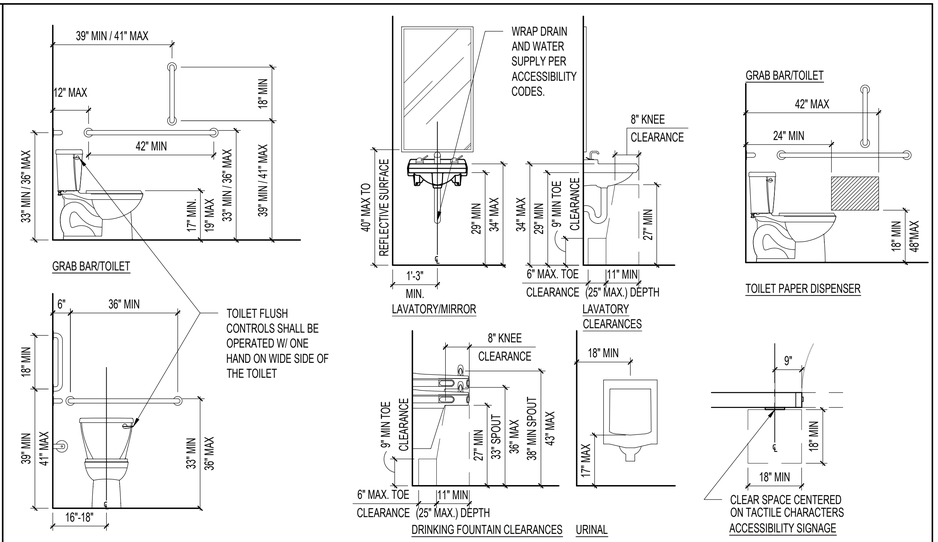
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

FITTING ROOM DETAILS

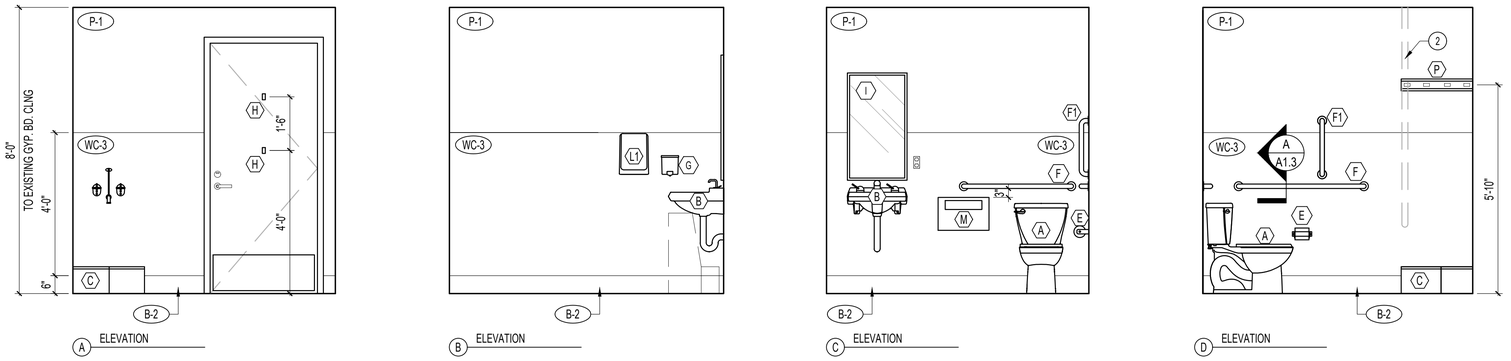
DRAWN BY	SLS
CHECKED BY	SL
JOB NUMBER	25303
SHEET NAME	A-1.2



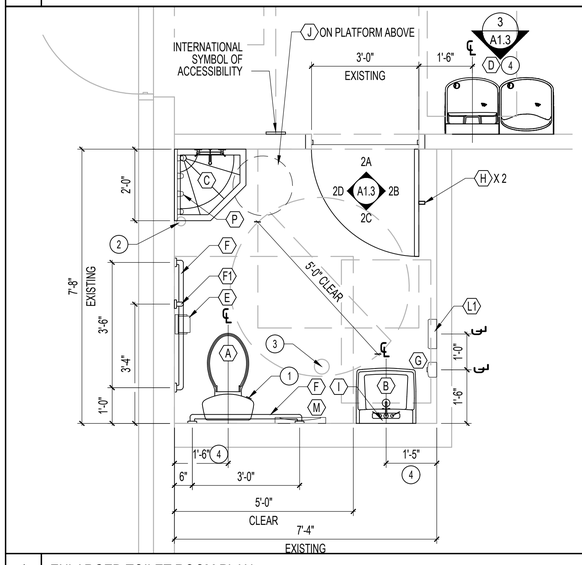
3 ELEVATION - HALLWAY — SCALE 1/2"=1'-0"



4 RESTROOM DETAILS — SCALE 1/2"=1'-0"



2 ELEVATIONS - TOILET ROOM — SCALE 1/2"=1'-0"

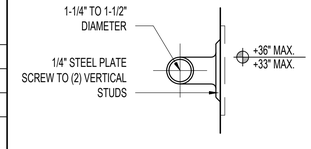


1 ENLARGED TOILET ROOM PLAN — SCALE 1/2"=1'-0"

NOTE:
SEE DETAIL 5/A1.3 REGARDING LOCATIONS OF PLUMBING FIXTURES & ACCESSORIES GRAB BARS - NOTIFY ARCHITECT IMMEDIATELY IF ANY EXISTING TO REMAIN ITEMS DO NOT COMPLY.

	TOILET ROOM SPECIFICATION	EXISTING	PROVIDED BY GC INSTALLED BY GC	EXISTING TO BE RELOCATED BY GC	OWNER SUPPLIED INSTALLED BY GC	NOT APPLICABLE
A	WATER CLOSET - SEE PLUMBING DRAWING		●			
B	LAVATORY - SEE PLUMBING DRAWING		●			
C	MOP SINK - SEE PLUMBING DRAWING		●			
D	DRINKING FOUNTAIN / BOTTLE FILLER SEE PLUMBING DRAWINGS		●			
E	TOILET PAPER HOLDER		●			
F	GRAB BARS - (1) 36"HORIZ, (1) 42"HORIZ		●			
F1	GRAB BARS - (1) 18" VERT		●			
G	TOUCHLESS SOAP DISPENSER				●	
H	HOOKS - (2) HOOKS PER ROOM, DOOR MOUNTED - SUNMALL INDUSTRIAL PIPE COAT HOOKS - BLACK. AVAILABLE AT AMAZON.COM		●			
I	MIRROR OVER LAVATORY 20" X 36"		●			
J	WATER HEATER (ON PLATFORM)		●			
K	CABINET					●
L	PAPER TOWEL DISPENSER - DEEP					●
L1	PAPER TOWEL DISPENSER - SHALLOW				●	
M	TOILET SEAT COVER DISPENSER				●	
N	BABY CHANGING STATION					●
P	MOP / BROOM HOLDER				●	

- T.R. ACCESS. SCHEDULE



A GRAB BAR SECTION — SCALE 3"=1'-0"

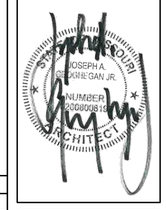
- KEY NOTES (#)

1. REQUIRED LOCATION OF FLUSH VALVE.
2. LOCATION OF EXISTING FIRE SPRINKLER INSPECTORS VALVE
3. LOCATION OF EXISTING FLOOR DRAIN. REPAIR AS REQUIRED AFTER REMOVAL OF EXISTING TILE. NEW CAP SHALL BE FLUSH WITH FLOOR.
4. LOCATION OF EXISTING PLUMBING TO BE REUSED FOR NEW FIXTURES

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISIONS:	DATE:
ISSUE FOR PERMIT, LANDLORD, PRICING	06/18/25

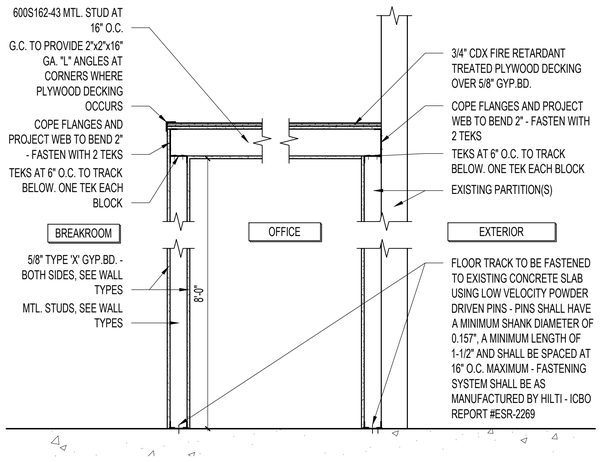
robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com



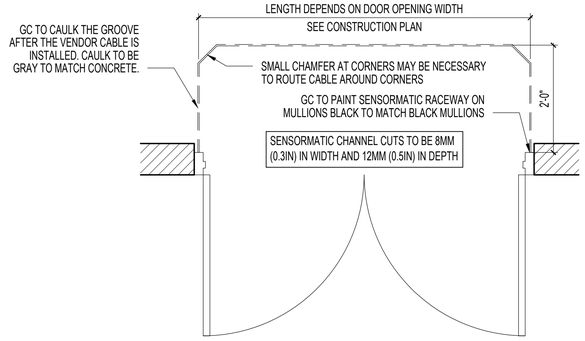
carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

ENLARGED
TOILET ROOM
PLANS & ELEVATIONS

DRAWN BY	SLS
CHECKED BY	SL
JOB NUMBER	25303
SHEET NAME	A-1.3

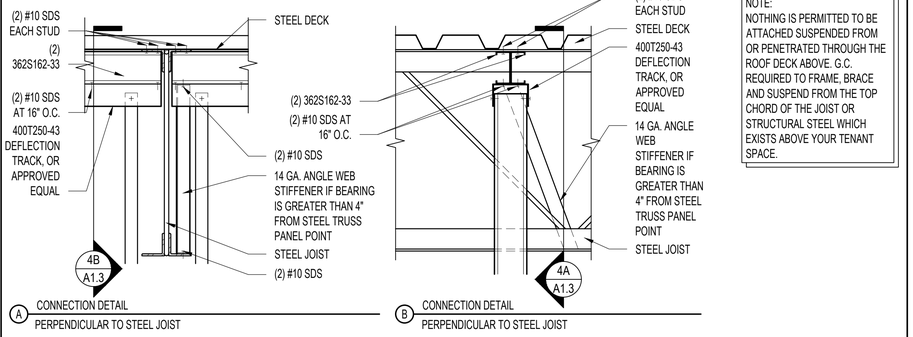


9 STOCKROOM / OFFICE PLATFORM DETAIL



8 SENSORMATIC CHANNEL DETAIL

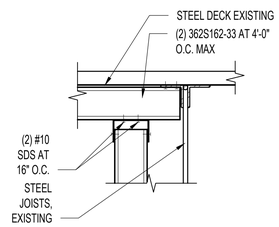
SCALE 3/4" = 1'-0"



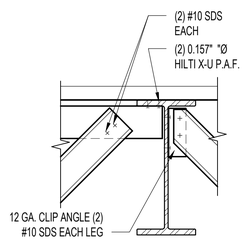
A CONNECTION DETAIL
PERPENDICULAR TO STEEL JOIST

B CONNECTION DETAIL
PERPENDICULAR TO STEEL JOIST

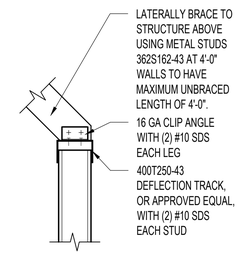
NOTE:
NOTHING IS PERMITTED TO BE ATTACHED SUSPENDED FROM OR PENETRATED THROUGH THE ROOF DECK ABOVE. G.C. REQUIRED TO FRAME, BRACE AND SUSPEND FROM THE TOP CHORD OF THE JOIST OR STRUCTURAL STEEL WHICH EXISTS ABOVE YOUR TENANT SPACE.



C CONNECTION DETAIL
PARALLEL TO STEEL JOIST



D LATERAL BRACE CONNECTION DETAIL
AT STEEL ROOF STRUCTURE



E WALL CONNECTION DETAIL
AT LATERAL BRACE

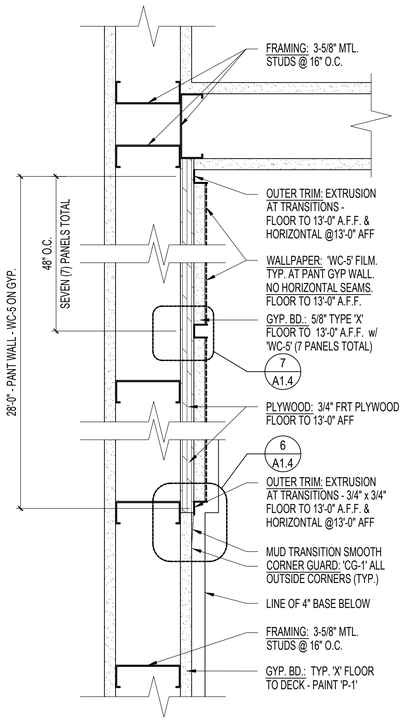
4 CONNECTION DETAILS

7 PANT WALL REVEAL DETAIL

SCALE 1'-0"=1'-0"

6 PANT WALL REVEAL DETAIL

SCALE 1'-0"=1'-0"



5 PANT WALL DETAIL

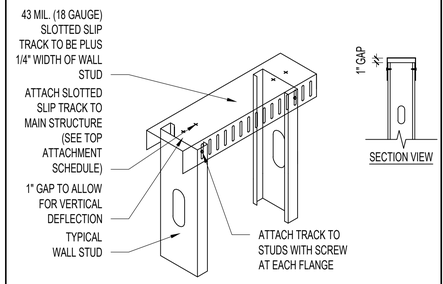
SCALE 3/4"=1'-0"

TOP TRACK ATTACHMENT SCHEDULE			
MATERIAL	FASTENER	SPACING	REMARKS
CONCRETE	HILTI X-U, 0.157" SHANK, 1-1/2" MINIMUM PENETRATION, 2,000 PSI MINIMUM CONCRETE ESR-2269	16" O.C.	EMBED 1" MINIMUM
STEEL	(1) - #10 SCREW	32" O.C.	MATERIAL > 43 MILS (> 18 GAUGE)
	(1) - #10 SCREW	16" O.C.	MATERIAL < 43 MILS (< 18 GAUGE)
OTHER	ATTACHMENT TO BE APPROVED BY DESIGN ENGINEER		

2 PARTITION DETAIL - TOP TRACK

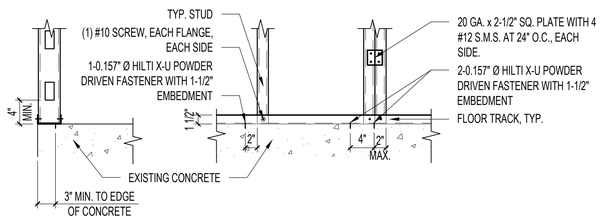
NOTE:
FOR ALTERNATE GAP AMOUNT, NOTIFY ARCHITECT/ENGINEER.

FOR ATTACHMENT OF SLOTTED SLIP TRACK TO WALL STUDS: TIGHTEN SCREWS, THEN BACK OFF 1/2 TURN



3 PARTITION DETAIL - SLOTTED TRACK

NOTE:
3/8" Ø HILTI KWIK KB TZ W/2" EMBEDMENT AND STANDARD WASHERS MAY BE SUBSTITUTED FOR EACH HILTI X-U POWDER DRIVEN FASTENER.



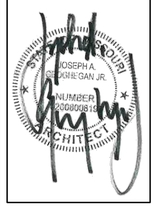
SECTION ELEVATION

1 PARTITION DETAIL - TYPICAL BOTTOM TRACK AND AT DOOR OPENING

rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISIONS:	DATE:
ISSUE FOR PERMIT, LANDLORD, PRICING	06/18/25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com



carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

CONSTRUCTION DETAILS

DRAWN BY
SLS
CHECKED BY
SL
JOB NUMBER
25303
SHEET NAME
A-1.4

A FIRE ALARM NOTES

- THE FIRE ALARM/FIRE WARNING SYSTEM SHALL BE CERTIFIED BY UNDERWRITER'S LABORATORY (UL) AND SHALL BE MAINTAINED IN ACCORDANCE WITH CITY STANDARDS. PROOF OF CERTIFICATION SHALL BE PROVIDED PRIOR TO APPROVAL OF OCCUPANCY. ALL DIGITAL ALARM COMMUNICATION TRANSMITTERS SHALL REPORT DISTINCTIVE SIGNALS FROM THE SITE FOR WATER FLOW (BY BUILDING), GENERAL FIRE ALARM, SUPERVISORY, AND SYSTEM TROUBLE CONDITIONS.
- THE LANDLORD WILL PROVIDE THE BASE BUILDING FIRE ALARM SYSTEM. THE TENANT SHALL PROVIDE WITHIN THE TENANT'S SPACE ALL REQUIRED DEVICES, CONDUIT AND WIRE AND CONNECT TO THE BASE BUILDING SYSTEM. THE DESIGN, PLAN-CHECK SUBMITTAL, SYSTEM MATERIAL AND INSTALLATION, SYSTEM REPROGRAMMING AND TESTING INCLUDING THE MODIFICATION TO THE BASE BUILDING SYSTEM AND THE WORK WITHIN TENANT'S SPACE SHALL BE PERFORMED BY A LANDLORD DESIGNATED FIRE ALARM CONTRACTOR AT THE TENANT'S EXPENSE.

B GENERAL NOTES

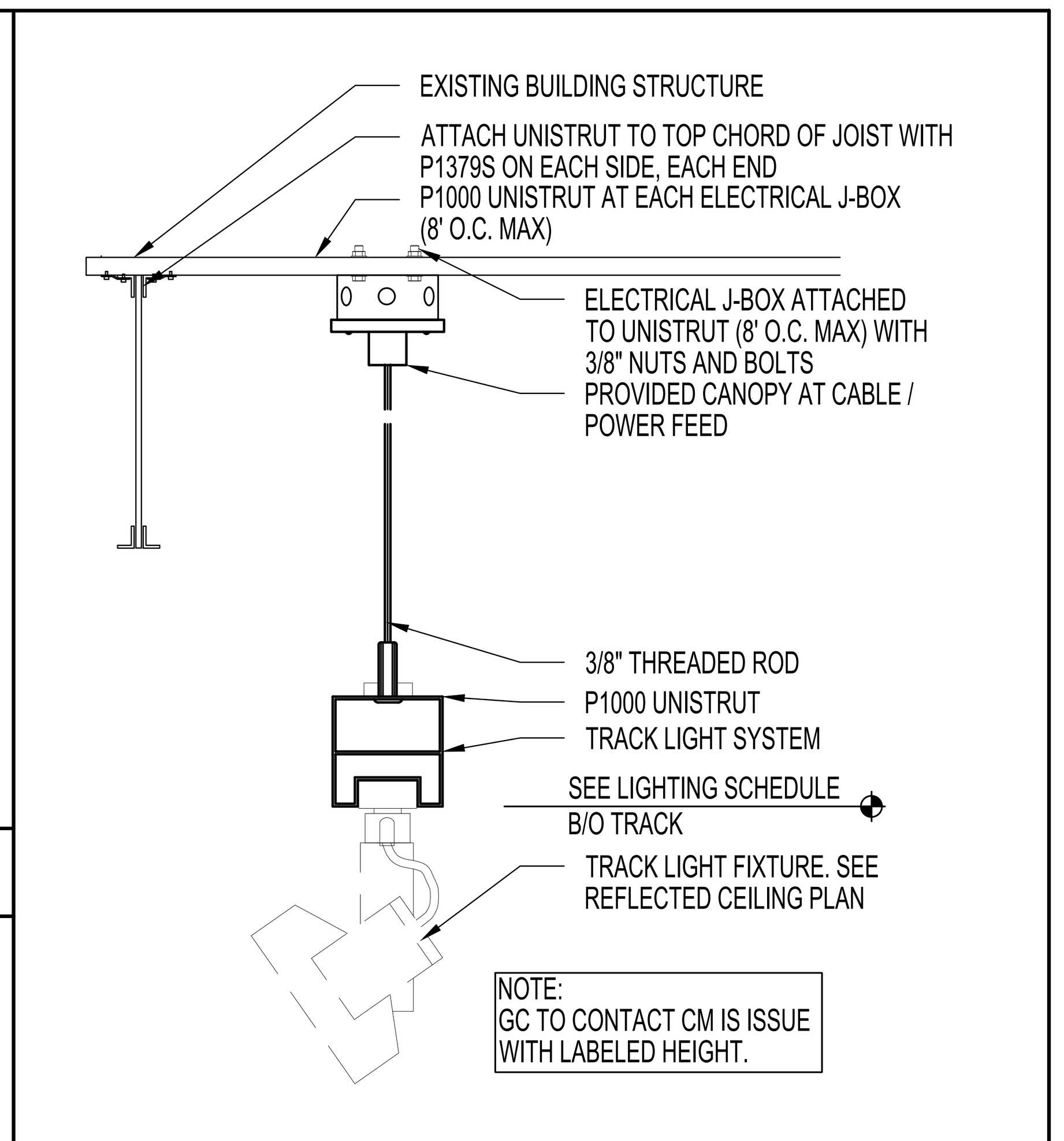
- ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL O.S. - OCCUPANCY SENSOR SWITCHES AT FITTING ROOMS AND TOILET ROOMS. SEE ELECTRICAL PLANS FOR MORE INFORMATION
- ELECTRICAL CONTRACTOR TO VERIFY LIGHTING IS IN WORKING CONDITION WHEN JOB IS COMPLETE
- NO DUCTWORK, PIPING, CONDUIT, ETC. SHALL BE SUSPENDED OR ATTACHED TO THE FLOOR DECK AND/OR ROOF DECK. ALL SUCH ITEMS MUST BE SUSPENDED ONLY FROM JOISTS AND/OR BEAMS.
- BOTTOM OF SUSPENDED EMERGENCY LIGHTING TO BE MOUNTED AT SAME HEIGHT AS TRACK LIGHTING
- SUPPLY AND RETURN HVAC DIFFUSERS SHOWN FOR REFERENCE / LOCATION ONLY REFER TO MECHANICAL PLANS.

C SPRINKLER NOTES

- SPRINKLER NOTES SHOWN ON THIS PLAN SHOULD SERVE AS A GUIDE ONLY AND THE CONTRACTOR SHOULD NOTIFY THE TENANT REPRESENTATIVE OF ANY SUBSTANTIAL CHANGE REQUIRED IN THE DESIGN TO COMPLY WITH REQUIRED PROTECTION STANDARDS.
- ALL HEADS IN GYP. BD. OR ACT CEILING ARE TO BE FULLY RECESSED AND CONCEALED WITH WHITE CAPS.
- PRIOR TO START OF WORK, CONTRACTOR SHALL SUBMIT TO THE TENANT REPRODUCIBLE COPIES OF THE FIRE SPRINKLER PLANS STAMPED WITH THE APPROVAL OF THE LOCAL FIRE OFFICIAL (AND LANDLORD'S INSURANCE UNDERWRITERS WERE REQUIRED). CONTRACTOR TO VERIFY.
- ALL SOFFIT AREAS ARE TO BE FULLY SPRINKLERED AS REQUIRED BY CODE AND LANDLORD.
- ALL WORK TO BE IN CONFORMANCE WITH LOCAL BUILDING CODES, LANDLORD'S UNDERWRITER AND ALL OTHER AGENCIES HAVING JURISDICTION AND IN STRICT ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS AND INSTRUCTIONS. G.C.. TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS.
- SPRINKLER HEADS ARE TO BE CENTERED ON ACOUSTIC TILE AND/OR LOCATED AS SHOWN ON APPROVED SPRINKLER SHOP DRAWINGS.

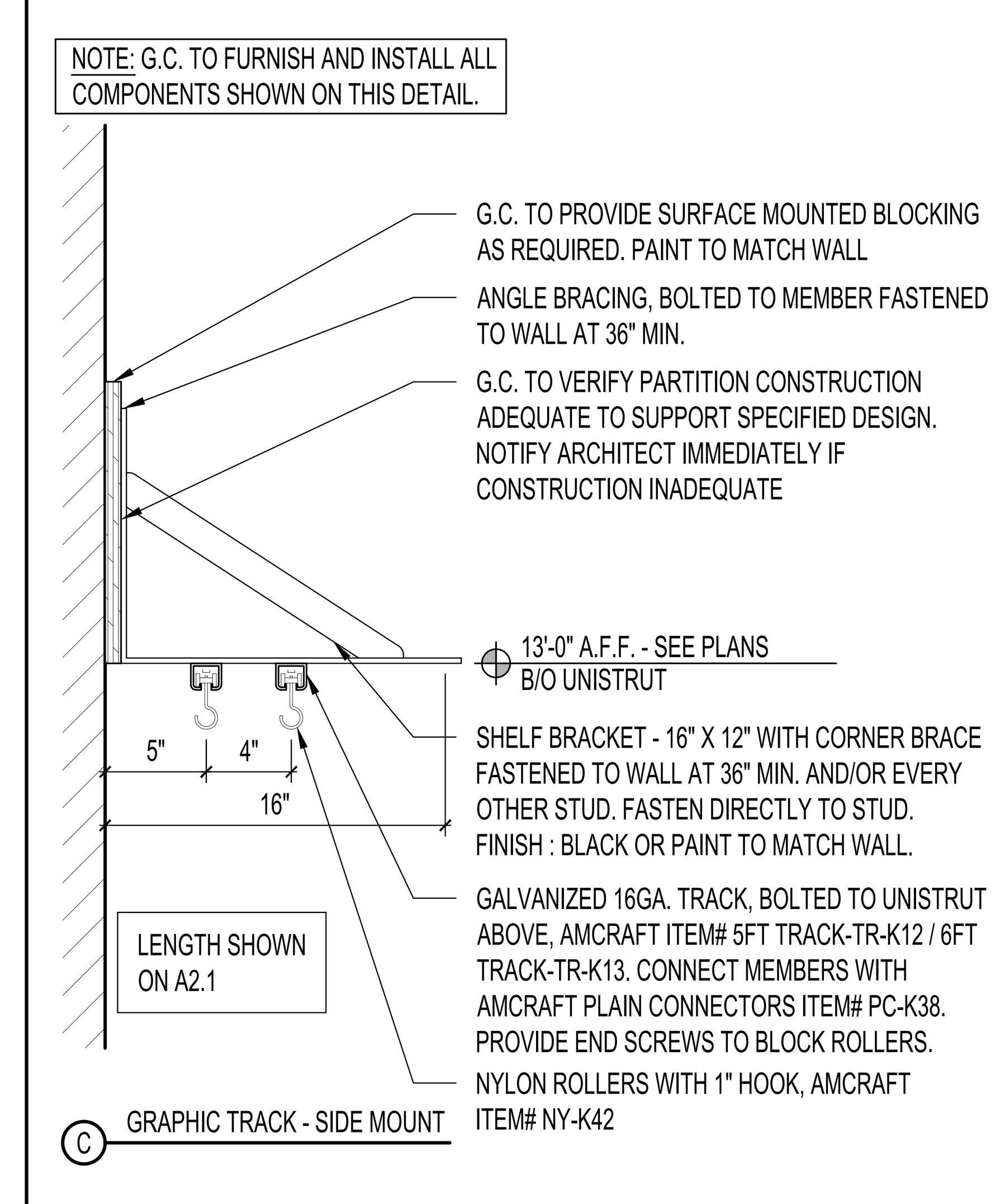
- KEY NOTES

1. CENTER THIS TRACK LIGHTING ON THIS WALL, STRUCTURAL FRAME, OR WINDOW PANE
2. CENTER THIS LIGHT IN THE ROOM / SPACE.
3. NEW AIR CURTAIN. SEE MECHANICAL DRAWINGS.
4. GRAPHIC TRACK - SEE DETAIL 3/A2.1
5. OPEN TO STRUCTURE ABOVE 13'-0" A.F.F. PAINT ALL TRUSSES, JOISTS, BEAMS, DUCTS, CONDUITS, EQUIPMENT, STRUCTURE, ETC. (TYP. THROUGHOUT UNLESS NOTED)
6. SUSPENDED TRACK LIGHTING 6" FROM GLASS.
7. CENTER CEILING GRID IN CENTER OF ROOM
8. INSTALL OWNER SUPPLIED SCENT MACHINE @ 160" A.F.F.



4 SUSPENDED TRACK LIGHT DETAIL — SCALE N.T.S.

NOTE: G.C. TO FURNISH AND INSTALL ALL COMPONENTS SHOWN ON THIS DETAIL.

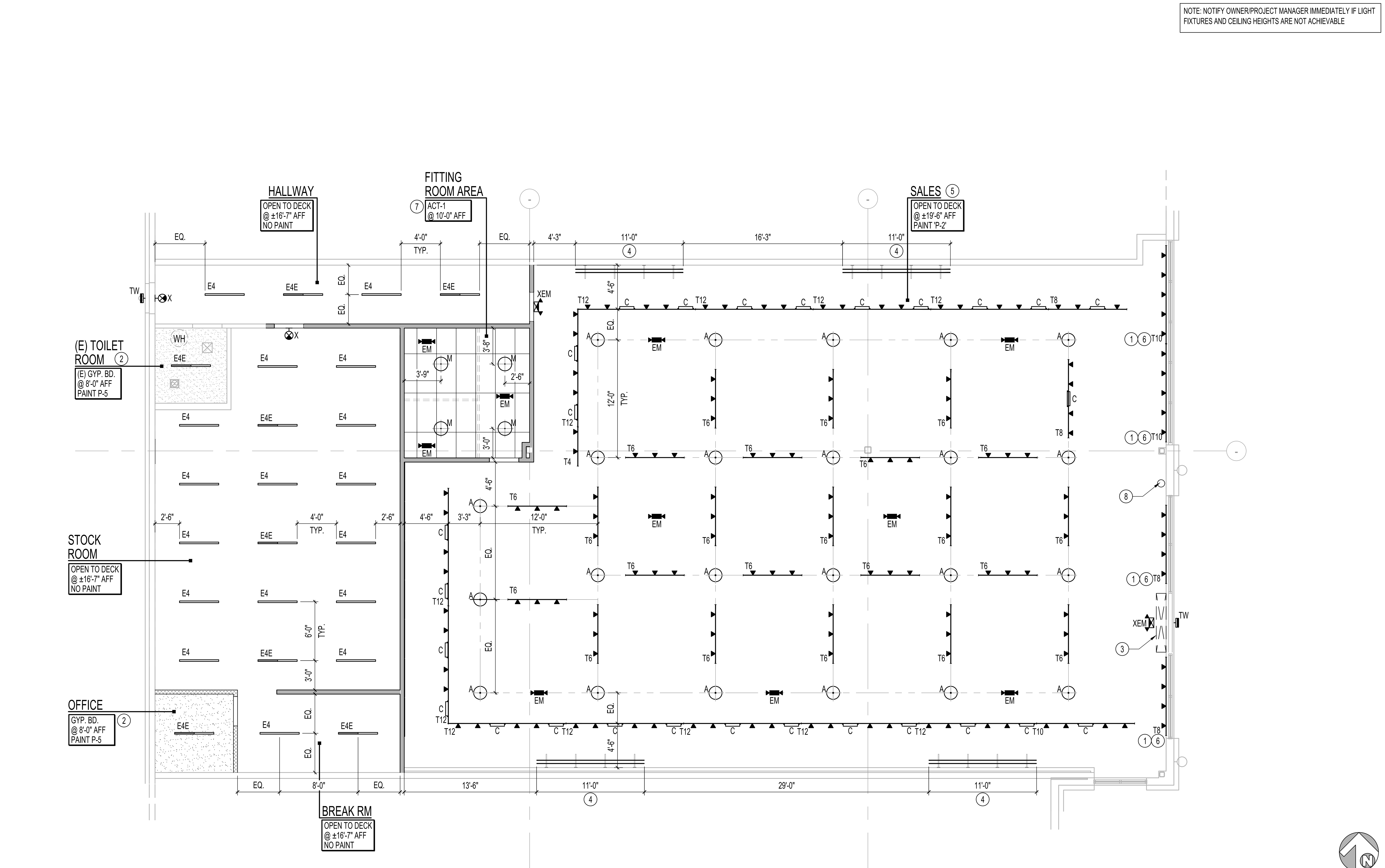


3 GRAPHIC TRACK DETAIL — SCALE 1 1/2"=1'-0"

TAG	SYMBOL	DESCRIPTION	HEIGHT
A		HIGH BAY LIGHTING	BOTTOM @ 13'-0" A.F.F.
B		TRACK HEAD - LED SPOT	TRACK MOUNTED
C		TRACK HEAD - WALL WASHER	TRACK MOUNTED
E4		4FT LINEAR LED	12'-0" AF.F.
E4E		4 FT LINEAR LED W/ EMERGENCY	12'-0" AF.F.
K		6" RECESSED WET LOCATION RATED EMERGENCY W/ BATTERY BACK UP	RECESSED IN PORTAL
M		PENDANT LIGHT (FITTING ROOM)	BOTTOM AT 9'-0" A.F.F.
T	2, 4, 6, 8, 12	1 CIRCUIT TRACK (LENGTH PER PLAN).	13'-0" A.F.F. (UNO)
TW		EXTERIOR EMERGENCY LIGHT	6" - 12" ABOVE OPENING
EM		EMERGENCY LIGHT WITH BATTERY BACK UP	12'-0" (UNO)
X		EXIT SIGN	10'-0" (UNO)

2 LIGHT FIXTURE SCHEDULE

NOTE: NOTIFY OWNER/PROJECT MANAGER IMMEDIATELY IF LIGHT FIXTURES AND CEILING HEIGHTS ARE NOT ACHIEVABLE



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

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISIONS:	DATE:
ISSUE FOR PERMIT, LANDLORD, PRICING	06/18/25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

carhartt

SUMMIT WOODS CROSSING

1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

REFLECTED CEILING PLAN
DETAILS & NOTES

DRAWN BY: SLS
CHECKED BY: SL
JOB NUMBER: 25303
SHEET NAME: A-2.1

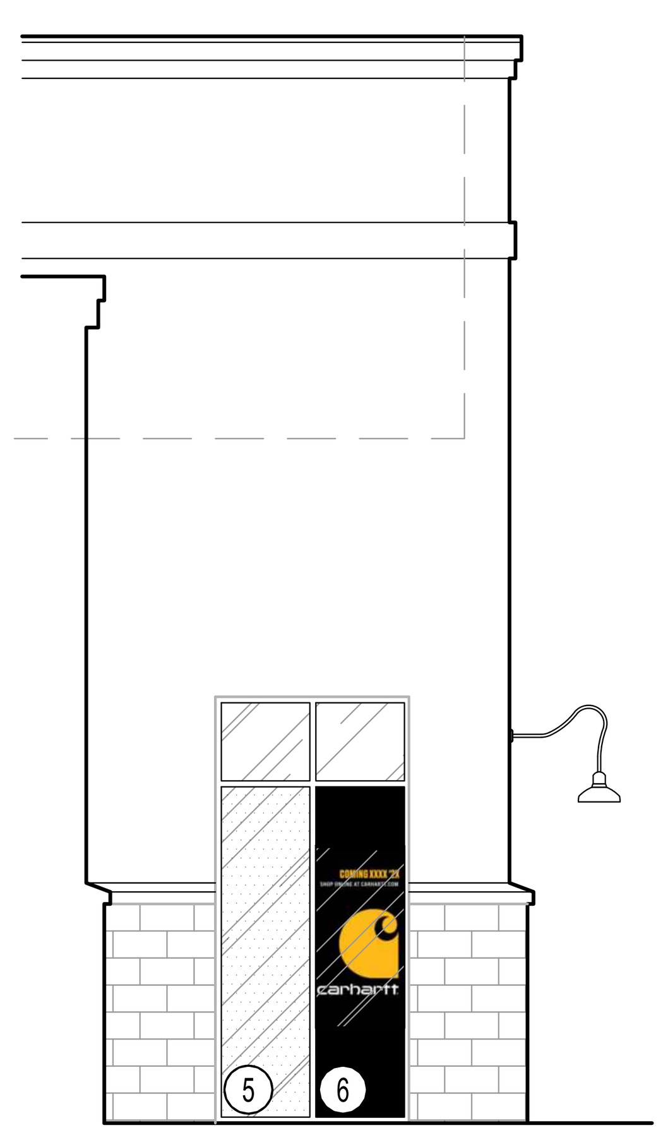
STOREFRONT WORK:

THE STORE FACADE, GLAZING, BASE ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.

NEW EXTERIOR WORK IS LIMITED TO THE FOLLOWING
- STOREFRONT SIGNAGE
- FACADE (EIFS) REPAIR

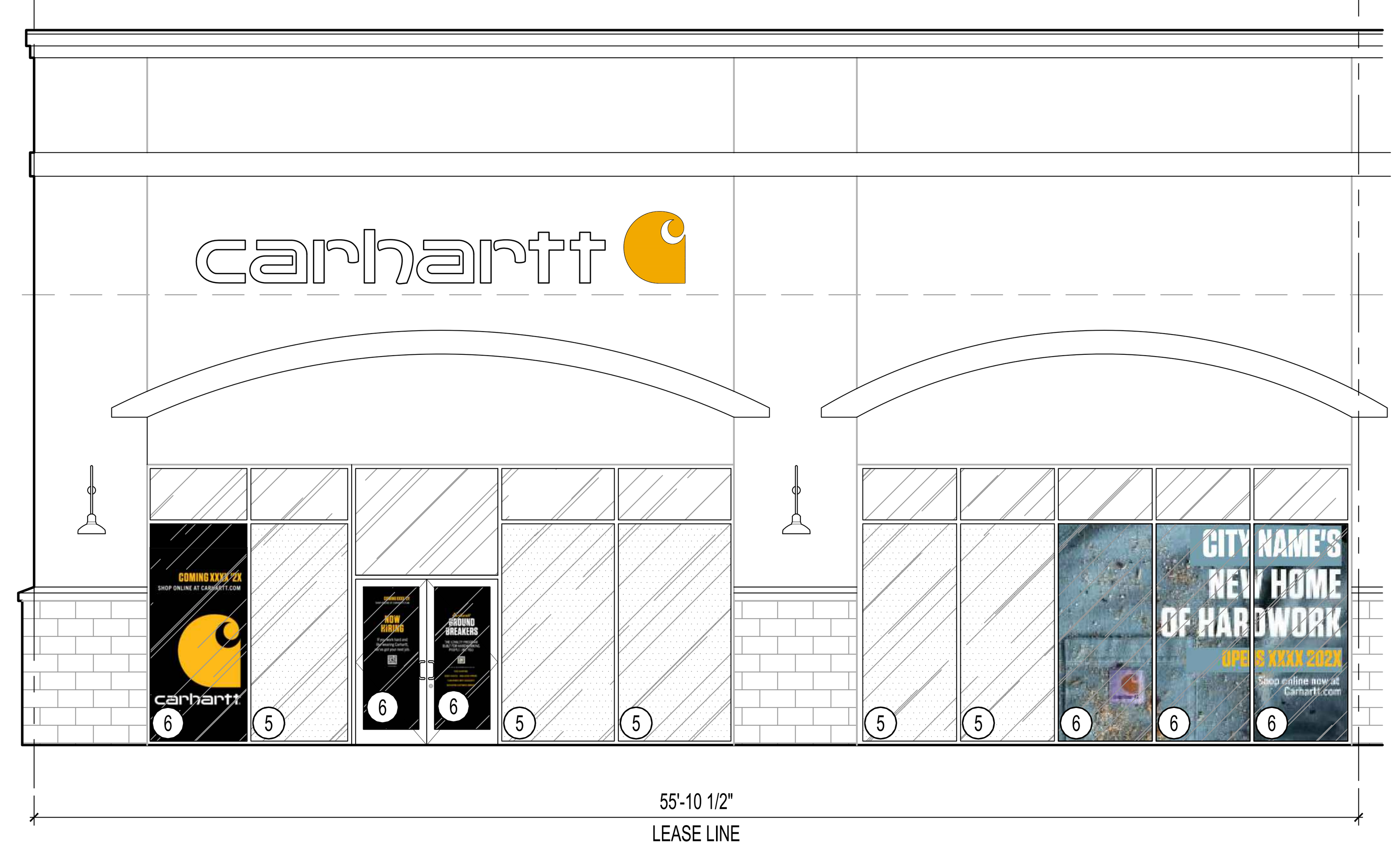
SIGN FURNISHED AND INSTALLED BY EXTERIOR SIGN CONTRACTOR. G.C. SHALL COORDINATE INSTALLATION WITH SIGN CONTRACTOR. SIGN CONTRACTOR TO PROVIDE SHOP DRAWINGS TO ARCHITECT PRIOR TO FABRICATION. SIGN COMPANY TO **PULL SEPARATE PERMIT FOR ALL SIGNAGE.**

NOTE:
INSTALL COMING SOON GRAPHICS WITHIN FIRST WEEK OF CONSTRUCTION.

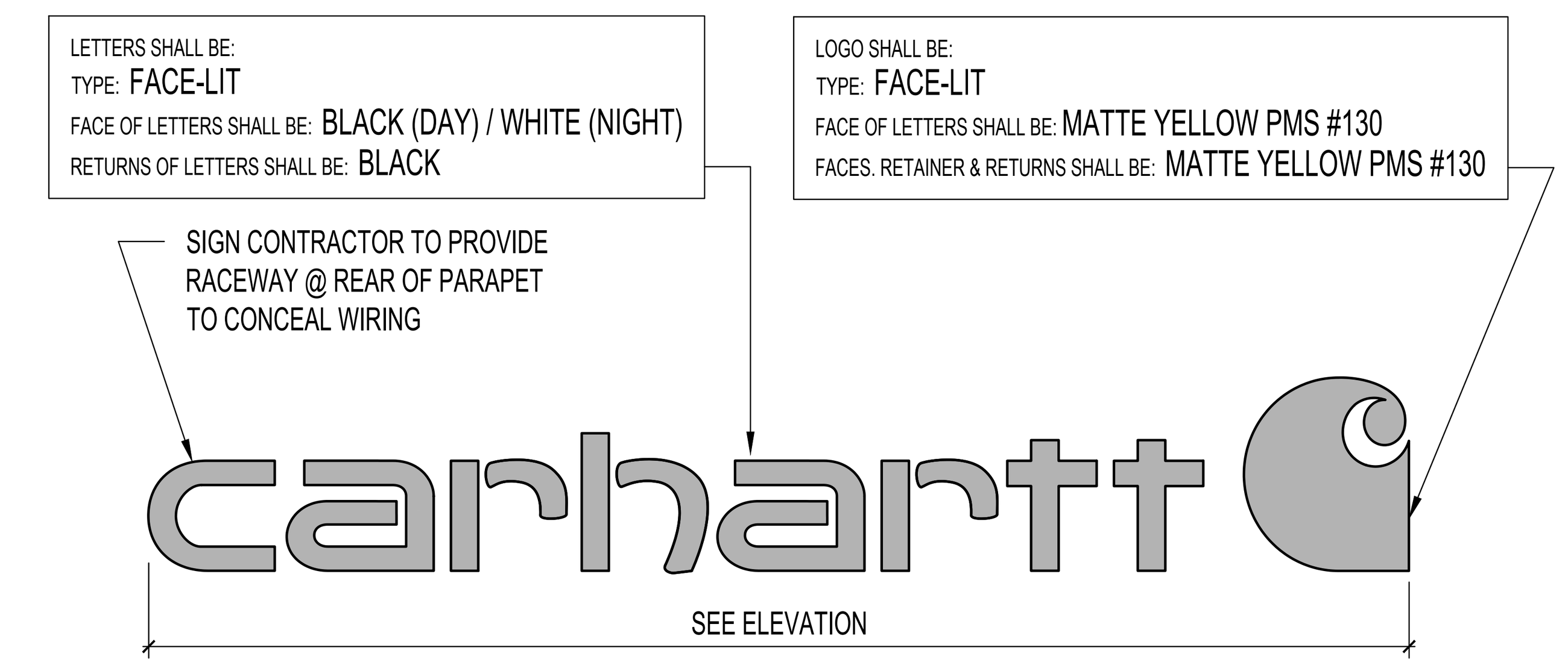


3A STOREFRONT ELEV. - COMING SOON GRAPHICS — SCALE 3/16"=1'-0"

NOTE:
INSTALL COMING SOON GRAPHICS WITHIN FIRST WEEK OF CONSTRUCTION.



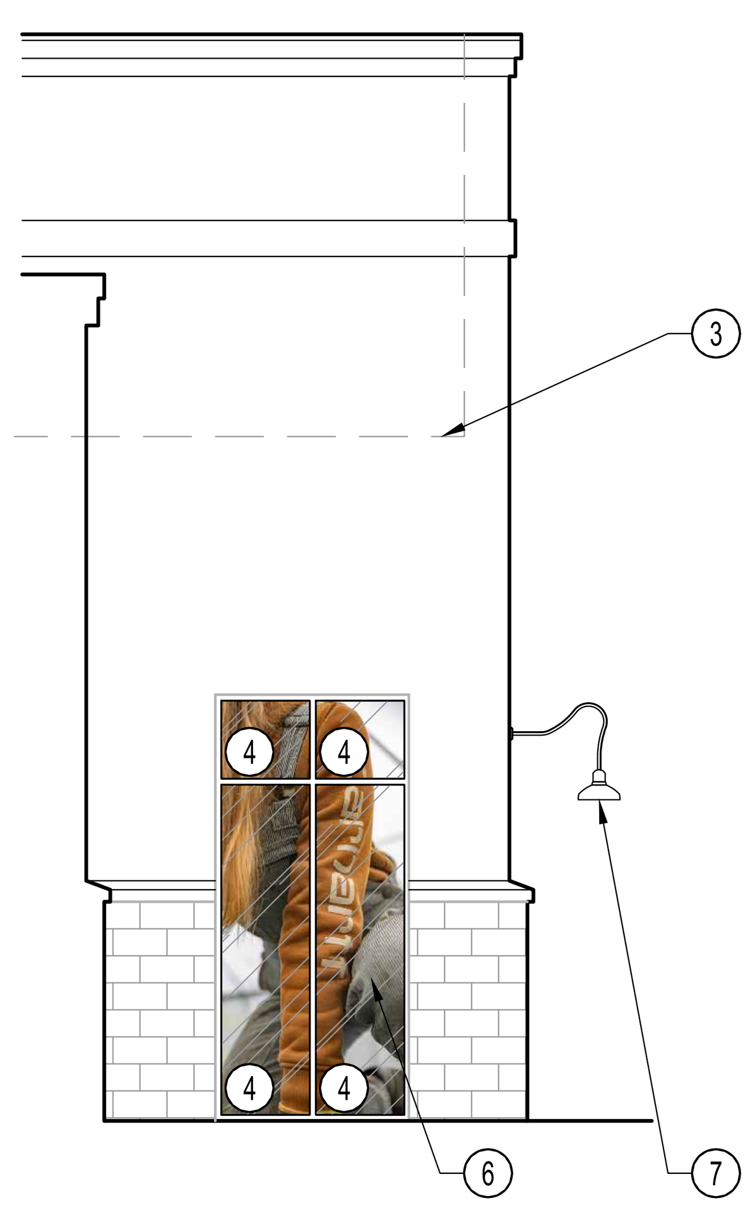
3B STOREFRONT ELEV. - COMING SOON GRAPHICS — SCALE 3/16"=1'-0"



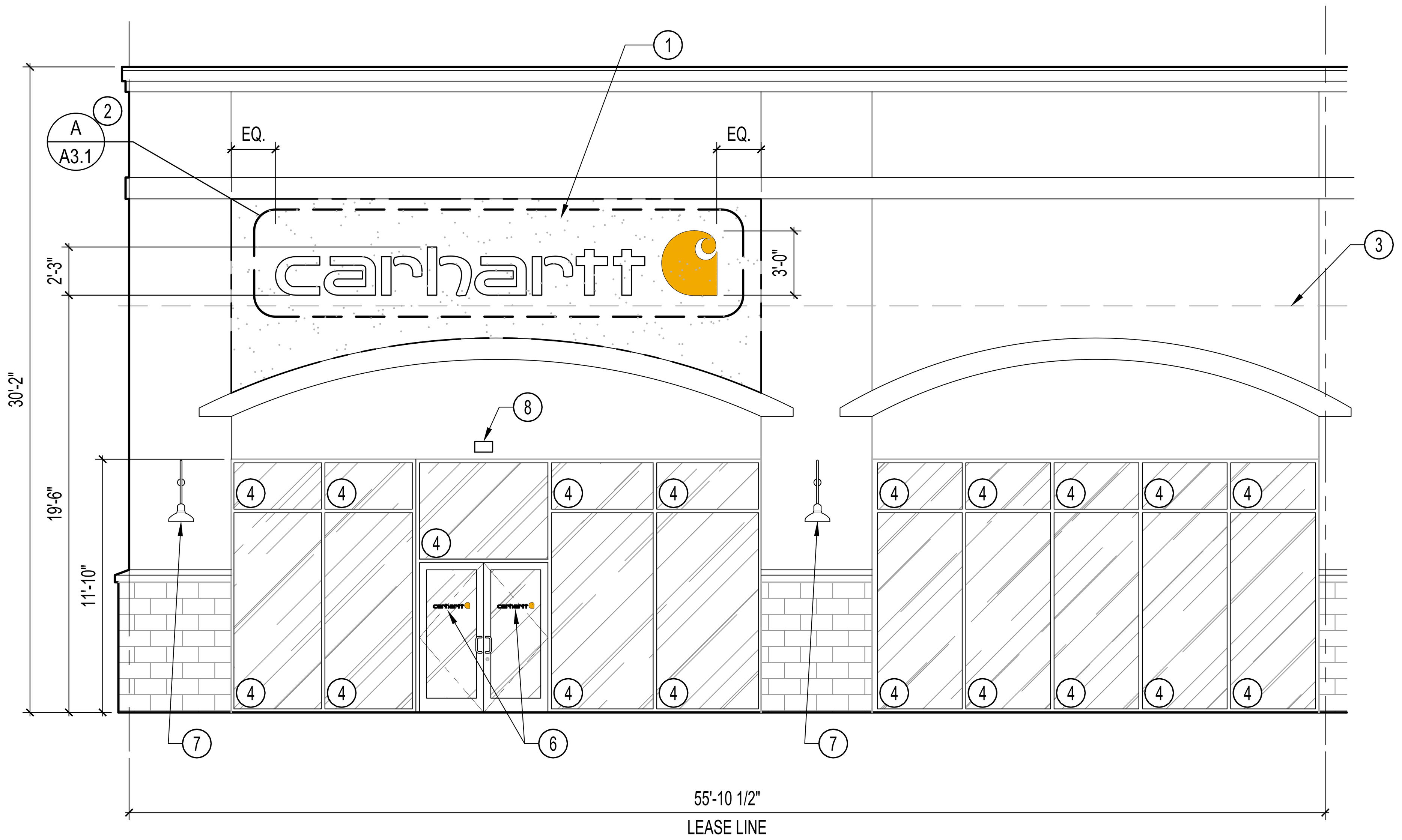
A SIGNAGE DETAILS — SCALE 1"=1'-0"

1. EXISTING FACADE TO REMAIN. PATCH/REPAIR FACADE AS REQUIRED TO A LIKE-NEW APPEARANCE. MATCH EXISTING PAINT (COORDINATE WITH LANDLORD FOR COLOR / FINISH)
2. COORDINATE WITH SIGN CONTRACTOR DRAWINGS.
3. APPROXIMATE LINE OF ROOF BEHIND PARAPET.
4. EXISTING STOREFRONT GLAZING SYSTEM TO REMAIN. GC SHALL CLEAN, INSPECT & NOTIFY ARCHITECT IMMEDIATELY OF ANY NECESSARY REPAIRS.
5. GC TO PROVIDE & INSTALL BLACK PAPER ON STOREFRONT GLAZING AS SHOWN. REMOVE AT END OF CONSTRUCTION.
6. VINYL GRAPHICS AS SHOWN. SEE SHEET F-2.1
7. EXISTING LANDLORD EXTERIOR LIGHT FIXTURE(S) TO BE REMAIN. NOTIFY ARCHITECT IMMEDIATELY IF NOT OPERATIONAL.
8. NEW EXTERIOR LIGHT. SEE A-2.1 & ELECTRICAL SHEETS.

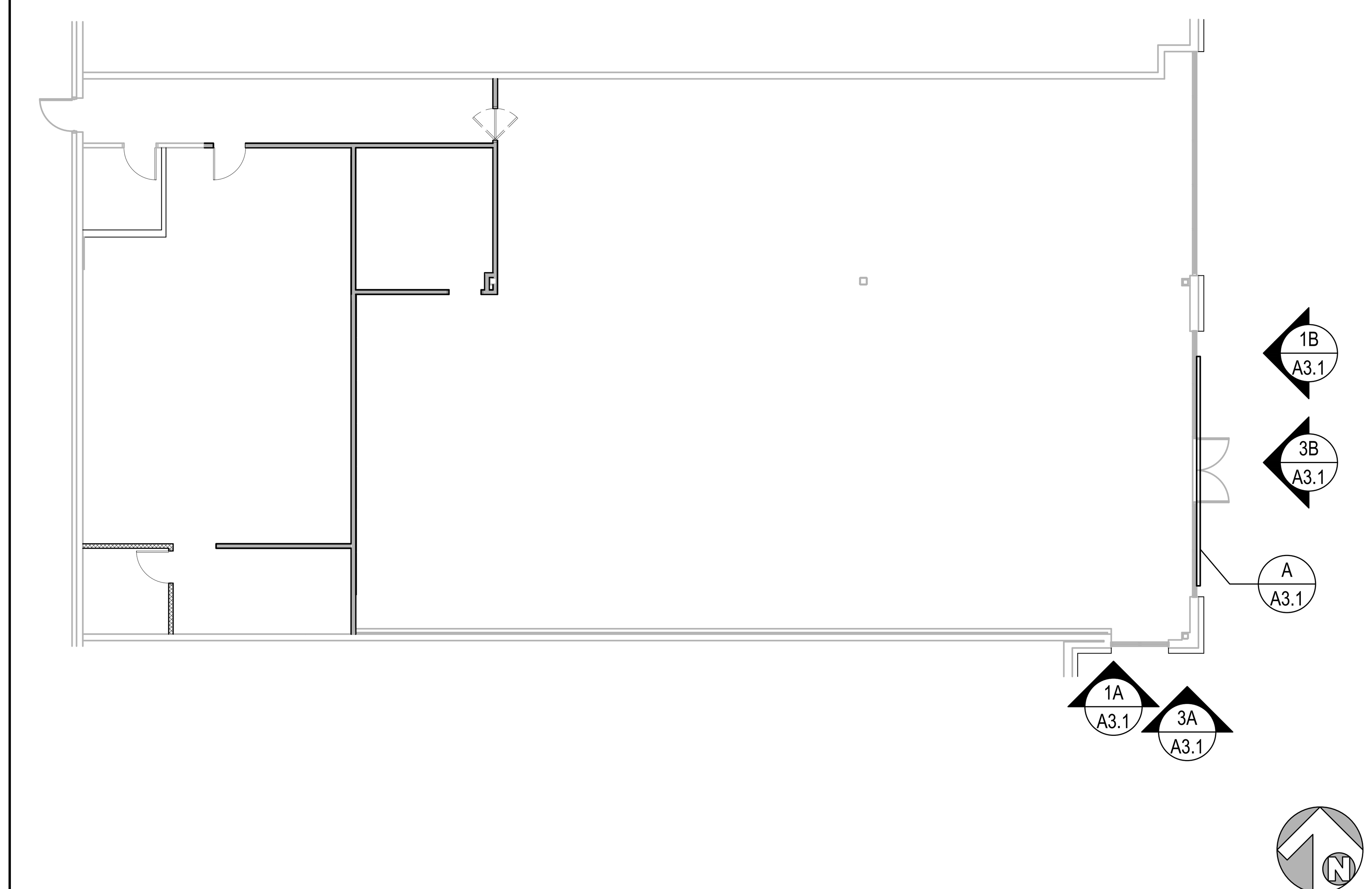
- KEY NOTES (#)



1A STOREFRONT ELEVATION — SCALE 3/16"=1'-0"



1B STOREFRONT ELEVATION — SCALE 3/16"=1'-0"



2 SIGN KEY PLAN — SCALE 3/32" = 1'-0"

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISIONS:	DATE:
ISSUE FOR PERMIT, LANDLORD, PRICING	06/18/25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

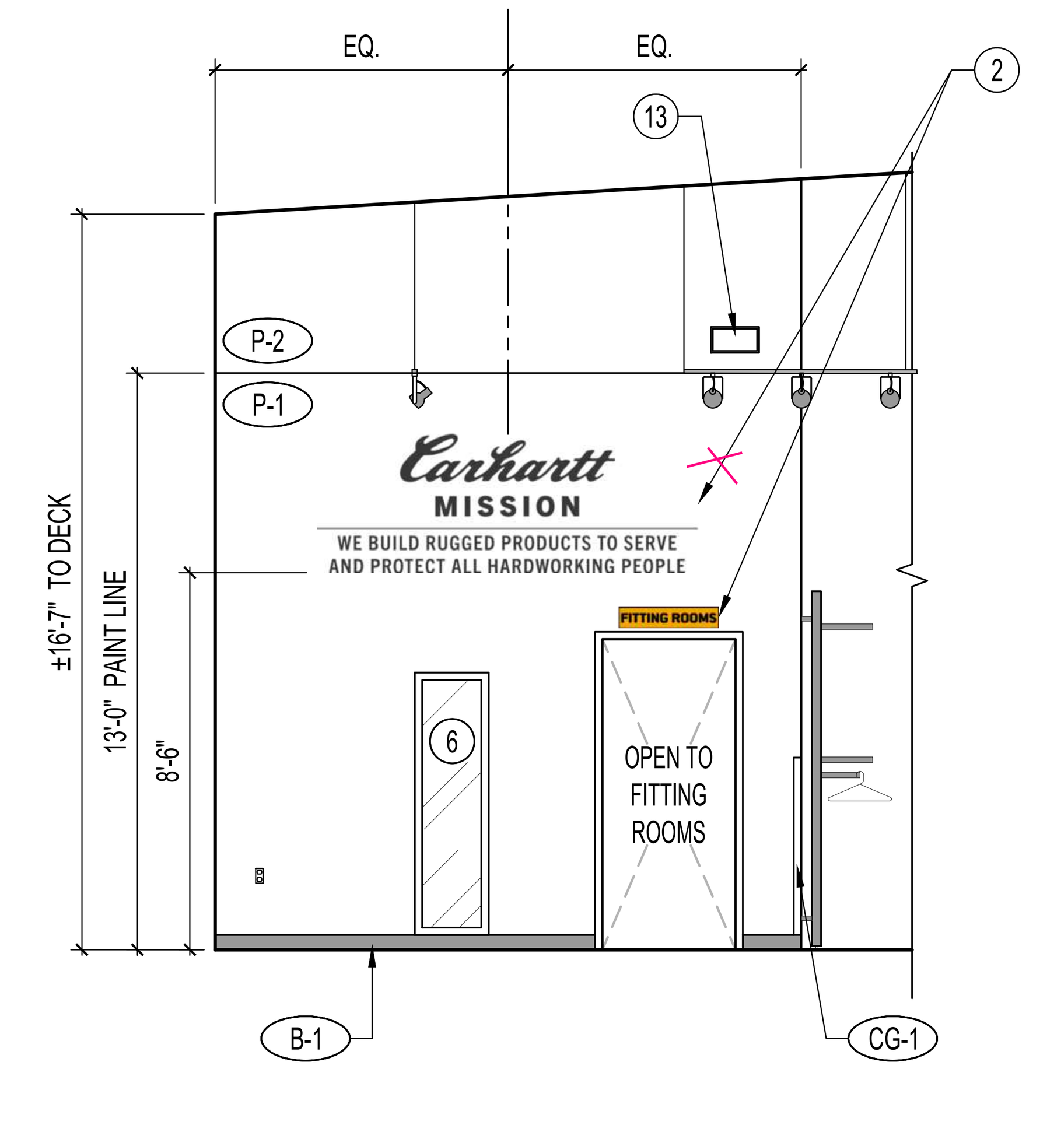
JOSEPH A. KERRIGAN JR. NUMBER ARCHITECT

carhartt
SUMMIT WOODS CROSSING

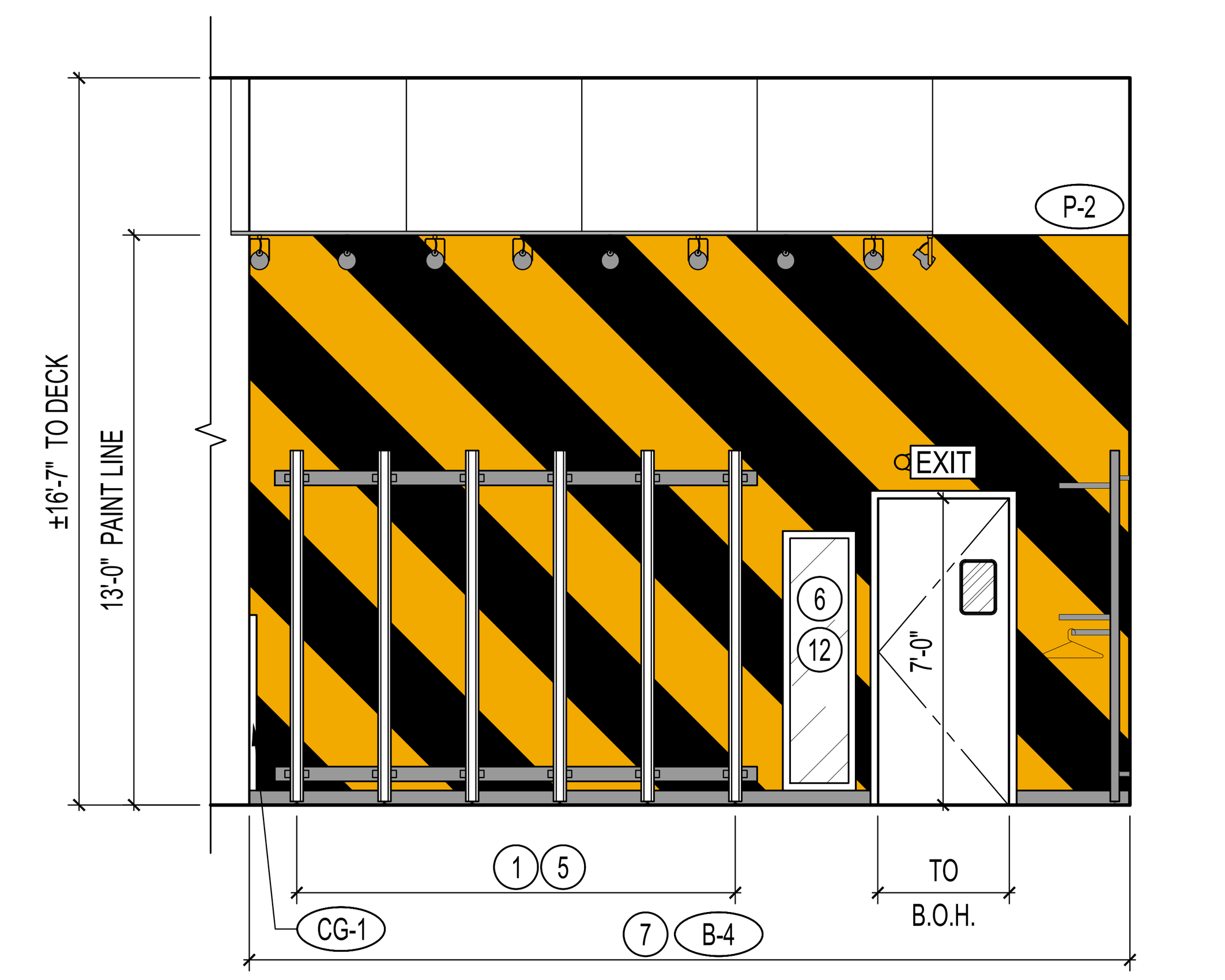
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

EXTERIOR ELEVATION

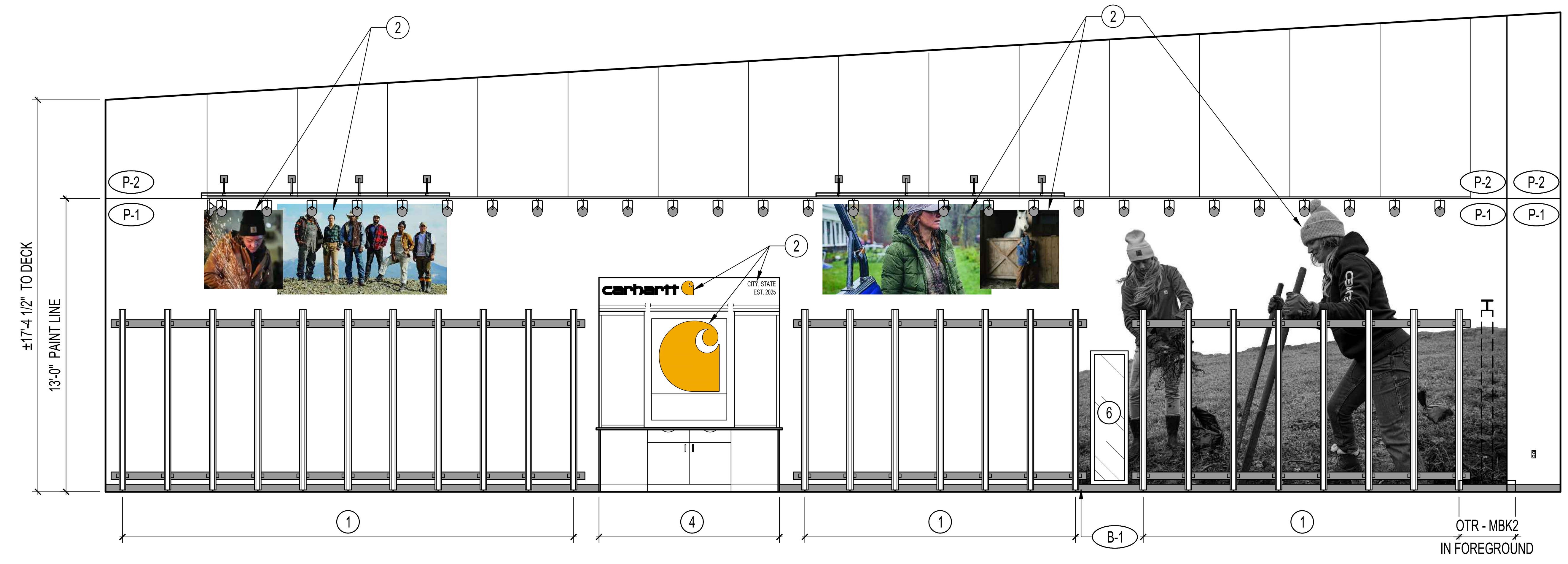
DRAWN BY: SLS
CHECKED BY: SL
JOB NUMBER: 25303
SHEET NAME: A-3.1



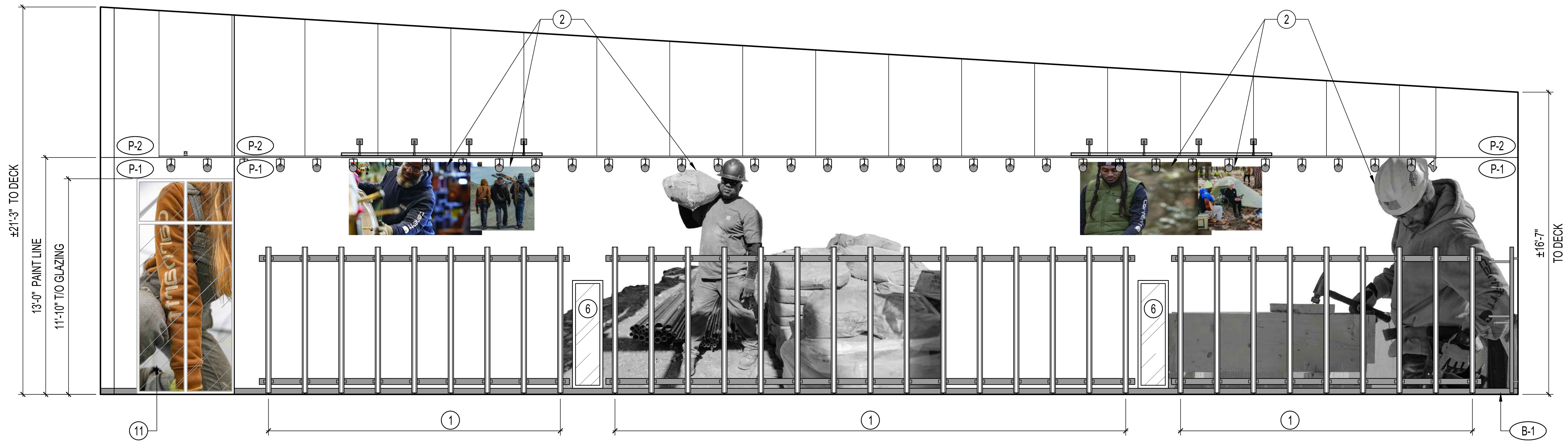
4 ELEVATIONS - SALES SCALE 1/4"=1'-0"



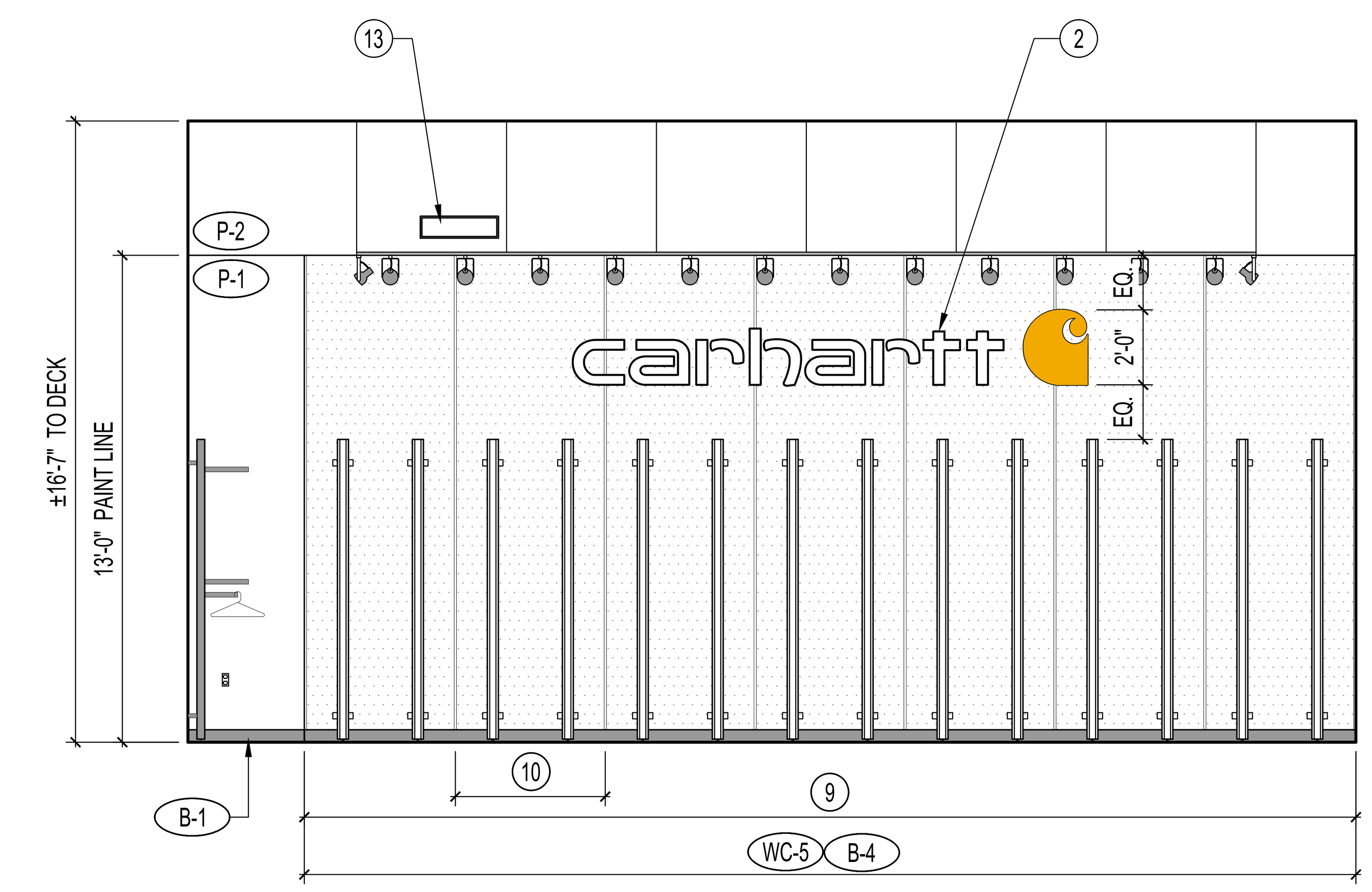
5 ELEVATIONS - SALES SCALE 1/4"=1'-0"



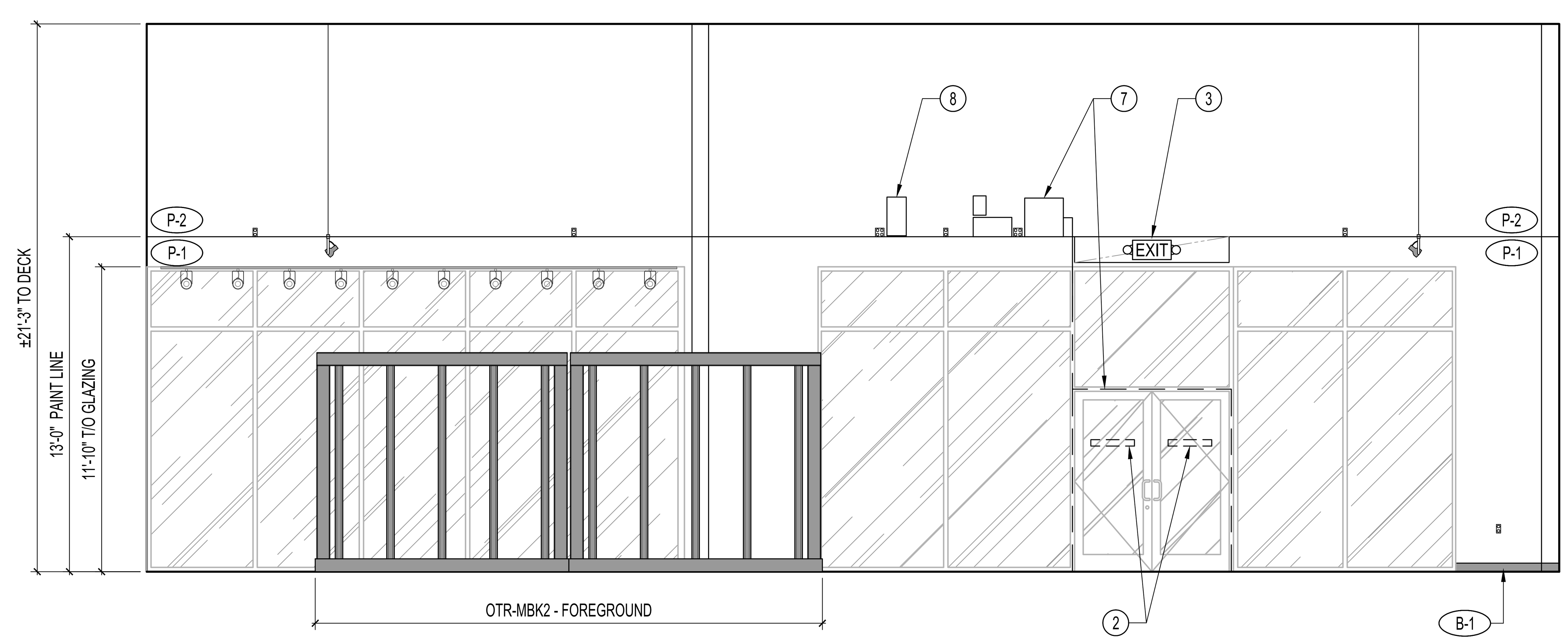
6 ELEVATIONS - SALES SCALE 1/4"=1'-0"



2 ELEVATIONS - SALES SCALE 1/4"=1'-0"



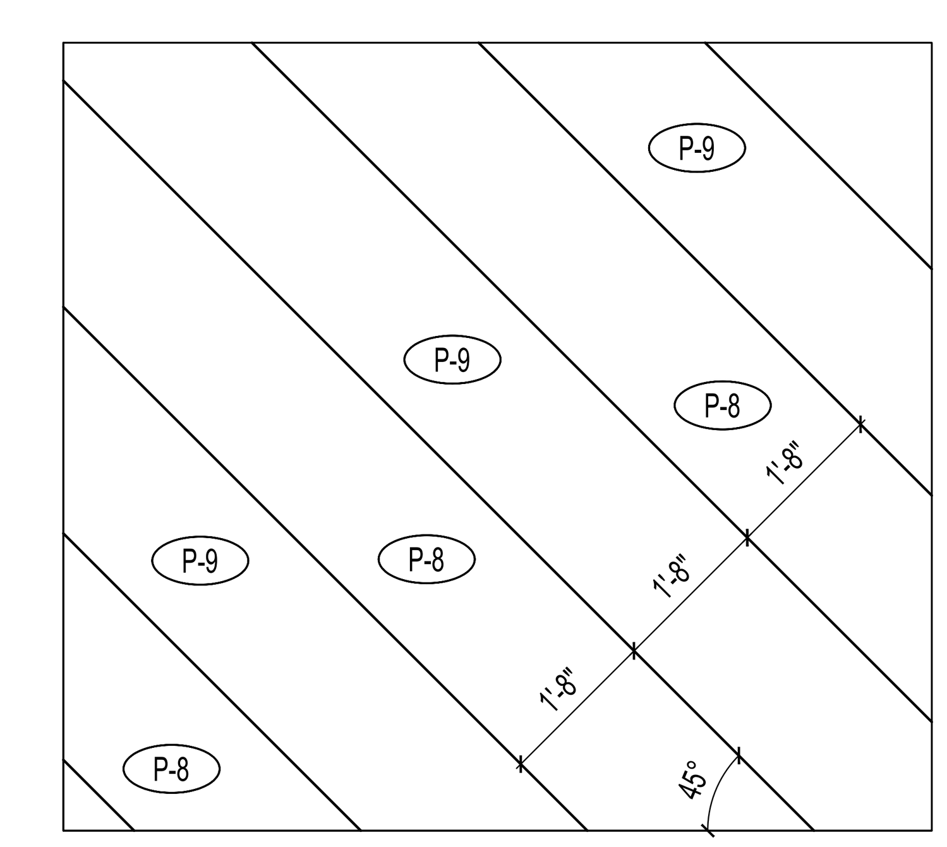
3 ELEVATIONS - SALES SCALE 1/4"=1'-0"



1 ELEVATIONS - SALES SCALE 1/4"=1'-0"

A KEY NOTES

1. FIXTURE POST SYSTEM. SEE DETAIL ON F-1.1.
2. GRAPHIC / INTERIOR SIGNAGE. SEE F-2.1 FOR DETAILS.
3. NEW AIR CURTAIN. SEE MECHANICAL SHEETS.
4. MILLWORK.
5. WALL BLOCKING / PLYWOOD IN THIS AREA TO BE PAINTED 'P-8'. PAINT WALL PER B/A4.1
6. WALL MOUNTED MIRROR
7. PATH FOR SENSORMATIC / EAS LOOP AND ASSOCIATED EQUIPMENT. G.C. TO PAINT EAS MOULDING / COVER TO MATCH ADJACENT SURFACE.
8. OWNER SUPPLIED / G.C INSTALLED SCENT MACHINE
9. PAINT WALL WITH POST SYSTEM. SEE DETAILS A-1.4 & F-1.1
10. 3/4" REVEALS AT 48" O.C. TO BE CENTERED AT PAINT WALL GYP. BD. SEE DETAILS A-1.4
11. VINYL ON GLAZING. SEE F-2.1
12. PAINT MIRROR FRAME 'P-8'
13. APPROXIMATE LOCATION OF TRANSFER GRILL. SEE MECHANICAL SHEETS.



B CAUTION TAPE PAINT SCALE 1/2"=1'-0"

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

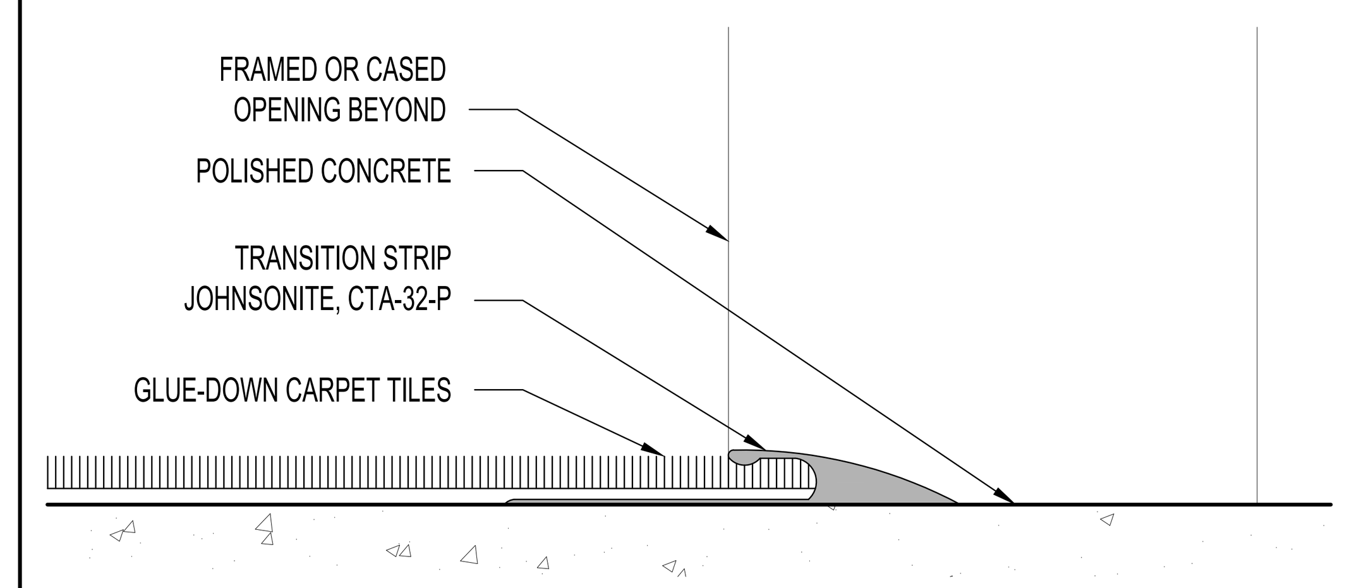
REVISIONS:	DATE:
ISSUE FOR PERMIT, LANDLORD, PRICING	06/18/25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

INTERIOR ELEVATIONS

DRAWN BY: SLS
CHECKED BY: SL
JOB NUMBER: 25303
SHEET NAME: A-4.1

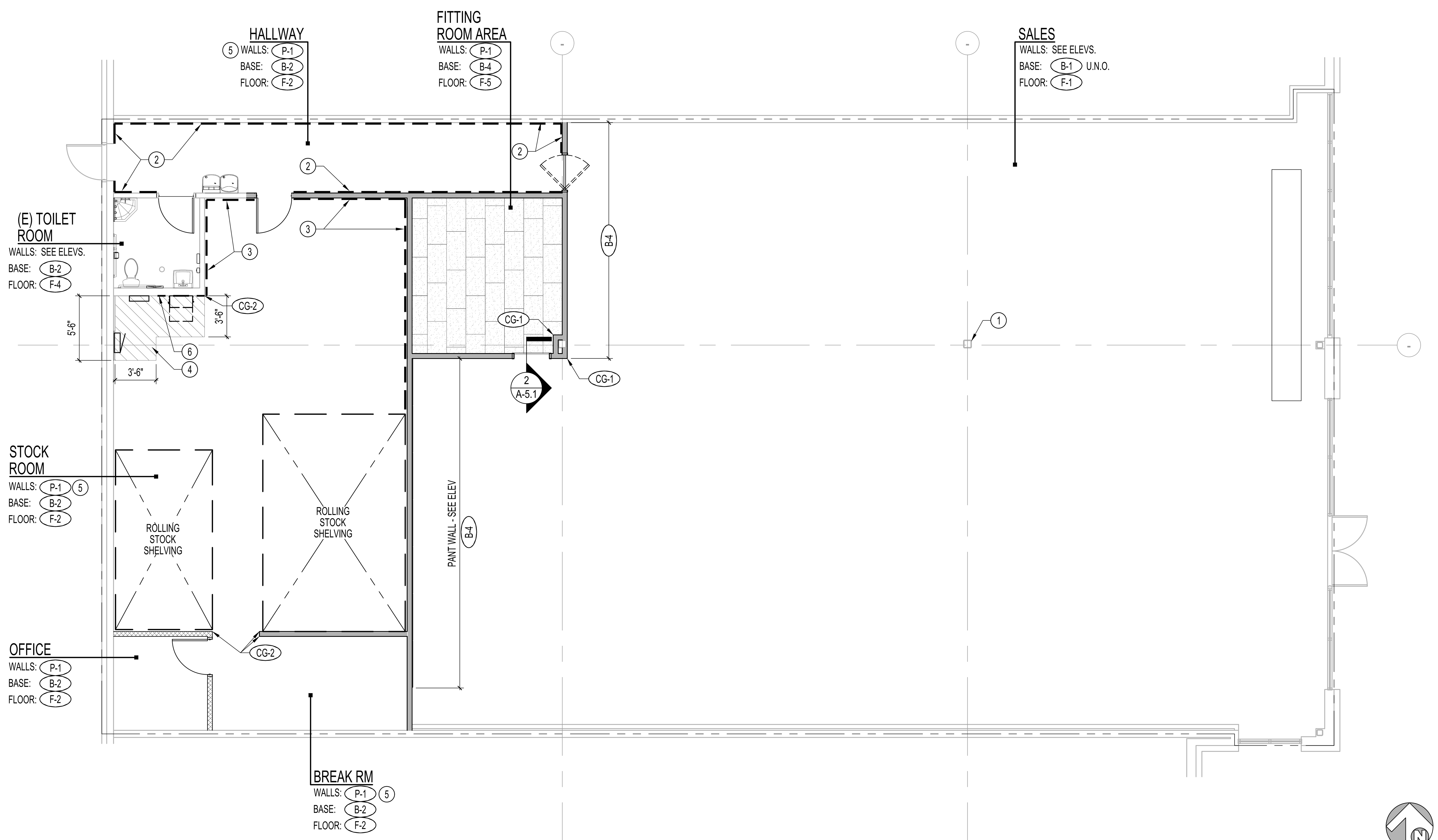


2 FLOOR TRANSITION - CONCRETE TO CARPET — SCALE 6" = 1'-0"

KEY NOTES

1. EXISTING STEEL COLUMNS. PAINT 'P-2' THROUGHOUT SALES AREA.
2. INSTALL 'WC-2' FLOOR TO 4'-0". PAINT TO MATCH ADJACENT WALL
3. INSTALL 'WC-2' FLOOR TO 8'-0". PAINT TO MATCH ADJACENT WALL
4. G.C. TO INSTALL A STRIPED PATH ON THE FLOORING. G.C. TO USE RED COLOR ON CONCRETE. 8" STRIPE / 8" UNPAINTED
5. WALLS SHALL BE PAINTED TO DECK. DO NOT PAINT DECK.

NOTE:
ALL WALLS AND SURFACES THAT ARE TO RECEIVE VINYL GRAPHICS MUST BE COMPLETE AT LEAST TEN (10) DAYS PRIOR TO THE END OF CONSTRUCTION. THIS INCLUDES PAINT TOUCH-UP.



1 FINISH PLAN — SCALE 3/16" = 1'-0"

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISIONS:	DATE:
ISSUE FOR PERMIT, LANDLORD, PRICING	06/18/25

JOSEPH A. [illegible] JR. — NUMBER [illegible] — ARCHITECT

carhartt
SUMMIT WOODS CROSSING

1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

FINISH PLAN

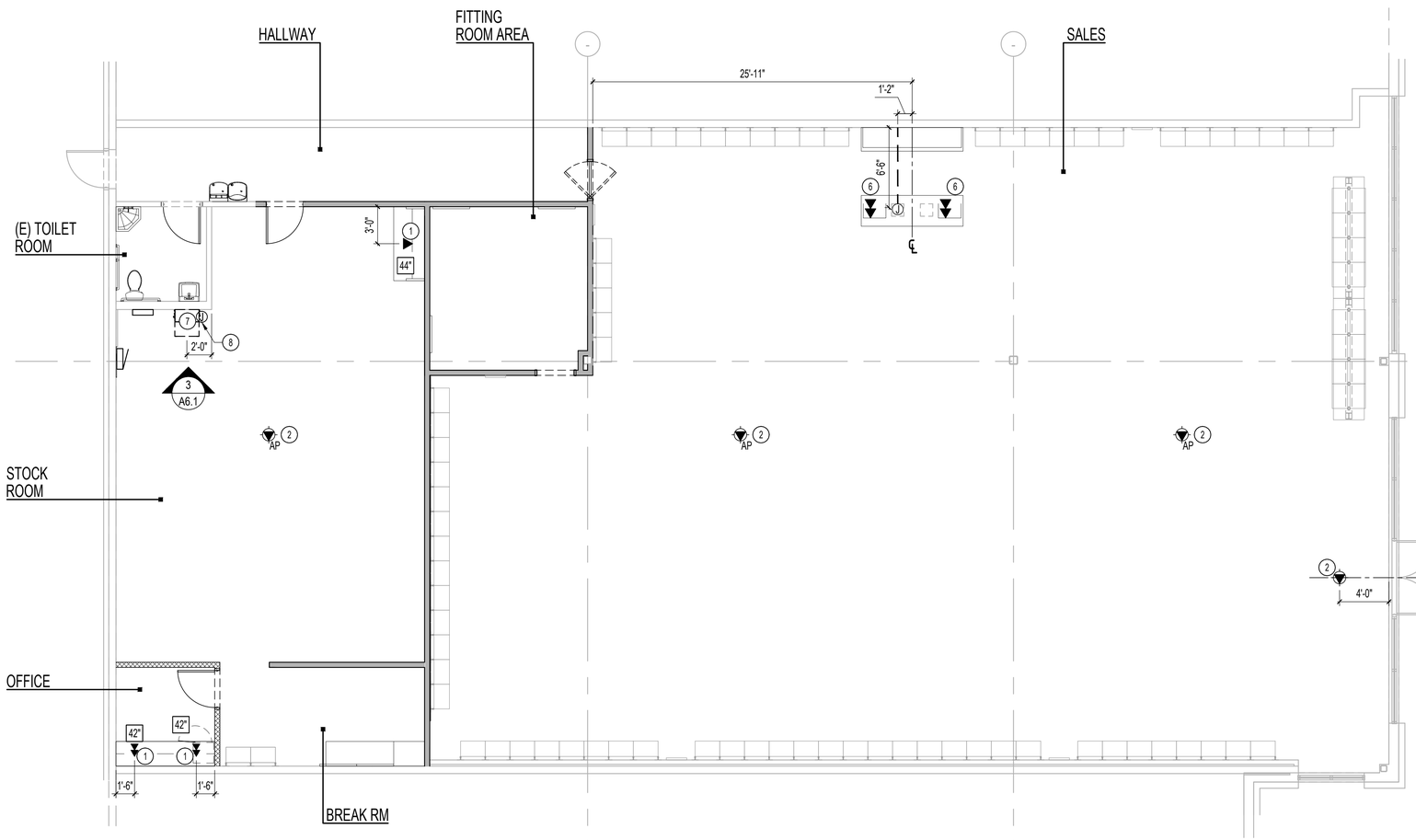
DRAWN BY: SLS
CHECKED BY: SL
JOB NUMBER: 25303
SHEET NAME: A-5.1

1. (WALL MOUNT) ROUTE (1) CAT 6 CABLE IN 3/4" CONDUIT FROM PATCH PANEL IN DATA RACK TO RECESSED SINGLE GANG J-BOX IN WALL. NO COVER PLATE IS NEEDED. CARHARTT'S TECH WILL EXTEND INTO THE BOXES AND TERMINATE. LEAVE SLACK SO THIS MAY BE TERMINATED. J-BOX SHALL BE INSTALLED AT HEIGHT SHOWN. J-BOX MAY BE SURFACE MOUNTED IF ON STEEL COLUMN OR MASONRY WALL. CONDUIT IS NOT REQUIRED AT CEILING / DECK OF SALES / STOCKROOM. LABEL BOTH ENDS OF THE CABLE.
2. (METAL DECK MOUNT) ROUTE (1) CAT 6 CABLE IN 3/4" CONDUIT FROM PATCH PANEL IN DATA RACK TO J-BOX SUSPENDED FROM THE DECK. J-BOX SHALL QUAD J-BOX WITH SINGLE GANG DEVICE RING AND SHALL BE SUSPENDED AT 11'-6" A.F.F. WITH CONDUIT TO DECK. CONDUIT IS NOT REQUIRED AT CEILING / DECK OF STOCKROOM OR SALES AREA BUT IS REQUIRED IN THE WALLS FOR THE VERTICAL PORTION OF THE RUN IN THE SALES AREA. SEE 2C/A6. LABEL BOTH ENDS OF THE CABLE.
3. NOT USED (CONCRETE DECK MOUNT / WOOD JOIST AND DECK MOUNT) ROUTE (1) CAT 6 CABLE IN 3/4" CONDUIT FROM PATCH PANEL IN DATA RACK TO J-BOX SUSPENDED FROM THE DECK. J-BOX SHALL QUAD J-BOX WITH SINGLE GANG DEVICE RING AND SHALL BE SUSPENDED AT 11'-6" A.F.F. WITH CONDUIT TO DECK. REVIEW LOCATIONS WITH REQUIRED LOW VOLTAGE WIRING SUB-CONTRACTOR PRIOR TO INSTALLING CONDUIT. CONDUIT IS NOT REQUIRED AT CEILING / DECK OF STOCKROOM BUT IS REQUIRED AT CEILING / DECK OF SALES AREA. LABEL BOTH ENDS OF THE CABLE.
4. NOT USED (CEILING MOUNT) ROUTE (1) CAT 6 CABLE FROM PATCH PANEL IN DATA RACK TO J-BOX ABOVE CEILING. LOOP CABLE ABOVE CEILING USING PROPER SUPPORTS. J-BOX TO BE MOUNTED WITHIN 18" ABOVE CEILING AND 24" OF DEVICE LOCATION SHOWN. PROVIDE 10' OF SERVICE LOOP ON SECONDARY END. CONDUIT IS NOT REQUIRED AT CEILING / DECK OF STOCKROOM. LABEL BOTH ENDS OF THE CABLE.
5. NOT USED (EXTERIOR DOOR) ROUTE (1) CAT 6 CABLE IN 3/4" CONDUIT FROM PATCH PANEL IN DATA RACK TO WATERPROOF DUAL GANG J-BOX. J-BOX SHALL BE INSTALLED AT HEIGHT SHOWN. J-BOX MUST BE RECESSED UNLESS INSTALLED IF ON MASONRY WALL. LABEL BOTH ENDS OF THE CABLE.
6. (CASHWRAP) ROUTE SEVERAL CAT 6 CABLES IN CONDUIT FROM PATCH PANEL IN DATA RACK TO J-BOX IN CABINET. EXTEND CABLES TO THE CASHWRAP AND LEAVE LOOPED WITHIN THE CASHWRAP AT LOCATION OF LOCATION OF EMPTY J-BOX. PROVIDE SLACK SO THEY CAN BE EXTENDED TO THE ENDS OF THE CASHWRAP. LABEL BOTH ENDS OF THE CABLE. CARHARTT'S TECH WILL EXTEND INTO THE BOXES AND TERMINATE. INSTALL SINGLE GANG J-BOX FOR EACH POS AT INSIDE REAR SURFACE OF CABINET. SEE 2/A6.1. NUMBER OF CABLES ARE REPRESENTED ON THE PLAN WITH A TRIANGLE SYMBOL. USE INDUSTRY STANDARD FOR CONDUIT SIZE BASED ON THE QUANTITY OF CABLES SHOWN.
7. GC TO INSTALL OWNER SUPPLIED DATA RACK ON WALL AT THE HEIGHTS / LOCATIONS SHOWN ON 3/A6.1 ALL CABLES SHOULD BE LEFT NEXT TO THE RACK WITH PLENTY OF SLACK. THE CARHARTT TECH WILL EXTEND INTO THE RACK AND TERMINATE ON THE PATCH PANELS.
8. GC TO ROUTE TWO (2) CAT6 CABLES IN EXISTING LANDLORD CONDUIT FROM BUILDING TELCO ROOM / MDF TO TENENT'S DATA RACK AREA / IDF. ASSUME 300' FOR PRICING.

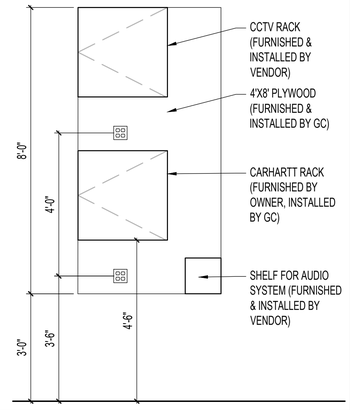
\- KEY NOTES - LOW VOLTAGE (#)

SYMBOL	DESCRIPTION
▼	DATA OUTLET
▼	CEILING MOUNTED DATA OUTLET
▼	FLOOR MOUNTED DATA OUTLET

\- SYMBOL LEGEND

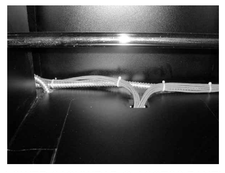


1 LOW VOLTAGE WIRING PLAN — SCALE 3/16"=1'-0"



3 SERVER ELEVATION — SCALE 1/2"=1'-0"

C DECK SUSPENDED J-BOXES



B LOWER CASHWRAP @ ACCESS PANEL

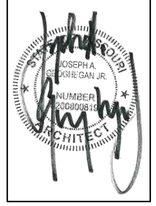
A INSIDE CASHWRAP

2 REFERENCE PHOTOS

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISIONS:	DATE:
ISSUE FOR PERMIT, LANDLORD, PRICING	06/18/25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com



carhartt

SUMMIT WOODS CROSSING

1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

LOW VOLTAGE PLAN

DRAWN BY
SLS
CHECKED BY
SL
JOB NUMBER
25303
SHEET NAME
A-6.1

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
07/29/2025

1. THIS PORTION OF CASHWRAP MEETS ACCESSIBILITY GUIDELINES AND IS 36" WIDE BY 24" DEEP, AND COUNTER TOP AT 34" AFF.
2. PROPOSED FIRE EXTINGUISHER LOCATION - CONFIRM WITH FIRE MARSHAL
3. REMOVE WOOD TRIM FROM THE SIDES OF THESE POSTS
4. INSTALL OWNER SUPPLIED CORK BOARD VERTICALLY, WITH BOTTOM AT 42" A.F.F.
5. INSTALL OWNER SUPPLIED DRY-ERASE BOARD VERTICALLY, WITH BOTTOM AT 52" A.F.F.

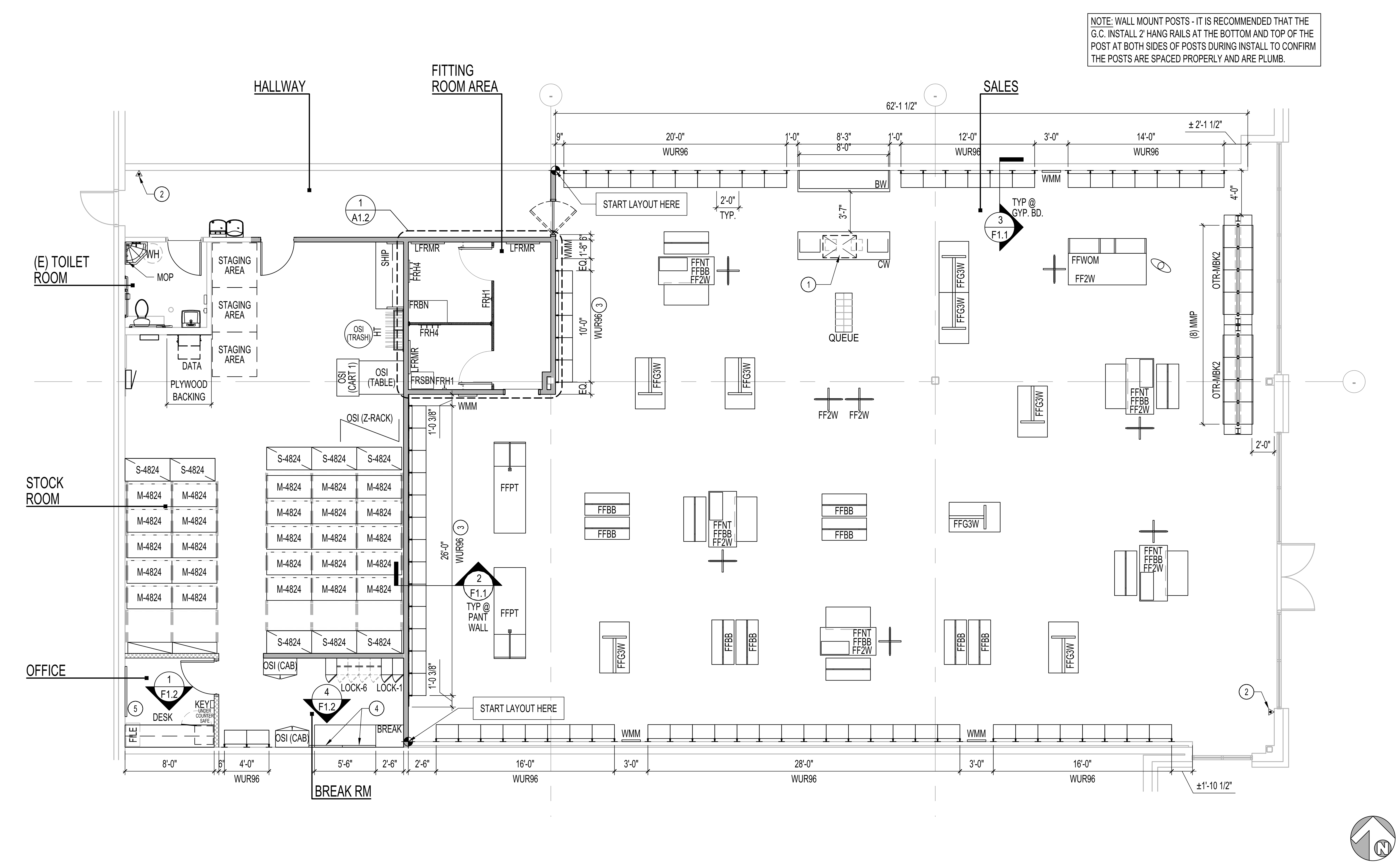
A KEY NOTES (#)

MARK	ITEM DESCRIPTION	NOT USED	EXIST	CONTRACTOR FURN.	CONTRACTOR INST.	VENDOR FURN.	VENDOR INST.	OWNER FURN.	OWNER INST.
BREAK	BREAK COUNTER - SEE F1.2			●	●				
DATA	DATA CABINET				●			●	
DESK	MANAGER'S DESK - SEE F1.2			●	●				
HT	HANGER MANAGEMENT SECTIONS WITH 12 H-BARS IN EACH SECTION				●			●	
LOCK-1	LOCKERS - ULINE : 12" X 18" X 72"				●			●	
LOCK-6	LOCKERS - ULINE: 72" X 18" X 72"				●			●	
M-XXXX	MOBILE STOCK SHELVING							●	●
MOP	MOP & BROOM RACK ABOVE MOP SINK				●			●	
SHIP	PACKING STATION				●			●	
S-XXXX	STATIONARY STOCK SHELVING							●	●
CAB	STORAGE & CABINET WITH DOORS. SHORTER UNIT IN TOILET ROOM.				●			●	
OSI	OWNER SUPPLIES EQUIP.				●			●	
FILE	FILE CABINET (UNDER-COUNTER)				●			●	
KEY	KEY BOX				●			●	

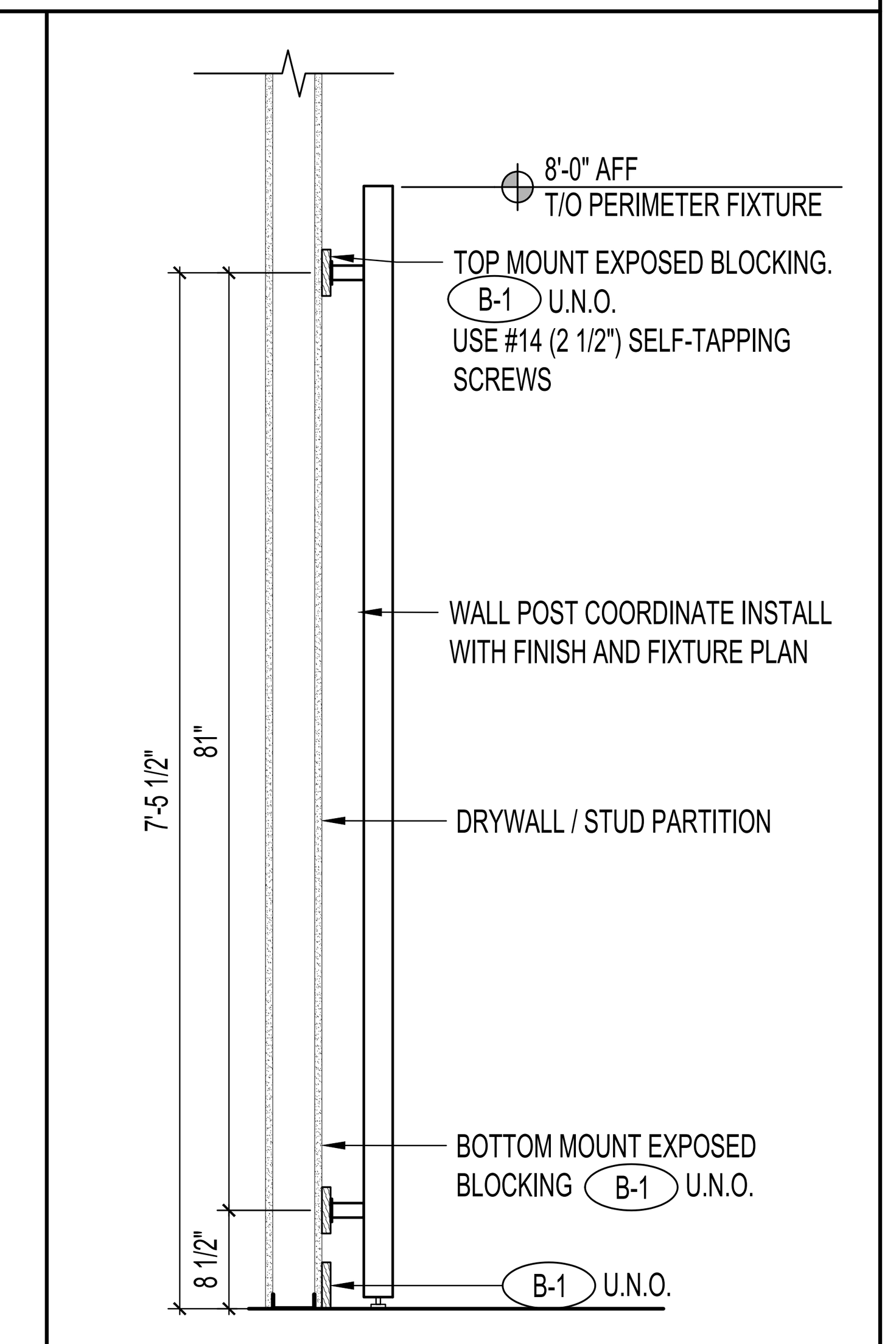
B STOCKROOM FIXTURE SCHEDULE

MARK	FIXTURE ITEM DESCRIPTION	NOT USED	EXIST.	CONTRACTOR FURN.	CONTRACTOR INST.	G+B* FURN.	G+B* INST.	VERMONT STORE FIXTURES FURN.	VERMONT STORE FIXTURES INST.	OWNER FURN.	OWNER INST.
BW	BACKWRAP				●	●					
CW	CASHWRAP				●	●					
CMP96	POST - CEILING MOUNT (96" CEILING)	●									
CMP144	POST - CEILING MOUNT (144" CEILING)	●									
FF2W	T-STAND				●	●					
FFBB	BALLET BAR				●	●					
FFC30	CUBE FIXTURE - 30" SQUARE	●									
FFG3W	GONDOLA - 3 WAY				●	●					
FFNT	NESTING TABLE SET WITH RISER				●	●					
FFPT	PANT TABLE				●	●					
FFWOM	WOMEN'S FIXTURE DISPLAY				●	●					
FRH1	FITTING ROOM HOOK - 1 - SEE A1.2 FOR SPEC			●	●						
FRH4	FITTING ROOM HOOKS - 4 SEE A1.2 FOR SPEC			●	●						
FRMR	FITTING ROOM MIRROR				●	●					
FRBN	FITTING ROOM BENCH - ADA				●	●					
FRSBN	FITTING ROOM BENCH - SMALL				●	●					
LFRMR	ILLUMINATED WALL MOUNTED MIRROR SEE A-1.2 FOR SPEC.			●	●						
MMP	METAL MESH PANEL				●	●					
OTR-MBK	POST SYSTEM ON BASE FOR CONCRETE	●									
OTR-MBK2	POST SYSTEM ON BASE FOR CONCRETE				●	●					
OTR-K	POST SYSTEM ON BASE	●									
QUEUE	QUEUE SYSTEM				●	●					
WMM	WALL MOUNT MIRROR				●	●					
WUR96	POST - WALL MOUNT				●	●					

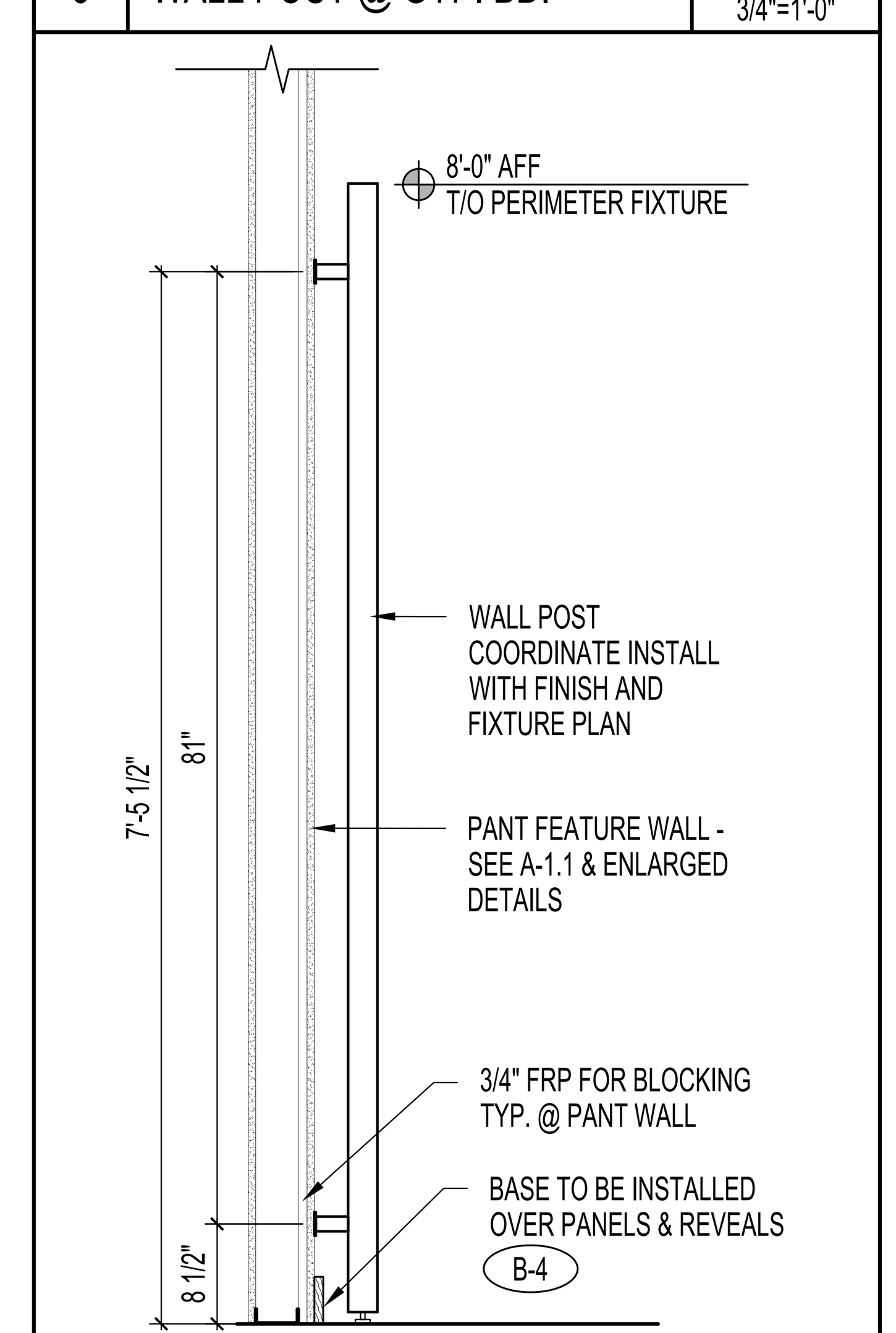
C FIXTURE SCHEDULE • ASSEMBLY REQUIRED FOR ALL G+ B FIXTURES



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



3 WALL POST @ GYP. BD.
SCALE 3/4"=1'-0"



2 WALL POST @ PANT WALL
SCALE 3/4"=1'-0"

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISIONS:	DATE:
ISSUE FOR PERMIT, LANDLORD, PRICING	06/18/25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

carhartt
SUMMIT WOODS CROSSING

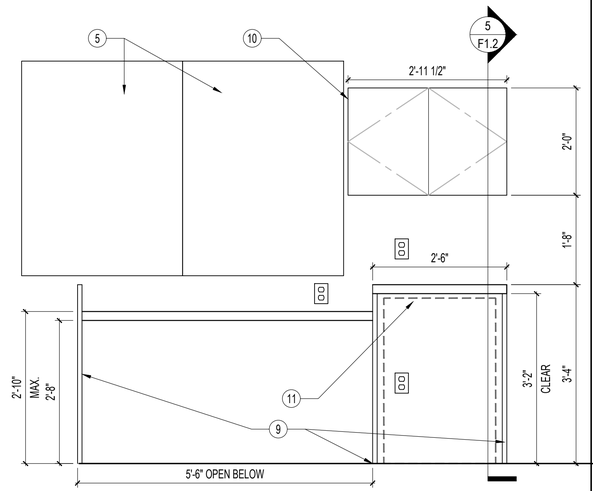
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

FIXTURE PLAN, SCHEDULE & NOTES

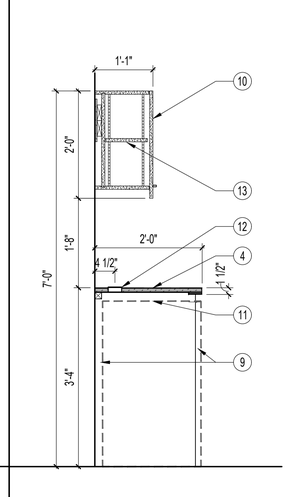
DRAWN BY: SLS
CHECKED BY: SL
JOB NUMBER: 25303
SHEET NAME: F-1.1

1. 3/4" THICK FIRE RATED PLYWOOD MOUNTING BOARD (PAINT TO MATCH WALL)
2. MANAGERS AREA
   - 2.1. STANDARDS: CAPITOL HARDWARE - 2000-00649 - C-LINE CHROME SLOTTED STANDARDS
   - 2.2. BRACKETS: CAPITOL HARDWARE - 2001-01403 - BRACKET - 14" WITH THUMB SCREW - ZINC
   - 2.3. SHELF REST: CAPITOL HARDWARE - 2075-00001 - CENTER - FOR C-LINE BRACKETS - ZINC
   - 2.4. 14" DEEP SHELF - WHITE MELAMINE
3. HANGBAR AREA:
   - 3.1. STANDARDS: CAPITOL HARDWARE - 2000-00649 - C-LINE CHROME SLOTTED STANDARDS
   - 3.2. BRACKETS: CAPITOL HARDWARE - 2001-01603 - BRACKET - 16" WITH THUMB SCREW, ZINC
   - 3.3. HANGRAIL ADAPTER: CAPITOL HARDWARE - 2039-30078 - ADAPTER WITH SPRING CLAMP FOR 1" DIAMETER ROUND TUBE - CHROME
   - 3.4. HANGRAIL: CAPITOL HARDWARE - 646-30847 - 1" DIAMETER ROUND TUBE
   - 3.5. END CAP: CAPITOL HARDWARE - 652-30047 - END CAP FOR 1" DIAMETER ROUND TUBE - CHROME
4. PLASTIC LAMINATE COUNTERTOP - WHITE
5. INSTALL OWNER SUPPLIED CORK BOARD HORIZONTALLY, WITH BOTTOM AT 42" A.F.F.
6. NOT USED
7. ALL POWER & DATA @ DESK SHALL BE MOUNTED @ +38"
8. 2'-6" d. WHITE LAMINATED COUNTERTOP W/MATCH SUPPORTS.
9. LAMINATE SUPPORTS AT EDGES OF COUNTERTOP
10. PLASTIC LAMINATE FINISH. SHELF UNIT HUNG ON CONTINUOUS WOOD CLEARS AT WALL. REINFORCE W/ PLYWOOD BACKING AT WALL & BLOCKING IN WALL-PLASTIC LAMINATE
11. OUTLINE OF UNDER COUNTER REFRIGERATOR (20"w. x 35"h. x22"d)
12. LOCATION OF 3" DIA. GROMMET W/ COVER (2 TYP.)
13. ADJUSTABLE SHELF ON RECESSED PILASTER STANDARDS
14. LOCATION OF VERTICAL FILING CABINET (15" W X 25" D X 29" H)
15. LOCATION OF SAFE (20" W X 20" D X 20" H)

7 ELEVATION KEY NOTES



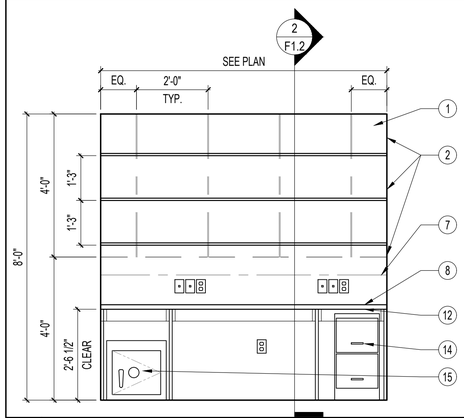
4 BREAK COUNTER ELEVATION — SCALE 3/4"=1'-0"



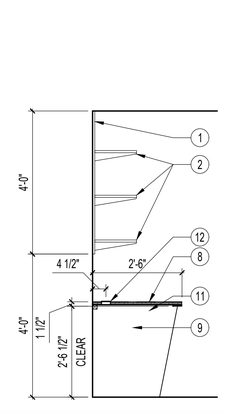
5 BREAK COUNTER SECTION — SCALE 3/4"=1'-0"

NOTE:
BREAK ROOM AND MANAGER'S DESK COUNTERTOPS MAY BE SOURCED FROM PRE-MANUFACTURED / IN-STOCK COUNTERTOPS IN A NEUTRAL COLOR AT LOCAL HOME IMPROVEMENT CENTER.

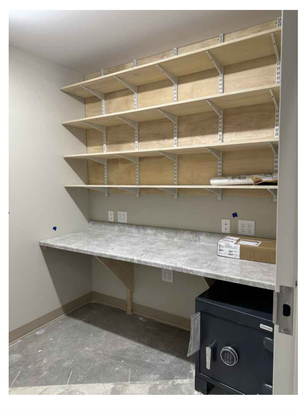
6 BREAK COUNTER - REFERENCE PHOTO



1 MANAGER'S DESK ELEVATION — SCALE 1/2"=1'-0"



2 MANAGER'S DESK SECTION — SCALE 1/2"=1'-0"

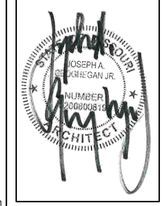


3 MANAGERS DESK - REFERENCE PHOTO

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISIONS:	DATE:
ISSUE FOR PERMIT, LANDLORD, PRICING	06/18/25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com



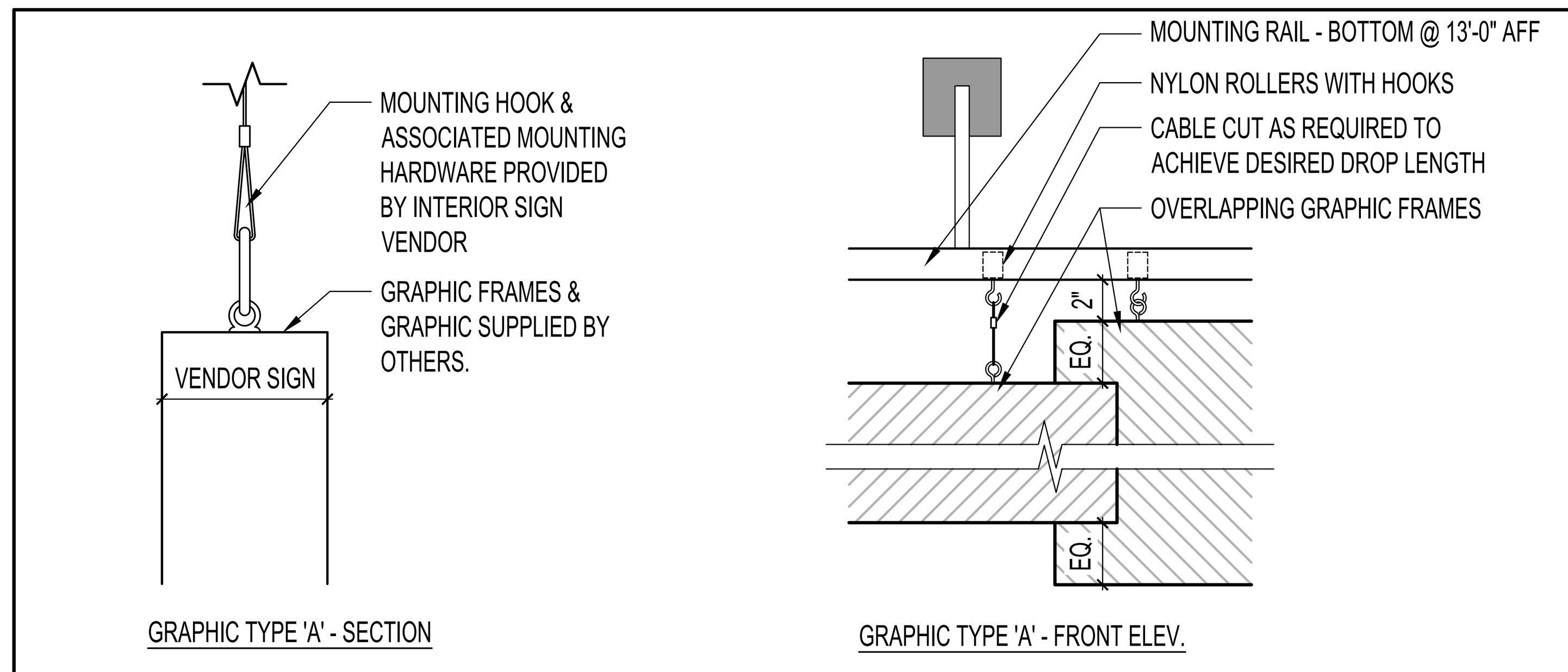
carhartt

SUMMIT WOODS CROSSING

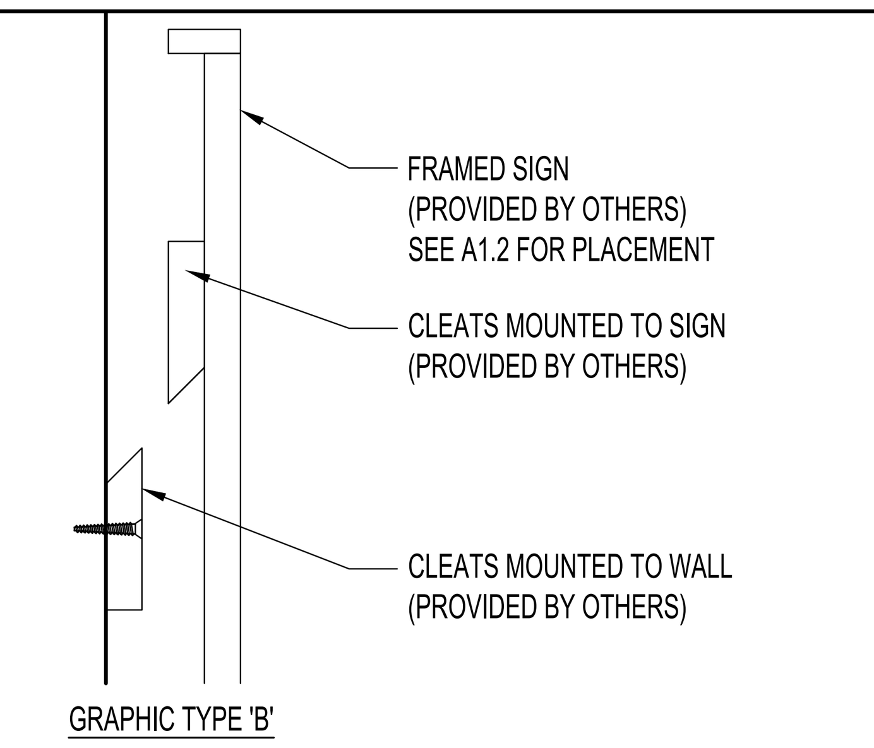
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

FIXTURE DETAILS

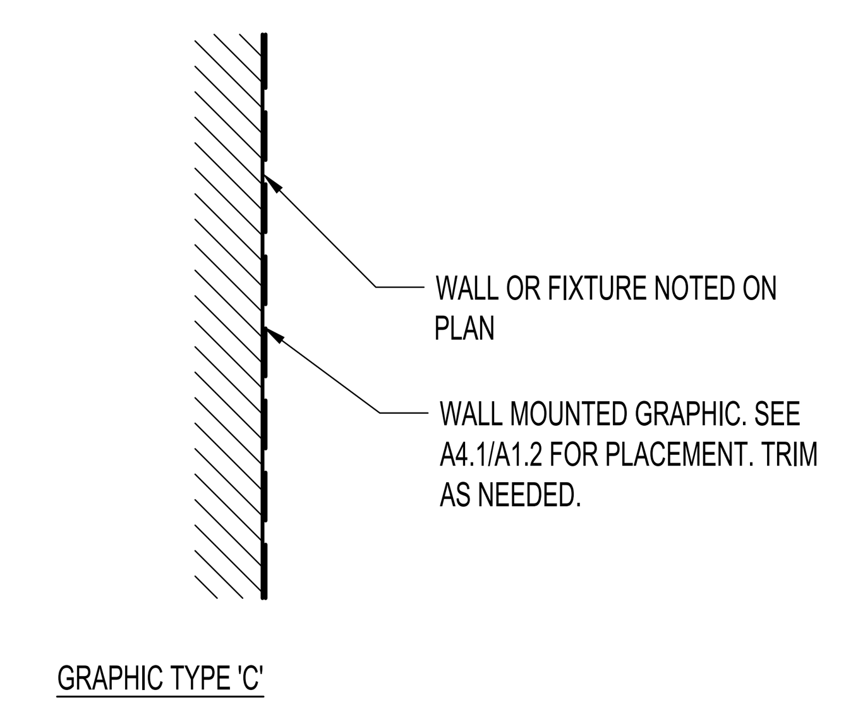
DRAWN BY	SLS
CHECKED BY	SL
JOB NUMBER	25303
SHEET NAME	F-1.2



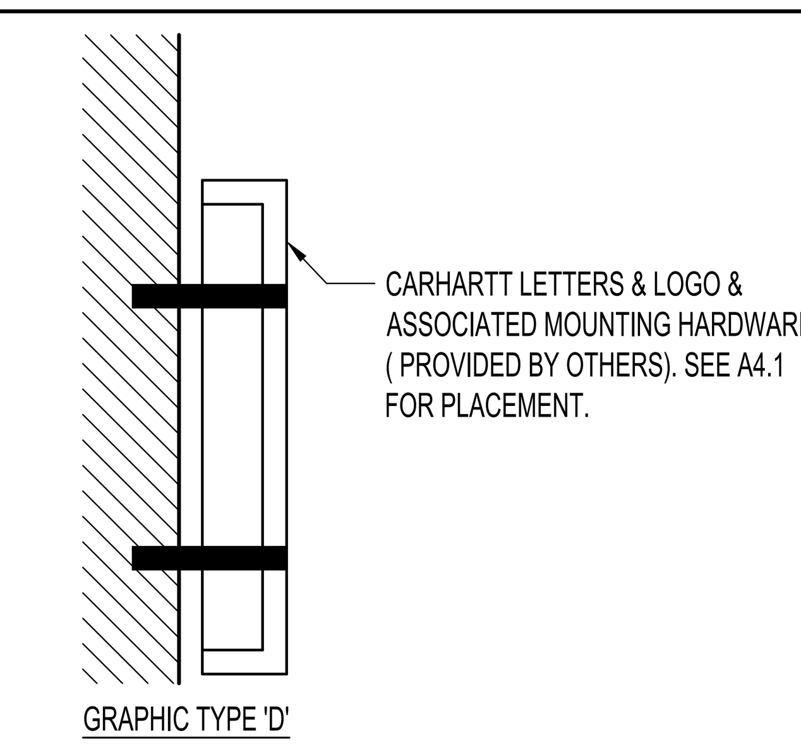
A HANGING GRAPHIC SIGN DETAIL — SCALE: NONE



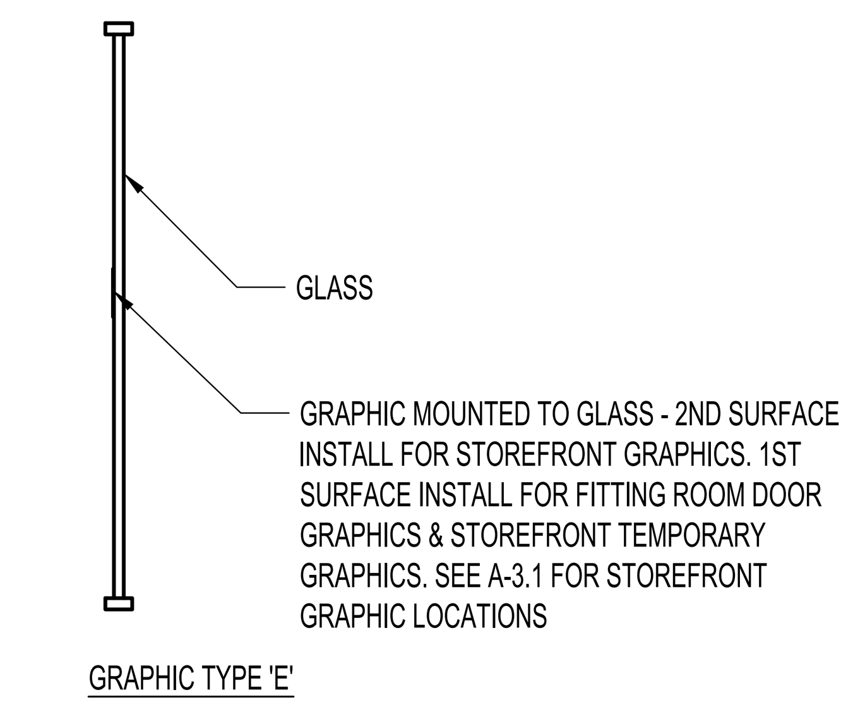
B FRAMED SIGN DETAIL — SCALE: NONE



C WALL MOUNTED SIGN DETAIL — SCALE: NONE



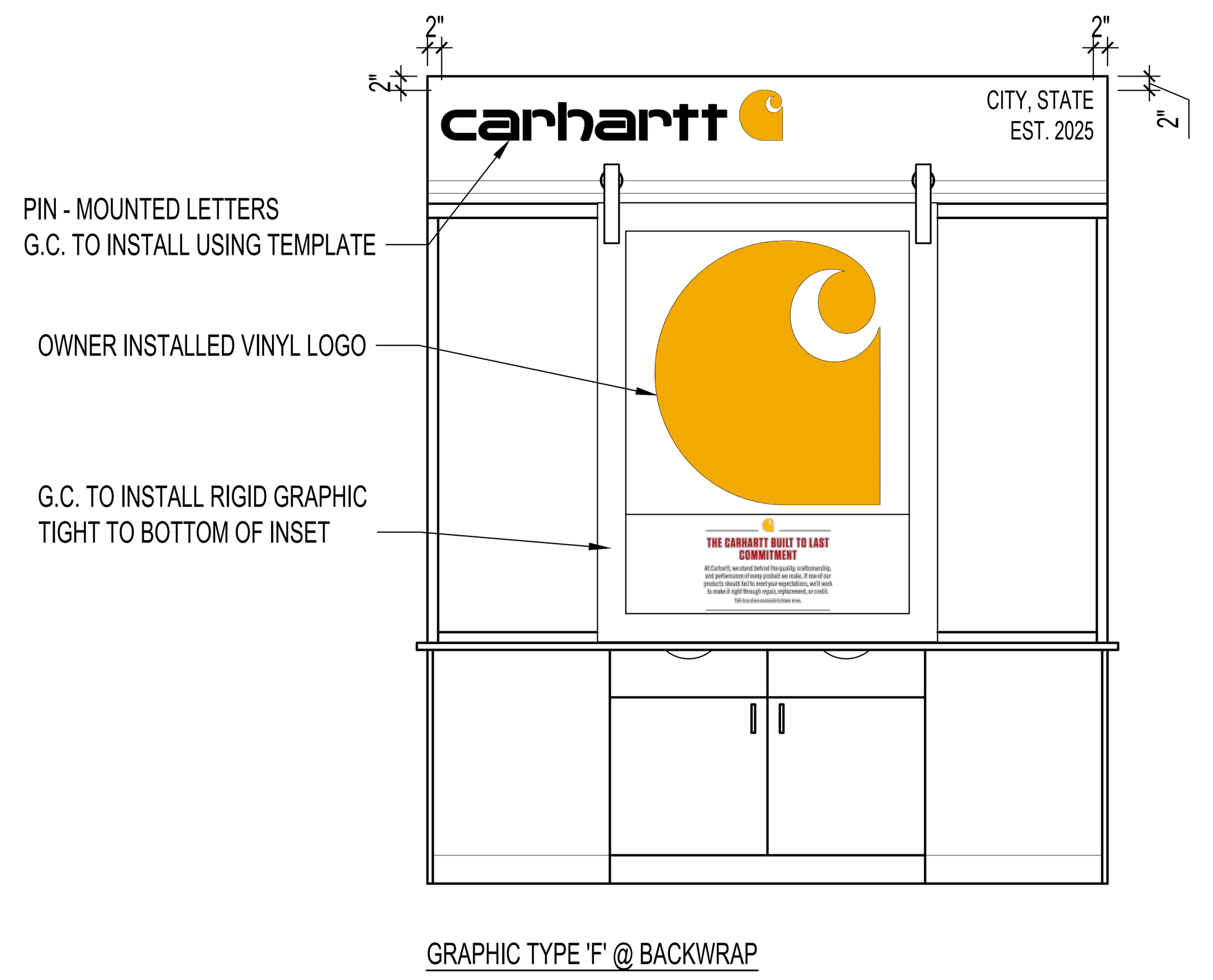
D PIN MOUNTED SIGN DETAIL — SCALE: NONE



E GLAZING GRAPHICS DETAIL — SCALE: NONE

2 KEY NOTES

1. SUSPENDED GRAPHIC FRAME : G.C. TO ASSEMBLE & INSTALL SUSPENDED FRAME. SUSPEND FROM GRAPHIC RAIL NYLON ROLLERS ABOVE. SEE A/F2.1.
2. FRAMED SIGN : G.C. TO INSTALL FRAMED SIGNS. MOUNT WITH CLEATS. PROVIDE CONCEALED BLOCKING. SEE B/F2.1.
3. VINYL GRAPHICS ON WALL / WOOD DOOR : SEE C/F2.1
4. PROJECTED PIN MOUNTED SIGN : G.C. TO INSTALL PIN MOUNTED LETTERS & LOGO ON WC-1. SEE D/F2.1
5. VINYL GRAPHIC ON GLAZING : SEE E/F2.1.
6. BACKWRAP GRAPHICS : SEE F/F2.1
7. VINYL GRAPHIC ON GLAZING : OWNER FURNISHED, G.C. INSTALLED WITHIN THE FIRST 5 DAYS OF CONSTRUCTION. SEE E/F2.1. G.C. SHALL REMOVE VINYL AT THE END OF CONSTRUCTION.



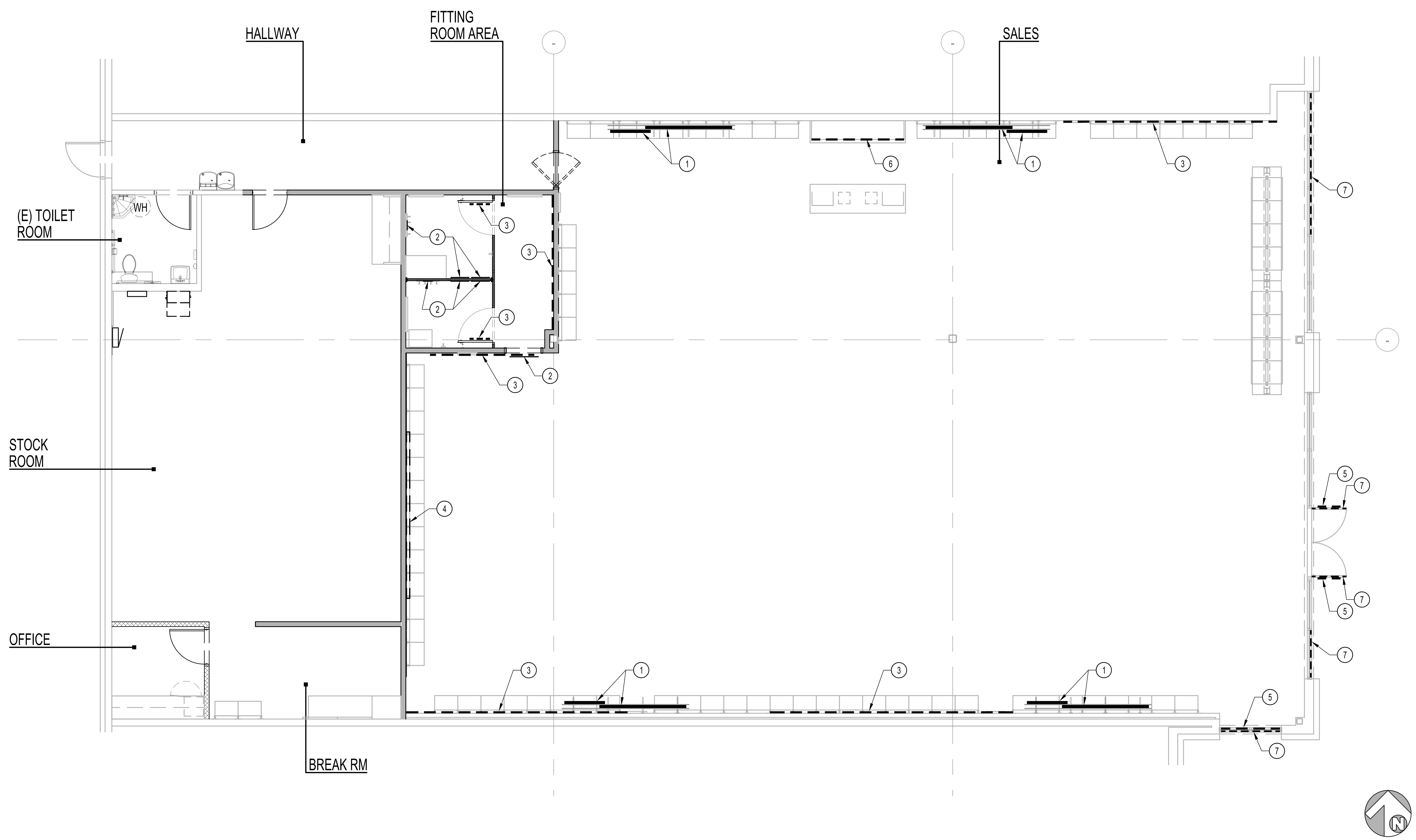
F BACKWRAP GRAPHIC SIGN DETAIL — SCALE: 1/2" = 1'-0"

SEE GRAPHIC INSTALLATION GUIDELINES FOR LOCATIONS

NOT ALL INTERIOR SIGNS / GRAPHICS ARE SHOWN.
ONLY THOSE REQUIRING GC ASSEMBLY / INSTALLATION ARE SHOWN.

SEE INTERIOR ELEVATIONS FOR GRAPHIC IMAGES

ALL GRAPHICS / INTERIOR SIGNAGE ARE FURNISHED BY OWNER.
SEE SHEET G-0.2 FOR 'INSTALLED BY' RESPONSIBILITY



1 INTERIOR SIGNAGE & GRAPHICS PLAN — SCALE: 3/16" = 1'-0"

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
07/29/2025

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISIONS:	DATE:
ISSUE FOR PERMIT, LANDLORD, PRICING	06/18/25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

JOSEPHA ... BERRIGAN JR. ... NUMBER ... ARCHITECT

carhartt
SUMMIT WOODS CROSSING

1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

INTERIOR SIGNAGE & GRAPHIC PLAN & DETAILS

DRAWN BY: SLS
CHECKED BY: SL
JOB NUMBER: 25303
SHEET NAME: F-2.1

GENERAL ELECTRICAL INSTALLATION NOTES

A. CODE COMPLIANCE: PROVIDE ALL ELECTRICAL WORK COMPLIANT WITH ALL PREVAILING CODES.

B. LISTINGS: PROVIDE MATERIALS, COMPONENTS AND ASSEMBLED COMPONENTS WITH LISTINGS AND LABELS FROM A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL), MANUFACTURED, LISTED AND LABELED FOR THEIR INTENDED USE.

C. RATED BUILDING SURFACES: SEPARATE DEVICE BOXES BY A MINIMUM OF 6 INCHES WHERE INSTALLED BACK-TO-BACK WITHIN DEMISING WALLS TO MAINTAIN REQUIRED FIRE AND SOUND RATING (TYPICAL OF ALL DEVICE BOXES INSTALLED ON DEMISING WALLS). PROVIDE LISTED FIRE-RATED WRAPS AROUND ALL RECESSED OUTLET, DEVICE AND EQUIPMENT BOXES IN FIRE/SMOKE RATED WALLS, CEILINGS AND FLOORS TO MEET OR EXCEED THE RESPECTIVE FIRE/SMOKE RATING OF THE SURFACE.

D. RATED PENETRATIONS: SEAL ALL PENETRATIONS THROUGH FIRE-RATED AND/OR SMOKE-RATED MEMBRANES (FLOORS, WALLS, CEILINGS, ETC.) USING SEALANT PRODUCTS THAT MEET OR EXCEED THE RATING OF THE RESPECTIVE MEMBRANE.

E. GANGED DEVICES: INSTALL WIRING DEVICES GANGED WHEREVER POSSIBLE FOR INSTANCES WHERE THEY ARE SHOWN TOGETHER. THIS INCLUDES LOCATIONS ABOVE COUNTERS AND WORK SURFACES WHERE APPLICABLE.

F. OUTLET BOXES NEAR CORNERS: INSTALL WALL-MOUNTED SWITCHES, CONTROLS, RECEPTACLES, OUTLETS, ETC. AT LEAST 6 INCHES FROM WALL CORNERS.

G. CONCEALMENTS: CONCEAL ALL CONDUIT DROPS AND RISES WITHIN WALLS, AND PROVIDE FLUSH-MOUNTED WALL OUTLET BOXES UNLESS OTHERWISE INDICATED.

H. DOCUMENTS OF OTHER TRADES: REVIEW DOCUMENTS OF OTHER TRADES, INCLUDING ARCHITECTURAL, PRIOR TO SUBMITTING A BID. PROVIDE ELECTRICAL WORK FOR EQUIPMENT, DEVICES, ETC. OF OTHER TRADES AS REQUIRED TO RENDER THEM FULLY OPERATIONAL. REFER TO ARCHITECTURAL ELEVATIONS FOR INTENDED LOCATIONS AND MOUNTING HEIGHTS FOR EQUIPMENT AND OUTLETS, ETC. PRIOR TO COMMENCING WITH ANY RELATED ROUGH-IN WORK.

I. SCHEMATIC REPRESENTATIONS: CIRCUITING WORK SHOWN ON DRAWINGS IS FOR SCHEMATIC GENERAL GRAPHIC REPRESENTATION ONLY. DETERMINE SPECIFICS IN FIELD (POINT-TO-POINT ROUTING, HOME-RUN LOCATIONS, METHODS OF CONCEALMENT, ETC.). LOCATIONS AND ROUTING INDICATED ON PLANS ARE SCHEMATIC AND DIAGRAMMATIC IN NATURE. LAYOUT AND INSTALL ALL ELECTRICAL WORK IN STRICT COMPLIANCE WITH CHAPTER 1, PART II, ARTICLE 110.26 OF THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70).

J. HOME-RUN DESIGNATIONS: HOME-RUN DESIGNATIONS INDICATED ON PLANS ARE SCHEMATIC DESIGNATIONS ONLY. DETERMINE EXACT CIRCUIT ASSIGNMENTS IN FIELD BASED ON FIELD CONDITIONS. PROVIDE COLOR-CODED CONDUCTOR INSULATION ACCORDINGLY, CODED PROPERLY DEPENDING ON SYSTEM, PHASE, NEUTRAL, ETC. PROVIDE EQUIPMENT AND PANELBOARD SCHEDULES THAT ACCURATELY INDICATE INSTALLED CONDITIONS.

K. LOCAL DISCONNECTS AND CONTROLS AT EQUIPMENT: LOCAL DISCONNECTS AND LOCAL CONTROLS SHOWN AT OR ON EQUIPMENT IN PLAN-VIEW ARE SHOWN FOR SCHEMATIC ASSOCIATIONS ONLY. AVOID INSTALLING DISCONNECTS OR CONTROLS ON EQUIPMENT ENCLOSURES. INSTALL ON ADJACENT WALLS OR BUILDING STRUCTURE, OR PROVIDE FIELD-FABRICATED UNISTRUT OR EQUIVALENT ASSEMBLIES AS NEEDED. PROVIDE FIELD COORDINATION WITH SITE CONDITIONS AND OTHER TRADES, AND PROVIDE ALL RELATED WORK IN STRICT COMPLIANCE WITH NFPA 70, INCLUDING ARTICLE 110.26. PROVIDE A PERMANENT LABEL ON LOCAL DISCONNECTS NOTING THE EQUIPMENT IT SERVES AND THE PANEL AND CIRCUIT NUMBER FEEDING THE EQUIPMENT PER NFPA 70, ARTICLE 110.22(A).

L. EQUIPMENT & LOAD COORDINATION: REFER TO AND COORDINATE WITH POWER FLOOR PLANS, EQUIPMENT SCHEDULES (INCLUDING EQUIPMENT COORDINATION SCHEDULES), DRAWINGS OF ALL TRADES, ALL DIVISIONS AND SECTIONS OF SPECIFICATIONS AND INSTALLERS OF ALL TRADES. BASED ON ACTUAL EQUIPMENT BEING PROVIDED, DETERMINE AND PROVIDE APPROPRIATE BREAKERS, FUSES, CONDUCTORS, CONTROLS, POWER DISTRIBUTION EQUIPMENT, ETC. PERFORM THESE SERVICES PRIOR TO FURNISHING POWER DISTRIBUTION EQUIPMENT SUBMITTALS.

M. EXTERIOR ELECTRICAL WORK AND WORK SUBJECT TO MOISTURE: EXTERIOR ELECTRICAL WORK SHALL BE WEATHERPROOF AND WATER-TIGHT, AND SHALL BE RUST-RESISTANT. PROVIDE XHHW-2 CONDUCTORS FOR ALL APPLICATIONS THAT ARE BELOW GRADE OR SUBJECT TO MOISTURE. PROVIDE MINIMUM NEMA 3R ENCLOSURES FOR ALL OUTDOOR EQUIPMENT AND ALL INDOOR EQUIPMENT THAT IS SUBJECT TO MOISTURE. PROVIDE NEMA 1 ENCLOSURES FOR ALL OTHER INDOOR EQUIPMENT.

N. EQUIPMENT GROUNDING CONDUCTORS: PROVIDE EQUIPMENT GROUNDING CONDUCTORS IN STRICT COMPLIANCE WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70), INCLUDING ARTICLE 250 AND TABLE 250.122. THESE CONDUCTORS MAY OR MAY NOT BE INDICATED ON SINGLE-LINE DIAGRAMS OR ELSEWHERE, BUT SHALL BE PROVIDED UNDER BASE BID NEVERTHELESS.

O. OVERHEAD WORK: HOLD ALL NEW OVERHEAD ELECTRICAL WORK AS TIGHTLY AS POSSIBLE TO THE BOTTOM OF THE OVERHEAD STRUCTURE. DO NOT INSTALL ANY ELECTRICAL WORK WITHIN SIX INCHES OF ROOF DECKING.

P. COORDINATION DRAWINGS: LAYOUT ALL PROPOSED RACEWAY ROUTING, ELEVATIONS, INSTALLATION METHODS, ETC. ON COORDINATION DRAWINGS AND COORDINATE ALL PROPOSED RACEWAY ROUTING WITH ALL AFFECTED TRADES PRIOR TO COMMENCING WITH WORK. IN ADDITION, REVIEW THE INFORMATION WITH ARCHITECT, ENGINEER AND OWNER FOR ALL AREAS WHERE THE RACEWAYS WILL BE VISIBLE AFTER COMPLETION OF CONSTRUCTION.

Q. JUNCTION AND PULL BOXES: LOCATE JUNCTION AND PULL BOXES SO THAT THEY REMAIN ACCESSIBLE AFTER ALL CONSTRUCTION WORK IS COMPLETE. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO COMMENCEMENT OF THE WORK. LOCATE BOXES IN A MANNER THAT AVOIDS HAVING TO USE ACCESS PANELS. IF ACCESS PANELS ARE INEVITABLE, PROVIDE THEM RATED TO MEET OR EXCEED THE FIRE AND/OR SMOKE RATINGS OF THE RESPECTIVE CEILING OR WALL, AND OBTAIN APPROVAL OF DESIGN PROFESSIONALS FOR EACH LOCATION..

R. CONDUCTOR TERMINATIONS: IN CASES WHERE CONDUCTOR SIZES ARE TOO LARGE TO FIT INTO LUGS/TERMINALS, PROVIDE APPROPRIATE FACTORY LUG KITS FOR AFFECTED EQUIPMENT IF AVAILABLE. ELSEWHERE, PROVIDE INSULATED BUTT-SPLICES OR EQUIVALENT METHOD, WITH TAILS SIZED TO FIT LUGS/TERMINALS. PROVIDE SPLICES IN SEPARATE BOXES IF REQUIRED BASED ON FIELD CONDITIONS, BOX SIZE LIMITATIONS, ETC. CONCEAL BOXES IN ACCESSIBLE OVERHEAD JOIST SPACES IN FINISHED REGULARLY OCCUPIED AREAS.

S. TYPE MC, AC, NM, SE CABLE: WHERE MORE THAN TWO TYPE MC, AC, NM, OR SE CABLES CONTAINING TWO OR MORE CURRENT CARRYING CONDUCTORS IN EACH CABLE ARE INSTALLED IN CONTACT WITH THERMAL INSULATION, CAULK, OR SEALING FOAM MAINTAIN SPACING BETWEEN CABLES.

EXISTING CONDITIONS - GENERAL NOTES

A. INTENT OF DOCUMENTS: EXISTING CONDITIONS SHOWN ON THE DRAWINGS ARE BASED ON VISUAL FIELD OBSERVATIONS AND THE REVIEW OF PREVIOUS DRAWINGS THAT MAY NOT HAVE BEEN CERTIFIED "AS-BUILTS". IT IS NOT THE INTENT OF THE ELECTRICAL DOCUMENTS THAT EXISTING CONDITIONS BE ACCURATELY SHOWN. EXISTING ELECTRICAL WORK IS SHOWN TO A VERY LIMITED EXTENT ON THE DRAWINGS AND IS SHOWN FOR GENERAL PLANNING REFERENCE ONLY.

B. PRE-BID SURVEY: PERFORM A DETAILED PRE-BID WALK-THROUGH FIELD INSPECTION AND SURVEY TO REVIEW THE EXISTING STRUCTURES AND PREMISES, TO ACCURATELY DETERMINE EXISTING CONDITIONS, AND TO DETERMINE SCOPE OF REQUIRED ELECTRICALLY RELATED WORK. INCLUDE APPLICABLE ACCESSIBLE CEILING CAVITY AREAS IN THIS INSPECTION.

C. REUSE OF REMOVED MATERIALS: DO NOT REUSE REMOVED ELECTRICAL MATERIALS UNLESS SPECIFICALLY INDICATED IN PROJECT DOCUMENTS. EXISTING WIRING SYSTEMS MAY BE UTILIZED ONLY TO THE EXTENT INDICATED IN PROJECT DOCUMENTS, OR AS DIRECTED BY OWNER'S REPRESENTATIVE IN FIELD.

D. EXISTING POWER DISTRIBUTION EQUIPMENT: WHERE MODIFICATIONS ARE MADE TO EXISTING POWER DISTRIBUTION EQUIPMENT, COMPLETELY RE-TYPE PANELBOARD DIRECTORIES USING ACCURATE “AS-BUILT” INFORMATION. WHEN ADDING COMPONENTS TO EXISTING POWER DISTRIBUTION EQUIPMENT, PROVIDE FULL SIZE (NO SPLIT OR TANDEM DEVICES) OVERCURRENT PROTECTION DEVICES (OCPs) TO MATCH THOSE ALREADY IN PLACE, INCLUDING MANUFACTURER, MODEL/SERIES, SHORT CIRCUIT CURRENT (SCCR/AIC) RATINGS. PROVIDE COMMON TRIPS (NO FIELD-INSTALLED HANDLE TIES) IN THE SAME GUTTER FOR MULTI-POLE DEVICES. PROVIDE SWITCHING DUTY (SWD), HACR AND HID RATINGS WHERE APPLICABLE FOR LOADS. PROVIDE HANDLE LOCK-ON DEVICES FOR EMERGENCY AND CRITICAL LOADS.

E. EXISTING BRANCH CIRCUITS: MAINTAIN, AND RECONNECT IF REQUIRED, BRANCH CIRCUITS THAT ARE EXISTING TO REMAIN. UNLESS NOTED OTHERWISE, ALL CIRCUIT DESIGNATIONS SHOWN ON THE DRAWINGS INDICATE NEW CIRCUIT ASSIGNMENTS, NOT EXISTING. WHERE COLOR CODING OF BRANCH CIRCUIT CONDUCTORS DOES NOT COMPLY WITH NFPA 70 OR IS NOT CONSISTENT WITH EXISTING CONDITIONS, MODIFY TO COMPLY.

F. ADDED LOADS TO EXISTING CIRCUITS: IN CASES WHERE NEW LOADS ARE INDICATED TO BE CONNECTED TO EXISTING CIRCUITS WITH EXISTING LOADS, METER THE EXISTING CIRCUIT IN ADVANCE AND ENSURE THE EXISTING PLUS ADDED LOAD DOES NOT EXCEED 80 PERCENT OF THE SOURCE CIRCUIT BREAKER AMPERE RATING. IF THAT LOAD IS EXCEEDED, NOTIFY DESIGN PROFESSIONAL.

G. REASSIGNMENT OF EXISTING CIRCUITS: IN CASES WHERE EXISTING CIRCUITS ARE REUSED (BASED ON INFORMATION SHOWN ON DRAWINGS OR BASED ON FIELD CONDITIONS) BUT MUST BE CONNECTED TO BREAKERS OTHER THAN THEIR ORIGINAL BREAKER, MODIFY COLOR-CODING AS REQUIRED IF THE NEW BREAKER ASSIGNMENT IS CONNECTED TO A DIFFERENT LINE/PHASE THAN THE ORIGINAL ONE. USE MEANS AND METHODS COMPLIANT WITH NFPA 70 AND WITH AUTHORITIES HAVING JURISDICTION.

H. ELECTRICAL WORK TO REMAIN OR BE RELOCATED: IF REQUIRED TO ACCOMMODATE CONSTRUCTION RELATED ACTIVITIES OR WHERE SPECIFICALLY SHOWN ON THE DRAWINGS, TEMPORARILY REMOVE, STORE IN PROTECTED LOCATION ON SITE, AND REINSTALL CONFLICTING ELECTRICAL EQUIPMENT, LUMINAIRES, OR DEVICES THAT ARE TO REMAIN OR TO BE RELOCATED.

I. PROTECTIVE BARRIERS: PROVIDE AND MAINTAIN TEMPORARY PARTITIONS AND DUST BARRIERS ADEQUATE TO PREVENT THE SPREAD OF DUST AND DIRT TO ADJACENT FINISHED AREAS AND OTHER SYSTEM COMPONENTS. PROTECT ADJACENT INSTALLATIONS DURING CUTTING AND PATCHING OPERATIONS. REMOVE PROTECTION AND BARRIERS AFTER DEMOLITION OPERATIONS ARE COMPLETE. PREVENT AIRBORNE DUST AND PARTICULATE MATTER RESULTING FROM ELECTRICAL WORK FROM ENTERING OCCUPIED SPACES, AND FROM ENTERING AIR INTAKES TO OPERATING HVAC SYSTEMS. MEET WITH OWNER AND HVAC INSTALLER TO DETERMINE SPECIAL INDOOR AIR QUALITY (IAQ) REQUIREMENTS RELATED TO ELECTRICAL THAT MAY APPLY TO THIS PROJECT. COOPERATE FULLY WITH HVAC IAQ REQUIREMENTS THAT AFFECT ELECTRICAL WORK AND ARE AFFECTED BY ELECTRICAL WORK.

J. PENETRATIONS: MAKE REQUIRED ELECTRICAL OPENINGS THROUGH WALLS, FLOORS, ETC. IMMEDIATELY PRIOR TO INSTALLATION OF WORK. PROPERLY AND PERMANENTLY SEAL ELECTRICAL OPENINGS IMMEDIATELY AFTER INSTALLATION OF WORK. PROVIDE TEMPORARY SEALS FOR APPLICATIONS WHERE PENETRATIONS ARE MADE BUT CANNOT BE PERMANENTLY SEALED WITHIN FOUR HOURS.

K. PRE-EXISTING CODE VIOLATIONS: INSPECT EXISTING ELECTRICAL WORK IN AREAS ACCESSED UNDER THIS PROJECT AND BRING INTO COMPLIANCE WITH NFPA 70. THIS APPLIES ONLY TO THE EXTENT THAT SUCH WORK IS UNCOVERED IN THE IMMEDIATE PROJECT AREAS AFFECTED BY CONSTRUCTION ACTIVITIES, AND ONLY TO THE LIMITED EXTENT THAT IT APPLIES TO PRE-EXISTING GENERAL INSTALLATION METHODS SUCH AS MISSING JUNCTION BOX PLATE, OPEN JUNCTION BOX KNOCKOUT, MINOR CONDUIT RE-ANCHORING AND MINOR EXPOSED WIRING/CONNECTIONS. IF MORE EXTENSIVE CODE OR SAFETY VIOLATIONS ARE DISCOVERED, IMMEDIATELY BRING THEM TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE (DETAILED IN WRITING) ALONG WITH PROPOSED COST FOR CORRECTIONS AND IMPACT (IF ANY) ON THE CONSTRUCTION SCHEDULE.

L. TEMPORARY LIGHTING AND POWER: COMPLY WITH NFPA 70 (INCLUDING ARTICLE 590), NFPA 70E AND ALL OTHER PREVAILING CODES. PROVIDE SUFFICIENT LIGHTING AND POWER CENTERS THROUGHOUT INTERIOR OF NEW WORK OR RENOVATION SCOPE. PROVIDE GFCI PROTECTION FOR ALL WORK. COORDINATE WITH GENERAL CONTRACTOR AND OTHER TRADES, AND PROVIDE ANY ADDITIONAL TEMPORARY ELECTRICAL NEEDS THAT ARE REQUIRED. FULLY DEMOLISH TEMPORARY ELECTRIC BY END OF PROJECT. UPON RECEIVING WRITTEN PERMISSION FROM OWNER’S REPRESENTATIVE, TEMPORARY ELECTRICAL SERVICE(S) MAY BE DERIVED FROM EXISTING BUILDING ENERGIZED SERVICE. PROVIDE OVERCURRENT PROTECTION, DISCONNECTS, CABLES, CONDUCTORS, RACEWAY, ETC. ACCORDINGLY. PROVIDE TEMPORARY SERVICE FROM UTILITY IF PERMISSION TO USE EXISTING BUILDING POWER IS NOT GRANTED BY OWNER’S REPRESENTATIVE; ARRANGE WITH LOCAL UTILITY FOR TEMPORARY SERVICE AND PAY ASSOCIATED FEES FOR INSPECTIONS, CONNECTIONS, ETC., AND PAY FOR UTILITY ELECTRIC USAGE/CONSUMPTION COSTS. RESTORE ASSOCIATED SITE AND BUILDING MATERIALS TO THEIR PRE-CONSTRUCTION STATE AND CONDITION AFTER TEMPORARY LIGHTING AND POWER IS NO LONGER NEEDED.

M. INTERIM LIFE-SAFETY PROVISIONS: PROVIDE INTERIM FIRE ALARM AND CODE MINIMUM LIGHTING IN DEMOLITION AND CONSTRUCTION AREAS. PROVIDE TEMPORARY PLASTIC COVERS, OBTAINED FROM SMOKE DETECTOR MANUFACTURER OR OBTAINED FROM A THIRD PARTY AND SPECIFICALLY APPROVED FOR SUCH USE BY SMOKE DETECTOR MANUFACTURER, OVER EXISTING SMOKE DETECTORS WITHIN PROJECT AREA, AND IN ADJACENT AREAS THAT ARE EXPOSED TO CONSTRUCTION-RELATED DUST OR AIRBORNE PARTICULATES. REMOVE ALL TEMPORARY LIFE SAFETY WORK WHEN NO LONGER NEEDED.

N. INTERIM EGRESS PATH PROVISIONS: PROVIDE TEMPORARY UL 924 COMPLIANT EXIT AND/OR EGRESS LIGHTING ALONG EGRESS ROUTES THAT MUST REMAIN ACCESSIBLE DURING CONSTRUCTION. PROVIDE TEMPORARY FIRE ALARM SYSTEM PULL STATIONS AND AUDIO/VISUAL ALARM NOTIFICATION DEVICES ALONG ALL AFFECTED EGRESS ROUTES. REMOVE THIS SCOPE WHEN NO LONGER NEEDED.

ELECTRIC LEGEND

SYMBOL	DESCRIPTION
LIGHTING AND LIGHTING CONTROLS	
	LUMINAIRE (REFER TO THE LUMINAIRE SCHEDULE) NOTE THAT OTHER SHAPES MAY ALSO BE USED TO REPRESENT LUMINAIRES
	SHADED LUMINAIRES DENOTE THOSE CONNECTED TO EMERGENCY OR STANDBY POWER AS APPLICABLE (UNSWITCHED LUMINAIRES ARE EGRESS LIGHTS AND/OR NIGHT-LIGHTS THAT OPERATE 24/7)
	TRACK LIGHTING IN LENGTH SHOWN AND WITH NUMBER OF LUMINAIRE HEADS AS INDICATED PROVIDE ALL REQUIRED ACCESSORIES (FITTINGS, END CAPS, POWER FEEDS, ETC.)
WALL MOUNT	SINGLE / DOUBLE SIDED EXIT SIGN CONNECT AHEAD OF SWITCHING & CONFIGURE ARROWS TO INDICATE DIRECTION OF EGRESS TRAVEL
	EMERGENCY LIGHTING UNIT WITH 90-MINUTE BATTERY BACKUP AND ASSOCIATED REMOTE HEADS WHERE APPLICABLE. CONNECT TO LOCAL LIGHTING CIRCUIT AHEAD OF SWITCHING
A NL / a EL	A = LUMINAIRE TYPE, NL = NIGHT-LIGHT (UNSWITCHED), a = SWITCHING DESIGNATION, EL = EGRESS LUMINAIRE (ILLUMINATES PATH OF EGRESS, UNSWITCHED UNLESS OTHERWISE NOTED)
$	LIGHTING SWITCH (KEYS: 2 = 2-POLE, 3 = 3-WAY, 4 = 4-WAY, D=DIMMER, K=KEYED, T = TIMER SWITCH, M = MOMENTARY-CONTACT, P = SWITCH W/PILOT LIGHT)
TYPE	CEILING-MOUNTED OCCUPANCY SENSOR. DUAL TECHNOLOGY UNLESS OTHERWISE NOTED BY TYPE. TYPE "IR" = INFRARED, TYPE "US" = ULTRASONIC
TYPE#	WALL-MOUNTED OCCUPANCY SENSOR SWITCH. DUAL TECHNOLOGY UNLESS OTHERWISE NOTED BY TYPE. TYPE "IR"=INFRARED, TYPE "US"=ULTRASONIC, "V"=VACANCY SENSOR, "D" = DIMMED.
RECEPTACLES AND MISCELLANEOUS OUTLETS	
	SINGLE ("SIMPLEX"), DUPLEX, AND DOUBLE DUPLEX ("QUAD") RECEPTACLE RESPECTIVELY
	GFI / GFCI RECEPTACLES
H, C, T 42", W, SW, L	RECEPTACLE ATTRIBUTES 42" = MOUNT RECEPTACLE AT THIS HEIGHT ABOVE GRADE / FINISHED FLOOR C = INSTALL ABOVE COUNTER AND BACKSPLASH H = INSTALL RECEPTACLE HORIZONTALLY L = LIT (PROVIDE ILLUMINATED FACE OR INDICATOR LIGHT TO INDICATE THERE IS POWER TO RECEPTACLE) SW = SPLIT WIRED T = TAMPER-RESISTANT W = WEATHER PROOF WHILE IN USE COVER AND WEATHER RESISTANT RECEPTACLE
MISCELLANEOUS	
T TS	LOW VOLTAGE THERMOSTAT (LEFT) AND TEMPERATURE SENSOR (RIGHT)
L R	LINE VOLTAGE THERMOSTAT (LEFT) AND REVERSE ACTING THERMOSTAT (RIGHT)
$ $MS $MSR	MOTOR RATED TOGGLE SWITCH, MANUAL STARTER WITH PILOT LIGHT, AND MANUAL STARTER WITH PILOT LIGHT WITH EXTERNAL RELAY FOR CONTROL OR MONITORING RESPECTIVELY - ALL MAY BE KEYED "K"
	HEAVY DUTY DISCONNECT SWITCH (NON-FUSED) (LEFT) HEAVY DUTY DISCONNECT SWITCH (FUSED) (RIGHT)
	CONTACTOR
	ELECTRICAL PANELBOARD OR DISTRIBUTION BOARD (DIMENSIONS MAY VARY / FLUSH OR SURFACE MOUNTED AS INDICATED)
PAD / POLE	OIL FILLED TRANSFORMER
SINGLE LINE DIAGRAM	
M	ELECTRIC UTILITY COMPANY METER AND ASSOCIATED CURRENT TRANSFORMERS
HD M	CUSTOMER ELECTRIC METER AND ASSOCIATED CURRENT TRANSFORMERS HD = HIGH DENSITY METERING CABINET/BANK MOUNTED TO TIGHTLY GROUP ALL METERS TOGETHER
400 / 400 300	HEAVY DUTY DISCONNECT SWITCH (NON-FUSED)(LEFT) (FUSED)(RIGHT) SIZES MAY BE SHOWN ONLY IN SCHEDULE
PANEL NAME	ELECTRICAL PANELBOARD OR DISTRIBUTION BOARD
	SURGE PROTECTIVE DEVICE

ELECTRIC LEGEND

SYMBOL	DESCRIPTION
WIRE / CABLE / RACEWAY	
LPA-1,3	BRANCH CIRCUIT HOME RUN WITH PANEL NAME AND CIRCUIT NUMBER(S)
	CABLING / RACEWAY INSTALLED CONCEALED IN WALLS OR ABOVE CEILING
	CABLING / RACEWAY INSTALLED BELOW FLOOR OR GRADE
	CABLE TRAY
	FEEDER DUCT / BUS DUCT
J	JUNCTION BOX ABOVE ACCESSIBLE CEILING JUNCTION BOX AT OVERHEAD STRUCTURE IN AREAS WITH NO CEILING
J	FLUSH MOUNTED JUNCTION BOX OR PULL BOX AS APPLICABLE FOR APPLICATION
P	FLUSH MOUNTED PULL BOX
UP / DN	CONDUIT UP OR DOWN

ABBREVIATIONS

42"	DISTANCE ABOVE FINISHED FLOOR / GRADE / PAVEMENT	LR	LEGALLY REQUIRED STANDBY
AF	AMP FRAME OF FUSED SWITCH OR CIRCUIT BREAKER	LI	LONG - INSTANTANEOUS
AFCI	ARC-FAULT CIRCUIT INTERRUPTER	LSI	LONG - SHORT - INSTANTANEOUS
AT	AMP TRIP OF FUSED SWITCH OR CIRCUIT BREAKER	LSIG	LONG - SHORT - INSTANTANEOUS - GROUND FAULT
ATS	AUTOMATIC TRANSFER SWITCH	MCB	MAIN CIRCUIT BREAKER
BAS	BUILDING AUTOMATION SYSTEM	MFR	MANUFACTURER
C.T.C.	WORK UNDER DIVISION 27 OR 28 AS APPLICABLE	MLO	MAIN LUGS ONLY
C/B	CIRCUIT BREAKER	MTS	MANUAL TRANSFER SWITCH
C / CH	COUNTER HEIGHT OR SPECIAL HEIGHT DEVICE	MW	MICROWAVE OVEN
DW	DISHWASHER	NIC	NOT IN CONTRACT (SHOWN FOR REFERENCE ONLY)
E	EMERGENCY	NTS	NOT TO SCALE
E.C.	WORK UNDER DIVISION 26	OFE	OWNER-FURNISHED EQUIPMENT - INSTALLED AND WIRED BY E.C.
EMS	ENERGY MANAGEMENT SYSTEM	OS	OPTIONAL STANDBY
EPO	EMERGENCY POWER OFF	P.C.	WORK UNDER DIVISION 22
ER	EQUIPMENT ROOM	(R)	RELOCATE
ERM	ENERGY REDUCTION MAINTENANCE SWITCH	S.C.	WORK UNDER DIVISION 21
ESP	EMERGENCY STANDBY RATING	SCCR	SHORT CIRCUIT CURRENT RATING
ETR	EXISTING TO REMAIN	SPD	SURGE PROTECTIVE DEVICE
EWC	ELECTRIC WATER COOLER	ST	SHUNT TRIP
EX.	EXISTING	TAAC	TO ABOVE ACCESSIBLE CEILING
FBO	FURNISHED BY OTHERS - INSTALLED AND WIRED BY E.C.	T	TAMPER RESISTANT
FIBO	FURNISHED AND INSTALLED BY OTHERS - WIRED BY E.C.	TTB	TELEPHONE TERMINAL BOARD
FP	RECEPTACLE TO BE USED FOR A FLAT PANEL DISPLAY.	TYP	TYPICAL
FWE	FURNISHED WITH EQUIPMENT BY OTHERS - INSTALLED AND WIRED BY E.C.	UCR	UNDER COUNTER REFRIGERATOR
GD	GARBAGE DISPOSAL	UL	UNDERWRITER'S LABORATORY
GFEP	GROUND FAULT EQUIPMENT PROTECTION	U.L.S.E.	LISTED FOR SERVICE ENTRANCE
GFI / GFCI	GROUND FAULT CIRCUIT INTERRUPTER DEVICE	UNO	UNLESS NOTED OR INDICATED OTHERWISE ON DRAWINGS OR IN SPECIFICATIONS
GND	GROUND	VFD / VSD	VARIABLE FREQUENCY / SPEED DRIVE
H.C.	WORK UNDER DIVISION 23	VIF	VERIFY IN FIELD
H.O.A.	"HAND - OFF - AUTO" SWITCH	VM	VENDING MACHINE
IG	ISOLATED GROUND	VP	VANDAL PROOF
Isc	SHORT CIRCUIT CURRENT	W / WP	WEATHERPROOF
		WG	WIRE GUARD
		WR	WEATHER RESISTANT
		X	RATED FOR CLASSIFIED LOCATION

PLAN-VIEW AND GRAPHIC LINE TYPES

WORK SHOWN BOLD-CONTINUOUS INDICATES NEW WORK (UNLESS OTHERWISE INDICATED)

WORK SHOWN FADED INDICATES EXISTING WORK TO REMAIN OR NEW WORK BY OTHERS AS APPLICABLE (UNLESS OTHERWISE INDICATED)

WORK SHOWN BOLD-DASHED INDICATES SELECTIVE DEMOLITION WORK (UNLESS OTHERWISE INDICATED)

ELECTRONIC DRAWING REQUEST

ELECTRONIC COPIES OF THESE DRAWINGS MAY BE REQUESTED AT: APPS.KLHENGRS.COM/DRAWINGREQUESTS.

ELECTRIC DESIGN CRITERIA

APPLICABLE BUILDING CODES

IBC (2018) INTERNATIONAL BUILDING CODE
IECC (2018) INTERNATIONAL ENERGY CONSERVATION CODE
NFPA 70 (2020) NATIONAL ELECTRIC CODE

TESTING/COMMISSIONING FOR LIGHTING CONTROLS

LIGHTING CONTROL DEVICES AND SYSTEMS SHALL BE TESTED TO ENSURE THE HARDWARE AND SOFTWARE IS CALIBRATED, PROGRAMMED, AND IN PROPER WORKING ORDER. INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED INSTALLATION REPORTS AND CERTIFICATES (UNLESS COMMISSIONING IS BEING PERFORMED IN WHICH CASE THE COMMISSIONING PROVIDER SHALL BE RESPONSIBLE FOR ALL REPORTS, CERTIFICATES, ETC.) AND SHALL PROVIDE MANUALS FOR LIGHTING CONTROL DEVICES TO OWNER PRIOR TO PROJECT CLOSE-OUT AND ALSO INCLUDE THE NAME AND ADDRESS OF AT LEAST ONE SERVICING AGENCY FOR THE LIGHTING CONTROL EQUIPMENT. INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR CONTRACTING WITH APPROPRIATE PARTIES TO ARRANGE FOR TESTING OF THE LIGHTING CONTROL SYSTEMS AND SHALL BE RESPONSIBLE FOR ENSURING ALL REQUIRED FUNCTIONAL PERFORMANCE TESTING FORMS/REPORTS ARE COMPLETED AND SUBMITTED TO THE OWNER AND LOCAL AHJ PRIOR TO PROJECT CLOSE-OUT (NO LATER THAN WITHIN 90 DAYS OF PROJECT CLOSEOUT). FUNCTIONAL PERFORMANCE TESTING OF LIGHTING CONTROLS SHALL FOLLOW THE REQUIREMENTS LISTED IN THE APPLICABLE ENERGY CODE INCLUDING (BUT NOT LIMITED TO) VERIFICATION OF THE PERFORMANCE OF OCCUPANCY SENSORS, AUTOMATIC TIME SWITCHES, AND DAYLIGHT HARVESTING CONTROLS.

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM
1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX
LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
JEREMY A. TOY
NUMBER
PE-2021044400
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

ELECTRIC COVER SHEET

DRAWN BY	DJR
CHECKED BY	MPR
JOB NUMBER	25303
SHEET NAME	E-001

GENERAL LIGHTING PLAN NOTES

A. EXIT SIGN CONNECTIONS: CONNECT ALL EXIT SIGNAGE AHEAD OF ANY SWITCHING.
B. INDOOR EGRESS LIGHTING: CONNECT ALL INDOOR EGRESS LIGHTING, DESIGNATED "EL", AHEAD OF ANY SWITCHING. UNLESS CONTROL METHODS ARE INDICATED OTHERWISE FOR A GIVEN AREA.
C. BATTERY BACKUP DEVICES: WHERE INDICATED IN DOCUMENTS, PROVIDE UL 924 LISTED BATTERY DEVICES, WHICH AUTOMATICALLY REVERT TO FULL ILLUMINATION FOR THE AFFECTED LUMINAIRES IN THE EVENT OF LOSS OF POWER FROM THE NORMAL POWER SUPPLY CIRCUIT. PROVIDE UNSWITCHED "HOT" TO SUCH COMPONENTS TO PROVIDE CONTINUOUS POWER EVEN IF LUMINAIRE IS TURNED OFF USING NORMAL LIGHTING CONTROLS.
D. TRANSFER/RELAY-CONTROL DEVICES: WHERE INDICATED IN DOCUMENTS, PROVIDE TRANSFER/RELAY-CONTROL DEVICES, WHICH AUTOMATICALLY REVERT TO FULL ILLUMINATION FOR THE AFFECTED LUMINAIRES IN THE EVENT OF LOSS OF POWER FROM THE NORMAL POWER SUPPLY CIRCUIT. PROVIDE UNSWITCHED "HOT" TO SUCH COMPONENTS, TO PROVIDE CONTINUOUS POWER EVEN IF LUMINAIRE IS TURNED OFF USING NORMAL LIGHTING CONTROLS.

KEYED NOTES

L1	LOCATION OF MASTER SWITCHBANK. SEE LIGHTING DETAILS FOR MORE INFORMATION.
L2	PROVIDE CEILING MOUNTED OCCUPANCY SENSOR TO OVERRIDE SALES AREA GENERAL LIGHTING FOR AFTER-HOURS USE. MOUNT OCCUPANCY SENSOR ON CEILING WITH LIGHT FIXTURES IN THE SAME AREA. CENTER BETWEEN LIGHT FIXTURE, TYP. SEE LIGHTING CONTROL DESIGN INTENT DETAIL ON SHEET E-101 FOR MORE INFORMATION.
L4	SEE THE SWITCH BANK DETAIL. WHERE CIRCUIT IS SHOWN ON THE SWITCHBANK DETAIL. THE INTENT IS FOR ALL LIGHTING ON THAT CIRCUIT TO BE CONTROLLED BY THE SWITCH VIA A CONTACTOR CONTROLLED BY THE TIMECLOCK, EXCEPT FOR EMERGENCY AND EXIT LIGHTING, WHICH SHALL BE CONNECTED TO THE CIRCUIT AHEAD OF ALL SWITCHING.

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM
1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX
LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
07/29/2025

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

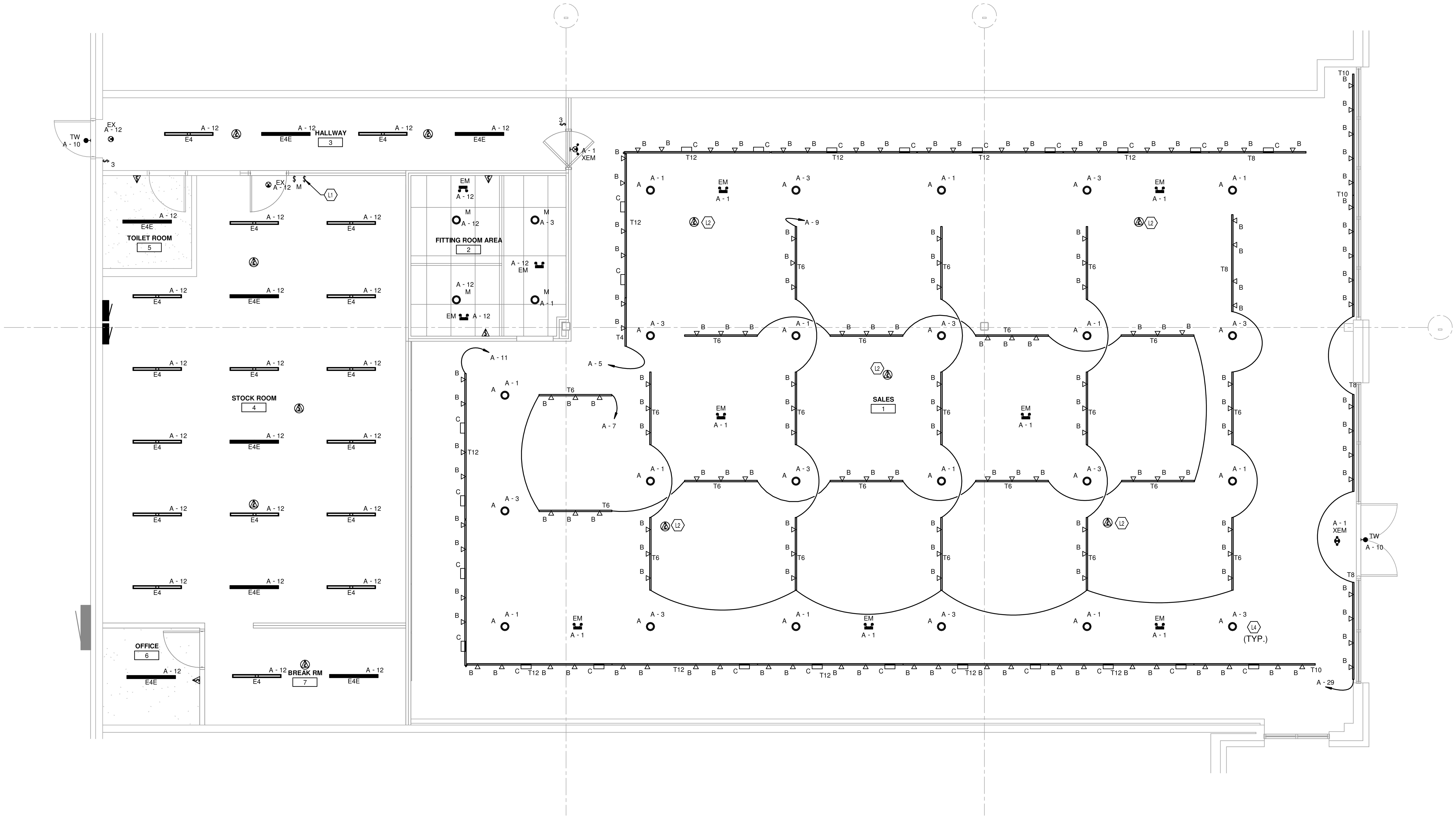
robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
JEREMY A. TOY
NUMBER
PE-2021044400
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

ELECTRIC LIGHTING PLAN

DRAWN BY	DJR
CHECKED BY	MPR
JOB NUMBER	25303
SHEET NAME	E-100



1 ELECTRIC LIGHTING PLAN
1/4" = 1'-0"

ELECTRIC LUMINAIRE SCHEDULE

GENERAL NOTES:
A. REFER TO "COMMENTS" COLUMN FOR MOUNTING TYPE, NUMBER OF FACES AND ARROWS OF EXIT SIGNS. VERIFY IN FIELD PRIOR TO INSTALLATION.
B. VERIFY COMPATIBILITY WITH VOLTAGE, CONTROLS, ETC. FOR ALL LUMINAIRE COMPONENTS
C. COORDINATE EACH LUMINAIRE LOCATION WITH THE ARCHITECTURAL REFLECTED CEILING PLANS, CEILING INSTALLERS, ETC. AND PROVIDE APPROPRIATE MOUNTING SYSTEM REQUIRED FOR EACH LUMINAIRE. ALSO, PROVIDE PLASTER FRAMES, WALL BRACKETS, SUPPORTS, OR OTHER APPURTENANCES AS REQUIRED FOR PROPER AND COMPLETE INSTALLATIONS.
D. WEAR CLEAN WHITE COTTON GLOVES WHEN HANDLING EXPOSED REFLECTIVE LUMINAIRE SURFACES. REMOVE PLASTIC SHIPPING BAGS ONLY AFTER INTERIOR WORK IS COMPLETE, AND CLEAN ALL SURFACES WITH CLEAN DRY CHEESECLOTH.
E. MOUNTING HEIGHTS INDICATED ARE TO THE BOTTOM OF THE LUMINAIRE, UNLESS OTHERWISE NOTED.
F. PRODUCTS: PROVIDE PRODUCTS INDICATED ON DRAWINGS AND SCHEDULES. WHERE MULTIPLE MANUFACTURER SERIES/MODEL NUMBERS ARE LISTED FOR A SINGLE LUMINAIRE, PROVIDE ONE OF THOSE LISTED. WHERE A SPECIFIC MANUFACTURER SERIES/MODEL NUMBER IS LISTED AS BASIS-OF-DESIGN, AND WHERE IT IS STATED THAT EQUIVALENTS WILL BE CONSIDERED, ANY PROPOSED NON-LISTED LUMINAIRES ARE SUBJECT TO REVIEW BY DESIGN PROFESSIONAL(S). SUBMITTALS FOR WHICH SHALL BE FURNISHED AT LEAST (10) DAYS PRIOR TO BID DUE DATE OR THEY WILL NOT BE CONSIDERED. THESE PRE-BID SUBMITTALS SHALL CLEARLY STATE EXACTLY WHAT IS BEING PROPOSED AND SHALL DEMONSTRATE COMPLIANT EQUIVALENCY. SIMILAR REQUESTS FOR PROPOSED SUBSTITUTIONS MAY BE MADE ONLY AFTER BIDS ARE RECEIVED, AND ONLY IF OWNER CHOOSES TO CONSIDER SUBSTITUTION REQUESTS. DESIGN PROFESSIONAL(S) AND OWNER RESERVE THE RIGHT TO REJECT ALL PRODUCTS THAT ARE NOT DEEMED TO BE FULLY EQUIVALENT TO THE BASIS-OF-DESIGN LISTING(S). SUBMIT ALL REQUESTS AND QUESTIONS THROUGH THE FORMALLY-ESTABLISHED BIDDING PROCESS, NOT DIRECTLY TO ENGINEER.
G. LIGHT FIXTURES AND LAMPS ARE TO BE PROVIDED BY THE GC. PURCHASE FROM OWNER REQUIRED SUPPLIER (SEE G0.0 FOR CONTACT INFORMATION).

TYPE	DESCRIPTION	MANUFACTURER	MODEL	MOUNTING	LIGHT SOURCE	LAMP QTY	DRIVER	DRIVER QTY	BATTERY	BATTERY TYPE	FINISH	LOAD (VA)	UNIVERSAL VOLTAGE (MVOLT)	VOLTAGE	Comments
A	HI BAY LIGHTING	SPECTRUM LIGHTING	ALDDH16LX-100L-35K-DS10X-CD72-AL16/MWI-DR1 6D-CNFR-PT	PENDANT	LED	1	ELECTRONIC	1	No	NONE	PREMIUM SILVER	81 VA	Yes	120 V	MOUNT AT 13'-0" AFF
B	TRACK HEAD - LED SPOT	CONTECH	CTL-2838-N-B	TRACK	LED	1	ELECTRONIC	1	No	NONE	BLACK	19 VA	Yes	120 V	
C	TRACK HEAD - WALL WASHER	CONTECH	CTL192H3D-B		LED	1	ELECTRONIC	1	No	NONE	BLACK	28 VA	Yes	120 V	
E4	LINEAR LED	NICOR	LSL-1-4-455-U-S-8	SURFACE	INTEGRAL LED	1	N/A	1	No	NONE	WHITE	45 VA	Yes	120 V	MOUNT AT 12'-0" AFF; PROVIDE 3500K MODEL
E4E	LINEAR LED	NICOR	LSL-1-4-455-U-S-EM8	SURFACE	INTEGRAL LED	1	N/A	1	Yes	INTEGRAL-90 MINUTE	WHITE	45 VA	Yes	120 V	MOUNT AT 12'-0" AFF; PROVIDE 3500K MODEL
EM	EMERGENCY LIGHTING UNIT	LITHONIA	ELM4L	PENDANT/SURFACE	LED	1	ELECTRONIC	1	Yes	INTEGRAL-90 MINUTE	WHITE	8 VA	Yes	120 V	
EX	EXIT SIGN WITH BATTERY BACK-UP	COOPER	APXEL-7-1-R	SURFACE	LED	1	ELECTRONIC	1	Yes	INTEGRAL-90 MINUTE	WHITE	3 VA	Yes	120 V	PROVIDE WITH 90 MINUTE BATTERY BACKUP.
M	HI BAY LIGHTING	DAC LIGHTING	D5242-LED35-120-AN-COIL	PENDANT	INTEGRAL LED	1	ELECTRONIC	1	No	NONE	SILVER	35 VA	No	120 V	MOUNT AT 9'-0" AFF
T4	TRACK	CONTECH	SINGLE CIRCUIT TRACK - BLACK	PENDANT/SURFACE	N/A	1	N/A	1	No	NONE	BLACK	0 VA	Yes	120 V	SURFACE MOUNT ON GYP BD CEILINGS. SUSPEND AT 13'-0" AFF IN OPEN TO DECK AREAS.
T6	TRACK	CONTECH	SINGLE CIRCUIT TRACK - BLACK	PENDANT/SURFACE	N/A	1	N/A	1	No	NONE	BLACK	0 VA	Yes	120 V	SURFACE MOUNT ON GYP BD CEILINGS. SUSPEND AT 13'-0" AFF IN OPEN TO DECK AREAS.
T8	TRACK	CONTECH	SINGLE CIRCUIT TRACK - BLACK	PENDANT/SURFACE	N/A	1	N/A	1	No	NONE	BLACK	0 VA	Yes	120 V	SURFACE MOUNT ON GYP BD CEILINGS. SUSPEND AT 13'-0" AFF IN OPEN TO DECK AREAS.
T10	TRACK	CONTECH	SINGLE CIRCUIT TRACK - BLACK	SURFACE	N/A	1	N/A	1	No	NONE	BLACK	0 VA		120 V	
T12	TRACK	CONTECH	SINGLE CIRCUIT TRACK - BLACK	PENDANT/SURFACE	N/A	1	N/A	1	No	NONE	BLACK	0 VA	Yes	120 V	SURFACE MOUNT ON GYP BD CEILINGS. SUSPEND AT 13'-0" AFF IN OPEN TO DECK AREAS.
TW	EXTERIOR EGRESS FIXTURE	TRACE LITE	SLW-15-4K-WH-EM-NS	WALL MOUNTED	LED	2	ELECTRONIC	1	Yes	INTEGRAL-90 MINUTE	WHITE	10 VA	Yes	120 V	
XEM	EXIT SIGN EMERGENCY LIGHT COMBO WITH BATTERY BACKUP	SURE-LITES	APC7RSQ	SURFACE	LED	2	ELECTRONIC	1	Yes	INTEGRAL-90 MINUTE	WHITE	4 VA	Yes	120 V	PROVIDE WITH 90 MINUTE BATTERY BACKUP; MOUNT AT 10'-0" AFF

ELECTRIC CONTACTOR SCHEDULE

NOTES:
1) PROVIDE A MINIMUM OF (2) SPARE CONTACTS IN EACH CONTACTOR UNLESS NOTED OTHERWISE.
2) REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3) CONTACTOR DESIGNATIONS DO NOT INDICATE QUANTITY OF CONTACTORS, THEY INDICATE CONTACTOR GROUPING(S) AND COMMON CONTROL METHODS ONLY. PROVIDE QUANTITY OF CONTACTOR(S) NEEDED TO ACCOMMODATE NUMBER OF POLES SHOWN.

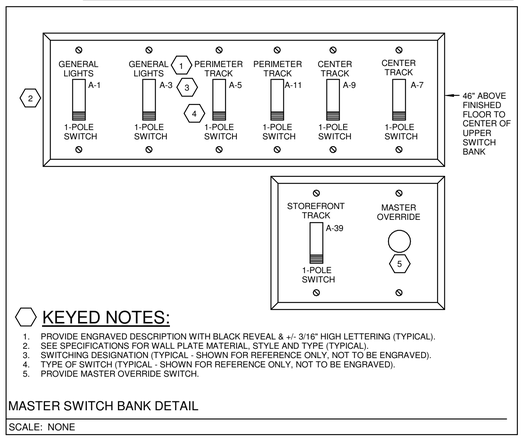
CONTROL ZONE DESCRIPTION & CONTACTOR CONTROL METHOD

C1 - STOREFRONT

C2 - INTERIOR LIGHTING

C3 - EXTERIOR LIGHTING/SIGNAGE

SUPPLY	CIRCUIT NUMBER	NUMBER OF POLES	CONTACT CURRENT	LOAD NAME
C1				
A	29	1	3 A	LTG SALES 1
A	27	1	8 A	SHOW WINDOW RECEPTACLES
C2				
A	1	1	9 A	SALES GENERAL LTG
A	5	1	7 A	PERIMETER TRACK
A	11	1	8 A	PERIMETER TRACK
A	9	1	7 A	CENTER TRACK
A	7	1	5 A	CENTER TRACK
A	19	1	5 A	RCPT FITTING ROOM AREA 2
A	3	1	8 A	SALES GENERAL LTG
C3				
A	8	1	10 A	SIGNAGE	CONTINUOUS
A	10	1	0 A	EXTERIOR LIGHTING

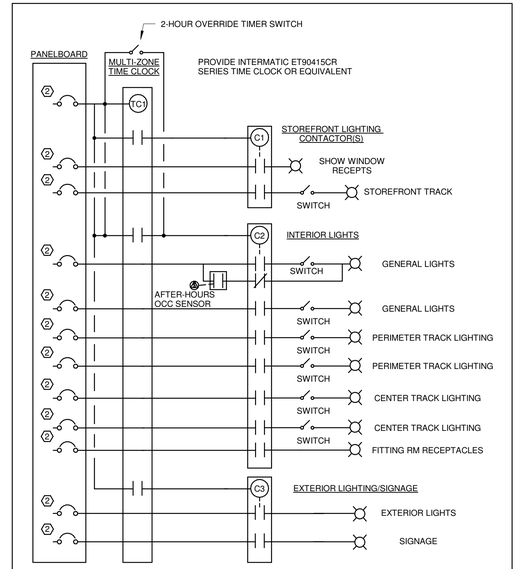


KEYED NOTES:

1. PROVIDE ENGRAVED DESCRIPTION WITH BLACK REVEAL & +/- 3/16" HIGH LETTERING (TYPICAL).
2. SEE SPECIFICATIONS FOR WALL PLATE MATERIAL, STYLE AND TYPE (TYPICAL).
3. SWITCHING DESIGNATION (TYPICAL - SHOWN FOR REFERENCE ONLY, NOT TO BE ENGRAVED).
4. TYPE OF SWITCH (TYPICAL - SHOWN FOR REFERENCE ONLY, NOT TO BE ENGRAVED).
5. PROVIDE MASTER OVERRIDE SWITCH.

MASTER SWITCH BANK DETAIL

SCALE: NONE



LIGHTING CONTROL DESIGN INTENT

STOREFRONT SIGNAGE AND EXTERIOR LIGHTING:
HARDWARE: TIMECLOCK AND CONTACTOR
CONTROL INTENT: STOREFRONT SIGNAGE SHALL TURN "ON" AND "OFF" BASED ON THE TIME SCHEDULE(S) PROGRAMMED INTO THE TIMECLOCK.

SALES AREA DISPLAY LIGHTS:
HARDWARE: WALL MOUNTED TOGGLE SWITCHES, LIGHTING CONTACTOR, TIMECLOCK, AND TIMER SWITCH.
CONTROL INTENT: DURING BUSINESS HOURS (HOURS PROGRAMMED INTO TIMECLOCK) THE DISPLAY LIGHTS AND TRACK LIGHTING SHALL TURN "ON" AND "OFF" BASED ON THE TIME SCHEDULE(S) PROGRAMMED INTO THE TIMECLOCK.
THE TIMER SWITCH SHALL OVERRIDE THE TIMECLOCK SCHEDULING (FOR A MAXIMUM OF 2-HOURS) AND ALLOW FOR AFTER HOURS CONTROL OF THE LIGHTING.

SALES AREA GENERAL LIGHTING:
HARDWARE:WALL MOUNTED TOGGLE SWITCHES, TIMECLOCK,TIMER SWITCH, AND OCCUPANCY SENSOR.
CONTROL INTENT: DURING BUSINESS HOURS (HOURS PROGRAMMED INTO TIMECLOCK) THE SALES AREA GENERAL LIGHTING SHALL TURN "ON" AND "OFF" BASED ON THE TIME SCHEDULE(S) PROGRAMMED INTO THE TIMECLOCK.
THE TIMER SWITCH SHALL OVERRIDE THE TIMECLOCK SCHEDULING (FOR A MAXIMUM OF 2-HOURS) AND ALLOW FOR AFTER HOURS CONTROL OF THE LIGHTING. OCCUPANCY SENSORS SHALL ALLOW FOR AFTER HOURS GENERAL LIGHTING OVERRIDE WHENEVER THE CONTACTOR IS OFF.

STOREFRONT LIGHTING AND RECEPTACLES:
HARDWARE: WALL MOUNTED TOGGLE SWITCH, LIGHTING CONTACTOR(S), AND TIMECLOCK.
CONTROL INTENT: STOREFRONT LIGHTING, RECEPTACLES AND SIGNAGE SHALL TURN "ON" AND "OFF" BASED ON THE TIME SCHEDULE(S) PROGRAMMED INTO THE TIMECLOCK.

KEYED NOTES:

1. PROVIDE TIME-BASED CONTROL FOR APPLICABLE CIRCUITS AS DEFINED ON TIMECLOCK SCHEDULE.
2. PROVIDE CONTACTOR CONTROL FOR APPLICABLE CIRCUITS AS DEFINED ON LIGHTING CONTACTOR SCHEDULE.

LIGHTING CONTROL DESIGN INTENT

SCALE: NONE

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM
1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX
LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

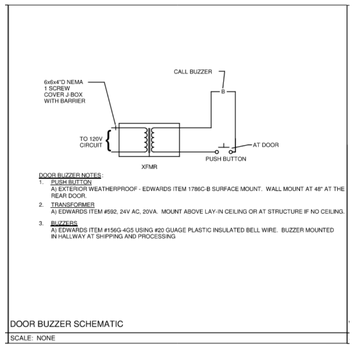
robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
JEREMY A. TOY
NUMBER PE-2021044400
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

ELECTRIC LIGHTING - DETAILS

DRAWN BY	DJR
CHECKED BY	MPR
JOB NUMBER	25303
SHEET NAME	E-101



DOOR BUZZER SCHEMATIC

SCALE: NONE

KEYED NOTES

E1	INTERLOCK EXHAUST FAN CONTROLS WITH RESTROOM LIGHTING CONTROLS.
E2	PROVIDE (2) 1" CONDUITS FOR POWER AND (1) 1-1/2" CONDUIT FOR DATA. STUB-UP IN BACK WRAP. COORDINATE CORING AND CONDUIT ROUTING WITH LANDLORD PRIOR TO BID. COORDINATE STUB UP LOCATION WITH MILLWORK VENDOR PRIOR TO ROUGH-IN.
E4	PROVIDE POWER AND CONTROL WIRING, CONNECTIONS, ETC. FOR SIGNAGE. COORDINATE EXACT LOCATION, HEIGHT, AND ELECTRICAL REQUIREMENTS WITH SIGNAGE INSTALLER AND PROVIDE ELECTRICAL WORK ACCORDINGLY. WHERE THE SIGN IS NOT PROVIDED WITH AN INTEGRAL DISCONNECTING MEANS, PROVIDE FLUSH-MOUNTED, LOCAL DISCONNECT SWITCH INSTALLED IN A CONCEALED, BUT ACCESSIBLE, LOCATION WITHIN SITE OF THE SIGN. WHERE THIS IS NOT POSSIBLE, PROVIDE LOCK-OUT, TAG-OUT BREAKER IN SOURCE PANELBOARD IN LIEU OF LOCAL DISCONNECT SWITCH AND A LABEL INSIDE THE SIGN ENCLOSURE IDENTIFYING THE BREAKER'S LOCATION PER NEC 600.6(A)(2).
E6	SMOKE DETECTOR INDICATED IS FOR SHUTDOWN OF ASSOCIATED MECHANICAL EQUIPMENT (TAGGED ADJACENT TO THE DETECTOR). QUANTITY AND TYPE SHOWN IS SCHEMATIC ONLY, PROVIDE QUANTITIES AND TYPES AS NEEDED FOR THE SPECIFIC MEANS AND METHODS USED. MECHANICAL CONTRACTOR SHALL INSTALL ALL DETECTORS THAT ARE INSIDE OF DUCTWORK. PROVIDE ALL RELATED WORK SO THAT WHEN SMOKE IS DETECTED THE ASSOCIATED MECHANICAL EQUIPMENT SHUTS DOWN UNTIL ALARM IS CLEARED AT THE FIRE ALARM PANEL. REFER TO FIRE ALARM SPECIFICATIONS FOR MORE INFORMATION.
E7	PROVIDE RECEPTACLE WITH BLACK FINISH.

GENERAL POWER PLAN NOTES

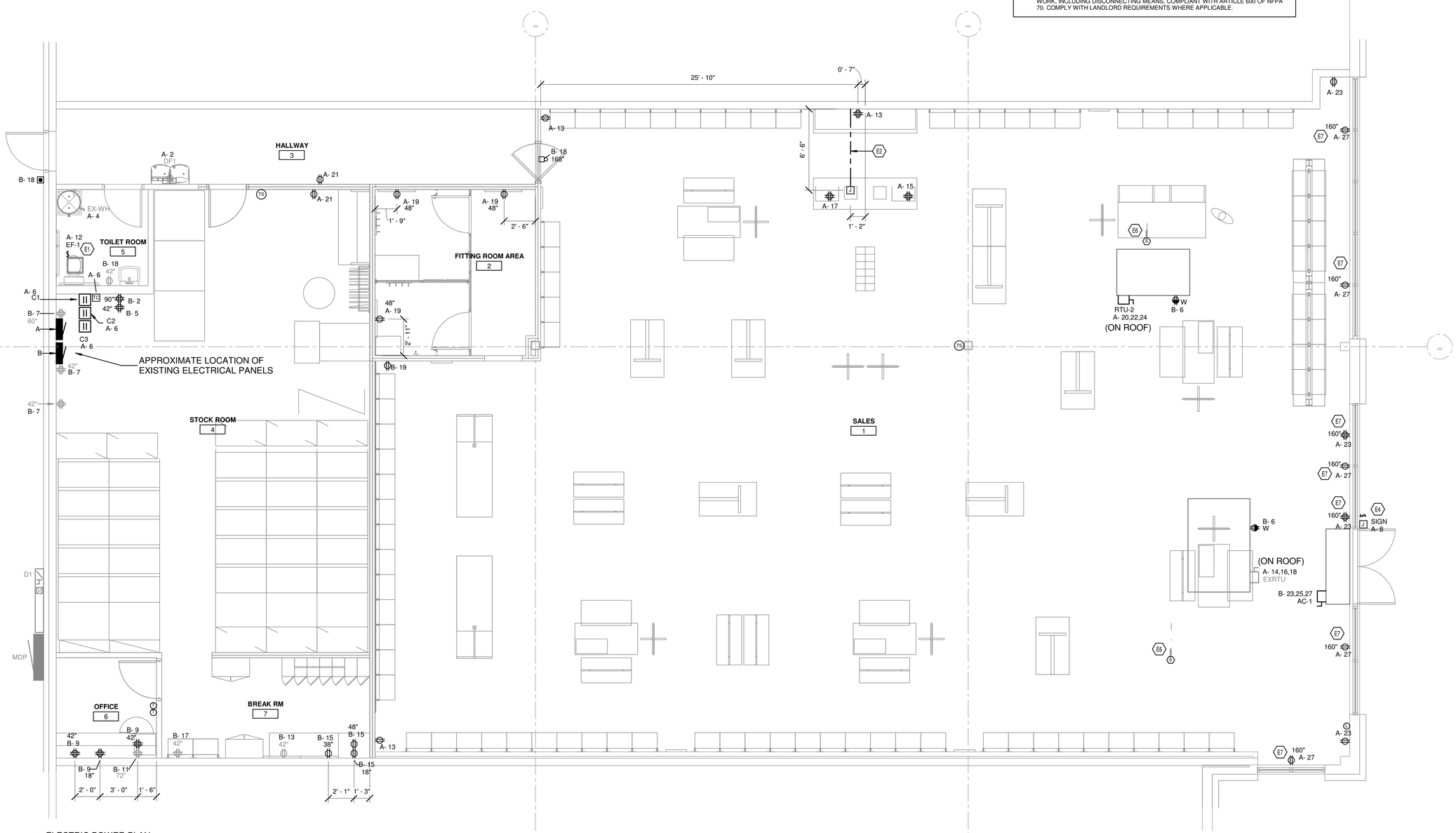
A. EQUIPMENT COORDINATION SCHEDULES: REFER TO EQUIPMENT COORDINATION SCHEDULES FOR REQUIREMENTS ASSOCIATED WITH EQUIPMENT CIRCUITING, CONNECTIONS, ANCILLARY DEVICES AND EQUIPMENT, ETC. COORDINATE LOCATIONS AND REQUIREMENTS FOR ALL EQUIPMENT WITH RESPECTIVE EQUIPMENT SUPPLIERS AND INSTALLERS PRIOR TO ORDERING ANY RELATED MATERIALS OR COMMENCING WITH ANY RELATED ROUGH-IN WORK.

B. TECHNOLOGY SYSTEMS: PROVIDE RACEWAY AND PATHWAY SYSTEMS FOR ALL TECHNOLOGY WORK. INCLUDE OUTLET BOXES, CONDUITS, RACEWAYS, J-HOOKS, CABLE TRAY, ETC. AS REQUIRED FOR COMPLETE OPERATIONAL SYSTEMS. COORDINATE ALL RELATED WORK (INCLUDING ASSOCIATED POWER) WITH OWNER (INCLUDING OWNER'S PROJECT MANAGER), FIELD CONDITIONS, FURNITURE INSTALLER(S), TECHNOLOGY INSTALLER(S) AND WORK OF OTHER TRADES AND SUPPLIERS/INSTALLERS AS APPLICABLE. TERMINATE ALL CONDUITS FROM OUTLET BOXES TO NEAREST ACCESSIBLE CEILING CAVITY, OR TO OVERHEAD STRUCTURAL SPACE FOR AREAS WITH NO CEILINGS. PROVIDE CONDUITS WITH SWEEP BENDS, PULL STRINGS, PLASTIC BUSHINGS AND IDENTIFICATION AT OVERHEAD ENDS. PROVIDE BLANK WALL PLATES TO MATCH WIRING DEVICE WALL PLATES.

C. STOREFRONT WINDOWS: INSTALL RECEPTACLE(S) INDICATED ABOVE STOREFRONT WINDOWS WITHIN 18 INCHES OF THE TOP OF STOREFRONT WINDOWS, AND INSTALL COMPLIANT WITH NEC, INCLUDING ARTICLE 210.62.

D. TRIM AND DOOR FINISHES: PROVIDE FACTORY-PAINTED OR FIELD-PAINTED TRIMS AND DOORS TO MATCH WALL FINISH COLOR FOR ALL PANELBOARDS AND SIMILAR EQUIPMENT THAT ARE INSTALLED RECESSED IN FINISHED WALLS. IF FIELD-PAINTED, PAINT ALL SIDES AND EDGES WITH TWO COATS OF PAINT BEFORE INSTALLATION, AND LET DRY BEFORE INSTALLING THEM. ENSURE THAT NO COMPONENTS ARE (DOORS, LATCHES, SCREWS, ETC.) ARE "PAINTED SHUT".

E. SIGNAGE: COORDINATE ALL SIGNAGE REQUIREMENTS WITH OWNER (INCLUDING OWNER'S PROJECT MANAGER), SIGNAGE SUPPLIERS AND INSTALLERS, AND ARCHITECT TO DETERMINE SPECIFICS REGARDING LOCATIONS, POWER, CONTROL, AND OTHER PERTINENT INFORMATION. PROVIDE POWER (ON DEDICATED CIRCUIT(S)) FOR SIGNAGE REQUIRING POWER CONNECTIONS. PROVIDE PHOTOCELL AND TIME-BASED CONTROL, CONFIGURED AS DIRECTED BY OWNER. PROVIDE ALL ELECTRICAL WORK, INCLUDING DISCONNECTING MEANS, COMPLIANT WITH ARTICLE 600 OF NFPA 70. COMPLY WITH LANDLORD REQUIREMENTS WHERE APPLICABLE.



1 ELECTRIC POWER PLAN
1/4" = 1'-0"

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM
1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX
LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road. Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
JEREMY A. TOY
NUMBER PE-2021044400
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt

SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

ELECTRIC POWER PLAN

DRAWN BY	DJR
CHECKED BY	MPR
JOB NUMBER	25303
SHEET NAME	E-200

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM

1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX

LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road. Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

ELECTRIC DISCONNECT SCHEDULE

NOTES:
A. WIRES: THE NUMBER OF WIRES INDICATED INCLUDES A GROUNDED (NEUTRAL) CONDUCTOR UNLESS IT WAS VERIFIED DURING DESIGN THAT ONE IS NOT REQUIRED. THE GROUNDED CONDUCTOR MAY BE OMITTED IF NOT REQUIRED BY THE EQUIPMENT BEING SERVED.
B. ENCLOSURE: WHERE FIELD IS BLANK, PROVIDE NEMA 1 ENCLOSURE FOR INDOOR INSTALLATIONS, NEMA 3R ENCLOSURE FOR OUTDOOR INSTALLATIONS OR INDOOR INSTALLATIONS SUBJECT TO MOISTURE, AND NEMA 4X FOR ALL KITCHEN AND WASH DOWN AREAS.
C. SHORT CIRCUIT RATING: WHERE FIELD IS BLANK, PROVIDE A SHORT CIRCUIT RATING THAT EXCEEDS THE LISTED FAULT CURRENT.

EQUIPMENT	SPACE NUMBER	SPACE NAME	SUPPLY FROM	CIRCUIT NUMBER	VOLTAGE	PHASE	WIRES	TRIP RATING (A)	FRAME RATING (A)	DEMAND (A)	OCP TYPE	FEEDER OR BRANCH CIRCUIT	ULSE	GEC	ENCLOSURE	FAULT CURRENT (A)	SHORT CIRCUIT RATING (A)	COMMENTS
Disconnect - Toggle Switch																		
EF-1	5	TOILET ROOM	A	12	120 V	1	2	15	30	0 A		(2) #12 AWG CU, (1) #12 AWG CU GND. IN 3/4" CONDUIT 60C RATED				6879		
EX-WH	5	TOILET ROOM	A	4	120 V	1	2	20	30	14 A		(2) #12 AWG CU, (1) #12 AWG CU GND. IN 3/4" CONDUIT 60C RATED				3962		
Fused Switch																		
D1			WW	1	208 V	3	4	200	200	199 A	FUSED	EXISTING FEEDER, AT RATING INDICATED, TO REMAIN UNLESS NOTED OTHERWISE			NEMA 3R	42700	EXISTING	
Safety Switch																		
AC-1	1	SALES	B	23,25,27	208 V	3	4	60	60	43 A		(4) #4 AWG CU, (1) #10 AWG CU GND. IN 1-1/4" CONDUIT 60C RATED				3175		
EXRTU	1	SALES	A	14,16,18	208 V	3	4	80	100	58 A		(4) #3 AWG CU, (1) #8 AWG CU GND. IN 1-1/4" CONDUIT 60C RATED				3989		
RTU-2	1	SALES	A	20,22,24	208 V	3	4	40	60	26 A		(4) #8 AWG CU, (1) #10 AWG CU GND. IN 1" CONDUIT 60C RATED				1915		

HVAC ELECTRICAL COORDINATION SCHEDULE

ABBREVIATIONS

DC	LOCAL DISCONNECT
MC	MOTOR CONTROL (POWER)
SD	DUCT SMOKE DETECTOR
CN	CONTROLS
TS	TOGGLE SWITCH
C/B	H.A.C.R. CIRCUIT BREAKER AT SOURCE PANELBOARD
FUSE	FUSE AT LOCAL DISCONNECT (VERIFY FIELD RATING)
FLA	OPERATING FULL LOAD AMPS
MCA	MINIMUM CIRCUIT AMPACITY
CP	CORD AND PLUG CONNECTION
[BLANK]	HARD WIRED (WHEN INDICATED FOR DC TYPE)

CONTRACTOR TYPE

EC	ELECTRICAL CONTRACTOR
EX	EXISTING
FC	FIRE PROTECTION CONTRACTOR
GC	GENERAL CONTRACTOR
HC	HVAC CONTRACTOR
MFR	MANUFACTURER
PC	PLUMBING CONTRACTOR
OR	OWNER OR OTHERS

MOTOR CONTROL TYPE

CS	COMBINATION STARTER
MCC	MOTOR CONTROL STARTER
MG	MAGNETIC STARTER OR CONTACT
MS	MANUAL STARTER
VFD	VARIABLE FREQUENCY DRIVE
MSR	MANUAL STARTER W/ CONTROL RELAY
OV	OVERCURRENT PROTECTION

CONTROL TYPE

TC	TIMECLOCK
CPT	CONTROL POWER TRANSFORMER
BAS	BUILDING AUTOMATION SYSTEM
LOW	LOW VOLTAGE CONTROLS
LINE	LINE VOLTAGE CONTROLS
RLINE	REVERSE ACTING LINE VOLTAGE THERMOSTAT
MAN	MANUAL
FA	FIRE ALARM
CO	CARBON MONOXIDE SENSOR
INT	INTEGRAL TO EQUIPMENT
AREA	AREA SMOKE DETECTOR
DUCT	DUCT SMOKE DETECTOR
ALARM	SHUTDOWN EQUIP ON GENERAL FIRE ALARM
FLOW	SHUTDOWN ON SPRINKLER FLOW
ANSUL	SHUTDOWN ON ANSUL ACTIVATION

SHORT CIRCUIT RATING

WHERE SHORT CIRCUIT RATING CODE REQUIRED VALUE INDICATES "YES" APPLICABLE EQUIPMENT'S SHORT CIRCUIT RATING SHALL EXCEED THE AVAILABLE FAULT CURRENT VALUE INDICATED.

CONNECTION MARK	DESCRIPTION	VOLTAGE	PHASE	EMERGENCY	HP	WATTS	HTG KW	FLA	MCA	OCP	FED FROM	DC TYPE	DC FURN	DC INST	DC WIRE	MC TYPE	MC FURN	MC INST	MC WIRE	CN TYPE	CN FURN	CN INST	CN WIRE	FA SHUTDOWN	SHORT CIRCUIT RATING CODE REQUIRED?	AVAILABLE FAULT CURRENT
AC-1	AIR CURTAIN W/ELECTRIC HEAT	208 V	3	NO	0.4		8		47.3	60			EC	EC	EC	MG	MFR	MFR	MFR	INT	MFR	MFR	MFR	NONE	No	3175
EF-1	HVAC EXHAUST FAN	120 V	1	NO				0.29	0.4	15			EC	EC	EC	ECM	MFR	MFR	MFR	MAN	EC	EC	EC	NONE	No	6879
EXRTU	PACKAGED ROOFTOP UNIT, GAS HEAT	208 V	3	NO					64	80			EC	EC	EC	ECM	MFR	MFR	MFR	LOW	HC	HC	HC	DUCT	Yes	3989
RTU-2	PACKAGED ROOFTOP UNIT, GAS HEAT	208 V	3	NO					29	40			EC	EC	EC	ECM	MFR	MFR	MFR	LOW	HC	HC	HC	DUCT	Yes	1915

ELECTRIC PANELBOARD AND SWITCHBOARD SCHEDULE

TYPICAL EQUIPMENT NAME NOMENCLATURE:
1 - POWER DISTRIBUTION SYSTEM (BLANK - NORMAL, E - EMERGENCY, S - STANDBY, L - LIFE SAFETY)
2 - DESCRIPTION (H - 480Y/277V, L - 208Y/120V)
3 - FLOOR / LEVEL
4 - SEQUENCE

ALL ALUMINUM BUSSING SHALL BE TIN-PLATED. ALL COPPER BUSSING SHALL BE EITHER TIN-PLATED OR SILVER-PLATED

EQUIPMENT	PHASE	SPACE NUMBER	SPACE NAME	SUPPLY FROM	POWER BRANCH	TYPE	VOLTAGE	PHASE	WIRES	DEMAND (kVA)	DEMAND (A)	MAINS RATING (A)	MAINS FRAME RATING (A)	MAINS TYPE	BUSSING (PLATED)	MOUNTING	FEEDER	LUGS TYPE	SPD	ULSE	GEC	ENCLOSURE TYPE	FAULT CURRENT (A)	SHORT CIRCUIT RATING (A)	NOTES
A	New Construction	4	STOCK ROOM	D1		Branch Panelboard	208	3	4	71692 VA	199 A	200	200	THERMAL MAGNETIC	COPPER OR ALUMINUM	SURFACE	(4) #3/0 AWG CU, (1) #6 AWG CU GND. IN 2" CONDUIT 75C RATED					NEMA 1	27177	42000	
B	New Construction	4	STOCK ROOM	A		Branch Panelboard	208	3	4	24290 VA	67 A	100	100	MAIN LUGS ONLY	COPPER OR ALUMINUM	SURFACE	(4) #3 AWG CU, (1) #6 AWG CU GND. IN 1-1/4" CONDUIT 75C RATED					NEMA 1	24806	42000	
MDP	Existing			UTILITY		Distribution Panelboard	208	3	4	71692 VA	199 A	1200	1200	THERMAL MAGNETIC	COPPER OR ALUMINUM	SURFACE	EXISTING FEEDER, AT RATING INDICATED, TO REMAIN UNLESS NOTED OTHERWISE			Yes	Yes	NEMA 3R	46261	EXISTING	

ELECTRIC FEEDER SCHEDULE

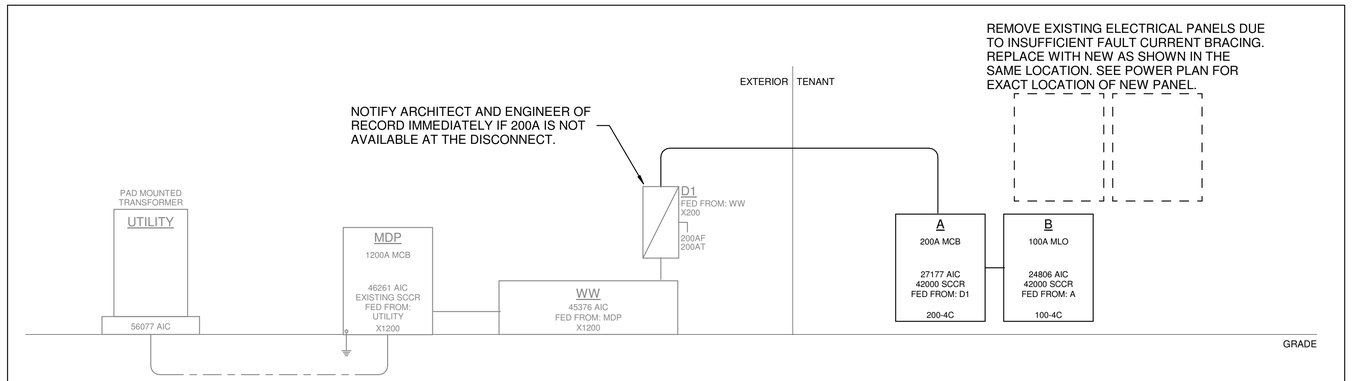
NOTES:
ALL CONDUIT SIZES INDICATED ARE MINIMUM SIZES. INCREASE SIZES AS REQUIRED TO ACCOMMODATE CONDUCTOR PULLING EASE, FIELD CONDITIONS, ETC.

*CU" = COPPER CONDUCTOR, "AL" = ALUMINUM CONDUCTOR

** WHERE THESE FIELDS ARE BLANK, PROVIDE INSULATION & CONDUIT MATERIAL PER THE...

FEEDER ID NOMENCLATURE:
* - INDICATES FEEDER SIZED TO COMPENSATE FOR VOLTAGE DROP
1 - GROUND TYPE (MAY BE BLANK)
U = EQUIPMENT GROUND CONDUCTOR REMOVED FOR SERVICE ENTRANCE FROM UTILITY
P = PARITY-SIZED EQUIPMENT GROUND CONDUCTOR
X = EXISTING FEEDER TO REMAIN UNLESS OTHERWISE NOTED
T = UPSIZED GROUND CONDUCTORS FOR TRANSFORMER SECONDARY
2 - CONDUCTOR AMPACITY
3 - TOTAL NUMBER OF PHASE AND GROUNDED ("NEUTRAL") CONDUCTORS
4 - CONDUCTOR MATERIAL: C = COPPER, A = ALUMINUM
5 - SPECIAL (MAY BE BLANK)
I = ISOLATED GROUND (PROVIDE CONTINUOUS INSULATED ISOLATED EQUIPMENT GROUNDING CONDUCTOR(S) FROM INSULATED ISOLATED GROUND BAR(S) TO RESPECTIVE UPSTREAM SERVICE ENTRANCE OR DERIVED SYSTEM GROUNDING ELECTRODE CONDUCTOR AS APPLICABLE.

SUPPLY TO	SUPPLY FROM	FEEDER ID	FEEDER	DEMAND (A)	VD %	NOTES
UTILITY						
-- MDP	UTILITY	X1200	EXISTING FEEDER, AT RATING INDICATED, TO REMAIN UNLESS NOTED OTHERWISE	199 A	0.092	
---- WW	MDP	X1200	EXISTING FEEDER, AT RATING INDICATED, TO REMAIN UNLESS NOTED OTHERWISE	199 A	0.102	
------ D1	WW	X200	EXISTING FEEDER, AT RATING INDICATED, TO REMAIN UNLESS NOTED OTHERWISE	199 A	0.135	
--------- A	D1	200-4C	(4) #3/0 AWG CU, (1) #6 AWG CU GND. IN 2" CONDUIT 75C RATED	199 A	0.462	
--------- B	A	100-4C	(4) #3 AWG CU, (1) #8 AWG CU GND. IN 1-1/4" CONDUIT 75C RATED	67 A	0.491	



SINGLE LINE - LAYOUT

SCALE: NONE

JEREMY A. TOY
NUMBER PE-2021044400
PROFESSIONAL ENGINEER
STATE OF MISSOURI
6/18/2025

SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

ELECTRIC POWER - SINGLE LINE DIAGRAM

DRAWN BY
DJR
CHECKED BY
MPR
JOB NUMBER
25303
SHEET NAME
E-300

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM

1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX

LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

PANEL NAME: B

SUPPLY FROM: A
LOCATION: STOCK ROOM 4
DISTRIBUTION SYSTEM: 208/120V 3PH 4W
FEEDER: (4) #3 AWG CU, (1) #8 AWG CU GND. IN 1-1/4" CONDUIT 75C RATED
BUSSING: COPPER OR ALUMINUM
MAINS RATING (A): 100
MAINS TYPE: MAIN LUGS ONLY
FEEDER ID: 100-4C
MOUNTING: SURFACE
FAULT CURRENT (A): 24806
SHORT CIRCUIT RATING (A): 42000
LUGS TYPE:
ENCLOSURE TYPE: NEMA 1
PHASE: New Construction
SURGE SUPRESSION:
ULSE:
200% NEUTRAL:
ISOLATED GROUND:

CKT	CIRCUIT DESCRIPTION	VD%	AWG	GND	TRIP	FRAME	POLE	A	B	C	POLE	FRAME	TRIP	GND	AWG	VD%	CIRCUIT DESCRIPTION	CKT
1	SPARE	--	--	--	20 A	20 A	1	0.00	0.36		1	20 A	20 A	#12	#12	0.136	RCPT STOCK ROOM 4	2
3	SPARE	--	--	--	20 A	20 A	1		0.00	0.00	1	20 A	20 A	--	--	--	SPARE	4
5	RCPT STOCK ROOM 4	0.126	#12	#12	20 A	20 A	1			0.36	0.36	1	20 A	20 A	#12	#12	0.986	RCPT SALES 1	6
7	(->) BOH QUAD	0.162	#12	#12	20 A	20 A	1	1.08	0.00		1	20 A	20 A	--	--	--	SPARE	8
9	RCPT OFFICE 6	1.052	#12	#12	20 A	20 A	1		1.08	0.00	1	20 A	20 A	--	--	--	SPARE	10
11	(->) OFFICE QUAD	0.418	#12	#12	20 A	20 A	1			0.36	0.00	1	20 A	20 A	--	--	--	SPARE	12
13	(->) BREAKROOM DUPLEX	0.261	#12	#12	20 A	20 A	1	0.18	0.00			1	20 A	20 A	--	--	--	SPARE	14
15	RCPT BREAK RM 7	0.842	#12	#12	20 A	20 A	1		0.54	0.00		1	20 A	20 A	--	--	--	SPARE	16
17	(->) BREAKROOM QUAD	0.471	#12	#12	20 A	20 A	1			0.36	0.26	1	20 A	20 A	#12	#12	0.075	(->) RR RCPT	18
19	RCPT	0.159	#12	#12	20 A	20 A	1	0.18	0.00			1	20 A	20 A	--	--	--	SPARE	20
21	SPARE	--	--	--	20 A	20 A	1		0.00	0.00		1	20 A	20 A	--	--	--	SPARE	22
23										5.11	0.00	1	20 A	20 A	--	--	--	SPARE	24
25	AC-1 | SALES 1	1.43	#4	#10	60 A	60 A	3	5.11	0.00			1	20 A	20 A	--	--	--	SPARE	26
27									5.11	0.00		1	20 A	20 A	--	--	--	SPARE	28
29	SPARE	--	--	--	20 A	20 A	1			0.00	0.00	1	20 A	20 A	--	--	--	SPARE	30
31	SPARE	--	--	--	20 A	20 A	1	0.00	0.00			1	20 A	20 A	--	--	--	SPARE	32
33	SPARE	--	--	--	20 A	20 A	1		0.00	0.00		1	20 A	20 A	--	--	--	SPARE	34
35	SPARE	--	--	--	20 A	20 A	1			0.00	0.00	1	20 A	20 A	--	--	--	SPARE	36
37	SPARE	--	--	--	20 A	20 A	1	0.00	0.00			1	20 A	20 A	--	--	--	SPARE	38
39	SPARE	--	--	--	20 A	20 A	1		0.00	0.00		1	20 A	20 A	--	--	--	SPARE	40
41	SPARE	--	--	--	20 A	20 A	1			0.00	0.00	1	20 A	20 A	--	--	--	SPARE	42
	TOTAL CONNECTED LOAD:							6.9 kVA		6.7 kVA	6.8 kVA							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	NOTES:	BREAKER QUANTITIES (NEW ONLY)
Continuous	15336 VA	125.00%	19170 VA		(39) 20A / 1P, (1) 60A / 3P
Non-Continuous	80 VA	100.00%	80 VA		
Receptacle	5040 VA	100.00%	5040 VA		

PANEL TOTALS

TOTAL CONNECTED LOAD:	20.5 kVA
DEMAND CALCULATION NOTES:	
TOTAL DEMAND:	24.3 kVA
TOTAL DEMAND AMPS:	**67 A**

PANEL NAME: A

SUPPLY FROM: D1
LOCATION: STOCK ROOM 4
DISTRIBUTION SYSTEM: 208/120V 3PH 4W
FEEDER: (4) #3/0 AWG CU, (1) #6 AWG CU GND. IN 2" CONDUIT 75C RATED
BUSSING: COPPER OR ALUMINUM
MAINS RATING (A): 200
MAINS TYPE: THERMAL MAGNETIC
FEEDER ID: 200-4C
MOUNTING: SURFACE
FAULT CURRENT (A): 27177
SHORT CIRCUIT RATING (A): 42000
LUGS TYPE:
ENCLOSURE TYPE: NEMA 1
PHASE: New Construction
SURGE SUPRESSION:
ULSE:
200% NEUTRAL:
ISOLATED GROUND:

CKT	CIRCUIT DESCRIPTION	VD%	AWG	GND	TRIP	FRAME	POLE	A	B	C	POLE	FRAME	TRIP	GND	AWG	VD%	CIRCUIT DESCRIPTION	CKT
1	SALES GENERAL LTG	1.372	#12	#12	20 A	20 A	1	1.07	0.72		1	20 A	20 A	#12	#12	0.475	(->)(G) DF1	2
3	SALES GENERAL LTG	1.266	#12	#12	20 A	20 A	1		0.93	1.65	1	20 A	20 A	#12	#12	0.721	(->) EX-WH | TOILET ROOM 5	4
5	PERIMETER TRACK	1.085	#12	#12	20 A	20 A	1			0.78	0.20	1	20 A	20 A	#12	#12	0.017	C1 C2 C3 | STOCK ROOM 4	6
7	CENTER TRACK	0.778	#12	#12	15 A	15 A	1	0.57	1.20			1	20 A	20 A	*#10	*#10	2.543	SIGNAGE | CONTINUOUS	8
9	CENTER TRACK	1.305	#12	#12	15 A	15 A	1		0.82	0.02		1	20 A	20 A	#12	#12	0.011	EXTERIOR LIGHTING	10
11	PERIMETER TRACK	1.155	#12	#12	15 A	15 A	1			1.00	1.26	1	15 A	15 A	#12	#12	0.378	EF-1 | LTG HALLWAY 3	12
13	RCPT SALES 1	1.243	#12	#12	20 A	20 A	1	0.72	6.92										14
15	RCPT SALES 1	0.841	#12	#12	20 A	20 A	1		0.36	6.92		3	80 A	80 A	#8	#3	1.506	(->) EXRTU | SALES 1	16
17	RCPT SALES 1	0.777	#12	#12	20 A	20 A	1			0.36	6.92								18
19	RCPT FITTING ROOM AREA 2	0.402	#12	#12	20 A	20 A	1	0.54	3.13										20
21	RCPT	0.366	#12	#12	20 A	20 A	1		0.36	3.13		3	40 A	40 A	#10	#8	1.549	RTU-2 | SALES 1	22
23	RCPT 6, 7, 1	3.551	#12	#12	20 A	20 A	1			1.08	3.13								24
25	SPARE	--	--	--	20 A	20 A	1	0.00	0.00			1	20 A	20 A	--	--	--	SPARE	26
27	SHOW WINDOW RECEPTACLES	2.831	#12	#12	20 A	20 A	1		0.90	0.00		1	20 A	20 A	--	--	--	SPARE	28
29	LTG SALES 1	1.056	#12	#12	15 A	15 A	1			0.34	0.00	1	20 A	20 A	--	--	--	SPARE	30
31	SPARE	--	--	--	20 A	20 A	1	0.00	0.00			1	20 A	20 A	--	--	--	SPARE	32
33	SPARE	--	--	--	20 A	20 A	1		0.00	0.00		1	20 A	20 A	--	--	--	SPARE	34
35	SPARE	--	--	--	20 A	20 A	1			0.00	0.00	1	20 A	20 A	--	--	--	SPARE	36
37								6.91	0.00			1	20 A	20 A	--	--	--	SPARE	38
39	B	SL	SL	SL	100 A	100 A	3		6.73	0.00		1	20 A	20 A	--	--	--	SPARE	40
41										6.81	0.00	1	20 A	20 A	--	--	--	SPARE	42
	TOTAL CONNECTED LOAD:							21.8 kVA		21.8 kVA	21.9 kVA							

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	NOTES:	BREAKER QUANTITIES (NEW ONLY)
Continuous	18186 VA	125.00%	22733 VA		(5) 15A / 1P, (27) 20A / 1P, (1) 20A / 1P(G), (1) 40A / 3P, (1) 80A / 3P, (1) 100A / 3P
Heating	30154 VA	100.00%	30154 VA		
Lighting	6753 VA	125.00%	8442 VA		
Motor	35 VA	125.00%	44 VA		
Non-Continuous	280 VA	100.00%	280 VA		
Receptacle	10080 VA	99.60%	10040 VA		

PANEL TOTALS

TOTAL CONNECTED LOAD:	65.5 kVA
DEMAND CALCULATION NOTES:	
TOTAL DEMAND:	71.7 kVA
TOTAL DEMAND AMPS:	**199 A**

PANEL SCHEDULE LEGEND

*	=	WIRE SIZED TO COMPENSATE FOR VOLTAGE DROP
**	=	REFER TO DRAWINGS FOR SPECIFICATIONS
(#)	=	NEW CIRCUIT TO EXISTING CIRCUIT BREAKER
(->)	=	CONNECT BRANCH CIRCUIT, WHICH WAS DISCONNECTED FROM ANOTHER SOURCE AS PART OF SELECTIVE DEMOLITION, TO POLE SPACE(S) INDICATED, DETERMINE EXACT POLE ASSIGNMENT(S) BASED ON EXISTING COLOR-CODING OF THE BRANCH CIRCUIT CONDUCTOR INSULATION. PROVIDE NEW BREAKER IF REQUIRED.
(A)	=	PROVIDE ARC FAULT CIRCUIT INTERRUPTER (AFCI) CIRCUIT BREAKER
(AG)	=	PROVIDE COMBINATION ARC FAULT (AFCI) / GROUND FAULT (GFCI) CIRCUIT INTERRUPTER CIRCUIT BREAKER
(AT)	=	EXISTING FUSIBLE SWITCH/CIRCUIT BREAKER WITH NEW FUSES/TRIP RATING
(DO)	=	PROVIDE DRAW-OUT CIRCUIT BREAKER
(ERM)	=	PROVIDE ENERGY REDUCTION MAINTENANCE (REDUCED ENERGY) CIRCUIT BREAKER
(EX)	=	EXISTING CIRCUIT TO REMAIN
(F)	=	CIRCUIT FOR FUTURE USE. PROVIDE BREAKER INDICATED. LOAD SHOWN FOR REFERENCE ONLY.
(G)	=	PROVIDE GROUND-FAULT CIRCUIT INTERRUPTER (GFCI) CIRCUIT BREAKER
(GE)	=	PROVIDE GROUND-FAULT EQUIPMENT PROTECTION (GFEP) CIRCUIT BREAKER
(GS)	=	PROVIDE SPECIAL PURPOSE GROUND-FAULT CIRCUIT INTERRUPTER (SPGFCI) CIRCUIT BREAKER
(H)	=	PROVIDE HANDLE TIE
(L)	=	PROVIDE LOCK-ON DEVICE
(LI)	=	PROVIDE ELECTRONIC LONG AND INSTANTANEOUS ADJUSTABILITY
(LSI)	=	PROVIDE ELECTRONIC LONG, SHORT, AND INSTANTANEOUS ADJUSTABILITY
(LSIA)	=	PROVIDE ELECTRONIC LONG, SHORT, INSTANTANEOUS, AND GROUND-FAULT ALARM ADJUSTABILITY
(LSIG)	=	PROVIDE ELECTRONIC LONG, SHORT, INSTANTANEOUS, AND GROUND-FAULT ADJUSTABILITY
(LT)	=	PROVIDE LOCK-OUT/TAG-OUT DEVICE
SL	=	SEE THE SINGLE LINE DIAGRAM / SCHEDULE FOR WIRE SIZE AND VOLTAGE DROP
(ST)	=	PROVIDE SHUNT TRIP CIRCUIT BREAKER

PANEL SCHEDULE GENERAL NOTES

A. PROVIDE HACR RATED BREAKERS ON ALL MOTOR LOADS.
B. ALL CONDUCTORS SHOWN ARE COPPER.
C. ALL VOLTAGE DROP CALCULATIONS AND COMPENSATED WIRE SIZES ARE BASED ON RIGHT ANGLE CIRCUIT LENGTHS. ACTUAL VOLTAGE DROP MAY VARY BASED ON INSTALLED WIRE LENGTH.
D. VOLTAGE DROP CALCULATIONS AND WIRE SIZES SHOWN IN THE PANEL SCHEDULES ARE FOR HOMERUN CONDUCTORS ONLY. FOR CIRCUITS WITH MORE THAN 1 DEVICE, THESE SIZES ASSUME THE CONDUCTORS DOWNSTREAM OF THE HOMERUN DEVICE ARE THE MINIMUM SIZE REQUIRED BY THE NEC BASED ON THE RATING OF THE CIRCUIT. WHERE THIS IS NOT THE CASE, IT HAS BEEN INDICATED ON THE DRAWINGS. VOLTAGE DROP TO THE FARTHEST DEVICE HAS BEEN CALCULATED TO NEVER EXCEED 5%.
E. RECEPTACLE LOADS CALCULATED AT 100% OF FIRST 10kVA, 50% OF REMAINDER. MOTOR LOADS CALCULATED AT 125% OF THE LARGEST MOTOR, 100% OF ALL OTHER MOTORS.

STATE OF MISSOURI
JEREMY A. TOY
NUMBER PE-2021044400
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

ELECTRIC PANEL SCHEDULES

DRAWN BY
DJR
CHECKED BY
MPR
JOB NUMBER
25303
SHEET NAME
E-301

COM*check* Software Version COMcheckWeb

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2018 IECC
Project Title: 27551.00 - Carhartt - Summit Woods Crossing - Lee's Summit, MO
Project Type: Alteration

Construction Site:
1744 NW CHIPMAN RD
LEES SUMMIT, MO 64081

Owner/Agent:

Designer/Contractor:
KLH Engineers
1538 Alexandria Pike
Fort Thomas, KY 41075

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts
1-FITTING ROOM AREA 2 (Retail:Dressing/Fitting Room)	168	0.50	84
2-SALES 1 (Common Space Types:Sales Area)	3741	1.59	5948
3-HALLWAY 3 (Common Space Types:Corridor/Transition <8 ft wide)	231	0.66	153
4-OFFICE 6 (Common Space Types:Office - Enclosed)	64	0.93	60
5-BREAK RM 7 (Common Space Types:Lounge/Breakroom)	134	0.62	83
6-STOCK ROOM 4 (Common Space Types:Storage >=50 - <=1000 sq.ft.)	858	0.46	395
7-TOILET ROOM 5 (Common Space Types:Restrooms)	65	0.85	55
		Total Allowed Watts =	6777

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 AREA 2 (Retail: Dressing/Fitting Room, 168 sq.ft.)				
M: M: HI BAY LIGHTING: Other:	1	4	35	140
SALES 1 (Common Space Types: Sales Area, 3740 sq.ft.)				
A: A: HI BAY LIGHTING: Other:	1	23	81	1863
Track Lighting: Wattage based on total luminaires	0	0	3512	3512
HALLWAY 3 (Common Space Types: Corridor/Transition <8 ft wide, 231 sq.ft.)				
E: E: LINEAR LED: Other:	1	3	45	135
E4E: E4E: LINEAR LED: Other:	1	1	45	45
OFFICE 6 (Common Space Types: Office - Enclosed, 64 sq.ft.)				
E4E: E4E: LINEAR LED: Other:	1	1	45	45
BREAK RM 7 (Common Space Types: Lounge/Breakroom, 134 sq.ft.)				
E: E: LINEAR LED: Other:	1	1	45	45
E4E: E4E: LINEAR LED: Other:	1	1	45	45
STOCK ROOM 4 (Common Space Types: Storage >=50 - <=1000 sq.ft., 858 sq.ft.)				
E: E: LINEAR LED: Other:	1	14	45	630
E4E: E4E: LINEAR LED: Other:	1	3	45	135
TOILET ROOM 5 (Common Space Types: Restrooms, 64 sq.ft.)				
E4E: E4E: LINEAR LED: Other:	1	1	45	45
			Total Proposed Watts =	6640

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 2018 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title | Signature | Date

COM*check* Software Version COMcheckWeb

Inspection Checklist

Energy Code: 2018 IECC

Requirements: 100.0% were addressed directly in the COM*check* 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.

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
C405.2.2.2 [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.
C405.2.1, C405.2.1.1 [EL18][1]	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multpurpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, 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.
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 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.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
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) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 3) 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, and 4) are configured such that any daylight responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C405.2.2, C405.2.2.1, C405.2.2.2 [EL21][2]	Each area not served by occupancy sensors (per C405.2.1) have time-switch controls and functions detailed in sections C405.2.2.1 and C405.2.2.2.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

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, C405.2.3.1, C405.2.3.2 [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:** Sidelit zones on first floor in Group A-2 and M occupancies.
C405.2.4 [EL26][1]	Separate lighting control devices for specific uses installed per approved lighting plans.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.2.4 [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.
C405.3 [EL6][1]	Exit signs do not exceed 5 watts per face.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C405.6 [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.
C405.7 [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	Requirement will be met.
C405.8.2, C405.8.2.1 [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.
C405.9 [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.

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][3]	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.
C405.4.1 [FI18][1]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Interior Lighting fixture schedule for values.*
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.
C408.2.5.1 [FI16][3]	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)

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM
1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX
LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
JEREMY A. TOY
NUMBER PE-2021044400
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

ENERGY COMPLIANCE

DRAWN BY	DJR
CHECKED BY	MPR
JOB NUMBER	25303
SHEET NAME	E-400

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
07/29/2025

26 05 01.00 - COMMON WORK RESULTS FOR ELECTRIC

The General Provisions of the Contract including the General and Supplemental Conditions and General Requirements apply to the work in this section. Before submitting a bid, examine documents of all other trades, visit the site and get acquainted with all conditions that may in any way affect the execution of this contract. Take measurements and be responsible for exact size and locations of all openings required for the installation of work. Noted dimensions convey desired locations for devices. Coordinate with owner representative on site prior to deviating from noted dimensions for any reason. Where detailed method of installation is not indicated or where variations exist between described work and approved practice, direction of the Owners representative on job site shall be followed.

Whenever the words "contractor", "this contractor", etc. appear on drawings or in these specifications for the Electrical Work, it shall refer to the Electrical Sub-Contractor. Whenever the word "Provide" appears in these documents, it shall be interpreted to mean "Furnish and Install". Whenever the word "Relocate" appears in these documents, it shall be interpreted to disconnect electrical feed, make safe including lock out, store and protect device, reinstall, rework and extend conduit and wire to new location, re-energize and test.

The exact mounting height of devices shall be determined in the field with relation to architectural details and equipment being served. It shall be the responsibility of this contractor to coordinate outlet location with equipment. The Owners representative shall be permitted to relocate any outlet prior to installation within a 15 foot limit at no additional charge in contract price. All fasteners, hangers and methods of hanging exposed work in finished areas shall be submitted to the Owners representative for approval before installation.

The contract includes all items of material and labor required for the complete installation and full operation of the electrical work as shown on the drawings and hereinafter specified. All materials and methods shall be in accordance with applicable codes, regulations and/or ordinances and meet the approval of local inspection authority having jurisdiction. The latest edition of NFPA 70 (NEC/National Electrical Code) shall be the minimum requirement for all work. Examine the drawings and specifications for compliance with the above codes, regulations and ordinances and base bid and work accordingly. Obtain and pay for all permits and inspections related to this work. A certificate of approval for work from inspection authority shall be given to the Owner before final acceptance will be given by Owners representative.

All work, materials, and equipment shall have a one-year warranty after acceptance of the work by the Owner. Any defective items shall be removed and replaced at the electrical sub-contractor's expense and to the satisfaction of the engineer and owner's representative.

Perform work under this contract in close harmony with other contractors so completed work shall present a neat and workmanlike installation. Exposed finished materials and equipment shall be carefully cleaned and wiped to remove grease, smudges, fingerprints, dust and other spots and left smooth and clean. During the progress of the work, the electrical sub-contractor shall carefully clean the job site and shall leave the premises and all portions of the building in which he is working free of debris and in a clean and safe condition.

This contractor shall be responsible for the training of owner's representatives of each system to the satisfaction of the Owners representative.

The Electrical Contractor shall consult the Plumbing, HVAC and Structural plans (where applicable) in all instances before installing his work so that his work will not interfere with those branches. In the event of a conflict, this contractor shall report to the Owners representative at once and do no further work to be installed until a satisfactory arrangement is decided upon. Any work done, or equipment placed in position by this contractor, creating a conflict in violation hereof, shall be readjusted to the satisfaction of the Owner's representative at the expense of the contractor. The decision of the Owners representative shall be final in regard to changes due to conflicting conditions. Contractor shall complete his work or any part thereof at such time as may be designated by the Owner, so that it can be used for temporary or permanent use and such use of the system shall not be construed as an acceptance of same by Owner.

Two sets of electrical drawings shall be provided as record drawings which shall be separate, clean, copies reserved for the purpose of showing a complete picture of the work as actually installed. These drawings shall also serve as work progress report sheets and the electrical contractor shall make any notations, neat and legible thereon daily as work proceeds. The drawings shall be available for inspection at all times and shall be kept at the job at a location designated by the Owners representative. At the completion of the work, these record drawings shall be signed by the electrical contractor, dated and returned to the Owners representative. Final payment of contract will not be made until receipt and review of said drawings.

Provide two neatly bound (with tabbed sections) copies of maintenance books, instruction books and parts list pertaining to all equipment furnished. Submit to the Owners representative for approval. Final payment will not be made until drawings for record, maintenance and instruction manuals are delivered to the Owners representative.

26 05 02.00 - COMMON ELECTRICAL MATERIALS AND METHODS

All materials and equipment shall be new. All materials, apparatus and equipment shall bear the seal of Underwriters Laboratories Inc. (UL), or a similar credible testing agency, label where regularly supplied. Certain manufacturers of material and equipment are specified and plans are detailed according to this material. This contractor shall base his bid on furnishing and installing this make of material and equipment.

Where more than one make of material or equipment is specified, the contractor shall state in his bid which make he proposes to furnish. Shop drawings shall be submitted on material and equipment to be furnished by the contractor for Engineers approval. This approval to be obtained prior to shipment of equipment.

Hold routing of new raceways in new and existing buildings as tightly as possible to the structure above. Obtain approval of owner's representative prior to installation. Do not install any electrical work within 6 inches of roof decking.

Neatly dress all work. Install all work parallel and perpendicular to surfaces or exposed structural members, and follow surface contours, where possible. Install splice and tap connectors which possess equivalent or better mechanical strength and insulation rating than conductors being spliced. Use splice and tap connectors which are compatible with conductor material. All wires shall be run continuous from outlet to outlet/luminaire to luminaire. Insulation value of joints shall be 100% in excess of wire. Provide adequate length of conductors within electrical enclosures and train the conductors to terminal points with no excess. Bundle multiple conductors, with conductors no larger than 10 AWG cabled in individual circuits. Make terminations so there is no bare conductor at the terminal.

Maintain a uniform elevation for all cable runs wherever possible. All cables shall be supported/anchored at maximum 4 foot intervals and within 12" of box or outlet and shall not sag. Install cables in a manner that prevents overheating. Cables shall be fastened directly to the structure using factory clamps/clips specifically designed for the respective cable (Caddy or equal).

Keep conductor splices to minimum. Pull conductors simultaneously where more than one is being installed in same raceway. Use UL listed pulling compound or lubricant, where necessary. Increase wire sizes to offset voltage drop as/if required.

Branch subfeeder circuits shall be installed as shown on the floor plans. Where outlets are indicated by letters on plans, they shall be controlled by corresponding switches.

Outlets shall be located approximately as shown on the plans and shall be wired to provide control of outlets indicated. All wires of any one circuit shall be run in the same conduit.

Mechanical wire splicers shall be Scotchlock insulated type, TandB Stakon or approved equal. The conductors terminating at each wired outlet shall be left not less than 8" long at their outlet fittings to facilitate installment of devices or luminaires. Friction and rubber tape conform to Federal Specifications HH-T-11 and HH-T-111. Plastic electrical tape shall be Scotch #33+ or approved equal.

Do not share neutrals when amongst multiple branch circuits or with multi-wire branch circuits.

Provide grounding electrode conductors for service entrances and derived systems.

Provide all feeders and branch circuits with insulated (green covering) equipment grounding.

Only install conduit exposed on rooftops when it is impossible to do otherwise, or only if specifically indicated for such installation case-by-case elsewhere in documents. Installation convenience, financial considerations, lack of coordination with other trades and similar rationale are not sufficient reasons for doing so. In cases where conduits must be installed on rooftops, de-rate conductors and modify conduit sizes as needed to accommodate this condition. Provide expansion fittings, which are UL listed and labeled for the respective applications, at all building expansion joints and at maximum distances of 100 feet. Paint all such conduits with at least two coats of UV-resistant weatherproof paint. Provide white paint on flat rooftops that have finishes white in color, and for otherwise-colored roof finishes that are not visible from the building interior or from the ground outdoors. Elsewhere select colors to match surrounding surfaces; submit colors to Architect for review in advance of procuring paint.

Provide all cutting and patching required for the admission of work. Any damage done by this contractor to the building during the progress of work shall be made good at contractor's own expense. All patching shall be done by a skilled craftsman in that respective trade. It shall be the responsibility of this contractor to supervise the installation of, and pay for all additional members, wood or metal and labor which may be required to support any type of permanent or temporary electrical apparatus employed in the execution of this contractor's work.

Access Doors: Do not use access doors unless special prior written permission is granted from the Owner's Representative. Install pull boxes, junction boxes, etc. in areas which are accessible after completion of construction. Do not install pull boxes or junction boxes above gypsum board or similar inaccessible ceiling systems. Where there is no other recourse but to provide an access door/panel, and where approval of Owner's Representative has been obtained, provide required access doors/panels as required for a complete code-compliant electrical installation as defined below. Provide access doors in fire/smoke ratings that meet or exceed the surrounding surface that is being penetrated.

Seal all new floor, ceiling, wall, slab, etc. penetrations to match or exceed existing assembly fire ratings. Provide sleeve seals for all sleeves, provide sleeves for all penetrations. All penetrations of fire-rated or smoke-rated wall, floors ceilings, etc. shall be sealed immediately after raceways are installed. All new electrically related work shall be supported directly from building structural members. New electrically related work shall not be supported from ductwork, ductwork hanger, ceiling supports, existing conduit support, etc.

26 05 03.00 - SUBMITTALS FOR ELECTRICAL SYSTEMS

Provide submittals in accordance with the Contract Documents. In addition to Division 01, the Contractor is advised to review and comply with the requirements articulated within each Division and within each section of that Division.

Some Divisions may include a division-specific "Submittal Requirements for …," section. Where this section exists, it articulates additional requirements for submittals that apply to the work of that Division.
The following requirements help to identify, track and keep the project organized for all parties involved. They are necessary to ensure a timely turnaround and an appropriate technical review. Submittals that do not conform to the administrative requirements are rejected and returned, without technical review.

Supply submittals for each section: Submittals shall be supplied on a section-by-section and type-by-type basis. For example, independent product data submittals shall be furnished for each section that requires product data submittals. Independent shop drawing submittals shall be furnished for each section that requires shop drawings. Separate PDF file packages shall be supplied for each section, for each submittal type. Each PDF shall represent a single standalone submittal.

Include a transmittal: Transmittals shall enumerate each submittal for each section of each type and iteration.

Include cover sheet / title page: The cover sheet shall include the information identified in the contract documents. It shall be included as the first page of each electronic and/or hardcopy document-based submittal. An editable and printable PDF form created with editable fields and specification compliant appearance is available from KLH upon request. It is also downloadable from the KLH website at www.klhengrs.com.

Include an index: The index shall enumerate the contents of the submittal.

Include checklists: Where checklists are included with the specifications, complete and include them within the appropriate submittal. Supply complete submittals: Complete submittals of each type are required. Partial submittals will be rejected. Where a section requires a product data submittal, all product data for that section shall be supplied together, at one time, as one complete submittal. When resubmittal is required (e.g. Revise and Resubmit) the revised submittal shall be more complete, more accurate and more contract-compliant than its rejected predecessor. The submittal number (for each section and type) shall increment for each subsequent submittal (00 – Original submission, 01 – First Resubmission, 02 – Second Resubmission, etc…). Resubmittals shall include a copy of the reviewers comments supplied with the prior submittal rejection and shall be amended with a description of the specific action taken to comply with the reviewer's comments. The absence of this on resubmittal is cause for rejection.

Name electronic files to match the submittal ID and cover sheet: The electronic file name of submittals shall match the submittal ID included on the submittals cover page. For example: The original/first product data submittal for Section 260519 would be labeled as "260519.00-PD-00"; the first resubmittal of same shall be labeled "260519.00-PD-01". The original/first shop drawings submittal file for the same section would be labeled "260519.00-SD-00"; the first resubmittal of same shall be labeled "260519.00-SD-01".

If expressly permitted by the Owner and the terms of the Contract, editable electronic drawings may be made available for the creation of shop and as-built drawings upon request. Drawings will be made available at the discretion of the Engineer.

"Request Drawings" form can be accessed, filled out and submitted at http://www.klhengrs.com (right hand side of page - Contractor Resources). Direct access to this form can be found here:
http://files.klhengrs.com/requestdrawings.html

26 05 19.00 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

Submittal Requirements
Product Data
For each type of conductor and cable.

Furnish and install all necessary cable of the size and type indicated on the drawings or specified hereinafter. All wire shall be copper. All wiring shall be new. No wire smaller than #12 AWG shall be installed unless specifically designated. Use of #14 color coded wire will be allowed for control circuits only. Provide stranded conductors for all sizes unless indicated otherwise.

Provide THHN/THWN-2 insulation for all conductors as appropriate for the locations where installed. Provide color coded insulation/jacket for phase identification. All wires shall be rated at 600 volts. Provide type XHHW-2 insulation for all wiring below grade or subject to moisture.

Unless specifically indicated otherwise on drawings, provide grounded ("neutral") conductors that are at least parity-sized with corresponding phase/line conductors for all applications.

All conductors shall be rated for 90 deg. C. minimum. Provide with green insulated equipment ground conductor. Provide compatible steel fittings with integral red plastic insulated throat bushings. Cables shall be 90 deg. C. rated with all components and fittings listed for grounding and compliant with the following: UL Std.4 and UL Std. 83; ANSI E119 and E814; NFPA 70.

Aluminum Conductors: Where applicable for electrical equipment connections for aluminum wiring, provide the following supplemental requirements and work regardless of who furnishes the equipment or what type of equipment is affected. Review equipment submittals, installation documents and nameplates to determine if there are any warranty or UL limitations regarding copper versus aluminum wiring connections at equipment. If there are any limitations, provide local non-fused disconnect at or near equipment (external to the equipment) and terminate aluminum conductors to the line side terminals of the disconnect switch. Provide copper conductors from load side terminals of the disconnect switch to the respective equipment factory disconnect or terminals as applicable. Provide UL-Listed AA-8000 series compact-stranded conductors compliant with specifications, prevailing codes and end-use equipment manufacturer requirements. Provide appropriately UL-Listed connectors as recommended by conductor manufacturer.

Cables: Route cables perpendicular and parallel to the building architectural lines, surfaces, and structural members, keeping offsets to a minimum and following surface contours where possible. Maintain a uniform elevation for cable runs wherever possible. Support and anchor cables at maximum 4 foot intervals and within 12" of box or outlet in a manner that prevents sagging. Install cables in a manner that prevents overheating. Fasten cables directly to the structure using factory clamps and clips (zip ties and like products are not permitted) specifically designed for the respective cable (Caddy or equal). Cables may be utilized only if code-approved for the intended use and in the limited applications defined below.

Type MC (Metal-Clad) Cable: Form from continuous length of spirally wound, interlocked zinc-coated or galvanized (inside and outside) strip steel or aluminum jacket, with stranded copper conductors with 90 deg. C THHN insulation system. Provide only where permitted in the Conduit/Wire Material Schedule shown on the drawings

26 05 26.00 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

All metallic conduit, surface raceways, wireways, supports, cabinet and equipment shall be grounded.

26 05 29.00 - HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

It shall be the responsibility of the electrical contractor to supervise the installation of and pay for all additional members, wood or metal and labor which may be required to support any type of permanent or temporary electrical apparatus employed in the execution of the electrical contractor's work. Provide supports, anchors, sleeves and seals furnished as part of factory-fabricated equipment as required. Locations and routing that may be shown on plans are schematic and diagrammatic in nature. Metallic products shall be galvanized steel.

Conduit shall be supported by approved straps, fasteners and hangers. Hangers shall be suspended from rods. Perforated straps will not be acceptable. Fasteners shall be lead expansion shields in block or concrete, toggle bolts in hollow walls, machine screws on metal surfaces and wood screws on wood construction. At building expansion joints and where deflection is expected, conduits shall be provided with expansion fittings with bonding jumpers. Conduits passing through structural members shall be provided with stub and coupling or sleeve in the member. Where moisture conditions are encountered, a hole shall be drilled at the lowest point in the conduit run. Also provide sleeves for all fire wall and smoke partition penetrations (sealed accordingly).

All conduit shall be supported independently from all other building systems and shall be supported directly from structural components. Electrically related work shall not be supported from ductwork, ductwork hangers, ceiling supports, existing conduit supports, etc.

Use of synthetic or plastic "tie-wraps", "zip ties", "wire ties" and similar products are not permitted as a permanent means of supporting, securing, supporting or otherwise installing any cables, conductors, conduits, raceways, devices, equipment or other electrical work.

All conduits, raceways and cables (where applicable) shall be routed parallel and perpendicular to building structural members. Any and all noncompliant work installed by the electrical contractor shall be removed and reinstalled by the electrical contractor to the satisfaction of the Owner's representative and the Engineer, at the expense of the electrical contractor. At building expansion joints and where deflection is expected, provide conduits with expansion fittings with bonding jumpers. Conduits passing through structural members shall be provided with stub and coupling or sleeve in the member. Where moisture conditions are encountered, a hole shall be drilled at the lowest point in the conduit run. Provide sleeves for all fire wall and smoke partition penetrations (sealed accordingly).

Stem lengths of all pendant fixtures shall be as directed by the owner's representative. All fasteners, hangers and method of hanging exposed work in finished areas shall be submitted to the owner's representative for review before installation. Fasteners shall be zinc-coated, type, grade, and class as required for a neat finished installation.

Place and secure anchorage devices. Use supported equipment manufacturer's setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded. Install anchor bolts to elevations required for proper attachment to supported equipment. Provide female expansion anchors, and install studs and nuts after equipment is positioned. Provide bushings for floor/wall-mounted equipment anchors to allow for resilient media between anchor bolts/studs and mounting hole in concrete.

Touchup Painting: Clean field welds and abraded areas of shop paint. Paint exposed areas immediately after erecting hangers and supports. Use same materials as used for shop painting.

Provide supports for multiple raceways capable of supporting combined weight of supported systems, equipment, connected systems and associated components/contents. Provide supports adequate in tension, shear, and pullout force to resist maximum loads calculated or imposed for this project, with a minimum structural safety factor of five times the applied force.

Coordinate installation of roof curbs, equipment supports, and roof penetrations.

Steel Slotted Support Systems: Comply with MFMA-4, factory-fabricated components for field assembly. Construct with all necessary fittings which mate and match with U-channel. Provide metallic coatings that are hot-dip galvanized after fabrication and applied according to MFMA-4. Provide channel dimensions that are selected for applicable load criteria. Comply with NECA 1 and NECA 101 unless requirements in this or other specification sections are stricter.

Multiple Raceways or Cables: Install trapeze-type supports fabricated with steel slotted, sized so capacity can be increased by at least 50 percent in future without exceeding specified design load limits. Secure raceways and cables to these supports with two-bolt conduit clamps, single-bolt conduit clamps, or single-bolt conduit clamps using spring friction action for retention in support channel as applicable.

Overhead Electric Work: Install work so that no raceway or cable is within six inches below roof deck(s). Suspend and support overhead electrical work from roof trusses and joists/joist girders only at panel points, at top cord only, unless otherwise indicated.

Strength of Support Assemblies: Where not indicated, select sizes of components so strength will be adequate to carry present and future static loads within specified loading limits. Minimum static design load used for strength determination shall be weight of supported components plus 200 lb.

Roof Decks: Do not suspend overhead hangers, or support any other overhead electrical work, from roof decks.

Plywood Equipment Boards: Lumber shall be preservative treated in accordance with AWPB LP-2, and kiln dried to a moisture content of not more than 19 percent. Provide plywood panels; APA C-D PLUGGED INT, with exterior glue; thickness as indicated, or if not indicated, not less than 3/4 inches deep. Provide marine grade plywood where subject to moisture conditions. Unless otherwise noted, boards shall be painted with two coats of good grade weatherproof flat gray non-conductive fire-retardant paint on all sides and edges (prior to mounting) and plumbed in a true vertical position. Provide nominal 1/2" rustproof spacers between back of plywood and wall. Maintain at least 4 inches from bottom of plywood equipment boards and the finished floor surface. Unless directed otherwise in field, plywood equipment boards shall be provided with expansion fittings with bonding shown on drawings (as dimensioned or as scaled) or length as required to accommodate equipment if not indicated on drawings. Provide plywood equipment boards at locations as shown on drawings. Unless directed otherwise in field, plywood equipment boards shall be provided for all surface mounted panelboards and systems "head-end" equipment for all applications where located in mechanical or electrical rooms and only where specifically shown on drawings for all other applications.

26 05 33.00 - RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS

Normal system power feeders and branch circuits shall be installed in separate raceways from emergency system power. All wiring for different power voltages shall be installed in raceway systems separate from each other. All wiring for the various electrical systems shall be installed in raceway systems separate from each other.

All fittings shall be set-screw or compression type steel, with insulated throats. Unless indicated otherwise on drawings or in other parts of the electrical specifications, all wiring of all systems shall be installed in conduit.

Conduit shall be cleaned inside before any wires are pulled. Conduit ends shall be capped and plugged with standard accessories as soon as conduit has been permanently installed. Conduit installed without conductors shall be provided with sweep bends and baling wire for pulling.

All joints shall be made tight with watertight couplings matching conduit and all corners shall be made with long radius elbows. The ends of all conduits shall be cut square and reamed and all joints brought to a shoulder. Conduit shall be continuous between outlets to make a complete installation and to provide a continuous ground. Suitable supports and fastening shall be provided for conduit.

All raceways shall be entirely free of plaster, mortar, water and other foreign matter before installing conductors or cables.

In general, gang type outlet boxes shall not be used. The outlet box locations indicated on drawings shall be considered approximate, and therefore, it shall be incumbent upon this contractor to study the general construction with relation to spaces and equipment surrounding each outlet. All outlet, switch and junction boxes shall be made of code galvanized steel complete with rings and screw cover plates and located where shown and noted on drawings. Where conduit is concealed, boxes shall not be less than 4" square x 1-1/2" deep. All boxes shall be equipped with proper covers to bring flush with finished wall surface.

Where outlet boxes occur in block, cinder, or concrete block, facing tile or other material where such materials form the finished wall surface, the opening for the box shall be cut neatly and of the size that the cover plate will cover all parts of the opening. Conduits shall be used on exposed raceways. In general, junction boxes shall be constructed of #12 gauge steel with removable front fastened on with counter sunk head screws or other approved means. For special application, junction boxes shall be noted, detailed and/or sized on the drawings or in the field as required.

Prior to rough-in, verify all box/device mounting heights and locations in field with Owners representative. In general, where not located at counter areas, the height of boxes from finished floor to center of boxes shall be as follows, unless otherwise noted on plans. In cases where using center of box for measurement would result in a switch-height device having an operable component higher than 48 inches above finished floor, install boxes lower as needed so that uppermost part of operable component is no higher than 48 inches.
Switches: 3'10"
Receptacles: 1'6" (unless counter height)
Telephone Outlets (desk phone): 1'6"
Telephone Outlets (Wall phone): 3'10"
Data Cable Outlets: 1'6"
Other devices: As directed in field.

26 05 53.00 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

Provide manufacturers standard self-adhesive vinyl tape not less than 3 mils thick by 1-1/2" wide. Where applicable, install on all concealed raceways at connection to all junction boxes, pull boxes, equipment, wall/floor/roof penetrations, etc. Unless otherwise indicated or required by governing regulations, provide orange tape with black letters. Provide circuit identification bands for all cables and conductors. Provide manufacturers standard color coding for cable/conductor jacket and/or insulation for all cables and conductors of all systems. Match identification with marking system used in existing systems (where applicable), shop drawings, contract documents, and similar previously established identification for projects electrical work. Provide on all conductors of all systems.

The following insulation color code shall be used for system and voltage identification. This shall apply to both feeder and branch circuit wiring. Interchange of colors shall not be permitted.

208Y/120V System: and White (neutral)	Black, Red, Blue
Equipment Grounding:	Green
Systems:	To match existing

where applicable - verify in field.

Provide engraved plastic-laminate sign on major units of electrical equipment, including panelboards, disconnects, starters, control panels, etc. Except as otherwise indicated, provide single line of text, 1/2" high lettering, on 1-1/2" high sign (2" high where 2 lines are required), white lettering in black field. Unless determined otherwise in field, provide text matching terminology and numbering of the contract documents and shop drawings. Secure to substrate with fasteners, except use adhesive where fasteners should not or cannot penetrate substrate.

All equipment and system identification nomenclature shown on drawings or listed herein is shown for general design and installation reference only. The actual nameplate, etc. nomenclature for this project shall be verified by electrical contractor in field prior to fabrication and where applicable, shall be an extension of existing nomenclature used on the site as determined in field by electrical contractor.

Equipment to Be Labeled: All enclosures for all electrical equipment furnished or installed under Divisions 26 and 28; Remote-controlled switches, dimmer modules, and control devices, via engraved wall plates; Miscellaneous Control Stations; Access doors and panels for concealed electrical items; Other similar equipment designated by owner's representative, architect or engineer in field.

26 05 84.00 - MECHANICAL EQUIPMENT

Provide all necessary electrically related work as required to render all mechanical equipment (including plumbing, heating, ventilating and air conditioning equipment) fully operational and fully compliant with all local and national codes. This includes, prior to ordering materials or commencing with rough-in, reviewing equipment submittal data and coordinating with installing contractors to ensure the correct size, rating and quantity of conductors are provided.

Provide raceway, wiring, connections, and terminations for power and interlocks for electrically operated equipment.

Provide disconnect switch ahead of all equipment, including controls, unless shown otherwise on the drawings. Provide NEMA 3R enclosures where installed outdoors and where installed indoors in areas subject to moisture. Ground metal frames of equipment by connecting frames to the grounded metal raceway and to a full-size green ground conductor. Provide the necessary electrical connections to the specified equipment. Where mechanical equipment lugs cannot accommodate conductor sizes, provide ILSCO ClearTap Insulated Multi-Tap Connectors.

Sizes, electrical ratings, etc. of equipment and wiring shown on drawings are based on the respective equipment basis of design. If different manufacturer(s) or model(s) are supplied, provide necessary coordination in field (prior to ordering materials and prior to rough-in) and provide the necessary size of related electrical equipment, wiring, conduit, etc.

Prior to furnishing submittals and prior to rough-in, determine exact electrically related characteristics, loads, voltages, disconnect and starter requirements, locations, mounting heights, connection points, etc. of mechanical equipment.

Disconnect and Controller Locations: Locations shown on drawings are indicated for schematic purposes only. Determine exact locations in field. Refer to Electrical Coordination Schedules on drawings. Provide disconnects, starters, accessories, wiring, connections, services, etc. where defined as "EC" in the schedule. Information in this section supplements the information in the schedules. Provide power wiring and connections for all equipment (including motor dampers and accessories where applicable) as required to render equipment fully operational. Install local disconnects and starters at 48 inches to top of outlet box or enclosure where applicable above finished floor/slab/grade. Provide flush mounted units in finished areas. Provide key operated manual starters where accessible to unauthorized personnel, including general public.

Maintenance Receptacles: Provide duplex GFCI receptacle within 25 feet of all electrically operated equipment of any nature that requires periodic testing or maintenance. This applies for all indoor and outdoor equipment. Provide Type WR duplex GFCI weatherproof receptacle for outdoor applications (including rooftops) and for applications subject to high humidity or moisture.

Domestic Water Heaters (Electric): Provide local disconnect switch, and power wiring and connections. Provide interlock wiring with circulating pumps, flow switches and aquastat controls where applicable.

Domestic Hot Water Circulating Pumps (Return Line): Provide manual starter with pilot light, and wire pump to operate through the aquastat. Refer to wiring diagrams on drawings for further definition.

Electric Water Coolers: Provide 120V duplex receptacle or direct 120V connection with lock-out/tag-out provisions at source circuit breaker (verify required method in field with electric water cooler installer). Provide GFCI circuit breaker to feed the circuit that serves electric water coolers, even if not indicated on panelboard schedule. Install outlets at height and location as directed by water cooler installer. Conceal outlets within water cooler enclosure if enclosure is designed for such an installation. Assemble and connect cord if applicable and needed. Coordinate all specifics with water cooler installing contractor prior to rough-in of related work.

General Control Wiring Requirements: Unless specifically indicated as empty conduit on drawings or herein, provide electrical control and interlock work as shown on drawings. Provide additional control work as specifically indicated herein. Coordinate HVAC thermostat and sensor locations in field (case by case) with Architect, Owner's Representative and equipment installer to ensure that they are placed in locations that will not interfere with furniture, equipment, artwork, wall-hung specialties, room finishes, etc. Field-verify these wall locations case by case, prior to rough-in, since locations shown on drawings are schematic only.

Schematic Thermostat and Sensor Locations: Refer to applicable drawings and documents.

Low Voltage Thermostats and Sensors: Provide 4-inch square by 2-1/8 inch deep wall outlet boxes at 46 inches above finished floor to center of outlet box (with single-gang rings) for each unit. Provide one 3/4 inch empty conduit from each location, turned out above accessible ceilings (in joist space or against overhead slab/deck). Identify conduit in ceiling cavity; provide sweep bends, bushings and drag line.

Line Voltage Thermostats and Sensors: Provide 4-inch square by 2-1/8 inch deep wall outlet boxes at 46 inches above finished floor to center of outlet box (with single-gang rings) for each unit. Provide line voltage power wiring, in 3/4 inch conduit, and connections from thermostats and sensors to respective equipment that is to be controlled by same. Install thermostats and sensors.

26 09 19.00 - ENCLOSED CONTACTORS

Provide contactors equipped with external pilot lights in cover, and external HOA selector switches in cover. Wire contactors for lighting applications so that the "AUTO" position is the normal activated condition (i.e. photocell controlled, photocell/time-clock controlled, remote switch controlled, BAS controlled, etc.); so that the "OFF" position is manual override to turn lighting off; and so that the "HAND" position is manual override to turn lighting on. Provide contactors with field convertible N.O./N.C. contacts and descriptive nameplates.

Electrically Held Contactors: Provide contactors equal to Square D Class 8903 (or Allen-Bradley Bul. 500L-BA*94 series) for tungsten lighting loads, ballast lighting loads, and small resistance heating loads. Provide contactors that are electrically operated and electrically held (EOEH). Provide contactors in factory NEMA 1 enclosures, with 120V coils (unless indicated otherwise elsewhere or otherwise required to render controls fully operable). Provide "dry" contacts rated at 30A, minimum 250V (600V if required by application). Provide number of poles (minimum of three poles) and number of contactors as required for each application. Field verify coil voltage ratings.

26 09 23.00 – LOCAL LIGHTING CONTROLS

Submittal Requirements
Product Data
For equipment, materials and systems specified in this section. Include product data, descriptive information, technical data, wiring diagrams, load restrictions, etc.

General Requirements
Finishes & Wall Plates: Refer to specification 262726.00 – Wiring Devices and match all requirements.

Toggle Switches:
Refer to specification 262726.00 – Wiring Devices.

Momentary-Contact Toggle Switches: Provide Standard of Quality equal to Legrand LVS-1, 3 Amp, 24 VAC/VDC, single-pole, double-throw with center rest, designed to fit conventional toggle switch openings.

Time Clocks
365-Day Multi-Purpose Time Clocks: Provide time clock that is programmable 365-day/24-hour with override controls and holiday option. Provide number of channels indicated on the drawings. Provide required external contactors, relays, etc. to render the control systems fully

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM
1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX
LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LI, REVIEW, AND PERMIT	06.18.25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
JEREMY A. TOY
NUMBER PE-2021044400
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

ELECTRICAL SPECIFICATIONS

DRAWN BY	DJR
CHECKED BY	MPR
JOB NUMBER	25303
SHEET NAME	E-500

operational. Verify zone control requirements in field prior to rough-in. Provide 100-hour carryover.

Occupancy Sensors, Dual Technology Wall Switches: Provide Wattstopper DW-100 wall switch (or equivalent) and configure as manual on, auto off (vacancy sensor) unless otherwise specified on drawings. Provide with time delay as specified on drawings. If no time delay is specified, program to 10 minutes.

Occupancy Sensors, Dual Technology Ceiling Sensors: Provide Wattstopper DT-300 ceiling mounted occupancy sensor (or equivalent). Provide with time delay as specified on drawings. If no time delay is specified, program to 20 minutes. Adjust sensitivity based on field conditions and occupancy of room to provide 100% coverage without nuisance tripping. Provide Wattstopper BZ-150 universal voltage pack(s) as required to properly power all occupancy sensors and provide switching per the design intent. In areas where multiple occupancy sensors control a single zone together, interlock occupancy sensors/power packs per manufacturer instructions to meet control intent.

26 24 16.00 – PANELBOARDS

Submittal Requirements
Product Data
For each provide bus configuration, current ratings, voltage ratings, SCCR Ratings, overcurrent protective device(s), surge suppression device(s), accessory, and components indicated. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, accessories, and finishes.

Subject to compliance with requirements, provide panelboard products of one of the following (for each type and rating of panelboard and enclosure): Square D Company, GE/ABB, Siemens, Eaton/Cutler-Hammer.

Panelboards shall bear UL labels for their specific applications. Panelboards shall be suitable for service voltage with number of branch circuits of capacity scheduled. Refer to the drawings for bussing material. Where copper is specified provide silver or tin plating. Unless otherwise indicated, panelboards and sections thereof, if any, shall have main-lugs-only of capacity equal to, or greater than, the rating or setting of the over the current protective device next back on the line. All circuit breaker panelboard bus assemblies shall be of the distributed (sequence) bussing type throughout, so that any 2 adjacent single pole breakers and/or spaces shall be replaceable by a 2-pole internal common trip breaker, and any 3 adjacent single pole breakers and/or spaces shall be replaceable by a 3 pole internal common trip breaker, 15 amp through 70 amp inclusive, without disturbing any other breaker. All panelboards shall be UL listed and labeled for use as service entrance equipment where being used as such.

208Y/120V panelboards shall be equal to Square D NQ with bolt-on branch breakers

All branch circuit breakers shall be full ambient compensated thermal magnetic molded case with quick-make and quick-break action and positive handle trip indication, both on manual and on automatic operation. Breakers shall be of the over-the-center toggle operating type with the handle going to a position between "on" and "off" to indicate automatic tripping. All breakers shall be bolt-on type.

All circuit breakers shall be full size. "Tandem" or "split" breakers shall not be permitted. All multi-pole breakers shall have internal common trip with all load side box lugs of one breaker in the same gutter. All circuit breakers shall have sealed cases to prevent tampering. All 15 and 20 ampere branch circuit breakers shall be UL Listed as SWD (switching duty). All 15-70 ampere branch circuit breakers shall be HACR Type. All GFCI circuit breakers shall be UL Class A with maximum threshold of 5 mA. All branch circuit breakers serving all ballasted (fluorescent/HID) lighting loads shall be HID rated.

Provide all electrical distribution related equipment with appropriately braced bussing and properly rated breakers, fuses, etc. for the available fault currents. In existing buildings where fault current values are not indicated on drawings, coordinate with existing "upstream" distribution equipment provide equipment SCCR to meet or exceed same.

Provide barriers around any energized phase busbar or terminal supplied from a feeder tap, transformer, or service entrance conductors.

Fill out panelboard's circuit directory card upon completion of installation work. Directories shall be neatly typewritten. All panelboard directories shall include the actual room names/numbers that are selected for interior signage/designation.

All recessed panelboards shall be provided with a minimum of three 1-1/4" empty conduits terminated to a single 12" X 12" X 6" deep junction box above accessible ceiling.

26 27 26.00 - WIRING DEVICES

Submittal Requirements
Product Data
For each type include electrical characteristics, configurations, ratings, markings, colors, etc.

Unless specifically indicated otherwise, or directed otherwise in field, coordinate finishes for wiring devices with architect and owner prior to ordering. Where applicable, devices on different branches of power shall be a different color.

Provide grounded ("neutral") conductors in all wall switch, dimmer and other lighting control outlet boxes, even if not immediately utilized.

Provide wall plates with engraved legends where indicated on drawings and/or where required per 26 05 53.00 - IDENTIFICATION FOR ELECTRICAL SYSTEMS Section. All device wall plates shall be standard size; "midway", "oversized" ("jumbo") or "extra deep" wall plates shall not be acceptable. Construct with metal screws for securing plates to devices; screw heads colored to match finish of plates. Except where/if indicated otherwise on drawings, wall plates in finished areas shall be commercial specification grade, satin finish stainless steel, with beveled edges, equal to Leviton Type 430 series. Wall plates in unfinished areas shall be galvanized steel unless otherwise noted. Refer to architectural finish schedules and owner representative for additional information.

Wall-Box Type Lighting Controls:
Refer to specification 260923.00 – Local Lighting Controls for types not listed here.

Toggle Switches:
Provide toggle switches equal to Leviton #122x-2 series in configurations shown on the drawings. Provide switches that are flush, self-grounding with green ground screw, back and side wired, and specification grade. 120/277V, 20A, AC quiet type.

Receptacles:

Special purpose receptacles shall be of the size, type and manufacturer as indicated on the plans or as determined in field.

Weather Resistant (WR) GFCI Receptacles: Provide for all receptacles installed in damp or wet locations. Any receptacle shown on the drawings with "WP/GFCI" next to it denoting exterior cover shall be installed with a WR GFCI receptacle. Provide duplex weather resistant receptacles equal to Leviton # W7899 series. Provide Weather-Resistant Receptacles with UL "WR" marking. For receptacle circuits protected with 15A breakers, provide NEMA 5-15R equivalents.

Self-Grounding Commercial Specification grade, Duplex Receptacles, Ground-Fault Circuit Interrupters: Feed-thru type, capable of protecting connected downstream receptacles on single circuit, grounding type UL-rated 943, Class A, Group 1, specification grade, 20-amperes rating (device and feed-thru), 125-volts, 60 Hz; with solid-state ground-fault sensing and signaling (maximum threshold of 5mA at 0.025 seconds maximum); equip with 20-ampere plug configuration, NEMA 5-20R. Provide ground fault circuit interrupter duplex receptacles equal to Leviton #8898 series. For receptacle circuits protected with 15A breakers, provide NEMA 5-15R equivalents. Where GFCI protected receptacles are shown on drawings, provide a separate GFCI receptacle for each one shown. Do not feed downstream receptacles from load-side (GFCI-protected) terminals of upstream receptacles.

26 51 00.00 - LIGHTING

Submittal Requirements
Product Data
For each type include detailed product information, light source, color temperature, color rendering index, lumen outputs, life, driver manufacturer, model and type, ceiling connection details, integral controls as applicable, drawings of custom fixtures or components, wiring diagrams, warranty, etc. Arrange luminaire submittals in booklet form with separate sheets for each luminaire, assembled by luminaire "type" in alphabetical order.

All recessed luminaires shall be equipped with necessary plaster frames and surface trim.

All junction boxes and serviceable components for recessed luminaires shall be readily accessible for service or replacement from below the ceiling, without removing any ceiling components (other than tiles).

All luminaires utilized for emergency and/or egress lighting shall be connected ahead of switching. All drivers of the same type shall be of the same manufacturer and catalog number. All LED modules of the same type shall be of the same manufacturer and catalog number.

Light Emitting Diode (LED) Systems: Provide factory installed LED modules that are specifically designed for, and matched and mated to, the respective luminaire in which they are used. Provide LED modules that can easily be replaced in the field and are readily accessible for replacement. Provide color temperature as indicated in Luminaire Schedule. Provide factory installed driver(s) for the LED source utilized that are specifically coordinated to the LED source and luminaire in which they are used. Provide driver(s) having specific operating characteristics defined in the Luminaire Schedule. Provide driver(s) that can easily be replaced in the field and are readily accessible for replacement. Provide specification sheet for the specific driver as part of the Luminaire Submittal. Provide Total Harmonic Distortion (THD) rating of less than 20 percent. Provide factory-installed integral filtering system to ensure THD does not exceed 20 percent regardless of quantities and/or mixes with other manufactured LED systems.

All surface and recessed ceiling luminaires installed on grid or tile ceilings shall be installed to agree with module of ceiling either displacing a tile, or unit on center of tile, or centered on grid lines.

Provide luminaires and/or luminaire outlet boxes with hangers to properly support luminaire weight. All luminaires installed in or on suspended ceiling systems shall be anchored directly to the building structural system above. Such anchoring shall be independent of the ceiling support system. All luminaires shall be installed plumb and level. Support surface mounted luminaires greater than 2 feet in length at a point in addition to the outlet box luminaire stud.

Occupancy Adjustments: When requested within 12 months of date of Substantial Completion, provide on-site assistance in adjusting aimable luminaires to suit actual occupied conditions. Provide up to two visits to Project during other-than-normal occupancy hours for this purpose. Some of this work may be required after dark. Adjust aimable luminaires in the presence of Owner's Representative and Design Professionals.

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
07/29/2025

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM

1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX

LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
JEREMY A. TOY
NUMBER PE-2021044400
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

ELECTRICAL SPECIFICATIONS

DRAWN BY	DJR
CHECKED BY	MPR
JOB NUMBER	25303
SHEET NAME	E-501

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM

1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX

LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

MECHANICAL LEGEND

SYMBOL	DESCRIPTION
PLAN-VIEW LINE TYPES	
———	WORK SHOWN FADED INDICATES EXISTING WORK TO REMAIN OR NEW WORK BY OTHERS AS APPLICABLE
———	WORK SHOWN BOLD-CONTINUOUS INDICATES NEW WORK
MECHANICAL AIR DEVICES	
SR	SUPPLY REGISTER
CD	CEILING DIFFUSER
MECHANICAL DUCTWORK	
UP	SUPPLY DUCT WITH ELBOW TURNED UP
DN	SUPPLY DUCT WITH ELBOW TURNED DOWN
UP	RETURN DUCT WITH ELBOW TURNED UP
DN	RETURN DUCT WITH ELBOW TURNED DOWN
UP	EXHAUST DUCT WITH ELBOW TURNED UP
DN	EXHAUST DUCT WITH ELBOW TURNED DOWN
24X12 SA	SUPPLY DUCT
24X12 RA	RETURN DUCT
24X12 EA	EXHAUST DUCT
24X12 OA	OUTSIDE AIR DUCT
	BRANCH TAKEOFF
	REDUCER, CONCENTRIC
	REDUCER, NONCONCENTRIC
MECHANICAL DUCTWORK ACCESSORIES	
	DUCT WITH MANUAL VOLUME DAMPER
S	DUCT MOUNTED SMOKE DETECTOR (HARD WIRE INTERLOCK TO FAN MOTOR BY E.C.) FURNISHED BY E.C., INSTALLED BY M.C.
MECHANICAL STATS & SENSORS	
TS	TEMPERATURE SENSOR
T	LOW VOLTAGE THERMOSTAT
L	LINE VOLTAGE THERMOSTAT
MECHANICAL MISCELLANOUS	
	CONNECT TO EXISTING (FIELD VERIFY EXISTING UTILITY SERVICE TYPE, PRIOR TO MAKING CONNECTION)

STANDARD HVAC ABBREVIATIONS

AAV	AUTOMATIC AIR VENT	HD	HEAD	RO	REVERSE OSMOSIS
ACCESS	ACCESSORIES	HOA	HAND/OFF/AUTOMATIC	RPM	REVOLUTIONS PER MINUTE
AD	ACCESS DOOR	HP	HORSEPOWER	RS	REFRIGERANT SUCTION
AFF	ABOVE FINISHED FLOOR	HPR	HIGH PRESSURE RETURN (STEAM CONDENSATE)	SA	SUPPLY AIR
AMP	AMPERE			SAT	SUPPLY AIR TEMPERATURE
AP	ACCESS PANEL	HSTAT	HUMIDISTAT	SC	SHADING COEFFICIENT
APD	AIR PRESSURE DROP	HTG	HEATING	SCD	SMOKE CONTROL DAMPER
ARI	AIR CONDITIONING AND REFRIGERATION INSTITUTE	HWR	HEATING HOT WATER RETURN	SD	SMOKE DETECTOR
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	HWS	HEATING HOT WATER SUPPLY	SENS	SENSIBLE HEAT
BAS	BUILDING AUTOMATION SYSTEM	HZ	HERTZ	SP	STATIC PRESSURE
BD	BACKDRAFT DAMPER	I/O	INPUT/OUTPUT	TAB	TESTING, ADJUSTING, BALANCE
BHP	BRAKE HORSEPOWER	IAQ	INDOOR AIR QUALITY	TDH	TOTAL DYNAMIC HEAD
BTU	BRITISH THERMAL UNIT	IN HG	INCHES OF MERCURY	TDS	TOTAL DISSOLVED SOLIDS
BTUH	BRITISH THERMAL UNIT PER HOUR	IN WC	INCH WATER COLUMN	TSP	TOTAL STATIC PRESSURE
CD	CEILING DIFFUSER	IN WG	INCH WATER GAUGE	TSTAT	THERMOSTAT
CFH	CUBIC FEET PER HOUR	IPLV	INTERGRATED PART LOAD VALUE	UL	UNDERWRITERS LABORATORY
CFM	CUBIC FEET PER MINUTE	INST	INSTALLED	VAV	VARIABLE AIR VOLUME
CHWR	CHILLED WATER RETURN	KW	KILOWATT	VFD	VARIABLE FREQUENCY DRIVE
CHWS	CHILLED WATER SUPPLY	KWH	KILOWATT HOUR	WB	WET-BULB (TEMPERATURE)
CI	CAST IRON	LAT	LEAVING AIR TEMPERATURE	WG	WATER GAGE
CLG	COOLING	LBS/HR	POUNDS PER HOUR	WPD	WATER SIDE PRESSURE DROP
CO	CARBON MONOXIDE	LF	LINEAR FOOT (FEET)	WIRE	WIRED
CO2	CARBON DIOXODE	LPR	LOW PRESSURE RETURN (STEAM CONDENSATE)		
COP	COEFFICIENT OF PERFORMANCE				
CV	CONSTANT VOLUME	LPS	LOW PRESSURE STEAM		
CWR	CONDENSER WATER RETURN	LWT	LEAVING WATER TEMPERATURE		
CWS	CONDENSER WATER SUPPLY	MAX	MAXIMUM		
DB	DECIBELS	MBH	1000 BTUH		
DB	DRY-BULB TEMPERATURE	MCA	MINIMUM BRANCH CIRCUIT AMPACITY		
DC	DISCONNECT	MERV	MINIMUM EFFICIENCY REPORTING VALUE		
DDC	DIRECT DIGITAL CONTROLS	MIN	MINIMUM		
DEG	DEGREE DELTA(CHANGE IN TEMPERATURE)	MOD	MOTOR OPERATED DAMPER		
DIA	DIAMETER	MPR	MEDIUM PRESSURE RETURN (STEAM CONDENSATE)		
DIW	DEIONIZED WATER				
DP	DEW POINT TEMPERATURE	MPS	MEDIUM PRESSURE STEAM		
DX	DIRECT EXPANSION	MRI	MAGNETIC RESONANCE IMAGING		
EA	EXHAUST AIR	MVD	MANUAL VOLUME DAMPER		
EAT	ENTERING AIR TEMPERATURE	NA	NOT APPLICABLE		
EER	ENERGY EFFICIENCY RATIO	NC	NOISE CRITERIA		
EG	EXHAUST GRILLE	NC	NORMALLY CLOSED		
EMERG	EMERGENCY POWER	NO	NORMALLY OPEN		
ESP	EXTERNAL STATIC PRESSURE	NTS	NOT TO SCALE		
EWT	ENTERING WATER TEMPERATURE	OA	OUTSIDE AIR		
EX.	EXISTING	OCP	OVER CURRENT PROTECTION		
F	FAHRENHEIT	PD	PRESSURE DROP		
F&T	FLOAT AND THERMOSTATIC	PPM	PARTS PER MILLION		
FA	FREE AREA	PRS	PRESSURE REGULATING (VALVE) STATION		
FD	FIRE DAMPER	PRV	PRESSURE REGULATING VALVE		
FLA	FULL LOAD AMPERES	PSI	POUNDS PER SQUARE INCH		
FPM	FEET PER MINUTE	PSIA	POUNDS PER SQUARE INCH – ABSOLUTE		
FPS	FEET PER SECOND	PSIG	POUNDS PER SQUARE INCH – GAGE		
FT	FEET	RA	RETURN AIR		
FURN	FURNISHED	RAT	RETURN AIR TEMPERATURE		
GA	GAUGE	RH	RELATIVE HUMIDITY		
GAL	GALLONS	RL	REFRIGERANT LIQUID LINE		
GPM	GALLONS PER MINUTE	RLA	RUN LOAD AMPERE		

STATE OF MISSOURI
ROBERT A. LONNEMANN
NUMBER PE-2003006449
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

MECHANICAL COVER SHEET

DRAWN BY	NMS
CHECKED BY	AJK
JOB NUMBER	25303
SHEET NAME	M-001

HVAC DEMOLITION GENERAL NOTES

A. REMOVE EXISTING DUCTWORK, CONTROLS, AND MISCELLANEOUS HVAC EQUIPMENT NOT INTENDED FOR REUSE. FIELD VERIFY THE EXACT SCOPE PRIOR TO BID. COORDINATE ALL DEMOLITION WORK WITH THE LANDLORD AND GENERAL CONTRACTOR.

FIELD VERIFY ALL CONDITIONS

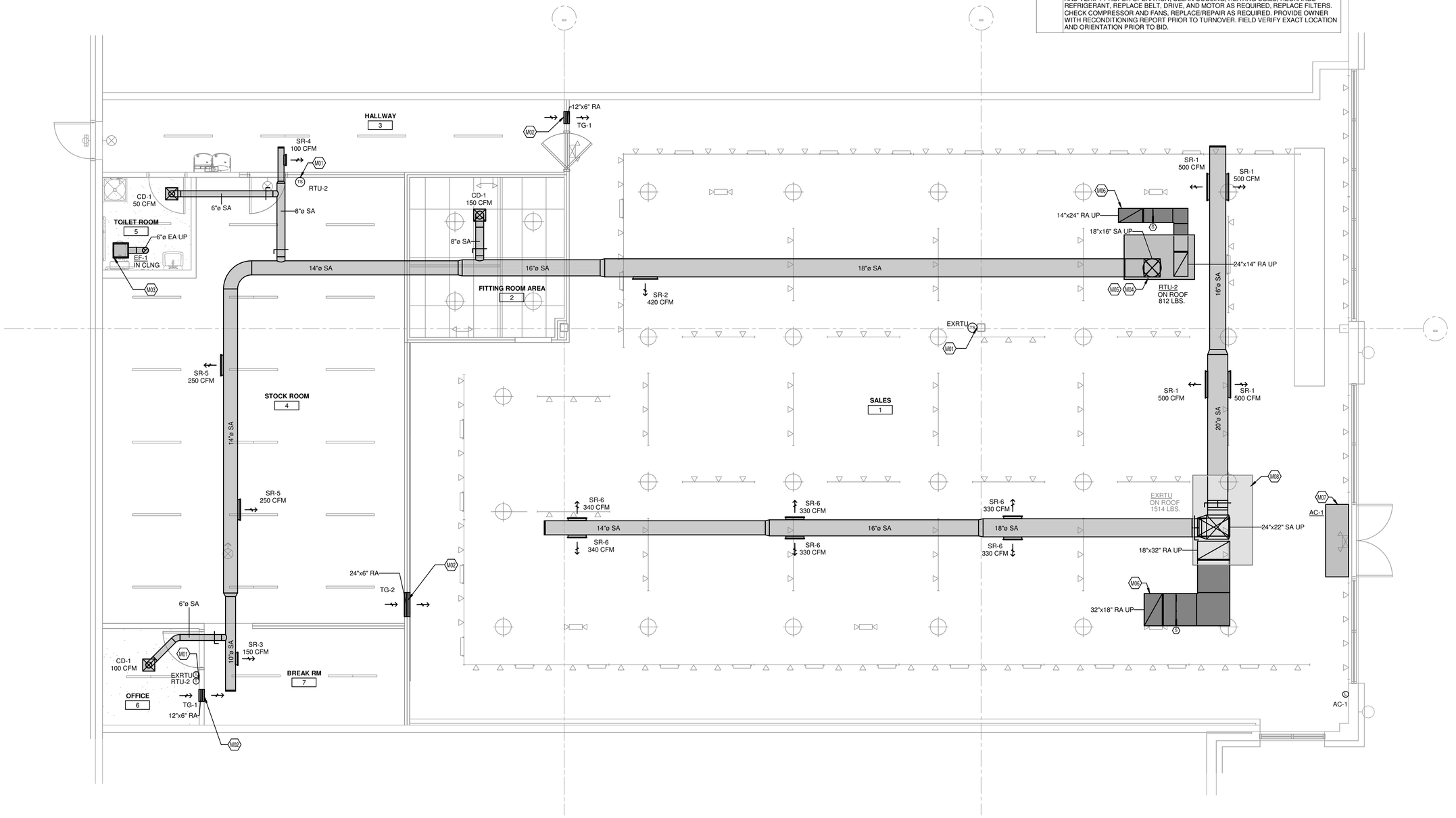
DESIGN DRAWINGS ARE SCHEMATIC. THIS CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING OR AWARD OF CONTRACT TO INSPECT EXISTING FIELD CONDITIONS. THIS CONTRACT SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR FIELD MODIFICATIONS DUE TO EXISTING CONDITIONS.

THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST.

BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS NOT WITHSTANDING. THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

KEYED NOTES

M01	PROVIDE NEW PROGRAMMABLE THERMOSTATS IN BACK OFFICE AREA WITH NEW REMOTE SENSORS RELOCATED TO LOCATIONS INDICATED ON PLANS. COORDINATE EXACT LOCATION WITH ARCHITECT AND SALES RACKS PRIOR TO INSTALLATION. REWIRE TO ROOFTOP UNIT PER MANUFACTURER'S PRINTED INSTRUCTIONS.
M02	PROVIDE TRANSFER OPENING FULLY ABOVE 13'-0" IN WALL. EQUIVALENT SIZE AS NOTED IN SCHEDULES.
M03	PROVIDE NEW CEILING MOUNTED EXHAUST FAN WITH INTEGRAL BACKDRAFT DAMPER AS SCHEDULED. BALANCE TO THE SCHEDULED AIRFLOW. EXTEND EXHAUST THROUGH ROOF AND TERMINATE WITH VENT CAP. MAINTAIN A MINIMUM OF 10'-0" FROM ANY BUILDING INTAKE. LANDLORD APPROVED ROOFING CONTRACTOR TO PERFORM ALL ROOF WORK AT THE GENERAL CONTRACTOR'S EXPENSE.
M04	PROVIDE AND BALANCE NEW ROOFTOP UNIT AS SCHEDULED. PROVIDE NEW MANUFACTURER'S ROOF CURB. MAINTAIN ALL CODE AND MANUFACTURER REQUIRED CLEARANCES. OUTSIDE AIR INTAKE SHALL BE LOCATED A MINIMUM OF 10'-0" FROM ANY FLUE OR BUILDING EXHAUST. ALL ROOF WORK TO BE DONE BY A LANDLORD APPROVED ROOFING CONTRACTOR AT THE GENERAL CONTRACTOR'S EXPENSE.
M05	PROVIDE PVC CONDENSATE TAILPIECE PER DETAIL AND TERMINATE AT ROOF.
M06	COVER OPEN END OF RETURN DUCT WITH 1" MESH HARDWARE CLOTH IN A REMOVABLE METAL FRAME AND ELBOW UP FOR SOUND ATTENUATION.
M07	PROVIDE NEW WALL-MOUNTED, ELECTRIC HEAT AIR CURTAIN AT 12'-0" A.F.F. . INSTALL PER MANUFACTURER'S PUBLISHED INSTRUCTIONS. AIR CURTAIN SHALL INCLUDE MANUAL OVERRIDE CUT OFF SWITCH. INTERLOCK WITH DOOR SWITCH AND PROVIDE LINE VOLTAGE THERMOSTAT WITH TIME DELAY RELAY.
M08	EXISTING ROOFTOP UNIT TO REMAIN. BALANCE TO THE SCHEDULED AIRFLOW. CLEAN AND VERIFY PROPER OPERATION; CLEAN COOLING, HEATING COILS, RECHARGE REFRIGERANT, REPLACE BELT, DRIVE, AND MOTOR AS REQUIRED, REPLACE FILTERS. CHECK COMPRESSOR AND FANS, REPLACE/REPAIR AS REQUIRED. PROVIDE OWNER WITH RECONDITIONING REPORT PRIOR TO TURNOVER. FIELD VERIFY EXACT LOCATION AND ORIENTATION PRIOR TO BID.



1 MECHANICAL PLAN - LEVEL 1
1/4" = 1'-0"

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM

1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX

LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
ROBERT A. LONNEMANN
NUMBER PE-2003006449
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt

SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

MECHANICAL DUCTWORK PLAN

DRAWN BY	NMS
CHECKED BY	AJK
JOB NUMBER	25303
SHEET NAME	M-101

COM*check* Software Version COMcheckWeb

Mechanical Compliance Certificate

Project Information

Energy Code:	2018 IECC
Project Title:	Carhartt- Lee's Summit
Location:	Lees Summit, Missouri
Climate Zone:	4a
Project Type:	Alteration

Construction Site:
1744 NW Chipman Road
Lee's Summit, Missouri 64081

Owner/Agent:

Designer/Contractor:
KLH Engineers
153
Fort Thomas, Kentucky 41075

Mechanical Systems List

Quantity System Type & Description

1 RTU-2: (Single Zone w/ PerimeterSystem):
Heating: 1 each - Central Furnace, Gas, Capacity = 65 kBtu/h
Proposed Efficiency = 81.00% Et, Required Efficiency: 80.00 % Et or 80% AFUE
Cooling: 1 each - Packaged Terminal Unit, Capacity = 50 kBtu/h, Air-Cooled Condenser, Unknown Economizer
Proposed Efficiency = 12.00 EER, Required Efficiency = 9.50 EER
Proposed Part Load Efficiency = 0.00 , Required Part Load Efficiency = 0.00
Fan System: RTU-2 -- Compliance (Motor nameplate HP and fan efficiency method) : Passes

Fans:
SUPPLY Supply, Constant Volume, 1470 CFM, 0.8 motor nameplate hp, 67.0 fan efficiency grade, 80.0 total fan efficiency, 70.0 design fan efficiency

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2018 IECC requirements in COM*check* Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title _____ Signature _____ Date _____

COM*check* Software Version COMcheckWeb

Inspection Checklist

Energy Code: 2018 IECC

Requirements: 100.0% were addressed directly in the COM*check* 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 [PR2][1]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3)

Section # & Req.ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C403.12.2 C403.12.3 [FO9][1]	Snow/ice melting system and freeze protection systems have sensors and controls configured to limit service for pavement temperature and outdoor temperature. future connection to controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3)

Section # & Req.ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6][1]	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.6.3 [PL7][1]	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C404.7 [PL8][1]	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

Additional Comments/Assumptions:

1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME41][1]	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-3.5.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.8.4 [ME142][1]	Motors for fans that are not less than 1/12 hp and less than 1 hp are electronically commutated motors or have a minimum motor efficiency of 70 percent. These motors have the means to adjust motor speed.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.8.5 [ME143][1]	Each DX cooling system > 65 kBtu and chiller water/evaporative cooling system with fans > 1/4 hp are designed to vary the indoor fan airflow as a function of load and comply with detailed requirements of this section.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.12.1 [ME71][1]	Systems that heat outside the building envelope are radiant heat systems controlled by an occupancy sensing device or timer switch.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.2.3 [ME73][1]	PTAC and PTHP with sleeves 16 in. by 42 in. labeled for replacement only as per Footnote b to Table C403.2.3(3).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	
C403.5.5 [ME113][1]	Fault detection and diagnostics installed with air-cooled unitary DX units having economizers.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.2 [ME59][1]	Natural or mechanical ventilation is provided in accordance with International Mechanical Code Chapter 4. Mechanical ventilation has capability to reduce outdoor air supply to minimum per IMC Chapter 4.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.1 [ME59][1]	Demand control ventilation provided for spaces >500 ft2 and >25 people/1000 ft2 occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.2 [ME115][1]	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.6 [ME141][1]	HVAC systems serving guestrooms in Group R-1 buildings with > 50 guestrooms: Each guestroom is provided with controls that automatically manage temperature setpoint and ventilation (see sections C403.7.6.1 and C403.7.6.2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.7.4 [ME57][1]	Exhaust air energy recovery on systems meeting Table C403.7.4(1) and C403.7.4(2).	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3)

Section # & Req.ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.7.5 [ME116][1]	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.
C403.11.1, C403.11.2 [ME60][1]	HVAC ducts and plenums insulated in accordance with C403.11.1 and constructed in accordance with C403.11.2, verification may need to occur during Foundation Inspection.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5, C403.5.1, C403.5.2 [ME62][1]	Air economizers provided where required, meet the requirements for design capacity, control signal, ventilation controls, high-limit shut-off, integrated economizer control, and provide a means to relieve excess outside air during operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5.3.3 [ME124][1]	Air economizers automatically reduce outdoor air intake to the design minimum outdoor air quantity when outdoor air intake will not reduce cooling energy usage. See Table C403.5.3.3 for applicable device types and climate zones.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5.3.4 [ME125][1]	System capable of relieving excess outdoor air during air economizer operation to prevent overpressurizing the building. The relief air outlet located to avoid recirculation into the building.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5.3.5 [ME126][1]	Return, exhaust/relief and outdoor air dampers used in economizers have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Reference section C403.7.7 for details.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.1.4 [ME63][1]	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 80F.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.3.3 [ME35][1]	Hot gas bypass limited to: <=240 kBtu/h – 50% >240 kBtu/h – 25%	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.2.1 [MES3][1]	Air outlets and zone terminal devices have means for air balancing.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.5, C403.5.1, C403.5.2 [ME123][1]	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.5.1 and refrigeration compressor systems that comply with C403.5.2..	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement does not apply.

1 | High Impact (Tier 1) | 2 | Medium Impact (Tier 2) | 3 | Low Impact (Tier 3)

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM
1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX
LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
ROBERT A. LONNEMANN
NUMBER PE-2003006449
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

ENERGY COMPLIANCE

DRAWN BY	NMS
CHECKED BY	AJK
JOB NUMBER	25303
SHEET NAME	M-401

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
C405.6 [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	Requirement will be met.
C405.7 [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	Requirement will be met.
C405.8.2, C405.8.2.1 [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.
C405.9 [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.

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, C408.2.5.3 [FI8]³	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.2 [FI27]³	HVAC systems and equipment capacity does not exceed calculated loads.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1 [FI47]³	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.4.1.2 [FI38]³	Thermostatic controls have a 5 °F deadband.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.1.3 [FI20]³	Temperature controls have setpoint overlap restrictions.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2 [FI39]³	Each zone equipped with setback controls using automatic time clock or programmable control system.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2.1, C403.2.4.2.2 [FI40]³	Automatic Controls: Setback to 55°F (heat) and 85°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C403.2.4.2.3 [FI41]³	Systems include optimum start controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.1.1 [FI57]³	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.
C408.2.1 [FI28]³	Commissioning plan developed by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.1 [FI31]³	HVAC equipment has been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C408.2.3.2 [FI10]³	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.3.3 [FI32]³	Economizers have been tested to ensure proper operation.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.4 [FI29]³	Preliminary commissioning report completed and certified by registered design professional or approved agency.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.1 [FI7]³	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.3 [FI43]³	An air and/or hydronic system balancing report is provided for HVAC systems.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
C408.2.5.4 [FI30]³	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1)	2 Medium Impact (Tier 2)	3 Low Impact (Tier 3)

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
07/29/2025

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM
1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX
LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
ROBERT A. LONNEMANN
NUMBER PE-2003006449
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

ENERGY COMPLIANCE

DRAWN BY	NMS
CHECKED BY	AJK
JOB NUMBER	25303
SHEET NAME	M-402

SECTION 23 05 01.00 – COMMON REQUIREMENTS FOR HVAC

General

General Provisions of the Contract including General and Supplementary Conditions and General Requirements apply to work of this section.

Scope

The base bid includes furnishing all materials, labor, tools, and equipment and the performance of all work required to install a complete heating and air conditioning system as outlined herein.

Guarantee

The contractor shall provide a guarantee in written form stating that all work under this section shall be free of defective work, materials, or parts for a period of one year from the date of owner's final acceptance and shall repair, revise or replace at no cost to the owner any such defects occurring within the guarantee period. Contractor shall also state in written form that any items or occurrences arising during the guarantee period will be attended to in a timely manner and will in no case exceed four (4) working days from date of notification by owner.

Quality Assurance

Provide a complete installation in conformance with the following standards.

AGA: American Gas Association

ASHRAE: American Society of Heating, Refrigerating and Air Conditioning Engineers

NFPA: National Fire Protection Association

SMACNA: Sheet Metal and Air Conditioning Contractors National Association.

Statewide Building Code

IMC: International Mechanical Code

Permits, Fees, Inspections, Laws and Regulations

Permits and fees of every nature required in connection with this work shall be obtained and paid for by this contractor who shall also pay for all the installation fees and similar charges. Laws and regulations, which bear upon or affect the various branches of this work shall be complied with by this contractor and are hereby made a part of this contract. All work, which such laws require to be inspected, shall be submitted to the proper public official for inspection and a certificate of final approval must be furnished.

Work in Existing Spaces

Genoral: Care shall be taken when working in existing spaces so as not to damage existing walls and ceilings where work is being performed.

Ceilings: Where work is being performed above ceilings, and the architectural drawings do not indicate ceiling modifications by the general contractor, it shall be the responsibility of this contractor to remove and replace existing ceilings where work is being performed. In those instances, all repair and installation of new grid, ceiling panels, etc shall be the responsibility of this contractor.

Match existing finishes.

Walls & Floors: It shall be the responsibility of this contractor to patch existing walls and floors and match existing finishes where work is being removed or installed and patching is being performed, unless noted otherwise on the architectural drawings.

Demolition

Any Equipment to be demolished shall also include the demolition of any and all ductwork, piping etc serving or served by the equipment, all accessories, air devices, wiring, gas piping, venting, control wiring and power wiring associated with the equipment.

Demolition shall be coordinated with all trades. All materials shall be turned over to the owner or disposed at the owner's direction.

Contractor is responsible for reclaiming any refrigerant in association with the demolition in accordance with all local, state and federal regulations.

Any roof or wall penetration shall be patched watertight to the satisfaction of the architect.

Tests and Adjustments

No ducts, piping, fixtures or equipment shall be concealed or covered until they have been inspected and approved by the Architect and the inspector who shall be notified by the contractor when the work is ready for inspection.

Work shall be completely installed, tested and leak tight before inspection is required. All tests shall be repeated to the satisfaction of those making the inspection.

Architectural coordination items

Cutting and Patching: Cut and drill all openings in walls and floors required for the installation. Secure approval of Engineer before cutting and drilling. Neatly patch all openings cut.

Fire Caulking: Patching through fire rated walls and enclosures shall not diminish the rating of that wall or enclosure. Patch shall be equal to rockwool, firestop, caulk or approved "rated" patch.

Access Panels and Pathways: Furnish all access panels required for proper servicing of equipment. Provide access panels for all concealed valves, vents, controls, cleanout doors, and sprinkler devices required by NFPA. Provide access panels for all fire and/or fire & smoke dampers. Provide frame as required for finish. Furnish panels to General Contractor. Exact locations to be approved by the Architect. Minimum size to be 12" x 12", units to be 16 gauge steel, locking device shall be screwdriver cam locks.

project conditions

Where new HVAC systems are required to be connected to existing HVAC systems, it is the contractor's responsibility to verify the location, size, pressure, condition, and they shall verify that the existing HVAC system is indeed the correct and appropriate HVAC system before any work is done. Provide all necessary camera scoping and dye testing as necessary. If there is any need for concern, if it is determined that the existing HVAC system is not a correct or appropriate HVAC system or not connected to a correct or appropriate HVAC system, if the condition of the existing HVAC system is not viable for re-use, or any other condition that would not allow the proper functioning of the new HVAC system, the contractor shall notify the engineer in writing immediately via RFI and wait for direction before proceeding.

DELEGATED DESIGN

For equipment supports, this contractor shall retain a qualified professional engineer to provide support calculations of static and dynamic loading due to operating equipment weight. The signed and sealed calculations and details shall be submitted by the retained professional engineer.

MECHANICAL EQUIPMENT COMMON REQUIREMENTS

INSPECTION

Examine areas and conditions under which mechanical equipment is to be installed. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Installer.

Uncrate equipment and inspect for damage. Verify that nameplate data corresponds with unit designation.

INSTALLATION

General: Install mechanical equipment as indicated, and in accordance with manufacturer's installation instructions.

Location: Install each unit level/plum and accurately in position indicated in relation to other work; and maintain sufficient clearance for normal service and maintenance, but in no case less than that recommended by manufacturer.

Coordinate with other trades to assure correct recess size for recessed units.

Protect interior mechanical equipment with protective covers during balance of construction.

For ducted equipment, connect ductwork to units with flexible duct connections. Provide transitions to exactly match unit duct connection size. Provide 1" acoustic duct lining on return air side a minimum of 10' from fan.

Provide trap at drain piping connection to unit sized per manufacturer's recommendations.

Access: Provide access space around and over mechanical equipment for service as indicated, but in no case less than that recommended by manufacturer or required by code in effect.

Access Panels: Furnish all access panels required for proper servicing of equipment. Provide access panels for all concealed valves, vents, controls and cleanout doors, and sprinkler devices required by NFPA. Provide frame as required for finish. Furnish panels to General Contractor.

Exact locations to be approved by the Architect. Minimum size to be 12" x 12", units to be 16 gauge steel, locking device shall be screwdriver cam locks.

Rooftop mechanical equipment shall be installed a minimum of 10'-0" from any roof edge regardless of location indicated on plans, unless a screen wall or railing is installed per the local building code. See the architectural plans for coordination.

Roof Curbs: Furnish roof curbs to roofing Installer for installation. Install and secure roof curb to roof structure, in accordance with National Roofing Contractor's Association (NRCA) installation recommendations and shop drawings. Install and secure units on curbs and coordinate roof penetrations and flashing. Install according to roofing manufacturer's recommendation and specifications.

Rooftop supports: Provide rooftop equipment rails for mechanical equipment located on the roof that spans two or more bar joists. Verify roof structure, mounting supports, and membrane installations are completed to the proper point to allow installation of roof mounted units.

ELECTRICAL COORDINATION ITEMS

Electrical Wiring: Install electrical devices furnished by manufacturer but not specified to be factory-mounted. Furnish copy of manufacturer's wiring diagram submittal to Electrical Installer.

Verify that electrical wiring installation is in accordance with manufacturer's submittal and installation requirements of Division 26 sections. Do not proceed with equipment start-up until wiring installation is acceptable to equipment installer.

Install electric heating terminal units including components in accordance with equipment manufacturer's written instructions and with recognized industry practices; complying with applicable installation requirements of NEC and NECA's "Standard of Installation".

Tighten connectors and terminals, including screws and bolts, in accordance with equipment manufacturer's published torque tightening values for equipment connectors. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals to comply with tightening torques specified in UL Std 486A.

Grounding: Provide equipment grounding connections for electric heating terminals as indicated. Tighten connections to comply with tightening torque values specified in UL Std 486A to assure permanent and effective grounding.

FIELD QUALITY CONTROL

Testing: After installation has been completed, test to demonstrate proper operation of mechanical equipment at performance requirements specified. When possible, field correct malfunctioning units, then retest to demonstrate compliance. Replace units, which cannot be satisfactorily corrected. Test controls and demonstrate compliance with requirements.

Cleaning: After construction is completed, including painting, clean unit exposed surfaces, vacuum clean coils and inside of cabinets. Clean factory-finished surfaces. Repair any marred or scratched surfaces with manufacturer's touch-up paint.

START-UP

Provide the services of a factory-authorized service representative to start-up rooftop units, in accordance with manufacturer's written start-up instructions. Test controls and demonstrate compliance with requirements. Replace damaged or malfunctioning controls and equipment.

TRAINING OF OWNER'S PERSONNEL

Provide owner's technical representative for 1-half day to instruct Owner's personnel in operation and maintenance of units. Schedule training with Owner, provide at least 7-day notice to Contractor and Engineer of training date.

SPARE PARTS

Provide one complete extra set of filters for each unit. Install new filters at completion of system work, and prior to testing, adjusting, and balancing work. Obtain receipt from Owner that new filters have been installed.

SECTION 23 05 03.00 – SUBMITTALS FOR HVAC

General

Where submittals are required by the Contract Documents, they shall be prepared and supplied in accordance with the Contract Documents. In addition to Division 01, the Contractor is advised to review and comply with the requirements articulated within each Division and within each section of that Division.

Some Divisions may include a division-specific "Submittal Requirements for ...," section. Where this section exists, it articulates additional requirements for submittals that apply to the work of that Division.

The following requirements help to identify, track and keep the project organized for all parties involved. They are necessary to ensure a timely turnaround and an appropriate technical review. Submittals that do not conform to the administrative requirements are rejected and returned, without technical review.

Requirements

Supply submittals for each section: Submittals shall be supplied on a section-by-section and type-by-type basis. For example, independent product data submittals shall be furnished for each section that requires product data submittals. Independent shop drawing submittals shall be furnished for each section that requires shop drawings. Refer to the specifications for identification of which submittals are required for the project. Separate PDF file packages shall be supplied for each section, for each submittal type, where electronic submittals are required. Each PDF shall represent a single standalone submittal. Separately bound and identified submittals shall be provided where hardcopies are required.

Include a transmittal: Transmittals shall enumerate each submittal for each section of each type and iteration.

Include cover sheet / title page: The cover sheet shall include the information identified in the contract documents. It shall be included as the first page of each electronic and/or hardcopy document-based submittal. An editable and printable PDF form created with editable fields and specification compliant appearance is available from KLH upon request. It is also downloadable from the KLH website at www.klhengrs.com.

Include an index: The index shall enumerate the contents of the submittal.

Include checklists: Where checklists are included with the specifications, complete and include them within the appropriate submittal. Supply complete submittals: Complete submittals of each type are required. Partial submittals will be rejected. Where a section requires a product data submittal, all product data for that section shall be supplied together, at one time, as one complete submittal. Do not send half the product data as one submittal and the other half as a separate one. When resubmittal is required (e.g. Revise and Resubmit) the revised submittal shall be more complete, more accurate and more contract-compliant than its rejected predecessor. The submittal number (for each section and type) shall increment for each subsequent submittal (00 – Original submission, 01 – First Resubmission, 02 – Second Resubmission, etc…). Resubmittals shall include a copy of the reviewer's comments supplied with the prior submittal rejection and shall be amended with a description of the specific action taken to comply with the reviewer's comments. The absence of this on resubmittal is cause for rejection.

Name electronic files to match the submittal ID and cover sheet: The electronic file name of submittals shall match the submittal ID included on the submittals cover page. For example: The original/first product data submittal for Section 234116 would be labeled as "234116.00-PD-00"; the first resubmittal of same shall be labeled "234116.00-PD-01". The original/first shop drawings submittal file for the same section would be labeled "234116.00-SD-00"; the first resubmittal of same shall be labeled "234116.00-SD-01".

Use of Electronic Drawings from the Owner's Design Team

Plan drawings for the Project were created with AutoCAD and Revit.

If expressly permitted by the Owner and the terms of the Contract, editable electronic versions of standard-scale, AutoCAD-based plan drawings may be made available for the creation of shop and as-built drawings.

Due to the proprietary nature of internal design systems, editable native-software versions of some drawings, including but not limited to system diagrams and details will not be made available in an editable form. In these cases, electronic versions of the drawings may be made available only in PDF, JPG or similar non-editable electronic form, at the sole discretion of the Design Professional.

The Request Drawings form can be accessed, filled out and submitted at the following internet address (scroll down to bottom of home page): http://www.klhengrs.com.

SECTION 23 05 29.00 – HANGERS AND SUPPORTS FOR HVAC PIPING AND EQUIPMENT

Submittal Requirements

Product Data: For each type of product indicated.
Shop Drawings: Fabrication and installation details.

General

Support all ductwork and equipment by hangers or brackets properly from the building structure. Support from decking above is prohibited. Furnish structural steel members where required to support piping and equipment. No portion of piping or valves shall be supported by equipment.

Ductwork - Support by means of hangers as follows:

Duct Width	Hanger Size and Type	Max. Spacing
30 or less	(#16 gage)	8
31 to 60	(#14 gage)	8

A pair of hangers shall be located at every transverse joint and elsewhere according to the table.

SECTION 23 05 48.00 – SEISMIC CONTROL FOR HVAC

Submittal Requirements

Shop Drawings: Provide performance requirements and design criteria, including analysis data signed and sealed by the qualified engineer responsible for their preparation.

General

The contractor shall subcontract a licensed structural engineer for the design of all seismic restraint systems required by the presiding jurisdiction. The structural engineer shall provide engineered stamped and signed drawings of seismic design and submit as deferred submittal to supplement the permit drawings.

Quality Assurance

The contractor shall provide seismic restraint systems to meet total design lateral force requirements for support and restraint of piping, conduit, cable trays and other similar systems and equipment where required by the applicable building code.

delegated design

Seismic Bracing and Support of Systems and Components

Seismic restraint designer shall coordinate all attachments with the structural engineer of record. Provide engineered stamped and signed drawings of seismic design.

Seismic restraint designer shall provide visual inspection after installation and approve installation of seismic design components.

Design analysis shall include calculated dead loads, static seismic loads, and capacity of materials utilized for the connection of the equipment or system to the structure.

Analysis shall detail anchoring methods, bolt diameter, and embedment depth.

All seismic restraint devices shall be designed to accept without failure the forces calculated per the applicable building code.

Friction from gravity loads shall not be considered resistance to seismic forces.

Fire protection systems shall meet the requirements of NFPA-13 and NFPA-14 for the building seismic requirements.

SECTION 23 05 93.00 – TESTING, ADJUSTING AND BALANCING FOR HVAC

Submittal Requirements

Shop Drawings: Certified Reports: Submit testing, adjusting, and balancing reports bearing the seal and signature of the Test and Balance Engineer. The reports shall be certified proof that the systems have been tested, adjusted, and balanced in accordance with the referenced standards; are an accurate representation of how the systems have been installed; are a true representation of how the systems are operating at the completion of the testing, adjusting, and balancing procedures; and are an accurate record of all final quantities measured, to establish normal operating values of the systems. Final Report: Upon verification and approval prepare final reports, type written, and organized and formatted as specified below. Submit 2 complete sets of final report to the landlord.

General

Test, adjust, and balance the following mechanical systems:

Supply air systems, all pressure ranges

Return air systems.

Exhaust air systems.

Test systems for proper sound and vibration levels.

Quality Assurance

Codes and Standards:

AABC: "National Standards for Total System Balance".

ASHRAE: ASHRAE Handbook, 2011 Applications, Chapter 38, Testing, Adjusting, and Balancing.

Qualifications

The contractor shall procure the services of an independent Balance and Testing Agency, approved by the Engineer, and a member of Associated Air Balance Council (AABC) or NEBB, which specializes in the balancing and testing of heating, ventilating and air conditioning systems, to balance, adjust and test all air and water systems and equipment as herein specified. All work by this agency shall be done under direct supervision of a qualified heating and ventilating Engineer employed by this agency. All instruments used by this agency shall be accurately calibrated and maintained in good working order.

Sequencing and Scheduling

Test, adjust and balance air conditioning systems during summer season and heating systems during winter season, including at least a period of operation at outside conditions within 5 deg F wet bulb temperature of maximum summer design condition, and within 10 deg F dry bulb temperature of minimum winter design condition. Take final temperature readings during seasonal operation.

Check all filters for cleanliness, provide new as required. Check dampers (volume and fire) for correct and locked position, and temperature control for completeness of installation before starting fans. Place outlet dampers in full open position. Lubricate all motors and bearings. Check fan belt tension. Check fan rotation.

Air balance and testing shall not begin until the system has been completed and is in full working order. 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. The contractor shall submit within 30 days after receipt of contract, 8 copies of submittal data for the testing and balancing of the air conditioning, heating, and ventilating systems. The Air Balance and Testing Agency shall provide proof of having successfully completed at least five projects of similar size and scope.

The air balancing contractor shall include the additional cost to change every fan factory installed sheave, pulley and/or belt of in order to obtain the design air flows.

Renovations: In areas where existing HVAC equipment is being utilized, balancing contractor shall include the cost to pre-check each equipment air flows, serving the area of work, prior to demolition, and re-check and adjust each air handler after new construction. Air flows of existing air handlers serving existing spaces shall be similar after project is complete.

Performing Testing, Adjusting and Balancing

Perform testing and balancing procedures on each system identified, in accordance with the detailed procedures outlined in the referenced standards.

Cut insulation, ductwork, and piping for installation of test probes to the minimum extent necessary to allow adequate performance of procedures.

Patch insulation, ductwork, and housings, using materials identical to those removed.

Seal ducts and piping, and test for and repair leaks.

Seal insulation to re-establish integrity of the vapor barrier.

Mark equipment settings, including damper control positions; valve indicators, fan speed control levers, and similar controls and devices, to show final settings. Mark with paint or other suitable, permanent identification materials.

Retest, adjust, and balance systems subsequent to significant system modifications, and resubmit test results.

SECTION 23 07 13.00 – DUCT INSULATION

Submittal Requirements

Product Data: For each product indicated.
Shop Drawings: Include plans, elevations, sections, details and attachments to other work.

All liners, insulation and adhesives shall have a flame spread index not more than 25 and a smoke developed index of not more than 50. Insulation shall have a minimum installed thermal resistance value of R6 or code minimum, whichever higher.

Rigid Fiberglass Ductwork Insulation: Glass fibers bonded with a thermosetting resin. Comply with ASTM C 612, Type IB, without facing and with vapor barrier all-service jacket manufactured from kraft paper, reinforcing scrim, aluminum foil, and vinyl film.

Flexible Fiberglass Ductwork Insulation: Glass fibers bonded with a thermosetting resin. Comply with ASTM C 553, Type II, without facing and with vapor barrier all-service jacket manufactured from kraft paper, reinforcing scrim, aluminum foil, and vinyl film.

Vapor Barrier Material for Ductwork: Paper-backed aluminum-foil, except as otherwise indicated; strength and permeability rating equivalent to factory-applied vapor barriers on adjoining ductwork insulation, where available; with following additional construction characteristics:

High Puncture Resistance: Low vapor transmission (for ducts in exposed areas: Mech. Rooms, etc.)

Moderate Puncture Resistance: Medium vapor transmission (for ducts in concealed areas).

All ductwork shall be insulated except:

Double wall ductwork

Fabric ductwork

Metal ducts with duct liner of sufficient thickness to comply with energy code.

Factory insulated flexible ductwork

Factory insulated plenums and casings

Flexible connectors

Vibration control devices

Factory insulated access panels and doors

Supply ductwork exposed in conditioned spaces excluding mechanical rooms, server rooms and electric equipment rooms

Toilet exhaust, general exhaust and return ductwork in an insulated joist or attic space.

SECTION 23 07 19.00 – HVAC PIPING INSULATION

Submittal Requirements

Product Data: For each type of product indicated.

Provide 3/4" Armaflex on refrigerant piping.

Insulation shall have a minimum thickness as required by Code.

All insulation and adhesives shall have a flame spread index not more than 25 and a smoke developed index of not more than 50.

SECTION 23 09 93.00 – SEQUENCE OF OPERATIONS FOR HVAC CONTROLS

Submittal Requirements

Product Data: Provide written sequences of operation for each controlled system and piece of equipment.

Packaged Rooftop Unit

1. Startup

The unit shall operate on a 7 day/night programmable thermostat.

During startup, the fan shall run with the dampers in the full recirculation position. Provide occupied changeover sequence with optimum start function. When the return air temperature reaches occupied setpoint (adjustable), the minimum outside air damper shall open to the controlled minimum outdoor air position.

2. Supply Fan Control

The supply fan shall be two staged and modulate up and down based on a call for heating or cooling.

3. Space Temperature Control

Provide 7-day programmable thermostat with digital display of space temperature and setpoint (+/- deg. F. adjustable), with override feature and remote space temperature sensor.

4. Minimum Outside Air Control

During occupied mode, the minimum outside air damper shall be open to the scheduled minimum outdoor air flow and modulate proportionally with the supply fan speed to maintain the scheduled minimum outside airflow. When the supply fan speed is set to high, outside air damper shall be partially closed allowing minimum outside air flow as scheduled. As supply fan speed is set to low, damper shall fully open allowing minimum outside air flow as scheduled. Provide motor operated dampers.

5. Economizer Control

Provide dual enthalpy economizer control. Economizer control shall be enabled whenever the outside air enthalpy is lower than the return air enthalpy. Enthalpy shall be calculated from sensors which are tied to the same controller for accuracy. During economizer mode, the outside air damper shall modulate to 100% open. The economizer damper shall modulate open on a call for cooling and modulate closed on a call for heating. The return damper shall modulate inversely with the economizer damper. Economizer shall have powered relief.

6. Cooling Control

Cooling shall be controlled to maintain space temperature setpoint. On a call for cooling, the heating shall be off and supply fan speed shall be low. On a further call for cooling, the supply fan speed shall be high and energized second stage of cooling.

7. Heating Control

Heating shall be controlled to maintain space temperature setpoint. On a call for heating, the mechanical cooling shall be off. On a further call for heating, the economizer mode shall be disabled. On a further call for heating, the supply fan shall be set to low speed. On a further call for heating, the supply fan shall be set to high speed and the gas heating shall be staged on. On a further call for heating, the supply fan shall be set to high speed.

8. Smoke Detector

When the smoke detector is alarmed, the system shall be alarmed and the air handler shall fail safe with manual reset.

9. Unoccupied Mode

During the unoccupied mode of operation, the RTU shall go into night setback mode.Night Setback/Shutdown

At night setback/shutdown the RTU shall go to fail safe position. Fail safe position is defined by the following: The supply fan is off, the outdoor air intake damper is closed, the heating is off and the mechanical cooling is off. The supply fan shall cycle in conjunction with either the heating or cooling system to maintain a minimum/maximum space temperature depending on the season.

Exhaust Fans (Manual)

Exhaust fans shall be controlled by local manual switch furnished, installed and wired by electrical contractor. When activated, exhaust fan motor damper shall open and fan shall start.

(Indicated by EC on HECS schedule)

Controls

Electrical contractor will provide power wiring. HVAC contractor shall provide all the low voltage wiring of HVAC units and controls, thermostats and controllers.

Thermostat shall be by the manufacturer of the HVAC unit (heat/cool/auto/off) with night setback. Provide plastic protective cover for all thermostats. Replace controls on existing unit, adjust and calibrate controls.

Low Voltage Thermostats

Low voltage thermostats shall be furnished, installed and wired by the HVAC contractor. The electrical contractor shall provide 4" square x 1- 1/2" deep wall outlet boxes (with single-gang rings) for all thermostats/sensors. The electrical contractor shall provide one 3/4" empty conduit from each thermostat/sensor location, turned out above accessible ceilings (in joist space or against overhead slab/deck). The HVAC/Temperature Control Contractor shall provide all other necessary conduit, raceway and wiring related work. Conduit shall be identified in ceiling cavity and shall be provided with sweep bends, bushings and dragline.

The HVAC/Temperature Control Contractor shall coordinate with the General Contractor to ensure thermal envelope is maintained at these locations.

General Control Wiring Requirements and Installation Methods

Except where specifically indicated otherwise above, the HVAC/Temperature Control Contractor shall provide all electrical work as required for all temperature control related wiring (i.e. conduit, raceway, outlet boxes, junction

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM
1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX
LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
ROBERT A. LONNEMANN
NUMBER PE-2003006449
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

MECHANICAL SPECIFICATIONS

DRAWN BY
NMS
CHECKED BY
AJK
JOB NUMBER
25303
SHEET NAME
M-501

boxes, wiring, etc.) in accordance with Electrical Specifications requirements. All conduit shall be 3/4" minimum.
Coordinate all thermostat/sensor locations in field (case by case) with Architect, Owner and Electrical Contractor to ensure that they are placed in locations that will not interfere with furniture, equipment, artwork, wall-hung specialities, room finishes, etc. All thermostat/sensor wall locations indicated on HVAC drawings are schematic only and must be verified case-by-case prior to rough-in.
All electrical work as described in this specification shall be per the latest edition of the National Electrical Code (NEC) and per applicable state and local codes.
Where "free-air" installation methods (either exposed above the ceilings, in bridle rings or in cable trays) are permitted under Electrical Specifications above ceilings, provide plenum-rated cables wherever plenum ceilings (if any) exist and install as defined under Electrical Specifications. Install low voltage circuits, located in concrete slabs and masonry walls, in inaccessible locations, or exposed in occupied areas, in electrical conduit regardless of what wiring methods are permitted under Electrical Specifications.
Where cable trays or bridle rings are provided by the electrical contractor for low voltage cables, these raceways may be utilized for control wiring by this contractor (provide special color coded jackets, label cable jackets per Electrical Specifications and group control wiring cables together). Provide conduit drops from cable tray/bridle ring paths to wall outlet boxes and equipment unless directed otherwise under Electrical Specifications.
Regardless of permitted methods in Electrical Specifications, all cables/wiring installed concealed by gypsum board, masonry or other inaccessible materials in walls or above ceilings shall be installed in conduit, 3/4" minimum.
All conduit, bridle rings, raceway, outlet boxes, etc. necessary for complete operational installation of control wiring shall be provided (furnished and installed) by the temperature control contractor in strict compliance with Electrical Specifications documents. Coordinate all work with all other applicable trades including the electrical contractor.
Provide all required conduit work to and between equipment in a manner compliant with that described above (i.e. between VAV boxes, to boilers, starters, condensing units, etc. as applicable).
Install control wiring without splices between terminal points, color-coded. Install in neat workmanlike manner, securely fastened. Install in accordance with National Electrical Code and per Electrical Specifications.
Install circuits over 25 volt with color-coded No. 12 wire in electrical metallic tubing, per Electrical Specifications.
Install circuits under 25 volt with color-coded No. 18 wire with 0.031" high temperature (105 degs. F) plastic insulation on each conductor and plastic sheath over all.
Install electronic circuits with color-coded No. 22 wire with 0.023" polythylene insulation on each conductor with plastic-jacketed copper shield over all.

SECTION 23 31 13.00 – METAL DUCTS

Submittal Requirements
Product Data: For liners, adhesives, sealants and gaskets.
Shop Drawings: Sheet metal thickness, reinforcing details, duct layouts indicating sizes, configuration, liner material, elevation and static pressure class.

Ductwork Materials
Exposed Ductwork Materials: Where ductwork is indicated to be exposed to view in occupied spaces, provide materials which are free from visual imperfections including pitting, seam marks, roller marks, stains and discolorations, and other imperfections, including those which would impair painting. Mechanical contractor shall confirm ductwork paint scope and color with architect.
Exposed ductwork which is to be painted shall have paint grip applied and be oil free.
Sheet Metal: Except as otherwise indicated, fabricate ductwork from galvanized sheet steel, lock forming quality; with G 90 zinc coating and mill phosphatized for exposed locations. Minimum gauge shall be 24.
Miscellaneous Ductwork Materials
Volume Dampers: Provide volume dampers in all branch ducts or as required for balancing to required air flows.
Fittings: Provide radius type fittings fabricated of multiple sections with maximum 15 deg. change of direction per section. Unless specifically detailed otherwise, use 45 deg. laterals and 45 deg. elbows for branch takeoff connections. Where 90 deg. branches are indicated, provide conical type tees.
Duct Sealant: Non-hardening, non-migrating mastic or liquid elastic sealant, type applicable for fabrication/installation detail, as compounded and recommended by manufacturer specifically for sealing joints and seams in ductwork.
Duct Cement: Non-hardening migrating mastic or liquid neoprene based cement, type applicable for fabrication/installation detail, as compounded and recommended by manufacturer specifically for cementing fitting components, or longitudinal seams in ductwork.
Ductwork Support Materials: Except as otherwise indicated, provide hot-dipped galvanized steel fasteners, anchors, rods, straps, trim and angles for support of ductwork.
Flexible Ducts
Either spiral-wound spring steel with flameproof vinyl sheathing, or corrugated aluminum. Unless specifically mentioned, the maximum length of flex duct on the supply equals 5 feet. Flex is not allowed for return, relief or exhaust applications. The flexible ducts indicated for use in the H.V.A.C. system shall conform to the requirements of UL 181 for Class 0 or Class 1 flexible air ducts and shall be so identified.
Where installed in unconditioned spaces other than return air plenums, provide 1" thick 1-1/2 lb. continuous flexible fiberglass sheath with vinyl vapor barrier jacket.
Installation is not permitted above drywall ceilings and inaccessible ceilings.
Fabrication
Shop fabricate ductwork in 4, 8, 10 or 12-ft lengths, unless otherwise indicated or required to complete runs. All ductwork shall be Pittsburgh Construction with a minimum of thickness of 24 gauge. In addition, ductwork used in systems over 3" W.G. shall have cold sealant applied.
Shop fabricate ductwork of gauges and reinforcement complying with SMACNA "HVAC Duct Construction Standards".
Lined Duct
Fabricate ductwork with duct liner in each section of duct where indicated. Laminate liner to internal surfaces of duct in accordance with instructions by manufacturers of lining and adhesive, and fasten with mechanical fasteners. Duct liner to be 3-lb density for acoustic requirements 1" thick or as noted. Size of ductwork shown on the drawings is free net area, outside dimension of ducts will need to be increased if lined duct is used.
Size of ductwork shown on the drawings is free net area, outside dimension of ducts will need to be increased if lined duct is used.
Duct Liner: Fibrous glass of thickness indicated. 3-lb density. All liners, insulation and adhesives shall have a flame spread index not more than 25 and a smoke developed index of not more than 50.
Duct Liner Adhesive: As recommended by insulation manufacturer and complying with NFPA 90A or NFPA 90B.
Duct Liner Fasteners: Comply with SMACNA HVAC Duct Construction Standards.
Installation of Metal Ductwork
General: Assemble and install ductwork in accordance with recognized industry practices which will achieve air-tight (5% leakage for systems rated 3" and under; 1% for systems rated over 3") and noiseless (no objectionable noise) systems, capable of performing each indicated service. Install each run with minimum number of joints. Align ductwork accurately at connections, within 1/8" misalignment tolerance and with internal surfaces smooth. Support ducts rigidly with suitable ties, braces, hangers and anchors of type which will hold ducts true-to-shape and to prevent buckling. Support vertical ducts at every floor.
Sealing: Seal all longitudinal seams, S's and drives and all joints with mastic or cement. Install according to SMACNA standards.
Balancing Dampers: The sheet metal contractor shall be fully responsible for installing balancing dampers in the ductwork, (whether shown on the drawing or not) in order to arrive at the intended air flow. The balancing sub-contractor shall provide direction and assistance in determining locations where dampers are required. Additional dampers, if required shall be installed at no additional cost to the owner.
Wall Penetrations: Seal and pack around all ducts and piping sleeves which pass through walls that extend to bottom side of structure and rated walls.
Field Fabrication: Complete fabrication of work at project as necessary to match shop-fabricated work and accommodate installation requirements.
Routing: Locate ductwork runs, except as otherwise indicated, vertically and horizontally and avoid diagonal runs wherever possible. Run ductwork in shortest route which does not obstruct useable space or block access for servicing building and its equipment. Hold ducts close to walls, overhead construction, columns, and other structural and permanent enclosure elements of building. Limit clearance to 1/2" where furring is set down for enclosure or concealment of ducts, but allow for insulation thickness, if any. Where possible, locate insulated ductwork for 1" clearance outside of insulation. Wherever possible in finished and occupied spaces, conceal ductwork from view, by locating in mechanical shafts, hollow wall construction or above suspended ceilings. Do not encase horizontal runs in solid partitions, except as specifically shown.
Coordinate layout with suspended ceiling and lighting layouts and similar finished work.
Electrical Equipment Spaces: Do not route ductwork through transformer vaults and their electrical equipment spaces and enclosures.
Penetrations: Where ducts pass through interior partitions and exterior walls, and are exposed to view, conceal space between construction opening and duct or duct insulation with sheet metal flanges of same gage as duct. Overlap opening on 4 sides by at least 1-1/2". Fasten to duct and substrate.
All dampers shall be low leakage with edge and blade seals. Damper manufacturers are subject to specification compliance. Provide products by one of the following:
Greenheck Fan Corporation
Nailor Industries
Pottorff
Ruskin Company
Young Regulator Company
Coordination: Coordinate duct installations with installation of accessories, dampers, coil frames, equipment, controls and other associated work of ductwork system.
Installation of Duct Liner
General: Install duct liner in accordance with SMACNA HVAC Duct Construction Standards. Size of ductwork shown on the drawings is free net area, outside dimension of ducts will need to be increased if lined duct is used. Store internally lined ductwork up off of the floor. Protect internally lined ductwork from water and dust.
The following ductwork shall be lined in addition to that shown per plans:
Return from open ceiling plenum return to HVAC unit.
Supply and return ductwork 10 feet downstream of HVAC unit.
Transfer air ducts.
Butter the leading edge of all internal duct lining with the manufacturer's recommended adhesive.
Inspect and repair all damaged lining prior to installation of ductwork.
Installation of Flexible Ducts
Maximum Length: For any duct run using flexible ductwork, do not exceed 5' - 0" extended length.
Installation shall have smooth full radius turns down to diffuser.
Installation not permitted above inaccessible ceilings.

23 34 23.00 – HVAC POWER VENTILATORS

Submittal Requirements
Product Data: For each type of product indicated.
Ceiling Ventilators
Centrifugal Ceiling Exhausters: Provide centrifugal ceiling exhausters, designed for ceiling or wall mounting, of type, size and capacity as scheduled.
Provide AMCA Certified Ratings Seal.
Type: Provide galvanized steel housing lined with acoustical insulation, adaptable for ceiling or wall installation. Provide centrifugal fan wheels mounted on motor shaft with fan shrouds, all removable for service. Provide integral backdraft damper fan discharge.
Grille: Provide steel louvered grille with flange on intake with thumbscrew attachment to fan housing.
Motor: Provide permanent split-capacitor motor, permanently lubricated.
Accessories: Provide manufacturer's standard roof jack, wall cap, and transition fittings as indicated on drawings or schedules.
Vibration Isolation: Provide spring floor isolators or hangers depending on type of installation.
Duct Lining: Provide 1" thick, 3-lb density duct liner a minimum of 5' (five feet) up and down stream of fan.
Manufacturer: Subject to compliance with requirements, provide centrifugal ceiling exhausters of one of the following:
Acme
Cook (Loren) Co.
Greenheck.
Twin City Fan & Blower
INSTALLATION
Coordinate ventilator work with work of roofing, walls, and ceilings, as necessary for proper interfacing.
Provide access door in duct below ventilator to service damper.
Solder bottom joints and up 2" of side joints of duct under roof ventilator to retain any moisture entering ventilator.

SECTION 23 34 33.00 – AIR CURTAINS

Submittal Requirements
Product Data: For each type of product indicated.

General
General: Provide air doors of size and capacity as noted on drawings. Air doors shall operate at a low sound level and meet OSHA standards.
Construction:
Wheels: Talc-filled polypropylene or aluminum.
Housing: Galvanized steel.
Motorboard: Galvanized steel.
Velocity Control: Provide adjustable louver damper controls for regulating rate of air flow. When louvers are completely closed air velocity shall reduce to sixty percent.
Directional Control: Provide adjustable vanes at outlet nozzle for directing air where needed and readily set to compensate for possible draft conditions through door openings. Vanes shall have a forty percent girth sweep front to back.
Motors: Provide totally enclosed shaded-pole, or permanent-split capacitor motors, Class "B" insulation, resiliently mounted, tap wound with built-in thermal overload protection, and with permanently lubricated type sleeve or ball bearings. Select motors with the voltage as scheduled.
Extended Motor Oilers: Provide plastic tubes for lubricating motor bearings which are installed beneath grille.
Motor Controls: Provide multi-speed motor control switch with OFF position, mounted behind access door.
Fans: Provide double width, double inlet centrifugal fans, which are balanced statically and dynamically, of indicated capacity. Select fans with single or double extended motor shaft, with fan housing and motor fastened as an integral assembly to a motorboard.
Electric Air Curtains
Heating Elements: Except as otherwise indicated, provide manufacturer's standard heating elements of types, sizes, capacities and ratings for duty indicated; consisting of resistance elements enclosed in steel sheath with extended fins, or with spirally finned sheath.
Electric Heating Capacity: Size elements for indicated fan speed, CFM, room heating load (BTUH), entering air temperature, and electric input (watts, voltage, phase).
Internal Electrical Wiring: Provide units with high temperature, electrical heat-resistant wiring in flexible metal conduit from terminal junction box to electrical devices. Provide fusing for motor and control circuit wiring. Provide all required control transformers.
Devices: Provide air doors with the following devices:
Thermally activated fan switch to keep fan motor operating until residual heat is dissipated.
Disconnect switch.
Automatic reset, high limit cut-out switch located in discharge air stream.
Manual "Summer-OFF-Winter" switch.
Unit-mounted line voltage thermostat
Time delay relay
Control Power Transformer
Magnetic Contactor (Relay Kit)
Manufacturers: Subject to compliance with requirements, provide electric air doors of one of the following:
Berner
Mars Sales Company, Inc.
Powered Aire Inc.
Raywall
Schwank
Installation
Provide disconnect at side or unit for installation in recessed ceiling.
Provide trim piece to finish linear slot supply in ceiling for recessed units.
Coordinate with other electrical work, including wiring/cabling, as necessary to properly interface installation of heating terminal units with other work.
Clean dust and debris from each heating terminal as it is installed to ensure cleanliness.
Comb out damaged fins where bent or crushed before covering elements with enclosures.
Touch-up scratched or marred heating terminal enclosure surfaces to match original finishes.
Field Quality Control
Upon completion of installation of electric heating terminals, and after building circuitry has been energized, test heating terminals to demonstrate capability and compliance with requirements.
Replace electric heating terminals and accessories which are damaged and remove damaged items from construction site.

23 37 13.00 – DIFFUSERS, REGISTERS AND LOUVERS

Submittal Requirements
Product Data: For each type of product indicated.

DIFFUSERS, GRILLES AND REGISTERS
Manufacturer: Subject to compliance with requirements, provide diffusers of one of the following:
Anemostat Products Div., Dynamics Corp. of America.
Metal-Aire
Titus Products Div., Philips Industries, Inc.
Tuttle and Bailey.
Price
Louvers and dampers
Provide louvers and dampers of size as noted.
Manufacturer: Subject to compliance with requirements, provide diffusers of one of the following:
Aerolite
Prefco
Pottorff
Greenheck
Ruskin

23 74 33.00 – PACKAGED OUTDOOR ROOFTOP UNITS

Submittal Requirements
Product Data: For each type of product indicated.

Warranty
Warranty on Compressor and Heat Exchanger: Provide written warranty, signed by manufacturer, agreeing to replace/repair, within warranty period, compressors and heat exchangers with inadequate and defective materials and workmanship, including leakage, breakage, improper assembly, or failure to perform as required; provided manufacturer's instructions for handling, installing, protecting, and maintaining units have been adhered to during warranty period. Replacement is limited to component replacement only, and does not include labor for removal and reinstallation.
Warranty Period: 5 years from date of owner acceptance.
[ROOFTOP HEAT PUMP UNITS
Unit Casing: Panels are of 20-gauge steel, cleaned, phosphatized and coated with resin primer and baked enamel finish.
Access doors provide access to unit controls, filters, indoor coil, supply air fans and optional economizer supply/return air dampers. Inside air section is completely insulated with fireproof, permanent, odorless, glass fiber material. All removable panels and access doors have neoprene gaskets to prevent leakage. The unit base pan is insulated with polyurethane foam insulation.
Knockouts are provided for utility and control connections.
Drain connections are provided to accommodate indoor and outdoor coil water runoff. Lifting lugs are provided as an integral part of the unit.
Compressor: All units have hermetically sealed, high efficiency reciprocating compressors designed for heat pump duty. Compressors are equipped with over temperature, over current and high pressure controls.
Crankcase heaters are standard.
Refrigerant Circuit: All units have expansion devices to provide proper refrigerant flow control in both heating and cooling. Heavy duty, high capacity solenoid type reversing (four-way) valve is standard to provide automatic refrigerant cycle changeover.
Condenser Coil: Outdoor coils are specially designed for heat pump application with widely spaced, wavy-finned surface and staggered row copper tubing. 3/8-inch OD seamless copper tubing is mechanically bonded to aluminum fins. Each coil is factory pressure and leak tested.
Evaporator Coil: Indoor coils are 3/8-inch OD seamless copper tubing mechanically bonded to aluminum fins and are factory pressure and leak tested.
Condensate Pan: Provide double sloped drain pan.
Provide high condensate switch in primary condensate pan to de-energize unit upon detection of high condensate levels in primary condensate pan.
Condenser Fan: Direct drive, statically and dynamically balanced propeller fans are used. All fans are weatherproof and UL listed for outdoor use. Permanently lubricated motors have built-in thermal overload protection.
Evaporator Fan: Belt-driven, forward-curved, centrifugal type fans equipped with an adjustable motor sheave are standard. Fan and motor bearings are permanently lubricated. Motor has built-in overload protection. Fan drive components are mounted on rubber-in-shear isolators to reduce noise and vibration.
Defrost Control: The demand defrost system compares precise temperature difference between the outdoor ambient temperature and outdoor coil fin surface temperature to assess outdoor coil heat transfer capacity. Solid-state comparator and defrost logic circuitry activates the reverse cycle defrost strictly on a demand basis to eliminate unnecessary defrost cycling. Logic circuitry has an integral time override to limit defrost cycle to a maximum of 8 minutes.
Filters: Provide air filters to fit in filter box, with a Maximum filter face velocity of 500 fpm, of the following type:
Disposable Type: Provide MERV 13 air filters, consisting of viscous coated fibers with filtering media encased in fiberboard cell sides having perforated metal grids on each side to provide media support.
Outside Air Options:
Economizer:
Enthalpy Controlled Economizer: Provide return and outside air dampers, outside air filter, fully modulating electric control system with dry control, and adjustable mixed-air thermostat. System shall be capable of driving 100% closed for unoccupied mode, minimum outside air position and modulation to 100 percent open outside air capability. Provide automatic changeover through adjustable control device.
Relief:
Power Exhaust Fan – Shall be factory installed for units larger than 5 tons. Shall include relief damper section with mist eliminator. Dampers open to relieve positive pressure within the building. Available only with economizer.
Accessories: Electric Supplemental Heaters: Slide-in heater module mounts in unit discharge air passage.
Curb: Provide insulated roof curb under unit, constructed in accordance with NRCA Standards. Provide seal strip between curb and unit, and wood nailer for flashing.
Thermostat: Provide thermostat assembly for 7 day/night setback staged heating and cooling with manual or automatic changeover on standard subbase.
Hail Guards: Provide hail guards around the condenser coil to protect the condenser fins against hail.
Manufacturer: Subject to compliance with requirements, provide rooftop units of one of the following:
Aaon
Carrier Air Conditioning; Div. of Carrier Corp.
Trane Co.
Bryant
Lennox
Daikin
Johnson Controls]
VARIABLE VOLUME ROOFTOP UNIT
General: All units shall be completely factory assembled and tested, piped, internally wired, and fully charged with HFC Refrigerant. Cooling capacities shall be rated in accordance with A.R.I. Standard 360. All electrical wiring shall be in accordance with the National Electric Code. All units shall be suitable for outdoor rooftop or ground level installation.
Unit Casing: All exterior surfaces shall be phosphatized, zinc-coated steel with enamel finish. Screws shall be coated with zinc-plus-zinc chromate and with neoprene washers where sealing shall be required. Doors shall provide access to control components, filters, outside/return air dampers, evaporator coil, and supply and exhaust fan sections. All access doors and removable panels shall have neoprene gaskets a 1/2-inch, dual density fiber insulation. Roof assembly shall have modified lock seam joints filled with sealant. Drain hole(s) shall be provided on each side of the condenser section. Unit base shall be one-piece welded assembly with 14-gauge formed, load bearing members and overhang roof curb to facilitate water runoff. Unit lifting lugs accept chains or cables for rigging.
Roof Curb: The curb shall be constructed of 16-gauge, zinc-clad steel. The roof curb is designed to mate with unit and provide support and complete weathertight installation when properly installed. Wood nailer strip shall be factory installed, with gasketing provided to seal supply/return air openings. Design shall allow for connection of ductwork to curb prior to setting of unit. Curb shall be 14 inches high and approved by the National Roofing Contractors Association. Roof curb ships knocked down for easy field assembly. Provide curb type and flashing per roofing manufacturer requirements.
Electrical: All wiring shall be installed and tested in individual component assemblies, then rechecked during final factory run test.
Refrigeration System:
Compressors - All units shall have two or more 3,600 rpm, hermetically sealed compressors. Compressors shall be equipped with over-temperature, over-current and high-pressure controls. Compressors shall be variable capacity. Crankcase heaters and suction line accumulators shall be standard on all models. Provide compressor isolation service valves.
Units shall also have:
Cylinder unloaders for capacity control, with minimum of two steps or as scheduled.
[Hot-gas bypass valve and piping on the lead circuit.]
Thermal expansion valves, filter dryers, sight glasses, liquid line service valves.
Coils: Refrigeration Controls - Refrigeration controls shall include condenser fan, evaporator fan, compressor contactors, and a 24-volt transformer. Each circuit of the unit shall have a separate set of refrigeration controls. Compressor safety controls are outlined in the section above. Evaporator Coil - All units shall have three independent circuits. Heavy-duty aluminum fins mechanically bonded to 1/2-inch seamless copper tubing shall be standard. Factory pressure and leak tested at 300 psi. Expansion valves shall be standard.
High Capacity DX coil (Trane Intellipak)
Condenser Coil - Factory pressure and leak tested at 425 psi. Aluminum fin surface mechanically bonded to 3/8-inch seamless copper tubing.
Fans:Indoor Air Fan - Shall be two, double-inlet, direct drive, backward incline, centrifugal-type fans mounted on a common shaft with adjustable sheave drive. All fans statically and dynamically balanced and tested at the factory. Supply fan shall be run tested in the unit as part of unit run test. Unit reaches its rated rpm before the fan shaft passes through the first critical speed. Fan shaft shall be mounted on two self-aligning, permanently sealed ball bearing. Condenser Fans and Motors - Shall be vertical discharge, balanced, direct-drive fans mounted in full length, bell-mouth orifices. Fan motor shall be three-phrase with permanently lubricated ball bearings and built-in thermal overload protection. Motors shall be line voltage, three phase and shall be equipped with rain shields to eliminate moisture.
Condensate Pan: Provide double sloping drain pain. Provide high condensate switch in primary condensate pan to de-energize unit upon detection of high condensate levels
Gas Fired Heating:
General - Shall be a completely assembled and wired gas-fired heating system with the unit. Test fired at the factory prior to shipment.
Heat Exchanger - Shall be tubular two-pass design with 16-gauge aluminized steel primary and 18-gauge secondary heat exchanger surfaces. Free-floating design eliminates contraction and expansion stresses and noises.
Combustion Blower - Shall be centrifugal-type fan, which provides required air for efficient fuel combustion. Fan motor shall have built-in thermal overload protection.
Gas Safety Controls - Shall have electronic flame safety controls, which require proving of combustion air prior to ignition sequence which includes 60-second prepurge cycle. Direct ignition spark to the burner. Positive ignition must occur within four seconds or heating cycle locks out. A 30-second delay occurs between first and second-state gas valves. Continuous electronic flame supervision is standard. Combustion blower continues to operate for 60-seconds for a postpurge cycle.
Burner - Shall be industrial-type power burner with air-proving switch. Automatic pressure sensing safety switch prevents burner operation if burner is open for maintenance or inspection. Ceramic burner cone shapes flame to prevent to prevent impingement on sides of heat exchanger drum. Burner assembly houses ignition in monitoring electrodes. Burner shall be full modulating with a minimum turndown of 5:1.
Exhaust Air Options:
Powered Relief – Provide factory installed exhaust fan including relief damper section with mist eliminator and building pressurization control. Dampers shall modulate open to relieve positive pressure within the building.
Exhaust fan shall be sized for 100% of supply air CFM.
Economizer:
Enthalpy Controlled Economizer: Provide return and outside air dampers, outside air filter, fully modulating electric control system with dry control, and adjustable mixed-air thermostat. System shall be capable of driving 100% closed for unoccupied mode, minimum outside air position and modulation to 100 percent open outside air capability. Provide automatic changeover through adjustable control device.

Filters:
Provide air filters to fit in filter box, with a Maximum filter face velocity of 500 fpm, of the following type:
Filters: Provide 65%, efficient filters.
Provide filters with clean resistance not exceeding 0.10" w.g. at face velocity of 300 fpm, and ASHRAE weight arrestance efficiency of 70-82%, based on final operating resistance of 0.5" w.g.
Options:
Hail guards protecting the condenser fins.
Controls:
Self Contained: Programmable Electronic Night Setback Thermostat - Shall provide heating setback and cooling setup with 7-day, programming capability. Optional remote sensor available.
DDC Interface – Equipment manufacturer shall provide a factory installed communications card to allow transfer of digital information from equipment manufacturer controller to temperature controls system/BAS. Mechanical contractor to coordinate all controls protocol requirements with temperature controls contractor prior to bid.
Manufacturers:
Subject to compliance with requirements, provide rooftop units of one of the following:
Aaon
Carrier Air Conditioning, Div of Carrier Corp.
Lennox
Trane; a division of Ingersoll Rand.
Daikin
Johnson Controls

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM
1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX
LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road. Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

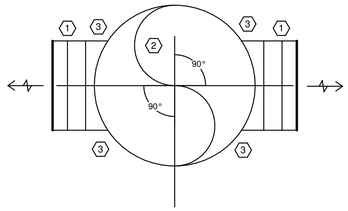
robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
ROBERT A. LONNEMANN
NUMBER PE-2003006449
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

MECHANICAL SPECIFICATIONS

DRAWN BY
NMS
CHECKED BY
AJK
JOB NUMBER
25303
SHEET NAME
M-502

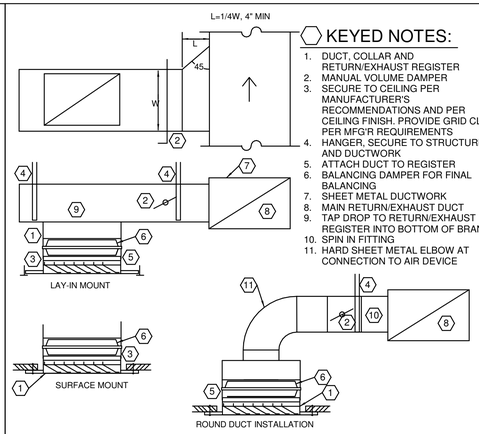


KEYED NOTES:

1. REGISTER WITH 0 DEGREE DEFLECTION BLADE DAMPER (TO BE SIZED AS SCHEDULED)
2. SUPPLY DUCT
3. SEAL JOINTS BETWEEN COLLAR AND MAIN DUCT

233713.00-01 - ANGLED REGISTER INSTALLATION 0 DEGREES

SCALE: NONE

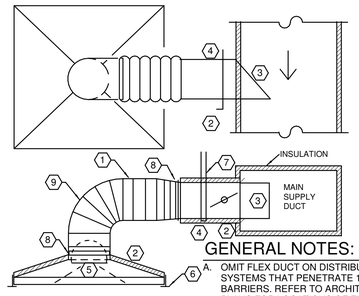


KEYED NOTES:

1. DUCT, COLLAR AND RETURN/EXHAUST REGISTER
2. MANUAL VOLUME DAMPER
3. SECURE TO CEILING PER MANUFACTURER'S RECOMMENDATIONS AND PER CEILING FINISH. PROVIDE GRID CLIPS PER MFG'R REQUIREMENTS
4. HANGER, SECURE TO STRUCTURE AND DUCTWORK
5. ATTACH DUCT TO REGISTER
6. BALANCING DAMPER FOR FINAL BALANCING
7. SHEET METAL DUCTWORK
8. MAIN RETURN/EXHAUST DUCT
9. TAP DROP TO RETURN/EXHAUST REGISTER INTO BOTTOM OF BRANCH
10. SPIN IN FITTING
11. HARD SHEET METAL ELBOW AT CONNECTION TO AIR DEVICE

233713.00-21 - RETURN/EXHAUST REGISTER INSTALLATION

SCALE: NONE



GENERAL NOTES:

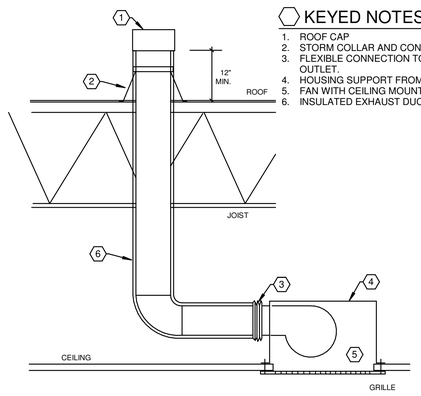
A. OMIT FLEX DUCT ON DISTRIBUTION SYSTEMS THAT PENETRATE 1-HR FIRE BARRIERS. REFER TO ARCHITECTURAL PLANS FOR LOCATIONS OF FIRE BARRIERS.

KEYED NOTES:

1. MAXIMUM LENGTH OF INSUL. FLEX DUCT EQUALS 5 FEET. FLEX NOT PERMITTED IN INACCESSIBLE CEILINGS
2. INSULATED DUCT, COLLAR AND DIFFUSER BY HVAC CONTRACTOR
3. SCOOP
4. SPIN IN FITTING WITH MANUAL VOLUME DAMPER
5. INTERNAL BUTTERFLY DAMPER FOR DRYWALL APPLICATIONS ONLY. (PROVIDE KEY FOR ADJUSTMENT)
6. SECURE TO CEILING PER MANUFACTURER'S RECOMMENDATIONS AND PER CEILING FINISH. PROVIDE GRID CLIPS PER MFG'R REQUIREMENTS. PROVIDE FRAMING FOR DRYWALL INSTALLATION.
7. HANGER, SECURE TO STRUCTURE AND DUCTWORK
8. PEEL BACK INSULATION AND PROVIDE STRAPPING AND SHEET METAL SCREWS AT FLEX CONNECTION TO DUCT. THEN PROVIDE STRAPPING AROUND INSULATION
9. SUPPORT FLEX TO PREVENT COLLAPSING

233713.00-04 - DIFFUSER INSTALLATION TYPICAL

SCALE: NONE



KEYED NOTES:

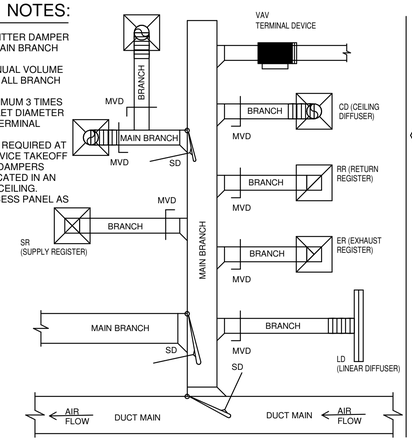
1. ROOF CAP
2. STORM COLLAR AND CONE FLASHING
3. FLEXIBLE CONNECTION TO FAN OUTLET.
4. HOUSING SUPPORT FROM JOIST.
5. FAN WITH CEILING MOUNTED GRILLE.
6. INSULATED EXHAUST DUCTWORK.

233423.00-15 - CEILING EXHAUST FAN

SCALE: NONE

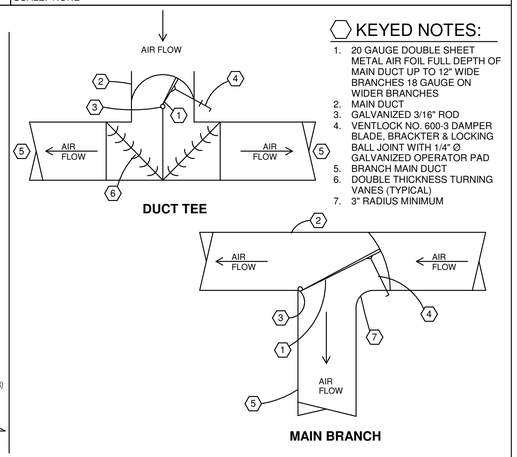
GENERAL NOTES:

1. PROVIDE SPLITTER DAMPER (SD) AT ALL MAIN BRANCH TAKEOFFS
2. PROVIDE MANUAL VOLUME DAMOERS AT ALL BRANCH TAKEOFFS
3. PROVIDE MINIMUM 3 TIMES STRAIGHT INLET DIAMETER TO ALL VAV TERMINAL DEVICES
4. DAMPER NOT REQUIRED AT TERMINAL DEVICE TAKEOFF
5. ALL MANUAL DAMPERS SHALL BE LOCATED IN AN ACCESSIBLE CEILING. PROVIDE ACCESS PANEL AS REQUIRED.



233300.00-01 - MANUAL DAMPER DETAIL

SCALE: NONE



KEYED NOTES:

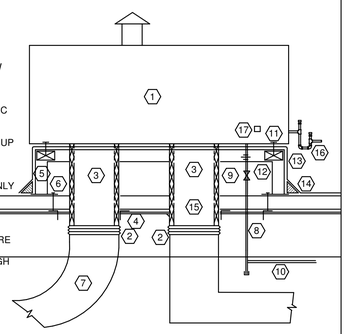
1. 20 GAUGE DOUBLE SHEET METAL AIR FOIL FULL DEPTH OF MAIN DUCT UP TO 12" WIDE BRANCHES 18 GAUGE ON WIDER BRANCHES
2. MAIN DUCT
3. GALVANIZED 3/16" ROD
4. VENTLOCK NO. 600-3 DAMPER BLADE, BRACKTER & LOCKING BALL JOINT WITH 1/4" Ø GALVANIZED OPERATOR PAD
5. BRANCH MAIN DUCT
6. DOUBLE THICKNESS TURNING VANES (TYPICAL)
7. 3" RADIUS MINIMUM

KEYED NOTES:

1. GAS FIRED ROOFTOP UNIT LOCATE A MINIMUM OF 10'-0" FROM EDGE OF ROOF AND ROOF HATCH
2. CANVAS FLEXIBLE CONNECTION
3. 1" ACOUSTICALLY LINED DUCTS
4. 4X4 ANGLE FASTENED TO ROOF DECK AND STRUCURAL SYSTEM. PROVIDE SUPPORTS AS REQUIRED
5. FACTORY FABRICATED, INSULATED ROOF CURB (BY SAME MFG'R AS UNIT)
6. FASTEN TO CURB DECK
7. INSULATED RADIUSED ELBOW
8. UNION BY PUMBING CONTRACTOR (PC)
9. GAS SHUT-OFF VALVE BY PC
10. GAS LINE (BLACK STEEL) BY PC
11. SECURE TO CURB
12. WOOD NAILER
13. ROOFING MEMBRANE, FLASH UP TO BELOW WOOD NAILER
14. CANT STRIP
15. ROOF DECK - CUT OPENINGS FOR DUCT PENETRATIONS ONLY
16. CONDENSATE TRAP - SEE CONDENSATE DRAIN TRAP DETAIL
17. HIGH WATER ALARM IN CONDENSATE DRAIN PAN. WIRE TO BREAK 24 VOLT CONTROL POWER IN THE CASE OF A HIGH WATER EVENT.

GENERAL NOTES:

A. CONTRACTOR SHALL PROVIDE CURB TO MAINTAIN 14" MINIMUM ABOVE FINISHED ROOFING SYSTEM. PROVIDE ADDITIONAL BLOCKING AS REQUIRED TO ACCOMMODATE ROOF INSULATION THICKNESS.
B. FINAL LOCATION AND STRUCTURAL VERIFICATION BY OTHERS.



237433.00-04 - ROOF CURB & MOUNTING C

SCALE: NONE

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM
1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX
LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
ROBERT A. LONNEMANN
NUMBER PE-2003006449
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

MECHANICAL - DETAILS

DRAWN BY	NMS
CHECKED BY	AJK
JOB NUMBER	25303
SHEET NAME	M-601

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM
1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX
LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
ROBERT A. LONNEMANN
NUMBER PE-2003006449
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

MECHANICAL - SCHEDULES

DRAWN BY: NMS
CHECKED BY: AJK
JOB NUMBER: 25303
SHEET NAME: M-602

DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

PRODUCT							GENERAL	MISC					
MARK	DESCRIPTION	MANUFACTURER	MODEL	LENGTH (IN)	WIDTH (IN)	SECTION NUMBER	STATUS	MTG TYPE	MATERIAL TYPE	FINISH TYPE	DAMPER TYPE	BORDER STYLE	ACCESSORIES
CD-1	DIFFUSERS, REGISTERS AND GRILLES	TITUS	TMS	12	12	23 37 13.00	NEW	CEILING	STEEL	STANDARD WHITE	BUTTERFLY	SURFACE MOUNTED	--
SR-1	DIFFUSERS, REGISTERS AND GRILLES	TITUS	S300FL	4	26	23 37 13.00	NEW	DUCT	STEEL	STANDARD WHITE	SCOOP DAMPER	SURFACE MOUNTED	--
SR-2	DIFFUSERS, REGISTERS AND GRILLES	TITUS	S300FL	4	24	23 37 13.00	NEW	DUCT	STEEL	STANDARD WHITE	SCOOP DAMPER	SURFACE MOUNTED	--
SR-3	DIFFUSERS, REGISTERS AND GRILLES	TITUS	S300FL	3	12	23 37 13.00	NEW	DUCT	STEEL	STANDARD WHITE	SCOOP DAMPER	SURFACE MOUNTED	--
SR-4	DIFFUSERS, REGISTERS AND GRILLES	TITUS	S300FL	3	10	23 37 13.00	NEW	DUCT	STEEL	STANDARD WHITE	SCOOP DAMPER	SURFACE MOUNTED	--
SR-5	DIFFUSERS, REGISTERS AND GRILLES	TITUS	S300FL	3	20	23 37 13.00	NEW	DUCT	STEEL	STANDARD WHITE	SCOOP DAMPER	SURFACE MOUNTED	--
SR-6	DIFFUSERS, REGISTERS AND GRILLES	TITUS	S300FL	3	18	23 37 13.00	NEW	DUCT	STEEL	STANDARD WHITE	SCOOP DAMPER	SURFACE MOUNTED	--
TG-1	DIFFUSERS, REGISTERS AND GRILLES	TITUS	350RL	6	12	23 37 13.00	NEW	SIDEWALL	STEEL	BLACK FINISH G.C. TO FIELD PAINT TO MATCH CEILING OR WALLS	NONE	SURFACE MOUNTED	--
TG-2	DIFFUSERS, REGISTERS AND GRILLES	TITUS	350RL	6	24	23 37 13.00	NEW	SIDEWALL	STEEL	BLACK FINISH G.C. TO FIELD PAINT TO MATCH CEILING OR WALLS	NONE	SURFACE MOUNTED	--

HVAC VENT SCHEDULE

NUMBER	NAME	AREA	LEVEL	AIR CHANGES	OA CHANGES	# OF PEOPLE	OA PER PERSON	OA PER SQFT	REQ SA	ACT SA	REQ OA	ACT OA	ACT RETURN	ACT EXH	CRIT OA%	PRESSURE	% OPERABLE	NATURAL VENTILATION
1	SALES	3419	LEVEL 1	0	0	52	7.5	0.12	3030	4000	1000	1000	4000	0	25	NEUTRAL	0	--
2	FITTING ROOM AREA	168	LEVEL 1	0	0	1	5	0.06	65	150	31	31	150	0	12.6	NEUTRAL	0	--
3	HALLWAY	231	LEVEL 1	0	0	0	0	0.06	80	100	21	21	100	0	17.3	NEUTRAL	0	--
4	STOCK ROOM	858	LEVEL 1	0	0	0	0	0.12	320	500	104	104	500	0	25.7	NEUTRAL	0	--
5	TOILET ROOM	65	LEVEL 1	0	0	0	0	0	35	50	10	10	0	75	0	NEGATIVE	0	--
6	OFFICE	64	LEVEL 1	0	0	1	5	0.06	85	100	21	21	100	0	11	NEUTRAL	0	--
7	BREAK RM	134	LEVEL 1	0	0	1	5	0.06	75	150	31	31	150	0	10.9	NEUTRAL	0	--
8	SALES 2	321	LEVEL 1	0	0	5	7.5	0.12	165	420	87	87	420	0	22.6	NEUTRAL	0	--

TOTAL AREA: 5260 SF

HVAC LOAD SCHEDULE

THE HEATING AND COOLING LOAD CALCULATIONS ARE BASED ON THE RTS (RADIANT TIME SERIES) METHOD. ASSUMPTIONS AND EXECUTION OF THESE METHODS ARE PER ASHRAE 183-2007 STANDARD FOR PEAK COOLING AND HEATING LOAD CALCULATIONS IN BUILDINGS EXCEPT LOW-RISE RESIDENTIAL BUILDINGS.

COOLING LOAD BREAKDOWN -
SUMMER DESIGN DB TEMP: 97 F,
SUMMER DESIGN WB TEMP: 77 F

HEATING LOAD BREAKDOWN -
WINTER DESIGN DB TEMP: 5 F

CROOF SENSIBLE HEAT GAIN FROM ROOF
CWALL SENSIBLE HEAT GAIN FROM EXTERIOR WALLS
CPART SENSIBLE HEAT GAIN FROM PARTITIONS
CGLASS SENSIBLE HEAT GAIN FROM GLAZING
CSOLAR SENSIBLE HEAT GAIN FROM SOLAR GAIN THROUGH GLAZING
CLIGHTS SENSIBLE HEAT GAIN FROM INTERIOR LIGHTING
CEQUIP SENSIBLE HEAT GAIN FROM PLUG LOADS, COMPUTERS, ETC.
CPSENS SENSIBLE HEAT GAIN FROM PEOPLE

CSSENS TOTAL SENSIBLE HEAT GAIN TO SPACE
CFAN SENSIBLE HEAT GAIN FROM AIR HANDLER FAN
COAS SENSIBLE HEAT GAIN FROM OUTDOOR VENTILATION AIR
CTSENS TOTAL SENSIBLE HEAT GAIN
CPLAT LATENT HEAT GAIN FROM PEOPLE
COAL LATENT HEAT GAIN FROM OUTDOOR VENTILATION AIR
CTLAT TOTAL LATENT HEAT GAIN
CTOT TOTAL HEAT GAIN (SENSIBLE + LATENT)

HROOF HEAT LOSS FROM ROOF
HWALL HEAT LOSS FROM EXERIOR WALLS
HPART HEAT LOSS FROM PARTITIONS
HGLASS HEAT LOSS FROM GLAZING
HSLAB HEAT LOSS FROM SLAB
HSPACE TOTAL SENSIBLE HEAT LOSS FROM SPACE
HOA HEAT LOSS FROM OUTDOOR VENTILATION AIR
HTOT TOTAL HEAT LOSS

EQUIPMENT NAME	ZONE	CROOF	CWALL	CPART	CGLASS	CSOLAR	CLIGHTS	CEQUIP	CPSENS	CSSENS	CFAN	COAS	CTSENS	CPLAT	COAL	CTLAT	CTOT	HROOF	HWALL	HPART	HGLASS	HSLAB	HSPACE	HOA	HTOT
RTU-1	1	6.45	1.1	0	3.21	20.61	23.1	2.7	17.16	81.95	2	22.47	106.42	10.4	30.54	40.94	147.36	11.58	2.97	0	12.44	11.89	38.88	70.22	109.1
RTU-2	2	4.27	1.81	0	0	0	16.73	2.22	4.55	29.58	0.74	6.88	37.2	1.6	9.35	10.95	48.14	7.69	6.03	0	0	5.82	19.54	21.5	41.04

AIR CURTAIN W/ELECTRIC HEAT SCHEDULE

PRODUCT						GENERAL		HEATING	ELECTRICAL	MISC	ELECTRICAL																	PRODUCT
MARK	DESCRIPTION	MANUFACTURER	MODEL	OPERATING WEIGHT (LBS)	SECTION NUMBER	AREA SERVED	STATUS	NOM HTG CAP (KW)	EMERGENCY	ACCESSORIES	CONNECTION MARK	ELECTRIC CONNECTION SUMMARY	CN TYPE	CN FURNISHED BY	CN INSTALLED BY	CN WIRED BY	MC TYPE	MC FURNISHED BY	MC INSTALLED BY	MC WIRED BY	DC TYPE	DC FURNISHED	DC INSTALLED BY	DC WIRED BY	FA SHUTDOWN	REQUIRED TO MEET FAULT CURRENT	FAULT CURRENT	EMERGENCY	MARK
AC-1	AIR CURTAIN W/ELECTRIC HEAT	POWERED AIRE	EVE-2-72E	102	23 34 33.00	--	NEW	8	NO	--	AC-1	AC-1 - 208V/3PH, 8KW HTG, 0.4 HP, 47.3 MCA, 60A OCP	INT	MFR	MFR	MFR	MG	MFR	MFR	MFR	--	EC	EC	EC	NONE	FALSE	AC-1: 3167	FALSE	AC-1

HVAC EXHAUST FAN SCHEDULE

PRODUCT						GENERAL		AIRFLOW				ELECTRICAL	MISC	ELECTRICAL																	PRODUCT
MARK	DESCRIPTION	MANUFACTURER	MODEL	OPERATING WEIGHT (LBS)	SECTION NUMBER	AREA SERVED	STATUS	EA (CFM)	ESP (IN. W.C.)	FAN BHP	FAN MTR SPEED (RPM)	EMERGENCY	ACCESSORIES	CONNECTION MARK	ELECTRIC CONNECTION SUMMARY	CN TYPE	CN FURNISHED BY	CN INSTALLED BY	CN WIRED BY	MC TYPE	MC FURNISHED BY	MC INSTALLED BY	MC WIRED BY	DC TYPE	DC FURNISHED	DC INSTALLED BY	DC WIRED BY	FA SHUTDOWN	REQUIRED TO MEET FAULT CURRENT	FAULT CURRENT	EMERGENCY	MARK
EF-1	HVAC EXHAUST FAN	GREENHECK	SP-LP0511-1	8	23 34 00.00	RESTROOM	NEW	80	4	0.01	773	NO	1,3	EF-1	EF-1 - 120V/1PH, 0.29A FLA, 0.4 MCA, 15A OCP	MAN	EC	EC	EC	ECM	MFR	MFR	MFR	--	EC	EC	EC	NONE	FALSE	EF-1: 6879	FALSE	EF-1

PACKAGED ROOFTOP UNIT, GAS HEAT SCHEDULE

PRODUCT						GENERAL		AIRFLOW					COOLING									
MARK	DESCRIPTION	MANUFACTURER	MODEL	OPERATING WEIGHT (LBS)	SECTION NUMBER	AREA SERVED	STATUS	SA (CFM)	OA (CFM)	DCV MIN AIRFLOW (CFM)	ESP (IN. W.C.)	FAN BHP	NOM CLG CAP (TON)	TOTAL CALC CLG MBH	CALC SENS CLG MBH	EAT DB CLG	EAT WB CLG	LAT DB CLG	LAT WB CLG	MIN SEER	MIN EER
EXRTU	PACKAGED ROOFTOP UNIT, GAS HEAT	TRANE	YHD150F3RHA01	1514	23 74 33.00	SALES	EXISTING	4000	1000	410.28	1	2.08	12.5	147.38	106.45	80	66	55	54	14.0	11.0
RTU-2	PACKAGED ROOFTOP UNIT, GAS HEAT	TRANE	YSK048A3S0L	812	23 74 33.00	BOH	NEW	1470	306	177.29	1	0.8	4	47.81	36.86	80	66	55	54	14.0	12.0

MARK	HEATING								ELECTRICAL	MISC
	CALC HTG MBH	EAT HTG	LAT HTG	FUEL TYPE	GAS INPUT	GAS OUT	MIN GAS PRESS	MAX GAS PRESS	MIN AFUE	EMERGENCY	ACCESSORIES
EXRTU	113.01	57	90	NATURAL GAS	250	203	4.5	14	81	NO	2,3,4,21
RTU-2	47.72	58	90	NATURAL GAS	80	64.8	4.5	14	81	NO	2,3,4,21

ELECTRICAL																		PRODUCT
CONNECTION MARK	ELECTRIC CONNECTION SUMMARY	CN TYPE	CN FURNISHED BY	CN INSTALLED BY	CN WIRED BY	MC TYPE	MC FURNISHED BY	MC INSTALLED BY	MC WIRED BY	DC TYPE	DC FURNISHED	DC INSTALLED BY	DC WIRED BY	FA SHUTDOWN	REQUIRED TO MEET FAULT CURRENT	FAULT CURRENT	EMERGENCY	MARK
RTU-1	RTU-1 - 208V/3PH, 64 MCA, 80A OCP	LOW	HC	HC	HC	ECM	MFR	MFR	MFR	--	EC	EC	EC	DUCT	TRUE	RTU-1: 3493	FALSE	RTU-1
RTU-2	RTU-2 - 208V/3PH, 29 MCA, 40A OCP	LOW	HC	HC	HC	ECM	MFR	MFR	MFR	--	EC	EC	EC	DUCT	TRUE	RTU-2: 1915	FALSE	RTU-2

HVAC ACCESSORIES

ACCESSORIES:

1. MOTOR DAMPER
2. ECONOMIZER
3. ROOF CURB
4. HAIL GUARDS
5. INTAKE HOOD
6. VIBRATION ISOLATION
7. FLAT FILTER
8. FILTER/MIXING BOX
9. ACCESS DOOR
10. FLEX CONNECTIONS
11. MOUNTING COLLAR
12. HOT GAS BYPASS
13. FACE/BYPASS DAMPER
14. CONDENSATE PUMP
15. MOTOR GUARD
16. GREASE TRAP
17. DUCT FLANGES
18. BASE RAIL
19. HUMIDIFIER
20. CO2 SENSORS
21. ECON POWERED EXHAUST
22. ECON BAROMETRIC RELIEF
23. HOT GAS REHEAT COIL
24. SHAFT GROUNDING BRUSHES

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM

1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX

LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
ROBERT A. LONNEMANN
NUMBER PE-2003006449
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

PLUMBING COVER SHEET

DRAWN BY
NMS
CHECKED BY
AJK
JOB NUMBER
25303
SHEET NAME
P-001

FIELD VERIFY ALL CONDITIONS

DESIGN DRAWINGS ARE SCHEMATIC. THIS CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING OR AWARD OF CONTRACT TO INSPECT EXISTING FIELD CONDITIONS. THIS CONTRACT SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY FOR FIELD MODIFICATIONS DUE TO EXISTING CONDITIONS.

THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST.

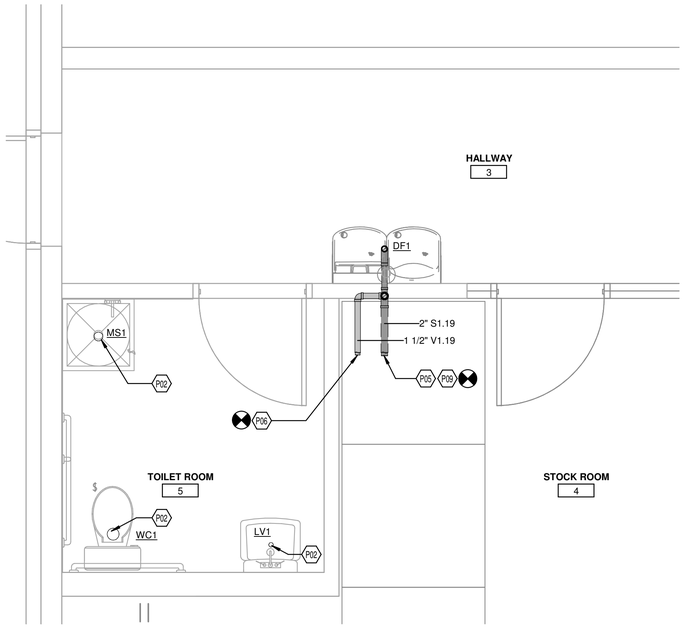
BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS NOT WITHSTANDING. THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

STANDARD PLUMBING ABBREVIATIONS

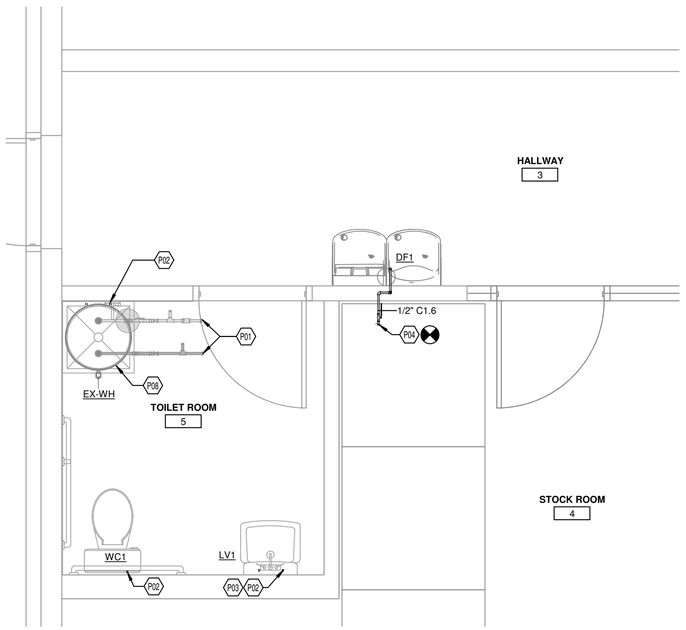
AAV	AIR ADMITTANCE VALVE
AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
ASPE	AMERICAN SOCIETY OF PLUMBING ENGINEERS
AV	ACID VENT
AW	ACID WASTE
BAS	BUILDING AUTOMATION SYSTEM
BFP	BACKFLOW PREVENTER
BT	BATHTUB
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
BWV	BACK WATER VALVE
CA	COMPRESSED AIR
CB	CATCH BASIN
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CO	CLEAN OUT
CO2	CARBON DIOXIDE
CP	CIRCULATION PUMP
CW	DOMESTIC COLD WATER
DF	DRINKING FOUNTAIN
DI	DEIONIZED WATER
DIA	DIAMETER
DN	DOWN
DS	DOWNSPOUT
DSN	DOWNSPOUT NOZZLE
EC	ELECTRICAL CONTRACTOR
ET	EXPANSION TANK
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EX	EXISTING
F	FAHRENHEIT
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FFE	FINISHED FLOOR ELEVATION
FLA	FULL LOAD AMPERES
FS	FLOOR SINK
FT	FEET
FW	FILTERED WATER
G	GAS
GCO	GRADE CLEAN OUT
GWH	GAS FIRED WATER HEATER
GI	GREASE INTERCEPTOR
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPR	GAS PRESSURE REGULATOR
GW	GREASE WASTE
H&CW	HOT & COLD WATER
HB	HOSE BIBB
HC	HVAC CONTRACTOR
HD	HUB DRAIN
HP	HORSEPOWER
HW	DOMESTIC HOT WATER
HWR	HOT WATER RETURN
IE	INVERT ELEVATION
IN WC	INCH WATER COLUMN
KW	KILOWATT
KWH	KILOWATT HOUR
LPG	LIQUID PROPANE GAS
LV	LAVATORY
MAU	MAKEUP AIR UNIT
MAX	MAXIMUM
MBH	1000 BTUH
MH	MANHOLE
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MS	MOP SINK
MV	MIXING VALVE
N	NITROGEN
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NITROUS OXIDE
NOM	NOMINAL
NTS	NOT TO SCALE
O	OXYGEN
OCP	OVER CURRENT PROTECTION
OD	OVERFLOW DRAIN
OI	OIL INTERCEPTOR
PC	PLUMBING CONTRACTOR
PRV	PRESSURE REGULATING VALVE
PSI	POUNDS PER SQUARE INCH
RD	ROOF DRAIN
RH	ROOF HYDRANT
RO	REVERSE OSMOSIS
RPZ	REDUCED PRESSURE ZONE VALVE
RTU	ROOF TOP UNIT
S	SANITARY
SI	SOLIDS INTERCEPTOR
SK	SINK
SOFT	SOFT WATER
SPEC	SPECIFICATION
SQ FT	SQUARE FOOT (FEET)
ST	STORM PIPING
TD	TRENCH DRAIN
TEMP	TEMPERATURE
TMV	THERMOSTATIC MIXING VALVE
TP	TRAP PRIMER
UH	UNIT HEATER
UR	URINAL
VAC	VACUUM
VFD	VARIABLE FREQUENCY DRIVE
VP	VACUUM PUMP
VTR	VENT THRU ROOF
WAGD	WASTE ANESTHESIA GAS
WB	WASHER BOX
WC	WATER CLOSET
WCO	WALL CLEAN OUT
WH	WALL HYDRANT
WF	WATER FILTER
YH	YARD HYDRANT

PLUMBING LEGEND

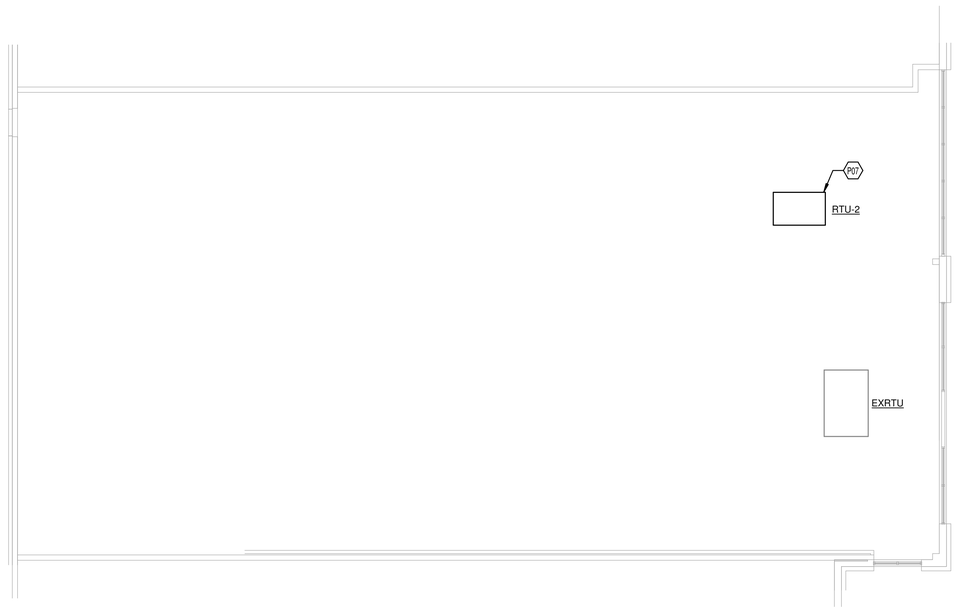
SYMBOL	DESCRIPTION
PIPING LINE TYPES	
S	SANITARY WASTE PIPING
V	VENT PIPING
CW	DOMESTIC COLD WATER PIPING
HW	DOMESTIC HOT WATER PIPING (140°F)
NG	NATURAL GAS PIPING
ELECTRONIC DRAWING REQUEST	
ELECTRONIC COPIES OF THESE DRAWINGS MAY BE REQUESTED AT: APPS.KLHENGRS.COM/DRAWINGREQUESTS.	
PLUMBING ACCESSORIES	
	UNION
	PRESSURE GAUGE
	THERMOMETER
	EXPANSION TANK
PIPE VALVES	
	SHUT-OFF VALVE
	CHECK VALVE
	BALANCING VALVE
	DOUBLE CHECK VALVE BACKFLOW PREVENTER
PLUMBING SYMBOLS	
	PIPE UP
	PIPE DOWN
	PIPE TEE DOWN
	PIPE TEE UP
	CONNECT TO EXISTING (FIELD VERIFY EXISTING UTILITY SERVICE TYPE, PRIOR TO MAKING CONNECTION)



1 ENLARGED PLUMBING SANITARY AND VENT PLAN
1/2" = 1'-0"



2 ENLARGED PLUMBING WATER PLAN
1/2" = 1'-0"



3 PLUMBING WATER & GAS PLAN - ROOF
1/8" = 1'-0"

KEYED NOTES

P01	DEMOLISH EXISTING COLD/HOT WATER SERVING EXISTING RESTROOM TO BE DEMOLISHED.
P02	NEW FIXTURE TO REPLACE EXISTING FIXTURE. EXTEND AND CONNECT NEW PIPING AS NECESSARY FOR REPLACEMENT. FIELD VERIFY EXISTING PIPE MATERIAL TYPE, SIZE, AND LOCATION PRIOR TO MAKING CONNECTION. REFER TO AND COORDINATE WITH ARCHITECTURAL DRAWINGS FOR PRECISE DIMENSIONS OF INTENDED LOCATION.
P03	PROVIDE NEW ASSE 1070 RATED THERMOSTATIC MIXING VALVE.
P04	EXTEND DOMESTIC WATER TO EXISTING 3/4" MIN. WATER MAIN. PROVIDE SHUT-OFF, BACKFLOW PREVENTER, PRESSURE REGULATING VALVE, METER, AND REMOTE READER IF REQUIRED. INSULATE ENTIRE LINE WITHIN BUILDING. FIELD VERIFY EXACT LOCATION OF EXISTING DOMESTIC WATER PRIOR TO INSTALLING ANY PIPING. REPORT DIFFERENCES TO ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
P05	CONNECT NEW SANITARY PIPING TO NEAREST EXISTING 4" MINIMUM SANITARY MAIN. FIELD VERIFY EXACT LOCATION, INVERT, DIRECTION OF FLOW, AND SYSTEM TYPE PRIOR TO STARTING WORK. CONTACT ENGINEER WITH ANY DIFFERENCES OTHER THAN WHAT IS SHOWN ON PLAN. PROVIDE CAMERA SCOPING TO ENSURE PIPNG SIZES AND LOCATION.
P06	CONNECT NEW VENT PIPING TO NEAREST EXISTING VENT MAIN. FIELD VERIFY EXACT LOCATION, INVERT, MATERIAL, SIZE AND SYSTEM TYPE PRIOR TO STARTING WORK. CONTACT ENGINEER WITH ANY DIFFERENCES OTHER THAN WHAT IS SHOWN ON PLAN.
P07	EXTEND AND CONNECT PREVIOUSLY EXISTING RTU NATURAL GAS SUPPLY PIPING TO NEW RTU.
P08	EXISTING WATER HEATER TO REMAIN AND SERVE EXISTING RESTROOM. 3/4" MIN. COLD AND HOT WATER MAINS TO REMAIN AND CONNECT TO NEW REPLACEMENT FIXTURES.
P09	EXISTING VENT AND SANITARY PIPING SERVING EXISTING EXISTING RESTROOM TO BE DEMOLISHED.

Pipe Type Legend

Mark	System Name	Pipe Material
C1.6	C1 - Domestic Cold Water	6 - Copper - Type L - ASTM B88
S1.19	S1 - Sanitary	19 - PVC - Schedule 40 - ASTM D1785/D2665
V1.19	V1 - Vent	19 - PVC - Schedule 40 - ASTM D1785/D2665

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM
1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX
LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
ROBERT A. LONNEMANN
NUMBER PE-2003006449
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

PLUMBING PLANS

DRAWN BY
NMS
CHECKED BY
AJK
JOB NUMBER
25303
SHEET NAME
P-101

SECTION 22 05 00.00 - COMMON WORK RESULTS FOR PLUMBING

GENERAL

The General Provisions of the Contract including the General and Supplemental Conditions and General Requirements apply to the work in this section. Before submitting a bid, examine documents of all other trades, visit the site and get acquainted with all conditions that may in any way affect the execution of this contract.
Contractor shall obtain and pay for all permits, certificates of inspection and approvals required.
Submittal of a bid indicates that the contractor has examined the drawings, specifications, and had an opportunity to visit the site to be able to provide a comprehensive complete bid to include providing all materials, labor, tools, and equipment required to provide complete plumbing systems as outlined in Division-22.
Clearly state all full load amps (FLA), voltages and model numbers on all submittals.
Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories. Provide wiring diagrams: For power, signal, and control wiring.

APPLICABLE STANDARDS

The installation of all plumbing work shall conform to all the following, but not limited, applicable local and municipal utility standards, rules and regulations, plumbing codes and statutes having jurisdiction.
All plumbing fixtures, equipment, accessories, and appurtenances shall be NSF/ANSI 61-372 compliant.
2018 International Building Code;
2018 International Plumbing Code;
American Society for Test Materials (ASTM);
National Sanitation Foundation (NSF);
American Standards Association (ASA);
Underwriters Laboratories (UL);
National Fire Protection Association (NFPA);
National Electric Code (NEC);

PLANS AND SPECIFICATIONS

Obtain the latest owner design and construction standards document(s). Comply with all owner-specific requirements in addition to requirements set forth in these specifications and accompanying drawings. Should there be a conflict, the owner's standards shall take precedence, unless prevailing codes and regulations mandate otherwise.
The drawings that accompany these specifications are diagrammatic. Wherever possible make use of submittal data and verify all dimensions on site. Provide additional fittings as required by site conditions and codes at no additional cost to conform to the structure, avoid obstructions, provide required service clearances and preserve headroom. Do not scale from drawings, all measurements should be taken in the field.

EXISTING CONDITIONS

Where new plumbing systems are required to be connected to existing plumbing systems, provide all camera scoping and dye testing necessary to verify the exact location, size, invert elevation, pressure, pipe integrity, and system type to ensure a proper connection is executed. The contractor shall notify the engineer immediately if it is found a proper connection cannot be executed.

CUTTING, PATCHING AND DEMOLITION

The contractor shall be responsible for damages to the grounds, walks, road, building, piping systems, electrical systems, and their equipment and contents, caused by leaks in the piping systems being installed or having been installed by him. The contractor shall repair at his expense all damaged so caused. All repair work shall be done as directed by and in such manner as satisfactory to the architect.
Owner reserves the right to make emergency repairs as required to keep equipment in operation without voiding the contractor's guarantee bond nor relieving the contractor of his responsibilities during the bonding period.
Cut and drill all openings in roofs, walls, and floors required for the installation. Neatly patch all openings cut. Hold cutting and patching to a minimum by arranging with other contractors for all sleeves and openings before construction is started. When drilling/cutting concrete slabs, utilize ground penetrating radar (GPR) and/or X-ray scanning equipment to verify the location is free from obstructions, including but not limited to: structural rebar/strands/tendons, electrical conduit/wiring, and/or piping/ductwork.

EXCAVATION AND BACKFILL

Perform all excavation and backfilling required for this work. Contractor shall consult with utility company prior to beginning excavation. At a minimum, all piping shall be laid on a bed of sand, 6" deep, well tamped into place and properly graded to permit the pipe to have an even bearing throughout its entire length. Sand shall be installed around the piping in 6" lifts to a point 6" above the piping.

WARRANTY

This contractor shall warrant that all work under this section shall be free of defective work, materials and parts for a period of one year after acceptance of the work and shall repair, revise, and replace, at no cost to the owner, any such defects occurring within the warranty period.
Use of Electronic Drawings from the Owner's Design Team
If expressly permitted by the Owner and the terms of the Contract, editable electronic drawings may be made available for the creation of shop and as-built drawings upon request. Drawings will be made available at the discretion of the Engineer. "Request Drawings" form can be accessed, filled out and submitted at http://www.klhengrs.com (right hand side of page - Contractor Resources). Direct access to this form can be found here: http://files.klhengrs.com/requestdrawings.html

22 05 03.00 - SUBMITTALS FOR PLUMBING

Provide submittals in accordance with the Contract Documents. In addition to Division 01, the Contractor is advised to review and comply with the requirements articulated within each Division and within each section of that Division.
Some Divisions may include a division-specific "Submittal Requirements for …." section. Where this section exists, it articulates additional requirements for submittals that apply to the work of that Division.
The following requirements help to identify, track and keep the project organized for all parties involved. They are necessary to ensure a timely turnaround and an appropriate technical review. Submittals that do not conform to the administrative requirements are rejected and returned, without technical review.
Supply submittals for each section: Submittals shall be supplied on a section-by-section and type-by-type basis. For example, independent product data submittals shall be furnished for each section that requires product data submittals. Independent shop drawing submittals shall be furnished for each section that requires shop drawings.
Separate PDF file packages shall be supplied for each section, for each submittal type. Each PDF shall represent a single standalone submittal.
Include a transmittal: Transmittals shall enumerate each submittal for each section of each type and iteration.
Include cover sheet / title page: The cover sheet shall include the information identified in the contract documents. It shall be included as the first page of each electronic and/or hardcopy document-based submittal. An editable and printable PDF form created with editable fields and specification compliant appearance is available from KLH upon request. It is also downloadable from the KLH website at www.klhengrs.com.
Include an index: The index shall enumerate the contents of the submittal.
Include checklists: Where checklists are included with the specifications, complete and include them within the appropriate submittal. Supply complete submittals: Complete submittals of each type are required. Partial submittals will be rejected. Where a section requires a product data submittal, all product data for that section shall be supplied together, at one time, as one complete submittal. When resubmittal is required (e.g. Revise and Resubmit) the revised submittal shall be more complete, more accurate and more contract-compliant than its rejected predecessor. The submittal number (for each section and type) shall increment for each subsequent submittal (00 – Original submission, 01 – First Resubmission, 02 – Second Resubmission, etc…).
Resubmittals shall include a copy of the reviewers comments supplied with the prior submittal rejection and shall be amended with a description of the specific action taken to comply with the reviewer's comments. The absence of this on resubmittal is cause for rejection.
Name electronic files to match the submittal ID and cover sheet: The electronic file name of submittals shall match the submittal ID included on the submittals cover page.
For example: The original/first product data submittal for Section 220523 would be labeled as "220523.00-PD-00"; the first resubmittal of same shall be labeled "220523.00-PD-01". The original/first shop drawings submittal file for the same section would be labeled "220523.00-SD-00"; the first resubmittal of same shall be labeled "220523.00-SD-01".
If expressly permitted by the Owner and the terms of the Contract, editable electronic drawings may be made available for the creation of shop and as-built drawings upon request. Drawings will be made available at the discretion of the Engineer.
"Request Drawings" form can be accessed, filled out and submitted at http://www.klhengrs.com (right hand side of page - Contractor Resources). Direct access to this form can be found here:
http://files.klhengrs.com/requestdrawings.html

22 05 17.00 – SLEEVES AND SLEEVE SEALS FOR PLUMBING PIPING

SLEEVES
Steel Pipe: ASTM A 53, Type E, Grade B, Schedule 40, galvanized, plain ends.

EXECUTION
Install steel pipe sleeves two sizes larger than pipes passing through floors, rated walls, building foundation walls or masonry construction. Sleeves are not required for core drilled holes.

For sleeves that will have sleeve-seal systems installed, select sleeves of size large enough to provide 1-inch annular clear space between piping and concrete slabs and walls.

Install sleeves in concrete floors, concrete roof slabs, and concrete walls as new slabs and walls are constructed. Permanent sleeves are not required for holes in slabs formed by molded-PE or -PP sleeves.
Cut sleeves to length for mounting flush with both surfaces.
Exception: Extend sleeves installed in floors of mechanical equipment areas or other wet areas 2 inches above finished floor level.
Using grout, seal the space outside of sleeves in slabs and walls without sleeve-seal system.

Install sleeves for pipes passing through interior partitions. Cut sleeves to length for mounting flush with both surfaces.
Install sleeves that are large enough to provide 1/4-inch annular clear space between sleeve and pipe or pipe insulation.
Seal annular space between sleeve and piping or piping insulation; use joint sealants appropriate for size, depth, and location of joint.

Seal sleeves and piping with material rating equivalent to the wall rating. Maintain indicated fire rating of walls, partitions, ceilings, and floors at pipe penetrations. Seal pipe penetrations with firestop materials where required.

22 05 23.00 - GENERAL DUTY VALVES

Submittal Requirements
Product Data: For each type of product indicated.
GENERAL
Provide stops or isolation valves on domestic water supplies to isolate hot and cold water to each fixture, including all equipment and equipment provided by others.
Access shall be provided to all valves. Provide fire-rated access panel(s) to maintain full access to concealed valves.
Ball valves - 2 inch and smaller: Lead-Free, 150 psi @ 250^{0}F minimum pressure rating, cast bronze body, blowout-proof stem.
Butterfly Valves - 3" and up: Ductile Iron Butterfly Valve, 200 WOG, Lug Body, Lever Operator.
Approved Manufacturers: Milwaukee Valve, NIBCO, and Watts Water Technologies Co.
Valves to conform to: MSS-SP-110 Type I/ MSS-SP-67 Type I, NSF/ANSI -61/372.
Check valves - to be same size as system piping it accompanies. Lead-free, bronze body, 250 WOG, non-shock, spring check valve. Conforms to the following standard(s): MSS-SP-80 I, NSF/ANSI -61/372

22 05 29.00 – HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT

GENERAL
Provide hangers, supports, clamps, attachments, and structural steel members where required to support piping and equipment from building structure.
Support of piping from the decking or equipment is prohibited.
Arrange for grouping of parallel runs of horizontal piping supported together on field-fabricated, heavy-duty trapeze hangers where possible. Trapeze hangers shall conform to: MSS SP-69, Type 59. Horizontal-Piping Clamps: Provide Carbon- or Alloy-Steel, Double-Bolt Pipe Clamps (MSS Type 3) for suspension of pipes requiring clamp flexibility and up to 4 inches of insulation.
Vertical-Piping Clamps: Provide extension pipe or Riser Clamps (MSS Type 8) for support of pipe risers.
Hangers shall be sized to allow insulation to pass through unobstructed.
Hanger and support types:
Hangers: Provide adjustable, Steel Clevis Hangers (MSS Type 1) for suspension of noninsulated or insulated, stationary pipes.
Horizontal-Piping Clamps: Provide Carbon- or Alloy-Steel, Double-Bolt Pipe Clamps (MSS Type 3) for suspension of pipes requiring clamp flexibility and up to 4 inches of insulation.
Vertical-Piping Clamps: Provide extension pipe or Riser Clamps (MSS Type 8) for support of pipe risers.
Hangers and supports shall be placed at all changes in direction, valves and equipment.
The maximum horizontal spacing of cast-iron pipe hangers can be 10' where 10-foot lengths of pipe are installed.
Piping shall also be supported at each change in direction, valves and equipment.
Clevis-type hangers shall and supports shall conform to: MSS SP-58, Type 1-58.

22 05 53.00 - IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT

PIPING
Provide self-adhesive pipe labels with white background and black lettering, contact type with permanent adhesive backing. Include identification of piping service using same designations or abbreviations as used on the drawings and an arrow indicating flow direction.
EQUIPMENT
Provide self-adhesive plastic equipment labels with white background and black lettering, contact type with permanent adhesive backing, 160 degree F temperature. Include equipment's drawing designation and specification section number where equipment is specified.

22 07 19.00 – PLUMBING SYSTEM INSULATION

GENERAL
Insulation shall be listed and labeled per ASTM E 84 for plenum installations employing slip on techniques.
Provide insulation materials, accessories, and finishes with smooth, straight, and even surfaces; free of voids throughout the length of piping including fittings, valves, and specialties.
Surface Preparation: Clean and dry surfaces to receive insulation. Remove materials that will adversely affect insulation application.
PIPING SYSTEMS REQUIRING INSULATION
Insulate domestic cold water piping, associated fittings and valves with flexible elastomeric 1/2" wall thickness insulation.
Insulate domestic hot water piping, associated fittings and valves with 1" thick flexible elastomeric, 1-1/2" thick fiberglass insulation or per local energy code, whichever greater.
Insulate waste piping above ceilings that receive condensate with 1/2" wall thickness insulation.
Insulate exposed sanitary drains, domestic water, domestic hot water, and stops for plumbing fixtures for people with disabilities.
FLEXIBLE ELASTOMERIC INSULATION
Closed-cell, sponge- or expanded-rubber materials.
Comply with ASTM C 534, Type I for tubular materials and Type II for sheet materials.
Adhesives, Sealers, and Protective Finishes: As recommended by insulation manufacturer for applications indicated.
Manufacturers: Subject to compliance with requirements, available products that may be incorporated into the work include, and are limited to, the following:
Aeroflex USA, Inc.; Aerocel., Armacell LLC; AP Armaflex.,K-Flex USA;
FIBERGLASS INSULATION
Fiberglass piping insulation: ASTM C 547, Class 1
Encase pipe fittings insulation with one-piece pre-molded PVC fitting covers.
Vapor Barrier Material: Paper-backed aluminum foil, except as otherwise indicated, strength and permeability rating equivalent to adjoining pipe insulation jacketing.
Staples, Bands, Wires, and Cement: As recommended by insulation manufacturer for applications indicated.
Adhesives, Sealers, and Protective Finishes: As recommended by insulation manufacturer for applications indicated.
Manufacturers: Subject to compliance with requirements, available products that may be incorporated into the work include, and are limited to, the following:
Armstrong World Industries, Inc., Owens-Corning Fiberglass Corp., Johns Manville.
ADHESIVES
Materials shall be compatible with insulation materials, jackets, and substrates and for bonding insulation to itself and to surfaces to be insulated, unless otherwise indicated.
Insulation for handicap accessible fixtures
All handicap lavatory p-trap and angle stop assemblies shall be insulated with trap wrap protective kit manufactured by Proflo model PF202WH or equal. Abrasion resistant, anti-microbial vinyl exterior cover shall be smooth. For traps, the insulation shall have a cleanout nut cap to allow service to the trap without disassembly. For stops, the insulation shall have a lock lid that prevents tampering but allows access without removal of the insulation. Fasteners shall remain substantially out of sight.
Manufacturers: subject to compliance with requirements: Proflo, Truebro, Plumberex

22 11 16.00 – DOMESTIC WATER PIPING

Submittal Requirements
Product Data: For each type of product indicated.
GENERAL
Install piping concealed from view unless noted otherwise, free of sags and bends. Do not enclose, cover, or put piping into operation until it has been inspected and approved by authorities having jurisdiction. Clean and disinfect potable domestic water piping using approved proceedures by authorities having jurisdiction or AWWA C651, whichever is more rigorous.
Install at right angles; diagonal runs are prohibited unless otherwise shown. Install piping above accessible ceilings to allow sufficient space for ceiling panel removal.
Coordinate all piping with all other trades.
Provide water pressure regulators where necessary to limit the incoming water pressure to 80 psi inside the building.
DOMESTIC WATER PIPING ABOVE GROUND:
Hard copper tube, ASTM B 88, Type L; wrought-copper, solder-joint fittings; and soldered joints.
Solder Filler Metals: ASTM B 32, lead-free alloys.
Flux: ASTM B 813, water flushable.
Type "L"; copper pressure-seal joint; and pressure-seal joint systems.
CATHODIC PROTECTION
Provide dielectric insulation at points where copper or brass pipe comes in contact with ferrous piping, reinforcing steel or other dissimilar metal in structure.

22 11 19.00 – DOMESTIC WATER PIPING SPECIALTIES

Submittal Requirements
Product Data: For each type of product indicated.
Manufacturers: Subject to compliance with requirements, available products that may be incorporated into the work include, and are limited to, the following:
Conbraco Industries, Inc., Watts Water Technologies Co., Zurn Industries, LLC., Thermomegatech, Acorn Engineering Co., and Caleffi, N. America., MIFAB, Inc., Precision Plumbing Products, Inc., Sioux Chief Manufacturing Company, Inc., Jay R. Smith Mfg. Co., Provent Systems, Rector Seal.
DUAL CHECK VALVE BACKFLOW PREVENTER
Provide a dual check valve backflow preventer that complies with ASSE 1022 at connection of domestic water supply to any permanently connected potable water dispensing equipment such as ice makers, coffee machines, and beverage dispensers or where indicated in the contract documents.
Beverage dispensing equipment backflow preventer
Provide a continuous pressure backflow preventer with stainless steel body, threaded connections and complies with ASSE 1022.
BALANCING VALVES
Provide balancing valves where required for proper balancing of water systems as shown on the contract documents.
Balancing valves shall be equal to Red-White Valve Corporation model 9517AB (NPT) or model 9519 (solder). Valve shall have brass body, globe valve regulation and isolation properties, fixed orifice design for precise measurement, integral memory stop to ensure repeatable setting, full shutoff without affecting memory settings, high and low pressure metering points, precision indicator windows, rugged top set hand-wheel assembly, pressure rating of 300 psi, and temperature rating of 15 deg. F to 260 deg. F.
VACUUM BREAKERS
Vacuum breakers shall be equal to Watts model LF288A for piping connections or Watts LF8 series for hose connections. Vacuum breakers shall comply with ASSE 1001 for piped connections, ASSE 1011 for hose connections, bronze body and threaded connections with rough bronze finish.
STRAINERS
Provide lead-free wye-pattern strainer rated for 125 psig minimum, bronze body, threaded connections, stainless steel screen with round perforations of 0.020 inch and pipe plug drain. Provide strainers on supply side of each pressure reducing valve, solenoid valve and pump.
WATER HAMMER ARRESTERS
Provide water-hammer arresters in water piping according to PDI-WH 201.
Standard: ASSE 1010 or PDI-WH 201.
Type: Metal bellows or copper tube with piston.
Size: ASSE 1010, sizes AA and A through F, or PDI-WH 201, sizes a through F.

22 13 16.00 - SANITARY, WASTE AND VENT PIPING SYSTEM

Submittal Requirements
Product Data: For each type of product indicated.
GENERAL
Provide a complete soil, waste and vent system in the building and on the site as indicated on the drawings and as specified herein.
Above ground soil, waste and vent piping within buildings including soil stacks, vent stacks, horizontal branches, traps, and connections to fixtures and drains.
Underground building drain piping including mains, branches, traps, connections to fixtures and drains, and connections to stacks, terminating at connection to existing sanitary sewer.
INTERIOR PIPING ABOVE GRADE
No-Hub cast iron soil, waste, and vent piping and fittings 1-1/2" and larger shall conform to ASTM A-888. Pipe couplings shall conform to ASTM C 1277 and CISPI 310.
Piping alignment shall be as indicated on the drawings using approved wye branches or eight bands for direction changes and shall be surely supported or secured to maintain such alignment.
Soil, waste and vent piping smaller than 1-1/2" shall be Type "M" copper and conform to ASTM B-306.
BELOW GRADE PIPING
Solid wall schedule 40 PVC pipe and fittings 2" and larger shall conform to ASTM D 2665 / ASTM D 1785 DWV.
Fittings shall conform to ASTM D 2665, made to ASTM D, DWV patterns and fit schedule 40 pipe.
Piping alignment shall be as indicated on the drawings using approved wye branches or eight bands for direction changes and shall be surely set and buried to maintain such alignment.
Soil, waste and vent piping smaller 1-1/2" and smaller below grade shall not be permitted
Slope piping according to local codes.
Protection shall be given to all footings and other structural elements during underground work adjacent to such items. Refer to architectural and/or structural drawings for locations.
Vent all fixtures, connect branch vents to main vent risers at least six inches above flood rim of fixtures. Pitch vent lines back to soil or waste pipe, free of drops and sags.
Cleanouts shall be full size of pipe up to 4", and 4" for larger sizes. For underground and concealed lines, provide cleanouts in accessible positions at each right angle turn and at intervals not to exceed fifty feet. In floors, install flush with finish floor with extension pipe from cleanout wye.

22 16 13.00 - NATURAL GAS PIPING SYSTEMS

Submittal Requirements
Product Data: For each type of product indicated.
GENERAL
Plumbing contractor shall be responsible for installing gas piping run-outs to all gas-fired equipment, including equipment supplied by the HVAC and electric contractors. Piping shall be installed full-size (as indicated on the drawings) to each units' gas inlet connection, burner, regulator, etc. Plumbing subcontractor shall provide gas cock and make final connections. Connections to each gas-fired equipment item shall include a drip leg and shutoff gas cock. Comply with equipment manufacturer's instruction. For connections to gas-fired rooftop equipment, plumbing contractor shall be responsible for the roof penetration and shall install the gas piping through the roof in a location that has been coordinated with the HVAC contractor.
BUILDING DISTRIBUTION PIPING:
All piping from meter/regulator to gas fired equipment connections shall be black steel.
Steel Pipe: ASTM A 53/A 53M, black steel, Schedule 40, Type E or S, Grade B.
Pipe size 2" and smaller: Malleable-Iron Threaded Fittings
Malleable-Iron Threaded Fittings: ASME B16.3, Class 150, standard pattern.
Press-Connect fittings: Carbon steel, cold-pressed, ANSI LC4/CSA 6.32
GENERAL DUTY VALVES:
Metallic valves 2 inches and smaller shall comply with ASME B16.33, cold working pressure of 125 psig.
Provide one-piece ball valves with bronze body, chrome-plated brass ball, blowout proof stem and seat, and bronze trim complying with MSS SP-110.
Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, and limited to, the following:
Milwaukee valve, NIBCO, and Watts Water Technologies co.

22 30 01.00 - POINT OF USE THERMOSTATIC MIXING VALVES

Submittal Requirements
Product Data: For each type of product indicated.
GENERAL
Thermostatic mixing valves shall be provided for all public hand washing sinks and lavatories and shall be ASSE 1070 listed, lead free, sweat connections, 125 psi operating pressure and have integral checks. Set outlet temperature of thermostatic mixing valve to 105 degrees F.
Point-of use thermostatic mixing valves shall be equal to Powers LFG480. Route tempered water to hot water side of sink and lavatories.
Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the work include, and are limited to, the following:
Symmons, Acorn Engineering, Powers, Bradley

22 40 00.00 - PLUMBING FIXTURES

Submittal Requirements
Product Data: For each type of product indicated.
GENERAL
Refer to plumbing fixture schedule and install per the manufacturer's installation and operation manual.
Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the work include, and are limited to, the following:
American Standard, Kohler Co., Zurn Industries, LLC.

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM
1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX
LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road. Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

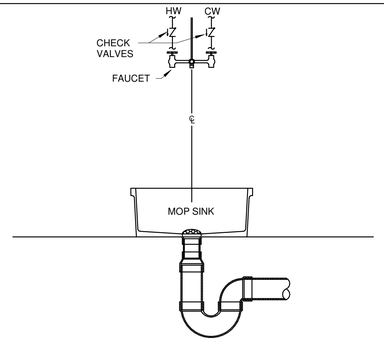
robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
ROBERT A. LONNEMANN
NUMBER PE-2002008449
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

PLUMBING - SPECIFICATIONS

DRAWN BY	NMS
CHECKED BY	AJK
JOB NUMBER	25303
SHEET NAME	P-501



NOTES:

1. SEAL TOP OF SINK TO WALL USING A CONTINUOUS BEAD OF SILICONE CAULKING, WHEREVER SINK ABUTS WALL.
2. FOR EXTERIOR MASONRY AND SOLID WALLS APPLICATION PROVIDE SURFACE MOUNT WATER SUPPLY LINES. WHEN POSSIBLE ROUTE WATER SUPPLY LINES INSIDE INTERIOR STUD WALLS.
3. INCLUDE MOP HANGER, HOSE & HOSE BRACKET, WALL AND BUMPER GUARDS.

224000.00-02 - MOP SINK DETAIL

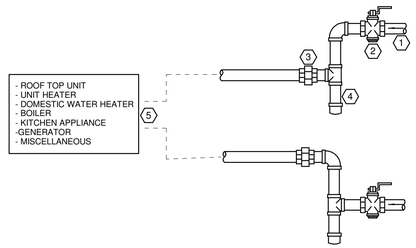
SCALE: NONE

GENERAL NOTES:

A. PIPING ARRANGEMENTS SHOWN ARE SCHEMATIC. ADJUST TO SUIT ACTUAL CONDITIONS. MAKE FINAL CONNECTION TO EQUIPMENT AS RECOMMENDED BY MANUFACTURER

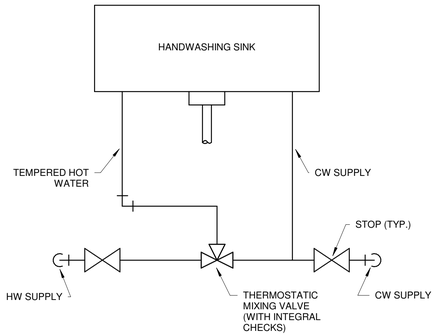
KEYED NOTES:

1. GAS SUPPLY.
2. APPROVED GAS SHUT OFF VALVE.
3. APPROVED UNION WITHIN 6'-0" OF APPLIANCE OR EQUIPMENT SERVED.
4. MINIMUM 6" LONG SEDIMENT TRAP WITH THREADED CAP. INSTALL CAP WITH PROPER CLEARANCE TO PROVIDE SERVICABILITY.
5. TO UNIT INLET CONNECTION.



221613.00-11 - TYPICAL GAS CONNECTIONS TO EQUIPMENT

SCALE: NONE

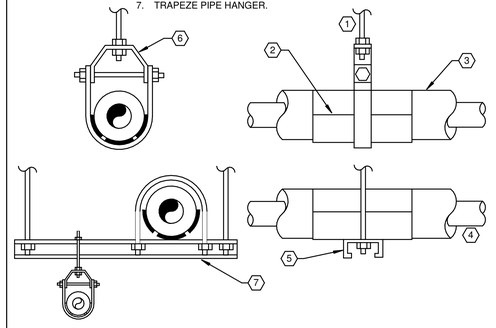


223001.00-01 - THERMOSTATIC MIXING VALVE TMV DETAIL

SCALE: NONE

KEYED NOTES:

1. HANGER ROD.
2. GALVANIZED STEEL PIPE SHIELD AND 360° CALCIUM SILICATE INSULATION HANGER SUPPORT.
3. PIPE INSULATION.
4. PIPE.
5. UNISTRUT CHANNEL.
6. CLEVIS HANGER.
7. TRAPEZE PIPE HANGER.



220529.00-01 - PLUMBING PIPE HANGER INSTALLATION

SCALE: NONE

MOP SINK SCHEDULE

PRODUCT					GENERAL		MISC	VALVE/FAUCET INFORMATION		FIXTURE UNITS				FLOW INFORMATION	TRAP INFORMATION
MARK	DESCRIPTION	MANUFACTURER	MODEL	SECTION NUMBER	LOCATION	STATUS	ACCESSORIES	FIXTURE MFG	FIXTURE MODEL	DFU	WSFU	CW SFU	HW SFU	FLUID FLOW	INTEGRAL TRAP
MS1	MOP SINK	FIAT	MSBID2424	22 40 00.00	REFER TO PLAN	NEW	--	FIAT	830AA	2	3	2.25	2.25	--	NO

TANK TYPE WATER CLOSET SCHEDULE

PRODUCT					FLOW INFORMATION	GENERAL		MISC	VALVE/FAUCET INFORMATION		FIXTURE UNITS				TRAP INFORMATION
MARK	DESCRIPTION	MANUFACTURER	MODEL	SECTION NUMBER	GALLONS PER FLUSH (GAL(US))	LOCATION	STATUS	ACCESSORIES	FIXTURE MFG	FIXTURE MODEL	DFU	WSFU	CW SFU	HW SFU	INTEGRAL TRAP
WC1	TANK TYPE WATER CLOSET	ZURN	Z5560	22 40 00.00	1.6	--	NEW	FURNISH ADA CLOSET AND TANK. ADA OPEN FRONT SEAT. SELF SUSTAINING HINGE. FLOOR FLANGE. CLOSET BOLTS AND CAPS. WAX RINGS. SUPPLY STOPS AND TUBE. FLUSH CONTROL MUST BE LOCATED ON THE WIDE/ACCESS SIDE OF THE WC (OPPOSITE OF THE WALL)	--	--	4	5	5	--	YES

LAVATORY SCHEDULE

PRODUCT					GENERAL		MISC	VALVE/FAUCET INFORMATION		FIXTURE UNITS				FLOW INFORMATION	TRAP INFORMATION
MARK	DESCRIPTION	MANUFACTURER	MODEL	SECTION NUMBER	LOCATION	STATUS	ACCESSORIES	FIXTURE MFG	FIXTURE MODEL	DFU	WSFU	CW SFU	HW SFU	FLUID FLOW	INTEGRAL TRAP
LV1	LAVATORY	AMERICAN STANDARD	0124024.020 COMRADE WALL-MOUNT SINK	22 40 00.00	REFER TO PLAN	NEW	FURNISH LAVATORY, SUPPLY STOPS AND TUBES, DRAIN AND ADA PIPING PROTECTION. PROVIDE TOUCHLESS FAUCET.	AMERICAN STANDARD	7025.103	1	2	1.5	1.5	--	NO

TANK TYPE ELECTRIC WATER HEATER SCHEDULE

PRODUCT						MISC		GENERAL		ELECTRICAL	DESIGN CONDITIONS		ELECTRICAL																		PRODUCT
MARK	DESCRIPTION	MANUFACTURER	MODEL	OPERATING WEIGHT (LBS)	SECTION NUMBER	STORAGE VOLUME (GAL(IMP))	ACCESSORIES	LOCATION	STATUS	EFFICIENCY	EWT	LWT	CONNECTION MARK	ELECTRIC CONNECTION SUMMARY	CW TYPE	CW FURNISHED BY	CW INSTALLED BY	CW WIRED BY	MC TYPE	MC FURNISHED BY	MC INSTALLED BY	MC WIRED BY	DC TYPE	DC FURNISHED	DC INSTALLED BY	DC WIRED BY	REQUIRED TO MEET FAULT CURRENT	FAULT CURRENT	EMERGENCY	MARK
EX-WH	TANK TYPE GAS FIRED WATER HEATER	STATE	ES665OMSK 200	80	22 34 00.00	6	EX	EX	EXISTING	--	40	140	EX-WH	EX-WH - 120V/1PH, 1.65KW HTG	EX	EX	EX	EX	--	--	--	--	--	EX	EX	EX	FALSE	EX-WH: --	FALSE	EX-WH

DRINKING FOUNTAIN SCHEDULE

PRODUCT					GENERAL		MISC	VALVE/FAUCET INFORMATION		FIXTURE UNITS				FLOW INFORMATION	TRAP INFORMATION	ELECTRICAL																	PRODUCT
MARK	DESCRIPTION	MANUFACTURER	MODEL	SECTION NUMBER	LOCATION	STATUS	ACCESSORIES	FIXTURE MFG	FIXTURE MODEL	DFU	WSFU	CW SFU	HW SFU	FLUID FLOW	INTEGRAL TRAP	CONNECTION MARK	ELECTRIC CONNECTION SUMMARY	CW TYPE	CW FURNISHED BY	CW INSTALLED BY	CW WIRED BY	MC TYPE	MC FURNISHED BY	MC INSTALLED BY	MC WIRED BY	DC TYPE	DC FURNISHED	DC INSTALLED BY	DC WIRED BY	REQUIRED TO MEET FAULT CURRENT	FAULT CURRENT	EMERGENCY	MARK
DF1	DRINKING FOUNTAIN	ELKAY	LZSTLBWSLK	22 40 00.00	REFER TO PLAN	NEW	WITH BOTTLE FILLER AND CANE APRON	--	--	0.5	0.25	0.25	--	0.13	NO	DF1	DF1 - 120V/1PH, 6A FLA	MAN	MFR	MFR	MFR	MG	MFR	MFR	MFR	CP	EC	EC	EC	FALSE	DF1: --	FALSE	DF1

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
07/29/2025

KLH ENGINEERS
KOHRS LONNEMANN HEIL ENGINEERS, INC.
MECHANICAL/ELECTRICAL ENGINEERS
WWW.KLHENGRS.COM
1538 ALEXANDRIA PIKE, SUITE 11
FT. THOMAS, KENTUCKY 41075
800-354-9783
859-442-8050
859-442-8058 FAX
LEXINGTON, KENTUCKY
LOUISVILLE, KENTUCKY
COLUMBUS, OHIO
KLH JOB #: 27551

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

NO.:	REVISIONS:	DATE:
	BID, LL REVIEW, AND PERMIT	06.18.25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
ROBERT A. LONNEMANN
NUMBER PE-2003006449
PROFESSIONAL ENGINEER
6/18/2025
SEAL:

carhartt
SUMMIT WOODS CROSSING
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

PLUMBING - DETAILS & SCHEDULES

DRAWN BY
NMS
CHECKED BY
AJK
JOB NUMBER
25303
SHEET NAME
P-601

DESIGN LOADS

1.	BUILDING CODE	2018 BUILDING CODE
2.	RISK CATEGORY	II
3.	MINIMUM ROOF LIVE LOAD	20 PSF
4.	GROUND SNOW LOAD	20 PSF
5.	WIND	
	A. BASIC WIND SPEED, (3-SEC GUST) VULT	109 MPH
	B. EXPOSURE CATEGORY	C
6.	SEISMIC	
	A. MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS, Ss	0.099
	B. MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS, S1	0.068
	C. SITE CLASS (ASSUMED)	D

GENERAL

1. THE SIZE AND LOCATION OF EQUIPMENT PADS AND PENETRATIONS THROUGH THE STRUCTURE FOR MECHANICAL, ELECTRICAL AND PLUMBING WORK SHALL BE COORDINATED WITH THE APPROPRIATE CONTRACTOR(S). PENETRATIONS SHALL BE SUBJECT TO APPROVAL BY THE ARCHITECT/ENGINEER.
2. STRUCTURAL ELEMENTS ARE NON-SELF SUPPORTING AND REQUIRE INTERACTION WITH OTHER ELEMENTS FOR STABILITY AND RESISTANCE TO LATERAL FORCES. FRAMING AND WALLS SHALL BE TEMPORARILY BRACED BY THE CONTRACTOR UNTIL PERMANENT BRACING, FLOOR AND ROOF DECKS, AND WALLS HAVE BEEN INSTALLED AND CONNECTIONS BETWEEN THESE ELEMENTS HAVE BEEN MADE.
3. STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION, UNLESS NOTED OTHERWISE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND OPERATION OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO.
4. ARCHITECTURAL, MECHANICAL AND ELECTRICAL COMPONENTS AND SYSTEMS SHALL BE DESIGNED AND CONSTRUCTED TO RESIST SEISMIC FORCES AS DETERMINED IN CHAPTER 13 OF ASCE 7.
5. CONTRACTOR IS RESPONSIBLE FOR STRUCTURAL INTEGRITY AND STABILITY OF EXISTING STRUCTURE DURING DEMOLITION AND NEW CONSTRUCTION. CONTRACTOR SHALL RETAIN THE SERVICES OF A PROFESSIONAL ENGINEER REGISTERED IN THE PROJECT STATE TO DESIGN TEMPORARY SHORING AS REQUIRED.
6. VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO FABRICATION OF STRUCTURAL ITEMS. IF ANY DISCREPANCIES ARE FOUND BETWEEN WHAT IS SHOWN ON THE PLANS AND WHAT EXISTS IN THE FIELD, CONTACT THE ARCH/ENGR. OF RECORD TO DETERMINE WHAT SHOULD BE DONE TO MATCH EXISTING CONDITIONS AS REQUIRED. BEGINNING OF STEEL FABRICATION MEANS ACCEPTANCE OF EXISTING CONDITIONS.
7. DIMENSIONS AND DETAILS OF THE EXISTING STRUCTURE ARE BASED UPON LIMITED FIELD SURVEY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND REPORT TO THE ENGINEER ANY VARIATIONS FROM THE DATA SHOWN HEREIN FOR POSSIBLE REDESIGN.
8. BEFORE OR CONCURRENT WITH EXCAVATIONS FOR THE FOUNDATIONS ADJACENT TO THE EXISTING BUILDING, PROVIDE ADEQUATE SUPPORT TO THE EXISTING SUBBASE OF THE EXISTING SLAB AND THE FOUNDATIONS TO PREVENT UNDERMINING.
9. DURING WELDING OR ANY OTHER CONSTRUCTION ACTIVITY THAT GENERATES SPARKS OR INTENSE HEAT, THE CONTRACTOR SHALL PROVIDE ADEQUATE FIRE PROTECTION TO THE EXISTING STRUCTURE AND CONTENTS.
10. USE ONLY DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT SCALE DRAWINGS OR USE ANY DIMENSIONS TAKEN FROM ELECTRONIC DRAWING FILES.
11. ASSUME EQUAL SPACING IF NOT INDICATED ON DRAWINGS.

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHALL MEET THE FOLLOWING MINIMUM YIELD STRESS (FY):

		YIELD	ASTM SPECIFICATION
A.	W, WT SHAPES:	50 KSI	A992
B.	BARS, PLATES, CHANNELS, ANGLES:	36 KSI	A36
C.	SQUARE, RECTANGULAR HSS:	50 KSI	A500, GRADE C
D.	ROUND HSS:	46 KSI	A500, GRADE C
E.	STRUCTURAL STEEL PIPE:	35 KSI	A53, GRADE B
F.	ANCHOR RODS:	36 KSI	F1554
G.	ALL-THREAD RODS:	36 KSI	A36
H.	HEADED STUD ANCHORS:	5 KSI TENSILE STRESS	A108, GRADES 1010-1020

2. WELDING SHALL MEET ANSI / AWS D1.1, STRUCTURAL WELDING CODE LATEST REVISION. ELECTRODES SHALL BE 70 KSI, LOW HYDROGEN.
3. ALL CONNECTIONS NOT FULLY DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED AND DETAILED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED, EMPLOYED OR RETAINED BY THE STEEL FABRICATOR. THE DESIGN AND DETAILING SHALL COMPLY WITH ALL APPLICABLE CODES AND SPECIFICATION SECTIONS.
4. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR INCLUDING THE COSTS FOR ALL MISCELLANEOUS STEEL IN THEIR BID REGARDLESS OF WHETHER THOSE ITEMS ARE INDICATED ON THE STRUCTURAL DRAWINGS. THESE COSTS SHALL INCLUDE BUT ARE NOT LIMITED TO MISCELLANEOUS STEEL ITEMS SHOWN ON ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.

EXISTING CONSTRUCTION CONDITIONS

1. WORK WITH EXISTING STRUCTURES REQUIRES THOROUGH COORDINATION OF THE CONTRACT DOCUMENTS WITH EXISTING CONDITIONS. THE CONTRACTOR MUST VERIFY ALL RELEVANT EXISTING CONDITIONS, DIMENSIONS, ELEVATIONS, DETAILS, ETC., BEFORE THE START OF WORK. THE CONTRACTOR MUST REPORT ANY DEVIATIONS FROM CONDITIONS OR DIMENSIONS SHOWN ON THE CONTRACT DOCUMENTS TO THE ARCHITECTURAL DESIGN PROFESSIONAL AND THE STRUCTURAL DESIGN PROFESSIONAL TO REVIEW THE DESIGN AND FOR POSSIBLE REVISION OF THE CONTRACT DOCUMENTS. BEGINNING FABRICATION MEANS ACCEPTANCE OF EXISTING CONDITIONS.
2. THE NATURE OF STRUCTURAL DEMOLITION OR STABILIZATION IS INHERENTLY UNCERTAIN. THE EXACT CONDITION AND CAPACITY OF EACH STRUCTURAL ELEMENT CANNOT BE VERIFIED BEFORE THE START OF WORK. IT IS IMPERATIVE TO REPORT ANY ELEMENT WITH QUESTIONABLE STRUCTURAL INTEGRITY TO THE ARCHITECTURAL DESIGN PROFESSIONAL AND THE STRUCTURAL DESIGN PROFESSIONAL FOR IMMEDIATE REVIEW.
3. NO ATTEMPT HAS BEEN MADE TO DEFINE EACH SPECIFIC STRUCTURAL ELEMENT THAT MUST BE REMOVED, ENHANCED, OR REPLACED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE CONDITION OF INDIVIDUAL ELEMENTS (PARTICULARLY RAFTERS, JOISTS, AND STRUCTURAL DECK BOARDS) TO DETERMINE WHICH ELEMENTS CAN BE SALVAGED, WHICH ELEMENTS MUST BE REPLACED, AND WHICH ELEMENTS ARE QUESTIONABLE. THE CONTRACTOR SHOULD CONSULT WITH THE ARCHITECTURAL DESIGN PROFESSIONAL AND THE STRUCTURAL DESIGN PROFESSIONAL TO DETERMINE THE APPROPRIATE PROCEDURE FOR ELEMENTS IN QUESTIONABLE CONDITION.
4. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN AND ERECTION OF ALL SHORING, BRACING, AND PROTECTION MEASURES NECESSARY TO SAFEGUARD AND MAINTAIN THE EXISTING STRUCTURE DURING DEMOLITION AND CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A DETAILED PLAN FOR THE SHORING, BRACING, AND PROTECTION OF THE EXISTING CONSTRUCTION FOR REVIEW BY THE DESIGN PROFESSIONAL. THE REVIEW OF THE SUBMITTAL BY THE STRUCTURAL DESIGN PROFESSIONAL IS ONLY FOR GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS. THE PLAN MUST INCLUDE THE PROPOSED CONSTRUCTION SEQUENCE. THE SHORING, BRACING, AND PROTECTION PLAN MUST BE SIGNED AND SEALED BY AN ENGINEER LICENSED IN THE PROJECT JURISDICTION.
5. DURING WELDING OR ANY OTHER CONSTRUCTION ACTIVITY THAT GENERATES SPARKS OR INTENSE HEAT, THE CONTRACTOR SHALL PROVIDE ADEQUATE FIRE PROTECTION TO THE EXISTING STRUCTURE AND CONTENTS.
6. THE EXISTENCE OF UNDERGROUND STRUCTURES AND UTILITIES IS NOT KNOWN. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH THE OWNER OR NECESSARY AUTHORITY AND LOCATING ALL UNDERGROUND STRUCTURES AND UTILITIES.
7. NO REINFORCING SHALL BE CUT WITHOUT THE APPROVAL OF THE STRUCTURAL DESIGN PROFESSIONAL. ADDITIONAL REINFORCEMENT OF THE SLAB MAY BE REQUIRED FOR NEW PENETRATIONS. CLUSTERED PENETRATIONS MAY NEED TO BE SEPARATED OR REGROUPED DEPENDING ON THE CONFIGURATION OF THE SLAB REINFORCING.
8. PENETRATIONS ARE NOT PERMITTED IN PRIMARY STRUCTURAL MEMBERS (BEAMS AND COLUMNS) WITHOUT THE STRUCTURAL DESIGN PROFESSIONAL'S WRITTEN PERMISSION.
9. THE CONTRACTOR SHALL USE METHODS AND TAKE PRECAUTIONS TO PREVENT OVERCUTTING FOR ANY NEW PENETRATIONS. SUGGESTED METHODS INCLUDE SAW CUTTING WITH CORED HOLES AT THE CORNERS OF NEW PENETRATIONS OR USING CONCRETE CHAINSAWS WITH PLUNGE-CUTTING CAPABILITIES.
10. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO THE EXISTING REINFORCING. ANY REPAIR PROCEDURES NOT DETAILED IN THE CONTRACT DOCUMENTS MUST BE SUBMITTED FOR REVIEW BY THE STRUCTURAL DESIGN PROFESSIONAL. THE SUBMITTAL MUST BE SIGNED AND SEALED BY A LICENSED ENGINEER IN THE PROJECT JURISDICTION.

REQUIRED SPECIAL INSPECTIONS

IN ADDITION TO THE REGULAR INSPECTIONS REQUIRED BY SECTION 110, THE FOLLOWING ITEMS WILL ALSO REQUIRE SPECIAL INSPECTION IN ACCORDANCE WITH SECTION 1705 OF THE 2018 BUILDING CODE.

ITEM	SECTION
STEEL CONSTRUCTION	1705.2

DURING WELDING OR ANY OTHER CONSTRUCTION ACTIVITY THAT GENERATES SPARKS OR INTENSE HEAT, THE CONTRACTOR SHALL PROVIDE ADEQUATE FIRE PROTECTION TO THE EXISTING STRUCTURE AND CONTENTS. AS A MINIMUM:
- REMOVE COMBUSTIBLE MATERIALS FROM AREAS OF WELDING AND SPARKS.
- PROVIDE FIRE PROOF BLANKETS AND SHIELDS TO CONTAIN SPARKS WHERE COMBUSTIBLE MATERIALS CANNOT BE REMOVED.
- PROVIDE A FIRE SAFETY OBSERVER WITH A FIRE EXTINGUISHER ON BOTH THE ROOF AND BELOW THE ROOF DURING WELDING NEAR THE ROOF STRUCTURE.

LEGEND

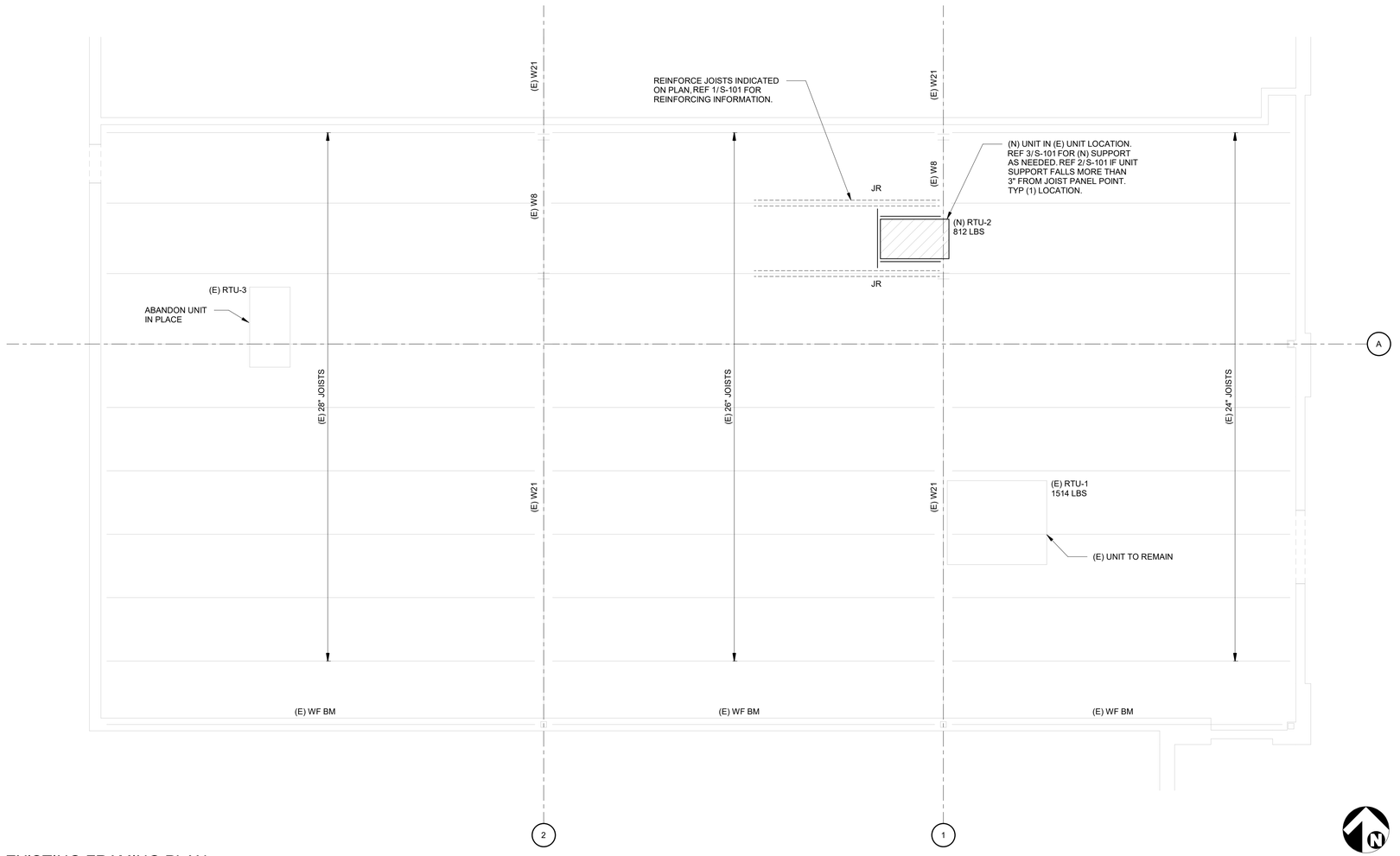
(E) - DENOTES EXISTING
(N) - DENOTES NEW
FV - DENOTES FIELD VERIFY
JR - DENOTES JOIST REINFORCING, REF 1/S-101
XXK - JOIST
WXX - WIDE FLANGE

- DENOTES EXISTING UNIT TO REMAIN

- DENOTES NEW UNIT IN EXISTING LOCATION

FIELD VERIFICATION NOTE

VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO FABRICATION OF STRUCTURAL ITEMS. EXISTING PORTION OF PLANS ARE FROM LIMITED EXISTING DRAWINGS, WHICH MAY OR MAY NOT REFLECT ACTUAL AS-BUILT CONDITIONS OR DIMENSIONS. IF ANY DISCREPANCIES ARE FOUND BETWEEN WHAT IS SHOWN ON THE PLANS AND WHAT EXISTS IN THE FIELD, CONTACT ARCHITECT AND ENGINEER TO DETERMINE WHAT SHOULD BE DONE TO MATCH EXISTING CONDITIONS AS REQUIRED. BEGINNING OF STEEL FABRICATION MEANS ACCEPTANCE OF EXISTING CONDITIONS. REF GENERAL NOTES.



1 EXISTING FRAMING PLAN
3/16" = 1'-0"

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
07/29/2025

wallace design collective

wallace design collective, pc
structural · civil · landscape · survey
1703 wyandotte street, suite 200
kansas city, missouri 64108
816.421.8282 · 800.364.5858

RGLA
rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISION	DATE
ISSUE FOR PERMIT, LANDLOAORD, PRICING	06/18/25
STRUCTURAL REVISION 1	07/21/25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p. 847.671.7452
f. 847.671.4200
www.rgla.com

STATE OF MISSOURI
DARCEY L. SCHUMACHER
NUMBER PE-2009024305
PROFESSIONAL ENGINEER
SEAL: 07.21.2025

carhartt

SUMMIT WOODS CROSSING

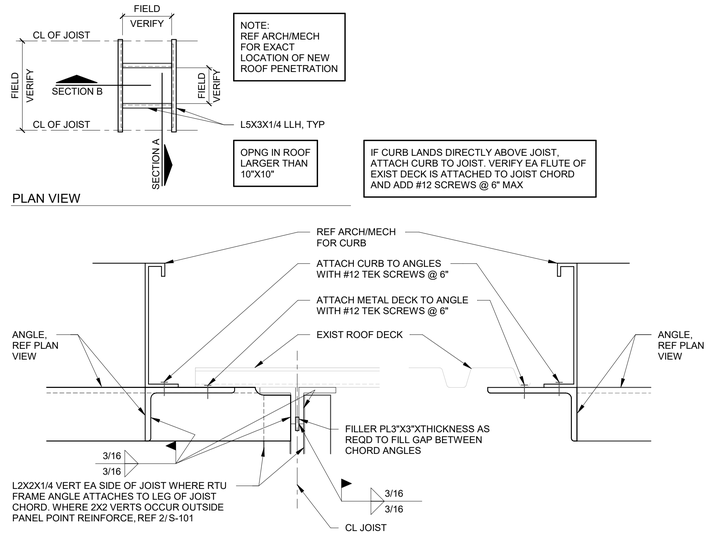
1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

GENERAL NOTES AND FRAMING PLAN

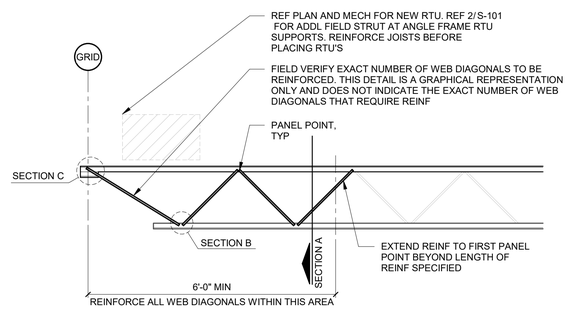
DRAWN BY	
AML	
CHECKED BY	
RLH	
JOB NUMBER	
25303	
SHEET NAME	
S-100 1	

wallace design collective

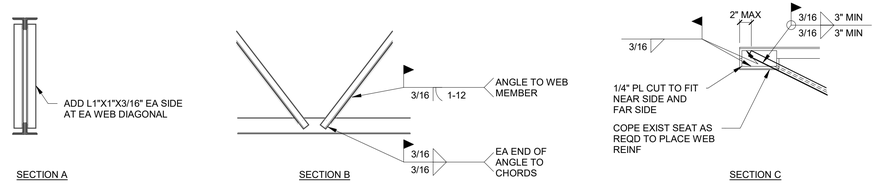
wallace design collective, pc
structural · civil · landscape · survey
1703 wyandotte street, suite 200
kansas city, missouri 64108
816.421.8282 · 800.364.5858



3 RTU SUPPORT FRAMING
3/4" = 1'-0"

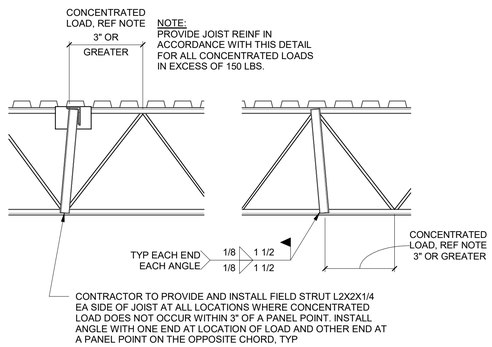


JOIST ELEVATION



JOIST DETAILS

1 JOIST REINFORCING DETAIL
3/4" = 1'-0"



2 JOIST PANEL POINT DETAIL
3/4" = 1'-0"

rgla solutions, inc.
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

REVISION	DATE
ISSUE FOR PERMIT, LANDLOARD, PRICING	06/18/25
STRUCTURAL REVISION	07/21/25

robert g. lyon + associates, inc.
retail architecture
5100 River Road, Ste 125
Schiller Park, IL 60176
p: 847.671.7452
f: 847.671.4200
www.rgla.com

STATE OF MISSOURI
DARCEY L. SCHUMACHER
NUMBER PE-2009034295
PROFESSIONAL ENGINEER

SEAL: 07.21.2025

carhartt

SUMMIT WOODS CROSSING

1744 NW CHIPMAN ROAD
LEE'S SUMMIT, MO 64081

DETAILS

DRAWN BY	AML
CHECKED BY	RLH
JOB NUMBER	25303
SHEET NAME	S-101