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ARCHITECT	
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STRUCTURAL ENGINEER	
COMPANY NAME:	CASE ENGINEERING INC
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CIVIL ENGINEER	
COMPANY NAME:	STANSBERRY ENGINEERING CO.
CONTACT NAME:	BLAYNE STANSBERRY P.E.
ADDRESS:	POST OFFICE BOX 132, MANCHACA, TEXAS 78652
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FAX:	---
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SHERWIN WILLIAMS

1816 S. COLORADO ST.
LOCKHART, TX 78644



SHEET INDEX		
SHEET NUMBER	SHEET NAME	CURRENT REVISION
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G002	GENERAL NOTES	
G100	ACCESSIBILITY & EGRESS PLAN	
CIVIL		
C0.0	COVER PAGE	
C0.1	LEGEND & ABBREVIATIONS	
C0.2	GENERAL CONSTRUCTION NOTES	
C0.3	EROSION CONTROLNOTES	
C0.4	UTILITY NOTES	
C1.0	EXISTING CONDITIONS	
C2.0	EROSION CONTROL PLAN	
C3.0	SITE PLAN	
C4.0	DIMENSION CONTROL PLAN	
C5.0	DRAINAGE PLAN	
C6.0	GRADING PLAN	
C7.1	DETENTION PLAN	
C7.2	DETENTION DETAILS	
C8.0	UTILITY PLAN	
C9.1	CONSTRUCTION DETAILS	
C9.2	CONSTRUCTION DETAILS	
C9.3	CONSTRUCTION DETAILS	
C9.4	CONSTRUCTION DETAILS	
ARCHITECTURAL		
A001	ARCHITECTURAL SITE PLAN	
A110	CONSTRUCTION PLAN	
A111	WALL TYPES & DETAILS	
A112	EXTERIOR WALL TYPES	
A113	EXTERIOR WALL DETAILS	
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SHEET INDEX		
SHEET NUMBER	SHEET NAME	CURRENT REVISION
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S140	TYPICAL DETAILS	
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S330	FRAMING SECTIONS	
PLUMBING		
P000	PLUMBING TITLE SHEET	
P001	PLUMBING DWV PLAN	
P002	PLUMBING SUPPLY PLAN	
P003	PLUMBING RISERS PLAN	
P004	PLUMBING DETAILS	
P005	PLUMBING SPECIFICATIONS	
MECHANICAL		
M000	HVAC TITLE SHEET	
M001	MECHANICAL SPECIFICATIONS	
M002	MECHANICAL SPECIFICATIONS	
M100	MECHANICAL FLOOR PLAN	
M200	ROOF MECHANICAL PLAN	
M400	MECHANICAL DETAILS	
M500	MECHANICAL SCHEDULES	
ELECTRICAL		
E000	ELECTRICAL TITLE SHEET	
E001	ELECTRICAL SITE PLAN	
E002	SITE PHOTOMETRIC PLAN	
E100	ELECTRICAL SPECIFICATIONS	
E101	ELECTRICAL SPECIFICATIONS	
E200	LIGHTING PLAN	
E300	POWER PLAN	
E400	ELECTRICAL RISER & SCHEDULES	

LINGLE DESIGN GROUP,INC

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REGISTERED ARCHITECT
CARL L. LINGLE
18179
STATE OF TEXAS

04/11/2025

PROJECT #:

DRAWN BY: BA CHECKED BY: MP

PERMIT SET - 04/11/2025

1 -
2 -
3 -
4 -
5 -
6 -

CONSTRUCTION PHASE NOTE

ARCHITECT'S DESIGN WITHOUT CONSTRUCTION PHASE SERVICES

SINCE DIRECT CONSTRUCTION OBSERVATIONS AND REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INCLUDED AS PART OF THE ARCHITECT'S BASIC SERVICES, IT IS UNDERSTOOD THAT SUCH RESPONSIBILITIES WILL BE ASSUMED BY OTHERS. LINGLE DESIGN GROUP, INC. AVAILS ITSELF TO THE CLIENT, THE CONTRACTOR, AND ANY OTHER PARTIES AS NECESSARY (VIA TELEPHONE, FAX, AND EMAIL) IN ORDER TO ASSIST IN PROVIDING CLARIFICATIONS OR RESOLVING ISSUES AND PROBLEMS THAT MAY ARISE. ALTHOUGH MANY ISSUES CAN BE EASILY ADDRESSED WITHOUT THE ARCHITECTS INVOLVEMENT, THERE ARE TIMES WHEN PARTICIPATION IS ADVISABLE. DETERMINATION OF WHEN INVOLVEMENT IS APPROPRIATE IS LEFT TO THE PROFESSIONAL DISCRETION OF THE CONTRACTOR. IT IS UNDERSTOOD THAT THE CLIENT AND/OR THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR INTERPRETATION OF THE DRAWINGS, AND ANY OTHER SUPPLEMENTAL INFORMATION, AND WHEN THE ARCHITECT IS DENIED THE OPPORTUNITY TO PROVIDE CLARIFICATIONS OR PARTICIPATE IN CHANGES TO THE DESIGN OR THE RESOLUTION OF ISSUES OR PROBLEMS, ALL PARTIES WAIVE ANY CLAIMS AGAINST THE ARCHITECT THAT MAY BE IN ANY WAY CONNECTED THERETO. LINGLE DESIGN GROUP, INC. IS HELD HARMLESS FROM LOSS, CLAIM, OR COSTS ARISING OR RESULTING FROM MODIFICATIONS OR CHANGES MADE TO THE DESIGN (WITHOUT THE KNOWLEDGE OF THE ARCHITECT) DUE TO CONDITIONS OR CIRCUMSTANCES (ANTICIPATED OR NOT) BEYOND THE ARCHITECT'S CONTROL.

VICINITY MAP



NOTE: CONSTRACTOR SHALL VISIT THE SITE PRIOR TO BID, TO CONFIRM FIELD CONDITIONS FOR DUCTWORK RUNS, EXHAUST AND CHASE LOCATIONS.

STATEMENT OF COMPLIANCE

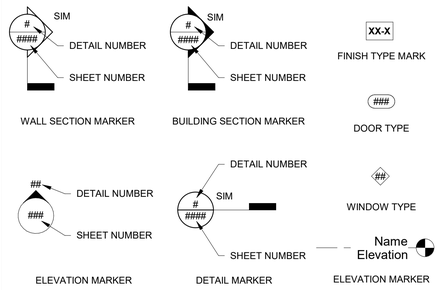
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF COMPLY WITH ALL APPLICABLE LAWS, CODES & ORDINANCES.

SIGNATURE: _____
ARCHITECT

REGISTRATION NO.: 18179

DATE: 9/30/2024

SYMBOL LEGEND



CODE / BUILDING INFORMATION

BUILDING CODES:	
BUILDING:	2018 INTERNATIONAL BUILDING CODE
MECHANICAL:	2018 INTERNATIONAL MECHANICAL CODE
ELECTRICAL:	2017 NATIONAL ELECTRICAL CODE
PLUMBING:	2018 INTERNATIONAL PLUMBING CODE
FUEL AND GAS:	2018 INTERNATIONAL FUEL GAS CODE
FIRE:	2015 INTERNATIONAL FIRE CODE
ENERGY:	2018 INTERNATIONAL ENERGY CONSERVATION CODE
ACCESSIBILITY:	2012 TEXAS ACCESSIBILITY STANDARDS
BUILDING INFORMATION:	
CONSTRUCTION TYPE:	V-B
SCOPE OF WORK:	NEW CONSTRUCTION
FLOOR AREA:	4,530 SQ. FT.
STORIES / HEIGHT:	1 STORY / 24'-0"
FIRE PROTECTION:	PORTABLE FIRE EXTINGUISHERS
INTERIOR FINISHES:	CLASS C FLAME SPREAD RATING
NUMBER OF EMPLOYEES:	4
OCCUPANCY:	M (MERCANTILE) - OCCUPANT LOAD: 72

ABBREVIATIONS

#	POUND OR NUMBER
(E)	EXISTING
(N)	NEW
+/-	PLUS OR MINUS
@	AT
ø	DIAMETER
A.B.	ANCHOR BOLT
A.C.T.	ACOUSTICAL (CLG) TILE
A.F.F.	ABOVE FINISH FLOOR
A.H.U.	AIR HANDLING UNIT
A.S.S.	AUTOMATIC SPRINKLER SYSTEM
A/C	AIR CONDITIONING
ABV.	ABOVE
ACOUS.	ACOUSTICAL
ALUM.	ALUMINUM
APPROX.	APPROXIMATE
ARCH.	ARCHITECT(URAL)
B.M.	BENCH MARK
B.O.C.	BOTTOM OF CURB
BD.	BOARD
BLDG.	BUILDING
BLK.	BLOCK(ING)
BLW.	BELOW
BRG.	BEARING
BRG. PL.	BEARING PLATE
BS	BUILDING SECTION
C.M.	CONTSTRUCTION MANAGER
C.M.U.	CONCRETE MASONRY UNIT
C/J	CEILING JOIST
C/O	CLEANOUT
CJ	CONTROL JOINT
CL	CENTER LINE
CLG.	CEILING
CLR.	CLEAR
COL	COLUMN
COMP	COMPOSITE
CONC.	CONCRETE
COND	CONDENSING UNIT
CONN.	CONNECTION
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS / CONTINUE
CONTR.	CONTRACTOR
CTR.	CENTER
CU FT	CUBIC FOOT
CU YD	CUBIX YARD
D.F.	DRINKING FOUNTAIN
D.S.	DOWNSPOUT
DBL.	DOUBLE
DEPT.	DEPARTMENT
DET.	DETAIL
DIA	DIAMETER
DIAG	DIAGONAL
DIM.	DIMENSION
DISP	DISPENSER / DISPOSAL
DL	DEAD LOAD
DN	DOWN
DW	DISHWASHER
DWG.	DRAWING
E.	EAST
E.P.	ELECTRIC PANEL
E.W.	EACH WAY
EA.	EACH
EJ	EXPANSION JOINT
EL.	ELEVATION
ELEC.	ELECTRICAL
EMER.	EMERGENCY
EQ.	EQUAL
EQUIP.	EQUIPMENT
EXIS.	EXISTING
EXT.	EXTERIOR
F.F.	FINISH FLOOR
F.H.	FIRE HYDRANT
F.L.	FLOW LINE
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
F.O.SH.	FACE OF SHEATHING
F.S.R.	FIRE SPRINKLER RISER
F/S	FLOOR SINK
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FIN.	FINISH
FIXT.	FIXTURE
FLOUR.	FLOURESCENT
FLR.	FLOOR
FND.	FOUNDATION
FT.	FOOT/FEET
FTG.	FOOTING
FUT.	FUTURE
G.C.	GENERAL CONTRACTOR
G.I.	GALVANIZED IRON
GA.	GAUGE
GALV.	GALVANIZED
GL.	GLASS / GLAZING
GND.	GROUND
GR.	GRADE / GRADING
GWB.	GYPSUM WALL BOARD
GYP BD	GYPSUM BOARD
GYP.	GYPSUM
H.B.	HOSE BIB
H.C.	HOLLOW CORE
H.M.	HOLLOW METAL
HDR.	HEADER
HDW.	HARDWARE
HDWD.	HARDWOOD
HOR.	HORIZONTAL
HT.	HEIGHT
HTG.	HEATING
HVAC	HEATING / VENTILATION / AIR CONDITIONING
I.D.	INSIDE DIAMETER
IN.	INCH
INSUL.	INSULATE / INSULATION
INT.	INTERIOR
INV.	INVERT
J-BOX	JUNCTION BOX
JST.	JOIST
JT.	JOINT
KO.	KNOCKOUT
KPL.	KICKPLATE
L	LENGTH
L.B.	LAG BOLT
L.H.	LEFT HAND
L.L.	LIVE LOAD
L.V.L.	LAMINATED VENEER LUMBER
LAM.	LAMINATED
LAV.	LAVATORY
LT.	LIGHT
LTL	LINTEL
LVR.	LOUVER
M.B.	MACHINE BOLT
M.H.	MANHOLE
M.O.	MASONRY OPENING
MAS.	MASONRY
MATL.	MATERIAL
MAX.	MAXIMUM
MECH.	MECHANICAL
MEMB.	MEMBRANE
MFR.	MANUFACTURE(ER)(ING)
MIN.	MINIMUM
MISC.	MISCELANEOUS
MOD.	MODULAR / MODULE
MTD.	MOUNTED
MTFR	METAL FURRING
MTL.	METAL
MUL.	MULLION
N.	NORTH
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NO.	NUMBER
NOM.	NOMINAL
O.A.	OVERALL
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.H.D.	OVERHEAD DOOR
OFCI	OWNER FURNISHED / CONTRACTOR INSTALLED
OFD.	OVERFLOW DRAIN
OFOI	OWNER FURNISHED / OWNER INSTALLED
OH.	OVERHEAD
OPG.	OPENING
OPP.	OPPOSITE
OPQ	OPAQUE
P.L.	PROPERTY LINE
P.T.	PRESSURE TREATED
PART'N	PARTITION
PCF	POUNDS PER CUBIC FOOT
PERF	PERFORATED
PFL	POUNDS PER LINEAR FOOT
PL.	PLATE
PLAM	PLASTIC LAMINATE
PLAS.	PLASTER
PLBG.	PLUMBING
PLWD.	PLYWOOD
PRKG.	PARKING
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PTD.	PAINT(ED)
PVC	POLYVINYL CHLORIDE
PVMT.	PAVEMENT
Q.T.	QUARRY TILE
QTY.	QUANTITY
R.	RISER
R.A.	RETURN AIR
R.D.	ROOF DRAIN
R.H.	RIGHT HAND
R.O.	ROUGH OPENING
R.O.W.	RIGHT OF WAY
RAD.	RADIUS
RB	RUBBER BASE
REF.	REFERENCE
REFR.	REFRIGERATOR
REINF.	REINFORCED
REQ'D.	REQUIRED
RESIL.	RESILIENT
RET.	RETURN
REV	REVISION
RFG.	ROOFING
RM.	ROOM
RVRS.	REVERSE
S.	SOUTH
S.A.N.	SCALE AS NOTED
S.A.T.	SUSPENDED ACOUSTICAL TILE
S.C.	SOLID CORE
S.D.	STORM DRAIN
SCHED.	SCHEDULE
SECT.	SECTION
SF	SQUARE FEET
SHT.	SHEET
SHTG.	SHEATHING
SIM.	SIMILAR
SLP.	SLOPE
SPEC.	SPECIFICATION
SPKR	SPEAKER
SQ.	SQUARE
SS	
SS.	STAINLESS STEEL
SSK.	SERVICE SINK
STD.	STANDARD
STL.	STEEL
STOR.	STORAGE
STRUCT	STRUCTURAL
SYM.	SYMETRICAL
SYS.	SYSTEM
T&G	TONGUE AND GROOVE
T.	TREAD
T.B.D.	TO BE DETERMINED
T.O.B.	TOP OF BEAM
T.O.C.	TOP OF CURB / CONCRETE
T.O.P.	TOP OF PARAPET
T.O.S.	TOP OF SHEATHING
T.O.ST.	TOP OF STEEL
T.O.W.	TOP OF WALL
TEL.	TELEPHONE
TFCI	TENANT FURNISHED / CONTRACTOR INSTALLED
TFTI	TENANT FURNISHED / TENANT INSTALLED
THK.	THICK(NESS)
THRES	THRESHOLD
TINT	TINTED
TMPD	TEMPERED
TOL	TOLERANCE
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
UBC	UNIFORM BUILDING CODE
UNFIN.	UNFINISH(ED)
V.B.	VINYL BASE
V.C.T.	VINYL COMPOSITION TILE
V.T.R.	VENT THROUGH ROOF
VERT.	VERTICAL
W.	WEST
W.B.	WEATHER BARRIER
W.C.	WATER CLOSET
W.H.	WATER HEATER
W.M.	WIRE MESH
W.R.	WATER RESISTANT
W.T.	WALL TILE
W.W.F.	WELDED WIRE FABRIC
W/	WITH
W/O	WITHOUT
WD.	WOOD
WSCT.	WAINSCOT

SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
COVER SHEET

SHEET NUMBER:
G001

DIVISION 1 - GENERAL CONDITIONS

A) CONSTRUCTION OBSERVATION SERVICES

1. DIRECT CONSTRUCTION OBSERVATIONS AND REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INCLUDED AS PART OF THE ARCHITECT'S BASIC SERVICES. IT IS UNDERSTOOD THAT SUCH RESPONSIBILITIES WILL BE ASSUMED BY OTHERS. LINGLE DESIGN GROUP AVAILS ITSELF TO THE CLIENT, CONTRACTOR AND OTHER PARTIES AS NECESSARY (VIA TELEPHONE, FAX AND E-MAIL) IN ORDER TO ASSIST IN PROVIDING CLARIFICATIONS OR RESOLVING ISSUES AND PROBLEMS

B) EXAMINATION

1. DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE COMPLIMENTARY. SPECIFIC INFORMATION MAY BE FOUND IN EITHER OR BOTH.

2. THE CONTRACTOR IS HEREBY SPECIFICALLY DIRECTED, AS A CONDITION OF THE CONTRACT, TO ACQUAINT HIMSELF WITH THE ARTICLES CONTAINED IN THE GENERAL NOTES, AND TO NOTIFY AND APPRISE ALL SUBCONTRACTORS AND ALL OTHER PARTIES OF THE CONTRACT OF, AND BIND THEM TO ITS CONDITIONS.

3. PRIOR TO SUBMITTING BID, GENERAL CONTRACTOR SHALL OBTAIN A COPY OF THE LEASE/TENANT AGREEMENT, AND ANY EXHIBITS THAT PERTAIN TO TENANT BUILD OUT. ALL INFORMATION SHALL BE NOTED FOR RESPONSIBILITIES AND COORDINATION.

4. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN PARTITION LOCATIONS, DIMENSIONS AND TYPES. DOOR AND WINDOW LOCATIONS SHALL BE AS SHOWN ON CONSTRUCTION PLAN. IN CASE OF CONFLICT, NOTIFY DESIGNER/ARCHITECT FOR WRITTEN CLARIFICATION PRIOR TO PROCEEDING WITH CONSTRUCTION.

5. ANY DETAILS OR NOTES REQUIRING FIELD VERIFICATION BY THE CONTRACTOR ARE TO BE DONE DURING THE BID PROCESS. DISCREPANCIES FOUND AFTER THE GENERAL CONTRACTOR IS SELECTED WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND CORRECTED AT THE GENERAL CONTRACTOR'S EXPENSE.

6. THE DESIGNER/ARCHITECT SHALL BE IMMEDIATELY NOTIFIED OF ANY APPARENT CONFLICTS, ERRORS, OR OMISSIONS IN THE CONSTRUCTION DRAWINGS, ANY APPARENT MISAPPLICATION OF ANY PRODUCT, SYSTEM OR ASSEMBLY FOR THE INTENDED USE, OR ANY DISCOVERED EXISTING CONDITIONS THAT ARE CONTRARY TO THE CONDITIONS INDICATED IN THE CONSTRUCTION DRAWINGS. THE DESIGNER/ARCHITECT SHALL PROVIDE INTERPRETATION AND CLARIFICATION AND, IF REQUIRED, MAKE APPROPRIATE REVISIONS TO THE CONSTRUCTION DRAWINGS. FAILURE TO NOTIFY THE DESIGNER/ARCHITECT PRIOR TO PROCEEDING WITH RELATED WORK WILL RESULT IN THE CONTRACTOR CORRECTING SUCH ITEMS AT THE CONTRACTOR'S EXPENSE.

7. THE CONSTRUCTION DRAWINGS ARE GENERAL DIAGRAMMATIC REPRESENTATIONS OF THE WORK, AND DO NOT INDICATE OR SPECIFY IN DETAIL, EVERY CONDITION AND COMPONENT OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT, FABRICATE ALL ASSEMBLIES AND INSTALL ALL EQUIPMENT AND SYSTEMS TO PRODUCE A COMPLETE, INTEGRATED AND FULLY FUNCTIONAL WORK PRODUCT IN ACCORDANCE WITH ALL MATERIAL AND EQUIPMENT MANUFACTURER'S REQUIREMENTS, INDUSTRY STANDARDS AND FEDERAL, STATE AND LOCAL LAWS, CODES AND REGULATIONS.

8. PRIOR TO ACCEPTANCE OF SUB-CONTRACTOR BIDS AND COMMENCEMENT OF CONSTRUCTION, GENERAL CONTRACTOR TO PROVIDE ALL SUB-CONTRACTORS ACCESS TO A FULL SET OF CONSTRUCTION DOCUMENTS.

9. THE CONTRACTOR SHALL VERIFY THAT DRAWINGS ARE THE LATEST ISSUE PRIOR TO COMMENCING CONSTRUCTION, & SHALL MAINTAIN ONE COPY AT THE SITE, INCLUDING ALL ADDENDA, CHANGE ORDERS & FIELD CHANGES.

10. GENERAL CONTRACTOR SHALL VISIT PROPOSED JOB SITE AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS & LOCATIONS OF UTILITIES. FAILURE OF GENERAL CONTRACTOR TO VISIT JOB SITE PRIOR TO BIDDING WILL RESULT IN FORFEITURE OF EXTRA COMPENSATION FOR TIME AND MONEY.

11. 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.

C) USE/OWNERSHIP OF DRAWINGS

1. THE ARCHITECT, THE ARCHITECT'S CONSULTANTS AND SHERWIN-WILLIAMS SHALL BE DEEMED THE AUTHORS & JOINT OWNERS OF THEIR RESPECTIVE INSTRUMENTS OF SERVICE, INCLUDING THE DRAWINGS AND SPECIFICATIONS, & WILL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING COPYRIGHTS.

2. THE ARCHITECT, TENANT, OR THE BRAND OWNER ASSUME NO RESPONSIBILITY OR LIABILITY FOR THE USE OF THESE DOCUMENTS FOR ANY PURPOSE OTHER THEN SPECIFICALLY AUTHORIZED BY THE aforementioned AND SIGNED AND SEALED FOR THE SPECIFIC LOCATION IN THE STATE SHOWN ON THE DRAWINGS AND SEAL.

D) CONTRACTS

1. THE LATEST EDITION OF THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION", AIA A201, PUBLISHED BY THE AMERICAN INSTITUTE OF ARCHITECTS, ARE HEREBY MADE PART OF THESE DRAWINGS AND SPECIFICATIONS.

2. TEN DAYS BEFORE CONSTRUCTION COMMENCEMENT, THE GENERAL CONTRACTOR SHALL PROVIDE THE ARCHITECT, FRANCHISEE, BRAND OWNER AND THE CONSTRUCTION MANAGER WITH A DETAILED AND COMPLETE CONSTRUCTION SCHEDULE, SHOWING ALL TRADES WITH STARTING AND COMPLETION DATES. A COMPLETE LIST OF ALL SUBCONTRACTORS MUST ALSO BE INCLUDED WITH THE SCHEDULE. THE GENERAL CONTRACTOR IS TO NOTIFY ALL PARTIES IN RECEIPT OF PROJECT SCHEDULE IN ANY CHANGES OCCUR WHICH AFFECT THE COMPLETION DATE. FAILURE TO COMPLETE THE PROJECT AS SCHEDULED MAY RESULT IN PENALTIES INCURRED BY THE GENERAL CONTRACTOR REGARDING FINAL PAYMENT.

E) INSURANCE

1. ALL CONTRACTORS (GENERAL AND SUBCONTRACTORS) SHALL COMPLY WITH THE REQUIREMENTS FOR INSURANCE, BONDS AND WAIVERS OF LIEN, AS OUTLINED IN THE LATEST EDITION OF THE "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION", AIA A201, PUBLISHED BY THE AMERICAN INSTITUTE OF ARCHITECTS AND SHALL MEET THE OWNERLL COI REQUIREMENTS .
2. TO THE FULLEST EXTENT PERMITTED BY LAW, THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER, ARCHITECT, ARCHITECT'S CONSULTANTS, AND AGENTS AND EMPLOYEES OF ANY OF THEM FROM & AGAINST CLAIMS/DAMAGES ARISING OUT OF OR RESULTING FROM PERFORMANCE OF THE WORK, PROVIDED THAT SUCH CLAIM, DAMAGE, LOSS OR EXPENSE IS ATTRIBUTABLE TO BODILY INJURY, SICKNESS, DISEASE OR DEATH, OR TO INJURY TO OR DESTRUCTION OF TANGIBLE PROPERTY, BUT ONLY TO THE EXTENT CAUSED BY THE NEGLIGENT ACTS OR OMISSIONS OF THE CONTRACTOR, A SUBCONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY THEM OR ANYONE FOR WHOSE ACTS THEY MAY BE LIABLE, REGARDLESS OF WHETHER OR NOT SUCH CLAIM, DAMAGE, LOSS OR EXPENSE IS CAUSED IN PART BY A PARTY INDEMNIFIED HEREUNDER.

F) STANDARDS AND CODES

1. GIVE ALL NOTICES AND COMPLY WITH ALL NATIONAL, STATE AND LOCAL LAWS, ORDINANCES, CODES, RULES AND REGULATIONS BEARING ON THE CONDUCT OF THE WORK. IF THE CONTRACTOR OBSERVES THAT THE DRAWINGS AND SPECIFICATIONS ARE AT VARIANCE THEREWITH, PROMPTLY NOTIFY THE DESIGNER/ARCHITECT. NECESSARY CHANGES SHALL BE MADE IN ACCORDANCE WITH THE GENERAL CONDITIONS.

2. THE CONTRACTOR SHALL FILE, OBTAIN AND PAY FEES FOR BUILDING DEPARTMENT AND ALL OTHER AGENCY APPROVALS AND PERMITS, CONTROLLED INSPECTIONS, AND FINAL WRITE-OFFS FOR PROJECT COMPLETION. COPIES OF TRANSACTIONS ARE TO BE FORWARDED TO THE PROJECT MANAGER.

3. IF THE CONTRACTOR KNOWINGLY PERFORMS ANY WORK WHICH IS CONTRARY TO SUCH LAWS, ORDINANCES, CODES, RULES AND REGULATIONS, HE SHALL PROMPTLY MAKE CHANGES AS REQUIRED TO COMPLY THEREWITH AND BEAR ALL COSTS ARISING THEREFROM.
CONFLICTS: IN CASE OF CONFLICTS IN THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION, THE MOST RESTRICTIVE REQUIREMENTS SHALL GOVERN.

4. WHERE CODES OR REGULATIONS, OTHER THAN THOSE LISTED IN THIS SECTION, ARE REFERRED TO IN VARIOUS SECTIONS OF THE DOCUMENTS. IT SHALL BE UNDERSTOOD THAT THEY APPLY TO THIS WORK AS FULLY AS IF CITED HEREIN.

5. LOADS AND CODE RESTRICTIONS FOR ALL DESIGN CONSIDERATIONS SHALL CONFORM TO LOCAL, STATE AND ALL GOVERNING CODES.

6. THE CONTRACTOR SHALL ARRANGE FOR ALL INSPECTIONS NECESSARY TO OBTAIN CERTIFICATE OF OCCUPANCY.

7. THE CONTRACTOR SHALL MAINTAIN, FOR THE ENTIRE LENGTH OF HIS CONTRACT, EXITS, EXIT LIGHTING, FIRE PROTECTIVE DEVICES, AND ALARMS TO CONFORM TO LOCAL BUILDING CODE REQUIREMENTS AND LANDLORD REQUIREMENTS.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATELY BRACING AND PROTECTING WORK DURING CONSTRUCTION AGAINST DAMAGE, BREAKAGE, COLLAPSE, DISTORTION AND/OR MISALIGNMENT IN ACCORDANCE WITH APPLICABLE CODES, STANDARDS AND GOOD PRACTICE.

9. WORK AND/OR CONSTRUCTION OPERATIONS SHALL NOT UNDERMINE THE STRUCTURAL INTEGRITY OF THE BUILDING.

10. ALL COMBUSTIBLE MATERIALS SHALL MEET APPLICABLE CODES. WOOD SHALL BE FIRE RETARDANT TREATED WHERE REQUIRED BY LOCAL BUILDING CODES.

11. THE CONTRACTOR SHALL PROVIDE BACK FLOW DEVICES AS REQUIRED BY LOCAL, STATE AND FEDERAL CODES.

DIVISION 1 - GENERAL CONDITIONS

G) LAYOUT OF WORK

1. EXERCISE PROPER PRECAUTIONS TO VERIFY ALL EXISTING CONDITIONS AND LAYOUT OF WORK. CONTRACTOR IS RESPONSIBLE FOR ANY ERROR RESULTING FROM FAILURE TO EXERCISE SUCH PRECAUTIONS. ANY SUCH ERROR WILL NOT BE CONSIDERED AS A BASIS FOR EXTRA COMPENSATION.

2. CONTRACTOR SHALL PROMPTLY NOTIFY ARCHITECT IF SUBSURFACE OR OTHERWISE CONCEALED PHYSICAL CONDITIONS DIFFER MATERIALLY FROM THOSE INDICATED IN THE CONTRACT DOCUMENTS, OR DIFFER FROM THOSE CONDITIONS ORDINARILY FOUND TO EXIST & GENERALLY RECOGNIZED AS INHERENT IN CONSTRUCTION ACTIVITIES OF THIS NATURE.

3. THE GENERAL CONTRACTOR SHALL NOT SCALE THE DRAWINGS.

4. GENERAL CONTRACTOR IS RESPONSIBLE FOR LAY OUT OF ALL WORK AND IS RESPONSIBLE FOR ALL LINES AND MEASUREMENTS OF THE BUILDING, UTILITIES, AND OTHER WORK EXECUTED UNDER THE CONTRACT, & SHALL ENSURE THAT THE WORK PERFORMED COMPLIES WITH APPROVED DRAWINGS.

5. PARTITIONS ARE DIMENSIONED FROM FINISH OF STUD TO FACE OF STUD, UNLESS OTHERWISE NOTED. DIMENSIONS MARKED "CLEAR" SHALL BE MAINTAINED AND SHALL ALLOW FOR THICKNESS OF FINISHES INCLUDING TILE, FRP, ETC. DIMENSIONS MARKED "CLEAR" ARE TO BE WITHIN 1/8" ALONG FULL HEIGHT AND FULL WIDTH OF WALLS.

6. ALL ROUGH OPENINGS AND DIMENSIONS LABELED "HOLD" ARE CRITICAL AND ARE NOT TO BE ADJUSTED WITHOUT WRITTEN CONSENT OF ARCHITECT/DESIGNER.

7. ALL WALL FLOOR PLATES ARE TO BE LOCATED AND POSITIONING CONFIRMED WITH FLOOR PLAN PRIOR TO DRYWALL INSTALLATION.

8. DIMENSIONS ARE AS FOLLOWS, UNLESS OTHERWISE NOTED:
   - TO INSIDE FACE OF JAMB AT DOORS & OTHER OPENINGS
   - TO TOP OF FINISHED FLOORS
   - TO BOTTOM OF FINISHED CEILINGS
   - TO INSIDE FACE OF FINISHED MILLWORK

9. CONTRACTOR SHALL INSTALL PORTABLE FIRE EXTINGUISHERS (TYPE 2A10BC) PER IFC SECTION 906.

10. FOR BUILT-IN WORK SURROUNDED BY PARTITIONS, INCLUDING BUT NOT LIMITED TO APPLIANCES AND FURNISHINGS, CONTRACTOR SHALL CONFIRM THAT FLOOR SLAB DOES NOT VARY BY MORE THAN 1/4" IN 20'-0". NOTIFY ARCHITECT/DESIGNER IF THIS TOLERANCE IS EXCEEDED.

11. NEW GYPSUM BOARD CONSTRUCTION ADJOINING EXISTING CONSTRUCTION IN THE SAME PLANE SHALL BE FLUSH WITH NO VISIBLE JOINTS, UNLESS OTHERWISE NOTED.

12. DIMENSIONS KNOWN AS V.I.F. SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD BY LAYING OUT THE PARTITIONS. CONTRACTOR SHALL NOTIFY CONSTRUCTION MANAGER AND ARCHITECT OF ANY DISCREPANCY IN DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK IN THAT AREA.

13. THE ARCHITECT AND HIS CONSULTANTS WILL NOT HAVE CONTROL OVER OR CHARGE OF, NOR BE RESPONSIBLE FOR, THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, THE SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, THE CONTRACTOR'S FAILURE TO PERFORM THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONSTRUCTION DRAWINGS OR CONTRACT, OR THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR THEIR AGENTS OR EMPLOYEES OR ANY OTHER PERSONS OR ENTITIES PERFORMING PORTIONS OF THE WORK.

14. WORK NOT PARTICULARLY DETAILED, NOTED OR SPECIFIED, SHALL BE THE SAME AS SIMILAR PARTS THAT ARE DETAILED, NOTED OR SPECIFIED.

15. IN THE EVENT OF INCONSISTENCIES AMONG THE CONTRACT DOCUMENTS, THE DESIGNER/ARCHITECT SHALL INTERPRET THEM WHEN ASKED TO DO SO BY THE OWNER OR CONTRACTOR. THE DESIGNER/ARCHITECT SHALL NOT BE RESPONSIBLE FOR THE RESULTS OF SUCH INTERPRETATIONS MADE BY OTHERS.

16. THE GENERAL CHARACTER OF DETAIL WORK IS SHOWN ON THE CONTRACT DOCUMENTS. SUBSEQUENT CLARIFICATIONS MAY BE MADE BY ADDITIONAL LAYOUTS OR LARGE SCALE OR FULL SIZE DETAILS.

17. DRAWINGS AND DIAGRAMS FOR MECHANICAL AND ELECTRICAL WORK SHALL BE CONSIDERED AS DIAGRAMMATIC ONLY, NOT TO BE USED FOR ANY STRUCTURAL GUIDANCE OR PHYSICAL LAYOUT. IN CASE OF CONFLICT, UNLESS OTHERWISE NOTED, THE ARCHITECTURAL DRAWINGS SHOWING LOCATIONS FOR MECHANICAL AND ELECTRICAL ITEMS AND ACCESSORIES SHALL TAKE PRECEDENCE.

18. UNLESS OTHERWISE NOTED, IT IS THE INTENTION OF THE DRAWINGS AND SPECIFICATIONS FOR ALL WORK, EQUIPMENT, CASEWORK, MECHANICAL, ELECTRICAL AND SIMILAR DEVICES OF WHATEVER NATURE, TO BE NEW & FREE OF DEFECTS, AND BE COMPLETELY INSTALLED, HOOKED-UP, MADE OPERATIONAL AND FUNCTIONAL FOR THE PURPOSE INTENDED, AND THAT ALL COSTS FOR THIS BE INCLUDED IN THE CONTRACTOR'S PROPOSAL.

19. THE CONTRACTOR SHALL, IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, APPLY, INSTALL, CONNECT, ERECT, CLEAN AND/OR CONDITION MANUFACTURED ARTICLES, MATERIALS AND/OR EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS. IN CASE OF CONFLICT BETWEEN MANUFACTURER'S INSTRUCTIONS AND THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER AND THE ARCHITECT BEFORE PROCEEDING.

20. THE CONTRACTOR SHALL COORDINATE AND SCHEDULE WORK BY OUTSIDE VENDORS INCLUDING BUT NOT LIMITED TO, TELEPHONE, DATA, "OWNER'S FORCES" ITEMS. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS AND SHALL DO THE CUTTING, FITTING AND PATCHING REQUIRED TO RECEIVE THE WORK OF OTHERS AS SHOWN OR REASONABLY IMPLIED BY THE DRAWINGS AND SPECIFICATIONS.

21. ANY CHANGES IN THE SCOPE OF WORK INVOLVING A CHANGE IN THE CONSTRUCTION COST OR TIME SHALL BE APPROVED BY THE OWNER IN WRITING PRIOR TO THE CONTRACTOR COMMENCING WITH THE WORK SCOPE CHANGE.

H) REFLECTED CEILING PLAN NOTES

1. REFER TO MECHANICAL, ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR DESIGN OF THESE SYSTEMS (DUCT SIZES, CIRCUITING, ETC.) AND FOR ADDITIONAL REQUIREMENTS. LOCATIONS OF FIXTURES, REGISTERS, SWITCHES, ETC. SHALL BE AS SHOWN ON THE ARCHITECTURAL PLANS. NOTIFY ARCHITECT/DESIGNER OF ANY CONFLICTS PRIOR TO COMMENCING CONSTRUCTION.

2. VERIFY FIELD CONSTRUCTIONS AND LOCATIONS OF ALL PLUMBING AND STRUCTURAL ELEMENTS AND OTHER APPLICABLE ITEMS. NOTIFY ARCHITECT/DESIGNER OF INADEQUATE CLEARANCES FOR CEILING LAYOUT.

3. ALL REGISTERS, SPRINKLER HEADS AND LIGHTING FIXTURES SHALL OCCUR WITHIN GRID LINES. INCANDESCENT FIXTURES OR OTHER ELEMENTS SHALL BE LOCATED AT THE CENTER OF ACOUSTICAL TILES UNLESS NOTED OTHERWISE.

4. CUT-OUTS AT FIXTURES IN LAY-IN CEILINGS SHALL BE PRECISE WITH NO GAPS, CHIPS OR IRREGULARITIES.

5. CEILNG GRID SHALL BE LEVEL WITHIN A TOLERANCE OF 1/8" IN A SPAN OF 10'-0".

6. LAY-IN LIGHTING FIXTURES SHALL NOT RELY ON THE CEILING SYSTEM ALONE FOR SUPPORT. LAY-IN LIGHTING FIXTURES SHALL BE SUPPORTED FROM THE STRUCTURE BY NO LESS THAN TWO HANGER WIRES AND SECURED TO THE CEILING GRID SYSTEM WITH THE APPROPRIATE ATTACHMENT HARDWARE.

7. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL REQUIRED ACCESSORIES, OPTIONS, MOUNTING HARDWARE AND FIELD FABRICATION REQUIRED TO PROPERLY ADAPT THE FIXTURES TO THE SPECIFIC APPLICATIONS.

8. ELECTRICAL CONTRACTOR SHALL CLEARLY LABEL PANEL BOARD CIRCUITING AS TO OPERATION.

9. ALL ELECTRICAL DEVICES SHALL BEAR THE U.L. LABEL.

10. ALL ELECTRICAL WORK SHALL FOLLOW ALL APPLICABLE NATIONAL, STATE & LOCAL CODES, REGULATIONS AND LAWS.

11. REFER TO LIGHT FIXTURE SCHEDULE FOR FINISH OF LIGHT FIXTURE TRIM.

12. WHERE/IF EXISTING CEILINGS ARE SCHEDULED TO REMAIN, & ARE DAMAGED OR OTHERWISE MODIFIED TO ACCOMMODATE THE NEW LAYOUT, THE G.C. SHALL PATCH, REPAIR OR RESTORE AS REQUIRED TO "LIKE-NEW" CONDITION.

13. IF ANY LIGHTS ARE SPECIFIED IN A LOCATION EXPOSED TO THE WEATHER, ELECTRICAL CONTRACTOR SHALL OBTAIN A SIMILAR FIXTURE RATED FOR EXTERIOR APPLICATION.

14. IF EXISTING MECHANICAL AND FIRE PROTECTION SYSTEMS ARE PRESENT, CONTRACTOR SHALL REWORK THE SYSTEMS TO ACCOMMODATE THE NEW CEILING AND WALL LAYOUTS.

15. USE OF THE ABOVE CEILING PLENUM AREA AS A RETURN AIR SYSTEM IS NOT ACCEPTABLE. RETURN AIR SHALL BE DUCTED TO THE CEILING.

16. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TESTING AND BALANCING OF ANY REWORKED MECHANICAL SYSTEM.

DIVISION 1 - GENERAL CONDITIONS

I) OWNER FURNISHED ITEMS

1. PRODUCTS TO BE FURNISHED AND PAID FOR BY THE OWNER AND INSTALLED BY THE CONTRACTOR ARE INDICATED AS "OWNER SUPPLIED" IN THE EQUIPMENT SCHEDULE.

2. OWNER'S RESPONSIBILITIES FOR OWNER FURNISHED PRODUCTS:
   - SUPPLY CONTRACTOR WITH PRODUCT LITERATURE, OWNER REVIEWED.
   - PRODUCT DATA AND SAMPLES.
   - PAY FOR PRODUCT DELIVERY TO SITE.
   - REVIEW DAMAGED PRODUCTS WITH CONTRACTOR PROMPTLY.
   - SUBMIT CLAIMS FOR DAMAGE. REPLACE DAMAGED, DEFECTIVE OR DEFICIENT ITEMS.
   - ARRANGE FOR MANUFACTURER'S WARRANTIES, INSPECTIONS AND SERVICE.

3. CONTRACTOR'S RESPONSIBILITIES FOR OWNER FURNISHED PRODUCTS:
   - REVIEW SHOP DRAWINGS, PRODUCT DATA AND SAMPLES TO ADEQUATELY ACQUAINT HIMSELF WITH THE SCOPE OF WORK.
   - REVIEW THE ORDER; SCHEDULE THE DELIVERY; RECEIVE, UNLOAD AND STORE PRODUCTS AT SITE.
   - INSPECT FOR COMPLETE OR DAMAGE. IF ITEMS ARE DAMAGED, GENERAL CONTRACTOR TO NOTIFY PROJECT MANAGER AND OWNER.

J) ALTERATIONS (IF APPLICABLE)

1. ARRANGE WITH LANDLORD/OWNER A CONVENIENT TIME TO PERFORM ALL WORK AND INSTALL TEMPORARY PROTECTED MEANS OF EGRESS FROM REQUIRED EXITS, INCLUDING TEMPORARY LIGHTING AND SAFETY DEVICES IN ACCORDANCE WITH GOVERNING STATE AND LOCAL CODE AND BUILDING MANAGEMENT REQUIREMENTS.

2. THE CONTRACTOR SHALL REMOVE, REPAIR, RESTORE AND REPLACE ANY WORK NECESSARY OR INDICATED ON THE DRAWINGS. CUT ALL NECESSARY OPENINGS AND REPAIR AFTER CUTTING WHERE NECESSARY. ALL PROTRUSIONS, MARKS, CRACKS, OR OTHER EVIDENCE OF A DEFICIENT OR DAMAGED CONDITION SHALL BE ELIMINATED UNLESS SPECIFICALLY NOTED OTHERWISE. ANY ITEMS WHICH ARE SPLIT, CRACKED, CHIPPED, SPALLED, BROKEN, MISSING, OUT OF ALIGNMENT OR ADJUSTMENT, MECHANICALLY OR STRUCTURALLY UNSAFE OR UNSOUND, BENT, TORN, OR OTHERWISE DEFICIENT OR DAMAGED IN ANY MANNER SHALL BE REMOVED, REPLACED, RESTORED OR SATISFACTORILY REPAIRED AS DIRECTED BY THE OWNER'S REPRESENTATIVE.

3. PERFORM DEMOLITION WORK AND SUCH SPRINKLER WORK, CONCRETE SAW CUTTING, PAINTING AND SIMILAR WORK CAUSING EXCESSIVE NOISE, DUST OR ODORS DISTURBING BUILDING OCCUPANTS, OR ANY WORK DISRUPTING TENANTS OR PUBLIC TRAFFIC WITHIN THE BUILDING, AFTER HOURS OR AT TIMES AND IN SUCH MANNER AS OTHERWISE APPROVED BY LANDLORD/OWNER.

4. SPECIAL ATTENTION SHALL BE GIVEN TO EXISTING AREAS SURROUNDING THE EXTERIOR OF THE PROJECT SPACE. ALL CONSTRUCTION AND INSTALLED EQUIPMENT, WALKS, AND LANDSCAPED AREAS SHALL BE PROTECTED AND GUARDED BY BARRIERS OR OTHER MEANS NECESSARY TO PROTECT AREAS FROM DAMAGE DURING CONSTRUCTION. ALL AREAS DAMAGED WILL BE RESTORED TO THEIR ORIGINAL CONDITION PRIOR TO FINAL PAYMENT AT THE SOLE EXPENSE OF THE GENERAL CONTRACTOR.

K) HAZARDOUS MATERIALS

1. ASBESTOS AND HAZARDOUS WASTE EXCLUSION: THE ARCHITECT HEREBY STATES, AND THE OWNER ACKNOWLEDGES, THAT THE ARCHITECT HAS NO PROFESSIONAL LIABILITY OR OTHER INSURANCE (AND IS UNABLE TO REASONABLY OBTAIN SUCH INSURANCE) FOR CLAIMS ARISING OUT OF THE PERFORMANCE OF OR THE FAILURE TO PERFORM PROFESSIONAL SERVICES, INCLUDING BUT NOT LIMITED TO, THE PREPARATION OF REPORTS, DESIGNS, DRAWINGS, AND SPECIFICATIONS, AND RELATED TO THE INVESTIGATION DETECTION OF HAZARDOUS MATERIALS ON THE SITE.

2. IF THE GENERAL CONTRACTOR ENCOUNTERS HAZARDOUS MATERIALS, & IF REASONBLE PRECAUTIONS WILL BE INADEQUATE TO PREVENT FORESEEABLE BODILY INJURY OR DEATH TO PERSONS RESULTING FROM A MATERIAL OR SUBSTANCE ENCOUNTERED ON THE SITE, THE GENERAL CONTRACTOR SHALL, UPON RECOGNIZING THE CONDITION, IMMEDIATELY STOP WORK IN THE AFFECTED AREA & REPORT THE CONDITION TO THE OWNER IN WRITING.

L) CONTRACTOR USE OF PREMISES

1. CONSTRUCTION OPERATIONS: LIMITED TO AREAS NOTED ON DRAWINGS.

2. TIME RESTRICTIONS FOR PERFORMING WORK: VERIFY WITH LANDLORD/OWNER & LOCAL CODES.

3. UTILITY OUTAGES AND SHUTDOWN SHALL BE COORDINATED WITH THE LANDLORD/OWNER.

4. AT ALL TIMES CONDUCT OPERATIONS TO INSURE THE LEAST INCONVENIENCE TO THE GENERAL PUBLIC. COMPLY WITH APPLICABLE CODES AND ORDINANCES FOR SAFETY.

5. ASSUME FULL RESPONSIBILITY FOR THE PROTECTION AND SAFEKEEPING OF PRODUCTS STORED ON THE SITE UNDER THIS CONTRACT.

6. COORDINATE USE OF PREMISES FOR WORK & STORAGE WITH THE LANDLORD/OWNER, & TO AREAS PERMITTED BY APPLICABLE LAWS, STATUTES, ORDINANCES & CODES.

7. LIMIT USE OF SITE FOR WORK AND STORAGE TO AREAS DESIGNATED UNLESS SPECIFIC ADDITIONAL AREAS ARE ALLOWED IN WRITING BY THE LANDLORD/OWNER.

8. IN THE EVENT OF DAMAGES TO MATERIALS/WORK, GENERAL CONTRACTOR OR RESPONSIBLE SUBCONTRACTORS SHALL IMMEDIATELY MAKE ALL REPAIRS AND REPLACEMENTS NECESSARY AT NO ADDITIONAL COST TO THE OWNER.

9. TEMPORARY SANITARY FACILITIES FOR THE WORKERS SHALL BE FURNISHED, INSTALLED AND MAINTAINED BY THE GENERAL CONTRACTOR. IF "CONTRACTOR-USE" FACILITIES DO NOT EXIST ON SITE. PERMANENT TOILETS INSTALLED ON THE PROJECT SHALL NOT BE USED DURING CONSTRUCTION OF THE PROJECT. ALL SUCH FACILITIES AND SERVICES SHALL BE FURNISHED IN STRICT ACCORDANCE WITH EXISTING GOVERNING HEALTH REGULATIONS.

10. PARKING TO BE DESIGNATED BY LANDLORD.

M) TEMPORARY JOB SITE SIGN

1. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL A TEMPORARY JOB SITE SIGN. SIGN SHALL BE PREPARED BY A PROFESSIONAL SIGN COMPANY.

N) FINISH NOTES

1. ENSURE THAT SURFACE TO RECEIVE FINISHES ARE CLEAN, TRUE AND FREE OF IRREGULARITIES AND ARE ACCEPTABLE TO RECEIVE NEW FINISHES. DO NOT PROCEED WITH WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED. COMMENCEMENT OF WORK SHALL INDICATE INSTALLER'S ACCEPTANCE OF SUBSTRATE.

2. ALL CODE-REQUIRED LABELS SUCH AS "U.L.", FACTORY MUTUAL OR ANY EQUIPMENT IDENTIFICATION, PERFORMANCE RATING, NAME OR NOMENCLATURE PLATES SHALL REMAIN READABLE AND NOT PAINTED.

3. THE CONTRACTOR SHALL PATCH SURFACES AS NECESSARY TO MATCH ADJACENT IN A MANNER SUITABLE TO RECEIVE FINISHES.

4. ALL MATERIALS AND FINISHES INDICATED ON DRAWINGS SHALL BE NEW AND UNUSED.

5. ANY SUBSTITUTIONS MUST BE REVIEWED AND APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO FABRICATION OR PURCHASING.

6. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE TIMELY ARRIVAL OF ALL SPECIFIED FINISH MATERIALS, EQUIPMENT, LIGHT FIXTURES, AND ANY OTHER MATERIALS TO BE UTILIZED IN THE PROJECT. THE G.C. SHALL NOTIFY THE ARCHITECT/DESIGNER IN WRITING WITHIN (10) DAYS OF DATE OF CONTRACT OF THOSE ITEMS SPECIFIED THAT ARE NOT READILY AVAILABLE. IF NOTIFICATION IS NOT RECEIVED, THE G.C. ACCEPTS RESPONSIBILITY FOR THE PROPER ORDERING AND FOLLOW-UP OF SPECIFIED ITEMS SO AS NOT TO CREATE A HARDSHIP ON THE OWNER, AND NOT TO DELAY PROGRESS OF THE WORK. NO EXTENSION OF TIME TO THE CONTRACT WILL BE ALLOWED FOR G.C.'S INABILITY TO SECURE SPECIFIED ITEMS.

7. COORDINATE WITH OWNER'S REPRESENTATIVE FOR DELIVERY AND PLACEMENT OF OWNER SUPPLIED ITEMS AND FURNISHINGS.

8. REFER TO FINISH SCHEDULE FOR SPECIFIED FINISHES.

9. ALL DOOR AND WINDOW FRAMES SHALL BE CAULKED AROUND ENTIRE PERIMETER.

10. GENERAL CONTRACTOR SHALL CAULK BETWEEN BASE AND FLOOR WITH CLEAR SILICONE SEALANT.

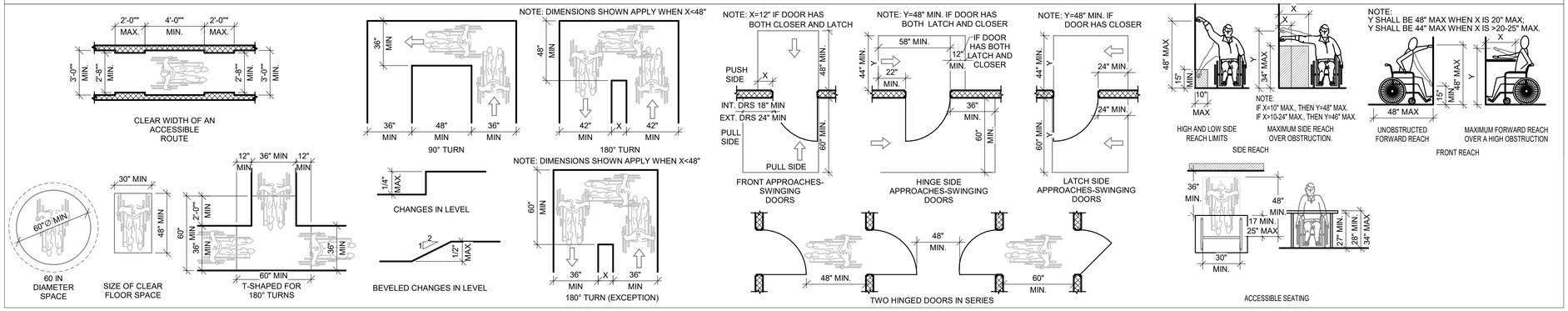
11. GENERAL CONTRACTOR SHALL SHALL TAPE AND BED ALL WALLS FOR A SMOOTH PAINTED FINISH.

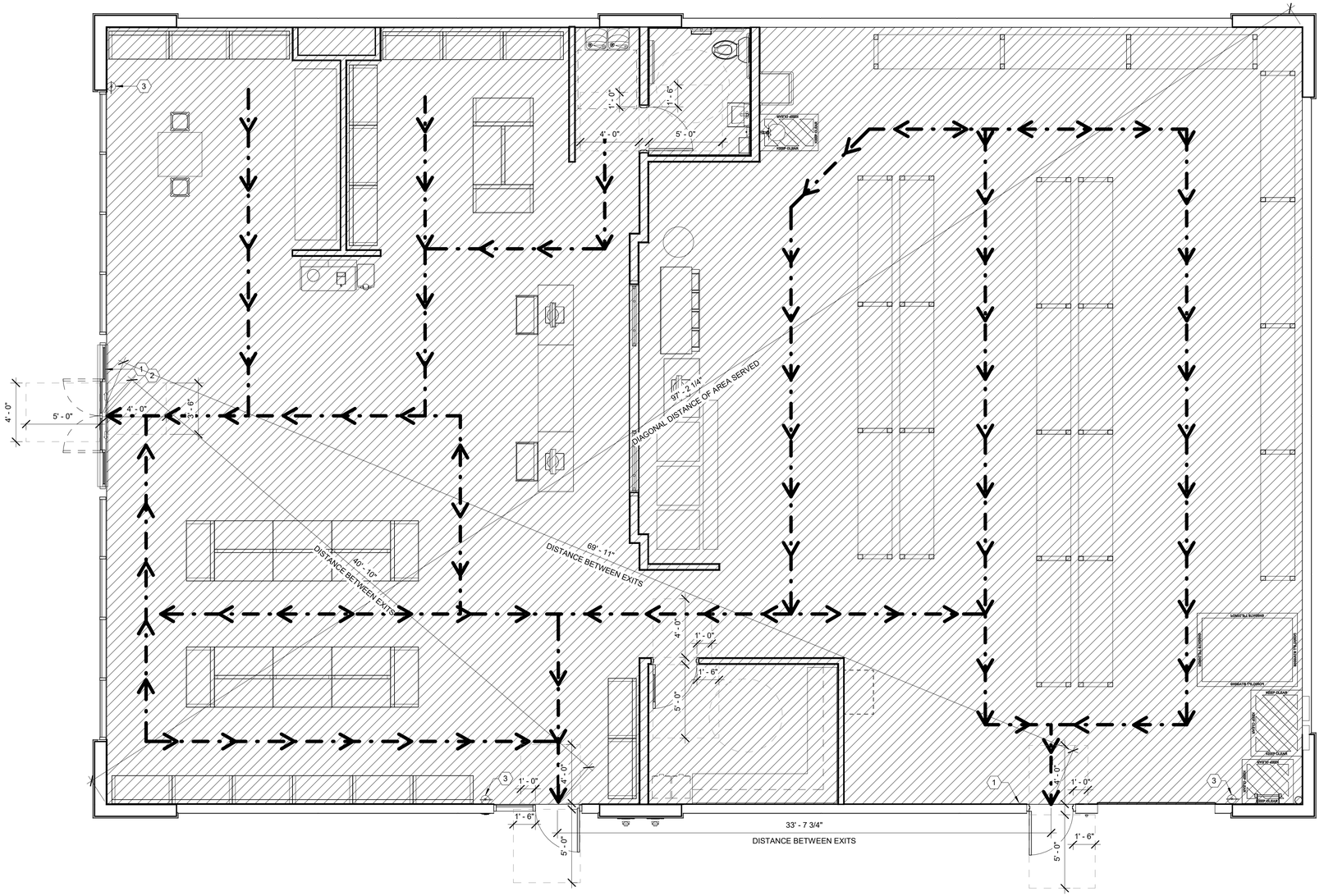
12. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO SECURE AND PROTECT FROM DAMAGE ALL ITEMS ON THE PREMISES, INCLUDING, BUT NOT LIMITED TO: CONSTRUCTION MATERIALS, LIGHT FIXTURES, FOOD SERVICE EQUIPMENT, EQUIPMENT, AND THE FURNITURE PACKAGE. AFTER RECEIPT ON JOB SITE, ANY LOST, STOLEN OR ITEMS DAMAGED LATER BY SUBCONTRACTORS OR OTHERS IN THE BUILDING, SHALL BE REPLACED OR REPAIRED AT THE GENERAL CONTRACTOR'S SOLE EXPENSE. THE GENERAL CONTRACTOR SHALL NOTIFY AND RELATE THIS INFORMATION AND REQUIREMENT TO ALL TRADES AND SUBCONTRACTORS ON SITE.

DIVISION 1 - GENERAL CONDITIONS

13. NO MATERIAL SUBSTITUTIONS WILL BE PERMITTED UNLESS AUTHORIZATION HAS BEEN GRANTED BY THE BRA

TYPICAL ACCESSIBILITY DETAILS




4' - 0"
5' - 0"
1' - 6"
4' - 0"
5' - 0"
97' - 2 1/4"
DIAGONAL DISTANCE OF AREA SERVED
69' - 11"
DISTANCE BETWEEN EXITS
40' - 10"
DISTANCE BETWEEN EXITS
33' - 7 3/4"
DISTANCE BETWEEN EXITS
1' - 0"
1' - 6"
5' - 0"
1' - 6"
1' - 0"
1' - 6"
5' - 0"
1' - 6"
1' - 0"
1' - 6"
5' - 0"
1' - 6"

LOCKHART COMMERCIAL

PHASES 1 & 2
SITE DEVELOPMENT

OWNER/CLIENT
LOCKHART QOZ II, LLC
1301 WEST 25TH ST. SUITE 510
AUSTIN, TX 78705
512/600-8080

ENGINEER
STANSBERRY ENGINEERING CO., INC.
POST OFFICE BOX 132
MANCHACA, TX 78652
512/292-8000

ARCHITECT
LINGLE DESIGN GROUP
1764 Blake Street
Denver, CO 80202
303/974-5873

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VICINITY MAP

REVIEWED BY:

CITY OF LOCKHART DEVELOPMENT SERVICES DATE

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BLAYNE E. STANSBERRY, P.E. 88646 ON APRIL 4, 2025

STATE OF TEXAS
BLAYNE E. STANSBERRY
88646
LICENSED
PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE	BY

stansberry engineering co.
Texas Registered Engineering Firm F-8276 phone 512 / 292-8000 www.stansberryengineering.com

LOCKHART COMMERCIAL - PHASE 1
1816 S COLORADO ST, LOCKHART, TEXAS

DATE: 04/04/2025
PROJECT NO: 2025266
DESIGNED BY: BES

C0.0
1 OF 18

PLOTTED: Apr 09, 2025 FILE NAME: Y:\2020266-Lockhart Commercial\02. Design\2.1 Cad Files\Phase 1\C-COVER.dwg

GENERAL

- PROPERTY LINE
- EASEMENT
- SETBACK
- 605 — PROPOSED CONTOUR
- 605 — EXISTING CONTOUR
- 100-YR FLOODPLAIN
- CWQZ — CRITICAL WATER QUALITY ZONE
- CURB & GUTTER
- CENTERLINE
- SIDEWALK/CONCRETE
- DEMOLITION AREA
- ADA — ACCESSIBLE ROUTE
- FENCE
- WOOD PRIVACY FENCE

SYMBOLS

- SIGNAGE
- BM-0 — BENCHMARK
- B-0 — SOIL BORING
- REGULAR FONT — DESIGNATES PROPOSED IMPROVEMENTS
- *ITALIC FONT* — DESIGNATES EXISTING IMPROVEMENTS
- 4 / C10 — DETAIL CALLOUT SYMBOL
  - DETAIL NUMBER
  - SHEET NO. DETAIL LOCATED ON
- A — CROSS SECTION SYMBOL
- 1 — PLAN REVISION SYMBOL

EROSION CONTROL

- LOC — LIMIT OF CONSTRUCTION
- SF — SF — SILT FENCE
- TP — TP — TREE PROTECTION FENCING
- MS — MS — MULCH SOCK
- TFD — TFD — TRIANGULAR SEDIMENT FILTER DIKE
- DD — DD — DIVERSION DIKE/BERM
- IP — INLET PROTECTION
- RB — ROCK BERM
- STABILIZED CONSTRUCTION ENTRANCE
- TEMPORARY SPOILS STORAGE /CONSTRUCTION STAGING
- SOIL RETENTION BLANKET

DRAINAGE / GRADING

- DRAINAGE AREA
- 1 — DRAINAGE AREA LABEL
- FLOW DIRECTION
- DRAINAGE SWALE
- H.P. — HIGH POINT
- L.P. — LOW POINT
- + 603.29 — EXISTING SPOT ELEVATION
- 605.25 — PROPOSED SPOT ELEVATION
- PROPOSED SPOT ELEVATION (CURB)
  - 605.75 — TOP OF CURB ELEVATION
  - 605.25 — GUTTER ELEVATION

UTILITIES

- W — EXISTING WATER LINE
- EXTG GATE VALVE
- EXTG FIRE HYDRANT
- EXTG METER
- WW — EXISTING WASTEWATER LINE
- EXTG WASTEWATER MANHOLE
- W — WATER LINE
- GATE VALVE
- FIRE HYDRANT
- WATER METER
- WW — WASTEWATER LINE
- WASTEWATER MANHOLE
- PROPOSED DOUBLE WASTEWATER SERVICE
- PROPOSED DOUBLE WATER SERVICE
- STORM DRAIN/CULVERT
- CURB INLET
- GRATE INLET
- TRENCH DRAIN INLET
- SLOPING HEADWALL
- WINGED HEADWALL
- WATER SURFACE ELEVATION
- E — ELECTRIC
- OE — OVERHEAD ELECTRIC
- POWER POLE
- LIGHT POLE
- G — GAS
- T — TELEPHONE/COMMUNICATIONS

ABBREVIATIONS

A.D.	ALGEBRAIC DIFFERENCE
AC	AIR CONDITIONER
APPROX	APPROXIMATE
B/W	BOTTOM OF WALL
BL	BUILDING LINE
BLDG	BUILDING
BLK	BLOCK
BM	BENCHMARK
BOC	BACK OF CURB
CFB	COMPOST FILTER BERM
CFS	CUBIC FEET PER SECOND
CI	CAST IRON
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
COA	CITY OF AUSTIN
CONC	CONCRETE
D/S	DOWNSTREAM
DCM	DRAINAGE CRITERIA MANUAL
DET, DETL	DETAIL
DI	DUCTILE IRON
DIA, ø	DIAMETER
Dn	NORMAL DEPTH OF FLOW
DRNG	DRAINAGE
EA	EACH
ECM	ENVIRONMENTAL CRITERIA MANUAL
EJ	EXPANSION JOINT
EL, ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
EQUIV	EQUIVALENT
ESC	EROSION AND SEDIMENTATION CONTROL
ESMT	EASEMENT
EX, EXTG	EXISTING
EXP. JT.	EXPANSION JOINT
F-F	FACE TO FACE
FF, FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FOC	FACE OF CURB
FP	FLOODPLAIN
FPS	FEET PER SECOND
FT	FEET
GPM	GALLON PER MINUTE
GV	GATE VALVE
H	HORIZONTAL
HDPE	HIGH DENSITY POLYETHYLENE
HDWL	HEADWALL
HGL	HYDRAULIC GRADE LINE
HL	HEAD LOSS
HMAC	HOT MIX ASPHALTIC CONCRETE
HORIZ	HORIZONTAL
HP	HIGH POINT
HW	HEADWATER
IP	INLET PROTECTION
JT	JOINT
L, LT	LEFT
LDC	LAND DEVELOPMENT CODE
LF	LINEAR FOOT
LN	LINE
LOC	LIMIT OF CONSTRUCTION
LOG	LIP OF GUTTER
LP	LOW POINT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MSL	MEAN SEA LEVEL
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NG	NATURAL GROUND
NTS	NOT TO SCALE
O/S	OFFSET
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OE	OVERHEAD ELECTRIC
OHU	OVERHEAD UTILITY
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PI	POINT OF INFLECTION
PKNG	PARKING
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PUE	PUBLIC UTILITY EASEMENT
PVC	POINT OF VERTICAL CURVE
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INFLECTION
PVT	POINT OF VERTICAL TANGENCY
Q	FLOW RATE
R, RT	RIGHT
RB	ROCK BERM
RCP	REINFORCED CONCRETE PIPE
REINF	REINFORCED
ROW	RIGHT OF WAY
S.S.	SIDE SLOPE
SCE	STABILIZED CONSTRUCTION ENTRANCE
SCH	SCHEDULE
SD	STORM DRAIN
SF	SILT FENCE
SF	SQUARE FOOT
Sf	FRICTION SLOPE
SRB	SOIL RETENTION BLANKET
SS	STORM SEWER OR SANITARY SEWER
STA	STATION
SWLK	SIDEWALK
SWPPP	STORM WATER POLLUTION PREVENTION PLAN
T/W	TOP OF WALL
TBM	TEMPORARY BENCHMARK
TC	TOP OF CURB
TCEQ	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
TEMP	TEMPORARY
TP	TREE PROTECTION
TRM	TURF REINFORCEMENT MAT
TSV	TAPPING SLEEVE & VALVE
TW	TAILWATER
Tw	TOP WIDTH OF FLOW
TYP	TYPICAL
U/S	UPSTREAM
UCM	UTILITY CRITERIA MANUAL
V, VERT	VERTICAL
V	VELOCITY
VC	VERTICAL CURVE
VLV	VALVE
W, WTR	WATER
WL	WATER LINE
WQP	WATER QUALITY POND
WSEL	WATER SURFACE ELEVATION
WW	WASTEWATER
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
YR	YEAR

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BLAYNE E. STANSBERRY, P.E. 88646 ON APRIL 4, 2025

STATE OF TEXAS — BLAYNE E. STANSBERRY — 88646 — PROFESSIONAL ENGINEER

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REV | DESCRIPTION | DATE | BY

LOCKHART COMMERCIAL - PHASE 1
1816 S COLORADO ST, LOCKHART, TEXAS
LEGEND & ABBREVIATIONS

DATE: 04/04/2025
PROJECT NO: 2025266
DESIGNED BY: BES

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GENERAL CONSTRUCTION NOTES FOR SITE PLAN

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF LOCKHART MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. CONTRACTOR SHALL CALL TEXAS 811 (811 OR 1-800-344-8377) FOR UTILITY LOCATIONS PRIOR TO ANY WORK IN CITY EASEMENTS OR STREET R.O.W.
3. CONTRACTOR SHALL NOTIFY THE CITY TO SUBMIT REQUIRED DOCUMENTATION, PAY INSPECTION FEES, AND TO SCHEDULE A PRE-CONSTRUCTION MEETING AND INSPECTIONS.
4. FOR SLOPES OR TRENCHES GREATER THAN FIVE FEET IN DEPTH, ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
5. ALL SITE WORK MUST ALSO COMPLY WITH ENVIRONMENTAL REQUIREMENTS.
6. UPON COMPLETION OF THE PROPOSED SITE IMPROVEMENTS AND PRIOR TO THE FOLLOWING, THE ENGINEER SHALL CERTIFY IN WRITING THAT THE PROPOSED DRAINAGE, FILTRATION AND DETENTION FACILITIES WERE CONSTRUCTED IN CONFORMANCE WITH THE APPROVED PLANS.
7. ALL IMPROVEMENTS SHALL BE MADE IN ACCORDANCE WITH THE RELEASED SITE PLAN. ANY ADDITIONAL IMPROVEMENTS WILL REQUIRE A SITE PLAN AMENDMENT AND APPROVAL FROM THE CITY.
8. ALL SIGNS MUST COMPLY WITH THE REQUIREMENTS OF THE CITY OF LOCKHART.
9. THE OWNER IS RESPONSIBLE FOR ALL COSTS OF RELOCATION OF, OR DAMAGE TO, UTILITIES.
10. ADDITIONAL ELECTRIC EASEMENTS MAY BE REQUIRED AT A LATER DATE.
11. WATER AND WASTEWATER SERVICE WILL BE PROVIDED BY THE CITY OF LOCKHART.

ELECTRIC

1. THE ELECTRIC PROVIDER HAS THE RIGHT TO PRUNE AND/OR REMOVE TREES, SHRUBBERY AND OTHER OBSTRUCTIONS TO THE EXTENT NECESSARY TO KEEP THE EASEMENTS CLEAR.
2. THE OWNER OF THIS LOT SHALL PROVIDE THE ELECTRIC PROVIDER WITH ANY EASEMENT AND/OR ACCESS REQUIRED FOR THE INSTALLATION AND ONGOING MAINTENANCE OF OVERHEAD AND UNDERGROUND ELECTRIC FACILITIES. THESE EASEMENT AND/OR ACCESS ARE REQUIRED TO PROVIDE ELECTRIC SERVICE TO THE BUILDING.
3. THE OWNER SHALL BE RESPONSIBLE FOR INSTALLATION OF TEMPORARY EROSION CONTROL, REVEGETATION AND TREE PROTECTION. IN ADDITION, THE OWNER SHALL BE RESPONSIBLE FOR ANY INITIAL TREE PRUNING AND TREE REMOVAL THAT IS WITHIN TEN FEET OF THE CENTER LINE OF THE PROPOSED OVERHEAD ELECTRICAL FACILITIES DESIGNED TO PROVIDE ELECTRIC SERVICE TO THIS PROJECT.
4. THE OWNER OF THE PROPERTY IS RESPONSIBLE FOR MAINTAINING CLEARANCES REQUIRED BY THE NATIONAL ELECTRIC SAFETY CODE, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS, CITY RULES AND REGULATIONS AND TEXAS STATE LAWS PERTAINING TO CLEARANCES WHEN WORKING IN CLOSE PROXIMITY TO OVERHEAD POWER LINES AND EQUIPMENT.

FIRE DEPARTMENT NOTES

1. FINAL ASPHALT OR CONCRETE PAVEMENT IS REQUIRED FOR REQUIRED ACCESS ROADS PRIOR TO THE START OF COMBUSTIBLE CONSTRUCTION. ANY OTHER METHOD OF PROVIDING "ALL-WEATHER DRIVING CAPABILITIES" SHALL BE REQUIRED TO BE DOCUMENTED AND APPROVED AS AN ALTERNATE METHOD OF CONSTRUCTION IN ACCORDANCE WITH THE APPLICABLE RULES.
2. FIRE HYDRANTS SHALL BE INSTALLED WITH THE CENTER OF THE FOUR (4) INCH OPENING (STEAMER) LOCATED AT LEAST 18 INCHES ABOVE FINISHED GRADE. THE STEAMER OPENING OF FIRE HYDRANTS SHALL FACE THE APPROVED FIRE ACCESS DRIVEWAY OR PUBLIC STREET AND SET BACK FROM THE CURB LINE(S) AN APPROVED DISTANCE, TYPICALLY THREE (3) TO SIX (6) FEET. THE AREA WITHIN THREE (3) FEET IN ALL DIRECTIONS FROM ANY FIRE HYDRANT SHALL BE FREE OF OBSTRUCTIONS, AND THE AREA BETWEEN THE STEAMER OPENING AND THE STREET OR DRIVEWAY GIVING EMERGENCY VEHICLE ACCESS SHALL BE FREE OF OBSTRUCTIONS.
3. TIMING OF INSTALLATIONS: WHEN FIRE PROTECTION FACILITIES ARE INSTALLED BY THE CONTRACTOR, SUCH FACILITIES SHALL INCLUDE SURFACE ACCESS ROADS. EMERGENCY ACCESS ROADS OR DRIVES SHALL BE INSTALLED AND MADE SERVICEABLE PRIOR TO AND DURING THE TIME OF CONSTRUCTION. WHEN THE FIRE DEPARTMENT APPROVES AN ALTERNATE METHOD OF PROTECTION, THIS REQUIREMENT MAY BE MODIFIED AS DOCUMENTED IN THE APPROVAL OF THE ALTERNATE METHOD.
4. ALL EMERGENCY ACCESS ROADWAYS AND FIRE LANES, INCLUDING PERVIOUS/DECORATIVE PAVING, SHALL BE ENGINEERED AND INSTALLED AS REQUIRED TO SUPPORT THE AXLE LOADS OF EMERGENCY VEHICLES. A LOAD CAPACITY SUFFICIENT TO MEET THE REQUIREMENTS FOR HS-20 LOADING (16 KIPS/WHEEL) AND A TOTAL VEHICLE LIVE LOAD OF 80,000 POUNDS IS CONSIDERED COMPLIANT WITH THIS REQUIREMENT.
5. THE MINIMUM VERTICAL CLEARANCE REQUIRED FOR EMERGENCY VEHICLE ACCESS ROADS OR DRIVES IS 14 FEET FOR THE FULL WIDTH OF THE ROADWAY OR DRIVEWAY.
6. FIRE ACCESS LANES, AS DELINEATED ON THE SITE PLAN, REQUIRE RED BACK GROUND WITH WHITE LETTERING "FIRE ZONE/TOW AWAY ZONE" IN LETTERS 3-INCHES TALL AT INTERVALS OF 35-FEET MAXIMUM. LEAD FREE PAINT SHALL BE USED

AMERICANS WITH DISABILITIES ACT

THE APPLICANT, PROPERTY OWNER, AND OCCUPANT OF THE PREMISES ARE RESPONSIBLE FOR DETERMINING WHETHER THE PLAN COMPLIES WITH ALL OTHER LAWS, REGULATIONS, AND RESTRICTIONS WHICH MAY BE APPLICABLE TO THE PROPERTY AND ITS USE.

ACCESSIBILITY

1. ACCESSIBLE ROUTES MUST HAVE A CROSS-SLOPE NO GREATER THAN 1:50.
2. ACCESSIBLE PARKING SPACES MUST BE LOCATED ON A SURFACE WITH A SLOPE NOT EXCEEDING 1:50.
3. SLOPES ON ACCESSIBLE ROUTES MAY NOT EXCEED 1:20 UNLESS DESIGNED AS A RAMP.
4. THE MAXIMUM SLOPE OF A RAMP IN NEW CONSTRUCTION IS 1:12. THE MAXIMUM RISE FOR ANY RAMP RUN IS 30 IN. THE MAXIMUM HORIZONTAL PROJECTION IS 30 FEET FOR A RAMP WITH A SLOPE BETWEEN 1:12 AND 1:15, AND 40 FEET FOR A RAMP WITH A SLOPE BETWEEN 1:16 AND 1:20.

CONTRACTOR'S CONSTRUCTION NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST REVISIONS TO THE CITY OF LOCKHART STANDARD SPECIFICATIONS.
2. THE PLAN INFORMATION WAS OBTAINED FROM A GROUND SURVEY COMPLETED BY HINKLE SURVEYING, AUGUST 2010. GROUND CONTOURS ARE ON AN STATE PLANE DATUM.
3. BLASTING IS PROHIBITED.
4. ANY EXISTING PAVEMENT, CURBS, AND/OR SIDEWALKS DAMAGED OR REMOVED, NOT SHOWN FOR DEMOLITION, WILL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE BEFORE ACCEPTANCE OF THE PROJECT.
5. A CURB LAY DOWN IS REQUIRED AT ALL POINTS WHERE THE PROPOSED SIDEWALK INTERSECTS THE CURB.
6. FOR DRIVEWAY CONSTRUCTION: THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS OF RELOCATION OF, OR DAMAGE TO, UTILITIES.
7. THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT TYPE AND LOCATION OF ALL UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGE TO THOSE UTILITIES. IF DAMAGE OCCURS, THE CONTRACTOR ASSUMES RESPONSIBILITY FOR THE IMMEDIATE REPAIR OF DAMAGED UTILITIES AND THE COST OF REPAIR.
8. SLOPES OF ROADWAY CUTS AND EMBANKMENTS DAMAGED BY ANY OPERATION OF THE CONTRACTOR DURING THE EXECUTION OF THIS PROJECT SHALL BE REPAIRED AND RESTORED TO THE ORIGINAL PRE-CONSTRUCTION CONDITION IN ACCORDANCE WITH ALL APPLICABLE PROVISIONS OF THE STANDARD SPECIFICATIONS. BACK FILL AND FILL PLACED DURING REMEDIAL GRADING SHALL BE COMPACTED TO A DENSITY EQUAL TO OR GREATER THAN THAT OF THE ORIGINAL CONDITIONS AND TO THE SATISFACTION OF THE ENGINEER AND GOVERNING AUTHORITIES.
9. WHERE REMOVAL OF BASE AND PAVEMENT IS NECESSARY FOR THIS PROJECT ALL BASE AND PAVEMENT SHALL BE REPLACED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, CITY'S STANDARD SPECIFICATIONS AND STANDARD SPECIFICATIONS FOR CUTS IN PUBLIC RIGHT OF WAY. ALL PAVEMENT CUTS SHALL BE SAWCUT PRIOR TO PLACEMENT OF H.M.A.C.
10. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY UNREPORTED OBSTACLES THAT MAY IMPEDE OR PREVENT THE PROPER CONSTRUCTION OF THIS PROJECT.
11. BEFORE DISCONNECTING ANY WATER LINE OR GAS LINE, CONTRACTOR MUST PROVIDE TWENTY-FOUR (24) HOUR NOTICE TO THE OWNER EXCEPT IN AN EMERGENCY.

GEOTECHNICAL NOTES

1. REFER TO THE GEOTECHNICAL REPORT FOR PAVEMENT SPECIFICATIONS AND SPECIAL CONSTRUCTION NOTES. PAVEMENT SHALL BE CONSTRUCTED AS SPECIFIED IN THE REPORT.
2. UTILITY TRENCHES SHOULD NOT BE BACKFILLED WITH SAND OR GRAVEL TO ASSURE THE TRENCHES DO NOT SERVE AS AQUEDUCTS TRANSPORTING WATER BENEATH THE PROPOSED STRUCTURE.

SITE CLEAN UP AND SAFETY REQUIREMENTS

1. REMOVAL OF EXCAVATED MATERIALS AND DAILY CLEANUP OPERATIONS SHALL BE PERFORMED TO THE SPECIFICATIONS AND TO THE SATISFACTION OF THE OWNER AND ENGINEER.
2. CONTRACTOR SHALL MAINTAIN THE JOB SITE IN A SAFE, NEAT AND WORKMANLIKE MANNER AT ALL TIMES. JOB SITE SAFETY SHALL NOT BE COMPROMISED. ANY UNATTRACTIVE NUISANCE SHALL BE REMOVED OR CAMOUFLAGED BY CONTRACTOR WHEN DIRECTED BY THE OWNER OR ENGINEER.
3. ALL UNATTENDED TRENCHES MUST BE ADEQUATELY PROTECTED TO PREVENT INJURY TO PEDESTRIANS AND VEHICULAR TRAFFIC.
4. BARRICADES, FENCING, LIGHTS, AND/OR OTHER PROTECTIVE DEVICES SHALL ADEQUATELY PROTECT ALL HOLES, TRENCHES, AND OTHER HAZARDOUS AREAS AT ALL TIMES.
5. ALL CONSTRUCTION AND TRENCHING OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). COPIES OF OSHA STANDARDS MAY BE PURCHASED FROM THE U.S. GOVERNMENT PRINTING OFFICE.
6. CONTRACTOR SHALL MAINTAIN A SUPERINTENDENT AT THE PROJECT AT ALL TIMES WORK IS IN PROGRESS.

TRAFFIC CONTROL AND SIGNAGE

1. ALL TRAFFIC CONTROL DEVICES, SIGNS, BARRICADES, WARNING SIGNS, AND FLAG MEN OPERATIONS SHALL BE PLACED, CONSTRUCTED, EXECUTED AND MAINTAINED IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUDTC) UNLESS OTHERWISE INSTRUCTED BY THE CITY OR THE ENGINEER.
2. THE CONTRACTOR SHALL MAINTAIN CLEAR PASSAGE FOR LOCAL TRAFFIC AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
3. WHERE PORTABLE SIGNS REQUIRE THE USE OF WEIGHTS, SANDBAGS SHALL BE USED. THE USE OF SOLID OBJECTS SUCH AS CONCRETE, ROCKS, IRON, ETC. SHALL NOT BE PERMITTED.
4. ALL TRAFFIC CONTROL SIGNS SHALL REMAIN IN PLACE UNLESS OTHERWISE SHOWN ON THE PLANS.
5. CONTRACTOR MUST RESTORE ALL PAVEMENT MARKINGS DISTURBED DURING CONSTRUCTION. CONTRACTOR SHALL OBSERVE ALL APPLICABLE MATERIALS, SPECIFICATIONS, AND INSTALLATION REQUIREMENTS INCLUDING SPECIAL ATTENTION TO MAINTAINING PROPER DIMENSIONS AND ALIGNMENT.
6. CONTRACTOR SHALL PROVIDE TEMPORARY DRIVEWAY ACCESS FOR ALL PROPERTY OWNERS ADJACENT TO CONSTRUCTION AREAS EXCEPT DURING PERIODS WHEN CONSTRUCTION IN THE AREA WOULD MAKE ACCESS UNSAFE. EMERGENCY ACCESS SHALL BE IMMEDIATELY PROVIDED TO DRIVEWAYS DURING CONSTRUCTION ON AN AS-NEEDED BASIS.

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BLAYNE E. STANSBERRY, P.E. 88646 ON APRIL 4, 2025

STATE OF TEXAS
BLAYNE E. STANSBERRY
88646
LICENSED ENGINEER

REV	DESCRIPTION	DATE	BY

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LOCKHART COMMERCIAL - PHASE 1
1816 S COLORADO ST, LOCKHART, TEXAS
GENERAL CONSTRUCTION NOTES

DATE: 04/04/2025
PROJECT NO: 2025266
DESIGNED BY: BES

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EROSION CONTROL NOTES (ECM APPENDIX P-1)

1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS, TREE/NATURAL AREA PROTECTIVE FENCING, AND CONDUCT "PRE-CONSTRUCTION" TREE FERTILIZATION (IF APPLICABLE) PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).

2. THE PLACEMENT OF EROSION/SED'IMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE CITY EROSION CONTROL ORDINANCE AND THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN. THE PLAN SHALL BE CONSULTED AND USED AS THE BASIS FOR A TPDES REQUIRED SWPPP. IF A SWPPP IS REQUIRED, IT SHALL BE AVAILABLE FOR REVIEW AT ALL TIMES DURING CONSTRUCTION, INCLUDING AT THE PRE-CONSTRUCTION MEETING. THE CHECKLIST BELOW CONTAINS THE BASIC ELEMENTS THAT SHALL BE REVIEWED FOR PERMIT APPROVAL BY COA EV PLAN REVIEWERS AS WELL AS COA EV INSPECTORS.

3. THE PLACEMENT OF TREE/NATURAL AREA PROTECTIVE FENCING SHALL BE IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION AND THE APPROVED GRADING/TREE AND NATURAL AREA PLAN.

4. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR, DESIGN ENGINEER/PERMIT APPLICANT AND CITY INSPECTOR AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS, TREE/NATURAL AREA PROTECTION MEASURES AND "PRE-CONSTRUCTION" TREE FERTILIZATION (IF APPLICABLE) PRIOR TO BEGINNING ANY SITE PREPARATION WORK. THE CONTRACTOR SHALL SCHEDULE THE MEETING & NOTIFY THE PARTICIPANTS AT LEAST SEVEN DAYS PRIOR TO THE MEETING DATE.

5. ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE ENGINEER OF RECORD & THE CITY ENGINEER AS APPROPRIATE. MINOR CHANGES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENGINEER OR CITY INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES.

6. THE CONTRACTOR IS REQUIRED TO PROVIDE A CERTIFIED ESC INSPECTOR THAT IS CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC OR CPESC – IT), CERTIFIED EROSION, SEDIMENT AND STORMWATER – INSPECTOR (CESSWI OR CESSWI – IT) OR CERTIFIED INSPECTOR OF SEDIMENTATION AND EROSION CONTROLS (CISEC OR CISEC – IT) CERTIFICATION TO INSPECT THE CONTROLS AND FENCES AT WEEKLY OR SEMI-MONTHLY INTERVALS AND AFTER ONE-HALF (½) INCH OR GREATER RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES OR ONE-THIRD (⅓) OF THE INSTALLED HEIGHT OF THE CONTROL WHICHEVER IS LESS.

7. PRIOR TO FINAL ACCEPTANCE BY THE CITY, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING DEBRIS SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.

8. TEMPORARY AND PERMANENT EROSION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW:

   A. ALL DISTURBED AREAS TO BE REVEGETATED ARE REQUIRED TO PLACE A MINIMUM OF SIX (6) INCHES OF TOPSOIL [STANDARD SPECIFICATION ITEM NO. 601S.3(A)]. DO NOT ADD TOPSOIL WITHIN THE CRITICAL ROOT ZONE OF EXISTING TREES.

      TOPSOIL SALVAGED FROM THE EXISTING SITE IS ENCOURAGED FOR USE, BUT IT SHOULD MEET THE STANDARDS SET FORTH IN 601S.

      AN OWNER/ENGINEER MAY PROPOSE USE OF ONSITE SALVAGED TOPSOIL WHICH DOES NOT MEET THE CRITERIA OF STANDARD SPECIFICATION 601S BY PROVIDING A SOIL ANALYSIS AND A WRITTEN STATEMENT FROM A QUALIFIED PROFESSIONAL IN SOILS, LANDSCAPE ARCHITECTURE, OR AGRONOMY INDICATING THE ONSITE TOPSOIL WILL PROVIDE AN EQUIVALENT GROWTH MEDIA AND SPECIFYING WHAT, IF ANY, SOIL AMENDMENTS ARE REQUIRED.

      SOIL AMENDMENTS SHALL BE WORKED INTO THE EXISTING ONSITE TOPSOIL WITH A DISC OR TILLER TO CREATE A WELL-BLENDED MATERIAL.

THE VEGETATIVE STABILIZATION OF AREAS DISTURBED BY CONSTRUCTION SHALL BE AS FOLLOWS:

TEMPORARY VEGETATIVE STABILIZATION:

1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH OR INCLUDE A COOL SEASON COVER CROP: (WESTERN WHEATGRASS (PASCOPYRUM SMITHII) AT 5.6 POUNDS PER ACRE, OATS (AVENA SATIVA) AT 4.0 POUNDS PER ACRE, CEREAL RYE GRAIN (SECALE CEREALE) AT 45 POUNDS PER ACRE. CONTRACTOR MUST ENSURE THAT ANY SEED APPLICATION REQUIRING A COOL SEASON COVER CROP DOES NOT UTILIZE ANNUAL RYEGRASS (LOLIUM MULTIFLORUM) OR PERENNIAL RYEGRASS (LOLIUM PERENNE). COOL SEASON COVER CROPS ARE NOT PERMANENT EROSION CONTROL.

2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 45 POUNDS PER ACRE OR A NATIVE PLANT SEED MIX CONFORMING TO ITEM 604S OR 609S.

   A. FERTILIZER SHALL BE APPLIED ONLY IF WARRANTED BY A SOIL TEST AND SHALL CONFORM TO ITEM NO. 606S, FERTILIZER. FERTILIZATION SHOULD NOT OCCUR WHEN RAINFALL IS EXPECTED OR DURING SLOW PLANT GROWTH OR DORMANCY. CHEMICAL FERTILIZER MAY NOT BE APPLIED IN THE CRITICAL WATER QUALITY ZONE.

   B. HYDROMULCH SHALL COMPLY WITH TABLE 1, BELOW.

   C. TEMPORARY EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1½ INCHES HIGH WITH A MINIMUM OF 95% TOTAL COVERAGE SO THAT ALL AREAS OF A SITE THAT RELY ON VEGETATION FOR TEMPORARY STABILIZATION ARE UNIFORMLY VEGETATED, AND PROVIDED THERE ARE NO BARE SPOTS LARGER THAN 10 SQUARE FEET.

   D. WHEN REQUIRED, NATIVE GRASS SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL AND STANDARD SPECIFICATION 604S OR 609S.

Table 1: Hydromulching for Temporary Vegetative Stabilization

Material	Description	Longevity	Typical Applications	Application Rates
100% or any blend of wood, cellulose, straw, and/or cotton plant material (except no mulch shall exceed 30% paper)	70% or greater Wood/Straw 30% or less Paper or Natural Fibers	0-3 months	Moderate slopes; from flat to 3:1	1,500 to 2,000 lbs per acre

PERMANENT VEGETATIVE STABILIZATION:

1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING IS CONSIDERED TO BE TEMPORARY STABILIZATION ONLY. IF COOL SEASON COVER CROPS EXIST WHERE PERMANENT VEGETATIVE STABILIZATION IS DESIRED, THE GRASSES SHALL BE MOWED TO A HEIGHT OF LESS THAN ONE-HALF (½) INCH AND THE AREA SHALL BE RE-SEEDED IN ACCORDANCE WITH TABLE 2 BELOW. ALTERNATIVELY, THE COOL SEASON COVER CROP CAN BE MIXED WITH BERMUDAGRASS OR NATIVE SEED AND INSTALLED TOGETHER, UNDERSTANDING THAT GERMINATION OF WARM-SEASON SEED TYPICALLY REQUIRES SOIL TEMPERATURES OF 60 TO 70 DEGREES.

2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 45 POUNDS PER ACRE WITH A PURITY OF 95% AND A MINIMUM PURE LIVE SEED (PLS) OF 0.83. BERMUDA GRASS IS A WARM SEASON GRASS AND IS CONSIDERED PERMANENT EROSION CONTROL. PERMANENT VEGETATIVE STABILIZATION CAN ALSO BE ACCOMPLISHED WITH A NATIVE PLANT SEED MIX CONFORMING TO ITEM 604S OR 609S.

   A. FERTILIZER USE SHALL FOLLOW THE RECOMMENDATION OF A SOIL TEST. SEE ITEM 606S, FERTILIZER. APPLICATIONS OF FERTILIZER (AND PESTICIDE) ON CITY-OWNED AND MANAGED PROPERTY REQUIRES THE YEARLY SUBMITTAL OF A PESTICIDE AND FERTILIZER APPLICATION RECORD, ALONG WITH A CURRENT COPY OF THE APPLICATOR'S LICENSE. FOR CURRENT COPY OF THE RECORD TEMPLATE CONTACT THE CITY OF AUSTIN'S IPM COORDINATOR.

   B. HYDROMULCH SHALL COMPLY WITH TABLE 2, BELOW.

   C. WATER THE SEEDED AREAS IMMEDIATELY AFTER INSTALLATION TO ACHIEVE GERMINATION AND A HEALTHY STAND OF PLANTS THAT CAN ULTIMATELY SURVIVE WITHOUT SUPPLEMENTAL WATER. APPLY THE WATER UNIFORMLY TO THE PLANTED AREAS WITHOUT CAUSING DISPLACEMENT OR EROSION OF THE MATERIALS OR SOIL. MAINTAIN THE SEEDBED IN A MOIST CONDITION FAVORABLE FOR PLANT GROWTH. ALL WATERING SHALL COMPLY WITH CITY CODE CHAPTER 6-4 (WATER CONSERVATION), AT RATES AND FREQUENCIES DETERMINED BY A LICENSED IRRIGATOR OR OTHER QUALIFIED PROFESSIONAL, AND AS ALLOWED BY THE AUSTIN WATER UTILITY AND CURRENT WATER RESTRICTIONS AND WATER CONSERVATION INITIATIVES.

   D. PERMANENT EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1½ INCHES HIGH WITH A MINIMUM OF 95 PERCENT FOR THE NON-NATIVE MIX, AND 95 PERCENT COVERAGE FOR THE NATIVE MIX SO THAT ALL AREAS OF A SITE THAT RELY ON VEGETATION FOR STABILITY MUST BE UNIFORMLY VEGETATED, AND PROVIDED THERE ARE NO BARE SPOTS LARGER THAN 10 SQUARE FEET.

   E. WHEN REQUIRED, NATIVE PLANT SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL, ITEMS 604S AND 609S.

Table 2: Hydromulching for Permanent Vegetative Stabilization

Material	Description	Longevity	Typical Applications	Application Rates
Bonded Fiber Matrix (BFM)	80% Organic defibrated fibers 10% Tackifier	6 months	On slopes up to 2:1 and erosive soil conditions	2,500 to 4,000 lbs per acre (see manufacturers recommendations)
Fiber Reinforced Matrix (FRM)	65% Organic defibrated fibers 25% Reinforcing fibers or less 10% Tackifier	Up to 12 months	On slopes up to 1:1 and erosive soil conditions	3,000 to 4,500 lbs per acre (see manufacturers recommendations)

11. THE CONTRACTOR SHALL NOT DISPOSE OF SURPLUS EXCAVATED MATERIAL FROM THE SITE WITHOUT NOTIFYING THE ENGINEER AT LEAST 48 HOURS PRIOR WITH THE LOCATION AND A COPY OF THE PERMIT ISSUED TO RECEIVE THE MATERIAL.

SEQUENCE OF CONSTRUCTION ENVIRONMENTAL REQUIREMENTS (ECM APPENDIX P-4)

1. TEMPORARY EROSION AND SEDIMENTATION CONTROLS ARE TO BE INSTALLED AS INDICATED ON THE APPROVED CONSTRUCTION PLANS AND, IF THE LOC IS OVER 1 ACRE, IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) REQUIRED TO BE POSTED ON THE SITE. INSTALL TREE PROTECTION AND INITIATE TREE MITIGATION MEASURES.

2. THE GENERAL CONTRACTOR/PROJECT MANAGER SHALL SCHEDULE THE REQUIRED ON-SITE PRECONSTRUCTION MEETING AND NOTIFY PARTICIPANTS AT LEAST 7 DAYS IN ADVANCE OF THE MEETING.

3. THE GENERAL CONTRACTOR WILL FOLLOW THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE REVISED, IF NEEDED, TO COMPLY WITH ENGINEER'S OR CITY'S DIRECTIVES.

4. ROUGH GRADE THE POND(S) AT 100% PROPOSED CAPACITY. EITHER THE PERMANENT OUTLET STRUCTURE OR A TEMPORARY OUTLET MUST BE CONSTRUCTED PRIOR TO DEVELOPMENT OF EMBANKMENT OR EXCAVATION THAT LEADS TO PONDING CONDITIONS. THE OUTLET SYSTEM MUST CONSIST OF A SUMP PIT OUTLET AND AN EMERGENCY SPILLWAY (REFERENCE COA DETL 638S-1.) THE OUTLET SYSTEM SHALL BE PROTECTED FROM EROSION AND SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION UNTIL INSTALLATION OF THE PERMANENT STORM QUALITY POND(S).

5. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE.

6. BEGIN SITE CLEARING/CONSTRUCTION (OR DEMOLITION) ACTIVITIES.

7. PERMANENT STORMWATER PONDS OR CONTROLS WILL BE CLEANED OUT PRIOR TO/CONCURRENTLY WITH REVEGETATION OF SITE.

8. COMPLETE CONSTRUCTION AND START REVEGETATION OF THE SITE AND INSTALLATION OF LANDSCAPING.

9. UPON COMPLETION OF THE SITE CONSTRUCTION AND REVEGETATION OF A PROJECT SITE, CONTACT THE DESIGN ENGINEER WITH AT LEAST 48 HOURS NOTICE TO OBSERVE SITE CONDITIONS. IF ACCEPTABLE, ENGINEER SHALL SUBMIT LETTER OF CONCURRENCE TO THE CITY INDICATING THAT CONSTRUCTION, INCLUDING REVEGETATION, IS COMPLETE AND IN SUBSTANTIAL CONFORMITY WITH THE APPROVED PLANS. AFTER RECEIVING THIS LETTER, A FINAL INSPECTION WILL BE SCHEDULED BY THE APPROPRIATE CITY INSPECTOR.

10. UPON COMPLETION OF LANDSCAPE INSTALLATION OF A PROJECT SITE, CONTACT THE LANDSCAPE ARCHITECT WITH AT LEAST 48 HOURS NOTICE TO OBSERVE LANDSCAPING. IF ACCEPTABLE, THE LANDSCAPE ARCHITECT SHALL SUBMIT A LETTER OF CONCURRENCE TO THE WATERSHED PROTECTION AND DEVELOPMENT REVIEW DEPARTMENT INDICATING THAT THE REQUIRED LANDSCAPING IS COMPLETE AND IN SUBSTANTIAL CONFORMITY WITH THE APPROVED PLANS. AFTER RECEIVING THIS LETTER, A FINAL INSPECTION WILL BE SCHEDULED BY THE APPROPRIATE CITY INSPECTOR.

11. AFTER A FINAL INSPECTION HAS BEEN CONDUCTED BY THE CITY INSPECTOR AND WITH APPROVAL FROM THE CITY INSPECTOR, REMOVE THE TEMPORARY EROSION AND SEDIMENTATION CONTROLS AND COMPLETE ANY NECESSARY FINAL REVEGETATION RESULTING FROM REMOVAL OF THE CONTROLS.

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BLAYNE E. STANSBERRY, P.E. 88646 ON APRIL 4, 2025

STATE OF TEXAS
BLAYNE E. STANSBERRY
88646
LICENSED
PROFESSIONAL ENGINEER

Blayne Stansberry

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LOCKHART COMMERCIAL - PHASE 1
1816 S COLORADO ST, LOCKHART, TEXAS
EROSION CONTROL NOTES

DATE: 04/04/2025
PROJECT NO: 2025266
DESIGNED BY: BES

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WATER / WASTEWATER SEPARATION REQUIREMENTS

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY §290.44. WATER DISTRIBUTION.

LOCATION OF WATERLINES. THE FOLLOWING RULES APPLY TO INSTALLATIONS OF WATERLINES, WASTEWATER MAINS OR LATERALS, AND OTHER CONVEYANCES/APPURTENANCES IDENTIFIED AS POTENTIAL SOURCES OF CONTAMINATION. FURTHERMORE, ALL RATINGS SPECIFIED SHALL BE DEFINED BY ASTM OR AWWA STANDARDS UNLESS STATED OTHERWISE. NEW MAINS, SERVICE LINES, OR LATERALS ARE THOSE THAT ARE INSTALLED WHERE NO MAIN, SERVICE LINE, OR LATERAL PREVIOUSLY EXISTED, OR WHERE EXISTING MAINS, SERVICE LINES, OR LATERALS ARE REPLACED WITH PIPES OF DIFFERENT SIZE OR MATERIAL.

(1) WHEN NEW POTABLE WATER DISTRIBUTION LINES ARE CONSTRUCTED, THEY SHALL BE INSTALLED NO CLOSER THAN NINE FEET IN ALL DIRECTIONS TO WASTEWATER COLLECTION FACILITIES. ALL SEPARATION DISTANCES SHALL BE MEASURED FROM THE OUTSIDE SURFACE OF EACH OF THE RESPECTIVE PIECES.

(2) POTABLE WATER DISTRIBUTION LINES AND WASTEWATER MAINS OR LATERALS THAT FORM PARALLEL UTILITY LINES SHALL BE INSTALLED IN SEPARATE TRENCHES.

(3) NO PHYSICAL CONNECTION SHALL BE MADE BETWEEN A DRINKING WATER SUPPLY AND A SEWER LINE. ANY APPURTENANCE SHALL BE DESIGNED AND CONSTRUCTED SO AS TO PREVENT ANY POSSIBILITY OF SEWAGE ENTERING THE DRINKING WATER SYSTEM.

(4) WHERE THE NINE–FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE FOLLOWING CRITERIA SHALL APPLY.

(A) NEW WATERLINE INSTALLATION – PARALLEL LINES.

(I) WHERE A NEW POTABLE WATERLINE PARALLELS AN EXISTING, NON–PRESSURE OR PRESSURE RATED WASTEWATER MAIN OR LATERAL AND THE LICENSED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS IS ABLE TO DETERMINE THAT THE EXISTING WASTEWATER MAIN OR LATERAL IS NOT LEAKING, THE NEW POTABLE WATERLINE SHALL BE LOCATED AT LEAST TWO FEET ABOVE THE EXISTING WASTEWATER MAIN OR LATERAL, MEASURED VERTICALLY, AND AT LEAST FOUR FEET AWAY, MEASURED HORIZONTALLY, FROM THE EXISTING WASTEWATER MAIN OR LATERAL. EVERY EFFORT SHALL BE EXERTED NOT TO DISTURB THE BEDDING AND BACKFILL OF THE EXISTING WASTEWATER MAIN OR LATERAL.

(II) WHERE A NEW POTABLE WATERLINE PARALLELS AN EXISTING PRESSURE–RATED WASTEWATER MAIN OR LATERAL AND IT CANNOT BE DETERMINED BY THE LICENSED PROFESSIONAL ENGINEER IF THE EXISTING LINE IS LEAKING, THE EXISTING WASTEWATER MAIN OR LATERAL SHALL BE REPLACED WITH AT LEAST 150 PSI PRESSURE–RATED PIPE. THE NEW POTABLE WATERLINE SHALL BE LOCATED AT LEAST TWO FEET ABOVE THE NEW WASTEWATER LINE, MEASURED VERTICALLY, AND AT LEAST FOUR FEET AWAY, MEASURED HORIZONTALLY, FROM THE REPLACED WASTEWATER MAIN OR LATERAL.

(III) WHERE A NEW POTABLE WATERLINE PARALLELS A NEW WASTEWATER MAIN, THE WASTEWATER MAIN OR LATERAL SHALL BE CONSTRUCTED OF AT LEAST 150 PSI PRESSURE–RATED PIPE. THE NEW POTABLE WATERLINE SHALL BE LOCATED AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL, MEASURED VERTICALLY, AND AT LEAST FOUR FEET AWAY, MEASURED HORIZONTALLY, FROM THE WASTEWATER MAIN OR LATERAL.

(B) NEW WATERLINE INSTALLATION – CROSSING LINES.

(I) WHERE A NEW POTABLE WATERLINE CROSSES ABOVE A WASTEWATER MAIN OR LATERAL, THE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND MUST BE PERPENDICULAR TO THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. WHEN CROSSING AN EXISTING WASTEWATER MAIN OR LATERAL AND IT IS DISTURBED OR SHOWS SIGNS OF LEAKING, THE WASTEWATER MAIN OR LATERAL SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE–RATED PIPE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (V) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.

(I) THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE AN EXISTING, NON–PRESSURE RATED WASTEWATER MAIN OR LATERAL.

(II) THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE AN EXISTING, PRESSURE–RATED WASTEWATER MAIN OR LATERAL.

(II) WHERE A NEW POTABLE WATERLINE CROSSES A NEW, NON–PRESSURE RATED WASTEWATER MAIN OR LATERAL, THE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND SHALL BE PERPENDICULAR TO THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (V) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END. THE MATERIALS AND METHOD OF INSTALLATION SHALL CONFORM TO ONE OF THE FOLLOWING OPTIONS:

(I) WITHIN NINE FEET HORIZONTALLY OF EITHER SIDE OF THE WATERLINE, THE WASTEWATER PIPE AND JOINTS SHALL BE CONSTRUCTED WITH PIPE MATERIAL HAVING A MINIMUM PRESSURE RATING OF AT LEAST 150 PSI. AN ABSOLUTE MINIMUM VERTICAL SEPARATION DISTANCE OF TWO FEET SHALL BE PROVIDED. THE WASTEWATER MAIN OR LATERAL SHALL BE LOCATED BELOW THE WATERLINE.

(II) ALL SECTIONS OF WASTEWATER MAIN OR LATERAL WITHIN NINE FEET HORIZONTALLY OF THE WATERLINE SHALL BE ENCASED IN AN 18–FOOT (OR LONGER) SECTION OF PIPE. FLEXIBLE ENCASING PIPE SHALL HAVE A MINIMUM PIPE STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE ENCASING PIPE SHALL BE CENTERED ON THE WATERLINE AND SHALL BE AT LEAST TWO NOMINAL PIPE DIAMETERS LARGER THAN THE WASTEWATER MAIN OR LATERAL. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE–FOOT (OR LESS) INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. EACH END OF THE CASING SHALL BE SEALED WITH WATERTIGHT NON–SHRINK CEMENT GROUT OR A MANUFACTURED WATERTIGHT SEAL. AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF SIX INCHES BETWEEN THE ENCASEMENT PIPE AND THE WATERLINE SHALL BE PROVIDED. THE WASTEWATER LINE SHALL BE LOCATED BELOW THE WATERLINE.

(III) WHEN A NEW WATERLINE CROSSES UNDER A WASTEWATER MAIN OR LATERAL, THE WATERLINE SHALL BE ENCASED AS DESCRIBED FOR WASTEWATER MAINS OR LATERALS IN CLAUSE (II) OF THIS SUBPARAGRAPH OR CONSTRUCTED OF DUCTILE IRON OR STEEL PIPE WITH MECHANICAL OR WELDED JOINTS AS APPROPRIATE. AN ABSOLUTE MINIMUM SEPARATION DISTANCE OF ONE FOOT BETWEEN THE WATERLINE AND THE WASTEWATER MAIN OR LATERAL SHALL BE PROVIDED. WHEN A NEW WATERLINE CROSSES UNDER A WASTEWATER MAIN, THE PROCEDURES IN §217.53(D) OF THIS TITLE (RELATING TO PIPE DESIGN) MUST BE FOLLOWED.

(IV) WHERE A NEW POTABLE WATERLINE CROSSES A NEW, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER AND SHALL BE PERPENDICULAR TO THE WASTEWATER LINE SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTER LINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER PIPE SHALL HAVE A MINIMUM PRESSURE RATING OF AT LEAST 150 PSI. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED SAND (SEE CLAUSE (V) OF THIS SUBPARAGRAPH) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.

(V) WHERE CEMENT STABILIZED SAND BEDDING IS REQUIRED, THE CEMENT STABILIZED SAND SHALL HAVE A MINIMUM OF 10% CEMENT PER CUBIC YARD OF CEMENT STABILIZED SAND MIXTURE, BASED ON LOOSE DRY WEIGHT VOLUME (AT LEAST 2.5 BAGS OF CEMENT PER CUBIC YARD OF MIXTURE). THE CEMENT STABILIZED SAND BEDDING SHALL BE A MINIMUM OF SIX INCHES ABOVE AND FOUR INCHES BELOW THE WASTEWATER MAIN OR LATERAL. THE USE OF BROWN COLORING IN CEMENT STABILIZED SAND FOR WASTEWATER MAIN OR LATERAL BEDDING IS RECOMMENDED FOR THE IDENTIFICATION OF PRESSURE RATED WASTEWATER MAINS DURING FUTURE CONSTRUCTION.

(5) WATERLINE AND WASTEWATER MAIN MANHOLE OR LATERAL MANHOLE OR CLEANOUT SEPARATION. THE SEPARATION DISTANCE FROM A POTABLE WATERLINE TO A WASTEWATER MAIN MANHOLE OR LATERAL MANHOLE OR CLEANOUT SHALL BE A MINIMUM OF NINE FEET. WHERE THE NINE–FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE POTABLE WATERLINE SHALL BE ENCASED IN A JOINT OF AT LEAST 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE–FOOT INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHALL BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEALANT.

(6) LOCATION OF FIRE HYDRANTS. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.

(7) LOCATION OF POTABLE OR RAW WATER SUPPLY OR SUCTION LINES. SUCTION MAINS TO PUMPING EQUIPMENT SHALL NOT CROSS WASTEWATER MAINS, WASTEWATER LATERALS, OR WASTEWATER SERVICE LINES. RAW WATER SUPPLY LINES SHALL NOT BE INSTALLED WITHIN FIVE FEET OF ANY TILE OR CONCRETE WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE.

(8) PROXIMITY OF SEPTIC TANK DRAINFIELDS. WATERLINES SHALL NOT BE INSTALLED CLOSER THAN TEN FEET TO SEPTIC TANK DRAINFIELDS.

UTILITY CONSTRUCTION NOTES

1. THE CITY STANDARD CONSTRUCTION SPECIFICATIONS CURRENT AT THE TIME OF BIDDING SHALL COVER MATERIALS AND METHODS USED TO DO THIS WORK.
2. AT LEAST 48 HOURS BEFORE BEGINNING ANY WATER AND WASTEWATER CONSTRUCTION IN PUBLIC R.O.W. OR PUBLIC EASEMENT, THE CONTRACTOR SHALL NOTIFY THE CITY.
3. THE CONTRACTOR SHALL CONTACT THE "ONE CALL" SYSTEM AT 1–800–344–8377 FOR EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION IN ADVANCE OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES TO BE EXTENDED, TIED TO, OR ALTERED, OR SUBJECT TO DAMAGE/INCONVENIENCE BY THE CONSTRUCTION OPERATIONS. THE CITY OF AUSTIN WATER AND WASTEWATER MAINTENANCE RESPONSIBILITY ENDS AT R.O.W./EASEMENT LINES.
4. NO OTHER UTILITY SERVICE/APPURTENANCES SHALL BE PLACED NEAR THE PROPERTY LINE, OR OTHER ASSIGNED LOCATION DESIGNATED FOR WATER AND WASTEWATER UTILITY SERVICE THAT WOULD INTERFERE WITH THE WATER AND WASTEWATER SERVICES.
5. TRENCHING SHALL COMPLY WITH OHSA SAFETY REQUIREMENTS.
6. PRESSURE TAPS SHALL BE ALLOWED ON A CASE BY CASE BASIS, AS DETERMINED BY THE ENGINEER. NORMALLY PRESSURE TAPS WILL BE ALLOWED ONLY IN THE FOLLOWING CASES: A) A TEST SHUT OUT INDICATES AN ADEQUATE SHUT OUT TO PERFORM THE WORK IS NOT FEASIBLE B) MORE THAN 30 CUSTOMERS OR A SINGLE CRITICAL CUSTOMER (AS DEFINED BY AUSTIN WATER) WOULD BE IMPACTED BY THE SHUT OUT OR C) THE EXISTING WATER LINE WARRANTS IT.
7. THRUST RESTRAINT SHALL BE IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEM 510.3(22) AND SPL WW 27–A and WW 27–F.
8. FIRE HYDRANTS SHALL BE SET IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEM 511S.4 AND SHALL BE PAINTED FLYNT ALUMINUM OR EQUAL. FIRE HYDRANTS AND ASSOCIATED VALVES, TEN (10) YEARS AND OLDER WILL BE REQUIRED TO BE REPLACED WITH A NEW FIRE HYDRANT AND APPURTENANCES.
9. WATER LINE TESTING AND STERILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEMS 510.3 (27)–(29). FORCE MAIN PRESSURE TESTING SHALL BE CONDUCTED AND FALL UNDER THE SPECIFICATIONS AS WATER LINES (PRESSURE PIPE) OR AT THE PRESSURES SHOWN ON THE APPROVED PLANS.
10. ALL MATERIAL USED ON THIS PROJECT MUST BE LISTED ON THE STANDARD PRODUCTS LISTING. ANY MATERIAL NOT LISTED HAS TO GO THROUGH THE REVIEW OF THE STANDARDS COMMITTEE FOR REVIEW AND APPROVAL PRIOR TO START OF PROJECT. TESTING AND EVALUATION OF PRODUCTS ARE REQUIRED BEFORE APPROVAL WILL BE GIVEN ANY CONSIDERATION.
11. WHEN WATER SERVICES ARE DAMAGED AND THE SERVICE MATERIAL IS PE, THE LINE SHALL BE REPAIRED ONLY BY HEAT FUSION WELD OR REPLACED THE FULL LENGTH WITH TYPE K COPPER MATERIAL. ANY TIME PB IS DAMAGED OR TAMPERED WITH IN ANY WAY, THE SERVICE LINE SHALL BE REPLACED FULL LENGTH WITH TYPE K COPPER MATERIAL. NOTE: FULL LENGTH IS FROM CORPORATION STOP TO METER.
12. WHEN AN EXISTING WATERLINE SHUT OUT IS NECESSARY AND POSSIBLE, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTOR WHO WILL THEN NOTIFY AUSTIN WATER DISPATCH AND THE AFFECTED CUSTOMERS A MINIMUM OF SEVENTY–TWO (72) HOURS IN ADVANCE.
13. THE CONTRACTOR SHALL NOTIFY THE CITY PUBLIC WORKS DEPARTMENT A MINIMUM OF 72 HOURS PRIOR TO RELOCATING ANY DOMESTIC OR FIRE DEMAND WATER METERS. THE CONTRACTOR SHALL CAREFULLY REMOVE ALL METERS AND METERS BOXES THAT ARE INDICATED TO BE RELOCATED OR SALVAGED. THE CONTRACTOR SHALL INSTALL THE REMOVED METER OR CITY PROVIDED METER AT THE NEW LOCATION INDICATED ON THE CONSTRUCTION PLANS.
14. WATER AND WASTEWATER SERVICES WILL NEED TO BE REPLACED UP TO THE MAIN. REPAIR COUPLINGS ARE NOT ALLOWED ON NEW INSTALLATIONS.
15. ALL MANHOLES IN UNPAVED AREAS PROVIDING DIRECT ACCESS TO A WASTEWATER LINE SHALL BE WATERTIGHT AND BEAR THE WORDING AND INSIGNIA FOR THE CITY OF LOCKHART.
16. THE CONTRACTOR SHALL VERIFY ALL VERTICAL AND HORIZONTAL LOCATIONS OF EXISTING UTILITIES, BELOW GROUND AND OVERHEAD, PRIOR TO STARTING ONSITE UTILITY WORK.
17. ALL WATER AND WASTEWATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH THE SEPARATION DISTANCES INDICATED IN CHAPTER 290 – DRINKING WATER STANDARDS, CHAPTER 217 – DESIGN CRITERIA FOR SEWERAGE SYSTEMS AND CHAPTER 210 – DESIGN CRIERIA FOR RECLAIMED SYSTEMS OF TCEQ RULES.
18. CONTRACTOR'S PERSONNEL THAT PERFORM BUTT FUSION AND ELECTROFUSION ON OR TO HDPE PIPE AND FITTINGS MUST HAVE CURRENT QUALIFICATION TRAINING CERTIFICATE ISSUED BY MCELROY OR COMPARABLE TRAINING PROGRAM.
19. SHOP DRAWINGS SIGNED AND SEALED BY A PROFESSIONAL STRUCTURAL ENGINEER, REGISTERED IN THE STATE OF TEXAS, SHALL BE SUBMITTED TO THE PUBLIC WORKS DEPARTMENT FOR APPROVAL FOR LARGE DIAMETER PRE–CAST MANHOLES, JUNCTION BOXES, WET WELLS, AND SIMILAR STRUCTURES. THE SHOP DRAWINGS SHALL INCLUDE FLOWLINE ELEVATIONS OF ALL INCOMING AND OUTGOING PIPES, ELEVATION OF TRANSITION FROM LARGE DIAMETER SECTIONS TO 48" ID SECTION, TOP OF MANHOLE ELEVATION, SURROUNDING GROUND ELEVATION, AS WELL AS SPECIAL CONSTRUCTION CONSIDERATIONS THAT ARE SPECIFIED IN THE CONTRACT DRAWINGS.
20. VALVE STEM EXTENSIONS SHALL CONSIST OF A SINGLE PIECE OF IRON ROD OF THE REQUIRED LENGTH WITH A SOCKET ON ONE END AND NUT ON THE OTHER.
21. ALL POTABLE WATER SYSTEM COMPONENTS, SHALL BE ESSENTIALLY "LEAD FREE" ACCORDING TO THE US SAFE DRINKING WATER ACT. EXAMPLES ARE VALVES (CORPORATION STOP, CURB STOP, AND PRESSURE REDUCING), NIPPLES, BUSHINGS, PIPE, FITTINGS, BACKFLOW PREVENTERS AND FIRE HYDRANTS. TAPPING SADDLES AND 2 INCH AND LARGER GATE VALVES ARE THE ONLY COMPONENTS EXEMPT FROM THIS REQUIREMENT. COMPONENTS THAT ARE NOT CLEARLY IDENTIFIED BY THE MANUFACTURER AS MEETING THIS REQUIREMENT EITHER BY MARKINGS ON THE COMPONENT OR ON THE PACKAGING SHALL NOT BE INSTALLED.
22. ALL FIRE HYDRANTS AND VALVES THAT ARE TO BE ABANDONED SHALL BE REMOVED, SALVAGED AND RETURNED TO THE CITY.
23. ALL EXISTING WATER METERS IDENTIFIED TO BE RELOCATED OR ABANDONED AT THE DEVELOPMENT, SHALL BE REMOVED FROM THE METER BOX PRIOR TO CONSTRUCTION AND GIVEN IMMEDIATELY TO THE CITY.
24. NO CONNECTION MAY BE MADE BETWEEN THE PRIVATE PLUMBING AND CITY WATER INFRASTRUCTURE UNTIL A CITY APPROVED WATER METER HAS BEEN INSTALLED.
25. ALL GRAVITY LINES SHALL BE INSTALLED DOWNSTREAM TO UPSTREAM.
26. METER BOXES AND CLEAN OUTS SHALL NOT BE LOCATED WITHIN PAVED AREAS SUCH AS DRIVEWAYS AND SIDEWALKS.

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BLAYNE E. STANSBERRY, P.E. 88646 ON APRIL 4, 2025

STATE OF TEXAS
BLAYNE E. STANSBERRY
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Blayne Stansberry

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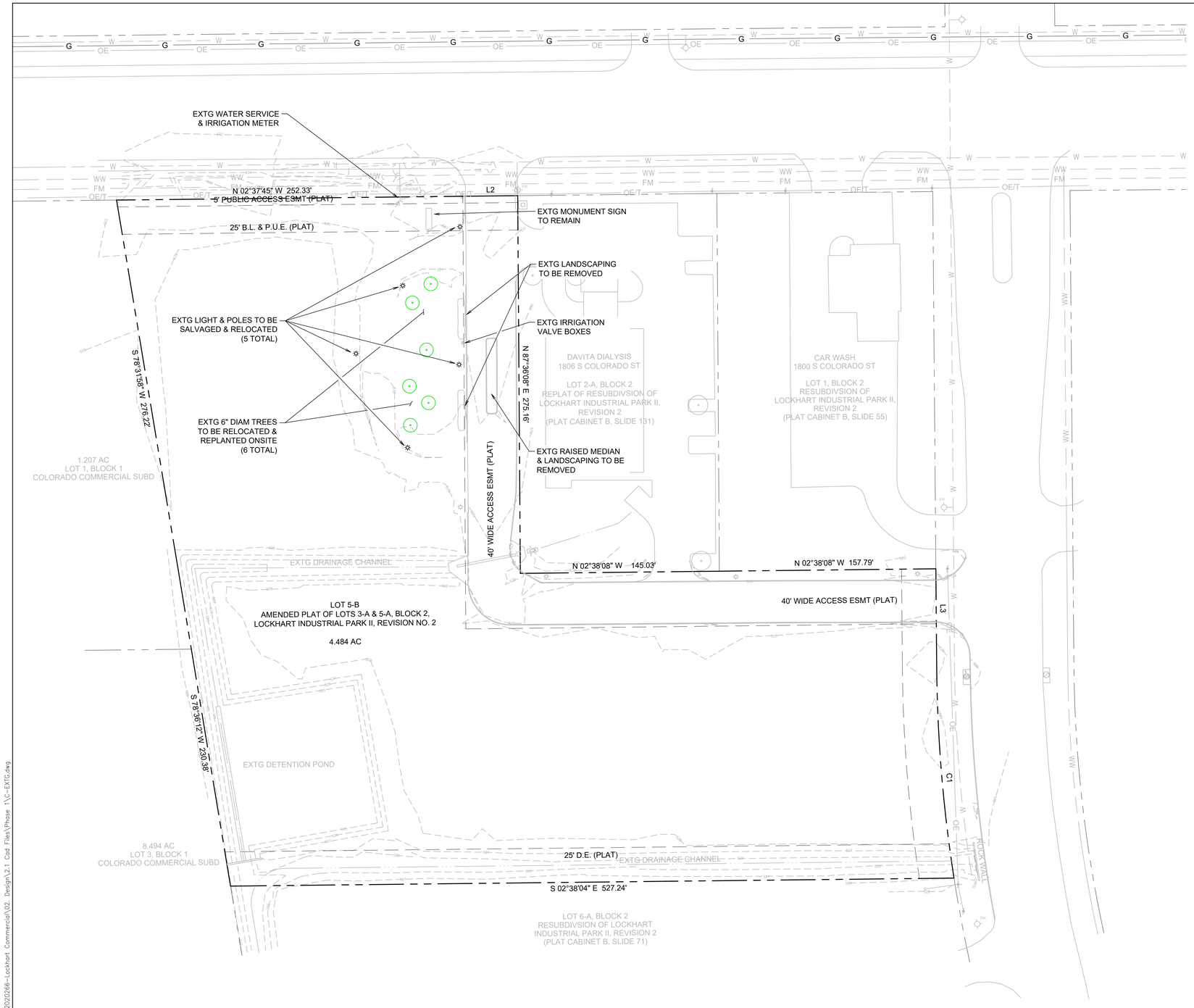
LOCKHART COMMERCIAL - PHASE 1
1816 S COLORADO ST, LOCKHART, TEXAS

UTILITY NOTES

DATE: 04/04/2025
PROJECT NO: 2025266
DESIGNED BY: BES

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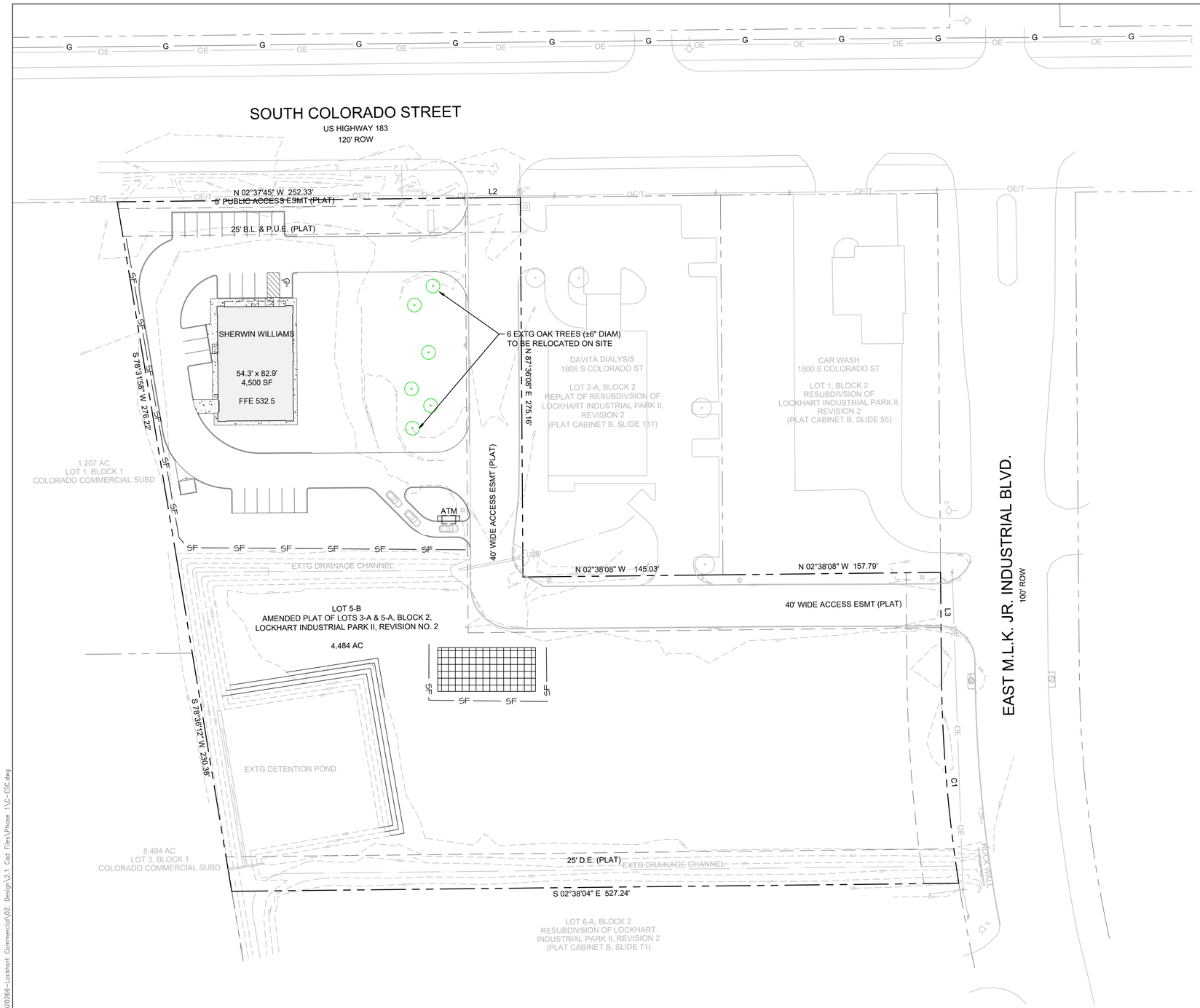
LOCKHART COMMERCIAL - PHASE 1
1816 S COLORADO ST, LOCKHART, TEXAS

EXISTING CONDITIONS

DATE: 04/04/2025
PROJECT NO: 2025266
DESIGNED BY: BES

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0 40' 80'

EROSION CONTROL LEGEND

- LOC — LIMIT OF CONSTRUCTION (__ AC)
- SF — SILT FENCE
- TP — TREE PROTECTION FENCING
- MS — MULCH SOCK
- DD — DIVERSION DIKE
- TFD — TRIANGULAR SEDIMENT FILTER DIKE
- IP — INLET PROTECTION
- RB — ROCK BERM
- 605 — EXSTING CONTOUR
- TREE TO BE SAVED
- TREE TO BE REMOVED
- PROTECTED CLASS TREE
- STABILIZED CONSTRUCTION ENTRANCE
- TEMPORARY SPOILS STORAGE /CONSTRUCTION STAGING
- SOIL RETENTION BLANKET

REV	DESCRIPTION	DATE	BY

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LOCKHART COMMERCIAL - PHASE 1
1816 S COLORADO ST, LOCKHART, TEXAS
EROSION CONTROL PLAN

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STATE OF TEXAS
BLAYNE E. STANSBERRY
88646
LICENSED PROFESSIONAL ENGINEER

DATE: 04/04/2025
PROJECT NO: 2025266
DESIGNED BY: BES

C2.0
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SOUTH COLORADO STREET
US HIGHWAY 183
120' ROW

N 02°37'45" W 252.33'
5' PUBLIC ACCESS ESMT (PLAT)
L2
RELOCATED
6" LIVE OAK (TYP)
6 TOTAL
25' B.L. & P.U.E. (PLAT)
50' RADIUS
6" CURB (TYP)
END 6" CURB
FLAT CURB
6' SIDEWALK
5' SIDEWALK
PHASE 1
SHERWIN WILLIAMS
54.3' x 82.9'
4,500 SF
FFE 532.5
PHASE 2
RETAIL A
5,500 SF
FFE 532.5
3' MIN. CONCRETE AROUND
BUILDING FOUNDATION
S 78°31'58" W 276.22'
10' CONCRETE
LOADING AREA
END 6" CURB
FLAT CURB
1.207 AC
LOT 1, BLOCK 1
COLORADO COMMERCIAL SUBD
DUMPSTER ENCLOSURE
FLAT CURB ALONG HEAD
OF PARKING SPACES
ATM
PROPOSED 4'X16'
CONCRETE PAD FOR
ATM STRUCTURE
40' WIDE ACCESS ESMT (PLAT)
EXISTING CHANNEL TO REMAIN
EXTG DRAINAGE CHANNEL
N 87°36'08" E 275.16'
N 02°38'08" W 145.03'
DAVITA DIALYSIS
1806 S COLORADO ST
LOT 2-A, BLOCK 2
REPLAT OF RESUBDIVISION OF
LOCKHART INDUSTRIAL PARK II,
REVISION 2
(PLAT CABINET B, SLIDE 131)
TELEPHONE
LOT 5-B
AMENDED PLAT OF LOTS 3-A & 5-A, BLOCK 2,
LOCKHART INDUSTRIAL PARK II, REVISION NO. 2
4.484 AC
REFER TO SHEET ___ FOR
DETENTION POND EXPANSION

0 20' 40'

SITE CALCULATIONS

1) SITE AREA 4.48 AC

5) IMPERVIOUS COVER

PROPOSED IC - PHASE 1			
BUILDING	4,515 SF	0.10 AC	2.31%
SIDEWALK	1,318 SF	0.03 AC	0.67%
PARKING/DRIVES	20,577 SF	0.47 AC	10.54%
TOTAL	**26,410 SF**	**0.61 AC**	**13.52%**
PROPOSED IC - PHASE 2			
BUILDING	5,500 SF	0.13 AC	2.82%
SIDEWALK	1,709 SF	0.04 AC	0.88%
PARKING/DRIVES	8,494 SF	0.19 AC	4.35%
TOTAL	**15,703 SF**	**0.36 AC**	**8.04%**
TOTAL			
BUILDING	10,015 SF	0.23 AC	5.13%
SIDEWALK	3,027 SF	0.07 AC	1.55%
PARKING/DRIVES	29,071 SF	0.67 AC	14.89%
TOTAL	**42,113 SF**	**0.97 AC**	**21.57%**

PARKING

1) **REQUIRED SPACES**

PHASE 1 - SHERWIN WILLIAMS		
BUILDING AREA	4,500 SF	
1 SPACE/300 SF		15 SPACES
+ EMPLOYEES		3 PER SHIFT
TOTAL		18 SPACES
PHASE 2 - RETAIL A		
BUILDING AREA	5,500 SF	
1 SPACE/300 SF		18 SPACES
+ EMPLOYEES		6 PER SHIFT
TOTAL		24 SPACES
TOTAL REQUIRED PARKING		**42**

2) **PROVIDED SPACES**

PHASE 1	
STANDARD SPACES	22
ACCESSIBLE SPACES	1
TOTAL SPACES	23
PHASE 2	
STANDARD SPACES	29
ACCESSIBLE SPACES	1
TOTAL SPACES	30
TOTAL PROVIDED PARKING	**53**

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STATE OF TEXAS
BLAYNE E. STANSBERRY
88646
LICENSED PROFESSIONAL ENGINEER

REV | DESCRIPTION | DATE | BY

stansberry engineering co.
Texas Registered Engineering Firm F-8276 phone 512 / 292-8000 www.stansberryengineering.com

LOCKHART COMMERCIAL - PHASE 1
1816 S COLORADO ST, LOCKHART, TEXAS
SITE PLAN

DATE: 04/04/2025
PROJECT NO: 2025266
DESIGNED BY: BES

C3.0
8 OF 18

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SOUTH COLORADO STREET
US HIGHWAY 183
120' ROW

0 20' 40'

OE/T OE/T OE/T OE/T N 02°37'45" W 252.33' OE/T OE/T OE/T OE/T L2 OE/T OE/T OE/T OE/T OE

5' PUBLIC ACCESS ESMT (PLAT)

25' B.L. & P.U.E. (PLAT)

81'

18'

R25'

R2'

76.67'

END 6" CURB

26'

R35'

R35'

6' SWLK

18'

54'

55.04'

59.00'

5' SWLK

PHASE 1
SHERWIN WILLIAMS

54.3' x 82.9'
4,500 SF

FFE 532.5

27'

83.54'

25'

10'

S 78°31'58" W 276.22'

45.83'

R50'

PHASE 2
RETAIL A

5,500 SF

FFE 532.5

R25'

36.61'

END 6" CURB

FLAT CURB

R25'

R50'

25'

R10'

R6'

R25'

18'

54'

FLAT CURB ALONG HEAD
OF PARKING SPACES

R18'

ATM

11'

R29'

1.207 AC
LOT 1, BLOCK 1
COLORADO COMMERCIAL SUBD

40' WIDE ACCESS ESMT (PLAT)

N 87°36'08" E 275.16'

DAVITA DIALYSIS
1806 S COLORADO ST

LOT 2-A, BLOCK 2
REPLAT OF RESUBDIVSION OF
LOCKHART INDUSTRIAL PARK II,
REVISION 2
(PLAT CABINET B, SLIDE 131)

N 02°38'08" W 145.03'

EXTG DRAINAGE CHANNEL

LOT 5-B
AMENDED PLAT OF LOTS 3-A & 5-A, BLOCK 2,
LOCKHART INDUSTRIAL PARK II, REVISION NO. 2

4.484 AC

PLOTTED: Apr 09, 2025 FILE NAME: X:\2020266-Lockhart Commercial\02. Design\2.1 Cad Files\Phase 1\C-DIM.dwg

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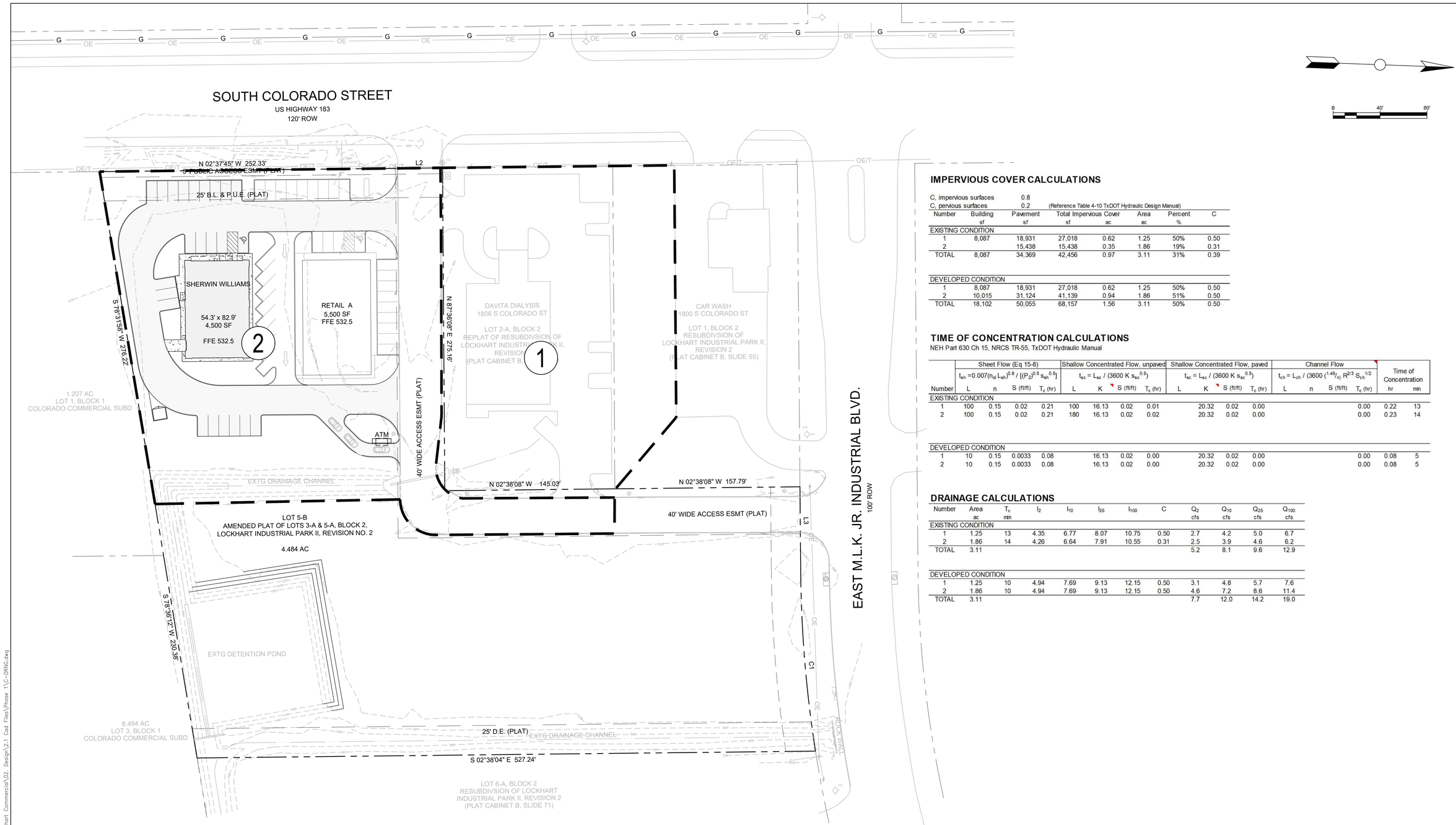
LOCKHART COMMERCIAL - PHASE 1
1816 S COLORADO ST, LOCKHART, TEXAS
DIMENSION CONTROL

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STATE OF TEXAS
BLAYNE E. STANSBERRY
88646
LICENSED PROFESSIONAL ENGINEER

DATE: 04/04/2025
PROJECT NO: 2025266
DESIGNED BY: BES

C4.0
9 OF 18



IMPERVIOUS COVER CALCULATIONS

C, impervious surfaces 0.8
C, pervious surfaces 0.2 (Reference Table 4-10 TxDOT Hydraulic Design Manual)

Number	Building sf	Pavement sf	Total Impervious Cover sf	ac	Area ac	Percent %	C
EXISTING CONDITION							
1	8,087	18,931	27,018	0.62	1.25	50%	0.50
2		15,438	15,438	0.35	1.86	19%	0.31
TOTAL	8,087	34,369	42,456	0.97	3.11	31%	0.39
DEVELOPED CONDITION							
1	8,087	18,931	27,018	0.62	1.25	50%	0.50
2	10,015	31,124	41,139	0.94	1.86	51%	0.50
TOTAL	18,102	50,055	68,157	1.56	3.11	50%	0.50

TIME OF CONCENTRATION CALCULATIONS

NEH Part 630 Ch 15, NRCS TR-55, TxDOT Hydraulic Manual

	Sheet Flow (Eq 15-8) $t_{sh}=0.007(n_{of}L_{sh})^{0.8}/[(P_2)^{0.5}s_{sh}^{0.5}]$				Shallow Concentrated Flow, unpaved $t_{sc}=L_{sc}/(3600\,K\,s_{sc}^{0.5})$				Shallow Concentrated Flow, paved $t_{sc}=L_{sc}/(3600\,K\,s_{sc}^{0.5})$				Channel Flow $t_{ch}=L_{ch}/(3600\,(^{1.49}/_{n})\,R^{2/3}\,S_{ch}^{1/2})$				Time of Concentration	
Number	L	n	S (ft/ft)	T_c (hr)	L	K	S (ft/ft)	T_c (hr)	L	K	S (ft/ft)	T_c (hr)	L	n	S (ft/ft)	T_c (hr)	hr	min
EXISTING CONDITION																		
1	100	0.15	0.02	0.21	100	16.13	0.02	0.01		20.32	0.02	0.00				0.00	0.22	13
2	100	0.15	0.02	0.21	180	16.13	0.02	0.02		20.32	0.02	0.00				0.00	0.23	14
DEVELOPED CONDITION																		
1	10	0.15	0.0033	0.08		16.13	0.02	0.00		20.32	0.02	0.00				0.00	0.08	5
2	10	0.15	0.0033	0.08		16.13	0.02	0.00		20.32	0.02	0.00				0.00	0.08	5

DRAINAGE CALCULATIONS

Number	Area ac	T_c min	I_2	I_{10}	I_{25}	I_{100}	C	Q_2 cfs	Q_{10} cfs	Q_{25} cfs	Q_{100} cfs
EXISTING CONDITION											
1	1.25	13	4.35	6.77	8.07	10.75	0.50	2.7	4.2	5.0	6.7
2	1.86	14	4.26	6.64	7.91	10.55	0.31	2.5	3.9	4.6	6.2
TOTAL	3.11							5.2	8.1	9.6	12.9
DEVELOPED CONDITION											
1	1.25	10	4.94	7.69	9.13	12.15	0.50	3.1	4.8	5.7	7.6
2	1.86	10	4.94	7.69	9.13	12.15	0.50	4.6	7.2	8.6	11.4
TOTAL	3.11							7.7	12.0	14.2	19.0

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STATE OF TEXAS
BLAYNE E. STANSBERRY
88646
LICENSED PROFESSIONAL ENGINEER

REV | DESCRIPTION | DATE | BY

stansberry engineering co.
Texas Registered Engineering Firm F-8276 phone 512 / 292-8000 www.stansberryengineering.com

LOCKHART COMMERCIAL - PHASE 1
1816 S COLORADO ST, LOCKHART, TEXAS
DRAINAGE PLAN

DATE: 04/04/2025
PROJECT NO: 2025266
DESIGNED BY: BES

C5.0
10 OF 18

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SOUTH COLORADO STREET
US HIGHWAY 183
120' ROW

0 20' 40'

N 02°37'45" W 252.33'

5' PUBLIC ACCESS ESMT (PLAT)

25' B.L. & P.U.E. (PLAT)

L2

TELEPHONE

FH

WM

530.84 | 531.22 | 530.75 | 531.13 | 531.66 | 531.06

END 6" CURB

FLAT CURB

6" CURB (TYP)

530.76 | 531.03 | 531.10 | 531.54 | 530.59

530.55 | 531.39 | 531.39 | 532.0

6' SIDEWALK

5' SIDEWALK

530.27 | 531.9 | 530.33 | 531.9 | 531.22

PHASE 1
SHERWIN WILLIAMS

54.3' x 82.9'
4,500 SF

FFE 532.5

PHASE 2
RETAIL A

5,500 SF

FFE 532.5

3' MIN. CONCRETE AROUND
BUILDING FOUNDATION

531.11 | 530.04

S 78°31'58" W 276.22'

DAVITA DIALYSIS
1806 S COLORADO ST

LOT 2-A, BLOCK 2
REPLAT OF RESUBDIVISION OF
LOCKHART INDUSTRIAL PARK II,
REVISION 2
(PLAT CABINET B, SLIDE 131)

N 87°36'08" E 275.16'

1.207 AC
LOT 1, BLOCK 1
COLORADO COMMERCIAL SUBD

529.83 | 529.81 | 529.83 | 530.14 | 530.4 | 529.40

END 6" CURB

FLAT CURB

529.83 | 529.69 | 529.69 | 530.02 | 530.19 | 530.27 | 529.16

DUMPSTER ENCLOSURE

530.33 | 529.6 | 529.6

FLAT CURB ALONG HEAD
OF PARKING SPACES

PROPOSED 4'X16'
CONCRETE PAD FOR
ATM STRUCTURE

40' WIDE ACCESS ESMT (PLAT)

ATM | 529.92 | 529.87 | 528.93 | 528.73

6" CURB CUT
529.02

EXISTING CHANNEL TO REMAIN

EXTG DRAINAGE CHANNEL

N 02°38'08" W 145.03'

LOT 5-B
AMENDED PLAT OF LOTS 3-A & 5-A, BLOCK 2,
LOCKHART INDUSTRIAL PARK II, REVISION NO. 2

4.484 AC

REFER TO SHEET ___ FOR
DETENTION POND EXPANSION

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STATE OF TEXAS
BLAYNE E. STANSBERRY
88646
LICENSED
PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE	BY

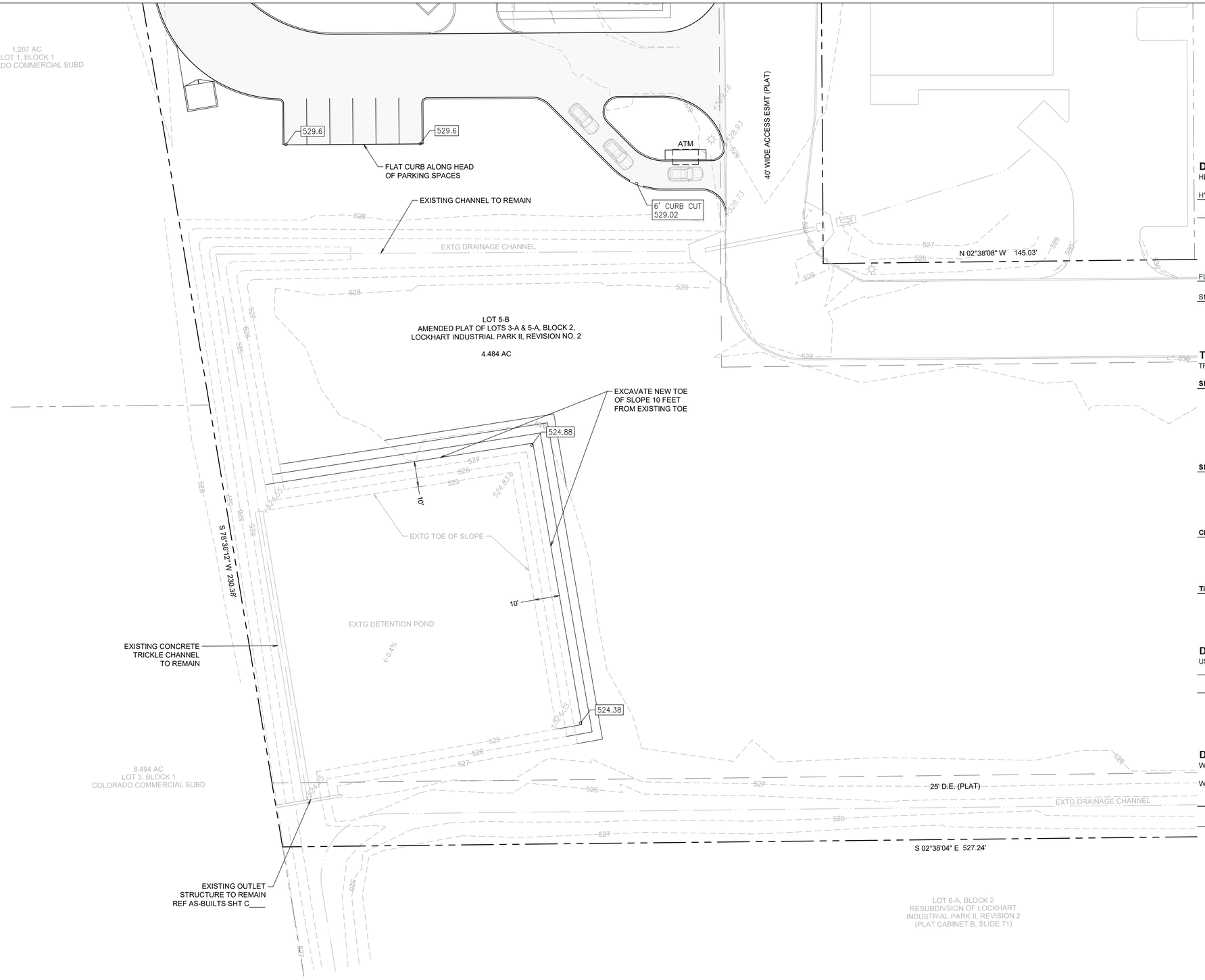
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Texas Registered Engineering Firm F-8276 phone 512 / 292-8000 www.stansberryengineering.com

LOCKHART COMMERCIAL - PHASE 1
1816 S COLORADO ST, LOCKHART, TEXAS
GRADING PLAN

DATE: 04/04/2025
PROJECT NO: 2025266
DESIGNED BY: BES

C6.0
11 OF 18

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0 20' 40'

DETENTION SUMMARY

HEC-HMS using SCS Methodology

HYDROLOGY VARIABLES

Area Number	Area Acres	Area Sq. Mile	I.C. %	CN	TLAG (TR55) min.
1 PRE	1.25	0.00195	0%	78.0	5.4
2 PRE	1.86	0.00291	0%	78.0	5.8
1 DEV	1.25	0.00195	50%	87.9	4.3
2 DEV	1.86	0.00291	51%	88.1	3.2

FLOW RESULTS

Storm Event	$Q_{undeveloped}$ (cfs)	$Q_{proposed}$ (cfs)	WSEL
2-yr	6.2	3.9	525.60
10-yr	13.4	12.2	525.9
25-yr	19.1	18.4	526.1
100-yr	29.9	28.5	526.3

TIME OF CONCENTRATION

TR-55 SCS Method

		Drainage Area & Condition	1 Predev	2 Predev	1 Dev	2 Dev
Sheet Flow			short grass prairie	short grass prairie	grass	grass
Surface Description (Table 3-1)						
Manning's n (Table 3-1)			0.15	0.15	0.15	0.15
Flow Length, L (<300 ft. 100'max COA DCM)	ft		100	100	50	30
Two -yr rainfall, P_2	in		4.14	4.14	4.14	4.14
Land Slope, s	ft/ft		0.02	0.02	0.02	0.02
$T_{sheet} = 0.007\ (nL)^{0.8}/(P_2^{0.5}s^{0.4})$	hr		0.14	0.14	0.08	0.05
Shallow Concentrated Flow (Gutter)						
Surface Description (paved or unpaved)			unpaved	unpaved	paved	paved
Flow Length, L	ft		100	180	300	200
Watercourse Slope	ft/ft		0.02	0.02	0.02	0.005
Average velocity, V (Figure 3-1)	ft/s		2.2	2.2	2.2	1.4
$T_{shallow} = L/3600V$	hr		0.01	0.02	0.04	0.04
Channel or Storm Drain Flow						
Flow Length, L	ft					
Watercourse Slope	ft/ft					
Average velocity, V (Manning's eqn)	ft/s					
$T_{channel} = L/3600V$	hr		0	0	0	0
Time of Concentration						
$T_C = T_{sheet} + T_{shallow + Tchannel}$	hr		0.15	0.16	0.12	0.09
	min		9.00	9.60	7.20	5.40
$T_{lag} = 0.6\ T_C$	hr		0.09	0.10	0.07	0.05
	min		5.40	5.76	4.32	3.24

DETENTION POND VOLUME CALCULATIONS

USING AVERAGE END AREA METHOD

Stage (ft. msl)	Area (sf)	Height (ft)	Avg. End Area	Cumul. Vol. (cf)	Cumul. Vol. (ac-ft)
524.25	0	----	0.00	0.00	----
525	13901	0.75	5212.88	5212.88	0.12
525.5	17904	0.50	7951.25	13164.13	0.30
526	17904	0.50	7951.25	21115.38	0.48
527	21524	1.00	19714.00	40829.38	0.94

DETENTION DISCHARGE CALCULATIONS

WEIR 1	Length	0.33	FT
	Elev	524.25	FT
WEIR 2	Length	10.00	FT
	Elev	525.50	FT

Stage (ft. msl)	Q_{WEIR} (cfs)	Q_{WEIR} (cfs)	Q_{total} (cfs)
524.25	0.00	--	0.00
525	0.71	--	0.71
525.5	1.54	0.00	1.54
526	2.54	11.77	14.32
527	5.01	61.18	66.19

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STATE OF TEXAS
BLAYNE E. STANSBERRY
88646
LICENSED
PROFESSIONAL ENGINEER

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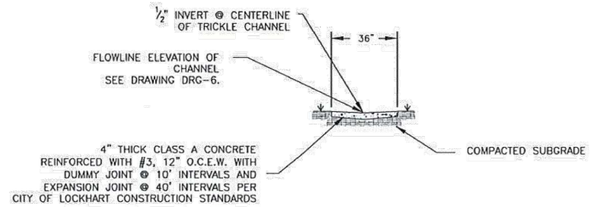
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Texas Registered Engineering Firm F-8276 phone 512 / 292-8000 www.stansberryengineering.com

LOCKHART COMMERCIAL - PHASE 1
1816 S COLORADO ST, LOCKHART, TEXAS
DETENTION PLAN

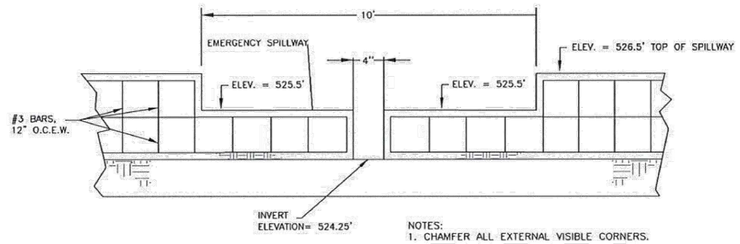
DATE: 04/04/2025
PROJECT NO: 2025266
DESIGNED BY: BES

C7.1
12 OF 18

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D7 DETAIL (TYP)
TRICKLE CHANNEL
N.T.S.

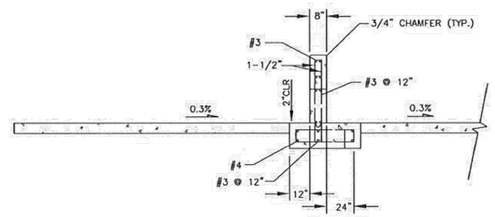


NOTES:
1. CHAMFER ALL EXTERNAL VISIBLE CORNERS.

2. CONCRETE DRAINAGE STRUCTURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF LOCKHART CONSTRUCTION STANDARDS, CHAPTER 4, SECTION VII.

3. ALL CONCRETE AND REINFORCING STEEL SHALL BE IN COMPLIANCE WITH THE CITY OF LOCKHART CONCRETE AND REINFORCEMENT CONSTRUCTION STANDARDS, CHAPTER 5. CONCRETE SHALL BE CLASS A. BAR REINFORCEMENT SHALL CONFORM TO ASTM A-615, GRADE 60.

D8 SECTION
DETENTION POND OUTLET STRUCTURE
N.T.S.



D9 SECTION
DETENTION POND WALL @ OUTLET
N.T.S.

EXISTING POND OUTFALL STRUCTURE - AS-BUILT
NTS

REFERENCE ENGINEERING CONSTRUCTION DOCUMENTS FOR FIRST LOCKHART NATIONAL BANK ATM FACILITY COMPLETED BY GALLUP ENGINEERING / R. ANNE GALLUP, P.E., DATED 4/5/2013

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STATE OF TEXAS
BLAYNE E. STANSBERRY
88646
LICENSED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE	BY

stansberry engineering co.
Texas Registered Engineering Firm F-8276 phone 512 / 292-8000 www.stansberryengineering.com

LOCKHART COMMERCIAL - PHASE 1
1816 S COLORADO ST, LOCKHART, TEXAS
DETENTION DETAILS

DATE: 04/04/2025
PROJECT NO: 2025266
DESIGNED BY: BES

C7.2
13 OF 18

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8" WATER LINE

0 20' 40'

INSTALL DOUBLE WASTEWATER SERVICE SERVING SHERWIN WILLIAMS AND RETAIL A PER DETL WW-8

INSTALL SINGLE WATER SERVICE PER DETL W-4 3/4" COPPER TUBING

EXTG WATER SERVICE
1.5" SERVICE LINE
1" WATER METER (IRRIGATION)
1" UNUSED SERVICE CONNECTION

INSTALL METER BOX FOR FUTURE METER

SOUTH COLORADO STREET

US HIGHWAY 183
120' ROW

18" WATER
12" WASTEWATER
8" FORCE MAIN
TELEPHONE

118.6'
10.0'
163.8'

5/8" METER

EXTG IRRIGATION METER TO REMAIN IN SERVICE

EXTG HYDRANT

112 LF 4" SDR-26 SEWER PIPE @ 5%

60 LF 4" SDR-26 SEWER PIPE @ 5%

136 LF 3/4" SCH 40 WATER LINE

54 LF 2" SCH 40 WATER LINE

10'
10'

50 LF 6" Ø SLEEVE FOR ELECTRICAL

40 LF 6" Ø SLEEVE FOR IRRIGATION

10'

TWO-WAY PRIVATE CLEANOUT DETL 1/C9.5

WASTEWATER STUB /PLUG FOR FUTURE EXTENSION TO RETAIL A FL=526.5

5'

WATER LINE STUB EXTEND 5' BEYOND PAVEMENT

77 LF 1.5" SCH 40 WATER LINE

SHERWIN WILLIAMS

2.3'

1'

WW CLEANOUT FL=529 (3.5' DEEP)

54.3' x 82.9'
4,500 SF

FFE 532.5

REF MEP FOR WATER CONNECTION

RETAIL A

5,500 SF

FFE 532.5

ATM

DAVITA DIALYSIS
1806 S COLORADO ST

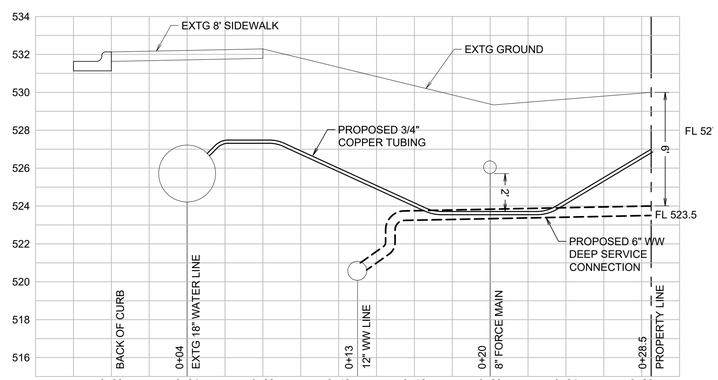
LOT 2-A, BLOCK 2
REPLAT OF RESUBDIVISION OF
LOCKHART INDUSTRIAL PARK II,
REVISION 2
(PLAT CABINET B, SLIDE 131)

CAR WASH
1800 S COLORADO ST

LOT 1, BLOCK 2
RESUBDIVISION OF
LOCKHART INDUSTRIAL PARK II,
REVISION 2
(PLAT CABINET B, SLIDE 55)

18" WATER LINE

L SUBD



1 SERVICE LINE PROFILES
SCALE 1" = 4'

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STATE OF TEXAS
BLAYNE E. STANSBERRY
88646
LICENSED
PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE	BY

stansberry engineering co.
Texas Registered Engineering Firm F-8276 phone 512 / 292-8000 www.stansberryengineering.com

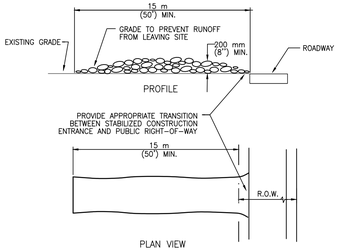
LOCKHART COMMERCIAL - PHASE 1
1816 S COLORADO ST, LOCKHART, TEXAS

UTILITY PLAN

DATE: 04/04/2025
PROJECT NO: 2025266
DESIGNED BY: BES

C8.0
14 OF 18

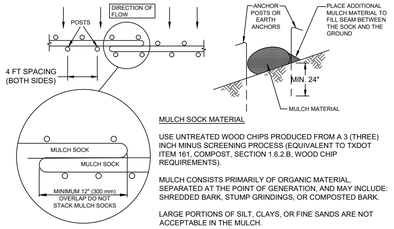
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NOTES:

1. STONE SIZE: 75–125 mm (3–5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

1 — CONSTRUCTION ENTRANCE
NTS



MULCH SOCK MATERIAL

USE UNTREATED WOOD CHIPS PRODUCED FROM A 3 (THREE) INCH MINUS SCREENING PROCESS (EQUIVALENT TO TXDOT ITEM 161, COMPOST, SECTION 1.6.2.B, WOOD CHIP REQUIREMENTS).

MULCH CONSISTS PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, OR COMPOSTED BARK.

LARGE PORTIONS OF SILT, CLAYS, OR FINE SANDS ARE NOT ACCEPTABLE IN THE MULCH.

NOTES:

1. STEEL OR WOOD POSTS WHICH SUPPORT THE MULCH SOCK SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 600mm (24 inches). IF WOOD POSTS CANNOT ACHIEVE 600mm (24 inches) DEPTH, USE STEEL POSTS. EARTH ANCHORS ARE ALSO ACCEPTABLE.

2. THE TOE OF THE MULCH SOCK SHALL BE PLACED SO THAT THE MULCH SOCK IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. IN ORDER TO PREVENT WATER FROM FLOWING BETWEEN THE JOINTS OF ADJACENT ENDS OFMULCH SOCKS, LAP THE ENDS OF ADJACENT MULCH SOCKS A MINIMUM OF 300mm (12 inches).

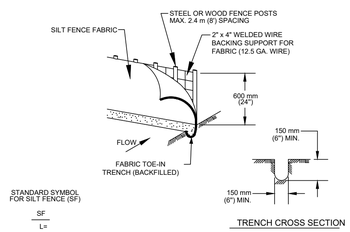
3. MULCH MATERIAL MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH; IT IS NOT ACCEPTABLE FOR THE MULCH MATERIAL TO CONTAIN GROUND CONSTRUCTION DEBRIS, BIOSOLIDS, OR MANURE.

4. SOCK MATERIAL WILL BE 100% BIODEGRADABLE, ~~PHOTODEGRADABLE, OR RECYCLABLE~~ SUCH AS BURLAP, TWINE, ~~UV-PHOTOBIODEGRADABLE PLASTIC, POLYESTER~~, OR ANY OTHER ACCEPTABLE MATERIAL.

5. MULCH SOCKS SHOULD BE USED AT THE BASE OF SLOPES NO STEEPER THAN 2:1 AND SHOULD NOT EXCEED THE MAXIMUM SPACING CRITERIA PROVIDED IN CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL TABLE 1.4.5.F.1 FOR A GIVEN SLOPE CATEGORY.

6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

2 — MULCH SOCK
NTS



1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 inches) DEPTH, USE STEEL POSTS.

2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.

3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 inches) DEEP AND 150 mm (6 inches) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

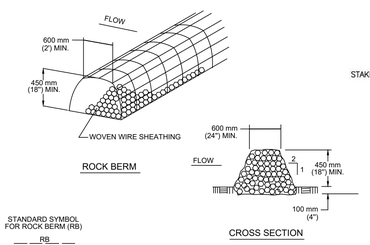
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE , WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.

5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTY AS NEEDED.

6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

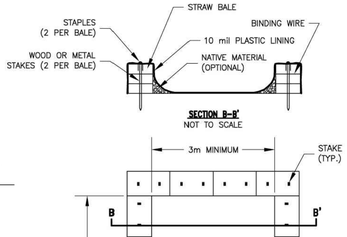
3 — SILT FENCE
NTS

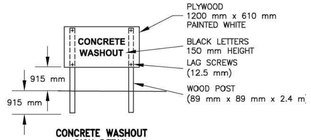


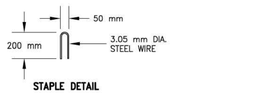
NOTES:

1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED,THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

4 — ROCK BERM
NTS







NOTES:

1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN (SEE FIG. 4–15) SHALL BE INSTALLED WITHIN 10 m OF THE TEMPORARY CONCRETE WASHOUT FACILITIY.

6 — CONCRETE WASHOUT
NTS

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BLAYNE E. STANSBERRY, P.E. 88646 ON APRIL 4, 2025

STATE OF TEXAS
BLAYNE E. STANSBERRY
88646
LICENSED
PROFESSIONAL ENGINEER

Blayne Stansberry

REV	DESCRIPTION	DATE	BY

stansberry engineering co.

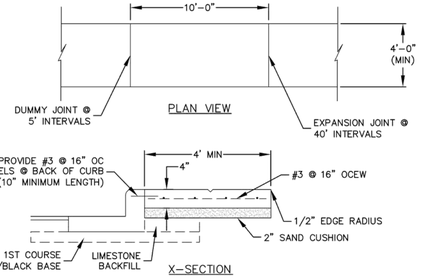
Texas Registered Engineering Firm F-8276 phone 512 / 292-8000 www.stansberryengineering.com

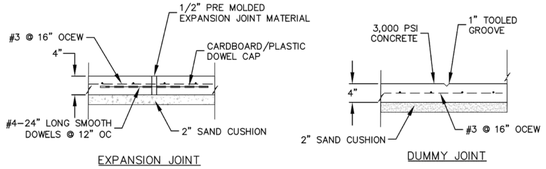
LOCKHART COMMERCIAL - PHASE 1
1816 S COLORADO ST, LOCKHART, TEXAS
CONSTRUCTION DETAILS

DATE: 04/04/2025
PROJECT NO: 2025266
DESIGNED BY: BES

C9.1
15 OF 18

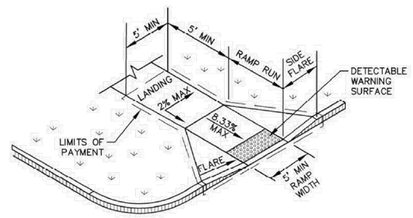
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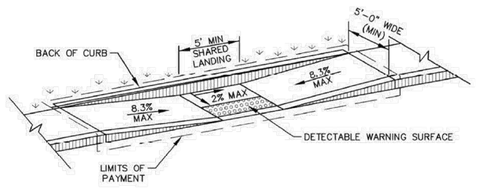




NOTES:
1. EXACT SIDEWALK LOCATION AND DIMENSIONS MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY CITY STAFF IF NOT CLEARLY SHOWN ON PLANS, OR REQUIRED DUE TO EXISTING SITE CONDITIONS.
2. CONTRACTOR SHALL LOCATE TOP OF SIDEWALK SO THAT IT DOES NOT ALTER EXISTING DRAINAGE PATTERNS. ALL DRAINAGE SHALL BE DIRECTED TO THE STREET.
3. LONGITUDINAL DUMMY JOINT REQUIRED AT MIDPOINT OF SIDEWALK 10'-0" OR WIDER.
4. SIDEWALK TO CONFORM TO ALL A.D.A. AND TEXAS ACCESSIBILITY STANDARDS (TAS).
5. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.
6. ALL CONCRETE AND REBAR SHALL BE INSTALLED PER ACI CODE.
7. SIDEWALKS INSTALLED ACROSS DRIVEWAYS SHALL BE MINIMUM 6" IN THICKNESS.
8. SIDEWALKS INSTALLED ALONG STATE ROADS AND HIGHWAYS SHALL BE A MINIMUM OF 5' WIDE.

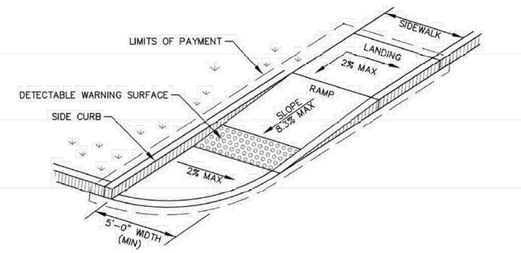
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THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD	REV 1 — DATE NOV 2002 — BY REV 2 — DATE NOV 2007 REV 3 — DATE DEC 2017 REV 4 — DATE JAN 2020 — BY JAD		SCALE: NTS — DRAWING No. S - 22





NOTE:
SEE CURB RAMP NOTES ON DETAIL S-25.

Lockhart TEXAS	DATE ISSUED:	APRIL 1987	TITLE: PARALLEL & PERPENDICULAR CURB RAMPS
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD	REV 1 — DATE NOV 2002 — BY CS REV 2 — DATE JAN 2020 — BY JAD		SCALE: NTS — DRAWING No. S - 23

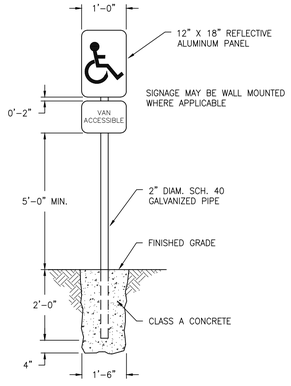


NOTE:
SEE CURB RAMP NOTES ON DETAIL S-25.

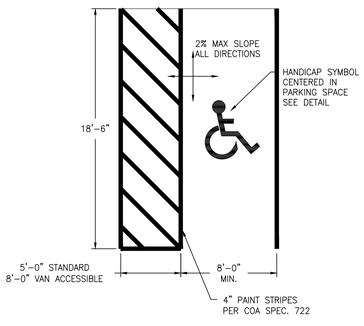
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THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD	REV 1 — DATE NOV 2002 — BY CS REV 2 — DATE JAN 2020 — BY JAD		SCALE: NTS — DRAWING No. S - 24

NOTES:
1. ALL CURB RAMPS SHALL COMPLY WITH ALL APPLICABLE TEXAS ACCESSIBILITY STANDARDS (TAS) AND ADA REQUIREMENTS.
2. ALL SLOPES ARE MAXIMUM ALLOWABLE. LESSER SLOPES THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. ADJUST CURB RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS AS REQUIRED.
3. MAXIMUM ALLOWABLE CROSS SLOPE ON ANY PORTION OF CURB RAMPS AND LANDINGS IS 2%
4. MAXIMUM ALLOWABLE RUNNING SLOPE ON CURB RAMP IS 8.33%.
5. MAXIMUM ALLOWABLE SLOPE ON SIDE FLARES IS 10%.
6. LANDINGS SHALL BE 5'-0" SQ. MINIMUM WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
7. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AND SHALL BE PLACED AT A MINIMUM DEPTH OF 5" FOR RAMPS, LANDINGS, AND FLARES, EXCLUSIVE OF AREAS UNDER THE DETECTABLE WARNING SURFACE.
8. CONTRACTOR SHALL FURNISH AND INSTALL A PREFABRICATED DETECTABLE WARNING PANEL MEETING TxDOT SPECIFICATIONS.
9. DETECTABLE WARNING SURFACES SHALL COVER A MINIMUM OF 24" IN DEPTH IN THE DIRECTION OF TRAVEL AND SPAN THE FULL WIDTH OF THE CURB RAMP OR LANDING.
10. DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB IS AT THE BACK OF CURB.
11. ALL CONCRETE AND STEEL REINFORCEMENT SHALL BE INSTALLED PER ACI CODE.
12. STEEL REINFORCEMENT SHALL BE #3 BARS @ 16" OCEW AND SHALL EXTEND UNDER THE DETECTABLE WARNING SURFACE. REINFORCEMENT SHALL ALSO BE INSTALLED IN ADJACENT CONCRETE FEATURES.
13. CURB RAMPS, LANDINGS, AND FLARES SHALL BE TIED IN TO EXISTING CONCRETE FEATURES USING 18" LONG #4 SMOOTH DOWELS @ 12" O.C. DRILLED 6" INTO EXISTING CONCRETE. INSTALL STANDARD EXPANSION JOINTS AT BOUNDARIES BETWEEN EXISTING AND PROPOSED CONCRETE AS INSTRUCTED BY CITY PERSONNEL. NO SEPARATE PAY.
14. CHANGES IN SURFACE ELEVATION SHALL NOT EXCEED ONE-FOURTH INCH.
15. CURBS SHOWN WITHIN THE LIMITS OF PAYMENT INCLUDING CONCRETE CURBS, SIDE AND BACK CURBS, GUTTER, AND COMBINED CURB AND GUTTER, ARE CONSIDERED PART OF THE CURB RAMP FOR PAYMENT.
16. ALL RAMPS SHALL BE INSTALLED SO THAT WATER DOES NOT POND IN THE RAMP OR LANDING.
17. OTHER CURB RAMP TYPES ADHERING TO TxDOT STANDARDS MAY BE USED UPON CITY APPROVAL.

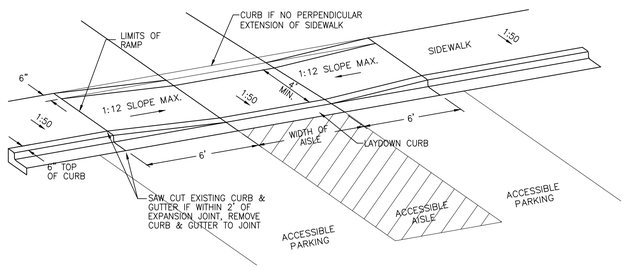
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THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD	REV 1 — DATE NOV 2002 — BY CS REV 2 — DATE JAN 2020 — BY JAD		SCALE: NTS — DRAWING No. S - 25



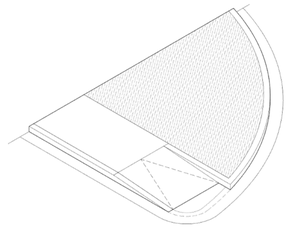
1 ACCESSIBLE PARKING SIGNAGE
NTS



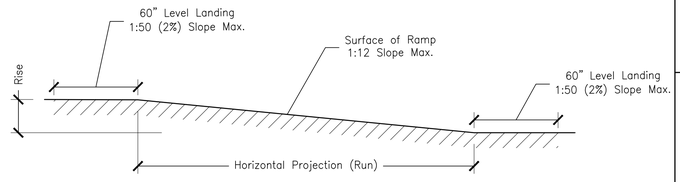
2 ACCESSIBLE PARKING
NTS



3 ACCESSIBLE RAMPS AT PARKING
NTS



4 ACCESSIBLE RAMP
AT CURB RETURN



Slope	Maximum Rise (inches)	Maximum Horizontal Projection (feet)
1:12 to < 1:16	30	30
1:16 to < 1:20	30	40

5 RAMP CROSS SECTION DIMENSIONS
NTS

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BLAYNE E. STANSBERRY, P.E. 88646 ON APRIL 4, 2025

STATE OF TEXAS
BLAYNE E. STANSBERRY
88646
LICENSED
PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE	BY

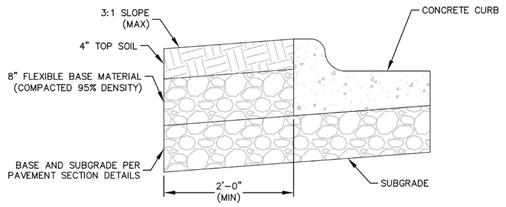
stansberry engineering co.
Texas Registered Engineering Firm F-8276
phone 512 / 292-8000 www.stansberryengineering.com

LOCKHART COMMERCIAL - PHASE 1
1816 S COLORADO ST, LOCKHART, TEXAS
CONSTRUCTION DETAILS

DATE: 04/04/2025
PROJECT NO: 2025266
DESIGNED BY: BES

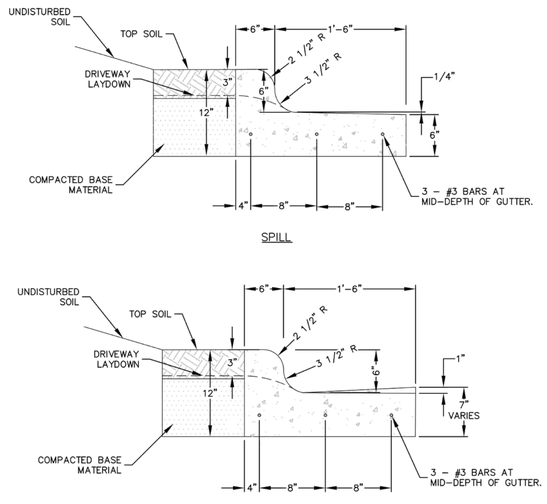
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16 OF 18

PLOTTED: Apr 09, 2025 FILE NAME: Y:\2020266-Lockhart Commercial\02. Design\2.1 Cad Files\Phase 1\C-DETL.dwg



NOTES:
1. ALL COMPACTION SHALL BE PER TxDOT TEX-113-E
2. FOR ASPHALT PAVEMENT, PLACE MINIMUM OF 4" FLEX BASE AND 8" LIME TREATED SUBGRADE BENEATH CURB. FOR CONCRETE PAVEMENT, PLACE MINIMUM 8" LIME TREATED SUBGRADE BENEATH CURB. SEE TYPICAL STREET SECTION DETAILS.

Lockhart TEXAS	DATE ISSUED:		APRIL 1997		TITLE: BEHIND CURB DETAIL
	REV		DATE	BY	
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	2		JAN 2020	JAD	
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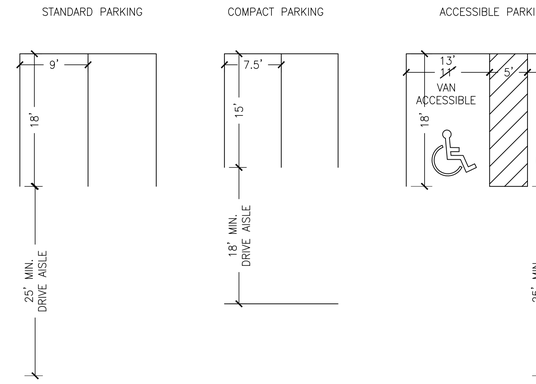


SPILL

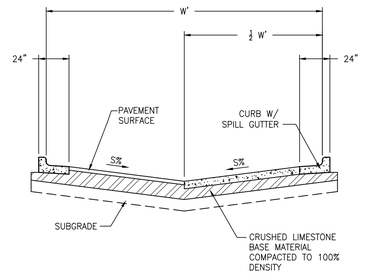
CATCH

NOTES:
1. SPILL GUTTER TO BE USED ON UPGRADE OF VALLEY GUTTERS.
2. FOR CONCRETE CURB AND GUTTER REMOVAL/REPLACEMENT, INSTALLED SECTION SHALL MATCH EXISTING CURB RADII.
3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI.
4. ALL CONCRETE AND REBAR SHALL BE INSTALLED PER ACI CODE.
5. REFERENCE BEHIND CURB DETAIL FOR BACKFILL REQUIREMENTS BEHIND AND UNDERNEATH CURB.

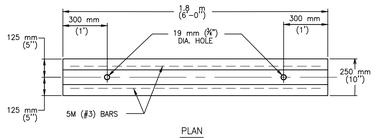
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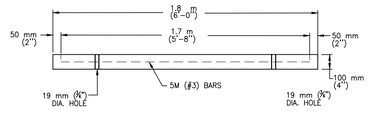
1 — PARKING SPACE DIMENSIONS
SCALE 1"=10'



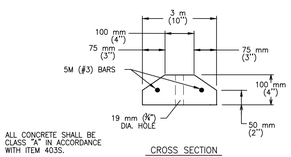
2 — PARKING CROSS SECTION
NTS



PLAN



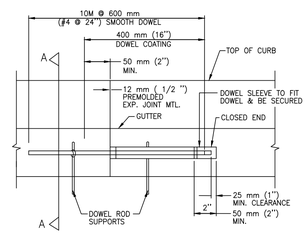
LONGITUDINAL SECTION



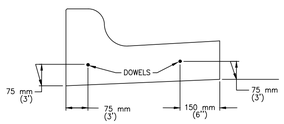
ALL CONCRETE SHALL BE CLASS "A" IN ACCORDANCE WITH ITEM 403S.

CROSS SECTION

3 — PARKING LOT WHEEL STOP



CURB EXPANSION JOINT DOWEL DETAIL



SECTION A-A
SEE STANDARD 430S-1 FOR TYPICAL CURB AND GUTTER SECTIONS.

4 — CURB EXPANSION JOINT
NTS

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BLAYNE E. STANSBERRY, P.E. 88646 ON APRIL 4, 2025

STATE OF TEXAS
BLAYNE E. STANSBERRY
88646
LICENSED
PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE	BY

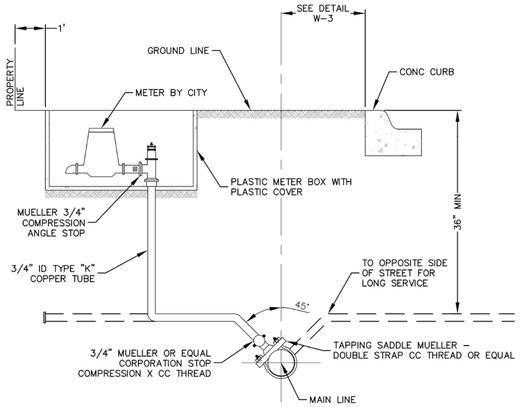
stansberry engineering co.
Texas Registered Engineering Firm F-8276
phone 512 / 292-8000 www.stansberryengineering.com

LOCKHART COMMERCIAL - PHASE 1
1816 S COLORADO ST, LOCKHART, TEXAS
CONSTRUCTION DETAILS

DATE: 04/04/2025
PROJECT NO: 2025266
DESIGNED BY: BES

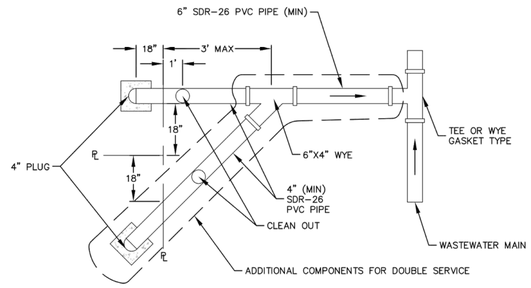
C9.3
17 OF 18

PLOTTED: Apr 09, 2025 FILE NAME: Y:\2020266-Lockhart Commercial\02. Design\2.1 Cad Files\Phase 1\C-DETL.dwg



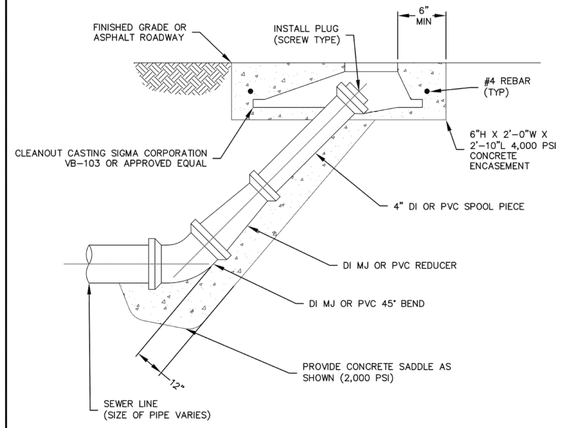
NOTES:
1. WATER SERVICES SHALL BE INSTALLED FROM WATER MAIN TO THE METER.
2. BEDDING AND BACKFILL SHALL BE PER TRENCH BACKFILL DETAILS.
3. METER BOX AND COVER SHALL BE MANUFACTURED BY DFW PLASTICS OR APPROVED EQUAL.

Lockhart TEXAS	DATE ISSUED: APRIL 1987	TITLE: SINGLE SERVICE CONNECTION	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD	REV / DATE / BY: 1 NOV 2002 CS; 2 JAN 2020 JAD	SCALE: NTS	DRAWING No. W – 6

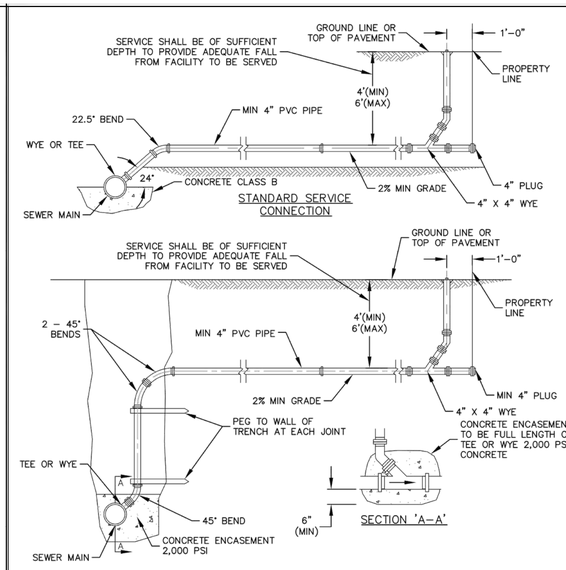


NOTES:
1. WASTEWATER SERVICE SHALL BE INSTALLED FROM WASTEWATER MAIN TO CLEANOUT.
2. BEDDING AND BACKFILL SHALL BE PER TRENCH BACKFILL DETAILS.

Lockhart TEXAS	DATE ISSUED: APRIL 1987	TITLE: SINGLE AND DUAL WASTEWATER SERVICE CONNECTION	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD	REV / DATE / BY: 1 NOV 2002 CS; 2 JAN 2020 JAD	SCALE: NTS	DRAWING No. WW – 8

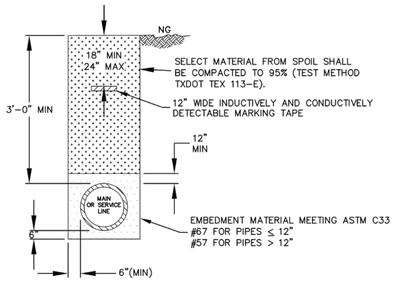


Lockhart TEXAS	DATE ISSUED: APRIL 1987	TITLE: CLEAN-OUT DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD	REV / DATE / BY: 1 NOV 2002 CS; 2 JAN 2020 JAD	SCALE: NTS	DRAWING No. WW – 7



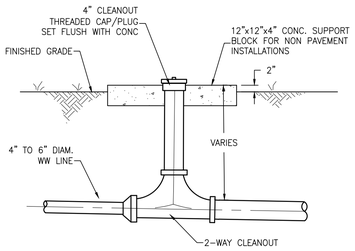
NOTES:
1. DEEP SERVICE CONNECTION SHALL BE USED WHEN WASTEWATER MAIN DEPTH IS MORE THAN SIX FEET (6') BELOW GROUND LINE.
2. WASTEWATER SHALL BE INSTALLED FROM WASTEWATER MAIN TO THE CLEANOUT.
3. BEDDING AND BACKFILL SHALL BE PER TRENCH BACKFILL DETAILS.
4. VERTICAL RISE SECTION SHALL OCCUR OUTSIDE THE LIMITS OF PAVEMENT.
5. CLASS OF CONCRETE SHALL ADHERE TO LATEST TXDOT SPECIFICATIONS, ITEM 421

Lockhart TEXAS	DATE ISSUED: APRIL 1987	TITLE: STANDARD AND DEEP WASTEWATER SERVICE CONNECTION	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD	REV / DATE / BY: 1 NOV 2002 CS; 2 JAN 2020 JAD	SCALE: NTS	DRAWING No. WW – 3



NOTE:
1. THIS DETAIL SHALL ONLY BE USED WHEN TRENCH EDGE IS MORE THAN 3'-0" FROM EXISTING OR FUTURE PAVEMENT.

Lockhart TEXAS	DATE ISSUED: APRIL 1987	TITLE: TRENCH DETAIL	
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD	REV / DATE / BY: 1 NOV 2002 CS; 2 JAN 2020 JAD	SCALE: NTS	DRAWING No. W – 1A



1 — NTS — WASTEWATER CLEANOUT — PRIVATE

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY BLAYNE E. STANSBERRY, P.E. 88646 ON APRIL 4, 2025

STATE OF TEXAS — BLAYNE E. STANSBERRY — 88646 — LICENSED PROFESSIONAL ENGINEER

REV	DESCRIPTION	DATE	BY

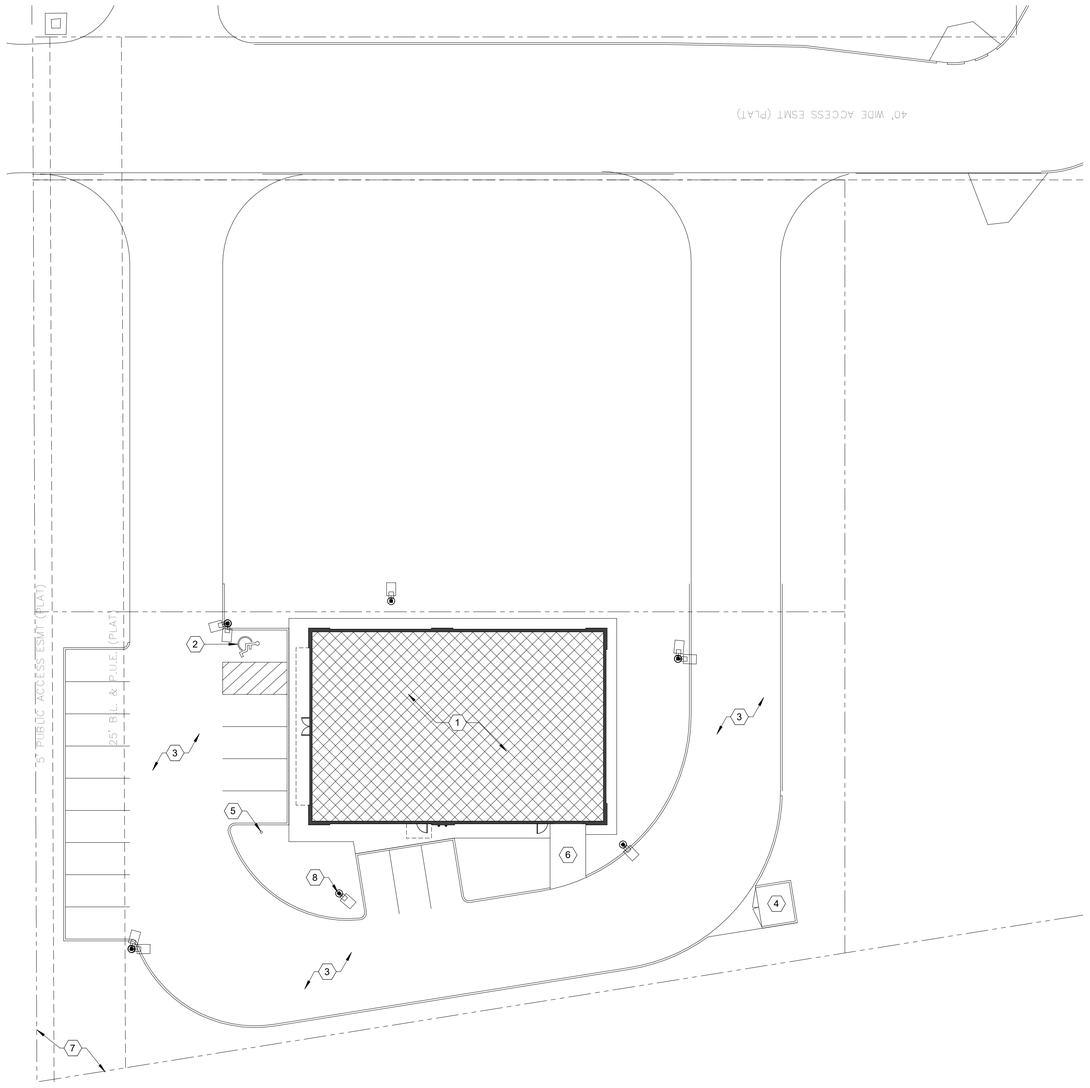
stansberry engineering co.
Texas Registered Engineering Firm F-8276 phone 512 / 292-8000 www.stansberryengineering.com

LOCKHART COMMERCIAL - PHASE 1
1816 S COLORADO ST, LOCKHART, TEXAS
CONSTRUCTION DETAILS

DATE: 04/04/2025
PROJECT NO: 2025266
DESIGNED BY: BES

C9.4
18 OF 18

PLOTTED: Apr 09, 2025 FILE NAME: Y:\2020266-Lockhart Commercial\02. Design\2.1 Cad Files\Phase 1\C-DETL.dwg



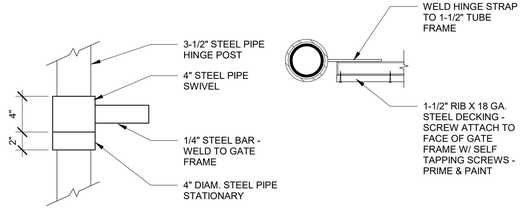
A1 ARCHITECTURAL SITE PLAN
1" = 20'-0"

GENERAL NOTES

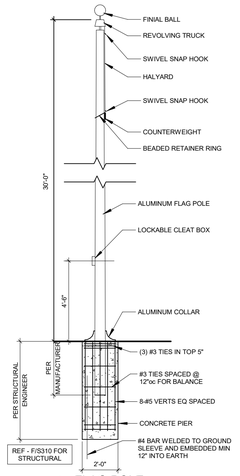
1. UNLESS OTHERWISE NOTED, ALL SITE & CIVIL WORK PERFORMED UNDER SEPARATE PERMIT.
2. REFERENCE CIVIL PERMIT SET.
3. GENERAL CONTRACTOR TO COORDINATE ALL UTILITIES SCHEDULING & CONNECTIONS.

SITE PLAN CODED NOTES

1	TENANT BUILDING
2	NEW ACCESSIBLE PARKING - REFER CIVIL FOR DETAILS
3	NEW SITEWORK & PARKING - REFER CIVIL
4	TRASH ENCLOSURE - REFER CIVIL
5	FLAG POLE - SEE DETAIL C5/A001 AND F/S310
6	DELIVERY RAMP - REF CIVIL
7	PROPERTY LINE
8	SITE LIGHT POST - REF ELEC - TYP

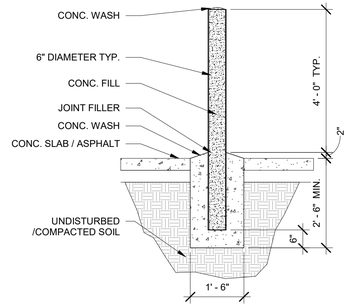


C4 HINGE DETAIL
1 1/2" = 1'-0"

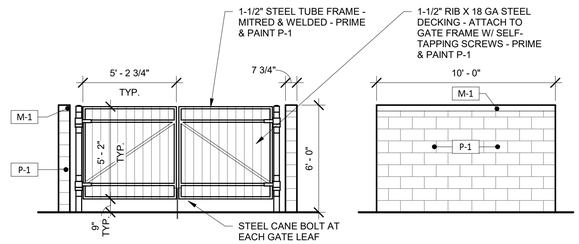


C5 FLAG POLE
1/4" = 1'-0"

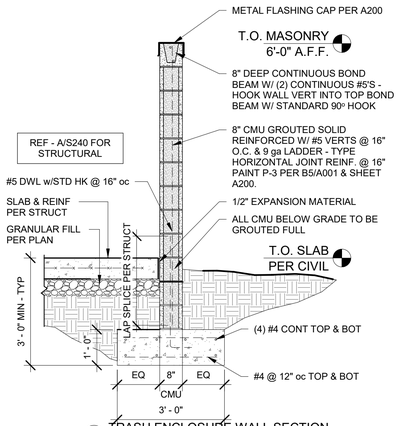
NOTE: SEE PLAN FOR LOCATION



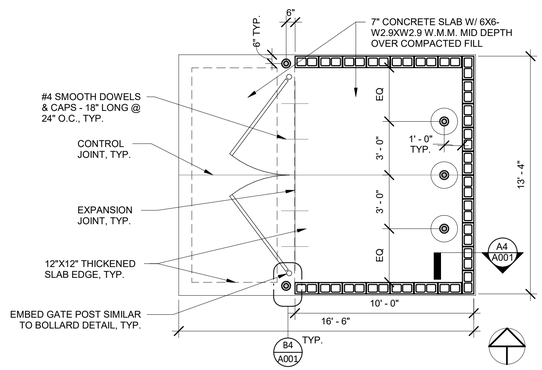
B4 BOLLARD DETAIL
1/2" = 1'-0"



B5 TRASH ENCLOSURE ELEVATIONS
1/4" = 1'-0"



A4 TRASH ENCLOSURE WALL SECTION
1/2" = 1'-0"



A5 TRASH ENCLOSURE PLAN
1/4" = 1'-0"

LINGLE DESIGN GROUP, INC

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158 WEST MAIN STREET
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WWW.LINGLEDESIGN.COM

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REGISTERED ARCHITECT
CARL L. LINGLE
18179
STATE OF TEXAS
04/11/2025

PROJECT #:

DRAWN BY: BA CHECKED BY: MP

PERMIT SET - 04/11/2025
1 -
2 -
3 -
4 -
5 -
6 -

SHERWIN WILLIAMS

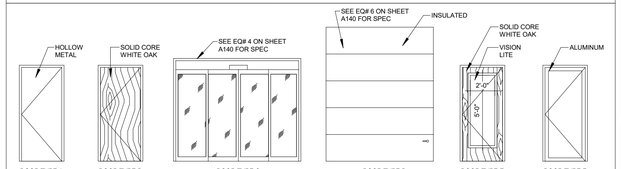
STORE #:
XXXX

ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
ARCHITECTURAL SITE PLAN

SHEET NUMBER:
A001

DOOR TYPES



Door Schedule

Mark	Width	Height	Thickness	DOOR TYPE	DOOR MATERIAL	FRAME MATERIAL	HARDWARE GROUP
101	10' - 0"	7' - 8"	0' - 4 1/2"	C	ALUMINUM	ALUM	1
101A	3' - 0"	7' - 0"	0' - 1 3/4"	F	ALUMINUM	ALUM	
102	8' - 0"	10' - 0"	0' - 1 1/2"	D	STEEL	---	5
102A	3' - 0"	7' - 0"	0' - 1 3/4"	A	HM-STL	HM-STL	4
104	3' - 0"	7' - 0"	0' - 1 3/4"	B	WOOD	HM-STL	2
105	3' - 0"	7' - 0"	0' - 1 3/4"	E	WOOD	HM-STL	3

CONSTRUCTION PLAN CODED NOTES

1	NO GYP. BD. NEEDED INSIDE VOID SPACE
2	WOOD BLOCKING FOR DESK SHELVING - SEE DETAIL B4/A111
3	4" PVC ROOF DRAIN PIPE - SEE SHEET A150

HARDWARE SCHEDULE

GROUP 1 - SLIDING DOORS		
2 EA.	EXIT DEVICE	MOTION DETECTION UNIT
1 EA.	LOCK	MANUFACTURER LOCK SYSTEM
2 EA.	CLOSER	AUTOMATIC DOORS
1 EA.	SIGNAGE	"DOOR TO REMAIN UNLOCKED DURING BUISINESS HOURS"
1 EA.	SIGNAGE	"MAXIMUM OCCUPANCY" - POST AT MAIN ENTRY
1 EA.	THRESHOLD	MANUFACTURER THRESHOLD SYSTEM
GROUP 2 - RESTROOM DOORS (PRIVACY SET)		
3 PR.	HINGE	STANLEY - #FBB179 - 4-1/2" X 4-1/2"
1 EA.	LATCH	SCHLAGE - ND40S-TLR (PRIVACY HARDWARE) - 626 FINISH
1 EA.	CLOSER	DORMA - 8616FHP
3 EA.	SILENCERS	GLYNN - GJ64
1 EA.	SIGNAGE	"RESTROOM" SIGNAGE PER DETAIL ON SHEET A400
1 EA.	STOP	AS REQUIRED - WALL: #407 1/2 PA28 - FLOOR: #436 OR #438 PA28
GROUP 3 - OFFICE DOOR		
3 PR.	HINGE	STANLEY - #FBB179 - 4-1/2" X 4-1/2"
1 EA.	LATCH	SCHLAGE - ND50PD-TLR-SFIC - 626 FINISH
1 EA.	LOCK	LATCH-COMPATIBLE SMALL FORMAT INTERCHANGEABLE CORE
3 EA.	SILENCERS	GLYNN - GJ64
1 EA.	STOP	AS REQUIRED - WALL: #407 1/2 PA28 - FLOOR: #436 OR #438 PA28
1 EA.	VISION LITE	FULL GLASS - VERIFY W/ SHERWIN-WILLIAMS CORPORATE
GROUP 4 - SERVICE DOOR		
3 PR.	HINGE	STANLEY - #FBB179 - 4-1/2" X 4-1/2"
1 EA.	PULL	YALE - 632F-626
1 EA.	EXIT DEVICE	YALE - 2150-36 - 652 FINISH (PANIC BAR)
1 EA.	CLOSER	LCN-4041 (4040 SERIES) - HEAVY DUTY CLOSER
3 EA.	SILENCERS	GLYNN - GJ64
1 EA.	THRESHOLD	PEMKO - #171A - SIZE AS REQUIRED
1 EA.	SWEEP	PEMKO - #307AV - SIZE AS REQUIRED
1 EA.	WEATHERSTRIP	PEMKO - #303AV - SIZE AS REQUIRED
GROUP 5 - DELIVERY DOOR		
1 EA.	OPENER/LOCK	MOTORIZED OPERATOR - LIFTMASTER LJ8900W
1 EA.	WEATHERSTRIP	PEMKO - #303AV - SIZE AS REQUIRED
GROUP 6 - STOREFRONT DOOR		
3 PR.	HINGE	4-1/2" X 4-1/2" B.B. WITT NON REMOVABLE PINS
1 EA.	LOCK	KEYED DEADBOLTS WITH INSIDE THUMBTURN
1 EA.	EXIT DEVICE	PUSH SET
1 EA.	PULL	ELMES G500-01-023-L300 OR APPROVED SIMILAR
1 EA.	CLOSER	LCN-4041 (4040 SERIES) - HEAVY DUTY CLOSER
1 EA.	THRESHOLD	PEMKO - #171A - SIZE AS REQUIRED
1 EA.	SWEEP	PEMKO - #307AV - SIZE AS REQUIRED

DOOR AND HARDWARE NOTES:

1. G.C. TO FURNISH & INSTALL MEDECO CYLINDER IN ALL PERIMETER DOORS. SHERWIN-WILLIAMS CORPORATE WILL RE-KEY TO SHERWIN-WILLIAMS MASTER KEY SYSTEM. PROVIDE KEYWAY ON EXTERIOR FACE.
2. G.C. TO FURNISH & INSTALL MEDECO CYLINDER IN ALL INTERIOR H.M. DOORS. ALL INTERIOR DOORS TO BE KEYED ALIKE. PROVIDE KEYWAY ON EXTERIOR FACE.
3. ALL HOLLOW METAL DOOR FRAMES ARE TO BE WELDED.
4. G.C. TO FURNISH & INSTALL PANIC HARDWARE PER ALL APPLICABLE REGULATIONS & CODES HAVING JURISDICTION.
5. DOOR STOPS AND BUMPERS TO BE INSTALLED BEHIND ALL DOORS.
6. ALL HARDWARE TO BE US26D BRUSHED CHROME, CLEAR ANODIZED FINISH.
7. UNDERCUT RESTROOM & OFFICE DOORS 1".
8. U.N.O. ALL PAINTED DOORS & DOOR JAMBS TO BE PAINTED P-1.

GENERAL NOTES

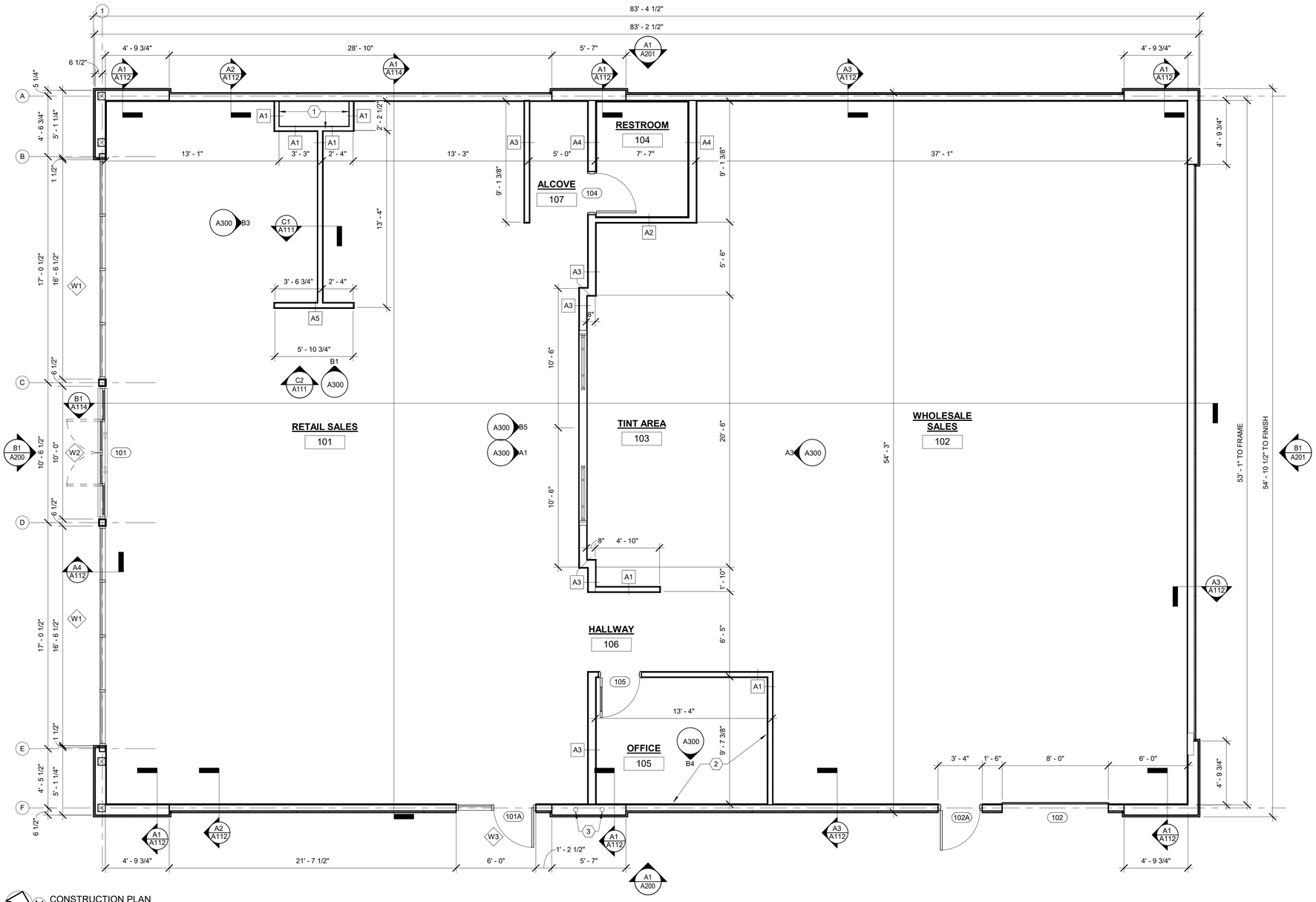
A. G.C. TO PROVIDE BLOCKING FOR SUPPORT OF RESTROOM AND CASEWORK ACCESSORIES AS RECOMMENDED BY MANUFACTURER. SEE ENLARGED RESTROOM AND CASEWORK ELEVATIONS.
B. OCCUPANCY LOAD SIGN SUPPLIED AND INSTALLED BY G.C.
C. G.C. SHALL SUPPLY AND INSTALL RECESSED FIRE EXTINGUISHERS AS REQUIRED BY LOCAL CODES. LOCATION PER LOCAL CODES. COORDINATE PLACEMENT WITH TENANT AND FIRE MARSHAL.
D. REFERENCE THE FOLLOWING SHEETS: G001 GENERAL NOTES, ABBREVIATIONS AND SYMBOLS; G100 ACCESSIBILITY PLANS.
E. ALL DIMENSIONS NOTED ARE FROM FACE OF STUD TO FACE OF STUD, UNO.
F. ELECTRICAL EQUIPMENT BY G.C. SEE ELECTRICAL DRAWINGS.
G. PLUMBING EQUIPMENT BY G.C. SEE PLUMBING DRAWINGS.
H. ALL CONSTRUCTION MUST BE PERFORMED WITHOUT ANY PENETRATION OF STOREFRONT IN ANY WAY, INCLUDING, BUT NOT LIMITED TO SCREWS, BOLTS AND DRILLING.
I. SOUND BATT INSULATION TO BE MINIMUM CLASS 2 WITH FLAME SPREAD RATING OF 25 TO 75.

XX WALL TYPES - SEE SHEET A111

XX STOREFRONT TAG - SEE SHEET A201

XXX DOOR TAG - SEE SHEET A110

INDICATES GLAZING



A1 CONSTRUCTION PLAN
1/4" = 1'-0"

LINGLE DESIGN GROUP, INC

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REGISTERED ARCHITECT
CARL L. LINGLE
18179
STATE OF TEXAS
04/11/2025

PROJECT #:

DRAWN BY: BA CHECKED BY: MP

PERMIT SET - 04/11/2025

1 -
2 -
3 -
4 -
5 -
6 -
7 -

SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:

1816 S. COLORADO ST.
LOCKHART, TX 78644

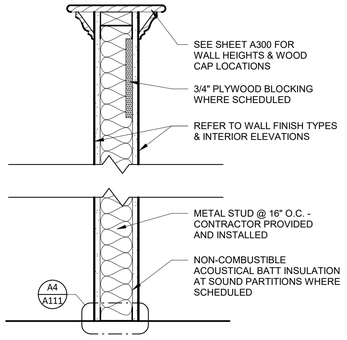
SHEET TITLE:

CONSTRUCTION PLAN

SHEET NUMBER:

A110

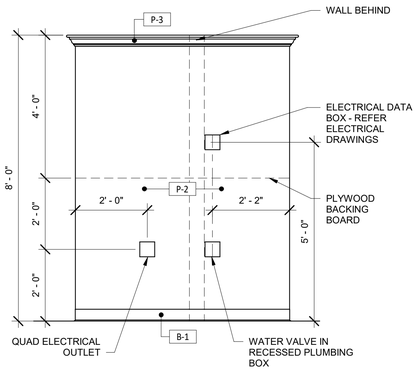
NOTE:
- G.C. TO VERIFY STUD SIZE & SPACING PER A1/A111
- ALL DRYWALL SHALL BE PATCHED & REPAIRED TO A SMOOTH , LEVEL SURFACE FREE OF VISIBLE IMPERFECTIONS



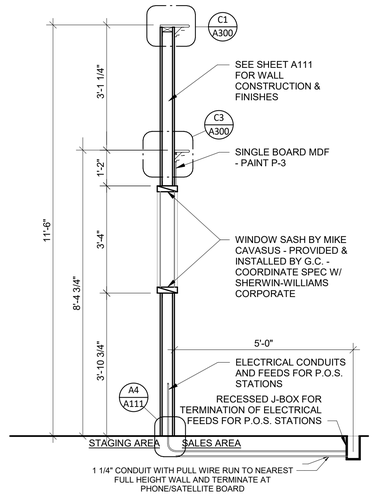
WALL TYPE "A"

A1 3 5/8" METAL STUD
A2 3 5/8" METAL STUD W/ BATT INSULATION
A3 6" METAL STUD
A4 6" METAL STUD W/ BATT INSULATION
A5 6" METAL STUD W/ PLYWOOD BLOCKING

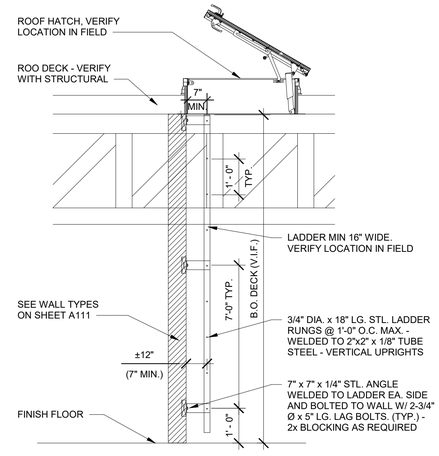
C1 WALL TYPE "A"
1 1/2" = 1'-0"



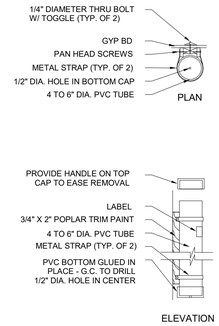
C2 "T" WALL DETAIL
1/2" = 1'-0"



C3 SECTION AT ACCENT WALL
1/2" = 1'-0"

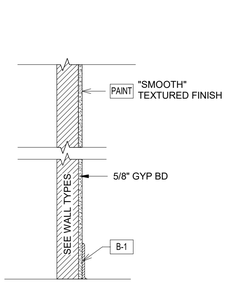


C4 SECTION AT ROOF LADDER, TYP.
N.T.S.

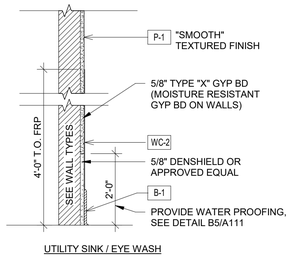


NOTE: UPON COMPLETION OF THE PROJECT, GENERAL CONTRACTOR MUST RUN A NEW BLUEPRINT SET FOR THE COMPLETED STORE DRAWINGS (ARCHITECTURAL, MECHANICAL, AND ELECTRICAL) AND PLACE BLUEPRINTS INTO THE PLAN TUBE HOLDER, LABEL (WITH CLEAR TAPE) STATING THIS TUBE CONTAINS STORE DRAWINGS AND IS NOT TO BE REMOVED WITHOUT THE CONSENT OF THE STORE MANAGER. TENANT G.C. TO SUPPLY AND INSTALL DRAWING TUBE ASSEMBLY ABOVE DOOR OR OTHER APPROVED LOCATION TO BE DETERMINED.

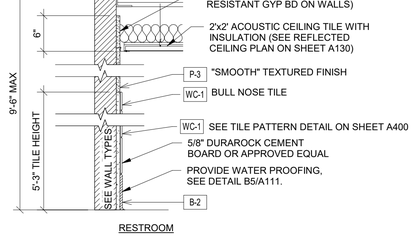
C5 PLANS STORAGE, TYP.
N.T.S.



B1 WALL FINISH 1 (SALES & WHOLESALE)
1" = 1'-0"



B2 WALL FINISH 2 (UTILITY SINK)
1" = 1'-0"



B3 WALL FINISH 3 (RESTROOM)
1" = 1'-0"

B4 WALL FINISH 4 (OFFICE)
1" = 1'-0"

WATER PROOFING NOTE:
GC TO EXTEND WATER PROOFING TO COVER ENTIRE FLOOR WHEN THERE IS A SPACE BELOW THIS TENANT SPACE.

B5 TYPICAL WATERPROOFING DETAIL
3" = 1'-0"

TYPICAL INTERIOR NON-LOAD BEARING STUD WALL - SLIP TRACK AT TOP

STUDS TO BE USED (ICC-ES# ESR-3016):

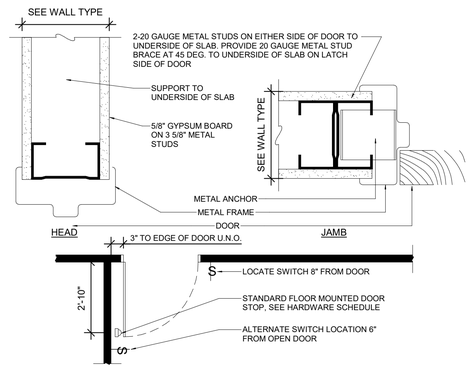
SIZE	SPACING	ALLOWABLE HEIGHT	BOTTOM TRACK GAUGE	TOP – "SLIP" TRACK GAGE (3" DEEP TRACK)
3⅝" – 25G STN	16"	15.4'	20	18
3⅝" – 20G STR	16"	17.0'	20	18
3⅝" – 18 G HDS	16"	22.6'	20	18
6" – 20G STR	16"	24.5'	20	18
6" – 18G HDS	16"	33.6'	20	18

NOTES:

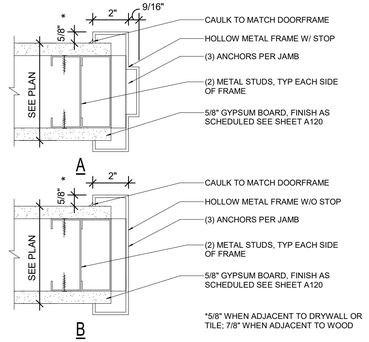
BUILDING CODE REQUIRES THAT INTERIOR PARTITION WALLS BE DESIGNED FOR A LATERAL LOAD OF 5 PSF. THE FOLLOWING GUIDELINES ARE BASED ON THIS LOAD. ALL STUDS GIVEN ARE ASSUMED TO BE EQUIVALENT TO THOSE MANUFACTURED BY DIETRICH INDUSTRIES, INC. ALL STUDS AND TRACKS ARE ASSUMED TO HAVE AN Fy = 33.0 KSI. ALL STUDS ARE ASSUMED TO HAVE ⅝" GYP BD ON BOTH FACES FOR THE FULL HEIGHT OR ARE PROVIDED WITH BRIDGING AS REQUIRED. DETAILS ARE PROVIDED TO ACCOMMODATE VERTICAL MOVEMENT AT THE TOP USING A 3" DEEP TRACK CONNECTION OR NO MOVEMENT. MAXIMUM HORIZONTAL DEFLECTION IS ASSUMED TO BE LIMITED TO H/240. PROVIDE LATERAL BRACING PER SCHEDULE.

1. BOTTOM TRACK GAGES MAY BE SUBSTITUTED FOR TOP–SLIP TRACK GAGES IF STUDS ARE PERMANENTLY ATTACHED TO BOTH FLANGES OF THE TRACK WITH #10 SCREWS.
2. ATTACH BOTTOM TRACK TO SLAB WITH HILTI X–DNI 32 PRS15 @ 3'–0" O.C.
3. IF GYP BD IS ON ONE SIDE ONLY, ADD HORIZONTAL BRIDGING AT 5'–0" O.C. VERTICALLY.
4. IF YOU HAVE A CASE THAT DIFFERS FROM THE ABOVE, PLEASE CONTACT THE ARCHITECT.

A1 STUD SIZE CHART
1/4" = 1'-0"

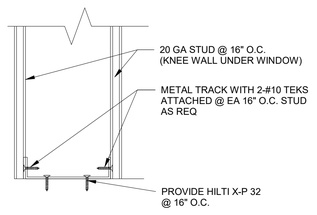


A2 TYP. DOOR JAMB & PLACEMENT DETAIL
3" = 1'-0"

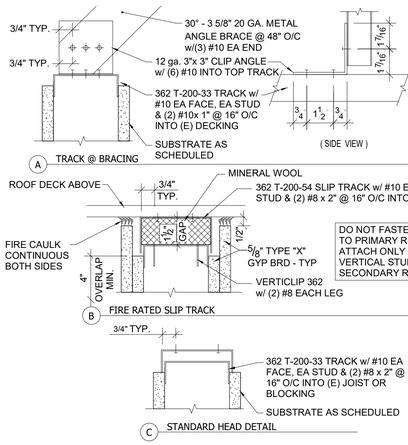


*5/8" WHEN ADJACENT TO DRYWALL OR TILE; 7/8" WHEN ADJACENT TO WOOD

A3 TYPICAL DOOR JAMB DETAILS
3" = 1'-0"



A4 TYP. FLOOR CONNECTION DETAIL
3" = 1'-0"



A5 HEAD TRACK DETAILS
3" = 1'-0"

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www.lingledesign.com

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REGISTERED ARCHITECT
CARL L. LINGLE
18179
STATE OF TEXAS
04/11/2025

PROJECT #:

DRAWN BY: BA CHECKED BY: MP

PERMIT SET - 04/11/2025

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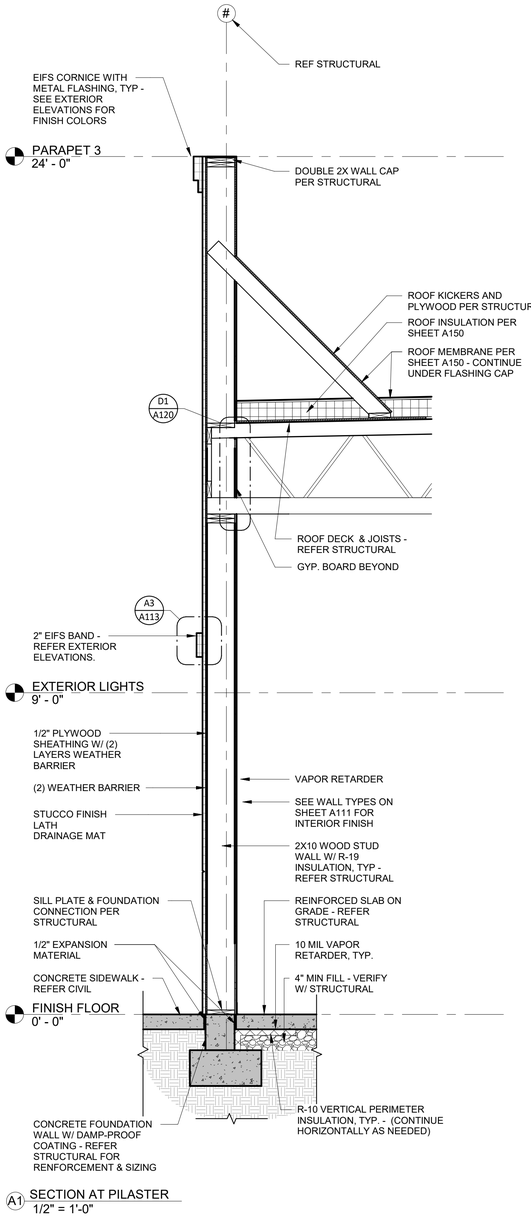
SHERWIN WILLIAMS

STORE #:
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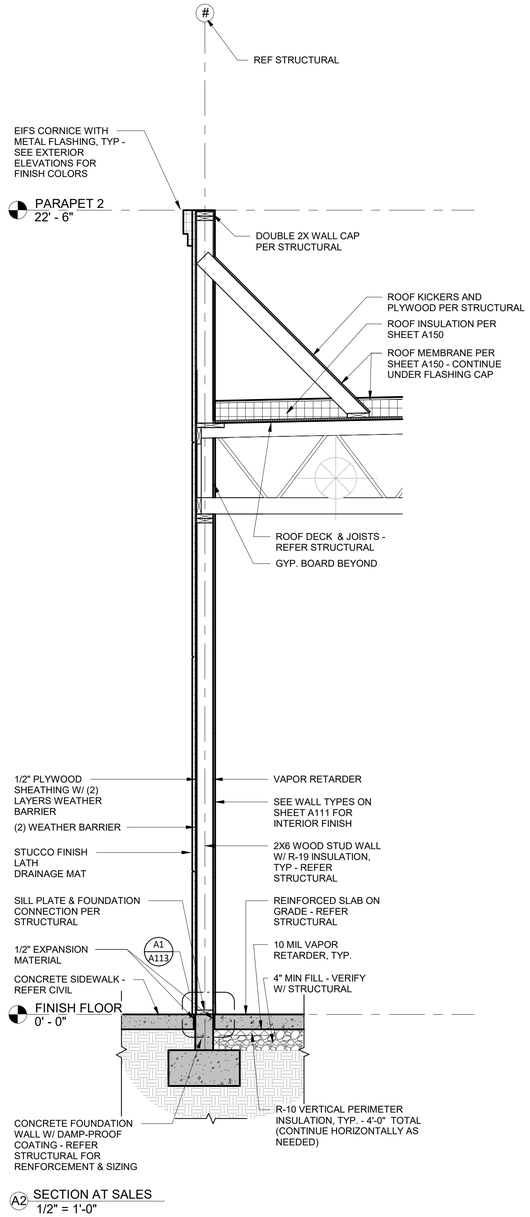
ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
WALL TYPES & DETAILS

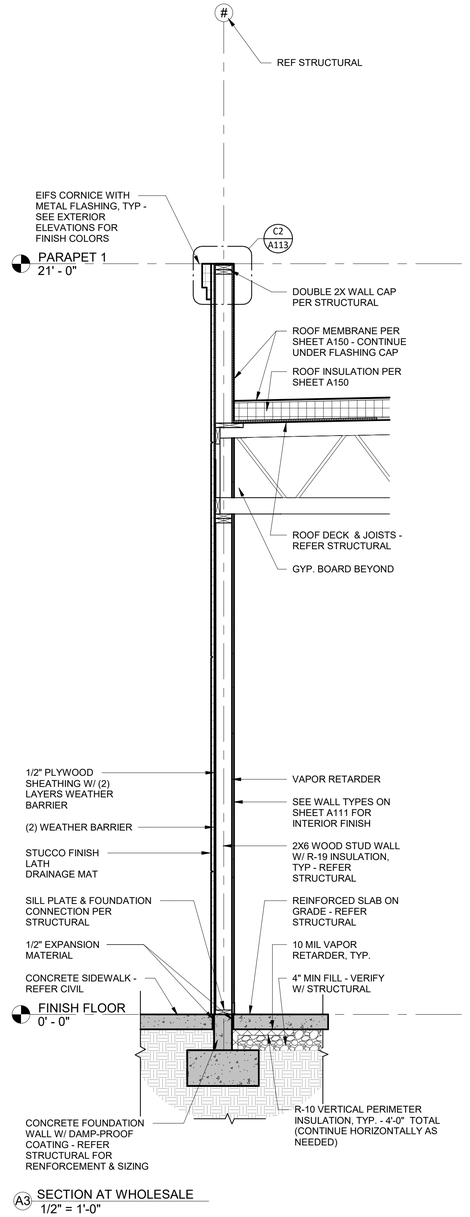
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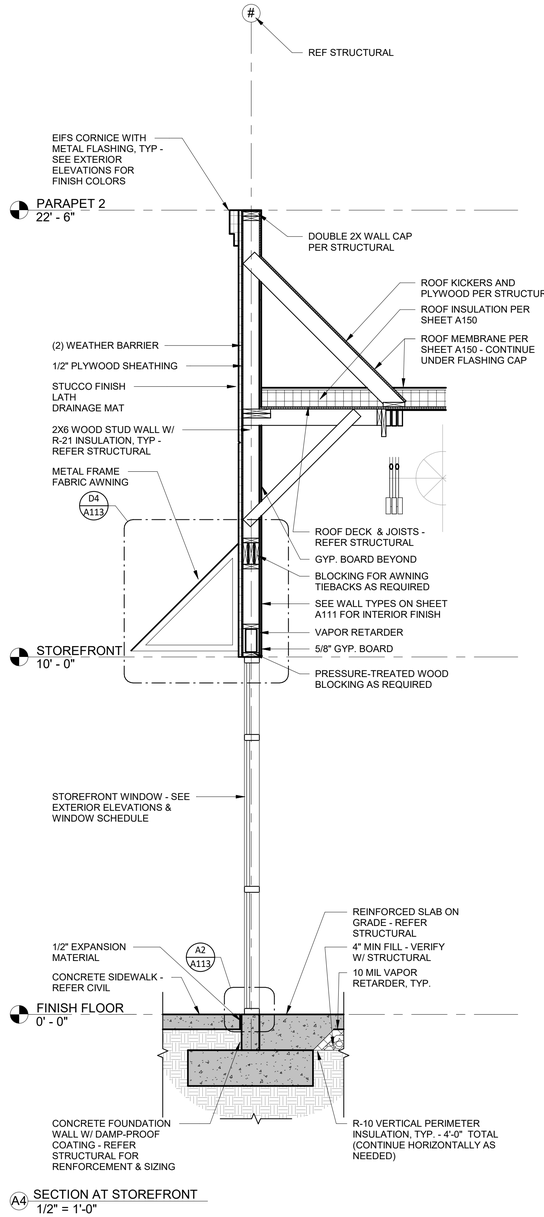
A1 SECTION AT PILASTER
1/2" = 1'-0"



A2 SECTION AT SALES
1/2" = 1'-0"



A3 SECTION AT WHOLESALE
1/2" = 1'-0"



A4 SECTION AT STOREFRONT
1/2" = 1'-0"

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SHERWIN WILLIAMS

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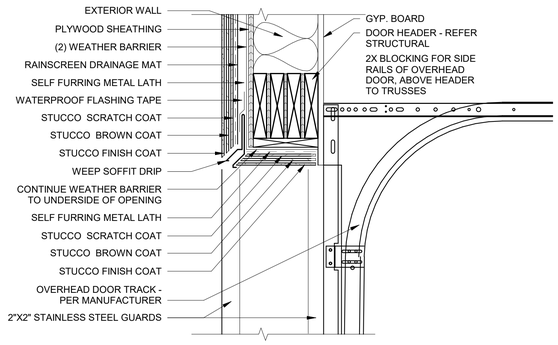
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LOCKHART, TX 78644

SHEET TITLE:

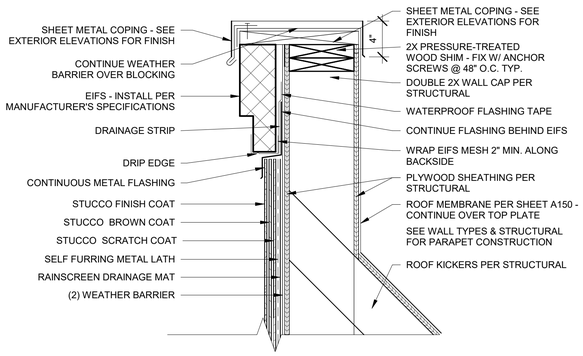
EXTERIOR WALL TYPES

SHEET NUMBER:

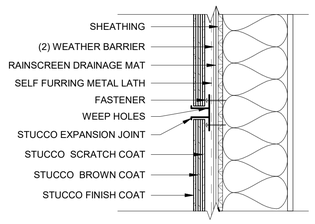
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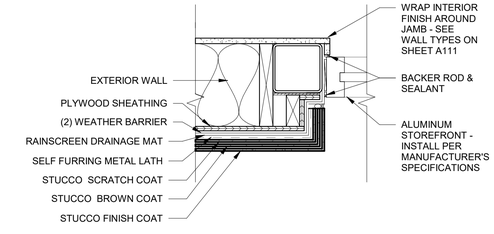
C1 OVERHEAD DOOR HEADER
1 1/2" = 1'-0"



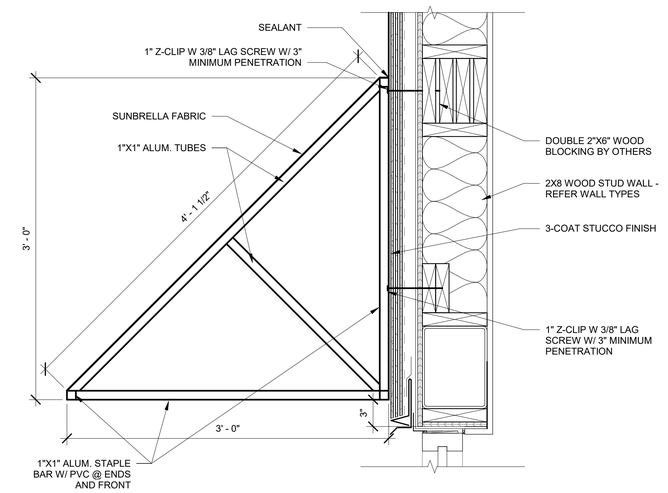
C2 SECTION AT PARAPET
1 1/2" = 1'-0"



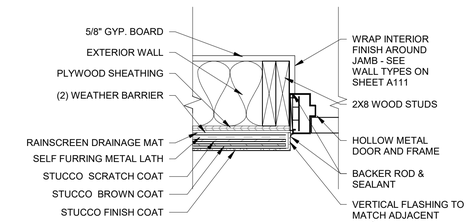
C3 STUCCO JOINT DETAIL
1 1/2" = 1'-0"



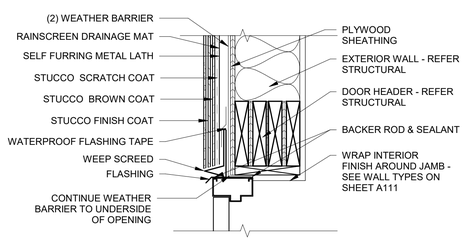
C4 VERTICAL TRANSITION AT PILASTER & STOREFRONT
1 1/2" = 1'-0"



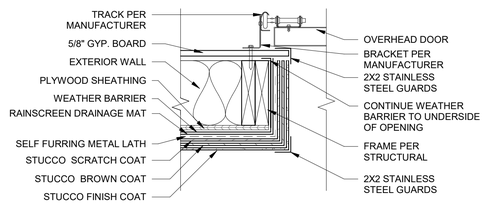
D4 METAL FRAME CANOPY
1 1/2" = 1'-0"



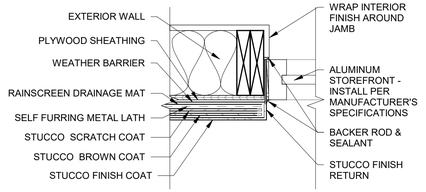
B1 EXTERIOR DOOR JAMB
1 1/2" = 1'-0"



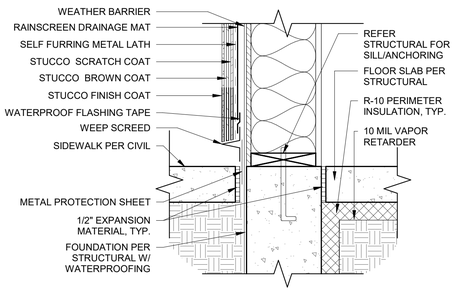
B2 EXTERIOR DOOR HEADER
1 1/2" = 1'-0"



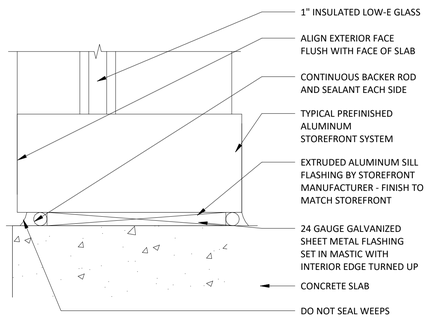
B3 OVERHEAD DOOR JAMB
1 1/2" = 1'-0"



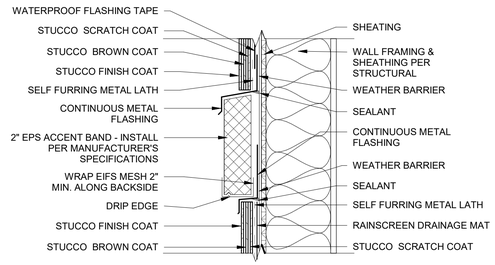
B4 VERTICAL TRANSITION AT STUCCO & STOREFRONT
1 1/2" = 1'-0"



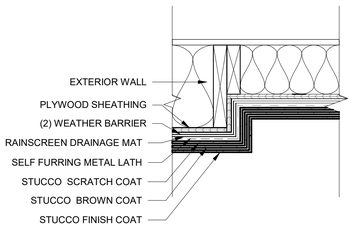
A1 BASE AT STUCCO
1 1/2" = 1'-0"



A2 STOREFRONT SILL DETAIL
6" = 1'-0"



A3 SECTION AT ACCENT BAND
1 1/2" = 1'-0"



A4 VERTICAL TRANSITION AT PILASTER
1 1/2" = 1'-0"

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CARL L. LINGLE
18179
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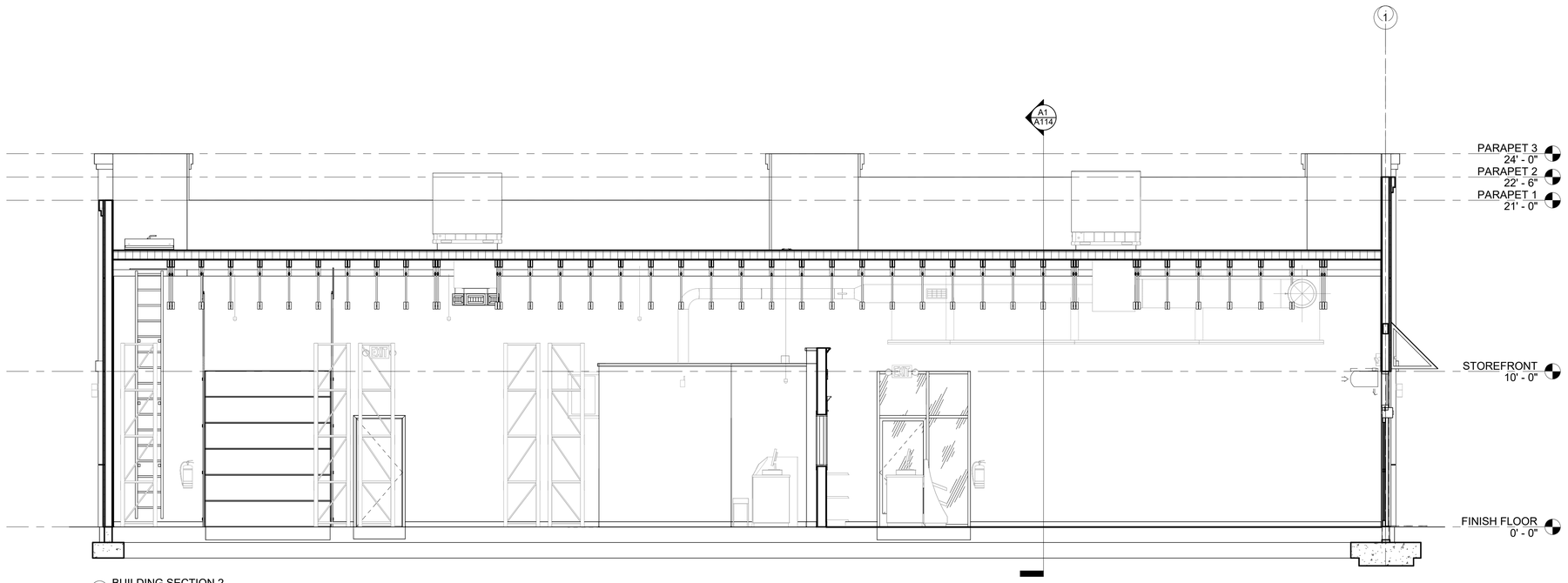
SHERWIN WILLIAMS

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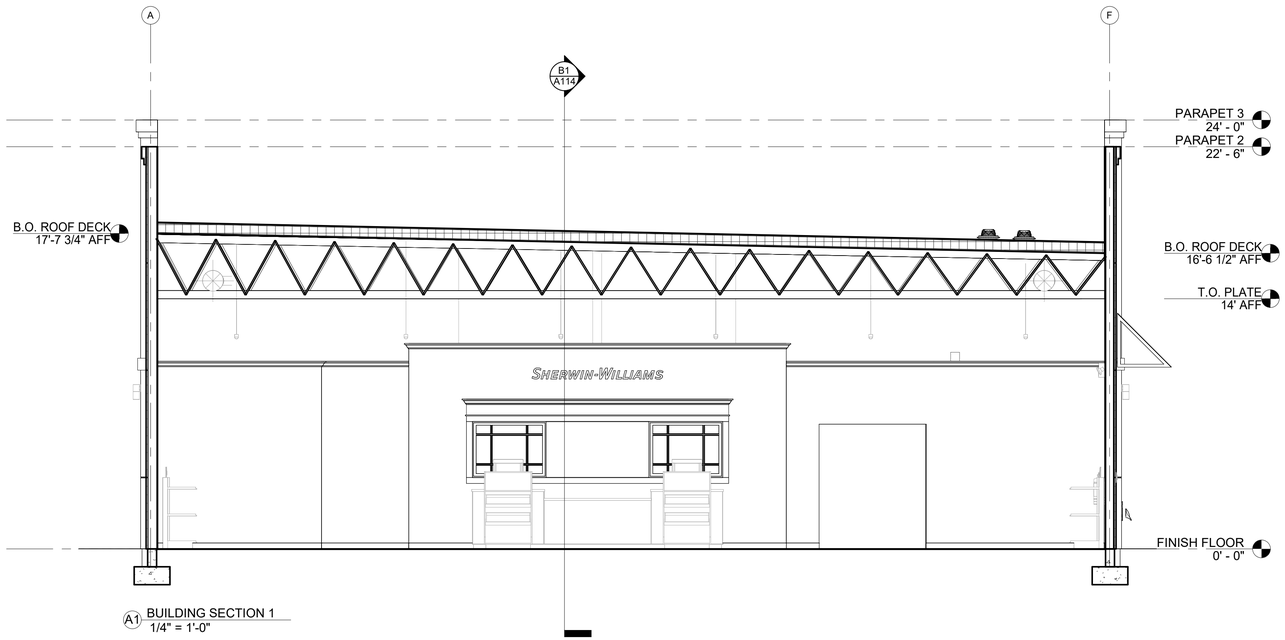
ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
EXTERIOR WALL DETAILS

SHEET NUMBER:
A113



B1 BUILDING SECTION 2
1/4" = 1'-0"



A1 BUILDING SECTION 1
1/4" = 1'-0"

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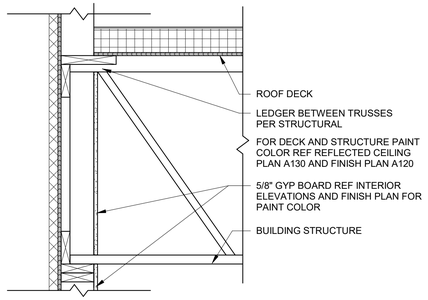
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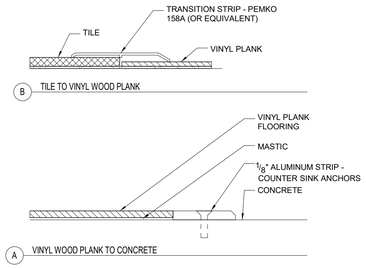
ADDRESS:
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SHEET TITLE:
BUILDING SECTIONS

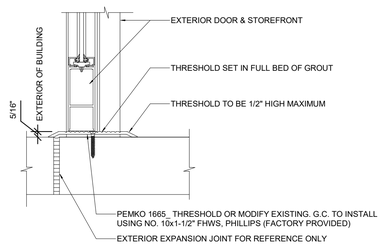
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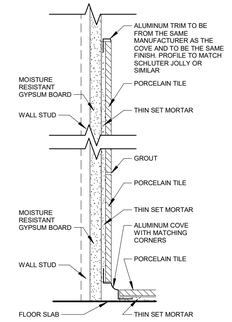
D1 INTERIOR FINISH AT TRUSS AND DECK
1" = 1'-0"



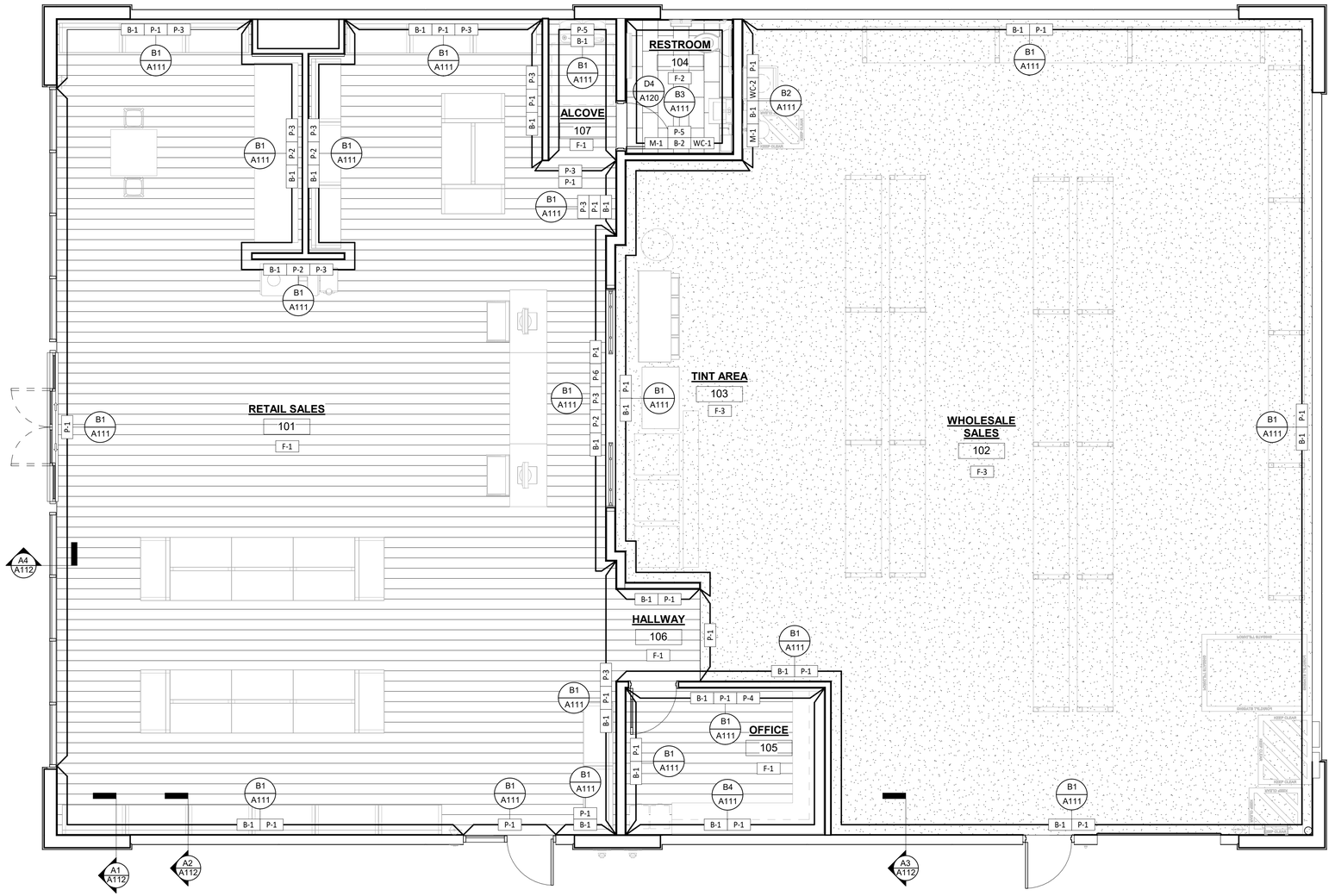
D2 FLOORING TRANSITION DETAILS
3" = 1'-0"



D3 THRESHOLD AT EXTERIOR DOOR
3" = 1'-0"



D4 COVE BASE
3" = 1'-0"



A1 FINISH PLAN
1/4" = 1'-0"

INTERIOR FINISH LEGEND

MARK	DESCRIPTION	MANUFACTURER & SPEC.	REMARKS
BASE			
B-1	RUBBER COVE BASE	ARMSTRONG #018 "DESERT" OR JOHNSONITE #080 "FAWN"	INSTALL ON SHEETROCK WALLS IN STAGING, SALES, OFFICE, AND CORRIDOR AREAS
B-2	ALUMINUM COVE BASE	SCHLUTER -SERIES: DILEX-AHK -FINISH: SATIN ANODIZED ALUMINUM	MATCHING INSIDE AND OUTSIDE CORNERS. INSTALL IN RESTROOM
FLOORING			
F-1	VINYL WOOD PLANK	MOHAWK FLOORING - SERIES: LUXURY VINYL - STYLE: (TBD)	PROVIDED BY SHERWIN-WILLIAMS
F-2	CERAMIC TILE	DALTILE - SERIES: PORTFOLIO - SIZE: 12x24 - COLOR: NOCE #PF11	GROUT: MAPEI #39 IVORY
F-3	DENSIFIED CONCRETE	H&C ENDURA POLISH CONCRETE SEALER	POLISH TO 800 GRIT BEFORE SEALING JOINT FILLER: SHER-CRETE POLYUREA
PAINT			
P-1	PAINT - ACCESSIBLE BEIGE	SHERWIN-WILLIAMS - SERIES: EMERALD K37 - COLOR: SW 7036 - FINISH: FLAT	(2) COATS IN SALES AREA, OFFICE, CORRIDOR, AND STAGING - (2) COATS ON WOOD DOORS & TRIM, HOLLOW METAL DOOR FRAMES U.N.O.
P-2	PAINT - CITYSCAPE	SHERWIN-WILLIAMS - SERIES: EMERALD K37 - COLOR: SW 7067 - FINISH: FLAT	(2) COATS ON SALES AREA ACCENT WALL (SEE A1/A300)
P-3	PAINT - AESTHETIC WHITE	SHERWIN-WILLIAMS - COLOR: SW 7035	(2) COATS ON WOOD CAP, CROWN MOLDING, CORRIDOR CEILING - USE DRYFALL PAINT ON ROOF STRUCTURE, DECK & DUCTING
P-4	PAINT - DRY ERASE	SHERWIN-WILLIAMS - DRY ERASE CLEAR GLOSS COATING KIT KB65C2000 - FINISH: CLEAR	USE ON OFFICE WALL - SEE PLAN
P-5	PAINT - ANTIMICROBIAL	SHERWIN-WILLIAMS - SERIES: PAINT SHIELD - COLOR: SW 7036 - FINISH: EGGSHELL	USE IN RESTROOMS AND HALLWAY
P-6	PAINT - SNAPDRY	SHERWIN-WILLIAMS - SERIES: SNAPDRY - COLOR: SW 7035	USE ON HORIZONTAL SURFACE OF TINTING WINDOW OPENING
MISCELLANEOUS			
M-1	LATICRETE	HYDRO BAN	INSTALL AT ALL WET WALLS & DEMISING WALL(S) - SEE DETAIL
M-2	WINDOW GRAPHIC	PRINTED VINYL SHEET	SHERWIN-WILLIAMS PROVIDE/INSTALL - EXTERIOR OF GLASS AT STAGING AREA
M-3	PLASTIC LAMINATE	PIONITE - SERIES: HARD ROCK - COLOR: MAPLE G48 WM791 H	USE FOR ALL EXPOSED SURFACES OF COUNTER AND SHELVING IN OFFICE
WALL COVERING			
WC-1	CERAMIC TILE	DALTILE - SERIES: PORTFOLIO - SIZE: 6x24 & 3x12 BULLNOSE - COLOR: NOCE #PF11	5'-3" HIGH WAINSCOT (FULL HEIGHT @ WET WALL) - SEE ELEVATIONS - GROUT: MAPEI #39 IVORY
WC-2	FRP WALL PANEL	MARLITE - MODEL: P-100 - FINISH: PEBBLED - COLOR: WHITE	INSTALL TO 4'-0" A.F.F.

NOTES:

A.	CONFIRM PAINT FINISH AND COATING/PRIMING REQUIREMENTS WITH PAINT SPECIFICATIONS ON SHEET A121

GENERAL NOTES

A. ALL FLOOR FINISHES SHALL BE INSTALLED WITH TOP EDGES LEVEL WITH ADJACENT MATERIAL TOP EDGES. CONFIRM TILE THICKNESS AS THESE MAY VARY. CONFIRM THAT NO OVERALL FLOATING OF FLOOR IS REQUIRED.
B. COORDINATE FLOORING TRANSITIONS AND BASE TILE INSTALLATION WITH MILLWORK SHOP DRAWINGS AND FIELD CONDITIONS.
C. ALL THRESHOLDS SHALL HAVE A MAXIMUM HEIGHT OF 1/2" ABOVE EXISTING CONCRETE SLAB AND/OR INTERIOR FINISHES.
D. TILE TRANSITION BETWEEN ROOMS TO BE CENTERED ON DOOR FRAME.
E. SEE PLUMBING DRAWINGS FOR DIMENSIONS AND LOCATIONS OF FLOOR DRAINS AND FLOOR SINKS.
F. ALL INTERIOR FINISHES TO HAVE A FLAME SPREAD RATING OF 25 OR LESS. WITH A MAXIMUM SMOKE GENERATION FACTOR OF 450.
G. TILE INSTALLER SHALL COORDINATE WITH GENERAL CONTRACTOR AND PROVIDE LAYOUT OF ALL WALL TILE PRIOR TO INSTALLATION. GENERAL CONTRACTOR SHALL PREPARE WALLS AS TO MINIMIZE CUT TILES IN THE HORIZONTAL DIRECTION AND ELIMINATE CUT TILES IN THE VERTICAL DIRECTION ON ANY WALLS. CONTACT ARCHITECT OF ANY DISCREPANCIES IN DIMENSIONS FOR DIRECTION PRIOR TO INSTALLATION. FAILURE TO ADHERE TO THESE REQUIREMENTS RESULTING IN ANY REMEDIATION REQUIRED TO MEET DESIGN INTENT WILL BE AT CONTRACTORS COST.

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REGISTERED ARCHITECT CARL L. LINGLE 18179 STATE OF TEXAS
04/11/2025

PROJECT #:

DRAWN BY: BA CHECKED BY: MP

PERMIT SET - 04/11/2025
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SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
FINISH PLAN

SHEET NUMBER:
A120

PAINT SPECIFICATIONS

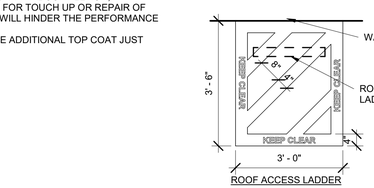
INTERIOR, EXTERIOR AND INDUSTRIAL PAINTS AND COATINGS
PART 1 – GENERAL
1.1. SUMMARY
1.1.1. SECTION INCLUDES
1.1.1.1. INTERIOR AND EXTERIOR PAINT AND COATINGS SYSTEMS INCLUDING SURFACE PREPARATION.
1.1.2. RELATED SECTION
1.1.2.1. SECTION 03 30 00 CAST-IN-PLACE CONCRETE
1.1.2.2. SECTION 05 12 16 FABRICATED FIREPROOFED STEEL COLUMNS
1.1.2.3. SECTION 05 50 00 METAL FABRICATIONS
1.1.2.4. SECTION 06 20 00 FINISH CARPENTRY
1.1.2.5. SECTION 06 40 00 ARCHITECTURAL WOODWORK
1.2. REFERENCES
1.2.1. THE PUBLICATION LISTED FORM A PART OF THIS SPECIFICATION TO THE EXTENT REFERENCED.
1.2.1.1. ASTM INTERNATIONAL (ASTM)
1.2.1.1.1. ASTM E 2129
1.2.1.2. STEEL STRUCTURES PAINTING COUNCIL
1.2.1.2.1. SSPC-SP 1
1.2.1.2.2. SSPC-SP 2
1.2.1.2.3. SSPC-SP 3
1.2.1.2.4. SSPC-SP 5
1.2.1.2.5. SSPC-SP 6
1.2.1.2.6. SSPC-SP 7
1.2.1.2.7. SSPC-SP 10
1.2.1.2.8. SSPC-SP 11
1.2.1.2.9. SSPC-SP 12
1.2.1.2.10. SSPC-SP 13
1.2.1.3. MATERIAL SAFETY DATA SHEETS / ENVIRONMENTAL DATA SHEETS
1.3. SUBMITTALS
1.3.1. APPLICATOR QUALIFICATIONS STATEMENT
1.4. QUALITY ASSURANCE
1.4.1. INSTALLER QUALIFICATIONS
1.4.1.1. A FIRM OR INDIVIDUAL EXPERIENCED IN APPLYING PAINTS AND COATINGS SIMILAR IN MATERIAL, DESIGN, AND EXTENT TO THOSE INDICATED FOR THIS PROJECT
1.4.1.2. THE FIRM OR INDIVIDUAL SHALL BE APPROVED IN WRITING BY THE COATING MANUFACTURER.
1.4.2. PAINT EXPOSED SURFACES. IF A COLOR OF FINISH, OR A SURFACE IS NOT SPECIFICALLY MENTIONED, ARCHITECT WILL SELECT FROM STANDARD PRODUCTS, COLORS, AND SHEENS AVAILABLE
1.4.3. DO NOT PAINT PREFINISHED ITEMS, CONCEALED SURFACES, FINISHED METAL SURFACES, OPERATING PARTS,AND LABELS UNLESS INDICATED.
1.4.4. MOCK-UP: PROVIDE A MOCK-UP FOR EVALUATION OF SURFACE PREPARATION TECHNIQUES AND APPLICATIONWORKMANSHIP. AN IN-PLACE MOCK-UP MAY BE PERMITTED AT THE DISCRETION OF THE ARCHITECT OR OWNER.
1.4.4.1. FINISH SURFACES FOR VERIFICATION OF PRODUCTS, COLORS, AND SHEENS.
1.4.4.2. FINISH AREA DESIGNATED BY ARCHITECT OR OWNER
1.4.4.3. DO NOT PROCEED WITH REMAINING WORK UNTIL THE COATING MANUFACTURER APPROVES THE MOCK-UP.
1.5. DELIVERY, STORAGE, AND HANDLING
1.5.1. DELIVERY: DELIVER MANUFACTURER'S UNOPENED CONTAINERS TO THE WORK SITE. PACKAGING SHALL BEAR THE MANUFACTURER'S NAME, LABEL, AND THE FOLLOWING INFORMATION
1.5.1.1. PRODUCT NAME AND TYPE
1.5.1.2. APPLICATION AND USE INSTRUCTIONS
1.5.1.3. SURFACE PREPARATION
1.5.1.4. VOC CONTENT
1.5.1.5. BATCH DATE
1.5.1.6. COLOR NUMBER
1.5.2. STORAGE: STORE AND DISPOSE OF SOLVENT BASED MATERIALS, AND MATERIALS USED WITH SOLVENT BASED MATERIALS, IN ACCORDANCE WITH REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION.
1.5.3. STORE MATERIALS IN AN AREA THAT IS WITHIN THE ACCEPTABLE TEMPERATURE RANGE PER THE MANUFACTURER'S INSTRUCTIONS. PROTECT FROM FREEZING.
1.5.4. HANDLING: MAINTAIN A CLEAN, DRY STORAGE AREA TO PREVENT CONTAMINATION OR DAMAGE TO THE COATINGS.
1.6. PROJECT CONDITIONS
1.6.1. MAINTAIN ENVIRONMENTAL CONDITIONS (TEMPERATURE, HUMIDITY, AND VENTILATION) WITHIN LIMITS RECOMMENDED BY THE MANUFACTURER FOR OPTIMUM RESULTS. DO NOT INSTALL PRODUCTS UNDER ENVIRONMENTAL CONDITIONS OUTSIDE OF THE MANUFACTURER'S ABSOLUTE LIMITS.
1.6.2. DO NOT APPLY COATINGS IN AREAS WHERE DUST IS BEING GENERATED.
1.6.3. PROVIDE LIGHTING LEVELS IN AREAS WHERE COATINGS ARE BEING INSTALLED OF AT LEAST 80 FOOT CANDLES.
1.7. EXTRA MATERIALS
1.7.1. DISPOSE OF EXTRA MATERIALS IN ACCORDANCE WITH REGULATIONS OF AUTHORITIES HAVING JURISDICTION

PART 2 – PRODUCTS
2.1. MANUFACTURERS
2.1.1. THE SHERWIN-WILLIAMS COMPANY, 1-800-524-5979, WWW.SHERWIN-WILLIAMS.COM
2.1.1.1. SOURCE FROM THE NEAREST SHERWIN-WILLIAMS LOCATION
2.1.2. SUBSTITUTIONS SHALL NOT BE PERMITTED
2.2. APPLICATION
2.2.1. INTERIOR PAINTS AND COATINGS
2.2.1.1. METAL: STRUCTURAL STEEL, JOISTS, TRUSSES, BEAMS, PARTITIONS AND SIMILAR ITEMS
2.2.1.2. WOOD: WALLS, CEILINGS, DOORS, TRIM AND SIMILAR ITEMS
2.2.1.3. GYPSUM: DRYWALL BOARD, GYPSUM BOARD
2.2.1.4. CONCRETE FLOORS
2.3. PAINT MATERIALS
2.3.1. PAINTS AND COATINGS
2.3.1.1. UNLESS OTHERWISE INDICATED, PROVIDE FACTORY MIXED AND TINTED COATINGS. DO NOT REDUCE, THIN, OR DILUTE COATINGS OR ADD MATERIALS TO COATINGS UNLESS SUCH PROCEDURE IS SPECIFICALLY DESCRIBED IN THE MANUFACTURER'S PRODUCT INSTRUCTIONS.
2.3.1.2. FOR OPAQUE FINISHES, TINT EACH COAT INCLUDING PRIMER COAT. FOLLOW MANUFACTURER'S PRODUCT INSTRUCTIONS FOR OPTIMAL COLOR CONFORMANCE.
2.3.2. PRIMERS: WHERE THE MANUFACTURER OFFERS OPTIONS ON PRIMERS FOR A PARTICULAR SUBSTRATE, USEPRIMER CATEGORIZED AS "BEST" BY THE MANUFACTURER.
2.3.2.1. WHEN INDICATED BY THE MANUFACTURER, USE THE APPROPRIATE "P-SHADE" TINT COLOR FOR THE DESIRED TOPCOAT COLOR.
2.3.2.2. WHEN NO "P-SHADE" COLOR IS INDICATED, TINT THE PRIMER TO MATCH THE TOP COAT.
2.3.3. COATING APPLICATION ACCESSORIES: PROVIDE ALL PRIMERS, SEALERS, CLEANING AGENTS, CLEANING CLOTHS,SANDING MATERIALS, AND CLEAN-UP MATERIALS PER MANUFACTURER'S SPECIFICATIONS.
2.3.4. COLOR: AS SCHEDULED OR INDICATED ON DRAWINGS
2.4. INTERIOR PAINT SCHEDULE
2.4.1. METAL: DUCTWORK
2.4.1.1. DRYFALL WATERBORNE TOPCOATS:
2.4.1.1.1. EG-SHEL FINISH
2.4.1.1.1.1. FIRST COAT: S-W PRO INDUSTRIAL WATERBORNE ACRYLIC DRYFALL, B42W82
2.4.1.1.2. SECOND COAT: S-W PRO INDUSTRIAL WATERBORNE ACRYLIC DRYFALL, B42W82, 8.0 MILS WET, 2.0 MILS DRY PER COAT
2.4.2. METAL (OVERHEAD): STRUCTURAL STEEL, JOISTS, TRUSSES, BEAMS, MISCELLANEOUS AND ORNAMENTAL IRON, FERROUS METAL
2.4.2.1. DRYFALL WATERBORNE TOPCOATS
2.4.2.1.1. EG-SHEL FINISH
2.4.2.1.1.1. FIRST COAT: S-W PRO INDUSTRIAL PRO-CRYL UNIVERSAL PRIMER, B66W310, 7.0 MILS WET, 3.0 MILS DRY
2.4.2.1.1.2. SECOND COAT: S-W PRO INDUSTRIAL WATERBORNE ACRYLIC DRYFALL, B42W82, 8.0 MILS WET, 2.0 MILS DRY PER COAT
2.4.3. METAL: STRUCTURAL STEEL AND IRON, FERROUS METAL, MISC. IRON
2.4.3.1. ACRYLIC SYSTEM
2.4.3.1.1. EG-SHEL FINISH
2.4.3.1.1.1. FIRST COAT: S-W PRO INDUSTRIAL PRO-CRYL UNIVERSAL PRIMER, B66A00310, 5.0 MILS WET, 1.8 MILS DRY
2.4.3.1.1.2. SECOND COAT: S-W PRO INDUSTRIAL ACRYLIC, B66-600 SERIES, 6.0 MILS WET, 2.1 MILS DRY
2.4.3.1.1.3. THIRD COAT: S-W PRO INDUSTRIAL ACRYLIC, B66-600 SERIES, 6.0 MILS WET, 2.1 MILS DRY
2.4.4. WOOD (VERTICAL SURFACES): WALLS, CEILINGS, DOORS, TRIM, WINDOW FRAMES
2.4.4.1. ALKYD SYSTEM
2.4.4.1.1. SEMI-GLOSS FINISH (WATERBASED)
2.4.4.1.1.1. FIRST COAT: S-W PREMIUM WALL & WOOD PRIMER, B28W8811, 4 MILS WET, 1.8 MILS DRY
2.4.4.1.1.2. SECOND COAT: S-W PROCLASSIC INTERIOR WATERBASED ACRYLIC-ALKYD SEMI-GLOSS, B34W8853
2.4.4.1.1.3. THIRD COAT: S-W PROCLASSIC INTERIOR WATERBASED ACRYLIC-ALKYD SEMI-GLOSS, B34W8853, 4 MILS WET, 1.6 MILS DRY PER COAT
2.4.5. WOOD (HORIZONTAL SURFACE): TRIM, WINDOW FRAMES, COUNTERS
2.4.5.1. ACRYLIC SYSTEM
2.4.5.1.1. SEMI-GLOSS FINISH
2.4.5.1.1.1. FIRST COAT: S-W PREMIUM WALL & WOOD PRIMER, B28W8811, 4 MILS WET, 1.8 MILS DRY
2.4.5.1.1.2. SECOND COAT: S-W SNAPDRY INTERIOR/EXTERIOR, A71 SERIES, 4 MILS WET, 1.44 MILS DRY
2.4.5.1.1.3. THIRD COAT: S-W SNAPDRY INTERIOR/EXTERIOR, A71 SERIES, 4 MILS WET, 1.44 MILS DRY
2.4.6. GYPSUM: WALLS, CEILINGS, GYPSUM BOARD, AND SIMILAR ITEMS
2.4.6.1. LATEX SYSTEM
2.4.6.1.1. FLAT FINISH
2.4.6.1.1.1. FIRST COAT: S-W PREMIUM WALL & WOOD PRIMER, B28W8811, 4 MILS WET, 1.8 MILS DRY
2.4.6.1.1.2. SECOND COAT: S-W EMERALD INTERIOR LATEX FLAT K35 SERIES, K35W8353
2.4.6.1.1.3. THIRD COAT: S-W EMERALD INTERIOR LATEX FLAT K35 SERIES, K35W8353, 4 MILS WET, 1.6 MILS DRY PER COAT
2.4.6.1.2. EG-SHELL FINISH (AT RESTROOMS AND RESTROOM ALCOVE)
2.4.6.1.2.1. FIRST COAT: S-W PREMIUM WALL & WOOD PRIMER, B28W8811, 4 MILS WET, 1.8 MILS DRY
2.4.6.1.2.2. SECOND COAT: S-W PAINT SHIELD INTERIOR LATEX MICROBICIDAL, D12W00051, 4.0 MILS WET, 1.8 MILS DRY
2.4.6.1.2.3. THIRD COAT: S-W PAINT SHIELD INTERIOR LATEX MICROBICIDAL, D12W00051, 4.0 MILS WET, 1.8 MILS DRY
2.4.6.2. POLYURETHANE (DRY ERASE) SYSTEM
2.4.6.2.1. GLOSS FINISH
2.4.6.2.1.1. FIRST COAT: S-W PREMIUM WALL & WOOD PRIMER, B28W8811, 4 MILS WET, 1.8 MILS DRY
2.4.6.2.1.2. SECOND COAT: S-W EMERALD INTERIOR LATEX FLAT K35 SERIES, K35W8353, 4 MILS WET, 1.6 MILS DRY
2.4.6.3.1.3. THIRD COAT: S-W DRY ERASE CLEAR GLOSS COATING, KB65C2000 KIT, 4 MILS WET, 2 MILS DRY
2.4.6.3.1.4. FOURTH COAT: S-W DRY ERASE CLEAR GLOSS COATING, KB65C2000 KIT, 4 MILS WET, 2 MILS DRY
2.4.7. CONCRETE: CONCRETE FLOORS
2.4.7.1. ALKYD SYSTEM
2.4.7.1.1. FLAT FINISH
2.4.7.1.1.1. FIRST COAT: S-W PRO INDUSTRIAL PRO-PARK WATERBORNE TRAFFIC MARKING PAINT, B97YD2467, 15 MILS WET, 9.3 MILS DRY
2.4.7.2. ACRYLIC SYSTEM
2.4.7.2.1. GLOSS FINISH
2.4.7.2.1.1. FIRST COAT: H&C CLARISHIELD WATER-BASED WET-LOOK CONCRETE SEALER, 50.148155
2.4.7.2.1.2. SECOND COAT: H&C CLARISHIELD WATER-BASED WET-LOOK CONCRETE SEALER, 50.148155
2.5. EXTERIOR PAINT SCHEDULE
2.5.1. MASONRY: CONCRETE MASONRY UNITS
2.5.1.1. ELASTOMERIC SYSTEM
2.5.1.1.1. FLAT FINISH
2.5.1.1.1.1. FIRST COAT: S-W LOXON BLOCK SURFACER, A24W00200, 16 MILS WET, 8.8 MILS DRY
2.5.1.1.1.2. SECOND COAT: S-W EMERALD EXTERIOR LATEX FLAT, K47 SERIES, 5.3 MILS WET, 2.1 MILS DRY
2.5.1.1.1.3. THIRD COAT: S-W EMERALD EXTERIOR LATEX FLAT, K47 SERIES, 6.4 MILS WET, 2.5 MILS DRY
2.5.2. METAL: GALVANIZED
2.5.2.1. ACRYLIC SYSTEM
2.5.2.1.1. GLOSS FINISH
2.5.2.1.1.1. FIRST COAT: S-W PRO INDUSTRIAL PRO-CRYL UNIVERSAL PRIMER, B66A00310, 5.0 MILS WET, 1.8 MILS DRY
2.5.2.1.1.2. SECOND COAT: S-W PRO INDUSTRIAL ACRYLIC, B66-600 SERIES, 6.0 MILS WET, 2.1 MILS DRY
2.5.2.1.1.3. THIRD COAT: S-W PRO INDUSTRIAL ACRYLIC, B66-600 SERIES, 6.0 MILS WET, 2.1 MILS DRY
2.5.3. METAL: STRUCTURAL STEEL AND IRON, FERROUS METAL, MISC. IRON
2.5.3.1. ACRYLIC SYSTEM
2.5.3.1.1. EG-SHEL FINISH
2.5.3.1.1.1. FIRST COAT: S-W PRO INDUSTRIAL PRO-CRYL UNIVERSAL PRIMER, B66A00310, 5.0 MILS WET, 1.8 MILS DRY
2.5.3.1.1.2. SECOND COAT: S-W PRO INDUSTRIAL ACRYLIC, B66-600 SERIES, 6.0 MILS WET, 2.1 MILS DRY
2.5.3.1.1.3. THIRD COAT: S-W PRO INDUSTRIAL ACRYLIC, B66-600 SERIES, 6.0 MILS WET, 2.1 MILS DRY
2.5.4. EXTERIOR INSULATION AND FINISH SYSTEM, SYNTHETIC STUCCO
2.5.4.1. LATEX SYSTEM
2.5.4.1.1. FLAT FINISH
2.5.4.1.1.1. FIRST COAT: S-W LOXON CONCRETE AND MASONRY PRIMER, A24W08300,5.3 MILS WET, 2.1 MILS DRY
2.5.4.1.1.2. SECOND COAT: S-W EMERALD EXTERIOR LATEX FLAT, K47 SERIES, 5.3 MILS WET, 2.1 MILS DRY
2.5.4.1.1.3. THIRD COAT: S-W EMERALD EXTERIOR LATEX FLAT, K47 SERIES, 6.4 MILS WET, 2.5 MILS DRY
2.5.5. PAVING: ASPHALTIC CONCRETE AND CONCRETE
2.5.5.1. ALKYD SYSTEM
2.5.5.1.1. FLAT FINISH
2.5.5.1.1.1. FIRST COAT: S-W PRO INDUSTRIAL PRO-PARK WATERBORNE TRAFFIC MARKING PAINT, B97YD2467, 15 MILS WET, 9.3 MILS DRY

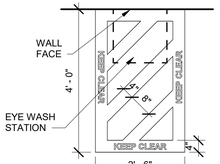
PART 3 – EXECUTION
3.1. EXAMINATION
3.1.1. DO NOT BEGIN INSTALLATION UNTIL SUBSTRATES HAVE BEEN PROPERLY PREPARED. NOTIFY ARCHITECT OFUNSATISFACTORY CONDITIONS BEFORE PROCEEDING. IF SUBSTRATE IS THE RESPONSIBILITY OF ANOTHER INSTALLER,NOTIFY ARCHITECT OF UNSATISFACTORY PREPARATION BEFORE PROCEEDING.
3.1.2. PROCEED WITH WORK ONLY AFTER CONDITIONS HAVE BEEN CORRECTED AND APPROVED BY ALL PARTIES,OTHERWISE APPLICATION OF COATINGS WILL BE CONSIDERED AS AN ACCEPTANCE OF SURFACE CONDITIONS.
3.2. SURFACE PREPARATION
3.2.1. GENERAL: SURFACES SHALL BE DRY AND IN SOUNDS CONDITION. REMOVE OIL, DUST, DIRT, LOOSE RUST, PEELINGPAINT, OR OTHER CONTAMINATION TO ENSURE GOOD ADHESION
3.2.1.1. REMOVE MILDEW BEFORE PAINTING BY WASHING WITH A SOLUTION OF 1 PART LIQUID HOUSEHOLDBLEACH AND 3 PARTS WARM WATER. APPLY THE SOLUTION AND SCRUB THE MILDEW AREA. ALLOW THESOLUTION TO REMAIN ON THE SURFACE FOR 10 MINUTES. RINSE THOROUGHLY WITH CLEAN WATER ANDALLOW THE SURFACE TO DRY A MINIMUM OF 48 HOURS BEFORE PAINTING. WEAR PROTECTIVE GLASSES ORGOGGLES, WATERPROOF GLOVES, AND PROTECTIVE CLOTHING. QUICKLY WASH OFF ANY OF THE MIXTURE THATCOMES IN CONTACT WITH SKIN. DO NOT ADD DETERGENTS OR AMMONIA TO THE BLEACH/WATER SOLUTION.
3.2.1.2. REMOVE ITEMS INCLUDING BUT NOT LIMITED TO THERMOSTATS, ELECTRICAL OUTLETS, SWITCH COVERSAND SIMILAR ITEMS PRIOR TO PAINTING. AFTER COMPLETING PAINTING OPERATIONS IN EACH SPACE OR AREAREINSTALL ITEMS REMOVED USING WORKERS SKILLED IN THE TRADES INVOLVED.
3.2.1.3. NO EXTERIOR PAINTING SHOULD BE DONE IMMEDIATELY AFTER A RAIN, DURING FOGGY WEATHER, WHENRAIN IS PREDICTED, OR WHEN THE TEMPERATURE IS BELOW 50 DEGREES F (10 DEGREES C) UNLESSPRODUCTS ARE DESIGNED SPECIFICALLY FOR THESE CONDITIONS. ON LARGE EXPANSES OF METAL SIDINGTHE AIR, SURFACE, AND MATERIAL TEMPERATURES MUST BE 50 DEGREES F (10 DEGREES C) OR HIGHER TO USELOW TEMPERATURE PRODUCTS.
3.2.2. ALUMINUM:
3.2.2.1. REMOVE ALL OIL, GREASE, DIRT, OXIDE, AND OTHER FOREIGN MATERIAL BY CLEANING PER SSPC-SP1,SOLVENT CLEANING

PAINT SPECIFICATIONS

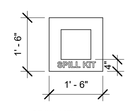
3.2.3. CONCRETE AND CONCRETE MASONRY:
3.2.3.1. REMOVE ALL LOOSE MORTAR AND FOREIGN MATERIAL. SURFACE MUST BE FREE OF LAITANCE,CONCRETE DUST, DIRT, FORM RELEASE AGENTS, MOISTURE CURING MEMBRANES, LOOSE CEMENT, ANDHARDENERS. CONCRETE MUST BE CURED AT LEAST 30 DAYS AT 75 DEGREES F (24 DEGREES C). THE PH OFTHE SURFACE SHOULD BE BETWEEN 6 AND 9 UNLESS THE PRODUCTS ARE DESIGN TO BE USE IN HIGH (ORLOW) PH ENVIRONMENTS. ON TILT-UP AND CAST-IN-PLACE CONCRETE COMMERCIAL DETERGENTS ANDABRASIVE BLASTING MAY BE NECESSARY TO PREPARE THE SURFACE. FILL BUG HOLES, AIR POCKETS, ANDOTHER VOIDS WITH A CEMENT PATCHING COMPOUND.
3.2.4. COPPER AND STAINLESS STEEL
3.2.4.1. REMOVE ALL OIL, GREASE, DIRT, OXIDE, AND OTHER FOREIGN MATERIAL BY CLEANING PER SSPC-SP2,HAND TOOL CLEANING.
3.2.5. GYPSUM BOARD
3.2.5.1. EXTERIOR
3.2.5.1.1. MUST BE CLEAN AND DRY. ALL NAIL HEADS MUST BE SET AND SPACKLED. JOINTS MUST BEPAINTED AND COVERED WITH A JOINT COMPOUND. SPACKLED NAIL HEADS AND TAPE JOINTS MUST BESANDED SMOOTH AND ALL DUST REMOVED PRIOR TO PAINTING. EXTERIOR SURFACES MUST BESPACKLED WITH EXTERIOR GRADE COMPOUNDS. PROVIDE GYPSUM BOARD FINISH LEVEL ASINDICATED ON DRAWINGS OR AS SPECIFIED ELSEWHERE.
3.2.5.2. INTERIOR
3.2.5.2.1. MUST BE CLEAN AND DRY. ALL NAIL HEADS MUST BE SET AND SPACKLED. JOINTS MUST BEPAINTED AND COVERED WITH A JOINT COMPOUND. SPACKLED NAIL HEADS AND TAPE JOINTS MUST BESANDED SMOOTH AND ALL DUST REMOVED PRIOR TO PAINTING. PROVIDE GYPSUM BOARD FINISHLEVEL AS INDICATED ON DRAWINGS OR AS SPECIFIED ELSEWHERE.
3.2.6. GALVANIZED METAL
3.2.6.1. CLEAN PER SSPC-SP1 USING DETERGENT AND WATER OR A DEGREASING CLEANER TO REMOVEGREASES AND OILS. APPLY A TEST AREA PRIMING AS REQUIRED. ALLOW THE COATING TO DRY AT LEAST ONEWEEK BEFORE TESTING. IF ADHESION IS POOR THEN BRUSH BLAST PER SSPC-SP7 TO REMOVE TREATMENTS.
3.2.7. STEEL
3.2.7.1. STRUCTURAL, PLATE, AND SIMILAR ITEMS
3.2.7.1.1. SHOULD BE CLEANED BY ONE OR MORE OF THE SURFACE PREPARATIONS DESCRIBEDBELOW. VISUAL STANDARDS ARE AVAILABLE THROUGH THE SOCIETY OF PROTECTIVE COATINGS.
3.2.7.1.1.1. SOLVENT CLEANING: SSPC-SP1
3.2.7.1.1.2. HAND TOOL CLEANING: SSPC-SP2
3.2.7.1.1.3. POWER TOOL CLEANING: SSPC-SP3
3.2.7.1.1.4. WHITE METAL BLAST CLEANING: SSPC-SP5 OR NACE 1
3.2.7.1.1.5. COMMERCIAL BLAST CLEANING: SSPC-SP6 OR NACE 3
3.2.7.1.1.6. BRUSH-OFF BLASTING: SSPC-SP7 OR NACE 4
3.2.7.1.1.7. POWER TOOL CLEANING TO BARE METAL: SSPC-SP11
3.2.7.1.1.8. NEAR-WHITE BLAST CLEANING: SSPC-SP10 OR NACE 2
3.2.7.1.1.9. HIGH AND ULTRA-HIGH PRESSURE WATER JETTING FOR STEEL AND OTHER HARDMATERIALS: SSPC-SP12 OR NACE 5
3.2.7.1.1.10. WATER BLASTING: SSPC-SP12 OR NACE 5
3.2.8. WOOD
3.2.8.1. MUST BE CLEAN AND DRY. PRIME AND PAINT AS SOON AS POSSIBLE. KNOTS AND PITCH STREAKS MUSTBE SCRAPED, SANDED, AND SPOT PRIMED BEFORE AND FULL PRIMING COAT IS APPLIED. PATCH ALLNAIL HOLES AND IMPERFECTIONS WITH A WOOD FILLER OR PUTTY AND SAND SMOOTH.
3.3. INSTALLATION
3.3.1. APPLY ALL COATINGS AND MATERIALS PER THE MANUFACTURER'S SPECIFICATIONS. DO NOT THIN COATINGSUNLESS SPECIFICALLY DIRECTED BY THE MANUFACTURER.
3.3.2. DO NOT APPLY TO WET OR DAMP SURFACES. WAIT AT LEAST 30 DAYS BEFORE APPLYING TO NEWCONCRETE OR MASONRY UNLESS USING PRODUCTS SPECIFICALLY DESIGNED TO BE APPLIED PRIOR TO30 DAYS OF CURING TIME. TEST NEW CONCRETE FOR MOISTURE CONTENT. WAIT UNTIL WOOD ISFULLY DRY AFTER RAIN OR MORNING DEW OR FOG.
3.3.3. APPLY COATINGS USING METHODS AND TOOLS RECOMMENDED BY THE MANUFACTURER.
3.3.4. UNIFORMLY APPLY COATINGS WITHOUT RUNS, DRIPS, SAGS, HOLIDAYS, OR BRUSH MARKS ANDWITH A CONSISTENT SHEEN.
3.3.5. APPLY COATINGS AT SPREADING RATE REQUIRED TO ACHIEVE THE MANUFACTURER'S RECOMMENDEDDRY FILM THICKNESS.
3.3.6. REGARDLESS OF NUMBER OF COATS SPECIFIED, APPLY AS MANY COATS AS NECESSARY FORCOMPLETE HIDE AND UNIFORM APPEARANCE.
3.3.7. THE COATED SURFACE MUST BE INSPECTED AND APPROVED BY THE ARCHITECT AND MANUFACTURERJUST PRIOR TO THE APPLICATION OF EACH COAT.
3.4. PROTECTION
3.4.1. PROTECT FINISHED COATINGS FROM DAMAGE UNTIL COMPLETION OF THE PROJECT
3.4.2. TOUCH-UP DAMAGED COATINGS AFTER SUBSTANTIAL COMPLETION. FOLLOWING MANUFACTURER'SRECOMMENDATION FOR TOUCH UP OR REPAIR OF DAMAGED COATINGS. REPAIR ANY DEFECTS THATWILL HINDER THE PERFORMANCE OF THE COATINGS.
3.4.2.1. REGARDLESS OF TOUCH-UP, APPLY ONE ADDITIONAL TOP COAT JUST AFTER SUBSTANTIAL COMPLETION.



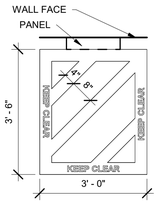
ROOF ACCESS LADDER



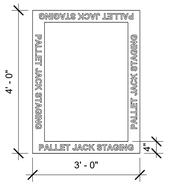
EYE WASH STATION



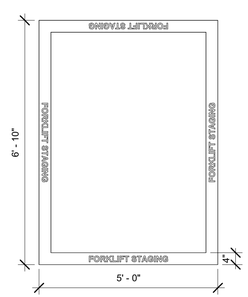
SPILL KIT



ELECTRICAL PANELS



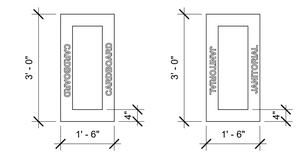
PALLET JACK STAGING



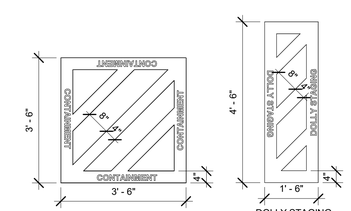
FORKLIFT STAGING / CHARGING

A3 Paint Striping - Caution Areas
1/2" = 1'-0"

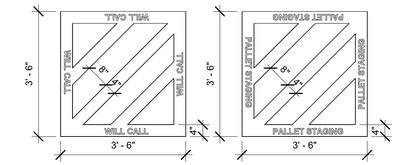
NOTE:
- COORDINATE FINAL PLACEMENT WITH SHERWIN-WILLIAMS CORPORATE
- LETTERS SHALL BE MINIMUM 2" HIGH AND SHALL CONTRAST WITH THE BACKGROUND COLOR. ALL BORDERS AND STRIPES SHALL BE 4" WIDE. STRIPES, WHERE INDICATED, SHALL BE SPACED 8" APART AND APPLIED DIAGONALLY. STRIPE REGULATORY AND CAUTIONARY AREAS IN YELLOW. OTHER REQUIRED STRIPED AREAS MAY BE ANY APPROVED COLOR.



CARDBOARD STAGING
MOP BUCKET



HAZMAT CONTAINER
DOLLY STAGING



WILL CALL
PALLET STAGING

A5 Paint Striping - Operational Areas
1/2" = 1'-0"

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REGISTERED ARCHITECT
CARL L. LINGLE
18179
STATE OF TEXAS
04/11/2025

PROJECT #:

DRAWN BY: BA CHECKED BY: MP

PERMIT SET - 04/11/2025
1 -
2 -
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4 -
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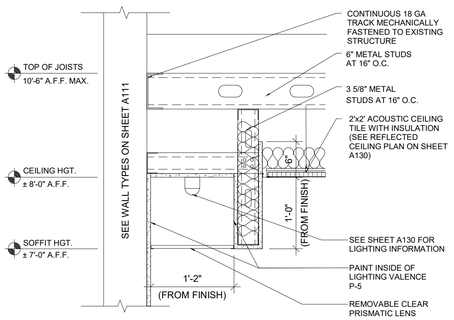
SHERWIN WILLIAMS

STORE #:
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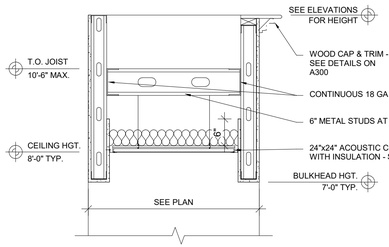
ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
PAINT SPECIFICATIONS

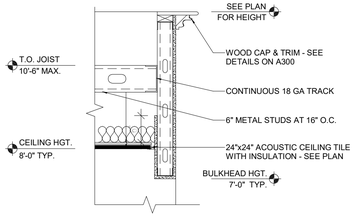
SHEET NUMBER:
A121



D1 RESTROOM LIGHTING VALENCE SECTION
1" = 1'-0"



D2 HALLWAY BULKHEAD SECTION
3/4" = 1'-0"



D3 BULKHEAD SECTION
3/4" = 1'-0"

Lighting Fixture Schedule

Type Mark	Count	Description	Manufacturer	Model	Lamp	Comments
A	1	2'x4' LED TROFFER	GE CURRENT	LVT24B048MM840VQLTWHTE	LED	TO BE SOURCED FROM WESCO
A-EM	1	2'x4' EMERGENCY TROFFER	GE CURRENT	LVT24B048MM840VQLTWHTEEL	LED	TO BE SOURCED FROM WESCO - CONNECT TO NON-SWITCHED EMERGENCY CIRCUIT
B	8	48" STANDALONE STRIP	GE CURRENT	ALV204T04T481DSQVQSTKQW	LED	TO BE SOURCED FROM WESCO
C	2	6" 1,000 LUMEN LED TRIM	GE CURRENT	LRXBR61X9CWVQ	LED	TO BE SOURCED FROM WESCO - CONNECT TO NON-SWITCHED EMERGENCY CIRCUIT
C-EM	3	6" 1,000 RECESSED EM CAN	GE CURRENT	LRXR610840MDEL	LED	TO BE SOURCED FROM WESCO - CONNECT TO NON-SWITCHED EMERGENCY CIRCUIT
DC	18	8' CONTINUOUS STRIP	GE CURRENT	ALV208T08T481DCQVQSTKQW	LED	TO BE SOURCED FROM WESCO
DC-EM	2	8' CONTINUOUS EM STRIP	GE CURRENT	ALV208T08T481DCQVESTKQW	LED	TO BE SOURCED FROM WESCO - CONNECT TO NON-SWITCHED EMERGENCY CIRCUIT
DS	7	8' STANDALONE STRIP	GE CURRENT	ALV208T08T481DSQVQSTKQW	LED	TO BE SOURCED FROM WESCO
DS-EM	3	8' STANDALONE EM STRIP	GE CURRENT	ALV208T08T481DSQVESTKQW	LED	TO BE SOURCED FROM WESCO - CONNECT TO NON-SWITCHED EMERGENCY CIRCUIT
E-EM	3	EXIT SIGNAGE W/ EMERGENCY LIGHTING	COOPER	APCH7R	LED	EXIT SIGN/EMERGENCY COMBO FIXTURE WITH 90 MINUTE BATTERY BACKUP
F	1	Ceiling Fan	Craftmade	MND54BNK3 - 54"		MOUNT @ 8'-0" A.F.F. - INSTALL "LIGHTING BOX" FOR STABILITY
G	1	WALL PACK W/ PHOTOCELL	GE CURRENT	EWLS02140AF740N3CBDKBZ	LED	TO BE SOURCED FROM WESCO
H	10	Outdoor Cylinder	PROGRESS	P564-20/30K BZ	LED	MOUNT @ 8'-0" A.F.F. - INSTALL "LIGHTING BOX" FOR STABILITY
U	8	22" UNDERCABINET	JUNO	UPLD 22IN SWW4 90CRI WH	LED	USE SPLICE BOX & JUMPER CONNECTORS
X-EM	3	REMOTE LED EMERGENCY HEADS	COOPER	APWR2	LED	REMOTE FROM EXIT SIGN/EMERGENCY COMBO FIXTURE

RCP CODED NOTES

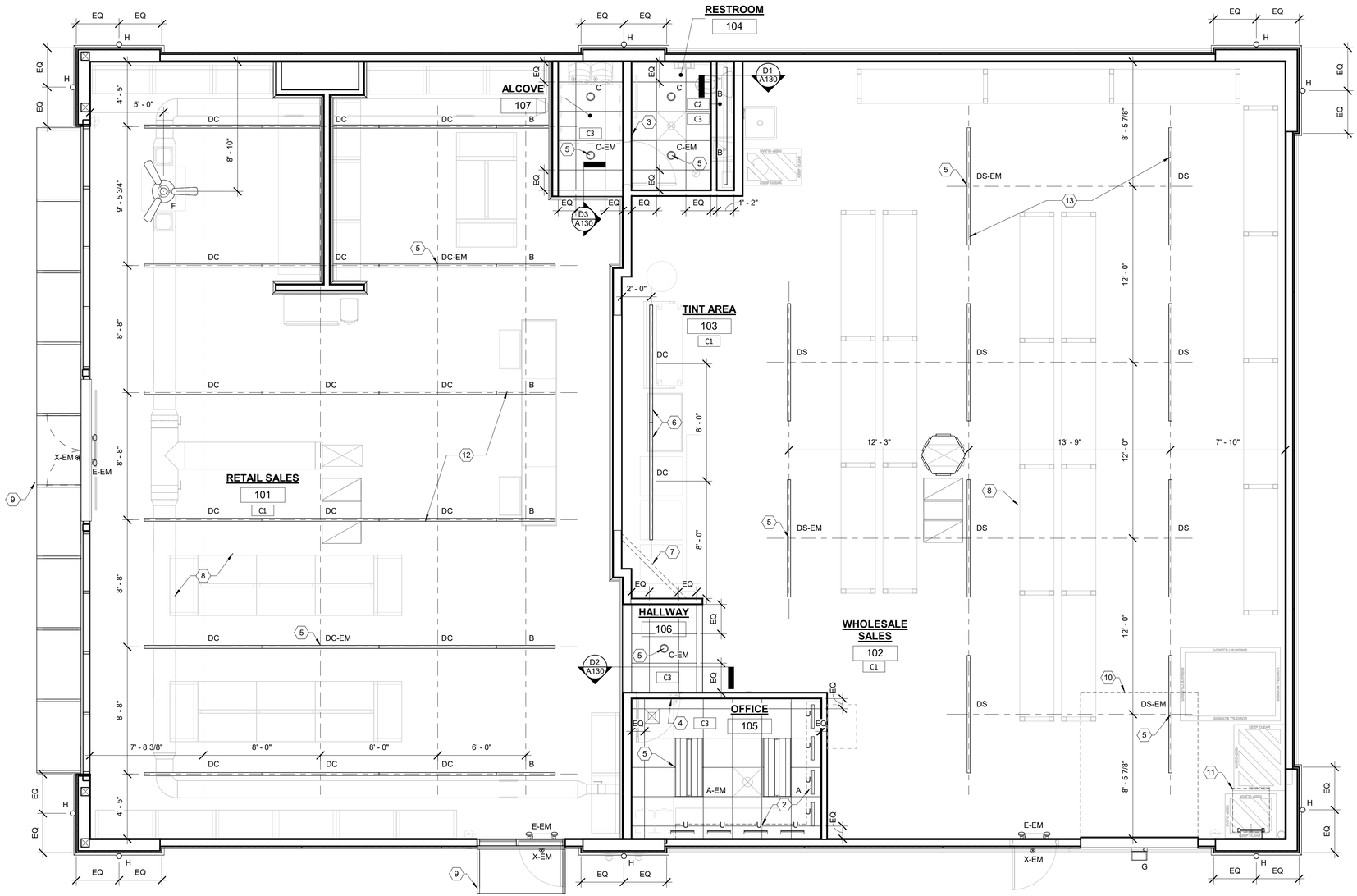
2	INSTALL LIGHTS ON UNDERSIDE OF OFFICE SHELF - SWITCH WITH OTHER OFFICE LIGHTS - SEE DETAIL B4/A111
3	INSTALL AUTOMATIC, MOTION SENSING SWITCHES (15-MINUTE GRACE PERIOD) TO CONTROL ALL LIGHTING AND EXHAUST FANS (IF APPLICABLE)
4	WIRE ALL LIGHT FIXTURES IN THE SALES, CORRIDOR AND STAGING AREAS THROUGH 8-BUTTON ELECTRONIC SWITCH WITH LED INDICATORS INSIDE THE OFFICE (LEGRAND LMSW-108 OR EQUAL)
5	CONNECT "D-E" FIXTURES TO SEPARATE NON-SWITCHED CIRCUIT
6	MOUNT LIGHT FIXTURES IN TINTING AREA 9'-6" A.F.F.
7	HORIZONTAL WALL BRACE AT 10'-0" A.F.F. 20GA METAL STUD
8	CONFIRM HVAC DUCTWORK AND DIFFUSER/RETURN LOCATIONS WITH MECHANICAL SHEETS - HOLD DUCTWORK CLOSE TO STRUCTURE
9	BLUE FABRIC OVER METAL FRAME AWNING - COORDINATE WITH OWNER
10	HOLD OVERHEAD DOOR TRACK BELOW LIGHT FIXTURE - VERIFY HEIGHT IN FIELD
11	ROOF ACCESS HATCH - SEE DETAIL C4/A111 - COORDINATE PLACEMENT WITH STRUCTURAL
12	LIGHT FIXTURES AT RETAIL SALES TO BE MOUNTED AT 12' AFF.
13	LIGHT FIXTURES AT WHOLESALE AREA TO BE MOUNTED AT 13'-6" AFF.

CEILING FINISH SCHEDULE

	DESCRIPTION:		NOTES:
C1	CEILING:	EXPOSED TO STRUCTURE :	HVAC DUCTWORK TO BE PAINTED P-3
	FINISH:	PAINT P-3	
C2	CEILING:	INSTALL 5/8" GYP. BD. CEILING	
	FINISH:	PAINT P-3 U.N.O.	
C3	MFG:	USG	GRID: USG DX GRID SYSTEM - GC SUPPLY/INSTALL - FACTORY PAINTED WHITE
	FINISH:	24"x24" SANDRIFT #808	
	COLOR:	WHITE	
	HEIGHT:	8'-0" A.F.F. U.N.O.	

GENERAL NOTES:

A. VERIFY ALL PLACEMENTS OF LIGHTS WITH ARCHITECT PRIOR TO INSTALLATION.
B. SEE ELECTRICAL PLANS FOR ADDITIONAL LIGHTING INFORMATION
C. ALL CEILING MATERIAL SHALL NOT EXCEED FLAME CLASS II - FLAME SPREAD INDEX 25-75.
D. G.C. SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES INVOLVED IN THE CEILING WORK TO ENSURE THAT PROPER CLEARANCES FOR DUCTS, LIGHTS, PIPING, ETC. ARE MET AND THAT THE CEILING HEIGHS NOTED ON THE DRAWINGS ARE MAINTAINED
E. G.C. TO VERIFY REQUIREMENTS AND QUANTITIES OF FIRE PROTECTION DEVICES INCLUDING SMOKE DETECTORS, DUCT SMOKE DETECTORS, FIRE ALARMS, RELATED SPEAKERS, STROBES, ETC. LIFE SAFETY INSTALLATIONS TO MEET REQUIREMENTS OF ALL APPLICABLE CODES AND ORDINANCES
F. G.C. TO CAULK JOINTS BETWEEN CEILING GRID AND ADJACENT SURFACES.
G. WESCO CONTACT: MARK SABATINO
EMAIL: MSABATINO@WESCO.COM
PHONE: (440) 554-4669



A1 REFLECTIVE CEILING PLAN
1/4" = 1'-0"

A5 TYPICAL SUSPENDED CEILING
1/4" = 1'-0"

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REGISTERED ARCHITECT CARL L. LINGLE 18179 STATE OF TEXAS 04/11/2025

PROJECT #:

DRAWN BY: BA CHECKED BY: MP

PERMIT SET - 04/11/2025
1 -
2 -
3 -
4 -
5 -
6 -
7 -

SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
REFLECTED CEILING PLAN

SHEET NUMBER:
A130

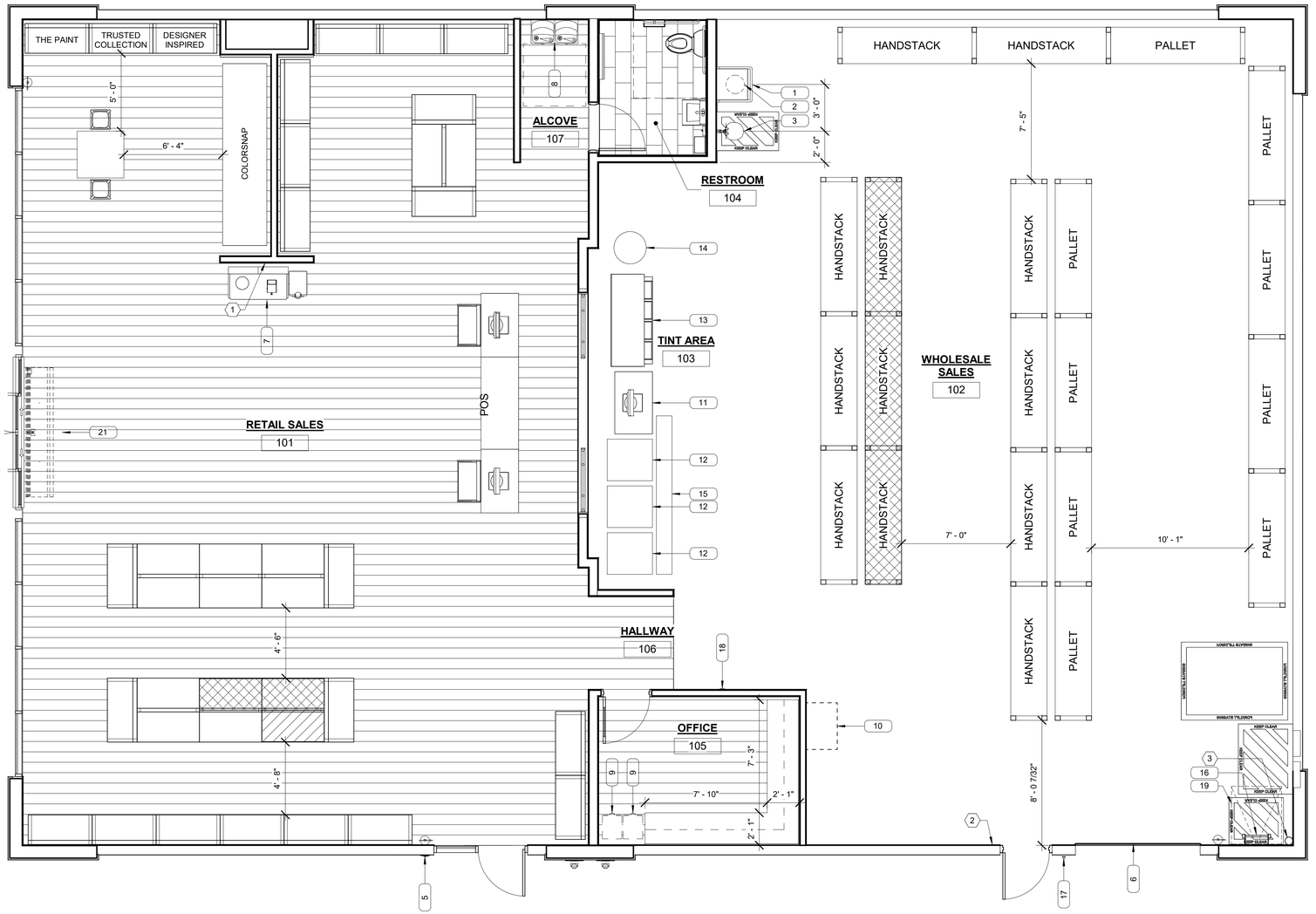
HAZARDOUS MATERIALS STORAGE

		MAX. STORAGE HEIGHT	MAX. AMOUNT		ACTUAL AMOUNT	
					0 GAL	
FLAMMABLE CLASS	1A	4'-0"	30 GAL			
	1B	4'-0"	1,600 GAL TOTAL		392 GAL	654 GAL TOTAL
	1C	4'-0"			60 GAL	
COMBUSTIBLE CLASS	II	6'-0"			150 GAL	
	IIIA	6'-0"			52 GAL	
	IIIB	6'-0"	13,200 GAL		330 GAL	
AEROSOL LEVEL	1	8'-0"			121 LBS	
	2	8'-0"	2,500 LBS	2,500 LBS TOTAL	203 LBS	224 LBS TOTAL
	3	8'-0"	1,000 LBS		21 LBS	

NOTE: TENANT WILL BE RESPONSIBLE FOR ADDING PERMANENT SIGNS ON EACH STORAGE SHELF OR RACK STATING THE ABOVE STORAGE LIMITATIONS AND TRAINING STORE STAFF IN PROPER STORAGE OF FLAMMABLE AND COMBUSTIBLE LIQUIDS. STORE OWNER WILL BE RESPONSIBLE FOR ADDING SIGNAGE TO SHELF AND RACK STORAGE WHERE FLAMMABLE AND COMBUSTIBLE LIQUIDS ARE STORED THAT "WARNING, NO COMBUSTIBLE PRODUCTS ARE TO BE STORED ABOVE ANY FLAMMABLE OR COMBUSTIBLE LIQUIDS" PER 2018 IFC.

EQUIPMENT LIST

TAG	DESCRIPTION	MANUFACTURER	MODEL	PROVIDED BY	INSTALLED BY	REMARKS
1	UTILITY SINK	ELKAY	B1C24X24X	GC	GC	ELEVATED ON METAL LEGS
2	WATER HEATER	A. O. SMITH	DEL-20	GC	GC	MOUNT ON SHELF ABOVE UTILITY SINK - VERIFY SPEC W/ PLUMBING
3	EYEWASH STATION	BRADLEY	S19224DC	GC	GC	WALL MOUNTED - PLUMB TO HOT/COLD WATER (W/ MIXING VALVE) & SANITARY SEWER
4	SLIDING GLASS DOOR	TORMAX	TX9200	TENANT	GC	
5	EMERGENCY KEY CABINET	KNOX BOX	3200 RECESSED MOUNTED	GC	GC	MOUNT 4'-0" A.F.F. - COORDINATE FINAL PLACEMENT WITH FIRE PREVENTION BUREAU
6	OVERHEAD DELIVERY DOOR	OVERHEAD DOOR	470			WALL-MOUNTED MOTORIZED OPERATOR: LIFTMASTER LJ8900W
7	COFFEE BAR W/ WATER COOLER			TENANT	TENANT	
8	HIGH/LOW DRINKING FOUNTAIN	ELKAY	LVRCGRNTL8	GC	GC	
9	FILE CABINET			TENANT	TENANT	
10	DATA CABINET			GC	GC	INSTALL PHONE/COMPUTER BOARD AT DATA CABINET
11	ACCUTINTER	MILLER	ACCUTINTER 8012	TENANT	TENANT	VERIFY SPEC W/ SHERWIN-WILLIAMS
12	5 GALLON MIXER	RED DEVIL	05025U	TENANT	TENANT	VERIFY SPEC W/ SHERWIN-WILLIAMS
13	1 GALLON MIXER	RED DEVIL	1015-PB-SQ	TENANT	TENANT	VERIFY SPEC W/ SHERWIN-WILLIAMS
14	MANUAL TINTER	FLUID MANAGEMENT	HARBIL NSC80	TENANT	TENANT	VERIFY SPEC W/ SHERWIN-WILLIAMS
15	CONVEYOR ROLLER			TENANT	TENANT	VERIFY SPEC W/ SHERWIN-WILLIAMS
16	FIXED ROOF LADDER			GC	GC	18 INCH WIDE
17	EXTERIOR BUZZER BUTTON	EDWARDS	1786-B	GC	GC	MOUNT 3'-8" A.F.F. - REFER ELECTRICAL
18	BUZZER RECEIVER	OPTEX	RCTD-20U	GC	GC	MOUNT 9'-0" A.F.F. - REFER ELECTRICAL
19	ROOF HATCH	BILCO	GS-50TB - 36x30	GC	GC	



A1 FIXTURE PLAN
1/4" = 1'-0"

CONSTRUCTION NOTES

1. THE GC SHALL INSTALL NEW VINYL WOOD PLANK FLOORING AND COVE BASE IN THE SALES, OFFICE AND CORRIDOR AREAS. INSTALL CERAMIC TILE ON THE FLOOR AND AS A 5'-3" HIGH WAINSCOT ON ALL WALLS FACING INTO THE RESTROOMS. SEE SHEET A400 FOR MORE INFORMATION.

2. THE GC SHALL INSTALL SHEETROCK FURRING ON ALL EXTERIOR WALLS, INTERIOR COLUMNS AND MASONRY WALLS FACING INTO THE SALES AREA. THESE WALLS SHALL EXTEND FROM THE SLAB TO THE UNDERSIDE OF THE ROOF DECK. INCLUDE INSULATION AS REQUIRED TO ACHIEVE THE EXTERIOR WALL INSULATION VALUE INDICATED IN THE DESIGN GUIDELINES. SEE THE DESIGN GUIDELINES FOR MORE INFORMATION.

3. THE GC SHALL INSTALL ALL WALLS FACING INTO THE SALES AREA TO BE FLAT, WITH NO PROTRUSIONS.

4. THE GC SHALL INSTALL SOUND INSULATION IN THE WALLS SURROUNDING AND SEPARATING THE RESTROOMS. THIS INSULATION SHALL EXTEND FROM THE SLAB TO THE ASSOCIATED CEILING HEIGHT.

5. THE GC SHALL NEW STOREFRONT WINDOWS AND DOORS WHERE SHOWN ON THIS PLAN. THESE SHALL BE DOUBLE GLAZED, INSULATED "E" GLASS. INSTALL THE MULLIONS TO PROVIDE A MINIMUM CLEAR GLASS SPACE OF 48 INCHES IN WIDTH AND 60 INCHES IN HEIGHT. SEE THE DESIGN GUIDELINES FOR MORE INFORMATION.

6. THE GC SHALL INSTALL RESTROOM ACCESSORIES. SEE THE DESIGN GUIDELINES FOR A LISTING OF THOSE ACCESSORIES AND PRODUCT SELECTIONS.

7. SEE THE REFLECTED CEILING PLAN FOR CEILING LAYOUT AND OTHER RELATED INFORMATION.

8. THE GC SHALL INSTALL THE SPECIFIED, 3-SECTIONED, WOOD FRAMED, WINDOW FEATURE IN THE WALL BETWEEN THE SALES AND TINTROOM AREAS. PRIME AND PAINT THE FRAMING. INSTALL CLEAR GLASS IN THE TWO END SECTIONS, LEAVING THE CENTER AS A CASED OPENING. SEE ELEVATION A1/A300 FOR MORE INFORMATION. SEE THE DESIGN GUIDELINES FOR PRODUCT AND COLOR SELECTIONS.

9. THE GC SHALL INSTALL A PLASTIC LAMINATE WORK COUNTER AND UPPER BOOK SHELF IN THE OFFICE. SHERWIN-WILLIAMS TO PROVIDE WIRE RACEWAY FOR DATA, VOICE, AND POWER ALONG DESK. RACEWAY SHALL BE WIRED USING MINIMUM OF TWO (2) CIRCUITS. SPACE EACH OPENING 2'-0" ON CENTER. ALL RECEPTACLES SHALL BE GRAY. G.C. TO INSTALL RACEWAY SURGE/DECORATOR COVERS AT VOICE/DATA LOCATIONS. VOICE/DATA DEVICES AND WIRING SHALL BE INSTALLED BY OTHERS.

10. THE GC SHALL INSTALL A PRIMED AND PAINTED WOOD CAP AND CROWN MOLDING ON TOP OF THE "T" WALL IN THE COLOR STUDIO AREA AND ON THE PERIMETER WALLS OF THE OFFICE, RESTROOMS AND TINT/SALES WALL. SEE SHEET A300 FOR MORE INFORMATION.

11. THE GC SHALL INSTALL WHITE FRP ON THE WALL BEHIND THE UTILITY SINK AND EYE WASH STATION. THIS FEATURE SHALL EXTEND FROM THE SLAB TO 4 FEET A.F.F. AND TO 2 FEET BEYOND EACH SIDE OF THE EQUIPMENT.

12. THE GC SHALL INSTALL A 1/2 INCH PLYWOOD BACK BOARD BENEATH THE SHEETROCK ON THE END OF THE "T" WALL IN THE SALES AREA TO SUPPORT A FLAT PANEL TELEVISION. SEE VIEW A3/A300 FOR INSTALLATION INSTRUCTIONS.

13. THE GC SHALL PAINT ALL INTERIOR AND EXTERIOR WALLS, DOORS, ROOF DECK, EXPOSED CONDUITS. SHERWIN-WILLIAMS WILL SUPPLY ALL LIQUID PAINT PRODUCTS FOR APPLICATION BY THE LANDLORD/CONTRACTOR. SEE THE PAINTING SCHEMATIC FOR THE LOCATION OF ACCENT COLORS. SEE THE PAINTING SCHEDULE CONTAINED IN THE DESIGN GUIDELINES FOR PRODUCT AND COLOR SELECTIONS.

FIXTURE PLAN CODED NOTES

1	COLD WATER LINE FOR COFFEE MAKER - SEE PLUMBING SHEETS
2	TIME CLOCK & LUTRON VIVE LIGHTING CONTROL SYSTEM - VERIFY W/ ELECTRICAL
3	AS-BUILT DRAWING TUBE - SEE DETAIL C5/A111

LINGLE DESIGN GROUP, INC

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REGISTERED ARCHITECT CARL L. LINGLE 18179 STATE OF TEXAS 04/11/2025

PROJECT #:

DRAWN BY: BA CHECKED BY: MP

PERMIT SET - 04/11/2025

1 -
2 -
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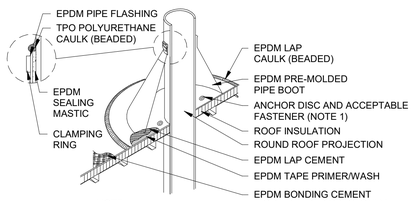
SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
FIXTURE PLAN & SCHEDULE

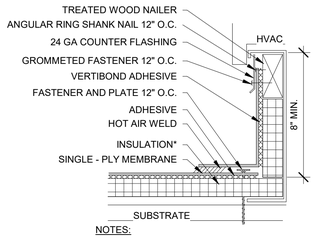
SHEET NUMBER:
A140



NOTE:

1. WITH MECHANICALLY FASTENED OR BALLASTED SPECIFICATIONS, MEMBRANE MUST BE MECHANICALLY ATTACHED WITH 2" (50 mm) ANCHOR DISC AND ACCEPTABLE FASTENERS (MINIMUM OF 4 PER PIPE).
2. DO NOT OVERLAP THE FLANGES FROM ADJACENT PIPE FLASHINGS.
3. ANY SEAM UNDER BOOT FLANGE TO BE TREATED AS T-JOINT.
4. BOTH SURFACES TO BE MATED MUST BE CLEANED WITH TAPE PRIMER/WASH. EPDM TAPE PRIMER/WASH MUST BE COMPLETELY DRY AND TACK FREE BEFORE APPLYING EPDM LAP CEMENT.

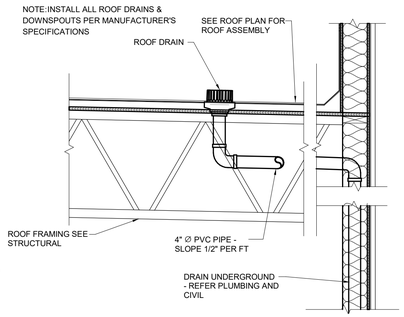
D1 TYPICAL BOOT DETAIL
1/4" = 1'-0"



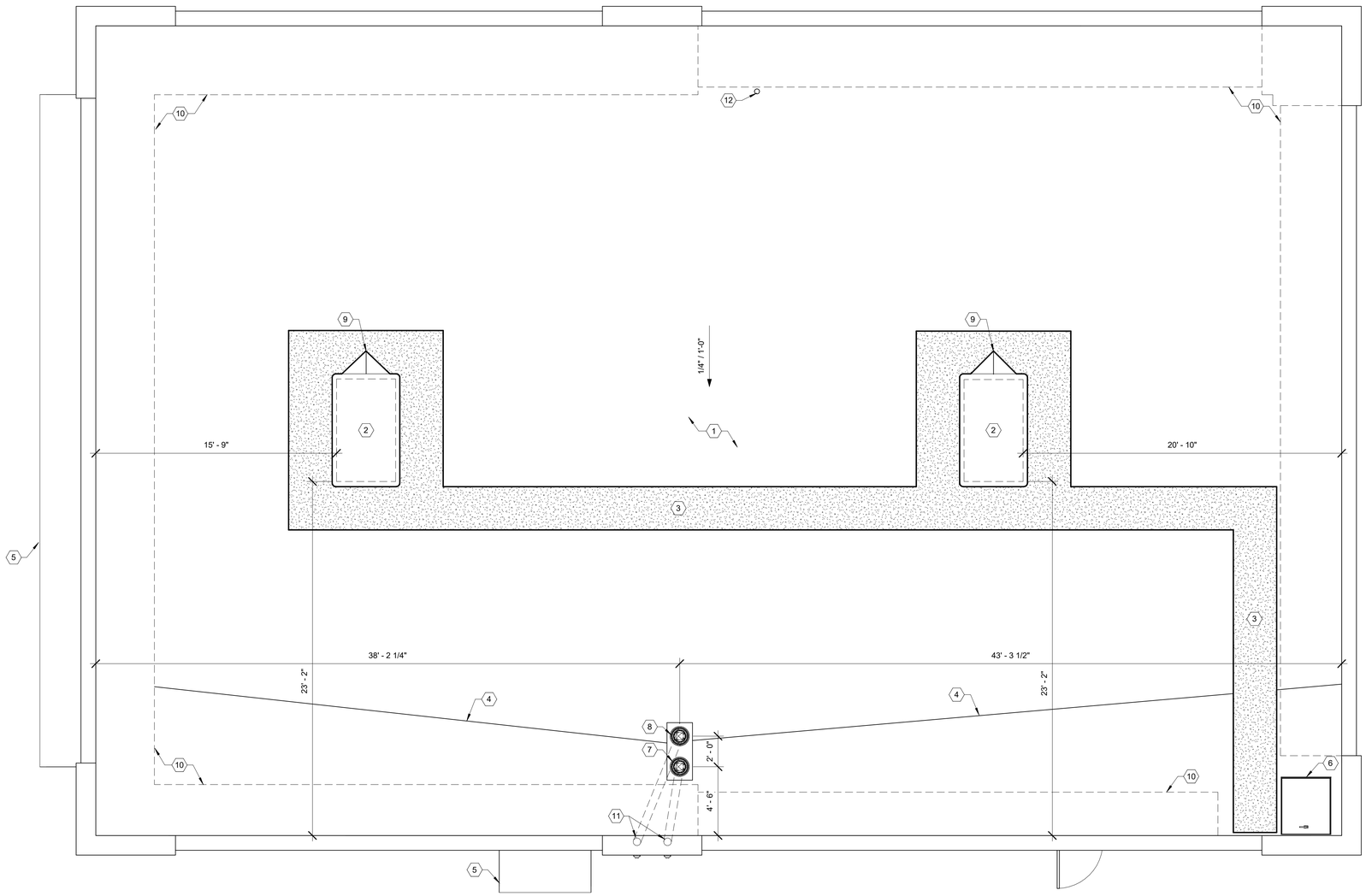
NOTES:

1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
2. DO NOT SCALE DRAWINGS.
3. USE PREFABRICATED OUTSIDE CORNERS.
4. INSULATION MUST BE SECURELY FASTENED.
5. *GLASS - FACED POLYISO INSULATION IS OPTIONAL AND MAY NOT BE REQUIRED ON EVERY PROJECT. IF INSULATION IS NOT REQUIRED, THE MEMBRANE MUST BE ADHERED TO AN APPROVED SURFACE.

D2 TYPICAL CURB FLASHING
1/4" = 1'-0"



D3 TYPICAL ROOF DRAINAGE
3/4" = 1'-0"



A1 ROOF PLAN
1/4" = 1'-0"

ROOF PLAN CODED NOTES

1	JM TPO - 60 MIL CRRC WHITE ROOF MEMBRANE OVER R-30 RIGID INSULATION - INSTALL PER MANUFACTURER'S SPEC - ROOF DECK PER STRUCTURAL - 2% SLOPE MIN.
2	MECHANICAL ROOFTOP UNIT - SEE MECHANICAL FOR INFORMATION, REINFORCE PER STRUCTURAL
3	REINFORCED WALKWAY FOR EQUIPMENT ACCESS
4	SLOPE CRICKET TO ROOF DRAIN
5	AWNING BELOW
6	ROOF ACCESS HATCH - COORDINATE PLACEMENT WITH STRUCTURAL
7	ROOF DRAIN - J.R. SMITH 1010-A04 (OR EQUIVALENT) - COORDINATE PLACEMENT W/ CIVIL
8	ROOF OVERFLOW DRAIN - J.R. SMITH 1070-A04 (OR EQUIVALENT) COORDINATE PLACEMENT W/ CIVIL
9	TAPERED INSULATION CRICKET AT EQUIPMENT CURB
10	ROOF KICKERS PER STRUCTURAL
11	4" PVC ROOF DRAIN PIPE BEYOND - REF PLUMBING
12	EXHAUST FAN VENT PIPE - REF MECHANICAL

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REGISTERED ARCHITECT
CARL L. LINGLE
18179
STATE OF TEXAS
04/11/2025

PROJECT #:

DRAWN BY: BA CHECKED BY: MP

PERMIT SET - 04/11/2025

1 -
2 -
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SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:

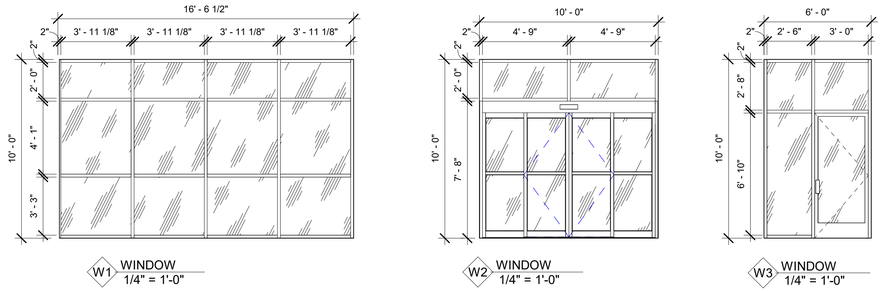
1816 S. COLORADO ST.
LOCKHART, TX 78644

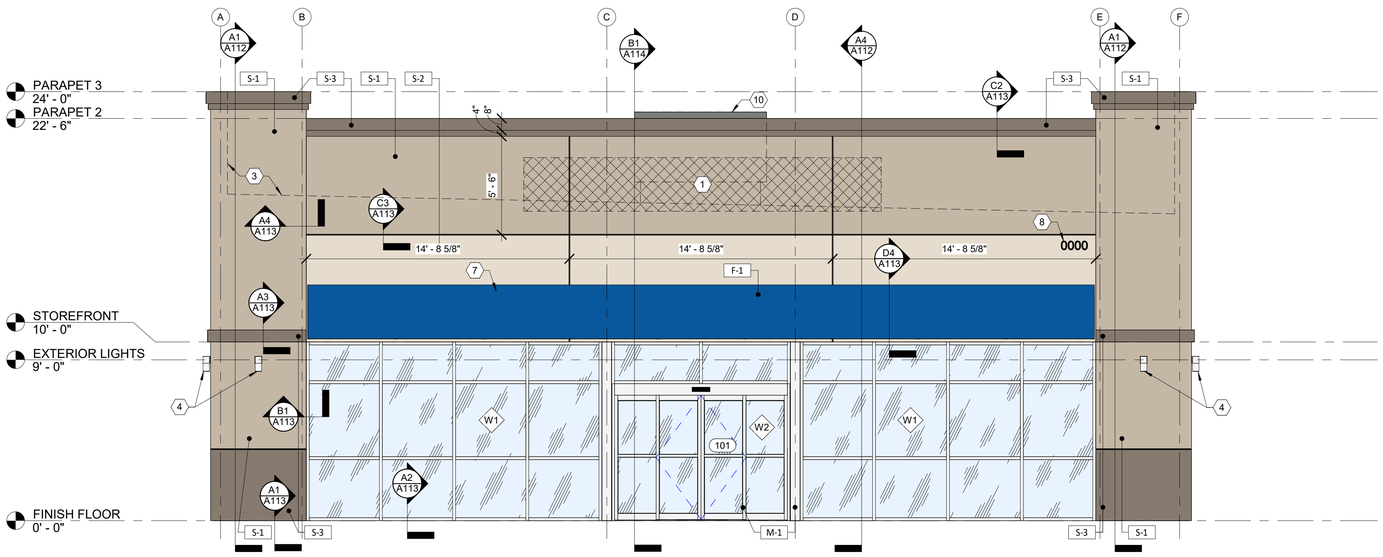
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ROOF PLAN

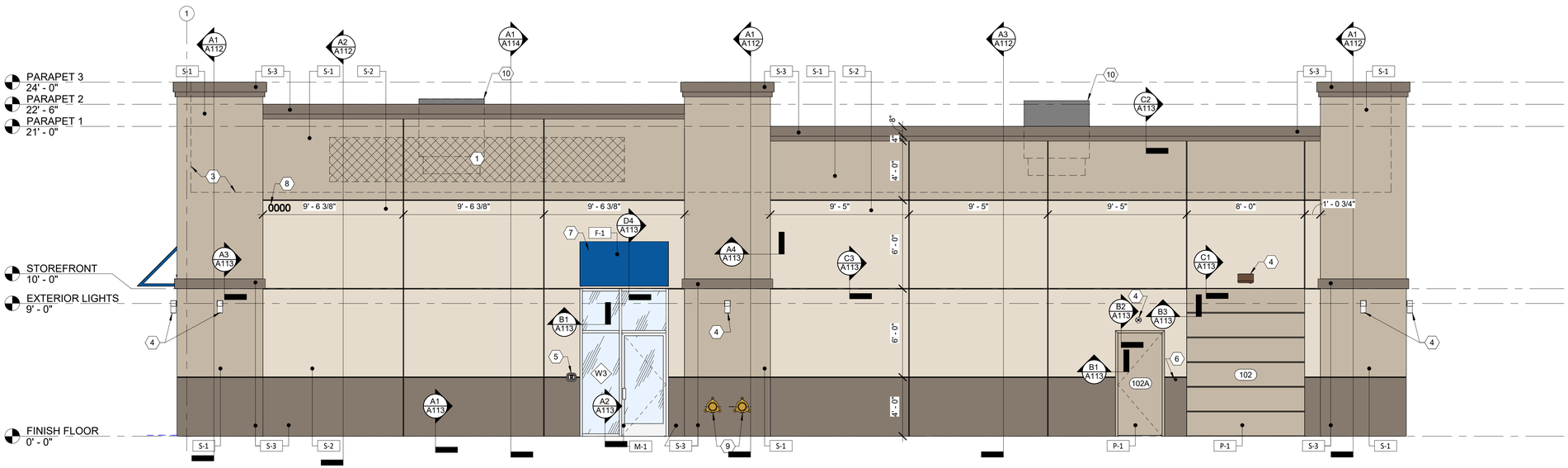
SHEET NUMBER:

A150





B1 WEST ELEVATION
1/4" = 1'-0"



A1 SOUTH ELEVATION
1/4" = 1'-0"

EXTERIOR FINISH SCHEDULE

MARK	DESCRIPTION	MANUFACTURER & SPEC	SAMPLE
S-1	STUCCO FIELD	SHERWIN-WILLIAMS COLOR: SW 7506 LOGGIA (SCORE LINES PER ELEVATIONS)	
P-1	PAINT		
S-2	STUCCO BAY	SHERWIN-WILLIAMS COLOR: SW 6105 DIVINE WHITE (PARAPET FLASHING TO MATCH)	
P-2	PAINT		
S-3	STUCCO FIELD	SHERWIN-WILLIAMS COLOR: SW 7025 BACKDROP (SCORE LINES PER ELEVATIONS)	
P-3	PAINT		
M-1	ANODIZED ALUMINUM	COLOR: CLEAR ANODIZE	
F-1	FABRIC OVER METAL FRAME AWNING	COLOR: SHERWIN WILLIAMS BLUE (AWNINGS)	

EXTERIOR ELEVATION CODED NOTES

1	SIGNAGE UNDER SEPARATE PERMIT
2	UTILITY METER BANK - PAINT TO MATCH ADJACENT FINISH - COORDINATE WITH CIVIL
3	ROOF LINE BEHIND PARAPET
4	EXTERIOR LIGHTING - SEE SCHEDULE ON SHEET A130
5	KNOX BOX - MODEL 3200 RECESSED - COORDINATE PLACEMENT WITH FIRE PREVENTION BUREAU
6	BUZZER BUTTON
7	METAL FRAMING, BLUE FABRIC AWNING - BY VENDOR
8	BUILDING ADDRESS PER 2022 IFC 505.1 - 6" HIGH MIN., 1 1/2" MIN. STROKE WIDTH
9	ROOF DRAIN NOZZLE - BRONZE
10	ROOF TOP UNIT BEYOND

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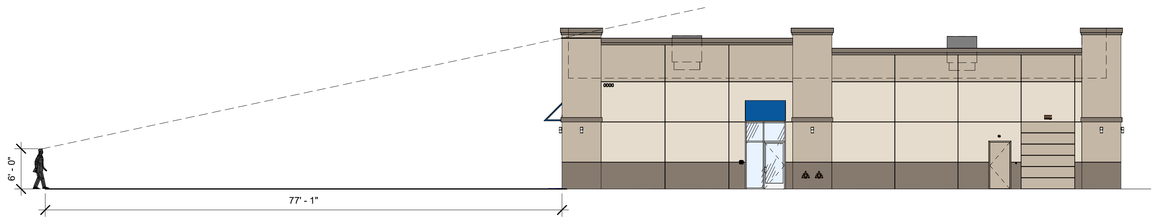
SHERWIN WILLIAMS

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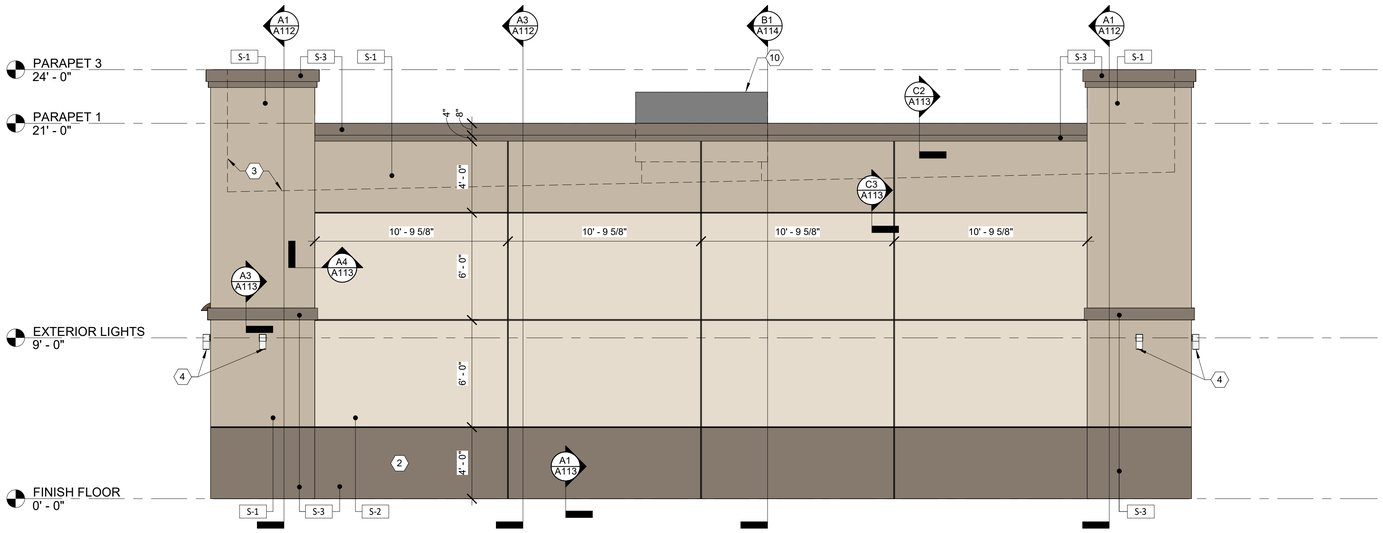
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LOCKHART, TX 78644

SHEET TITLE:
EXTERIOR ELEVATIONS & WINDOW SCHEDULE

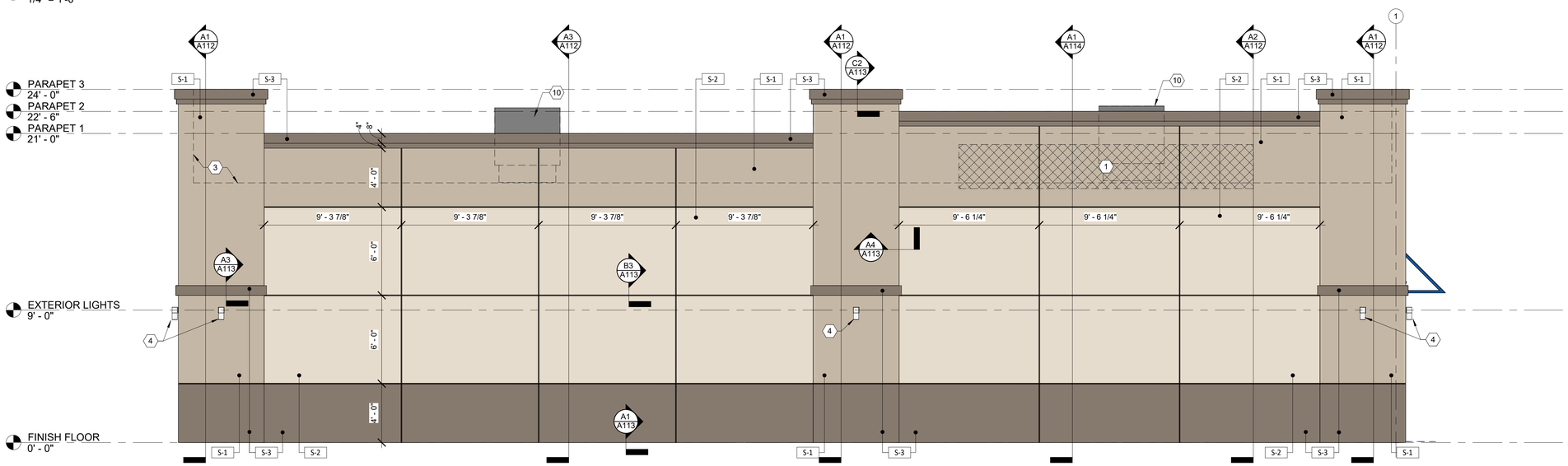
SHEET NUMBER:
A200



C1 LINE OF SIGHT
3/32" = 1'-0"



B1 EAST ELEVATION
1/4" = 1'-0"



A1 NORTH ELEVATION
1/4" = 1'-0"

EXTERIOR FINISH SCHEDULE

MARK	DESCRIPTION	MANUFACTURER & SPEC	SAMPLE
S-1	STUCCO FIELD	SHERWIN-WILLIAMS COLOR: SW 7506 LOGGIA (SCORE LINES PER ELEVATIONS)	
P-1	PAINT		
S-2	STUCCO BAY	SHERWIN-WILLIAMS COLOR: SW 6105 DIVINE WHITE (PARAPET FLASHING TO MATCH)	
P-2	PAINT		
S-3	STUCCO FIELD	SHERWIN-WILLIAMS COLOR: SW 7025 BACKDROP (SCORE LINES PER ELEVATIONS)	
P-3	PAINT		
M-1	ANODIZED ALUMINUM	COLOR: CLEAR ANODIZE	
F-1	FABRIC OVER METAL FRAME AWNING	COLOR: SHERWIN WILLIAMS BLUE (AWNINGS)	

EXTERIOR ELEVATION CODED NOTES

1	SIGNAGE UNDER SEPARATE PERMIT
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3	ROOF LINE BEHIND PARAPET
4	EXTERIOR LIGHTING - SEE SCHEDULE ON SHEET A130
5	KNOX BOX - MODEL 3200 RECESSED - COORDINATE PLACEMENT WITH FIRE PREVENTION BUREAU
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SHERWIN WILLIAMS

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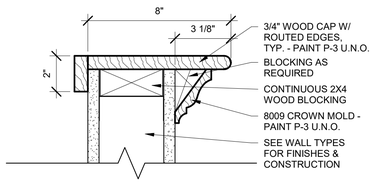
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SHEET TITLE:
EXTERIOR ELEVATIONS

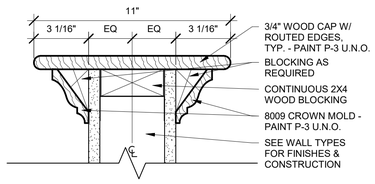
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A201

INTERIOR ELEVATION CODED NOTES

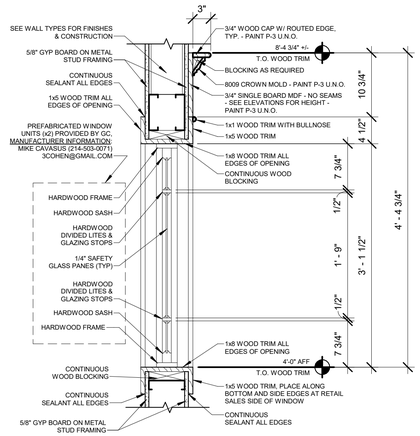
1	3/4" PLYWOOD BACKING BOARD
2	QUAD OUTLET & WATER VALVE IN RECESSED BOX - COORDINATE W/ ELECTRICAL & PLUMBING
3	EXTEND CONDUIT FOR DATA J-BOX THROUGH PLYWOOD BACKING BOARD - TVL508 - COORDINATE W/ ELECTRICAL - TERMINATE AT DATA BOARD
4	CASED WINDOW BY MIKE CAVASUS - G.C. TO PROVIDE & INSTALL - COORDINATE SPEC W/ SHERWIN-WILLIAMS CORPORATE
5	CONFIRM HVAC DUCTWORK AND DIFFUSER/RETURN LOCATIONS WITH MECHANICAL SHEETS - HOLD DUCTWORK CLOSE TO STRUCTURE



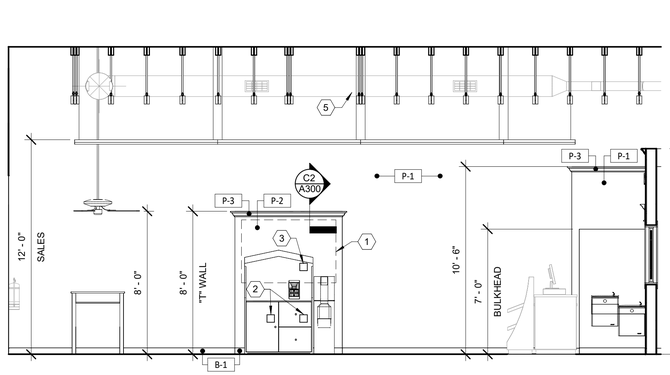
C1 WOOD CAP & TRIM (SINGLE)
3" = 1'-0"



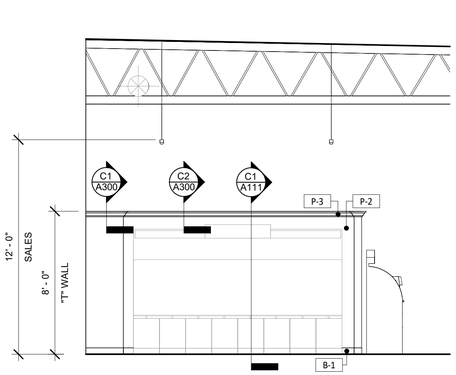
C2 WOOD CAP & TRIM (DOUBLE)
3" = 1'-0"



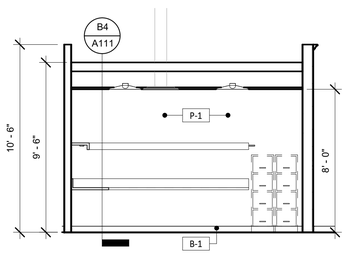
C3 WOOD TRIM (TINT WINDOW)
1" = 1'-0"



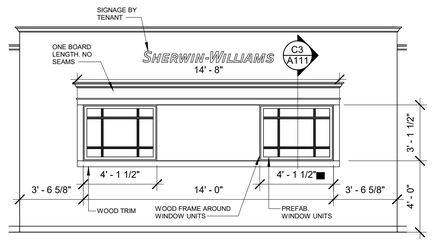
B1 ELEVATION AT COFFEE STATION
1/4" = 1'-0"



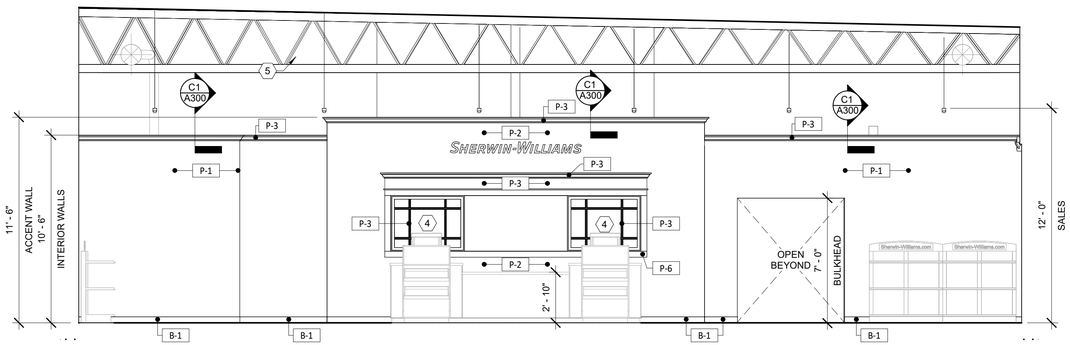
B3 ELEVATION AT "T" WALL
1/4" = 1'-0"



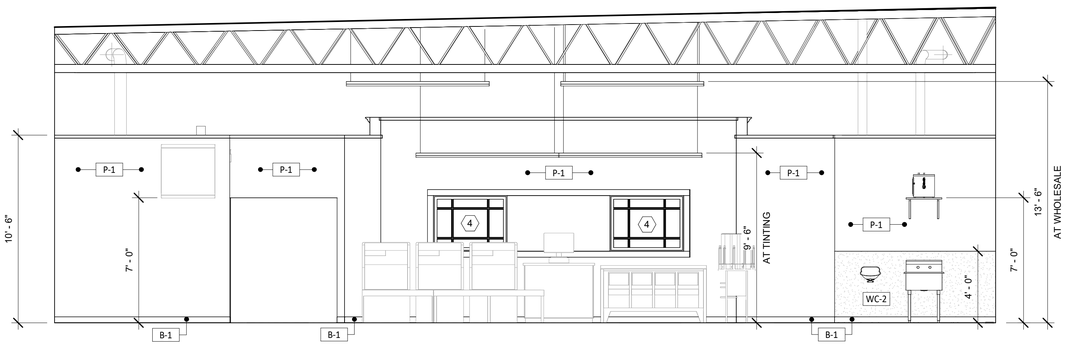
B4 ELEVATION AT OFFICE
1/4" = 1'-0"



B5 BRAND WINDOW
1/4" = 1'-0"



A1 ELEVATION AT SALES
1/4" = 1'-0"



A3 ELEVATION AT TINTING AND WHOLESALE
1/4" = 1'-0"

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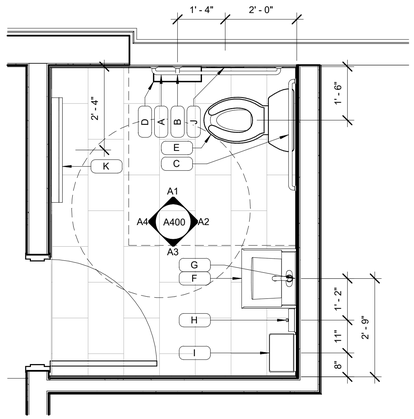
SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
INTERIOR ELEVATIONS

SHEET NUMBER:
A300



B1 ENLARGED RESTROOM PLAN
1/2" = 1'-0"

RESTROOM FIXTURE SCHEDULE

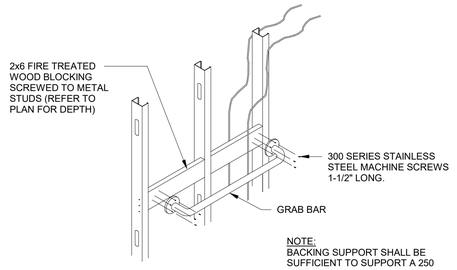
TAG	DESCRIPTION	MANUFACTURER	MODEL	REMARKS	PROVIDED/ INSTALLED BY
A	42" GRAB BAR	BOBRICK	B-6808 X 42	(1) 2X6 4'-0" LONG CENTER MOUNTED @ 33" A.F.F. TO CENTER OF SUPPORT GRAB BAR - SEE DETAIL D5/A400	GC
B	18" GRAB BAR	BOBRICK	B-6808 X 42	(1) 2X6 MOUNT TO CENTER OF SUPPORT GRAB BAR - SEE DETAIL D5/A400	GC
C	36" GRAB BAR	BOBRICK	B-6808 X36	(1) 2X6 4'-0" LONG CENTER MOUNTED @ 33" A.F.F. TO CENTER OF SUPPORT GRAB BAR - SEE DETAIL D5/A400	GC
D	TOILET TISSUE DISPENSER	BOBRICK	B-2840	INSTALL BLOCKING PER MANUFACTURER RECOMMANDATIONS	TENANT
E	WATER CLOSET	KOHLER	K-3519 WHITE	1 GALLON PER FLUSH - SEAT: KOHLER LUSTRA K-4650 WHITE	GC
F	LAVATORY	AMERICAN STANDARD	COMRADE 0124.024.020 WHITE	INTEGRATED PLUMBING SHROUD - FAUCET: BRADLEY S53-3100-RT5-BB-A14-029 - "VERGE - CREST SERIES FAUCET", PLUG-IN ADAPTER, CAPACITIVE SENSING ACTIVATION NO SUBSTITUTIONS.	GC
G	MIRROR	BOBRICK	B-165 1836	INSTALL BLOCKING PER MANUFACTURER RECOMMANDATIONS	GC
H	SOAP DISPENSER	BOBRICK	B-2112	INSTALL BLOCKING PER MANUFACTURER RECOMMANDATIONS	TENANT
I	PAPER TOWEL DISPENSER	CINTAS	AUTOMATIC	INSTALL BLOCKING PER MANUFACTURER RECOMMANDATIONS	TENANT
J	SANITARY NAPKIN DISPOSAL	BOBRICK	B-353	INSTALL BLOCKING PER MANUFACTURER RECOMMANDATIONS	TENANT
K	BABY CHANGING STATION	BOBRICK	KB200-01	INSTALL BLOCKING PER MANUFACTURER RECOMMANDATIONS	TENANT

GENERAL NOTES

1. ALL FIXTURES & ACCESSORIES MUST MEET ALL NATIONAL AND LOCAL CODES AND ADA REQUIREMENTS. PROVIDE SOLID FIRE TREATED BLOCKING AT ALL WALL MOUNTED FIXTURES FOR SECURE ANCHORING, VERIFY LOCATION WITH MANUFACTURERS SPECIFICATIONS. CLEAR SILICONE CAULK ALL FIXTURES TO PARTITION.
2. WATER CLOSET AND URINAL FLUSH VALVE CONTROLS, AND FAUCET AND OPERATING MECHANISM CONTROLS, SHALL BE OPERABLE WITH ONE HAND, SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST, AND SHALL BE MOUNTED NO MORE THAN 44" ABOVE THE FLOOR.
3. THE FORCE REQUIRED TO ACTIVATE WATER CLOSET AND URINAL FLUSH VALVE CONTROLS, AND FAUCET AND OPERATING CONTROLS, SHALL BE NO GREATER THAN 5 LBF.
4. SEE SHEET A110 FOR WALL DIMENSIONS.
5. USE MOISTURE RESISTANT GYPSUM BOARD AT WALLS BEHIND PLUMBING FIXTURES.
6. PROVIDE BATT INSULATION IN WALLS WHERE SCHEDULED ON SHEET A110.

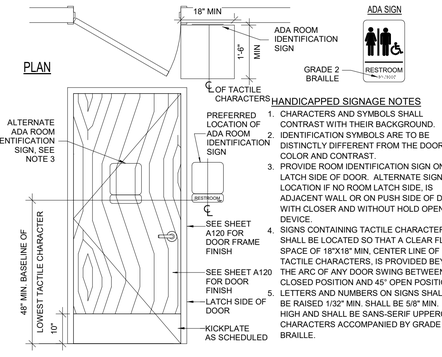
XX-X FINISH TAG - SEE FINISH SCHEDULE ON SHEET A120

DOOR TAG - SEE DOOR SCHEDULE ON SHEET A110



NOTE:
BACKING SUPPORT SHALL BE SUFFICIENT TO SUPPORT A 250 POUND POINT LOAD.

D5 TYP. GRAB BAR ATTACHMENT DETAIL
1/2" = 1'-0"

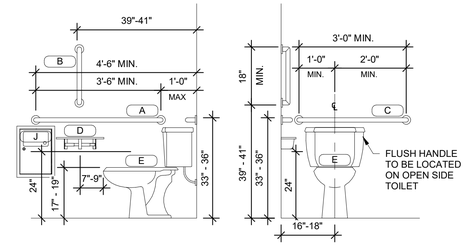


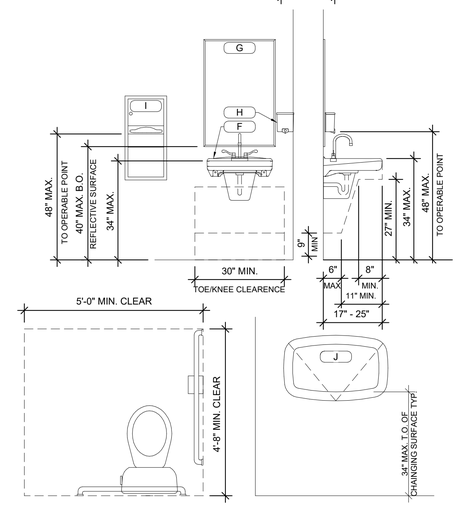
PER ICC A117.1

HANDICAPPED SIGNAGE NOTES

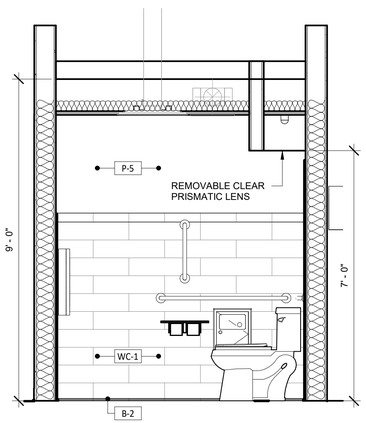
1. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND.
2. IDENTIFICATION SYMBOLS ARE TO BE DISTINCTLY DIFFERENT FROM THE DOOR IN COLOR AND CONTRAST.
3. PROVIDE ROOM IDENTIFICATION SIGN ON LATCH SIDE OF DOOR. ALTERNATE SIGN LOCATION IF NO ROOM LATCH SIDE, IS ADJACENT WALL OR ON PUSH SIDE OF DOOR WITH CLOSER AND WITHOUT HOLD OPEN DEVICE.
4. SIGNS CONTAINING TACTILE CHARACTERS SHALL BE LOCATED SO THAT A CLEAR FLOOR SPACE OF 18"X18" MIN. CENTER LINE OF TACTILE CHARACTERS, IS PROVIDED BEYOND THE ARC OF ANY DOOR SWING BETWEEN THE CLOSED POSITION AND 45° OPEN POSITION.
5. LETTERS AND NUMBERS ON SIGNS SHALL BE RAISED 1/32" MIN. SHALL BE 5/8" MIN. HIGH AND SHALL BE SANS-SERIF UPPERCASE CHARACTERS ACCOMPANIED BY GRADE 2 BRAILLE.

C5 RESTROOM SIGNAGE DETAIL
1/2" = 1'-0"

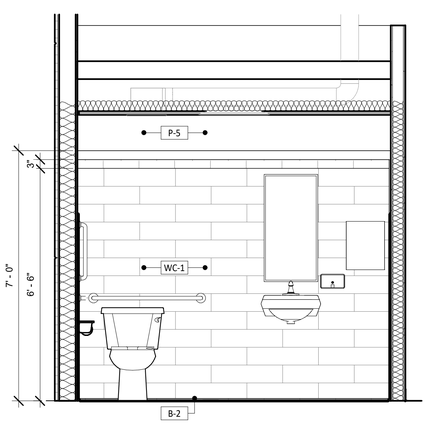




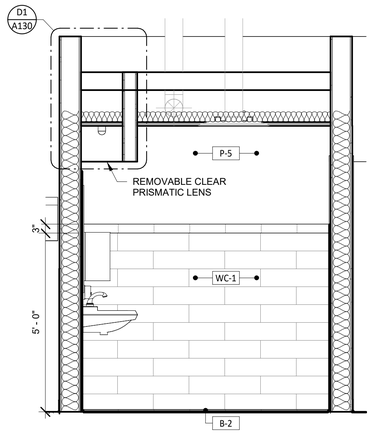
A5 REQUIRED ACCESSIBLITY CLEARANCES
1/2" = 1'-0"



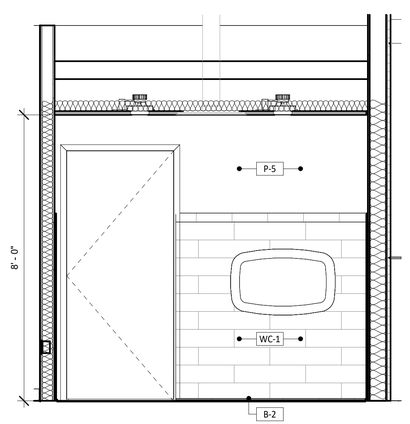
A1 RESTROOM ELEVATION
1/2" = 1'-0"



A2 RESTROOM ELEVATION
1/2" = 1'-0"



A3 RESTROOM ELEVATION
1/2" = 1'-0"



A4 RESTROOM ELEVATION
1/2" = 1'-0"

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PERMIT SET - 04/11/2025

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SHERWIN WILLIAMS

STORE #:
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ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
ENLARGED RESTROOM PLAN

SHEET NUMBER:
A400

STRUCTURAL ABBREVIATIONS

#	POUND(S), NUMBER
&	AND
(E)	EXISTING
@	AT
AB	ANCHOR BOLT (S)
ADDL	ADDITIONAL
ALT	ALTERNATE
ARCH	ARCHITECT(URAL)
B/FTG	BOTTOM OF FOOTING
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BMD	BOTTOM OF METAL DECK
BN	BOUNDARY NAIL
BOT	BOTTOM
BP	BASE PLATE
BRG	BEARING
BS	BOUNDARY SCREW
BTWN	BETWEEN
CANT	CANTILEVER(ED)
CFS	COLD-FORMED STEEL
CIP	CAST-IN-PLACE
CJ	CONTROL OR CONST JOINT
CL	CENTER LINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CTR	CENTER
DBL	DOUBLE
DC	DEMAND CRITICAL (WELD)
deg	DEGREE
DET	DETAIL(S)
DF	DOUGLAS FIR
DFL	DOUGLAS FIR LARCH
dia	DIAMETER
DIM	DIMENSION
DWG	DRAWING
DWL	DOWEL
EA	EACH
EE	EACH END
EF	EACH FACE
EL	ELEVATION
ELEV	ELEVATOR
EMB	EMBEDMENT
EN	EDGE NAIL
EOJ	END OF JOIST
EOR	ENGINEER OF RECORD
EOS	EDGE OF SLAB
EQ	EQUAL
ETC	ET CETERA
EW	EACH WAY
EXP	EXPANSION
EXT	EXTERIOR
FDN	FOUNDATION
FF	FINISH FLOOR
FIN FLR	FINISH FLOOR
FLR	FLOOR
FRMG	FRAMING
FRT	FIRE-RETARDENT TREATED
FS	FAR SIDE
FTG	FOOTING
FV	FIELD VERIFY
ga	GAUGE
GALV	GALVANIZE(D)
GLB	GLULAM BEAM
HDR	HEADER
HGR	HANGER
HK	HOOK

STRUCTURAL ABBREVIATIONS

HORIZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION
INT	INTERIOR
ISF	INSIDE FACE
J/BRG	JOIST BEARING
JG	JOIST GIRDER
JG/BRG	JOIST GIRDER BEARING
JST	JOIST
JT	JOINT
kip	1,000 POUNDS
ksi	kips PER SQUARE INCH
LB	POUND
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
MAX	MAXIMUM
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTL	METAL
NS	NEAR SIDE
NTS	NOT TO SCALE
oc	ON CENTER
OH	OPPOSITE HAND
OPNG	OPENING
OSF	OUTSIDE FACE
PAF	POWER-ACTUATED FASTENER
PARA	PARAPET
PEMB	PRE-ENGINEERED METAL BUILDING (MANUFACTURER)
PIL	PILASTER
PL	PLATE
PLBG	PLUMBING
PLYWD	PLYWOOD
psf	POUNDS PER SQUARE FOOT
psi	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
QT	QUANTITY
REINF	REINFORCED, REINFORCING
REQD	REQUIRED
RTU	ROOF TOP UNIT
SCHED	SCHEDULE
SD	SNOW DRIFT
SHTG	SHEATHING
SIM	SIMILAR
SL	SNOW LOAD
SPF	SPRUCE PINE FIR
STD	STANDARD
STL	STEEL
STRUC	STRUCTURAL
SYP	SOUTHERN YELLOW PINE
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
T/BRG	TRUSS BEARING
T/CONC	TOP OF CONCRETE
T/FTG	TOP OF FOOTING
T/PARA	TOP OF PARAPET
T/PIL	TOP OF PILASTER
T/STL	TOP OF STEEL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
USGS	US GEOLOGICAL SURVEY
VAR	VARIES
VERT	VERTICAL
w/	WITH
WHS	WELDED HEADED STUD(S)
WP	WORK POINT
WWR	WELDED WIRE REINFORCEMENT

SHOP DRAWING AND SUBMITTAL NOTES

1. SHOP DRAWINGS AND/OR SUBMITTALS SHALL BE FURNISHED FOR ALL STRUCTURAL COMPONENTS. UNLESS OTHERWISE NOTED, THESE SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION IN ACCORDANCE WITH THESE CONTRACT DRAWINGS AND PROJECT SPECIFICATIONS (IF APPLICABLE). CONTRACTOR SHALL ALLOW A MINIMUM OF 2 WEEKS FROM RECEIPT OF SHOP DRAWINGS FOR CASE ENGINEERING INC. TO PROVIDE RESPONSE.
2. PRIOR TO SUBMITTAL TO THE ENGINEER, THE CONTRACTOR AND ARCHITECT SHALL HAVE REVIEWED THE SHOP DRAWINGS AND MADE ANY CORRECTIONS REQUIRED. THE CONTRACTOR AND ARCHITECT SHALL STAMP THE DRAWINGS, INDICATING THE SUBMITTAL HAS BEEN REVIEWED.
3. STRUCTURAL DRAWINGS ARE THE SOLE PROPERTY OF CASE ENGINEERING. REPRODUCTION OF STRUCTURAL DRAWINGS FOR USE IN SHOP DRAWING SUBMITTALS IS NOT ACCEPTABLE WITHOUT OUR WRITTEN AGREEMENT.
4. SHOP DRAWING REVIEW IS FOR GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS. THE RESPONSIBILITY FOR FINAL COMPLETENESS AND CORRECTNESS SHALL RESIDE WITH THE PREPARER OF THE SHOP DRAWINGS.

BUILDING CODES AND STANDARDS USED FOR DESIGN

1. INTERNATIONAL BUILDING CODE 2021 EDITION
   ASCE 7-16
   RISK CATEGORY: II

DESIGN LOADS

1. DESIGN LOADS

ROOF LIVE LOAD:	20 psf
ROOF DEAD LOAD:	20 psf

2. SNOW LOAD DESIGN CRITERIA

SNOW LOAD IMPORTANCE FACTOR, I:	I
GROUND SNOW LOAD, Pg:	5 psf
FLAT ROOF SNOW LOAD. Pf:	3.5 psf
THERMAL FACTOR, Ct:	I
EXPOSURE FACTOR, Ce:	I
MINIMUM FROST DEPTH:	0'-12"

3. WIND LOAD DESIGN CRITERIA

WIND IMPORTANCE FACTOR, I:	I
ULTIMATE WIND SPEED:	110 MPH (3 SEC GUST)
WIND EXPOSURE CATEGORY:	C
WIND ENCLOSURE CLASSIFICATION	ENLCOSED
GCpi:	+/- 0.18
- 'a' DIMENSION	5.5 ft
- 'h' DIMENSION	16.5 ft

4. SEISMIC LOAD DESIGN CRITERIA

SEISMIC IMPORTANCE FACTOR, I:	I
SITE CLASS:	D
SPECTRAL RESPONSE ACCELERATIONS:	Ss=0.053g, S1=0.029g Sds=0.057g, Sd1=0.046g
SEISMIC DESIGN CATEGORY:	A
BASIC SEISMIC-FORCE RESISTING SYSTEM:	LT FRAME WOOD WALLS w/ STRUC SHEAR PNLS
REDUNDANCY FACTOR, ρ	1
RESPONSE MODIFICATION FACTOR, R:	7
SYSTEM OVER-STRENGTH FACTOR, Ωo:	2
DEFLECTION AMPLIFICATION FACTOR, Cd:	4.5
ANALYSIS PROCEDURE USED:	EQUIVALENT LATERAL FORCE

COMPONENT & CLADDING (C & C) DESIGN WIND PRESSURES

1. SURFACE PRESSURES ARE GIVEN IN THE TABLE BELOW IN PSF AND ARE BASED ON THE TRIBUTARY AREA IN SQUARE FEET (SF) OF THE MEMBER BEING DESIGNED. LINEAR INTERPOLATION BETWEEN VALUES SHOWN IS ACCEPTABLE. EXTRAPOLATION OF VALUES ABOVE LARGEST TRIBUTARY AREA IS NOT ACCEPTABLE.
2. TABLES ARE APPLICABLE FOR ENCLOSED OR PARTIALLY ENCLOSED LOW-RISE BUILDINGS WITH A MEAN ROOF HEIGHT (h) LESS THAN OR EQUAL TO 60 FT.
3. REFER TO ASCE 7 DIAGRAMS FOR THE LOCATION OF WIND PRESSURE ZONES BASED ON ADOPTED CODE YEAR.
4. POSITIVE PRESSURES ACT TOWARD THE BUILDING, NEGATIVE & OVERHANG PRESSURES ACT AWAY FROM THE BUILDING AND ARE APPLIED NORMAL TO THE C &C SURFACE.
5. DELEGATED DESIGNERS ARE RESPONSIBLE FOR DESIGNING EACH C & C FOR THE MAXIMUM POSITIVE AND NEGATIVE WIND PRESSURES BASED ON ASCE 7 LOAD COMBINATIONS.
6. NO C & C SHALL BE DESIGNED FOR A NET PRESSURE OF LESS THAN 16 PSF ULTIMATE ACTING IN EITHER DIRECTION.
7. PRESSURES SHOWN ARE ULTIMATE PRESSURES AND SHOULD BE MULTIPLIED BY 0.6 FOR NOMINAL (ASD) PRESSURES. USE A PERMANENT DEAD LOAD OF 6 PSF FOR MEMBER NET UPLIFT DESIGN.

ASCE 7-16

GABLE 7° < Θ ≤ 45°
HIP 7° < Θ ≤ 27°

ROOF ZONES	10 SF	100 SF	200 SF	700 SF
NEGATIVE 1	-46.9	-36.6	-33.5	-29.4
NEGATIVE 1'	-26.9	-26.9	-23.2	-18.2
NEGATIVE 2	-61.8	-48.6	-44.6	-39.4
NEGATIVE 3	-61.8	-48.6	-44.6	-39.4
POSITIVE 1 & 1'	16.0	16.0	16.0	16.0
POSITIVE 2 & 3	26.9	23.0	21.8	20.2
OVERHANG 1 & 1'	-42.4	-39.9	-33.4	-24.9
OVERHANG 2	-57.3	-39.7	-34.4	-27.4
OVERHANG 3	-57.3	-39.7	-34.4	-27.4
WALL ZONES	**10 SF**	**100 SF**	**200 SF**	
NEGATIVE 4	-29.2	-25.2	-24.0	
NEGATIVE 5	-35.9	-28.0	-25.6	
POSITIVE 4 & 5	26.9	23.0	21.8	
PARAPETS	**10 SF**	**100 SF**	**200 SF**	
CASE A - ZONE 2	86.3	67.7	62.1	
- ZONE 3	86.3	67.7	62.1	
CASE B - INTERIOR	-51.0	-42.4	-39.8	
- CORNER	-58.3	-45.4	-41.5	

GENERAL STRUCTURAL NOTES

1. THIS DRAWING SET IS TO BE VIEWED AS A WHOLE AND COORDINATED WITH ARCHITECTURAL, MECHANICAL, CIVIL, AND OTHER DISCIPLINES. ALL WORK PERTAINING TO A SPECIFIC CONTRACTOR MAY OR MAY NOT BE SHOWN ON SPECIFIC DRAWING SECTIONS. IT IS EACH SUBCONTRACTOR'S RESPONSIBILITY TO PREPARE HIS BID FROM A COMPLETE SET OF PLANS.
2. THE CONTRACTOR SHALL FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE DRAWINGS. DIMENSIONS NOT SHOWN ON PLAN TO BE COORDINATED WITH ARCHITECTURAL PLANS.
3. ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY AT ANY SIMILAR SITUATION ELSEWHERE ON THE JOB, EXCEPT WHERE A DIFFERENT DETAIL OR SECTION IS SHOWN.
4. THE STRUCTURE SHALL BE ADEQUATELY BRACED AND SHORED DURING ERECTION AGAINST WIND AND ERECTION LOADS. STRUCTURAL MEMBERS ARE DESIGNED FOR "IN-PLACE" LOADS ONLY.
5. THE GENERAL CONTRACTOR SHALL VERIFY ALL OPENING SIZES, PAD SIZES, AND LOCATIONS WITH THE RESPECTIVE CONTRACTORS.
6. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN CONSTRUCTION DOCUMENTS AND ACTUAL FIELD CONDITIONS.
7. THE VARIOUS SUBCONTRACTORS ARE RESPONSIBLE FOR PLACING SLEEVES, OUTLET BOXES, ANCHORS, VENT OPENINGS, ETC. THAT MAY BE REQUIRED IN FOUNDATION WALLS. CONSTRUCTION MANAGER SHALL COORDINATE ALL PLACEMENT OF ITEMS IN FOUNDATION WALLS.
8. SEE ARCHITECTURAL PLANS FOR ADDITIONAL DETAILS AND INFORMATION.
9. ALL ELEVATIONS GIVEN ARE REFERENCED TO FINISHED FLOOR ELEVATIONS AT 100'-0", UNLESS SHOWN AS USGS ELEVATIONS.
10. WHERE GENERAL NOTES OR TYPICAL DETAILS CONTRADICT INFORMATION PROVIDED IN BUILDING SECTIONS, THE BUILDING SECTIONS TAKE PRECEDENCE.
11. ALL HOLES THROUGH CONSTRUCTION SHALL BE CORE DRILLED OR SAWCUT.
12. ALL STAIR STRINGERS, LANDINGS, AND HANDRAILS TO BE DESIGNED AND FABRICATED BY STAIR FABRICATOR.
13. WHERE INFORMATION PROVIDED IN THESE STRUCTURAL DRAWINGS CONTRADICTS INFORMATION PROVIDED IN PROJECT SPECIFICATIONS, THE SPECIFICATIONS SHALL TAKE PRECEDENCE.
14. FOR ARCHITECTURAL, MEP, & STRUCTURAL COORDINATION: MODELED ELEMENTS SHOWN ON STRUCTURAL DRAWINGS SUCH AS TRUSSES, OPEN-WEB JOISTS, AND JOIST GIRDERS, ARE NOT THE FINAL CONFIGURATION. ALL COORDINATION SHALL BE PERFORMED BETWEEN THE VARIOUS TRADES AND THE SUPPLIERS OF THESE ELEMENTS FOR THE STRUCTURE, NOT WITH THE STRUCTURAL MODEL.
15. THIS DRAWING SET IS TO BE VIEWED AS A WHOLE, ALL TYPICAL DETAILS AND GENERAL NOTES SHOWN IN THESE DRAWINGS ARE APPLICABLE TO THE PROJECT EVEN IF THEY ARE NOT SHOWN ON PLANS OR SECTIONS.
16. DESIRED ALTERATIONS TO ANY DETAIL, MEMBER SIZE, MEMBER TYPE, OR ANY OTHER STRUCTURAL COMPONENT SHOWN ON THE DRAWINGS, SHALL BE SUBMITTED AS A REQUEST IN WRITING TO CASE ENGINEERING. CASE ENGINEERING WILL NOT BE RESPONSIBLE FOR CHANGES TO THE DESIGN OR DETAILS MADE DURING SHOP DRAWINGS DEVELOPMENT, DURING CONSTRUCTION, OR AT ANY OTHER TIME WITHOUT WRITTEN CONSENT.

EXCAVATION AND EARTHWORK NOTES

1. THE BEARING VALUE AND LATERAL EARTH PRESSURES OF THE SOILS IS PER REPORT BY: ECS SOUTHWEST, LLP, DATED OCTOBER 2024. THE FOUNDATION DESIGN IS BASED ON THE FOLLOWING NET ALLOWABLE BEARING AND LATERAL EARTH PRESSURES (ALLOWABLE BEARING PRESSURES MAY BE INCREASED BY 33 PERCENT FOR WIND AND SEISMIC LOADS):
   - SPREAD FOOTINGS 3,000 psf
   - CONT. WALL FOOTINGS 3,000 psf
   - FRICTION COEFFICIENT 0.34
2. WATER LEVELS INDICATED ON THE BORING LOGS MAY BE SUBJECT TO SEASONAL AND/OR ANNUAL VARIATIONS. A DEWATERING SYSTEM OF SUFFICIENT CAPACITY SHALL BE INSTALLED AND OPERATED TO MAINTAIN THE CONSTRUCTION AREA FREE OF WATER AT ALL TIMES.
3. ALL FOOTING EXCAVATIONS SHALL BE INSPECTED, PRIOR TO CONCRETE PLACEMENT, BY A SOILS ENGINEER TO VERIFY SUITABLE BEARING MATERIAL OF CAPACITY AS SPECIFIED.
4. NOTIFY THE OWNER'S REPRESENTATIVE WHEN ADDITIONAL EXCAVATION IS REQUIRED TO REACH SUITABLE BEARING MATERIAL.
5. THE SOILS ENGINEER SHALL CERTIFY IN WRITING THAT ALL FOUNDATIONS WERE PLACED ON SOIL WITH THE BEARING VALUE AS SPECIFIED.
6. WITHIN THE EXCAVATION AREA OF FOUNDATIONS, ALL VEGETATION, TOPSOIL, PREVIOUSLY PLACED FILL AND UNSUITABLE SOILS SHALL BE REMOVED. ALL FOOTINGS TO BEAR ON VIRGIN SOIL OR PROPERLY PLACED AND COMPACTED ENGINEERED FILL.
7. FOUNDATION DESIGN DOES NOT ACCOUNT FOR WINTER CONSTRUCTION. ANY UNENCLOSED / UNHEATED SPACES SHALL BE ADEQUATELY PROTECTED AGAINST FROST DURING WINTER CONSTRUCTION BY THE CONTRACTOR.
8. IF ANY SOFT SPOTS, OR AREAS QUESTIONABLE FOR ANY REASONS ARE ENCOUNTERED BY THE CONTRACTOR, ARCHITECT/ENGINEER SHALL BE NOTIFIED IMMEDIATELY SO THAT ANY REQUIRED ACTION MAY BE TAKEN PRIOR TO CONTINUATION OF CONSTRUCTION IN THAT AREA.

DEFERRED SUBMITTALS

THE FOLLOWING DESIGN ELEMENTS MUST BE SIGNED & SEALED BY A PROFESSIONAL ENGINEER (PE/SE) REGISTERED IN THE STATE WHERE THIS PROJECT IS LOCATED, AND SUBMITTED TO THE ARCHITECT AND ENGINEER OF RECORD. DESIGNED DRAWINGS AND CALCULATIONS SHALL BE SUBMITTED FOR REVIEW AND RECORD.

1. STRUCTURAL STEEL CONNECTION CALCULATIONS AND SHOP FABRICATION DRAWINGS FOR CONNECTIONS.
2. PRE-FABRICATED WOOD TRUSS CALCULATIONS AND FABRICATION DRAWINGS INCLUDING:
   A. ALL TRUSS-TO-TRUSS CONNECTIONS
   B. PLAN AND DETAILS FOR THE LOCATIONS OF ALL ERECTION/TEMPORARY AND PERMANENT LATERAL AND DIAGONAL BRACING AND/OR BLOCKING.
   C. FRAMING PLAN LAYOUT (DIMENSIONED AND TO SCALE).
   D. EACH TRUSS SHALL BE LEGIBLY BRANDED, MARKED, OR OTHERWISE HAVE PERMANENTLY AFFIXED THERETO THE FOLLOWING INFORMATION LOCATED WITHIN 2 FEET OF THE CENTER OF THE SPAN ON THE FACE OF THE BOTTOM CHORD.
      a. IDENTITY OF THE COMPANY MANUFACTURING THE TRUSS
      b. DESIGN LOADS
      c. TRUSS SPACING
3. AWNING / CANOPY CALCULATIONS AND CONSTRUCTION DRAWINGS, INCLUDING CONNECTIONS AND ATTACHMENT TO OTHER ELEMENTS OF THE STRUCTURE.

CONCRETE NOTES

1. ALL CONCRETE WORK INCLUDING FORMING, REINFORCING, MIXING, PLACING, FINISHING AND CURING SHALL BE DONE IN ACCORDANCE WITH THE ACI MANUAL OF CONCRETE PRACTICE INCLUDING "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", ACI 318, AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE", ACI 301 LATEST EDITIONS.
2. IT SHALL BE THE RESPONSIBILITY OF THE MIX DESIGN SUPPLIER TO PROPORTION MIXES APPROPRIATELY TO REACH THE REQUIRED PROPERTIES NOTED, AND SHALL BE APPROPRIATE FOR THEIR INTENDED USE. ADMIXTURES MEETING ASTM C494 ARE OPTIONAL. HOWEVER, AIR-ENTRAINING ADMIXTURES MEETING ASTM C260 SHALL BE USED FOR CONCRETE EXPOSED TO THE EXTERIOR OR FREEZE-THAW CYCLES.
3. CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS FOR EACH INTENDED USE ON THE PROJECT FOR REVIEW AND APPROVAL BY THE ENGINEER OF RECORD. CONTENTS OF THE MIX DESIGN SHALL COMPLY WITH, AND INCLUDE ALL INFORMATION REQUIRED BY, ACI 318, CHAPTER 5 (FOR 2011 AND EARLIER CODE EDITIONS), & CHAPTER 26 (FOR 2014 CODE EDITION). THIS INCLUDES, BUT IS NOT LIMITED TO NUMBER OF TESTS AND AGE OF TESTS INCLUDED IN THE MIX DESIGN REPORT.
4. ALL CONCRETE DENSITY SHALL BE NORMAL WEIGHT (145 pcf +/- 5) UNLESS OTHERWISE INDICATED.
5. FLY ASH ALLOWANCES:
   - 20% MAXIMUM BY WEIGHT OF CEMENTITIOUS IN FOOTINGS
   - 15% MAXIMUM BY WEIGHT OF CEMENTITIOUS MATERIAL IN SLABS
6. COORDINATE CONCRETE WORK WITH THAT OF OTHER TRADES TO ALLOW FOR SETTING OF SLEEVES, ACCESSORIES, ETC.
7. ALL REINFORCING STEEL, ANCHOR RODS, DOWELS, AND INSERTS SHALL BE WELL-SECURED IN POSITION PRIOR TO PLACING CONCRETE. DO NOT "WET SET" OR "FLOAT" INTO CONCRETE.
8. TEST CYLINDERS WILL BE REQUIRED, AND RECORDS OF RESULTS SHALL BE SUBMITTED TO ENGINEER OF RECORD. PROVIDE A MINIMUM OF (4) 6"x12" OR (5) 4"x8" CYLINDERS OF EACH MIX DESIGN FOR TESTING AT THE FREQUENCIES LISTED BELOW. TEST 1 AT 7 DAYS, 2 AT 28 DAYS FOR 6"x12" CYLINDERS, OR 3 AT 28 DAYS FOR 4"x8" CYLINDERS. KEEP 1 SPARE FOR FURTHER TESTING IF NEEDED. CYLINDERS SHALL BE TAKEN AND TESTED NO LESS THAN THE FOLLOWING: (SLUMP TESTS ARE RECOMMENDED)
   A. ONCE A DAY
   B. FOR EACH 150 CUBIC YARDS POURED
   C. FOR EACH 5,000 SQ. FT. OF SURFACE AREA POURED
9. CONSTRUCTION JOINTS IN CONCRETE INDICATED WITH A ROUGH, CLEAN SURFACE SHALL HAVE A 1/4" AVERAGE AMPLITUDE.
10. ALL COLD JOINTS SHALL BE ROUGHENED AND CLEANED PRIOR TO PLACING CONCRETE.
11. SLUMP: CONCRETE MIXES SHALL BE PROPORTIONED TO ACHIEVE A MAXIMUM SLUMP OF 8" FOR CONCRETE CONTAINING HIGH RANGE WATER REDUCING ADMIXTURE. 6" FOR CONCRETE CONTAINING A MID-RANGE WATER REDUCING ADMIXTURE. MIXES SHALL HAVE A WATER SLUMP OF 2"-3" PRE-ADDITIVE (3" TO 4" FOR CONCRETE RECEIVING A "DRY-SHAKE" HARDENER). MAXIMUM 4" WATER SLUMP FOR ALL OTHER CONCRETE NOT CONTAINING A WATER REDUCER.
12. DEPOSIT AND CONSOLIDATE CONCRETE FOR FLOORS AND SLABS IN A CONTINUOUS OPERATION, WITHIN LIMITS OF CONSTRUCTION JOINTS, UNTIL PLACEMENT OF A PANEL OR SECTION IS COMPLETE.
   A. CONSOLIDATE CONCRETE DURING PLACEMENT OPERATIONS, SO CONCRETE IS THOROUGHLY WORKED AROUND REINFORCEMENT AND OTHER EMBEDDED ITEMS AND INTO CORNERS.
   B. MAINTAIN REINFORCEMENT IN POSITION ON CHAIRS DURING CONCRETE PLACEMENT.
   C. SCREED SLAB SURFACES WITH A STRAIGHT EDGE AND STRIKE OFF TO CORRECT ELEVATIONS.
   D. UTILIZE A VIBRATORY SCREED FOR CONCRETE THAT WILL RECEIVE DIAMOND POLISH FINISH. KEEP VIBRATING SCREED MOVING CONTINUOUSLY ACROSS SURFACE. DO NOT STOP SCREED IN ANY ONE PLACE WHILE VIBRATING.
   E. SLOPE SURFACES UNIFORMLY TO DRAINS WHERE REQUIRED.
   F. BEGIN INITIAL FLOATING USING BULL FLOATS OR DARBIES TO FORM A UNIFORM AND OPEN-TEXTURED SURFACE PLANE BEFORE EXCESS BLEED WATER APPEARS ON THE SURFACE. DO NOT FURTHER DISTURB SLAB SURFACES BEFORE STARTING FINISHING OPERATIONS.
   G. THE USE OF HIGHWAY STRAIGHT EDGES OR "BUMP CUTTERS" ON CONCRETE SLABS TO BE POLISHED IS PROHIBITED.
13. CONCRETE TO BE POLISHED SHALL RECEIVE A HARD STEEL TROWEL FINISH WITH A MINIMUM OF (3) SEPARATE PASSES WITH POWER TROWEL TO ACHIEVE CLASS 5 FINISH AS DESCRIBED IN ACI 302R. HAND TROWELLING SHALL BE LIMITED TO ONLY THOSE AREAS NECESSARY. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
   A. INSPECT TROWELLING MACHINE AND REMOVE ACCUMULATED MORTAR PRIOR TO EACH PASS.
   B. FINISH SURFACE SHALL BE FREE OF TROWEL MARKS, BURN MARKS AND MOTTLING.
14. ALL SLABS-ON-GRADE SHALL MEET THE SPECIFIED OVERALL FLOOR FLATNESS (FF) AND OVERALL FLOOR LEVELNESS (FL) MEASUREMENTS PROVIDED BASED ON BUILDING USE. COORDINATE WITH THE ARCHITECT, EQUIPMENT MANUFACTURERS AND OWNER/TENANT FOR MORE STRINGENT SPECIFIED OVERALL REQUIREMENTS AND FOR ANY MINIMUM LOCAL VALUES UNDER SPECIFIC EQUIPMENT. TESTING SHALL BE DONE ON SLABS REQUIRED TO BE "FLAT" OR "SUPER FLAT" OR AT OWNER / TENANT REQUEST IN ACCORDANCE WITH ASTM E 1155 AND WITHIN 16 TO 72 HOURS OF THE FINAL TROWELING OPERATION.
   A. CONVENTIONAL: NONPUBLIC AREAS, MECHANICAL ROOMS, PARKING STRUCTURES
      - $F_F = 20$, $F_L = 15$
   B. MODERATELY FLAT: COMMERCIAL BUILDINGS
      - $F_F = 25$, $F_L = 20$
   C. FLAT: WAREHOUSES WITH STANDARD FORKLIFT TRAFFIC, SLAB UNDER THIN-SET TILE FLOORS
      - $F_F = 35$, $F_L = 25$
   D. SUPER FLAT: WAREHOUSES WITH ROBOTICS OR COMPLEX LOGISTIC RACKING SYSTEMS
      - $F_F > 60$, $F_L > 40$ (VERIFY VALUES)
15. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH IN ACCORDANCE WITH THE FOLLOWING:
   A. AIR ENTRAINMENT IS NOT RECOMMENDED FOR SURFACES TO BE GIVEN A SMOOTH, DENSE, HARD-TROWELED FINISH. COORDINATE FINISH REQUIREMENTS WITH ARCHITECTURAL DRAWINGS AND/ OR SPECIFICATIONS.

CONCRETE TABLE

INTENDED USE	EXPOSURE CLASS	MIN 28 DAY STRENGTH (psi)	MAX WATER-CEMENT RATIO	% TOTAL AIR LIMITS	% MAX SHRINKAGE @ 28 DAYS
INTERIOR SLAB ON GRADE (1)	F0	4,000	0.50	3	0.04
FOOTING & FOUNDATION WALLS	F0/F1/F2/F3	4,000	0.50	4.5 TO 7.5	0.05
ALL CONCRETE NOT OTHERWISE SPECIFIED	F3	5,000	0.40	4.5 TO 7.5	0.05

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CASE ENGINEERING PROJECT #: LDG-TX-04-25

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STATE OF TEXAS
STEPHEN J. SACCO
110974
LICENSED PROFESSIONAL ENGINEER
04/11/25

PROJECT #:
Project Number

DRAWN BY: RRR CHECKED BY: EK

PERMIT SET - 04/10/2025

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SHERWIN WILLIAMS

STORE #:
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ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
GENERAL NOTES

SHEET NUMBER:
S110

DEVELOPMENT LENGTH OF STANDARD HOOKS IN CONCRETE NOTES

1. VALUES IN TABLE ARE BASED ON 60ksi REBAR. FOR OTHER REBAR YIELD STRENGTHS, MULTIPLY VALUES IN THE TABLE BY THE SPECIFIED YIELD STRENGTH DIVIDED BY 60.
2. SEE ACI 318 SECTION 12.5 FOR ALLOWABLE REDUCTIONS IN DEVELOPMENT LENGTH. IT SHALL NOT BE LESS THAN 8 BAR DIAMETERS OR 6 INCHES.HOOKED BARS ARE NOT CONSIDERED EFFECTIVE IN DEVELOPING BARS IN COMPRESSION.
3. REBAR IN ALL CONCRETE MEMBERS SHALL HAVE STANDARD HOOKS WHERE SHOWN ON SECTIONS IN ACCORDANCE WITH "DEVELOPMENT LENGTH OF STANDARD HOOKS IN TENSION" TABLE, UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.

DEVELOPMENT LENGTH OF STANDARD HOOKS IN CONCRETE - 60 ksi...

BAR SIZE	f'c = 4,000 psi	f'c = 4,500 psi	f'c = 5,000 psi
#3	8	7	7
#4	10	9	9
#5	12	12	11
#6	15	14	13

TENSION LAP SPLICE LENGTH IN CONCRETE NOTES

1. FOR HORIZONTAL BARS, VALUES IN THE TABLE SHALL BE MULTIPLIED BY 1.3 WHERE MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST BELOW THE BAR.
2. WHERE CLEAR SPACING OF BARS BEING SPLICED IS AT LEAST 2 BAR DIAMETERS AND CLEAR COVER AT LEAST 1 BAR DIAMETER, USE CASE 1. FOR ALL OTHER BAR ARRANGEMENTS, USE CASE 2.
3. VALUES IN THE TABLE ARE BASED ON 60ksi REBAR. FOR OTHER REBAR YIELD STRENGTHS, MULTIPLY VALUES IN THE TABLE BY THE SPECIFIED YIELD STRENGTH DIVIDED BY 60.
4. WHERE BARS OF DIFFERENT SIZES ARE SPLICED, PROVIDE THE LAP LENGTH OF THE LARGER BAR.
5. WELDED WIRE REINFORCEMENT (DEFORMED OR PLAIN WIRE) SHALL BE LAPPED ONE FULL MESH SQUARE PLUS 2 INCHES MINIMUM, BUT NOT LESS THAN 12 INCHES.
6. REBAR IN ALL CONCRETE MEMBERS SHALL BE SPLICED IN ACCORDANCE WITH "TENSION LAP SPLICE LENGTH" TABLE, UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.

TENSION LAP SPLICE LENGTH IN CONCRETE - 60 KSI REBAR TABLE (INCHES)

f'c =	3,500psi	3,500psi	4,000psi	4,000psi	4,500psi	4,500psi	5,000psi	5,000psi
BAR SIZE	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2
#3	20	30	19	28	18	27	17	25
#4	27	40	25	37	24	35	23	34
#5	33	50	31	47	30	44	28	42
#6	40	60	37	56	35	53	34	50

REINFORCING STEEL NOTES

1. NON-WELDED STEEL BAR REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60. WELDED STEEL BAR REINFORCING SHALL CONFORM TO ASTM A706.
2. WELDING OF REINFORCING STEEL SHALL BE PERFORMED BY AWS QUALIFIED WELDERS IN CONFORMANCE WITH AWS D1.1 USING E90 ELECTRODES FOR ASTM A615 REBAR, AND E80 ELECTRODES FOR ASTM A706 REBAR UNLESS OTHERWISE NOTED ON THE DRAWINGS.
3. WELDED WIRE REINFORCEMENT (WWR) SHALL BE SMOOTH WIRE PER ASTM A185 WITH MINIMUM YIELD STRENGTH, fy = 65 ksi, OR DEFORMED WIRE PER ASTM A497 WITH MINIMUM YIELD STRENGTH, fy = 70 ksi, UNLESS NOTED OTHERWISE.
4. MINIMUM CONCRETE COVER FOR REINFORCING STEEL IN CAST-IN-PLACE (NON-PRESTRESSED) CONCRETE SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED ON THE DRAWINGS:
   A. CONCRETE CAST AGAINST EARTH = 3"
   B. CONCRETE EXPOSED TO EARTH OR WEATHER:
      - #6 BAR AND LARGER = 2"
      - #5 BAR AND SMALLER = 1 1/2"
   C. CONCRETE NOT EXPOSED TO EARTH OR WEATHER (SLABS, WALLS, & JOISTS):
      - #14 BARS AND LARGER = 1 1/2"
      - #11 BARS AND SMALLER = 3/4"
   D. CONCRETE NOT EXPOSED TO EARTH OR WEATHER (BEAMS & COLUMNS):
      - PRIMARY REINFORCEMENT, TIES, STIRRUPS, & SPIRALS = 1 1/2"
5. ALL DETAILING, FABRICATION, AND ERECTION OF REINFORCING STEEL SHALL CONFORM TO THE LATEST EDITION OF ACI 315 (SP-66), DETAILS AND DETAILING OF CONCRETE REINFORCEMENT.
6. LAP SPLICE LENGTHS FOR BARS INSTALLED IN CONCRETE AND CMU SHALL BE IN ACCORDANCE WITH THE TABLE(S).

WOOD FRAMING NOTES

1. WOOD FRAMING SHALL CONFORM TO THE "LUMBER TABLE" UNLESS NOTED OTHERWISE.
2. FOR STRUCTURAL GLUE-LAMINATED TIMBER MEMBERS, AN AITC CERTIFICATION OF CONFORMANCE ISSUED BY A CURRENT, ICC-APPROVED QUALITY CONTROL AGENCY SHALL BE SUBMITTED TO THE BUILDING INSPECTOR PRIOR TO INSTALLATION.
3. FOR WOOD FASTENING REQUIREMENTS, REFER TO TABLE 2304.9.1 FOR IBC 2012 AND OLDER, TABLE 2304.10.1 FOR IBC 2015-2018, AND TABLE 2304.10.2 FOR IBC 2021 AND NEWER.
4. ALL NAILS SHALL BE GALVANIZED COMMON WIRE NAILS UNLESS OTHERWISE NOTED. SEE "WOOD FASTENER TYPES SCHEDULE" FOR MINIMUM FASTENER DIMENSIONS. NAILS IN CONTACT WITH FIRE RETARDANT TREATED OR PRESSURE TREATED WOOD SHALL BE HOT-DIP GALVANIZED (ASTM A153) OR STAINLESS STEEL (TYPE 304 OR 316). WHEN REQUIRED TO PREVENT SPLITTING, PRE-DRILL FOR NAILS WITH 1/8" DIAMETER DRILL BIT.
5. BOLTS AND LAG SCREWS SHALL CONFORM TO ASTM A307 AND ANSI/ASME STANDARD B18.2.1-1981, AND SHALL BE GALVANIZED. BOLTS AND LAG SCREWS IN CONTACT WITH FIRE RETARDANT TREATED OR PRESSURE TREATED WOOD SHALL BE HOT-DIP GALVANIZED (ASTM A153) OR STAINLESS STEEL (TYPE 304 OR 316). STANDARD WASHERS SHALL BE PROVIDED UNDER HEAD AND NUT OF ALL BOLTS IN WOOD FRAMING. BOLT THREADS SHALL NOT BEAR ON WOOD. DRILLED HOLES FOR BOLTS SHALL BE 1/16" LARGER IN DIAMETER THAN BOLT.
6. ALL BOLTS SHALL BE RETIGHTENED IMMEDIATELY PRIOR TO CLOSING IN FRAMING.
7. METAL FRAMING CONNECTORS SHALL BE "SIMPSON" BRAND OR ENGINEERED APPROVED EQUIVALENT AND SHALL BE GALVANIZED. METAL FRAMING CONNECTORS IN CONTACT WITH FIRE RETARDANT TREATED OR PRESSURE TREATED WOOD SHALL BE HOT-DIP GALVANIZED (ASTM A123) OR STAINLESS STEEL (TYPE 316L). METAL FRAMING CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S LATEST PUBLISHED INSTALLATION INSTRUCTIONS USING THE LARGER SIZE AND QUANTITY OF FASTENERS INDICATED, UNLESS OTHERWISE NOTED.
8. WASHERS USED IN SHEAR WALLS AND ANCHOR HOLD DOWNS SHALL BE SQUARE WASHERS OF SIZE AND THICKNESS INDICATED IN "SHEAR WALL SHEATHING AND FASTENER SCHEDULE". ROUND WASHERS ARE NOT ACCEPTABLE FOR SHEAR WALL APPLICATIONS.
9. ALL BOLTS, WASHERS, NAILS, METAL FRAMING CONNECTORS AND OTHER FASTENERS IN CONTACT WITH PRESERVATIVE OR FIRE RETARDANT TREATED LUMBER SHALL BE HOT-DIPPED GALVANIZED (ASTM A153) OR STAINLESS STEEL (TYPE 304 OR 316).
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT WOOD USED FOR STRUCTURAL PURPOSES IS KEPT AS DRY AS POSSIBLE BEFORE AND DURING CONSTRUCTION. A MAXIMUM MOISTURE CONTENT SHALL BE MAINTAINED UNTIL THE BUILDING ENVELOPE IS CLOSED IN AND WATER-PROOFED AS FOLLOWS:
    A. KILN-DRIED LUMBER: 19%
    B. TIMBERS: 19%
    C. GLULAM BEAMS: 16%
    D. LVL & PSL: 12%
    E. PLYWOOD: 8%
    F. OSB: 4%
11. ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE-TREATED. ALL WOOD EXPOSED TO WEATHER SHALL BE PRESSURE-TREATED. PRESSURE TREATMENT OF WOOD THAT IS CUT SHALL BE REINSTATED ON CUT EDGES.

LUMBER TABLE

MEMBER	SPECIES	GRADE
2x PLATES, STRIPPING, MISC CONCEALED FRAMING, BLKG, & FIRE STOPPING	SOUTHERN PINE	NO 2
SILLS ON CONCRETE OR MASONRY	PRESSURE TREATED SOUTHERN PINE	NO 2
2x LUMBER	SOUTHERN PINE	NO 2
ALL 4x DIMENSIONED LUMBER	SOUTHERN PINE	NO 2
TIMBER 5x5 AND LARGER	SOUTHERN PINE	NO 1
ENGINEERED WOOD RIM BOARD	PER MANUFACTURER	APA RATED RIM BOARD PLUS
LAMINATED VENEER LUMBER (LVL) HEADERS, BEAMS, STRINGERS AND POSTS	PER MANUFACTURER	ICC ESR-2403. GRADE 1.9E; OR ICC ESR-1387, GRADE 1.9E; OR ICC ESR-2993, GRADE 1.9E; OR ICC ESR-1994, GRADE 2.0E
SHEAR WALL SHEATHING	PER MANUFACTURER	APA RATED SHEATHING, EXPOSURE 1 (PS 1 OR PS 2)
ROOF SHEATHING	PER MANUFACTURER	APA RATED SHEATHING, EXPOSURE 1 (PS 1 OR PS 2)
GLULAM BEAMS (GLB)	PER PLAN	PER PLAN

WOOD FASTENER TYPES SCHEDULE

NOTE: 1.-"SD" AND "SDS" SCREWS ARE MANUFACTURED BY SIMPSON STRONG-TIE. 2.-ALL SCREWS SHALL BE INSTALLED SO THAT HEADS ARE FLUSH WITH OUTSIDE MATERIAL. DO NOT OVERDRIVE SCREWS. SCREWS WITH WING-TIPS ARE NOT PERMITTED IN SHEAR WALLS OR DIAPHRAGMS.

TYPE	DIAMETER	LENGTH
16d COMMON	0.162"	3 1/2"
10d COMMON	0.148"	3"
8d COMMON	0.131"	2 1/2"
#9 SD SCREW	0.131"	1 1/2" OR 2 1/2"
#10 SD SCREW	0.161"	1 1/2" OR 2 1/2"
SDS SCREW	0.25"	VARIES 1 1/2"-8"

MASONRY LAP SPLICE LENGTH NOTES

1. CONTRACTOR SHALL PROVIDE DEVELOPMENT AND REBAR SPLICE LENGTHS SHOWN IN THE TABLES AS A MINIMUM UNLESS INDICATED OTHERWISE IN STRUCTURAL DETAILS OR NOTES.
2. "SINGLE" INDICATES ONE BAR PER CELL. "DOUBLE" INDICATES TWO BARS PER CELL. SEE PLAN.

f'm = 2,000 psi - MASONRY LAP SPLICE LENGTH TABLE (INCHES)

	CMU SIZE	8"	10"	10"	12"	12"
BAR SIZE	STD HOOK DEVELOPMENT LENGTH (IN)		SINGLE	DOUBLE	SINGLE	DOUBLE
#3	5	12	12	12	12	12
#4	6	13	12	20	12	20
#5	8	20	16	32	13	32
#6	9	38	29	61	24	61
#7	10	52	40	84	33	84
#8	12	79	61	96	50	96

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STATE OF TEXAS
STEPHEN J. SACCO
110974
LICENSED PROFESSIONAL ENGINEER

04/11/25

PROJECT #:
Project Number

DRAWN BY: RRR CHECKED BY: EK

PERMIT SET - 04/10/2025

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4 -
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SHERWIN WILLIAMS

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ADDRESS:

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LOCKHART, TX 78644

SHEET TITLE:

GENERAL NOTES

SHEET NUMBER:

S120

REINFORCED MASONRY NOTES

1. MASONRY CONSTRUCTION SHALL CONFORM TO THE APPLICABLE PORTIONS OF TMS 602, "SPECIFICATIONS FOR MASONRY STRUCTURES". CONCRETE MASONRY UNITS SHALL BE CLASSIFIED AS NORMAL WEIGHT DENSITY AND CONFORM TO ASTM C90. THE MASONRY ASSEMBLY SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH, (f'm) = 2,000 psi.
2. GROUT IN ACCORDANCE WITH ASTM C476 MAY BE FINE OR COARSE, SELF-CONSOLIDATING OR CONVENTIONAL (AT CONTRACTOR'S OPTION), AND SHALL BE PROPORTIONED TO ACHIEVE THE MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF MASONRY. GROUT SHALL HAVE A DRY DENSITY OF 135 +/- 3pcf. NORMAL WEIGHT AGGREGATES IN GROUT SHALL COMPLY WITH ASTM C404. MORTAR SHALL COMPLY WITH PROPORTION SPECIFICATION REQUIREMENTS OF ASTM C270.
3. ALL MASONRY WALLS SHALL HAVE CONTINUOUS HORIZONTAL BOND BEAMS WITH SIZE AND SPACING PER MASONRY WALL ELEVATIONS. VERTICAL REINFORCEMENT IS PER FOUNDATION PLAN.
4. SUPPLY VERTICAL REINFORCING IN MINIMUM LENGTHS EQUAL TO 4'-0" PLUS LAP SPLICE LENGTH PER TABLE.
5. WALL CONSTRUCTION LIFTS FOR REINFORCING BARS AND INSULATION FILL SHALL BE PER ACI 530.
6. PORTLAND CEMENT AND LIME TYPE "S" MORTAR IS REQUIRED FOR ALL MASONRY UNLESS NOTED OTHERWISE.
7. SEE ARCHITECTURAL PLANS FOR LOCATION AND DETAIL OF CONTROL JOINTS AND EXPANSION JOINTS. SEE TYPICAL CONTROL JOINT DETAIL FOR GUIDANCE.
8. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS AND DETAILS OF DOOR AND WINDOW OPENINGS FOR SPECIAL COURSING AND OTHER MASONRY DETAILS. THE INFORMATION SHOWN ON THE STRUCTURAL DRAWINGS IS INTENDED TO DEFINE THE STRUCTURAL REQUIREMENTS ONLY.
9. ALL BOLTS, ANCHORS, ETC., INSERTED IN THE WALLS SHALL BE GROUTED SOLID INTO POSITION WITH MINIMUM EDGE DISTANCE FROM ANCHOR TO EDGE OF GROUTED PORTION OF CMU IN ALL DIRECTIONS AS NOTED ON DRAWINGS.
10. REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED ON DRAWINGS. REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A706.
11. WHEN A FOUNDATION DOWEL DOES NOT LINE UP WITH A VERTICAL BLOCK CORE, IT SHALL NOT BE SLOPED MORE THAN (ONE HORIZONTAL IN 6 VERTICAL), OR 10 DEGREES. DOWEL MAY BE GROUTED INTO CELL IN VERTICAL ALIGNMENT, EVEN THOUGH IT IS IN AN ADJACENT CELL TO THE VERTICAL WALL REINFORCING, AS LONG AS THE CENTER-TO-CENTER SPACE BETWEEN THE WALL REINFORCING AND THE DOWEL DOES NOT EXCEED 8 INCHES. DOWELS SHALL NOT BE BENT INTO ALIGNMENT AFTER CONCRETE HAS BEEN CAST.
12. SPLICED REINFORCING SHALL BE LAPPED ACCORDING TO "MASONRY LAP SPLICE LENGTH" TABLE. SPLICED BARS SHALL BE WIRED TOGETHER. CONTRACTOR MAY OPT TO STAGGER SPLICES.
13. VERTICAL BARS SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 192 DIAMETERS OF THE REINFORCING OR 10'-0"
14. REINFORCING STEEL SHALL BE SECURELY TIED IN PLACE AND INSPECTED BEFORE GROUTING STARTS.
15. VERTICAL GROUTING MAY BE EITHER "LOW LIFT" OR "HIGH LIFT" AT THE CONTRACTOR'S OPTION.
16. VERTICAL CELLS THAT WILL BE GROUTED SHALL HAVE VERTICAL ALIGNMENT TO MAINTAIN A CONTINUOUS UNOBSTRUCTED CELL AREA NOT LESS THAN 2"x3".
17. GROUTING OF MASONRY BEAMS OVER OPENINGS SHALL BE DONE IN ONE CONTINUOUS OPERATION.
18. VERTICAL REINFORCING BARS SHALL MAINTAIN MINIMUM CLEARANCES AS FOLLOWS UNLESS NOTED OTHERWISE ON DRAWINGS:
    1. INSIDE FACE OF MASONRY = 3/4"
    2. ADJACENT BARS NOT SPLICED = 1" OR 1 BAR DIAMETER, WHICHEVER IS GREATER.
19. INSULATION INSERTS ARE NOT PERMITTED IN GROUTED CELLS.
20. PRISM TESTS IN ACCORDANCE WITH ASTM C1314 AND ASTM C140 SHALL BE PERFORMED WITH TEST REPORTS SENT TO ARCHITECT AND EOR FOR RECORD. REFER TO SPECIAL INSPECTIONS TABLE ITEM "EVALUATION OF STRENGTH" FOR ADDITIONAL INFORMATION.

SPECIAL INSPECTIONS

1. REFER TO THE SPECIAL INSPECTION TABLES FOR THE LIST OF ELEMENTS OF CONSTRUCTION THAT SHALL REQUIRE SPECIAL INSPECTION. THIS SHALL BE CONSIDERED A GUIDE, AND THE CONTRACTOR AND INSPECTOR SHALL REFER TO THE IBC FOR COMPLETE REQUIREMENTS, QUALIFICATIONS, EXCEPTIONS, AND SUBMITTALS. REFER TO IBC CHAPTER 17. THE OWNER SHALL BE RESPONSIBLE FOR EMPLOYING THE SPECIAL INSPECTION AGENCY. ANY "OBSERVATIONS" BY THE EOR WILL NOT BE TO PERFORM SPECIAL INSPECTIONS AND SHALL NOT BE INTERPRETED AS SUCH.
2. COPIES OF ALL INSPECTION REPORTS THAT REPORT COMPLIANCE SHALL BE SUBMITTED TO THE ARCHITECT OF RECORD, STRUCTURAL ENGINEER OF RECORD, AND BUILDING INSPECTOR WITHIN 7 CALENDAR DAYS OF COMPLETION OF THAT PORTION OF WORK. A MINIMUM OF ONE (1) PROGRESS REPORT PER MONTH FOR EACH TYPE OF CONSTRUCTION REQUIRING SPECIAL INSPECTION SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD.
3. SPECIAL INSPECTOR SHALL INFORM ENGINEER OF RECORD IMMEDIATELY OF NON-COMPLIANCE WITH CONSTRUCTION DOCUMENTS OR APPROVED SUBMITTALS. CONTACT ENGINEER OF RECORD THE SAME DAY NON-COMPLIANCE IS DISCOVERED AND FOLLOW UP WITH AN OFFICIAL REPORT WITHIN 2 BUSINESS DAYS.
4. THE SPECIAL INSPECTIONS IDENTIFIED ON THE PLANS ARE IN ADDITION TO, AND NOT A SUBSTITUTE FOR THOSE INSPECTIONS REQUIRED TO BE PERFORMED BY A BUILDING INSPECTOR.
5. SPECIAL INSPECTIONS ARE NOTED AS EITHER "CONTINUOUS" OR "PERIODIC". A "CONTINUOUS" INSPECTION REQUIRES THE PRESENCE OF A QUALIFIED INSPECTOR IN THE VICINITY OF THE WORK BEING PERFORMED FOR 100% OF THAT WORK. A "PERIODIC" INSPECTION REQUIRES PART-TIME OBSERVATION OF THE WORK BEING PERFORMED. THE INSPECTOR SHALL ALSO OBSERVE THE FINAL CONDITION OF THE WORK BEFORE IT IS CLOSED FROM VIEW.
6. WHEN WORK IN MORE THAN ONE CATEGORY OF WORK REQUIRING SPECIAL INSPECTION IS TO BE PERFORMED SIMULTANEOUSLY, OR THE GEOGRAPHIC LOCATION OF THE WORK IS SUCH THAT IT CANNOT BE CONTINUOUSLY OBSERVED, IT SHALL BE THE RESPONSIBILITY OF THE AGENT TO EMPLOY A SUFFICIENT NUMBER OF SPECIAL INSPECTORS TO ASSURE THAT ALL WORK IS CONTINUOUSLY INSPECTED IN ACCORDANCE WITH THOSE PROVISIONS.
7. SPECIAL INSPECTIONS AND TESTS ARE NOT REQUIRED FOR PORTIONS OF STRUCTURES DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION PROVISIONS OF SECTION 2211 OF THE IBC OR THE CONVENTIONAL LIGHT-FRAME CONSTRUCTION PROVISIONS OF SECTION 2308 OF THE IBC.

SPECIAL INSPECTIONS - SOILS AND FOUNDATIONS TABLE

ITEM	INSPECTION FREQUENCY	SCOPE
SOILS	PERIODIC	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY; VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL; PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS; PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY
SOILS	CONTINUOUS	VERIFY USE OF PROPER MATERIALS, DENSITIES, LIFT THICKNESSES, AND COMPACTION OF FILL; VERIFY MATERIALS AND PROCEDURES COMPLY WITH THE GEOTECHNICAL REPORT / SOILS ENGINEER

SPECIAL INSPECTIONS - WOOD TABLE

ITEM	INSPECTION FREQUENCY	SCOPE
PREMANUFACTURED WOOD STRUCTURAL ELEMENTS AND ASSEMBLIES	-	SEE "OFF-SITE FABRICATION" SPECIAL INSPECTION TABLE
DIAPHRAGM AND SHEAR WALL	PERIODIC	WOOD SHEAR WALLS, SHEAR PANELS, AND DIAPHRAGMS, INCLUDING NAILING, BOLTING, ANCHORING, AND OTHER FASTENING TO COMPONENTS OF THE MAIN LATERAL SYSTEM WHEN THE FASTENER SPACING IS LESS THAN OR EQUAL TO 4 INCHES ON CENTER
HIGH-LOAD DIAPHRAGM	PERIODIC	WOOD STRUCTURAL PANEL SHEATHING GRADE AND THICKNESS; NOMINAL SIZE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES; NAIL OR STAPLE DIAMETER AND LENGTH; NUMBER OF FASTENER LINES; FASTENER SPACING AND EDGE DISTANCE
METAL PLATE CONNECTED WOOD TRUSSES WITH CLEAR SPAN OF 60FT OR GREATER	PERIODIC	VERIFY TEMPORARY, ERECTION, AND PERMANENT BRIDGING AND BRACING IS INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE

SPECIAL INSPECTIONS - CONCRETE TABLE

ITEM	INSPECTION FREQUENCY	SCOPE
REINFORCEMENT	PERIODIC	INSPECT REINFORCEMENT AND PLACEMENT; VERIFY CONFORMANCE WITH CONSTRUCTION DOCUMENTS, AND THAT BARS ARE FREE FROM MATERIALS THAT COULD PREVENT BOND, ARE ADEQUATELY LAPPED, SPLICED, TIED, AND SUPPORTED
REINFORCEMENT	PERIODIC	VERIFY WELDABILITY OF REBAR OTHER THAN ASTM A 706; INSPECT SINGLE PASS FILLET WELDS NOT GREATER THAN 5/16"
REINFORCEMENT	CONTINUOUS	INSPECT ALL OTHER WELDS (SEE ALSO "STEEL" SPECIAL INSPECTIONS TABLE)
ANCHOR INSTALLATION	PERIODIC	INSPECT CAST-IN-PLACE ANCHORS AND BOLTS
MIX DESIGN	PERIODIC	VERIFY USE OF APPROVED MIX DESIGN
SAMPLING AND TESTING	CONTINUOUS	PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTING; PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE TEMPERATURE OF THE CONCRETE
CONCRETE PLACEMENT	PERIODIC	VERIFY MAINTENANCE OF CURING TEMPERATURE AND TECHNIQUES
CONCRETE PLACEMENT	PERIODIC	INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF CONCRETE MEMBER BEING FORMED
CONCRETE PLACEMENT	CONTINUOUS	CONCRETE PLACEMENT

SPECIAL INSPECTIONS - OFF-SITE FABRICATION (INCLUDING PRE-MANUFACTURED WOOD STRUCTURAL ELEMENTS AND ASSEMBLIES, AND STEEL FABRICATING)

ITEM	INSPECTION FREQUENCY	SCOPE
FABRICATION AND IMPLEMENTATION PROCEDURES	PERIODIC	VERIFY THAT FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR INSPECTION CONTROL OF THE WORKMANSHIP AND THE FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS; REVIEW PROCEDURES FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENTS FOR THE FABRICATOR'S SCOPE OF WORK
NOTE	-	SPECIAL INSPECTION FOR OFF-SITE FABRICATION IS NOT REQUIRED FOR FABRICATORS APPROVED BY THE BUILDING OFFICIAL IN ACCORDANCE WITH THE CODE

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STATE OF TEXAS
STEPHEN J. SACCO
110974
LICENSED PROFESSIONAL ENGINEER
04/11/25

PROJECT #:
Project Number

DRAWN BY: RRR CHECKED BY: EK

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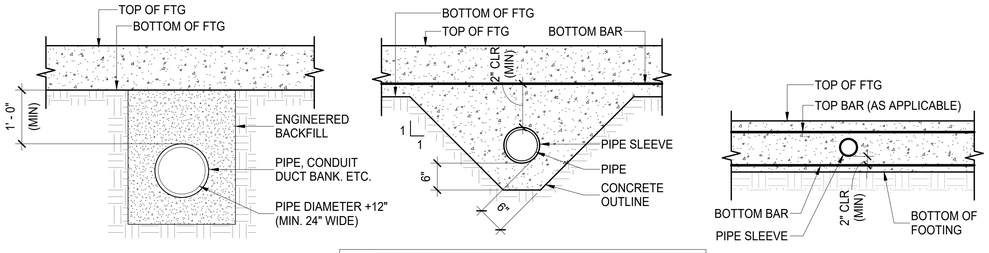
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LOCKHART, TX 78644

SHEET TITLE:
GENERAL NOTES

SHEET NUMBER:
S130



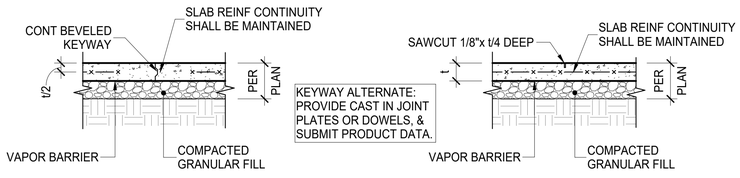
NOTE:
PIPE SLEEVE I.D. 2" LARGER THAN O.D. OF PIPE TYPICAL UNLESS NOTED OTHERWISE. CAULK OR PROVIDE FLOWABLE GROUT w/ COMPRESSIBLE WRAP AROUND PIPE.

BELOW BOTTOM OF FOOTING | **CLOSE TO BOTTOM OF FOOTING** | **CLEAR OF TOP & BOTTOM BAR IN FOOTING OR FOUNDATION WALL (OR TRENCH FOOTING/GRADE BM.)**

A S140 TYP FOUNDATION PIPE PENETRATION DETAILS

N.T.S.

NOTES:
1. SAW-CUT CONTROL JOINTS TO BE CUT AS SOON AS SURFACE WILL NOT BE TORN, ABRADED, OR OTHERWISE DAMAGED BY CUTTING ACTION. (WITHIN 8 TO 10 HOURS OF BURNISHING)
2. SPACE CONTROL JOINTS AT 15'-0" MAX. FOR INTERIOR SLABS UNO ON PLANS.
3. CONSTRUCTION JOINTS TO BE USED AT END OF EACH POUR.

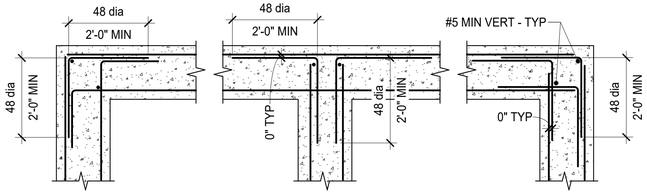


CONSTRUCTION JOINT | **CONTROL JOINT**

B S140 TYP CONCRETE FOOTING, FOUNDATION, & WALL REINFORCEMENT

N.T.S.

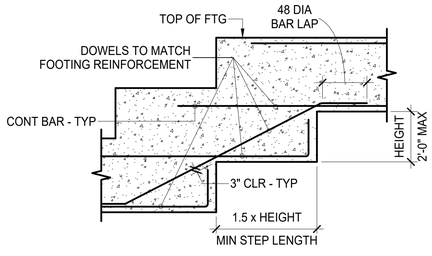
NOTES:
1. WHERE SINGLE CURTAIN OF REINFORCING OCCURS, BEND BARS AS SHOWN FOR OUTSIDE BARS.
2. FOR MORE THAN 2 BARS PER LAYER, EXTEND INNER BARS 12" INTO PERPENDICULAR FOOTING. OUTER BARS SHALL BE PLACED AS INDICATED.
3. CORNER BARS TO MATCH WALL REINFORCEMENT.



PLAN OF TYPICAL CORNER | **PLAN OF INTERSECTION** | **PLAN OF ALTERNATE CORNER**

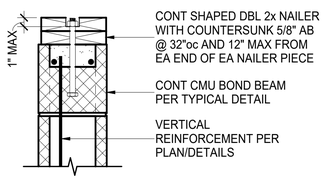
C S140 TYP FOOTING STEP

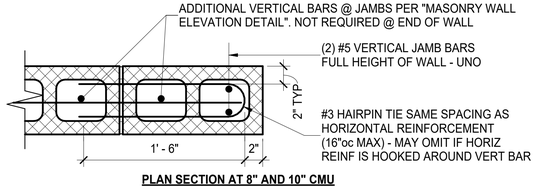
N.T.S.



D S140 TYP SLAB-ON-GRADE CONSTRUCTION JOINT DETAILS

N.T.S.





PLAN SECTION AT 8" AND 10" CMU

E S140 TYP CONCRETE WALL CONTROL, CONSTRUCTION, AND EXPANSION JOINT DETAILS

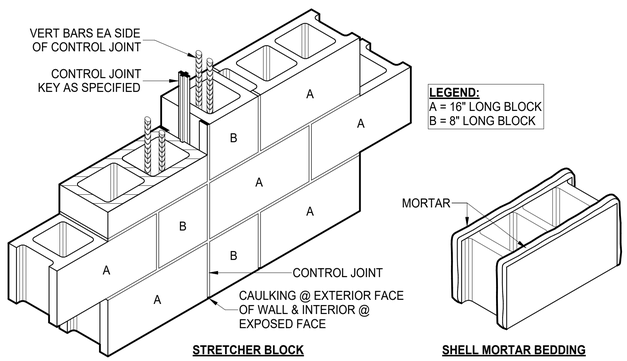
N.T.S.

F S140 TYP TOP OF WALL NAILER DETAIL

N.T.S.

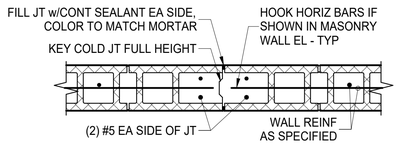
G S140 TYP CMU JAMB DETAILS

N.T.S.



LEGEND:
A = 16" LONG BLOCK
B = 8" LONG BLOCK

STRETCHER BLOCK | **SHELL MORTAR BEDDING**

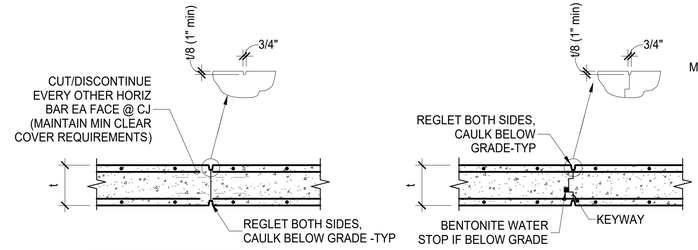


PLAN VIEW AT 8" AND 10"CMU

NOTES:
1. FIGURE ABOVE IS APPLICABLE TO THE CONSTRUCTION OF ALL CONTROL JOINTS IN THE 8" & 10" HOLLOW BLOCK WALLS EXCEPT WHERE STEEL OR CONCRETE COLUMNS OCCUR. SEE STRUCTURAL & ARCHITECTURAL DRAWINGS FOR LOCATIONS.
2. SEE SPEC. & ARCH. DRAWINGS FOR JOINT SPACING/LOCATIONS

H S140 TYP CMU WALL CONTROL JOINT DETAIL

N.T.S.

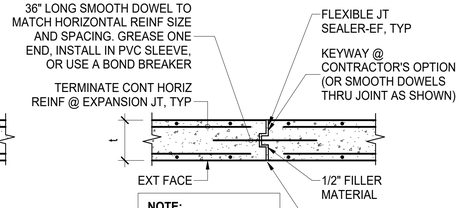


NOTE:
25'-0"oc MAX. SPACING OR AS APPROVED BY OWNER/ARCHITECT/ENGINEER

CONTROL JOINT

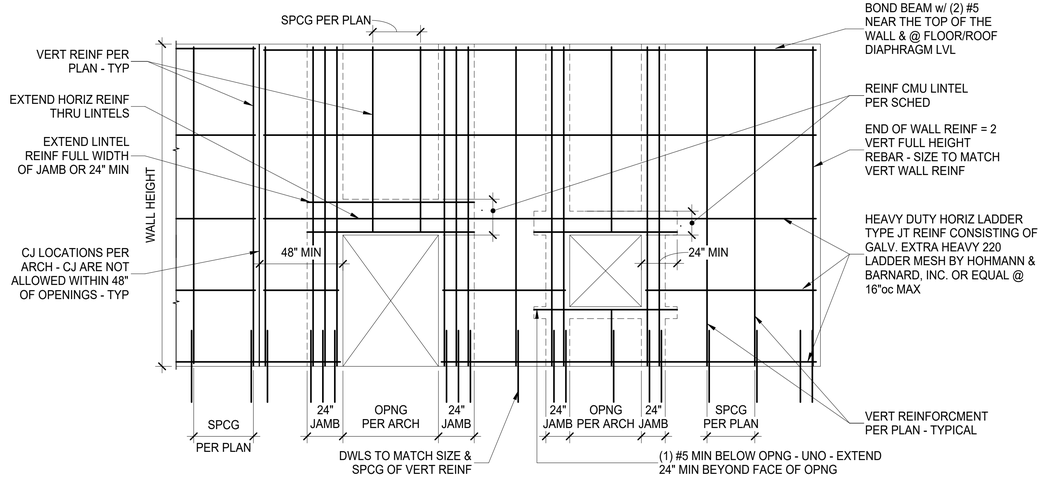
NOTE:
LOCATION TO BE BY CONTRACTOR.

CONSTRUCTION JOINT



NOTE:
NOTE:
MAX EXPANSION JOINT SPACING = 100'-0"

EXPANSION JOINT



NOTE: GENERAL CONTRACTOR TO PROVIDE CMU SHOP DRAWINGS OF ALL CMU WALLS SHOWING ALL REINFORCEMENT, LINTELS, CONTROL JOINTS, ETC. ON SCALED WALL ELEVATIONS TO EOR FOR REVIEW PRIOR TO FABRICATION

J S140 TYP REINFORCED MASONRY WALL ELEVATION

N.T.S.

LINGLE DESIGN GROUP, INC
LingleDesignGroup,Inc
158 West Main Street
Lena, IL 61048
815.369.9155
1764 BLAKE ST
DENVER, CO 80202
303.974.5875
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CASE Engineering Inc.
796 Merus Court
St. Louis, MO 63026
T 636.349.1600
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CERTIFICATE OF AUTHORITY NO. F-20080
CASE ENGINEERING PROJECT #: LDG-TX-04-25

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STATE OF TEXAS
STEPHEN J. SACCO
110974
LICENSED PROFESSIONAL ENGINEER

04/11/25

PROJECT #:
Project Number

DRAWN BY: RRR CHECKED BY: EK

PERMIT SET - 04/10/2025

1 .
2 .
3 .
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5 .
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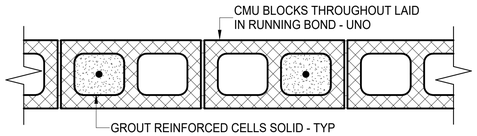
SHERWIN WILLIAMS

STORE #:
XXXX

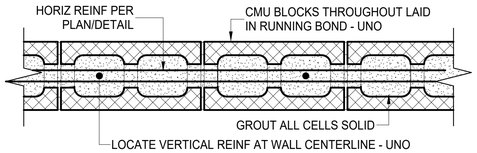
ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
TYPICAL DETAILS

SHEET NUMBER:
S140



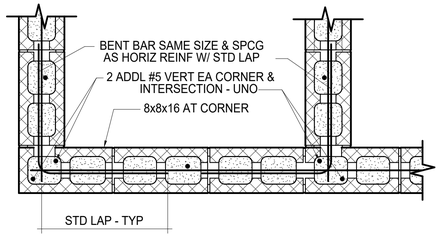
TYPICAL CMU WALL COURSE BETWEEN BOND BEAM COURSES



TYPICAL CMU WALL BOND BEAM COURSE

A S150 TYP CMU WALL COURSES

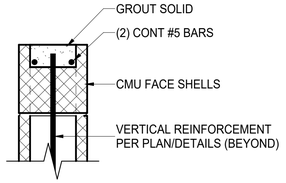
N.T.S.



CORNER **INTERSECTION**

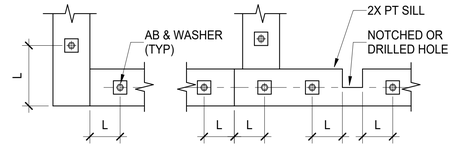
B S150 TYP CMU WALL CORNERS & INTERSECTIONS

N.T.S.



C S150 TYP 8" CMU BOND BEAM DETAIL

N.T.S.



NOTES:

1. TYPICAL ANCHOR BOLT END DISTANCE L = 4 1/2" MIN, 12" MAX.
2. ANCHOR BOLTS SHALL BE INSTALLED AT 12" MAXIMUM FROM EACH END OF EACH SILL PLATE PIECE, AND SHALL BE SPACED AT 48" ON CENTER MAXIMUM. SEE TYPICAL SHEAR WALL DETAIL FOR ANCHOR BOLT SPACING AT SHEAR WALLS.
3. WHERE SILL PLATE IS NOTCHED, DRILLED OR CUT MORE THAN ONE THIRD OF ITS WIDTH, INSTALL ANCHOR BOLT EACH SIDE AS SHOWN. NOTCHES, CUTS AND HOLES SHALL BE TREATED WITH A PRESERVATIVE SOLUTION CONFORMING TO AWPA STANDARD M4.
4. ANCHOR BOLTS SHALL BE 5/8" DIAMETER GALVANIZED OR STAINLESS STEEL FULLY THREADED WITH STANDARD WASHERS, UNLESS OTHERWISE NOTED. ALONG SHEAR WALLS USE 3"x3" x 0.229" SQUARE PLATE WASHERS.
5. MINIMUM ANCHOR BOLT EMBEDMENT SHALL BE 7", MEASURED FROM TOP OF THE CONCRETE SLAB. FOR ANCHOR BOLTS EMBEDED IN CONCRETE CURBS **NOT** POURED MONOLITHICALLY WITH THE FOUNDATION (NON-INTEGRAL CURBS), THE LENGTH OF ANCHOR BOLT IN CONCRETE CURBS SHALL NOT APPLY TO THIS MINIMUM EMBEDMENT.
6. ANCHOR BOLTS WITH DAMAGED THREADS SHALL NOT BE USED.
7. WHERE SILL PLATE ANCHORS MUST BE POST-INSTALLED, PROVIDE 5/8"dia x 8" SIMPSON TITEN HD GALVANIZED OR STAINLESS STEEL SCREW ANCHORS (INTEGRAL CURBS ONLY, OR NO CURB), OR 5/8"dia x (8 1/2" + CURB HEIGHT) STAINLESS STEEL THREADED ROD ANCHORS INSTALL w/ HILTI HIT-HY 200 ADHESIVE OR EQUIVALENT. POST-INSTALLED ANCHORS SHALL NOT REPLACE HOLDOWN ANCHOR BOLTS UNLESS ALLOWED IN THE HOLDOWN SCHEDULE.

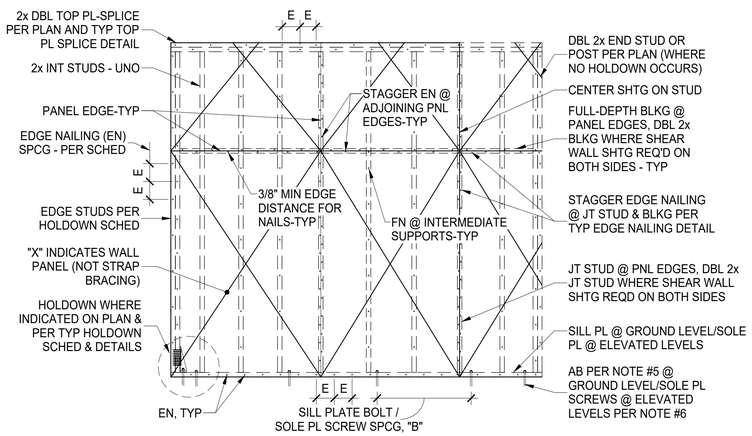
D S150 TYPICAL SILL PLATE ANCHOR BOLT DETAIL

N.T.S.

SILL PL BOLTS & SOLE PL SCREWS SCHEDULE			
MARK	WALL SIDES SHEATHED	FASTENER SPACING "B" (NOTES #5-6)	
		BOLT	SCREW
6	1	34"	5"
	2	16"	2"
4	1	22"	3"
	2	10"	1.5"
3	1	16"	2"
	2	8"	1"

WALL SHEATHING AND NAILING SCHEDULE			
MARK	SHTG SPEC	NAIL SIZE	EN SPCG "E"
6	15/32" *	10d	6"
4	15/32" *	10d	4"
3	15/32" *	10d	3"

* PANELS SHALL BE STRUCTURAL 1 GRADE, SEE LUMBER SCHEDULE FOR REQUIREMENTS.

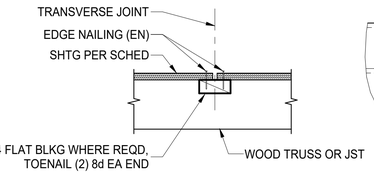


NOTES:

1. FIELD NAILING (FN): 10d @ 12"oc.
2. ALL NAILS SHALL BE COMMON OR BOX WIRE NAILS.
3. MINIMUM DIMENSION OF ANY SHEATHING SHEET EQUALS 16" OR STUD SPACING, WHICHEVER IS GREATER.
4. ALL SHEAR WALL SHEATHING PANEL EDGES SHALL BE FULLY BLOCKED WITH FULL DEPTH 2x STUD BLOCKING-TYP-UNO.
5. SILL PLATES SHALL BE FASTENED WITH 5/8"dia x 7"LG EMBED GALVANIZED OR STAINLESS STEEL ANCHOR BOLTS PER FASTENER SPACING "B" IN SCHEDULE ABOVE. ALTERNATIVELY, USE 5/8" x 8"LG SIMPSON TITEN HD GALVANIZED OR STAINLESS STEEL SCREW ANCHORS. BOTH OPTIONS REQUIRE 3"x3"x0.229" PLATE WASHERS AT EACH AB.
6. USE DOUBLE 2x OR SINGLE 3x STUDS AND BLOCKING AT PANEL EDGES WHERE EN IS LESS THAN OR EQUAL TO 3".
7. USE 3x SILL PLATE WHERE EN IS LESS THAN OR EQUAL TO 3"

E S150 TYP SHEAR WALL SHEATHING AND FASTENER SCHEDULE

N.T.S.



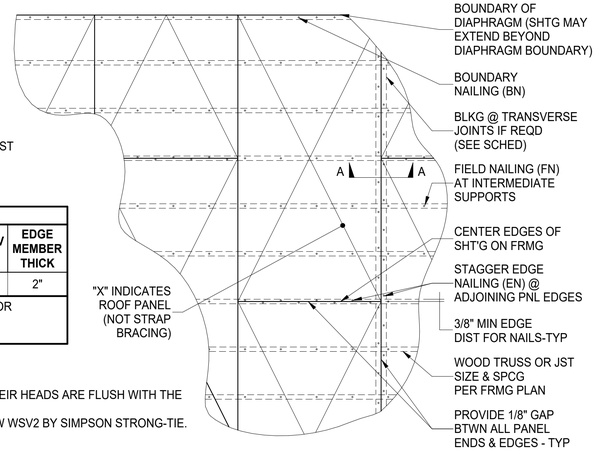
SECTION A-A

DIAPHRAGM SHEATHING & NAILING SCHEDULE							
MARK	SHTG SPEC	NAIL SIZE	BN SPCG	EN SPCG	FN SPCG	TRANSV BLKG	EDGE MEMBER THICK
R1	19/32" *	10d	6"	6"	12"	YES	2"

* PANELS SHALL BE SHEATHING GRADE, SEE LUMBER SCHEDULE FOR REQUIREMENTS.

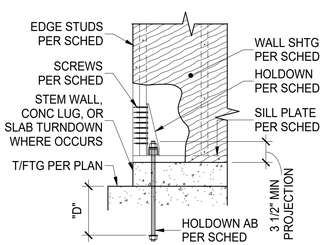
NOTE:

1. DIAPHRAGM SHEATHING NAILS SHALL BE DRIVEN SO THAT THEIR HEADS ARE FLUSH WITH THE SURFACE OF THE SHEATHING.
2. 10d COMMON NAILS CAN BE SUBSTITUTED WITH #9 x 2" SCREW WSV2 BY SIMPSON STRONG-TIE.



F S150 TYP DIAPHRAGM SHEATHING DETAIL

N.T.S.



HOLDOWN AT FOUNDATION

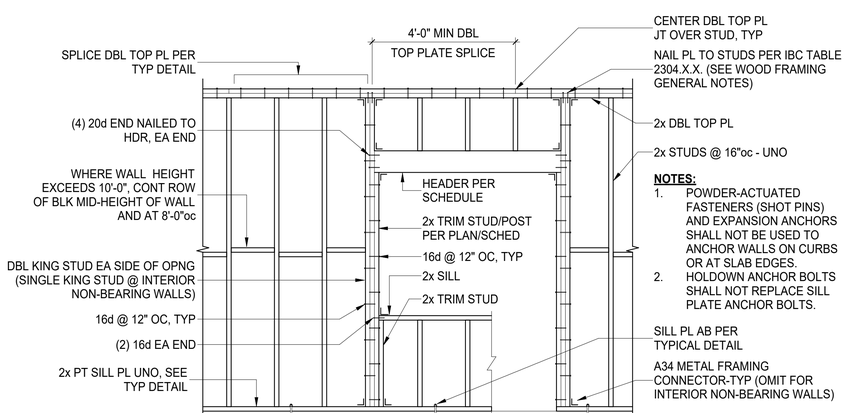
HOLDOWN SCHEDULE					
MARK	EDGE STUDS	SIMPSON HOLDOWN	SDS 1/4"x2.5" STUD SCWS	SIMPSON AB (CIP)	"D" (CIP)
A	6x	HDU11-SDS2.5	30	SB1X30	20"
B	PER PLAN	HDU14-SDS2.5	36	SB1X30	20"

NOTES:

1. HOLDOWN ANCHOR BOLTS SHALL BE HOT-DIPPED GALVANIZED (ASTM A153). CONTRACTOR MAY CHOOSE CAST-IN-PLACE OR POST-INSTALLED OPTION. ADHERE WITH HILTI HIT-HY 200 SAFE SET SYSTEM ADHESIVE FOR POST-INSTALLED OPTION. IF "N/A" IS SHOWN, POST-INSTALLED OPTION IS NOT ALLOWED.
2. THICKENED FOOTING WHERE REQUIRED TO ACHIEVE MINIMUM ANCHOR BOLT EMBEDMENT.
3. WHERE HOLDOWN OCCURS ADJACENT TO A POST ON THE PLAN, USE THE LARGER OF THE INDICATED POST OR THE SCHEDULE EDGE STUDS.

G S150 TYP HOLDOWN SCHEDULE & DETAILS

N.T.S.

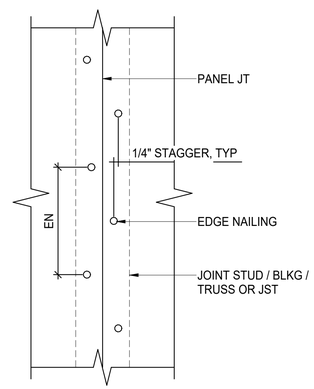


NOTES:

1. POWDER-ACTUATED FASTENERS (SHOT PINS) AND EXPANSION ANCHORS SHALL NOT BE USED TO ANCHOR WALLS ON CURBS OR AT SLAB EDGES.
2. HOLDOWN ANCHOR BOLTS SHALL NOT REPLACE SILL PLATE ANCHOR BOLTS.

H S150 TYP STRUCTURAL WALL PANEL FRAMING ELEVATION

N.T.S.



J S150 TYP STAGGERED EDGE NAILING DETAIL

N.T.S.

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F 636.349.1730
CERTIFICATE OF AUTHORITY NO. F-20080
CASE ENGINEERING PROJECT #: LDG-TX-04-25

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STATE OF TEXAS
STEPHEN J. SACCO
110974
LICENSED PROFESSIONAL ENGINEER
04/11/25

PROJECT #:
Project Number

DRAWN BY: RRR CHECKED BY: EK

PERMIT SET - 04/10/2025

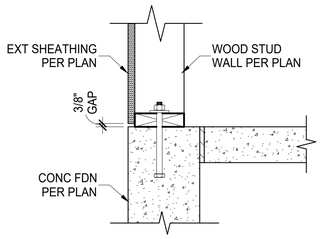
SHERWIN WILLIAMS

STORE #:
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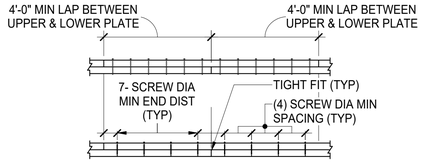
ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
TYPICAL DETAILS

SHEET NUMBER:
S150



A TYPICAL SHEATHING GAP DETAIL
S160 N.T.S.

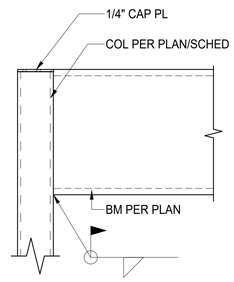


NAILED SPLICE SCHEDULE	
MARK	NAILS
A	(8) 16d
B	(10) 16d
C	(12) 16d

SCREWED SPLICE SCHEDULE	
MARK	SDS 1/4 SCREWS
D	(8) 1/4" SCREWS
E	(12) 1/4" SCREWS
F	(24) 1/4" SCREWS

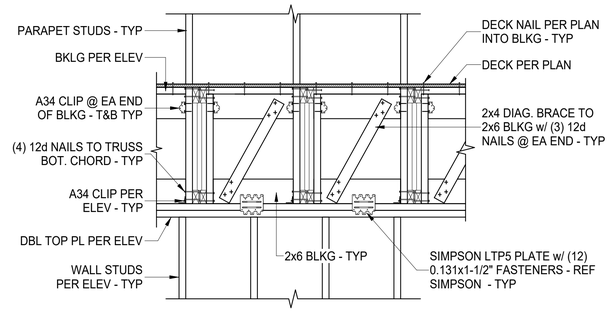
NOTES:
1. SPLICE 2x DOUBLE TOP PLATES PER MARK "A" AND 3x DOUBLE TOP PLATES PER MARK "D" OF THE ABOVE SCHEDULE, UNLESS OTHERWISE INDICATED.
2. SCREWS SHALL BE 3" LONG FOR 2x PLATES AND 5" LONG FOR 3x PLATES.
3. JOINTS IN UPPER AND LOWER PLATE SHALL BE CENTERED OVER STUD OR MULLION.
4. ALL NAILS SHALL BE COMMON WIRE NAILS.
5. SCHEDULE INDICATES NUMBER OF NAILS OR SCREWS ON EACH SIDE OF EACH JOINT.

B TYPICAL TOP PLATE SPLICE DETAIL
S160 N.T.S.



ELEVATION - WELDED

C TYP HSS BM TO COL CONN DETAIL
S160 N.T.S.

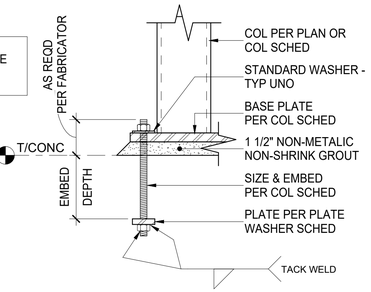


D TRUSS BLKG DETAIL @ LOAD BEARING WALL
S160 N.T.S.

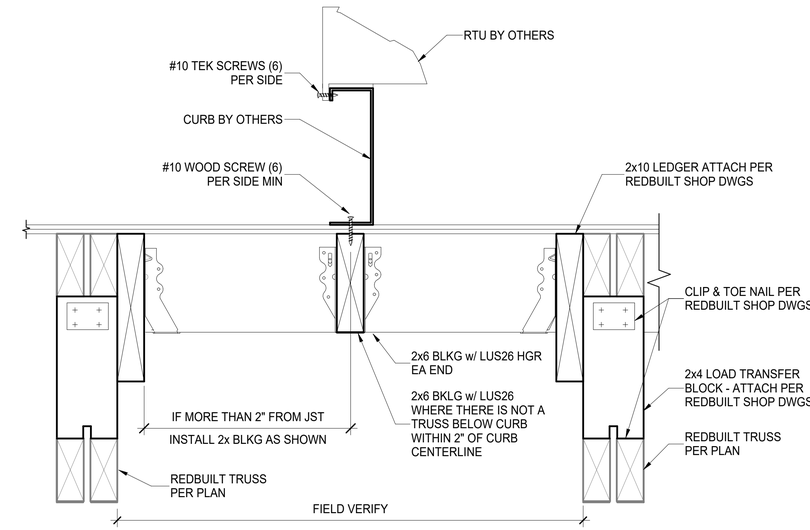
NOTE:
ANCHOR RODS TO BE ASTM F1554, GRADE 36, FULLY-THREADED RODS w/ PLATE WASHER & NUT ON BOTTOM-TYP, UNO

PLATE WASHER SCHED	
ANCHOR ROD DIAMETER	PLATE WASHER SIZE
LESS THAN 3/4"	2 1/2" x 2 1/2" x t*
3/4"	2 1/2" x 2 1/2" x 5/8"
1"	3" x 3" x 5/8"
1 1/4"	3 1/2" x 3 1/2" x 5/8"
1 1/2"	4" x 4" x 5/8"

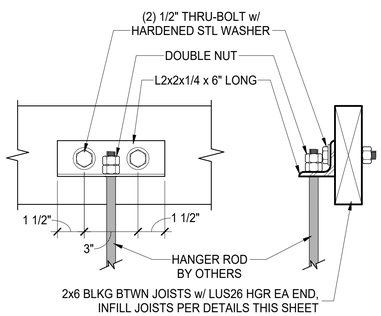
*t = ANCHOR ROD DIAMETER, MIN



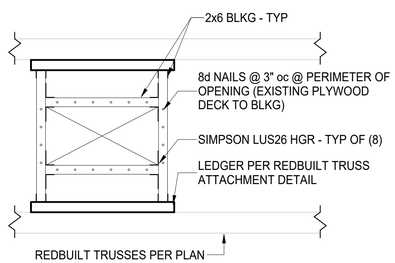
E TYP ANCHOR BOLT DETAIL
S160 N.T.S.



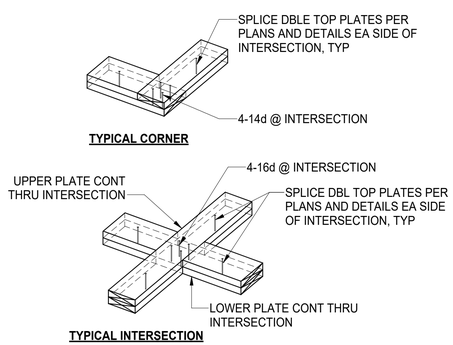
F CURB - RED BUILT TRUSS
S160 N.T.S.



G TYP HANGER ROD TO WOOD BLKG
S160 N.T.S.



H 2x6 BLKG - ROOF OPNG - REDBUILT TRUSSES
S160 N.T.S.



J TYPICAL TOP PLATE CORNERS & INTERSECTION DETAIL
S160 N.T.S.

LINGLE DESIGN GROUP,INC
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STATE OF TEXAS
STEPHEN J. SACCO
110974
LICENSED
PROFESSIONAL ENGINEER
04/11/25

PROJECT #:
Project Number

DRAWN BY: RRR CHECKED BY: EK

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1 -
2 -
3 -
4 -
5 -
6 -

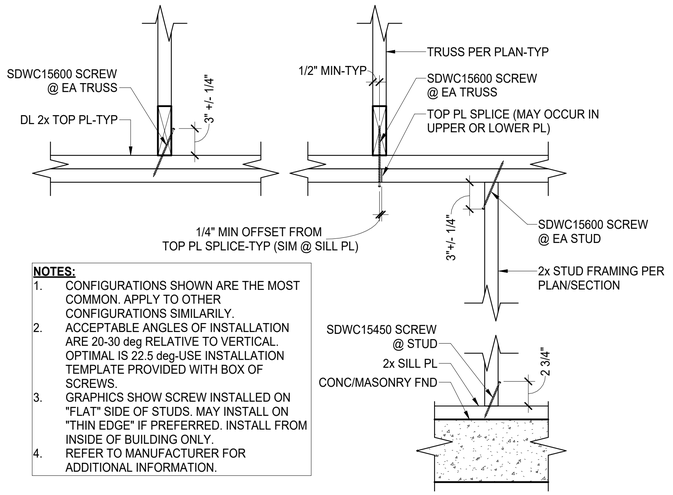
SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
TYPICAL DETAILS

SHEET NUMBER:
S160

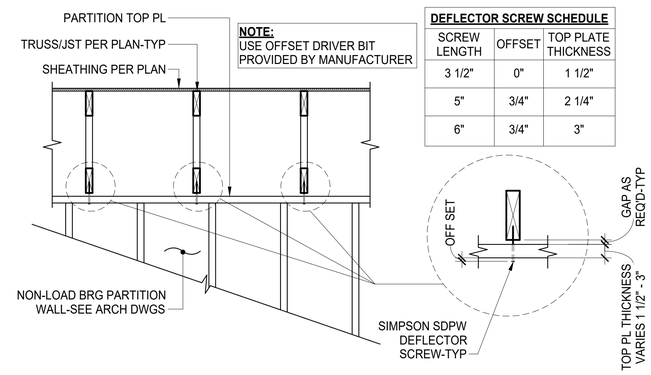


NOTES:

1. CONFIGURATIONS SHOWN ARE THE MOST COMMON. APPLY TO OTHER CONFIGURATIONS SIMILARILY.
2. ACCEPTABLE ANGLES OF INSTALLATION ARE 20-30 deg RELATIVE TO VERTICAL. OPTIMAL IS 22.5 deg-USE INSTALLATION TEMPLATE PROVIDED WITH BOX OF SCREWS.
3. GRAPHICS SHOW SCREW INSTALLED ON "FLAT" SIDE OF STUDS. MAY INSTALL ON "THIN EDGE" IF PREFERRED. INSTALL FROM INSIDE OF BUILDING ONLY.
4. REFER TO MANUFACTURER FOR ADDITIONAL INFORMATION.

A TYPICAL SIMPSON SDWC TRUSS SCREW DETAIL

S170 N.T.S.



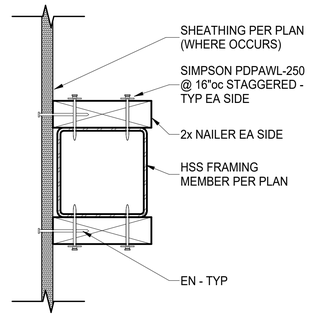
NOTE:
USE OFFSET DRIVER BIT PROVIDED BY MANUFACTURER

DEFLECTOR SCREW SCHEDULE

SCREW LENGTH	OFFSET	TOP PLATE THICKNESS
3 1/2"	0"	1 1/2"
5"	3/4"	2 1/4"
6"	3/4"	3"

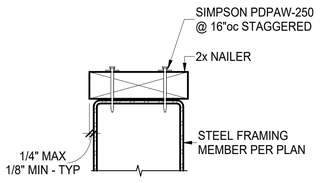
B TYP SLIP CONNECTION @ NON LOAD-BEARING WOOD PARTITION WALL

S170 N.T.S.



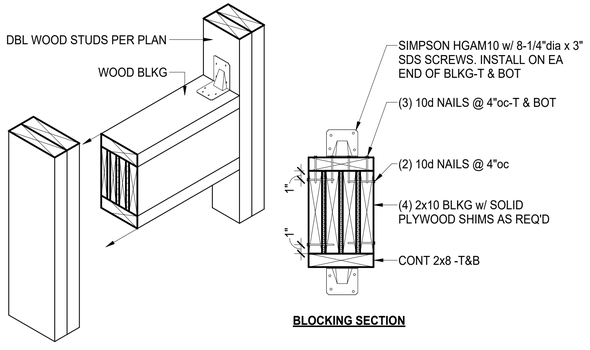
C TYP NAILER @ HSS COLUMN - NAILED

S170 N.T.S.



D NAILER ON BEAM - PAF NAILED

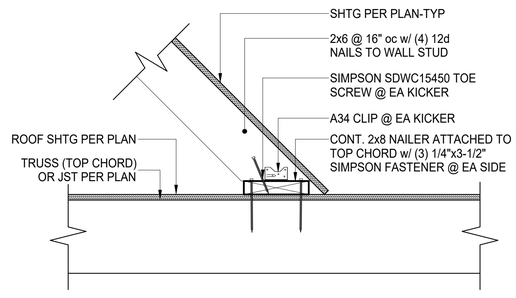
S170 N.T.S.



BLOCKING SECTION

E TYPICAL CANOPY ATTACHMENT BLOCKING @ WOOD STUDS

S170 N.T.S.



F TYP KICKER CONNX. TO TRUSS/JST

S170 N.T.S.

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CERTIFICATE OF AUTHORITY NO. F-20080
CASE ENGINEERING PROJECT #: LDG-TX-04-25

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STATE OF TEXAS
STEPHEN J. SACCO
110974
LICENSED
PROFESSIONAL ENGINEER

04/11/25

PROJECT #:
Project Number

DRAWN BY: RRR CHECKED BY: EK

PERMIT SET - 04/10/2025

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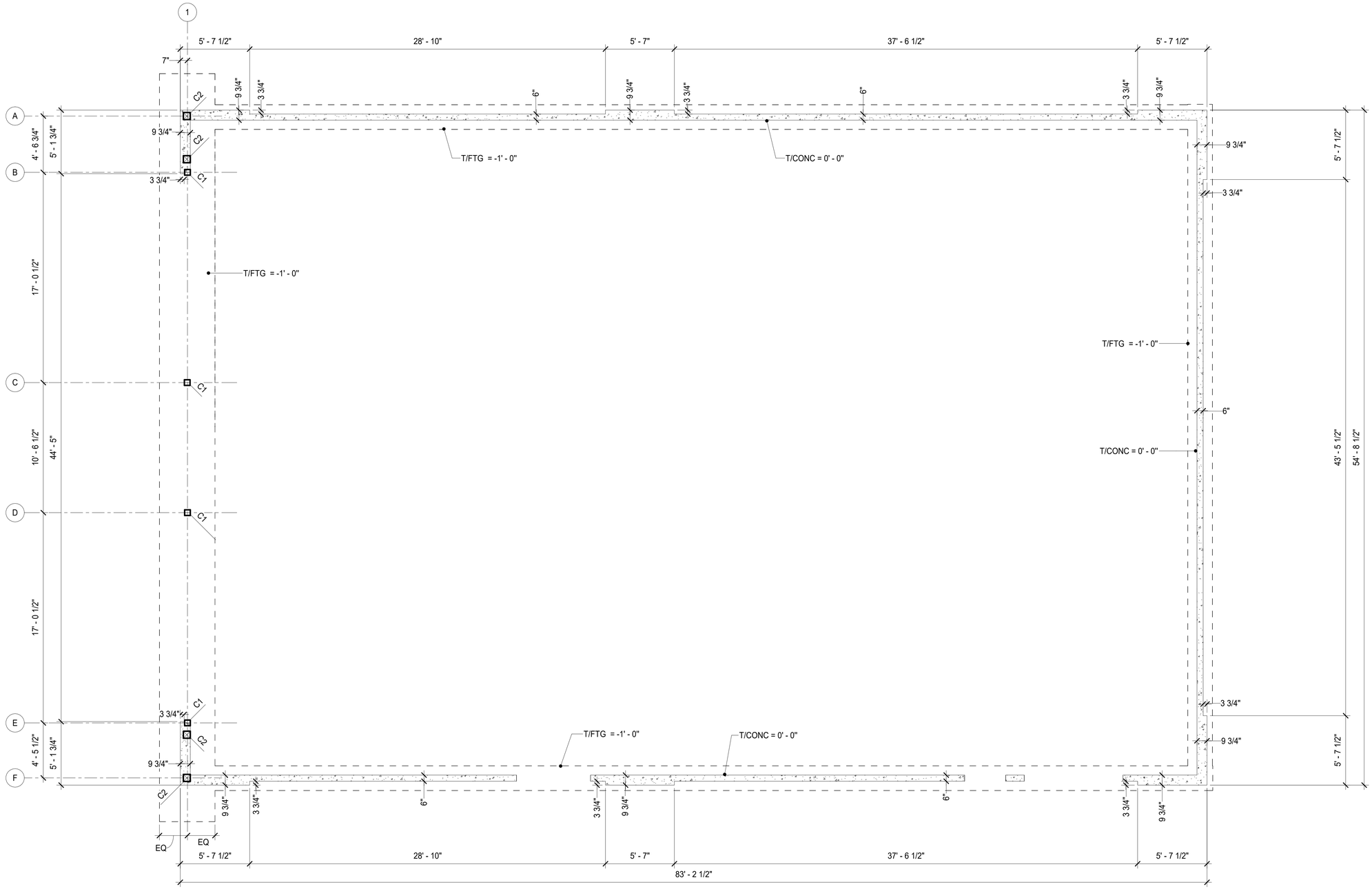
SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
TYPICAL DETAILS

SHEET NUMBER:
S170



FOUNDATION PLAN

PLAN NOTES

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

1. SEE SHEETS S110- S150 FOR GENERAL NOTES AND TYPICAL DETAILS.
2. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, SECTIONS, AND ELEVATIONS NOT SHOWN HEREON.
3. COORDINATE SIZE AND LOCATION OF ROUGH OPENINGS IN FLOOR OR WALLS WITH ARCHITECTURAL DRAWINGS.
4. SEE SHEET S220 FOR BALANCE OF INFORMATION.

POST SCHEDULE

MARK	SIZE	BASE PLATE	ANCHOR BOLTS
C1	HSS5 1/2X5 1/2X1/4	12"x12"x3/4"	(4) 3/4"dia w/ 16" EMBED
C2	6 3/4" x 6 7/8", GLULAM-AXIAL, SOUTHERN PINE, 50 (N1D14)	-	-

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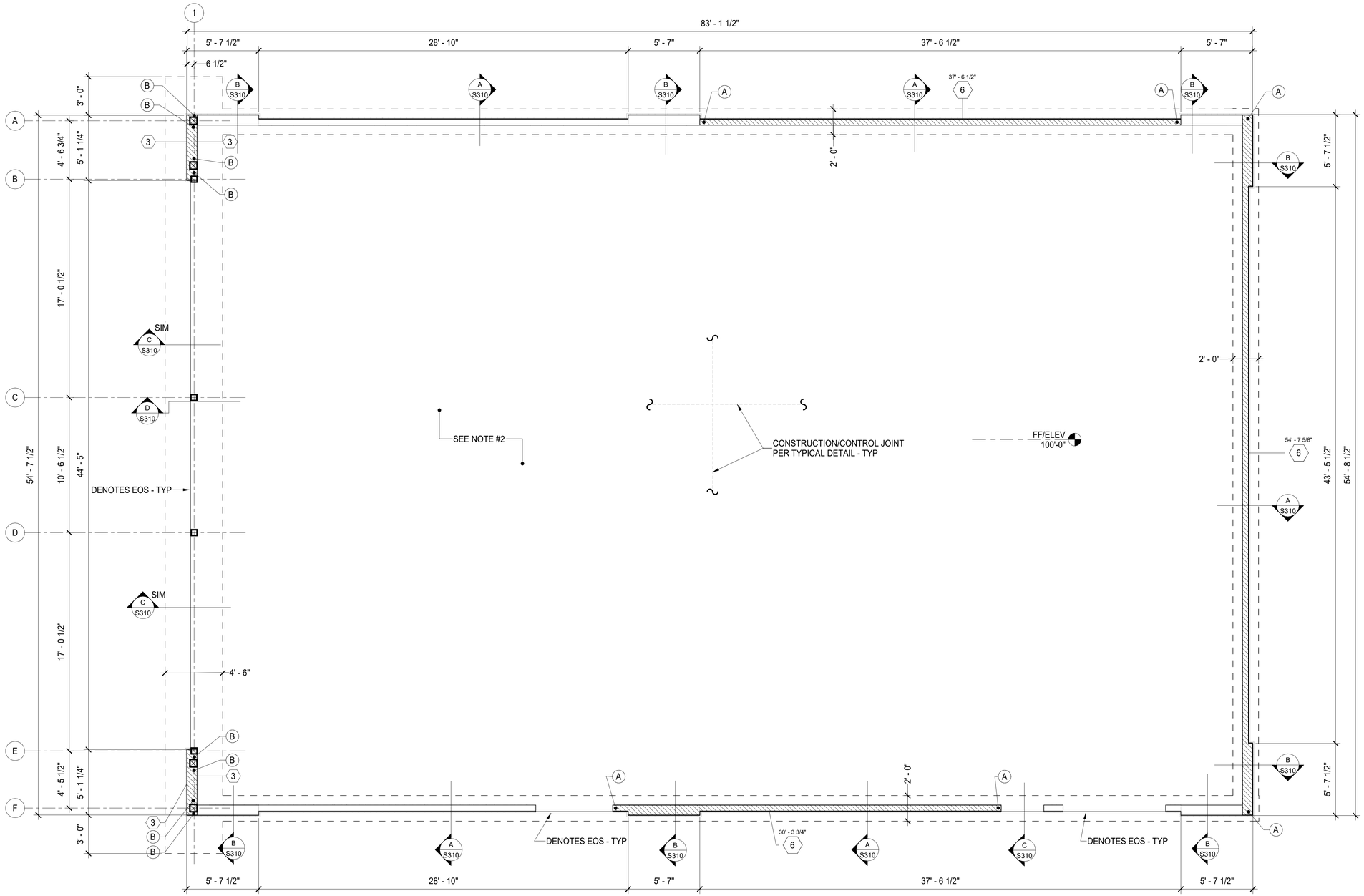
SHERWIN WILLIAMS

STORE #:
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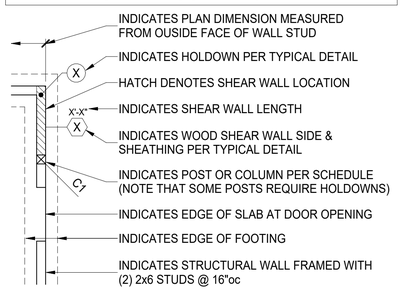
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SHEET TITLE:
FOUNDATION PLAN

SHEET NUMBER:
S210



LEGEND - FOUNDATION PLAN



STRUCTURAL FLOOR PLAN

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

PLAN NOTES

1. SEE SHEETS S110 - S150 FOR GENERAL NOTES AND TYPICAL DETAILS.
2. 6" CONCRETE SLAB REINFORCED WITH ONE LAYER OF 6x6 - W2.9xW2.9 WWR ON 10 MIL. POLY VAPOR BARRIER OVER 12" MINIMUM SPECIALLY PREPARED AND COMPACTED SELECT FILL AND 6" OF SUB-BASE AS RECOMMENDED BY THE SOILS REPORT. REINFORCEMENT TO BE LOCATED IN THE MIDDLE OF THE SLAB.
3. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, SECTIONS AND ELEVATIONS NOT SHOWN HEREON.
4. COORDINATE SIZE AND LOCATION OF ROUGH OPENINGS IN FLOOR OR WALLS WITH ARCHITECTURAL DRAWINGS.
5. ALL EXTERIOR WALL SHEATHING NOT SPECIFIED AS "SHEAR WALL SHEATHING" IS TO BE 1/2" OSB SHEATHING AND ATTACHED. PER IBC TABLE 2304.9.1 UNLESS OTHERWISE INDICATED BY ARCHITECT.
6. SEE SHEET S210 FOR BALANCE OF INFORMATION.

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STATE OF TEXAS
STEPHEN J. SACCO
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LICENSED
PROFESSIONAL ENGINEER

04/11/25

PROJECT #:
Project Number

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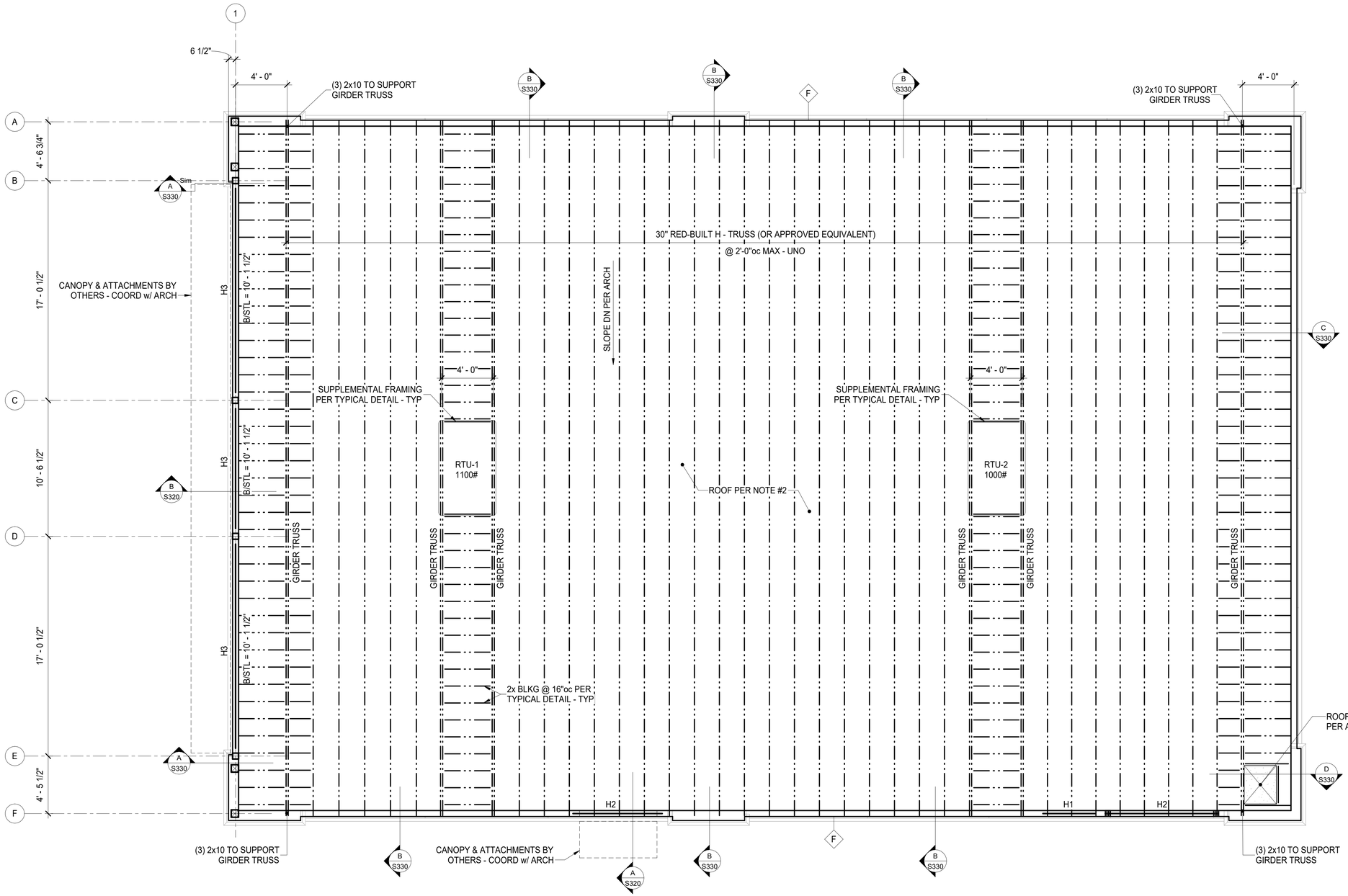
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SHEET TITLE:
STRUCTURAL FLOOR PLAN

SHEET NUMBER:
S220



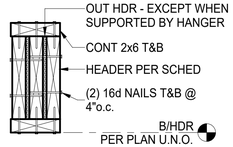
HEADER SCHEDULE			
MARK	HEADER SIZE	TRIM STUD SIZE	KING STUD SIZE
H1	(3) 2x12	LVL (2) 1.75x 5.5 - 1.9E 2600 Fb	LVL (2) 1.75x 5.5 - 1.9E 2600 Fb
H2	LVL (3) 1.75x 9.5 - 1.9E 2600 Fb	(2) 2x6	(2) 2x6
H3	HSS8x4x1/2"	-	-

ROOF FRAMING PLAN

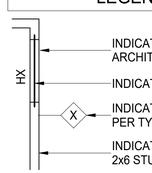
SCALE: 1/4" = 1'-0"

PLAN NOTES

1. SEE SHEETS S110 - S150 FOR GENERAL NOTES AND TYPICAL DETAILS.
2. ROOF CONSTRUCTION: 19/32" PLYWOOD ROOF SHEATHING, ATTACHED TO SUPPORTS PER LUMBER NOTES, SCHEDULE, AND DETAILS.
3. PROVIDE TRUSS BRIDGING AND SPACING TRUSS SUPPLIER.
4. TRUSS MANUFACTURER TO COORDINATE WITH CONTRACTORS TO DETERMINE RTU AND TRANSFORMER LAYOUTS, WEIGHTS, AND FOOTPRINTS. MANUFACTURER TO COORDINATE WITH ROOF HATCH SUPPLIER FOR SIZE AND LOCATION. RTU AND EXHAUST HOOD LOADS ARE TO BE IN ADDITION TO OTHER DESIGN LOADS.
5. MAXIMUM TRUSS SPACING = 2'-0" UNO
6. SEE ARCHITECTURAL DRAWINGS FOR STAIRS, DIMENSIONS, SECTIONS, AND ELEVATIONS NOT SHOWN HEREON.
7. ALL ELEVATIONS ARE REFERENCED FROM FINISHED MAIN FLOOR = 0'-0"
   - B/STL = BOTTOM OF STEEL ELEVATION = PER PLAN
   - TRUSS/BRG = TRUSS BEARING = 14'-0"
8. TRUSS DESIGNER TO DESIGN FOR 500-PLF AXIAL & 500-PLF SHEAR ULTIMATE DUE TO WIND AT KICKER REACTION.
9. PROVIDE (3) 2x12 BLOCKING FOR THE SIDE RAILS OF OVERHEAD DOOR



LEGEND - FRAMING PLAN



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STATE OF TEXAS
STEPHEN J. SACCO
110974
LICENSED PROFESSIONAL ENGINEER
04/11/25

PROJECT #:
Project Number

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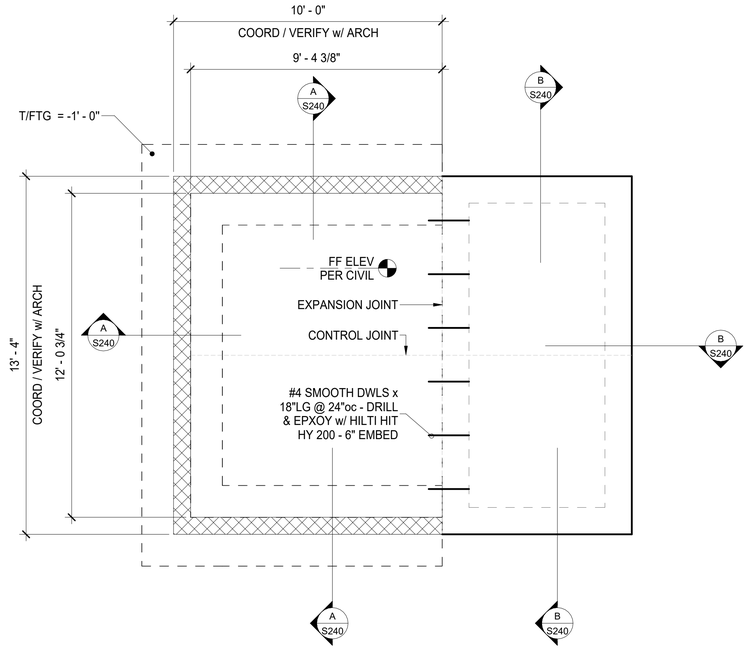
SHERWIN WILLIAMS

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ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
ROOF FRAMING PLAN

SHEET NUMBER:
S230

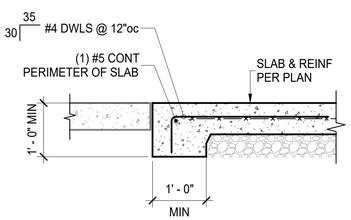


FOUNDATION PLAN

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

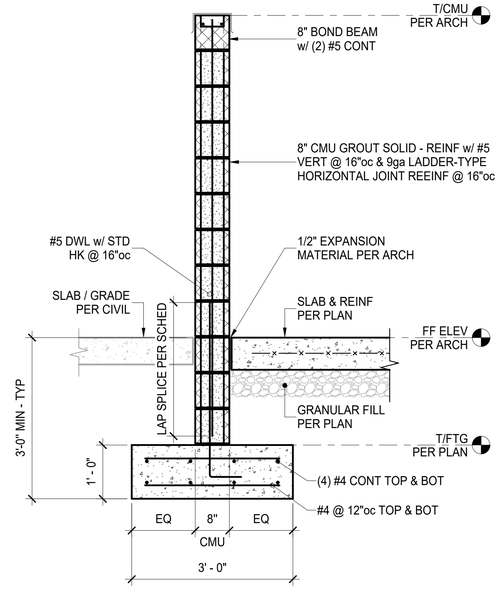
PLAN NOTES

1. **SEE SHEETS S1.1 - S1.3 FOR GENERAL NOTES AND TYPICAL DETAILS.**
2. **7" CONCRETE SLAB REINFORCED WITH ONE LAYER OF 6x6 - W2.9xW2.9 WWR OVER 6" MINIMUM (COMPACTED FREE-DRAINING GRANULAR MATERIAL SPECIALLY PREPARED AND COMPACTED SUB GRADE. REINFORCEMENT TO BE LOCATED IN THE MIDDLE OF THE SLAB.**
3. **SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, SECTIONS, AND ELEVATIONS NOT SHOWN HEREON.**
4. **ALL ELEVATIONS ARE REFERENCED FROM FINISHED MAIN FLOOR = 100'-0"**
   - **T/FTG = TOP OF FOOTING = PER PLAN**



B / S240 TYP PAD AT EXTERIOR EQUIPMENT

N.T.S.



A / S240 SCREEN WALL

N.T.S.

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PROFESSIONAL ENGINEER

04/11/25

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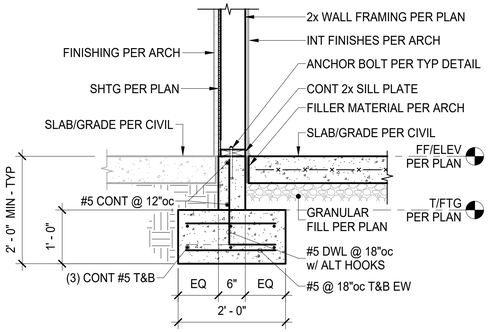
1816 S. COLORADO ST.
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SHEET TITLE:

TRASH ENCLOSURE
PLAN & DETAILS

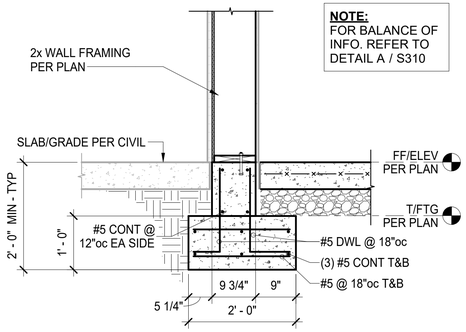
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S240



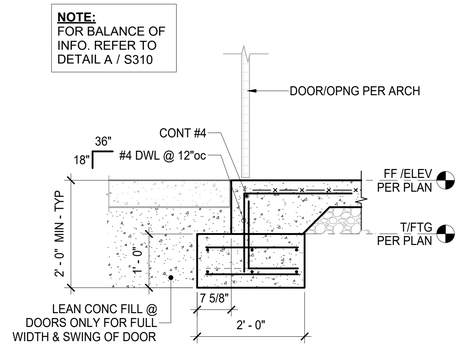
A S310 **FOUNDATION SECTION**

3/4" = 1'-0"



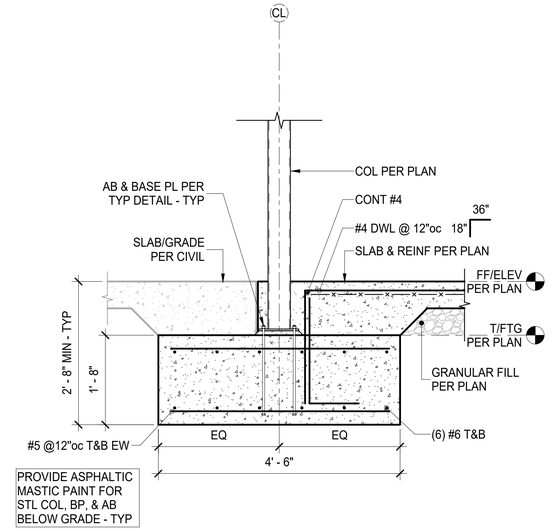
B S310 **FOUNDATION SECTION**

3/4" = 1'-0"



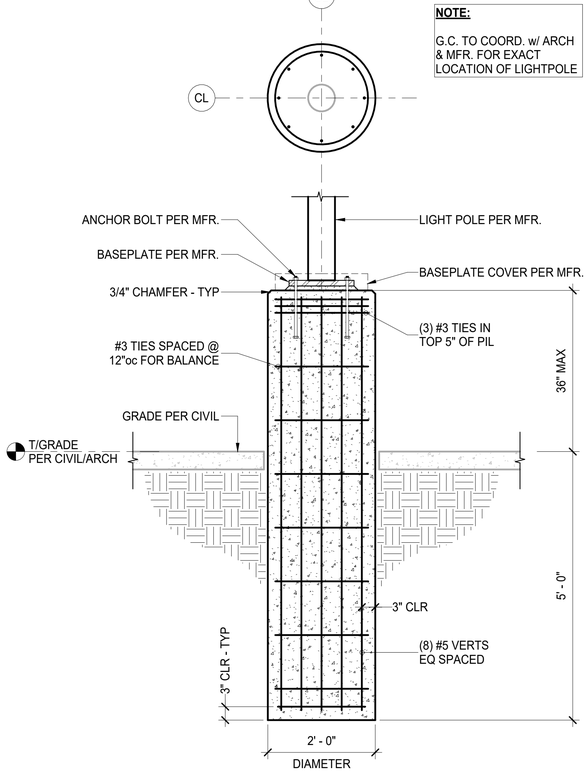
C S310 **FOUNDATION SECTION**

3/4" = 1'-0"



D S310 **FOUNDATION SECTION**

3/4" = 1'-0"



E S310 **TYPICAL LIGHT POLE FOOTING DETAIL**

N.T.S.

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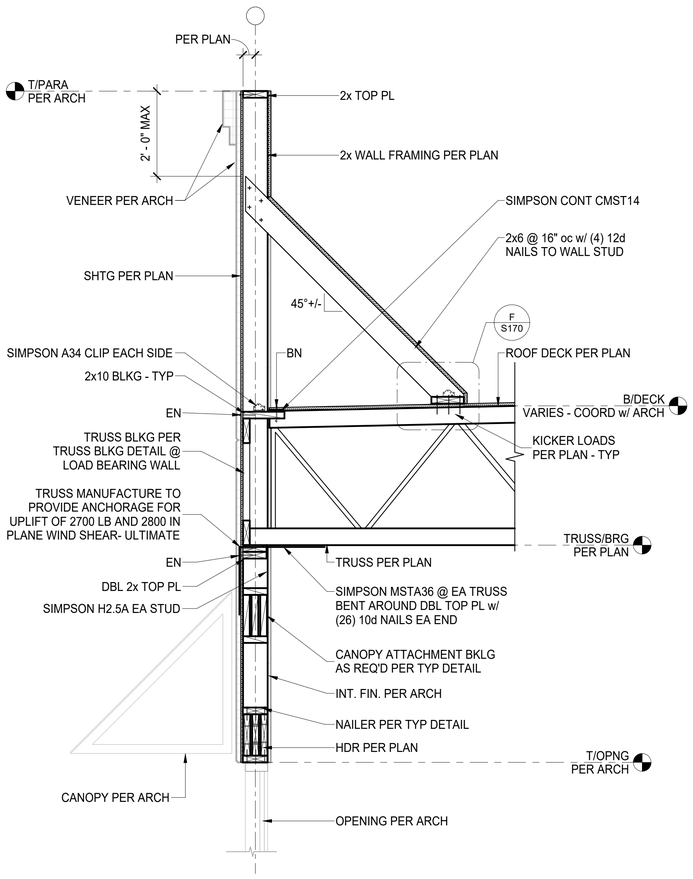
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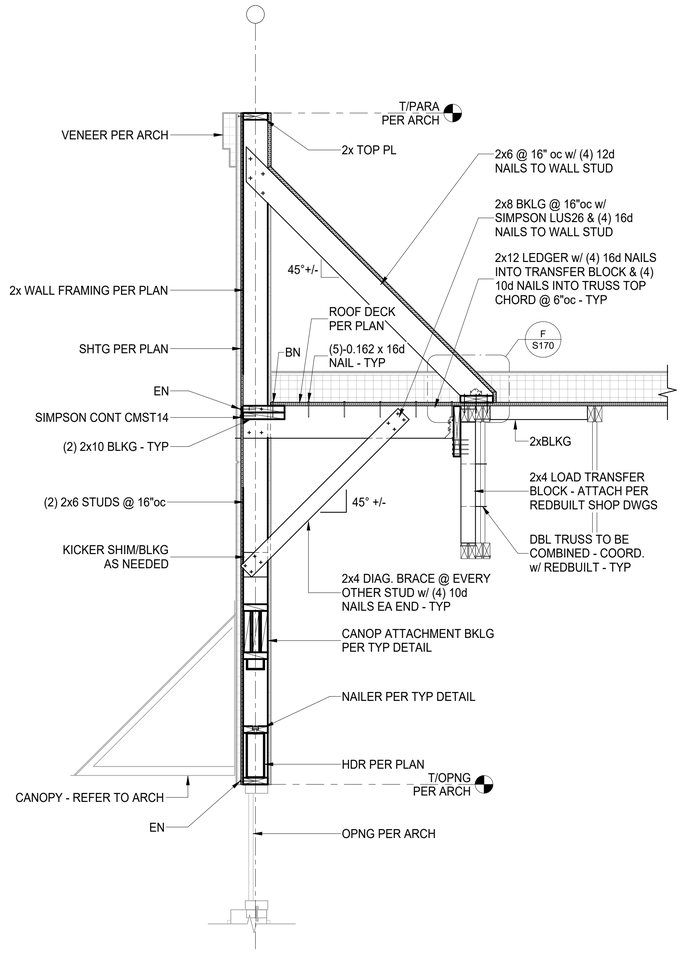
SHEET TITLE:
FOUNDATION SECTIONS

SHEET NUMBER:
S310



A S320 **FRAMING SECTION**

3/4" = 1'-0"



B S320 **FRAMING SECTION**

3/4" = 1'-0"

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2 -
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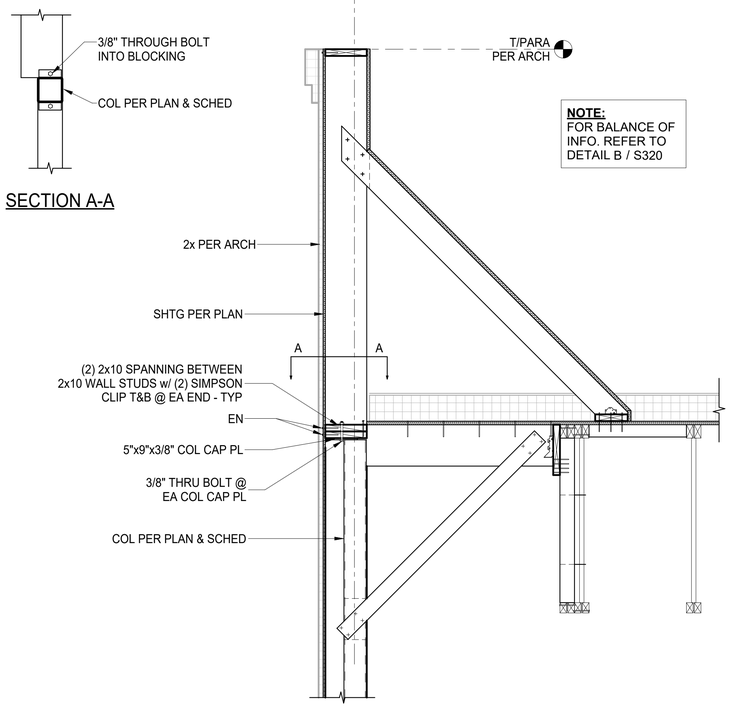
SHERWIN WILLIAMS

STORE #:
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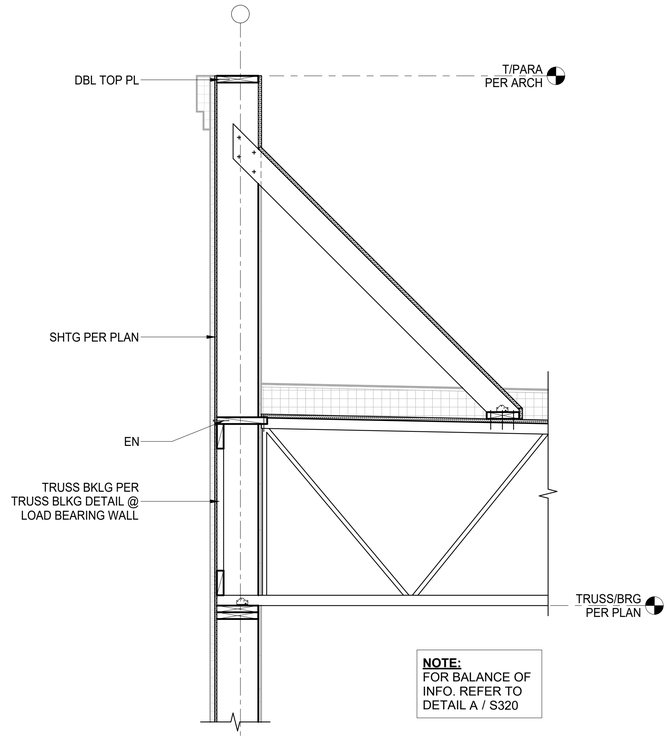
ADDRESS:
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SHEET TITLE:
FRAMING
SECTIONS

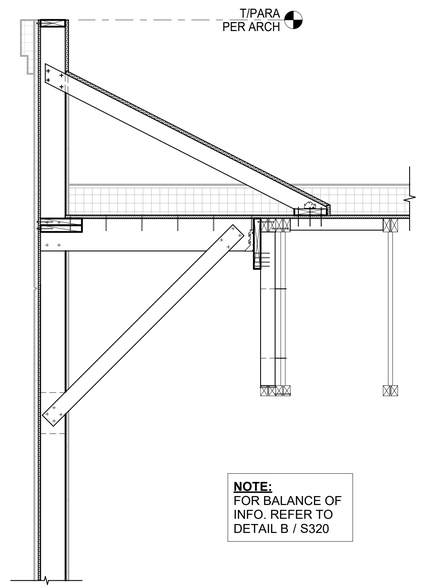
SHEET NUMBER:
S320



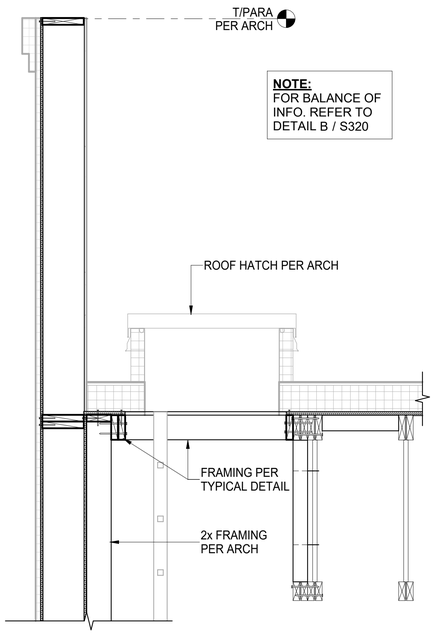
A S330 **FRAMING SECTION**
3/4" = 1'-0"



B S330 **FRAMING SECTION**
3/4" = 1'-0"



C S330 **FRAMING SECTION**
3/4" = 1'-0"



D S330 **FRAMING SECTION**
3/4" = 1'-0"

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CERTIFICATE OF AUTHORITY NO. F-20080
CASE ENGINEERING PROJECT #: LDG-TX-04-25

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STATE OF TEXAS
STEPHEN J. SACCO
110974
LICENSED
PROFESSIONAL ENGINEER

04/11/25

PROJECT #:
Project Number

DRAWN BY: RRR CHECKED BY: EK

PERMIT SET - 04/10/2025

1 .
2 .
3 .
4 .
5 .
6 .

SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:

1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:

FRAMING
SECTIONS

SHEET NUMBER:

S330

GENERAL MECHANICAL SYMBOLS

REVISION NUMBER - SHOWN ON PLANS

POINT WHERE NEW CONNECTS TO EXISTING

NUMBER OF DETAIL ON SHEET

NUMBER OF SHEET WHERE DETAIL APPEARS

KEYNOTE

CONTINUATION SYMBOL

Room
4

ROOM NAME AND NUMBER

ITEM TO BE DEMOLISHED

AREA NOT IN CONTRACT

2"

PIPE SIZE TAG (DIAMETER)

ABOVE GROUND PIPING

1/8" / 12" SLOPE

PIPE SLOPE TAG

BELOW GROUND PIPING

INVERT: -105' - 1"

PIPE INVERT ELEVATION TAG

(E)

EXISTING PIPE TAG

PIPING BEING DEMOLISHED

ABBREVIATIONS

Ø	ROUND	LVR	LOUVER
ABV	ABOVE	LWT	LEAVING WATER TEMPERATURE
AC	AIR CONDITIONING	M/A	MIXED AIR
AD	AREA DRAIN	MAX	MAXIMUM
ADD	ADDENDUM	MBH	ONE THOUSAND BTU PER HOUR
AFF	ABOVE FINISHED FLOOR	MCF	ONE THOUSAND CUBIC FEET
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MD	MOTORIZED DAMPER
ALT	ALTERNATE	MECH	MECHANICAL
AP	ACCESS PANEL	MFR	MANUFACTURER
ARCH	ARCHITECT/ARCHITECTURAL	MIN	MINIMUM
BFF	BELOW FINISHED FLOOR	MISC	MISCELLANEOUS
BLW	BELOW	MTR	MOTOR
BTU	BRITISH THERMAL UNITS	MU/A	MAKE-UP/AIR
BTUH	BRITISH THERMAL UNITS PER HOUR	NC	NOISE CRITERIA
CAP	CAPACITY	NC	NORMALLY CLOSED
CB	CATCH BASIN	NIC	NOT IN CONTRACT
CFM	CUBIC FEET PER MINUTE	NO	NUMBER
CLG	CEILING	NO	NORMALLY OPEN
CO	CLEAN OUT	NTS	NOT TO SCALE
CW	COLD WATER	O	OXYGEN
D	DEGREE	O/A	OUTSIDE AIR
DB	DRY BULB	ORD	OVERFLOW ROOF DRAIN
DIA	DIAMETER	PD	PRESSURE DROP
DN	DOWN	PIV	POST INDICATOR VALVE
DW	DISTILLED WATER	PLBG	PLUMBING
EA	EACH	PRESS	PRESSURE
EAT	ENTERING AIR TEMPERATURE	PRV	PRESSURE REDUCING VALVE
ELEC	ELECTRICAL	PSI	POUNDS PER SQUARE INCH
EQUIP	EQUIPMENT	PSIG	POUNDS PER SQUARE INCH GAUGE
EWC	ELECTRIC WATER COOLER	PWR	POWER
EWT	ENTERING WATER TEMPERATURE	R	DUCT RISER
E/A	EXHAUST AIR	R/A	RETURN AIR
EXIST	EXISTING	RCP	RADIANT CEILING PANEL
F	DEGREES FAHRENHEIT	RD	ROOF DRAIN
FCO	FLOOR CLEAN OUT	REC	RECESSED
FD	FLOOR DRAIN	RED	REDUCER
FDC	FIRE DEPARTMENT CONNECTION	RH	RELATIVE HUMIDITY
FL	FLOOR	RL/A	RELIEF AIR
FO	FUEL OIL	RM	ROOM
FOV	FUEL OIL VENT	RPM	REVOLUTIONS PER MINUTE
FOR	FUEL OIL RETURN	RW	RAIN WATER
FOS	FUEL OIL SUPPLY	SF	SQUARE FOOT
FPM	FEET PER MINUTE	S/A	SUPPLY AIR
FS	FLOOR SINK	SAN	SANITARY
FT	FOOT/FEET	SF	SQUARE FOOT
FTR	FIN TUBE RADIATION	SD	SMOKE DAMPER
GAL	GALLON	SM	SURFACE MOUNT
GF	GAS-FIRED	SP	STANDPIPE
GC	GENERAL CONTRACTOR	SP	STATIC PRESSURE
GPM	GALLONS PER MINUTE	STM	STEAM
GW	GREASE WASTE	T	THERMOSTAT
HB	HOSE BIB	TD	TEMPERATURE DROP
HP	HORSE POWER	TDR	TRENCH DRAIN
HTG	HEATING	TEMP	TEMPERATURE
HTR	HEATER	TYP	TYPICAL
HW	HOT WATER	UG	UNDERGROUND
HYD	HYDRANT	VAC	VACUUM
ID	INDIRECT	V	VENT
IN	INCH	VAV	VARIABLE AIR VOLUME
INV	INVERT	VENT	VENTILATION
LB	POUND	VTR	VENT THROUGH ROOF
LB/HR	POUNDS PER HOUR	W	WASTE
LAT	LEAVING AIR TEMPERATURE	WB	WET BULB
LP	LOW PRESSURE	WCO	WALL CLEAN OUT
LPG	LIQUEFIED PETROLEUM GAS	WH	WALL HYDRANT

EQUIPMENT ABBREVIATIONS

AC	AIR CONDITIONING UNIT	ET	EXPANSION TANK
ACCU	AIR COOLING CONDENSING UNIT	EWH	ELECTRIC WATER HEATER
AHU	AIR HANDLING UNIT	FCU	FAN COIL UNIT
AS	AIR SEPARATOR	FP	FIRE PUMP
B	BOILER	GI	GREASE INTERCEPTOR
CH	CHILLER	GRV	GRAVITY ROOF VENTILATOR
CT	COOLING TOWER	HWP	HEATING WATER PUMP
CUH	CABINET UNIT HEATER	HRU	HEAT RECOVERY UNIT
CHWP	CHILLED WATER PUMP	PRV	POWER ROOF VENTILATOR
DBP	DOMESTIC WATER BOOSTER PUMP	RE	RETURN/EXHAUST FAN
DC	DUCT MOUNTED COIL	RTU	ROOFTOP UNIT
DCP	DOMESTIC WATER CIRCULATING PUMP	SP	SUMP PUMP
EF	EXHAUST FAN	UH	UNIT HEATER
EDC	ELECTRIC DUCT COIL	WH	WATER HEATER

PLUMBING AND PIPING SYMBOLS

CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CD	CONDENSATE DRAINAGE
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
GWR	GEOTHERMAL WATER RETURN
GWS	GEOTHERMAL WATER SUPPLY
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
G	NATURAL GAS
PG	PROPANE GAS
REF-L	REFRIGERANT-LIQUID
REF-S	REFRIGERANT-SUCTION
REF-HG	REFRIGERANT-HOT GAS
STM	STEAM
CDR	CONDENSATE RETURN
CWV	COMBINATION WASTE & VENT
CA	COMPRESSED AIR
CW	DOMESTIC COLD WATER
H-CW	HARD COLD WATER
S-CW	SOFT COLD WATER
F-CW	FILTERED COLD WATER
RO	REVERSE OSMOSIS WATER
HW	HOT WATER
HW 140°	HOT WATER 140°
HW-R	HOT WATER RECIRCULATION
HW-R 140°	HOT WATER RECIRCULATION 140°
GV	GREASE VENT
GW	GREASE WASTE
IW	INDIRECT WASTE
OV	OIL VENT
OW	OIL WASTE
PD	PUMP DISCHARGE
V	SANITARY VENT
SS	SANITARY SEWER
SHWR	SOLAR HOT WATER RETURN
SHWS	SOLAR HOT WATER SUPPLY
SD	STORM DRAINAGE
OSD	OVERFLOW STORM DRAINAGE

PIPE DROP
PIPE RISE
PIPE TEE
CAP

4"
2"
4"
PLUG
REDUCING 45 DEGREE TEE
45 DEGREE TEE

PIPE ACCESSORY TAGS

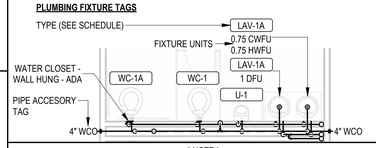
- 4" FCO CLEANOUT
- 2" BACKWATER SWING CHECK
- 2" CHECK CHECK VALVE
- (ALTERNATE CHECK VALVE SYMBOL)
- 2" BALANCE BALANCING VALVE
- 2" CIRC CIRCUIT SETTER
- 1" RECIRC RECIRC. VALVE
- 2" GATE GATE VALVE
- 2" QUICK QUICK OPENING
- 2" SHUTOFF BALL VALVE
- 2" STRAINER
- 1/2" PRIMER TRAP PRIMER
- 2" M-CNTRL ELEC. CONTROL
- TMV-XX THERMOSTATIC MIXING
- 1/2" TMV EMERG. THERMOSTATIC
- 2" PRV PRESS REDUCING
- 2" DOM. WM DOM. WATER METER
- 1 1/2" DOM. WM IRRIGATION WATER METER
- 1" GAS-CNTRL EMERG. GAS SHUTOFF
- 1" PLUG PLUG VALVE
- 1" GAS COCK GAS SHUTOFF COCK
- 1" REG PRESS REGULATOR
- DOUBLE CHECK VALVE
- REDUCED PRESSURE ZONE

DRAIN TAGS

DRAIN SIZE

FLOOR DRAIN	4" FD-1	TYPE (SEE SCHEDULE) 4" AD-2	AREA DRAIN NO TRAP
TRAP PRIMER	4" FD-3P	"P" - INDICATES PRIMER CONNECTION	4" SD-29 DECK DRAIN
DEEP TRAP	4" FD-3		4" SD-12 FLOW CONTROL DRAIN
INTEGRAL CLEANOUT	8 DFU	FIXTURE UNITS	4" SD-15 STORM DRAIN
HUB DRAIN	4" FD-14		
FLOOR SINK	4" FS-4	ROOF AREA SERVED BY DRAIN 4000 SF	6" SD-1 COMBINATION DRAINS

PLUMBING FIXTURE TAGS



* NOTE *

ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

PLUMBING SHEET INDEX

P000	PLUMBING TITLE SHEET
P001	PLUMBING DWV PLAN
P002	PLUMBING SUPPLY PLAN
P003	PLUMBING RISERS PLAN
P004	PLUMBING DETAILS
P005	PLUMBING SPECIFICATIONS

PIPE MATERIAL SCHEDULE

PIPE	MATERIALS
WASTE PIPING	BELOW GRADE: PIPING SHALL BE TYLER, AB&I OR CHARLOTTE NO-HUB CAST IRON DRAIN, WASTE, SEWER, AND STORM SHALL COMPLY TO CISPI 301 AND/OR ASTM A888 AND BE LINED WITH A SUITABLE EPOXY COATING. PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE (CISPI) AND BE LISTED BY NSF ABOVE GRADE: PIPING SHALL BE TYLER, AB&I OR CHARLOTTE NO-HUB CAST IRON DRAIN, WASTE, VENT, SEWER, AND STORM LINES SHALL CONFORM TO THE REQUIREMENTS OF CISPI 301 AND/OR ASTM A888. PIPE AND FITTINGS SHALL BE MARKED WITH THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE (CISPI) AND BE LISTED BY NSF. JOINTS: ALL JOINTS SHALL BE HUSKY OR EQUIVALENT HEAVY DUTY COUPLINGS TESTED AND CERTIFIED TO THE REQUIREMENTS ASTM C1540. GASKET MATERIAL SHALL BE TESTED AND CERTIFIED TO ASTM C564 AND HAVE A SHIELD MADE OF 316 AISI STAINLESS STEEL WITH A .015MIL THICKNESS. SCHEDULE 40 PVC/CPVC MAY BE CONSIDERED AS A VALUE ENGINEERED ALTERNATE WHERE ALLOWED BY LOCAL AHJ, NOT TO BE INSTALLED WITHIN PLENUM AREAS OR RECEIVING DISCHARGE TEMPERATURES OF OVER THE MANUFACTURERS LISTED TEMPERATURES. PIPING SUBMITTAL MUST BE SUBMITTED TO ENGINEER FOR APPROVAL. INSULATION: INSULATION FOR STORM PIPING SHALL BE 1/2" THICK ARMAFLEX UL LABELED OR FIBERGLASS 25 WITH ASJ/SSL FOIL/VINYL JACKET OR EQUAL. INSULATE ALL PIPING AND FITTINGS.
WATER PIPING	UNDERGROUND: CERRO TYPE "K" COPPER TUBE, SOFT TEMPER OR EQUIVALENT ABOVEGROUND: CERRO TYPE "L" COPPER TUBE, HARD DRAWN OR EQUIVALENT. INSULATION: INSULATION FOR COLD WATER PIPING SHALL BE 1/2" (1" ON 1ST 8 FT. FROM TANK) THICK ARMAFLEX UL LABELED OR FIBERGLASS 25 WITH ASJ/SSL FOIL/VINYL JACKET OR EQUAL. INSULATE ALL PIPING AND FITTINGS. INSULATION: INSULATION FOR HOT WATER PIPING SHALL BE 1" ON PIPING 1-1/2" AND SMALLER AND INSUALTION SHALL BE SAME THICKNESS AS PIPE DIAMETER ON 2" AND ABOVE THICK ARMAFLEX UL LABELED OR FIBERGLASS 25 WITH ASJ/SSL FOIL/VINYL JACKET OR EQUAL. INSULATE ALL PIPING AND FITTINGS.
GAS PIPING	A. GAS PIPING ABOVE GROUND: ASTM A53, SCHEDULE 40 BLACK STEEL WITH 125 POUND BLACK MALLEABLE IRON SCREWED FITTINGS. INSTALL MOISTURE TRAPS ON HVAC UNITS AND KITCHEN EQUIPMENT. B. GAS PIPING COMPOUND AT JOINTS; IN COMPLIANCE WITH NFPA BULLETIN #54 AND LOCAL APPLICABLE CODES AND SUITABLE FOR NATURAL GAS SERVICE.

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CERTIFICATE OF AUTHORITY NO. 10975461-0143

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4/11/2025

STATE OF TEXAS
MATTHEW RICHARD CASE
128362
LICENSED
PROFESSIONAL ENGINEER

PROJECT #:

DRAWN BY: DM CHECKED BY: NH

PERMIT SET - 4/11/2025

1 -
2 -
3 -
4 -
5 -
6 -

SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:

1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:

PLUMBING TITLE SHEET

SHEET NUMBER:

P000

PLUMBING SYMBOLS LEGEND

CA	COMPRESSED AIR PIPING
G	NATURAL GAS PIPING
CD	CONDENSATE DRAIN PIPING
	COLD WATER PIPING
	HOT WATER PIPING (140°F)
	HOT WATER RETURN PIPING
	SANITARY DRAIN PIPING
	UNDERGROUND SANITARY PIPING
	SANITARY VENT PIPING
VTR	VENT THROUGH ROOF
	PIPE TURNING DOWN
	PIPE TURNING UP
	CHECK VALVE
	UNION
AFF	ABOVE FINISHED FLOOR
CO	CLEAN OUT
	PRESSURE REGULATING VALVE (PRV)
	BALL VALVE
GCO	GRADE CLEAN OUT
	POINT OF CONNECTION
	BALANCE VALVE

(#) SHEET NOTES:

1. ROUTE TO CONNECT TO 4" SANITARY SEWER SERVICE. VERIFY SIZE, LOCATION, DIRECTION OF FLOW AND INVERT ELEVATION OF CONNECTION POINT TO ENSURE GRAVITY DRAINAGE CAN BE MAINTAINED TO FURTHEST FIXTURE PRIOR TO WORK. PLUMBING CONTRACTOR SHALL COORDINATE EXACT CONNECTION REQUIREMENTS WITH UTILITY COMPANY PRIOR TO ANY WORK.
2. ALL VENT PIPING FROM ALL FIXTURES ARE 2" DIAMETER UNLESS SPECIFIED OTHERWISE.
3. ROUTE 3" SANITARY VENT UP THROUGH ROOF. MAINTAIN A MINIMUM CLEARANCE OF 10" FROM NEAREST AIR INTAKE. VERIFY EXACT LOCATION IN FIELD.
4. INSTALL 2" FLOOR DRAIN IN BATHROOM AS SHOWN. PROVIDE WITH TRAP PRIMER FROM NEAREST SINK.
5. ROUTE TEMPERATURE AND PRESSURE RELIEF VALVE DOWN AND INDIRECTLY DRAIN TO UTILITY SINK BELOW.

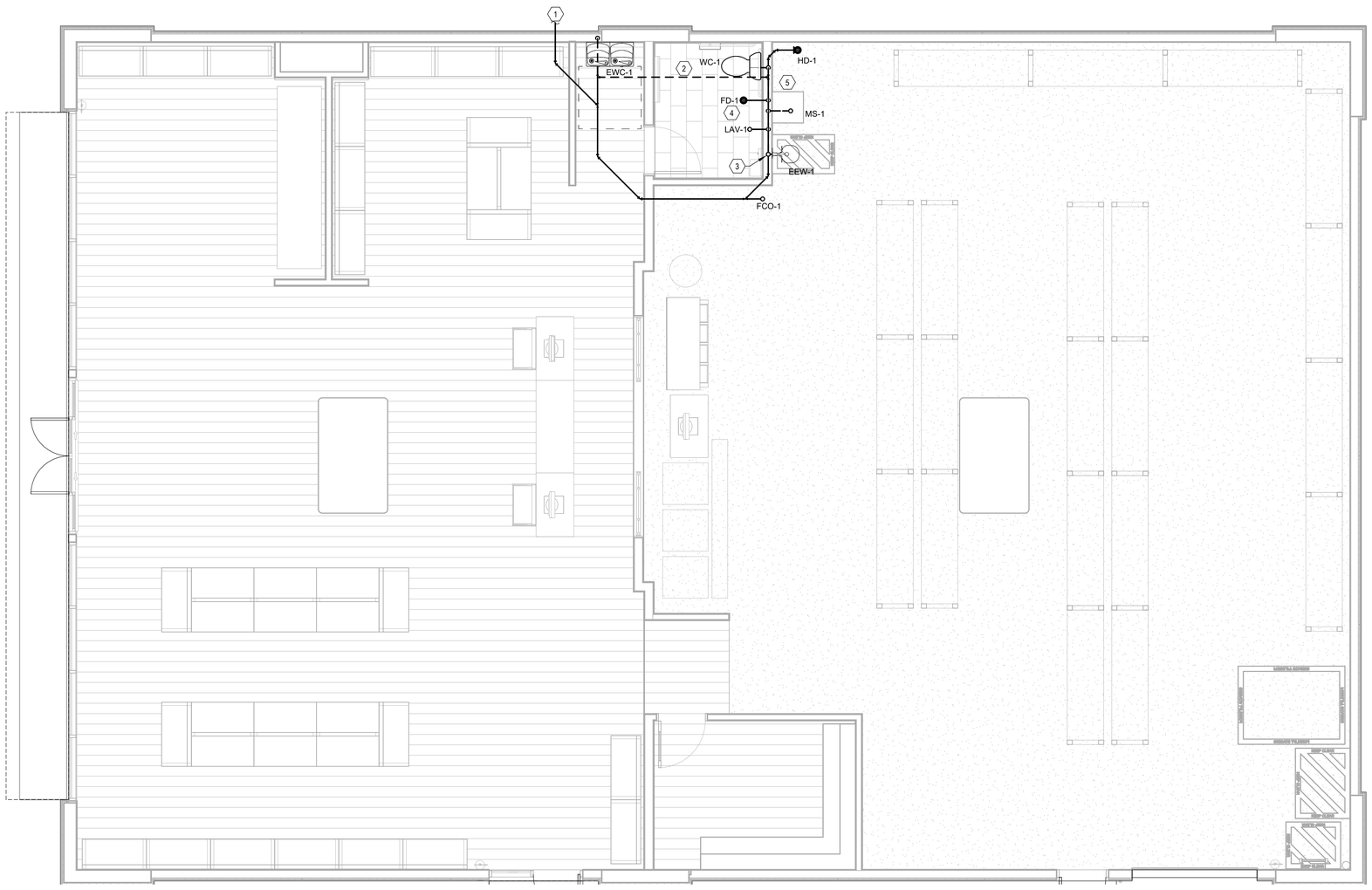
GENERAL NOTES:

1. PLUMBING DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS, CERTIFIED EQUIPMENT DRAWINGS AND FROM THE STRUCTURE ITSELF BEFORE FABRICATING ANY WORK, VERIFY ALL SPACE REQUIREMENTS COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT EXTRA CHARGES TO THE OWNER.

2. CONTRACTOR SHALL COORDINATE WORK INDICATED WITH MECHANICAL, ELECTRICAL, FIRE PROTECTION, STRUCTURAL, CIVIL, AND ARCHITECTURAL DIVISIONS. CONTRACTOR SHALL VERIFY SIZE & LOCATION OF EXISTING UTILITIES PRIOR TO COMMENCING WORK, COORDINATE WITH OTHER TRADES AND MAKE FINAL CONNECTION. SUBMIT 1/4" SCALE SHOP DRAWINGS FOR PLUMBING SYSTEMS, DIMENSIONED TO INCORPORATE THE WORK OF OTHER TRADES. INDICATE SPACES RESERVED FOR FIRE SPRINKLER, PLUMBING PRIOR TO FABRICATION. COORDINATE ALL CHASE, SLEEVE, AND SLAB BLOCKOUTS BEFORE CONCRETE IS POURED OR BLOCK SET.
3. PROVIDE ACCESSIBLE SHUT-OFF VALVES ON ALL NEW FIXTURE HW & CW BRANCHES.

4. ALL WATER SUPPLY LINES LESS THAN 1" IN DIAMETER SHALL BE COPPER OR COPPER ALLOY. USE ONLY CAST AND WROUGHT COPPER AND COPPER ALLOY PRESS-CONNECT PRESSURE FITTINGS: ASME B16.51, DO NOT USE SOLDER OR BRAZED CONENCTIONS. PRESS-CONNECT JOINTS: PRESS-CONNECT JOINTS SHALL BE MADE IN ACCORDANCE WITH THE FITTING MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS USING A PRESS-CONNECT TOOL AND JAWS APPROVED FOR USE FOR THE MANUFACTURER'S SPECIFIC FITTING CONFIGURATION. COPPER ALLOY TUBE SHALL BE MECHANICALLY CLEANED AND REAMED PRIOR TO JOINING TO REMOVE ALL BURRS (INTERIOR AND EXTERIOR) AND RESTORE FULL INSIDE DIAMETER AND A SMOOTH, CHAMFERED EXTERIOR SURFACE. FITTINGS SHALL HAVE EPDM SEALING ELEMENTS.

5. PROVIDE TRAP PRIMERS FOR ALL FLOOR AND HUB DRAINS.



1 P001 PLUMBING WASTE AND VENT PLAN
1/4" = 1'-0"
0 6" 1' 2'

SANITARY SEWER CONDITIONS NOTE:

SANITARY SEWER PIPING SHOWN ON DRAWINGS IS DIAGRAMMATIC AND MAY DIFFER SLIGHTLY FROM ACTUAL FIELD CONDITIONS. PLUMBING CONTRACTOR (PC) SHALL COORDINATE WITH EXISTING FIELD CONDITIONS VIA A SANITARY VIDEO SURVEY/SCOPE TO DETERMINE THE EXACT SIZE, LOCATION, INVERT ELEVATIONS AT THE PROPOSED CONNECTIONS TO EXISTING PLUMBING SERVICES PRIOR TO BID/CONSTRUCTION. IF ACTUAL FIELD FINDINGS VARY SIGNIFICANTLY FROM THOSE AS INDICATED ON PLANS, PC SHALL NOTIFY GENERAL CONTRACTOR (GC) IMMEDIATELY PRIOR TO STARTING ANY WORK. THE OWNER SHALL NOT BE RESPONSIBLE FOR ADDITIONAL COSTS INCURRED BY FAILED COORDINATION AFTER CONSTRUCTION HAS BEGUN. PC SHALL BE RESPONSIBLE FOR UTILIZING A REPUTABLE UTILITY LOCATING SERVICE PRIOR TO ANY EXCAVATION.

PLUMBING GENERAL NOTES

1. PLUMBING CONTRACTOR SHALL ABIDE BY THE LOCAL CODES AND ORDINANCES.

2. PLUMBING CONTRACTOR SHALL FIELD VERIFY THE EXACT LOCATIONS AND SIZES OF ALL UTILITIES, INCLUDING THE DEPTHS OF ALL BELOW GRADE SANITARY SEWERS, PRIOR TO START OF WORK. THIS DRAWING IS NOT INTENDED TO INDICATE ALL EXISTING UTILITIES.

3. CONTRACTOR SHALL BE FAMILIAR WITH LANDLORD'S STANDARDS, RULES AND REGULATIONS. ALL LANDLORD'S CRITERIA SHALL BE COMPILED WITH AND INCLUDED IN THIS BID.

4. CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTING BID AND FIELD VERIFY EXISTING CONDITIONS TO ENSURE THAT THE WORK REPRESENTED ON THE DRAWINGS AND IN THESE SPECIFICATIONS CAN BE INSTALLED AS INDICATED. CONTRACTOR SHALL TAKE ALL INTERFERENCES INTO CONSIDERATION. PROVIDE ALL NECESSARY OFFSETS TO SUIT FIELD CONDITIONS AS REQUIRED.

5. CONTRACTOR SHALL VERIFY AND COORDINATE ALL UTILITY CONNECTION POINTS, INCLUDING SIZES AND INVERTS WITH EXISTING FIELD CONDITIONS PRIOR TO START OF WORK.

6. MAKE ALL UTILITY CONNECTIONS AND INSTALLATIONS IN FULL ACCORDANCE WITH ALL UTILITY REGULATIONS. PROVIDE ALL ADDITIONAL APPURTENANCES AS REQUIRED BY UTILITY COMPANY. THE COMPLETED INSTALLATION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE INDUSTRY STANDARDS OF GOOD PRACTICE AND SAFETY, AND THE MANUFACTURER'S STRICTEST RECOMMENDATIONS FOR EQUIPMENT AND PRODUCT APPLICATION AND INSTALLATION.

7. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS RELATED TO THE INSTALLATION OF THE WORK.

8. ALL WORK SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES, LAWS, ACTS AND ALL AUTHORITIES HAVING JURISDICTION AND LANDLORD'S CRITERIA.

9. MAINTAIN ALL MANUFACTURER'S RECOMMENDED SERVICE CLEARANCES FOR ALL FIXTURES AND EQUIPMENT. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF PLUMBING FIXTURES.

10. CUTTING OF ROOF AND FLASHING OF PIPE CURBS, SANITARY VENT THROUGH ROOF, ETC. SHALL BE COORDINATED WITH AND PERFORMED BY LANDLORD,S ROOFING CONTRACTOR, AT THIS CONTRACTOR'S EXPENSE, TO MAINTAIN ROOF WARRANTY. ALL VENT OUTLETS SHALL BE A MINIMUM OF 10'-0" AWAY FROM OR 3'-0" ABOVE ANY AIR INTAKES ON HVAC EQUIPMENT.

11. ALL HORIZONTAL FIRE PROTECTION SPRINKLER PIPING AND ALL ABOVE GRADE EXPOSED HORIZONTAL PIPING IS TO BE INSTALLED AS HIGH AS POSSIBLE.

12. CONTRACTOR SHALL COORDINATE TIMES TO WORK IN SPECIFIC AREA OF THE EXISTING BUILDING WITH THE BUILDING MANAGER AND WITH THE OCCUPANTS OF THE AREA AFFECTED BY THE WORK.

13. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES WITH THE CONTRACT DOCUMENTS BEFORE COMMENCING ANY WORK.

14. SLEEVE AND SEAL ALL PIPE PENETRATIONS O WALLS AND FLOORS. APPLY INTUMESCENT FIRE SAFING COMPOUND AT PENETRATIONS AT FIRE RATED WALLS AND FLOORS, MAINTAINING INTEGRITY AND RATING OF FIRE SEPARATION. SLEEVES THROUGH FLOORS SHALL EXTEND 2" ABOVE FLOOR, BE GROUTED INTO PLACE AND WATERPROOFED. PIPING THROUGH EXTERIOR WALLS SHALL BE SLEEVED AND SEALED WEATHER TIGHT WITH SILICONE CAULK.

15. ALL DOMESTIC COLD, HOT AND TEMPERED WATER PIPING TO BE INSULATED WITH RIGID FIBERGLASS INSULATION WITH TYPE "ASJ" JACKET. COLD WATER PIPES TO HAVE½" THICK INSULATION. DOMESTIC HOT AND TEMPERED WATER PIPES TO HAVE 1" THICK INSULATION.

16. THE P.C. IS TO INSPECT THE EXISTING SANITARY DRAIN TO VERIFY THAT IT HAS SUFFICIENT DEPTH FOR THE NEW WORK AND TO VERIFY THE DIRECTION OF FLOW. PRESSURE TEST THE EXISTING SANITARY DRAIN PRIOR TO THE START OF WORK. VERIFY THAT SEWER IS ACTIVE BY FLUSHING WITH WATER, A MINIMUM OF FIVE GALLONS PER MINUTE FOR FOUR HOURS PRIOR TO START OF WORK.

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4/11/2025

STATE OF TEXAS
MATTHEW RICHARD CASE
128362
LICENSED
PROFESSIONAL ENGINEER

PROJECT #:

DRAWN BY: DM CHECKED BY: NH

PERMIT SET - 4/11/2025

1 -
1 -
1 -
1 -
1 -
1 -

SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
PLUMBING DWV PLAN

SHEET NUMBER:
P001

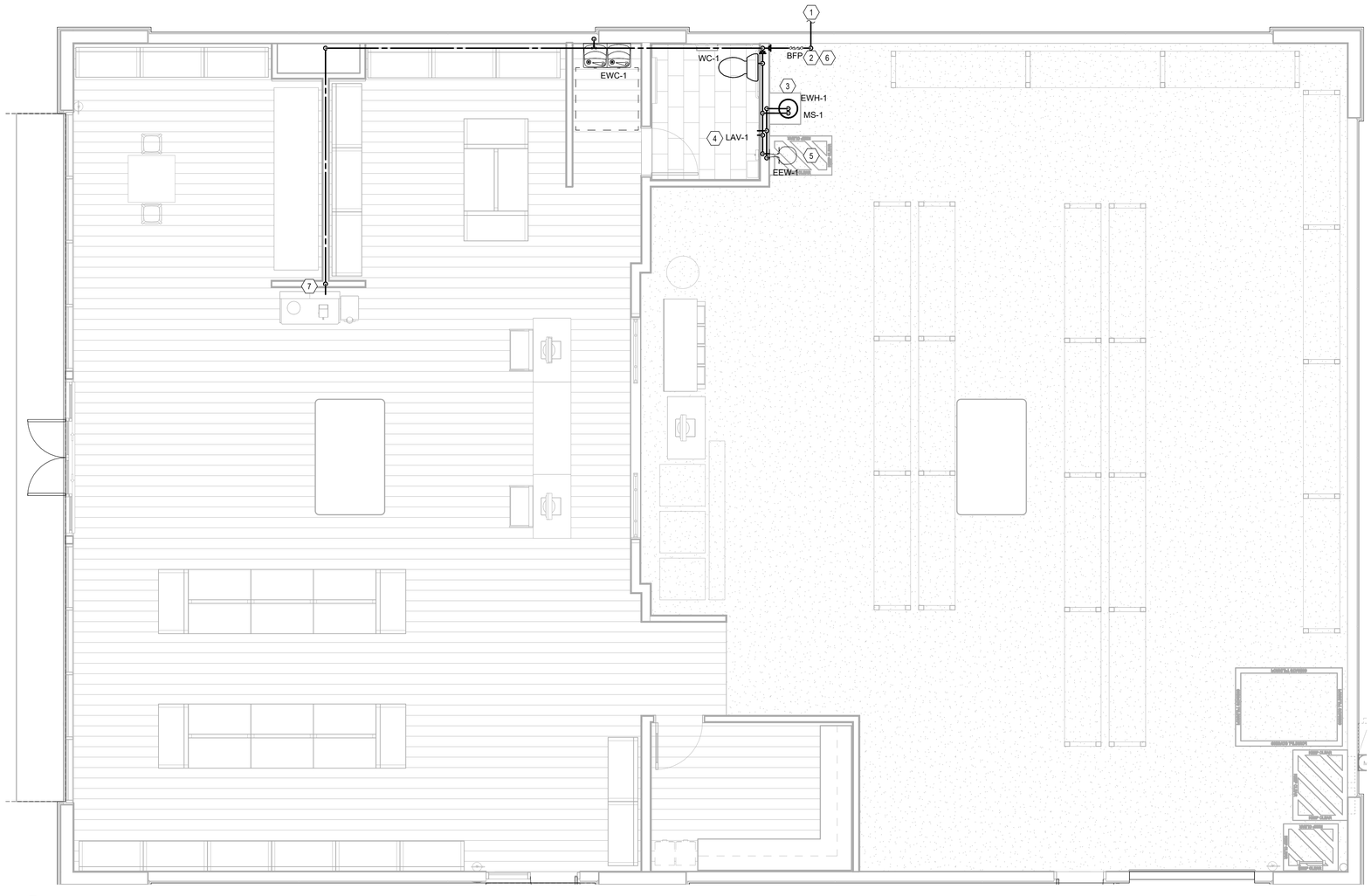
FOUNTAIN SCHEDULE							
MARK	FIXTURE	SAN.	VENT	C.W.	VOLT/PHASE	MANUFACTURER	MODEL#
EWC-1	ELECTRIC WATER COOLER ADA COMPLIANT HIGH/LOW WITH BOTTLE FILLER	2"	2"	1/2"	120V/1PH	ELKAY	EDFP217C

WATER HEATER SCHEDULE							
MFR	MODEL	STORAGE	RECOVERY	F. RISE	VOLT/PHASE	HEAT INPUT	REMARKS
A.O. SMITH	DEL-20	20 GAL	12 GPH	100	120V/1PH	3KW	1,2,3

1: SET WATER HEATER TEMPERATURE TO 140°f.
2: CONSULT MANUFACTURER PRIOR TO PURCHASE FOR EXACT MODEL AND ALL ACCESSORIES FOR A COMPLETE SYSTEM.
3: CONFIRM VOLTAGE WITH ELECTRICAL CONTRACTOR PRIOR TO PURCHASE AND ROUGH IN.

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE	SAN.	VENT	C.W.	H.W.	REMARKS
WC-1	WATER CLOSET -ADA FLOOR SET TOTO	4"	2"	1/2"	-	1 GALLON PER FLUSH-ELONGATED BOWL, TWO PIECE, FLUSH VALVE PROVIDED BY BRADLEY, WHITE, TRIP LEVER INSTALLED ON WIDE SIDE OF STALL, ASSEMBLY CODE D2010300
LAV-1	LAVATORY - ADA AMERICAN STANDARD	2"	2"	1/2"	1/2"	AMERICAN STANDARD - COMRADE, WALL-HUNG 0124.024 BRADLEY - FAUCET S53-3100-RT5-BB-A14-029 - VERGE-CREST SERIES
MV	THERMOSTATIC MIXING VALVE POINT OF USE	-	-	1/2"	1/2"	ACORN ST-70 SET TO 105°
EEW-1	EMERGENCY EYE WASH BRADLEY	2"	2"	1/2" (MIXED)	-	BRADLEY - S19224DC WALL MOUNTED - PLUMBING TO HOT/COLD WATER (W/ MIXING VALVE) & SANITARY SEWER
MS-1	UTILITY SINK	3"	2"	1/2"	1/2"	ELKAY B1C24X24X STAINLESS STEEL, FAUCET: CHICAGO FAUCET 897 WITH WALL BRACE, PAIL HOOK, AND MALE HOSE THREADED OUTLET. ELEVATED ON METAL LEGS. PROVIDE WITH ALL ACCESSORIES FOR A COMPLETE SYSTEM
HD-1	HUB DRAIN	2"	2"	-	-	SIOUX CHIEF 832-36PNR



1 / P002 PLUMBING WATER PLAN
1/4" = 1'-0"
0 6" 1' 2'

(#) SHEET NOTES:

1. ROUTE TO CONNECT TO EXISTING 1" WATER STUB IN SPACE. FIELD VERIFY SIZE, LOCATION AND COORDINATE WITH ALL DISCIPLINES PRIOR TO WORK.

2. FURNISH AND INSTALL 1" BACKFLOW PREVENTER AND STRAINER FOR DOMESTIC WATER SERVICE. ROUTE RELIEF PIPING TO DISCHARGE INDIRECTLY IN TO SERVICE SINK DRAIN. SEE DOMESTIC WATER ENTRY DETAIL FOR MORE INFORMATION. ROUTE DOMESTIC WATER ENTRY ASSEMBLY. CONTRACTOR TO COORDINATE IN FIELD.

3. MOUNT WATER HEATER ABOVE UTILITY SINK ON PLATFORM.

4. PROVIDE AND INSTALL ANTI-SCALD MIXING VALVE AT LAVATORY AND UTILITY SINK TO TEMPER HOT WATER FOR PUBLIC USE. SET VALVE TO DISCHARGE A MAXIMUM OF 110°F.

5. ROUTE CW/HW PIPING DOWN TO EYEWASH MIXING VALVE. REFER TO DETAIL 6 ON P004.

6. PROVIDE WATER SUB-METER TO LOCATION SHOWN IF REQUIRED. VERIFY EXACT CONNECTION REQUIREMENTS WITH WATER COMPANY IN FIELD PRIOR TO WORK.

7. COLD WATER CONNECTION ROUTED TO COFFEE MAKER. PROVIDE SHUTOFF VALVE AND BACKFLOW PREVENTER IN WALL IN A RECESSED VALVE BOX PRIOR TO CONNECTION TO EQUIPMENT.

GENERAL NOTES:

1. PLUMBING DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS, CERTIFIED EQUIPMENT DRAWINGS AND FROM THE STRUCTURE ITSELF BEFORE FABRICATING ANY WORK, VERIFY ALL SPACE REQUIREMENTS COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT EXTRA CHARGES TO THE OWNER.

2. CONTRACTOR SHALL COORDINATE WORK INDICATED WITH MECHANICAL, ELECTRICAL, FIRE PROTECTION, STRUCTURAL, CIVIL, AND ARCHITECTURAL DIVISIONS. CONTRACTOR SHALL VERIFY SIZE & LOCATION OF EXISTING UTILITIES PRIOR TO COMMENCING WORK, COORDINATE WITH OTHER TRADES AND MAKE FINAL CONNECTION. SUBMIT 1/4" SCALE SHOP DRAWINGS FOR PLUMBING SYSTEMS, DIMENSIONED TO INCORPORATE THE WORK OF OTHER TRADES. INDICATE SPACES RESERVED FOR FIRE SPRINKLER, PLUMBING PRIOR TO FABRICATION. COORDINATE ALL CHASE, SLEEVE, AND SLAB BLOCKOUTS BEFORE CONCRETE IS POURED OR BLOCK SET.
3. PROVIDE ACCESSIBLE SHUT-OFF VALVES ON ALL NEW FIXTURE HW & CW BRANCHES.

4. ALL WATER SUPPLY LINES LESS THAN 1" IN DIAMETER SHALL BE COPPER OR COPPER ALLOY. USE ONLY CAST AND WROUGHT COPPER AND COPPER ALLOY PRESS-CONNECT PRESSURE FITTINGS: ASME B16.51, DO NOT USE SOLDER OR BRAZED CONENCTIONS. PRESS-CONNECT JOINTS: PRESS-CONNECT JOINTS SHALL BE MADE IN ACCORDANCE WITH THE FITTING MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS USING A PRESS-CONNECT TOOL AND JAWS APPROVED FOR USE FOR THE MANUFACTURER'S SPECIFIC FITTING CONFIGURATION. COPPER ALLOY TUBE SHALL BE MECHANICALLY CLEANED AND REAMED PRIOR TO JOINING TO REMOVE ALL BURRS (INTERIOR AND EXTERIOR) AND RESTORE FULL INSIDE DIAMETER AND A SMOOTH, CHAMFERED EXTERIOR SURFACE. FITTINGS SHALL HAVE EPDM SEALING ELEMENTS.

5. PROVIDE TRAP PRIMERS FOR ALL FLOOR AND HUB DRAINS.

WATER SERVICE CONDITIONS NOTE:

WATER PRESSURE IS SHOWN AS DIAGRAMMATIC ONLY. CONTRACTOR SHALL VERIFY EXISTING WATER PRESSURE IN FIELD PRIOR TO ANY WORK AND PIPING ROUGH IN. IF DISCOVERED ON SITE THAT EXISTING WATER PRESSURE IS LESS THAN 68 PSI, CONTACT ENGINEER IMMEDIATELY FOR PIPING DESIGN CHANGES. IF PRESSURE IS GREATER THAN 80 PSI PROVIDE PRESSURE REDUCING VALVE AND REDUCE DOWN TO 77 PSI.

PRIOR TO WORK VERIFY INCOMING WATER QUALITY TO SPACE. WHEN INCOMING WATER IS ABOVE 3.5 GRAINS PER GALLON (60 PARTS PER MILLION) SCALE BUILD-UP WILL FORM INSIDE THE PLUMBING SYSTEM CAUSING DAMAGE TO SYSTEM COMPONENTS AND COPPER PIPE. TO AVOID DAMAGE DUE TO SCALE BUILD-UP, EITHER A WATER SOFTENER OR ANTI-SCALE DEVICE SHOULD BE INSTALLED AT POINT-OF-ENTRY. APPLICATIONS WHERE THERE IS A CONCERN FOR WATER SPOTS ON GLASS SHOWER DOORS, GLASS DISHES, VEHICLES IN CARWASHES, ETC., AND/OR THE EFFECTS OF HARD WATER ON HUMAN SKIN, A WATER SOFTENER SHOULD BE USED INSTEAD OF AN ANTI-SCALE DEVICE. ANTI-SCALE DEVICES REDUCE THE FORMATION OF SCALE IN A PLUMBING SYSTEM BUT DO NOT REMOVE THE CALCIUM AND MAGNESIUM FROM THE WATER, WHICH WILL REMAIN ONCE THE WATER HAS EVAPORATE LEAVING WATER SPOTS AND/OR DRYING OUT HUMAN SKIN. WATER SOFTENERS REMOVE CALCIUM AND MAGNESIUM FROM THE WATER BUT REQUIRE ROUTINE REFILLING OF SALT LEVELS IN THE BRINE TANK.

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4/11/2025

STATE OF TEXAS
MATTHEW RICHARD CASE
128362
LICENSED
PROFESSIONAL ENGINEER

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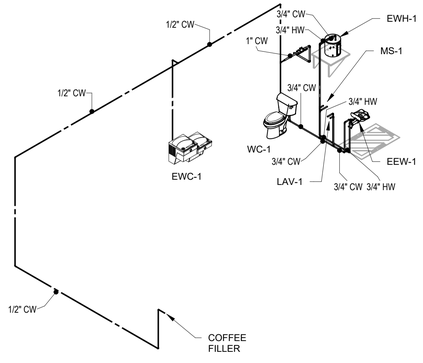
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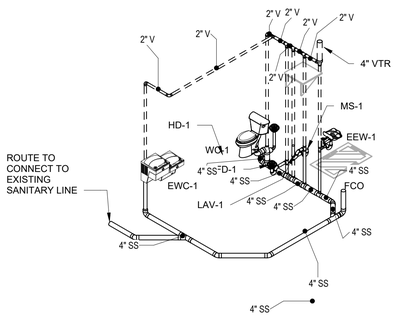
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SHEET TITLE:
PLUMBING SUPPLY PLAN

SHEET NUMBER:
P002



1 P003 DOMESTIC WATER RISER DIAGRAM



2 P003 WASTE & VENT RISER DIAGRAM

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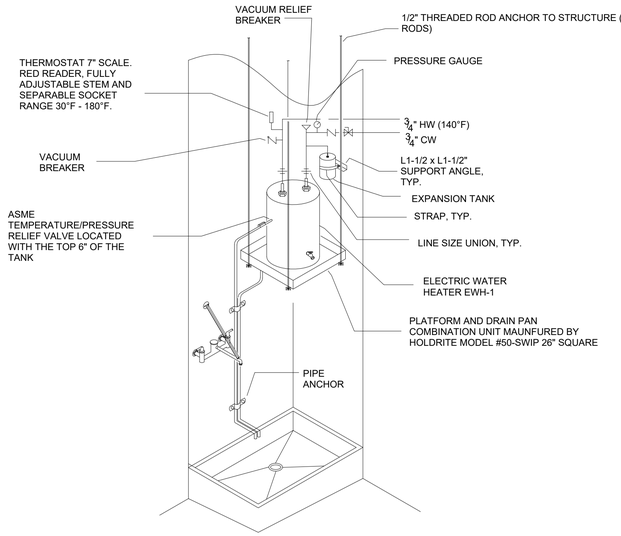
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SHEET TITLE:

PLUMBING RISERS PLAN

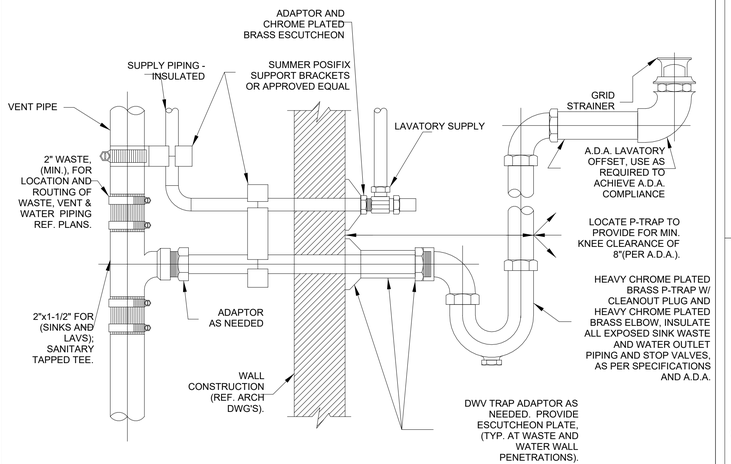
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P003



ELECTRIC WATER HEATER DETAIL

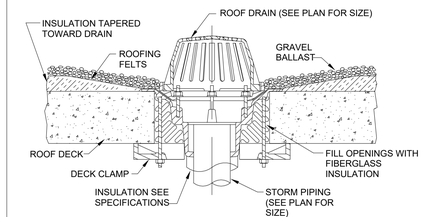
SCALE: NO SCALE



NOTE:
ALL EXPOSED PIPING, VALVES, EQUIPMENT, ECT. TO BE A.D.A. COMPLIANT.

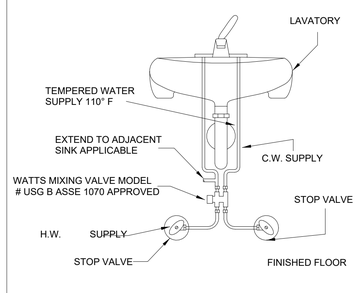
TYPICAL LAVATORY & SINK CONNECTION DETAIL

SCALE: NONE



ROOF DRAIN DETAIL

NO SCALE



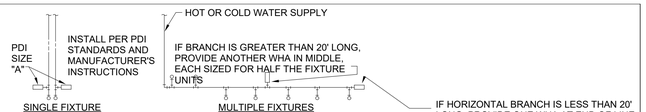
MIXING VALVE DETAIL

SCALE: NONE

PIPE SUPPORT SCHEDULE

NOMINAL PIPE DIAMETER NPS (IN)	MAXIMUM SUPPORT SPACING (FEET)							
	CAST IRON	COPPER	STEEL	SCH 40 PVC	SCH 40 CPVC			
				60°F	73°F	100°F	120°F	140°F
1/2		8		-	5	4.5	4.5	4
3/4		9		5	5	5	4.5	4
1	5	9		5.5	5.5	5.5	5	4.5
1 1/4	5	12	7	5.5	5.5	5.5	5.5	5
1 1/2	5	12	9	6	6	5.5	5.5	5
2	5	13	10	6	6	6	5.5	5
2 1/2	5	14	11	7	7	6.5	6.5	6
3	5	15	12	7	7	7	7	6
4	5	17	12	7.5	7.5	7.5	7	6.5
6	5	21	12	8.5	8.5	8	7.5	7
8	5	24	12	9	9.5	9.5	8.5	7.5
10	5	26	12	10	10.5	10.5	9.5	8
12	5	30	12	11.5	11.5	10.5	10	8.5

1. SUPPORT SPACING ABOVE IS FOR STRAIGHT HORIZONTAL PIPE. PROVIDE SUPPORTS ON EACH SIDE OF ELBOWS, FLANGES, VALVES, SPECIALTIES, ETC.
2. ALL PIPING SUPPORTS, THREADED ROD SIZES AND HANGERS SHALL BE PER MSS SP-69



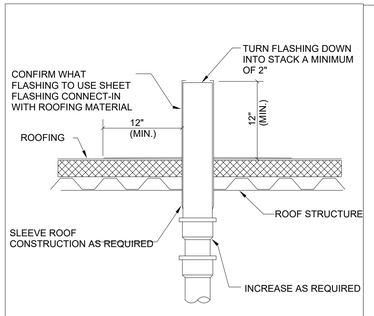
PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD
A	1/2"	1-11
B	3/4"	12-32
C	1"	33-60
D	1-1/4"	61-113
E	1-1/2"	114-154
F	2"	

FIXTURE UNIT TABULATION		
FIXTURE	COLD	HOT
VALVE WATER CLOSET	10	--
TANK WATER CLOSET	5	--
URINAL	5	--
LAVATORY/SINK	1.5	1.5
JANITOR'S SINK	3	3
SHOWER/BATHTUB	2	2

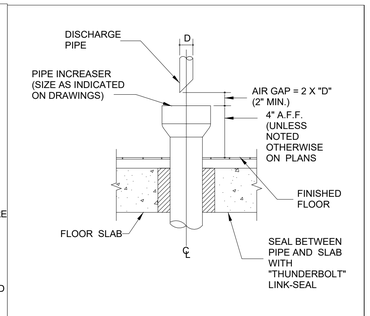
PC TO PROVIDE WATER HAMMER ARRESTERS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS, WATTS OR APPROVED EQUIVALENT WITH PISTON AND 0-RING CONSTRUCTION, HAVING PDI #WH- 201, ASSE #1010 AND ANSI #A112.26.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE UNITS AS SHOWN ON THE DRAWINGS AND/OR PER THE TABLES SHOWN ABOVE. PROVIDE ACCESS PANEL FOR SERVICING OR REPLACEMENT, WHERE REQUIRED.

HAMMER ARRESTER DETAIL

SCALE: NONE



VENT THROUGH THE ROOF DETAIL



HUB DRAIN DETAIL

SCALE: NONE

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STATE OF TEXAS
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SHEET TITLE:
PLUMBING DETAILS

SHEET NUMBER:
P004

PLUMBING SPECIFICATIONS

1. GENERAL
THE "ARCHITECTURAL GENERAL CONDITIONS" GOVERN WORK UNDER THIS SECTION.

BEFORE SUBMITTING A PROPOSAL, THIS CONTRACTOR SHALL VISIT THE SITE OF THE WORK AND SHALL CAREFULLY EXAMINE THE DRAWINGS AND SPECIFICATIONS. IT IS EXPRESSLY UNDERSTOOD THAT THIS PROPOSAL IS BASED ON THE ABOVE REQUIREMENTS AND THAT IT COVERS EVERYTHING NECESSARY TO DO AND COMPLETE THE WORK.

2. INSPECTION AND COOPERATION
NO DEVIATION FROM THE DRAWINGS AND /OR SPECIFICATIONS WILL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF ARCHITECT OR ENGINEER. THIS CONTRACTOR SHALL COOPERATE WITH THE OTHER CONTRACTORS TO ALLOW FOR THE INSTALLATION OF THEIR WORK AS WELL AS HIS OWN.

THIS CONTRACTOR SHALL BE RESPONSIBLE FOR HIS WORK FITTING IN PLACE WITHOUT CONFLICT WITH THE OTHER TRADES, WHERE PROPER PLANNING COULD AVOID INTERFERENCE.

3. CODES AND PERMITS
NOTHING IN THE DRAWINGS AND/OR SPECIFICATIONS SHALL BE INTERPRETED TO CONFLICT WITH ANY CITY OR PROVINCIAL LAW, REGULATION, CODE, ORDINANCE, RULING, OR FIRE UNDERWRITER'S REQUIREMENT APPLICABLE TO THIS CLASS OF WORK.

SHOULD THE DRAWINGS AND/OR SPECIFICATIONS CONFLICT WITH SUCH LAWS OR ORDINANCES, THE CONFLICTING PORTION OF THE WORK SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH SUCH LAWS AND ORDINANCES WITHOUT EXTRA COST.

THIS CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY PERMITS AND INSPECTIONS REQUIRED FOR THIS INSTALLATION OF HIS WORK.

4. ACCURACY OF DATA
THE INFORMATION GIVEN HEREIN AND ON THE DRAWINGS IS AS EXACT AS COULD BE SECURED, BUT ITS EXTREME ACCURACY IS NOT GUARANTEED. THIS CONTRACTOR SHALL EXAMINE THE LOCATIONS AND VERIFY ALL MEASUREMENTS, DISTANCES, ELEVATIONS AND EXISTING PIPE SIZES BEFORE STARTING THE WORK AS ALL PIPING SYSTEMS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC ONLY.

THIS CONTRACTOR SHALL PROVIDE ALL NECESSARY OFFSETS, RAISED AND DROPS IN PIPING AND DUCTWORK AS REQUIRED BY BUILDING CONDITIONS AT NO ADDITIONAL COST.

MECHANICAL DRAWINGS SHALL NOT BE USED FOR GENERAL CONSTRUCTION DIMENSIONS OR FOR TYPE OF MATERIAL USED. FOR EXACT BUILDING LAYOUT, DIMENSIONS AND BUILDING MATERIAL USED, THIS CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS.

5. SHOP DRAWINGS
SHOP OR INSTALLATION DRAWINGS, FOUNDATION PLANS, EQUIPMENT OR APPARATUS DRAWINGS SHALL BE FURNISHED BY THIS CONTRACTOR. THESE DRAWINGS SHALL BE CLEARLY MARKED INDICATING WHICH ITEMS ARE TO BE SUPPLIED AND SHALL STATE CAPACITIES, SIZES AND GENERAL DESCRIPTION OF ALL EQUIPMENT. ANY CHANGES FROM THE SPECIFIED ITEMS SHALL BE NOTED ON THE SUBMITTALS.

SHOP DRAWINGS OF SPECIAL APPARATUS OR EQUIPMENT WHICH IS TO BE FABRICATED INDIVIDUALLY FOR THIS PROJECT AND IS NOT DESCRIBED BY STANDARD MANUFACTURER'S DRAWINGS OR BULLETINS SHALL BE SUBMITTED FOR PROCESSING BEFORE FABRICATION.

THESE DRAWINGS SHALL BE SUBMITTED IN A TIMELY MANNER.

IT SHALL BE THIS CONTRACTORS RESPONSIBILITY TO MAINTAIN LIAISON WITH ALL PARTIES CONCERNED WITH THE MATERIAL SUBMITTED. THIS CONTRACTOR SHALL NOT PURCHASE ANY EQUIPMENT UNTIL SHOP DRAWINGS HAVE BEEN PROCESSED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY FEES ACCRUED FROM THE RETURN OF FIXTURES PURCHASED PRIOR TO THE REVIEW OF SHOP DRAWINGS AND THAT ARE NOT APPROVED.

THIS CONTRACTOR SHALL SUBMIT NO DRAWINGS WITHOUT NOTATION INDICATING DATE OF CONTRACTOR'S REVIEW AND SIGNATURE OF CHECK FOR CONTRACTOR TOGETHER WITH CONTRACTOR'S NAME AND PROJECT IDENTIFICATION.

ARCHITECT'S PROCESSING WILL NOT CONSTITUTE A COMPLETE CHECK BUT WILL INDICATE ONLY THAT GENERAL METHOD OF CONSTRUCTION AND DETAILING IS SATISFACTORY.

ARCHITECT'S PROCESSING WILL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ERRORS SINCE THIS CONTRACTOR IS SOLELY RESPONSIBLE FOR DIMENSIONS AND DESIGNS OF ADEQUATE CONNECTIONS, DETAILS AND SATISFACTORY CONSTRUCTION OF ALL WORK, AS WELL AS FURNISHING MATERIALS AND WORKMANSHIP REQUIRED BY DRAWINGS AND SPECIFICATIONS WHICH MAY NOT BE INDICATED ON THE SUBMITTALS WHEN APPROVED.

CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING ENGINEER REVIEW DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS. REVIEW OF A SPECIFIC ITEM SHALL NOT INCLUDE REVIEW OF AN ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. THE CONTRACTOR IS RESPONSIBLE FOR: EQUIPMENT VOLTAGES AND DIMENSIONS TO BE CONFIRMED AND CORRELATED WITH ALL DISCIPLINES PRIOR TO PURCHASE; INFORMATION THAT PERTAINS SOLELY TO THE FABRICATION PROCESSES OR TO THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION; COORDINATION OF THE WORK WITH THAT OF ALL OTHER TRADES AND PERFORMING ALL WORK IN A SAFE AND SATISFACTORY MANNER.

6. SUBSTITUTIONS OF EQUIPMENT OR MATERIAL

THE BRAND NAMES OF EQUIPMENT OR MATERIALS SPECIFIED HEREIN SHALL ESTABLISH QUALITY, CAPACITY, TYPE AND DIMENSIONS TO BE INCLUDED IN THE BASE BID.

APPROVAL OF SUBSTITUTED ITEMS WILL BE BASED ON ABILITY AND CAPACITY TO PERFORM FUNCTION SERVED, QUALITY AND AVAILABILITY OF PARTS AND SERVICE, QUALITY OF EQUIPMENT, DELIVERY SCHEDULE, ETC. THE ARCHITECT SHALL REVIEW ALL SUCH REQUESTS BUT RESERVES THE SOLE RIGHT OF JUDGEMENT TO APPROVE OR REJECT THE PROPOSED SUBSTITUTIONS.

ACCEPTANCE OR REJECTION OF PROPOSED SUBSTITUTIONS SHALL NOT CAUSE ADDITIONAL COST. ANY CHANGES OF PIPING, DUCTWORK, ELECTRICAL CONTROLS OR INSTALLATION REQUIRED BECAUSE OF THE SUBSTITUTION OR EQUIPMENT SHALL BE PAID FOR BY THIS CONTRACTOR PROPOSING THE SUBSTITUTION.

7. ERECTION OF APPARATUS

ALL WORK SHALL BE DONE UNDER THE PERSONAL SUPERVISION OF THIS CONTRACTOR WHO SHALL PROVIDE A COMPETENT FOREMAN TO LAY OUT ALL WORK. ALL WORK SHALL BE LAID OUT WITH DUE REGARD FOR THE SPACE REQUIREMENTS OF THE OTHER CONTRACTORS. THIS CONTRACTOR SHALL REPORT ANY CONFLICTS OR DIFFICULTIES IN REGARD TO THE INSTALLATION IMMEDIATELY.

WHERE CROWDED LOCATIONS EXIST OR WHERE THERE IS A POSSIBILITY OF CONFLICT BETWEEN TRADES, THIS CONTRACTOR SHALL MAKE COMPOSITE DRAWINGS SHOWING THE EXACT LOCATIONS OF PIPES, DUCT, CONDUIT AND EQUIPMENT. DRAWINGS SHALL BE BASED ON FIELD MEASUREMENTS AND AFTER CONSULTATION AND AGREEMENT BETWEEN THE TRADES, SHALL BE APPROVED BY ARCHITECT AND ENGINEER BEFORE INSTALLATION OF THE WORK.

EQUIPMENT OF A TYPE TO REQUIRE REPLACEMENT, SERVICING, ADJUSTING OR MAINTENANCE SHALL BE LOCATED TO ALLOW EASY ACCESS AND SPACE FOR REMOVAL OF INTERNAL ASSEMBLIES, IT REQUIRED.

8. EXCAVATION AND BACKFILL

THIS CONTRACTOR SHALL DO ALL EXCAVATION REQUIRED TO INSTALL PIPES AND EQUIPMENT SHOWN ON THE PLANS OR REQUIRED FOR PROPER OPERATION. EXCESS EXCAVATION BELOW THE REQUIRED LEVEL SHALL BE BACKFILLED WITH EARTH AND THOROUGHLY TAMPED. UTILITIES SERVICES LINES SHALL BE INSPECTED AND APPROVED BY THE PROPER INSPECTION AUTHORITY BEFORE BACKFILLING.

INSTALL PLASTIC PIPE AND FITTINGS IN STRICT ACCORDANCE WITH THE INSTALLATION RECOMMENDATIONS OF THE PIPE AND FITTINGS MANUFACTURER, APPENDIX X1 OF ASTM D2265 (STORAGE AND INSTALLATION PROCEDURES FOR PLASTIC DRAIN, WASTE, AND VENT PIPING) AND FOR BURIED PIPE ASTM D2321 (STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS). SUCH INSTRUCTIONS SHALL INCLUDE BUT ARE NOT LIMITED TO CUTTING, SOLVENT CEMENTING AND PRIMING, JOINTS, CONNECTIONS, TRANSITIONS, ALIGNMENT AND GRADE, TRENCHING, BEDDING, BACKFILL AND COMPACTION, SUPPORTS AND SPACING AND ALLOWANCE FOR THERMAL EXPANSION.

CAST IRON PIPING TRENCHING SHALL BE IN ACCORDANCE TO THE CAST IRON SOIL PIPE AND FITTINGS HANDBOOK ISSUED BY THE CAST IRON SOIL PIPE INSTITUTE.

THE BOTTOM OF TRENCHES SHALL BE TAMPED HARD AN GRADED TO SECURE THE REQUIRED FALL. ROCK, WHERE ENCOUNTERED SHALL BE EXCAVATED TO A DEPTH OF SIX INCHES (6") BELOW THE BOTTOM OF THE PIPE, AND BEFORE THE PIPE IS LAID, THE SPACE BETWEEN BOTTOM PIPE AND ROCK SURFACE SHALL BE FILLED WITH GRAVEL. IF TRENCHES ARE DEEPER THAN BOTTOM OF FLOORING OR CLOSER THAN THREE FEET (3'0") TO FOOTING THEY MUST BE FILLED WITH COHESIVE SOIL AND COMPACTED TO 95% OF MAXIMUM DENSITY, STANDARD PROCTOR, ASTM D- 698. ALL OTHER EXCAVATIONS UNDER FLOOR SLABS COMPACTED TO 95% STANDARD PROCTOR.

WHEN EXCESS DIRT HAS BEEN REMOVED, THE TRENCH SHALL BE BROUGHT TO THE REQUIRED LEVEL WITH SAND AND GRAVEL FIRMLY COMPACTED.

TRENCHES AND EXCAVATION SHALL BE BACKFILLED IN 6" LAYERS OF EARTH, FREE FROM CLODS, AND STONES THOROUGHLY TAMPED TO A DEPTH OF 12" ABOVE THE PIPE. AFTER THAT DEPTH HAS BEEN REACHED, BACKFILLING SHALL BE DONE IN 12" LAYERS, THOROUGHLY TAMPED.

THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO ANY DAMAGES OR SAGS TO THE PIPING SYSTEMS THAT OCCUR FROM THE IMPROPER EXCAVATION AND BACKFILL METHODS.

9. EQUIPMENT SUPPORTS

ANY STRUCTURAL STEEL MEMBERS REQUIRED TO ADAPT THE EQUIPMENT AND PIPING AS FURNISHED BY THIS CONTRACTOR, TO THE BUILDING STEEL OR STRUCTURE, SHALL BE INCLUDED IN THE BID OF THE CONTRACTOR FURNISHING THE EQUIPMENT OR PIPING. HANGING OF ALL EQUIPMENT AND REQUIRED SUPPORTING STEEL AND BRACING SHALL BE FURNISHED BY THE CONTRACTOR WHO SUPPLIES THE EQUIPMENT.

10. CUTTING AND PATCHING

THIS CONTRACTOR SHALL INCLUDE ALL CUTTING, PATCHING AND PAINTING OF PATCHED AREAS REQUIRED FOR AND RESULTING FROM THE INSTALLATION OF ALL OF THIS CONTRACTOR'S WORK, EXCEPT WHERE NOTED OTHERWISE.

ALL OPENINGS AROUND PIPE PENETRATIONS THROUGH SMOKE OR FIRE-RATED FLOORS, CEILINGS OR WALLS SHALL BE SEALED AIRTIGHT WITH MATERIAL HAVING A RATING EQUAL TO THE MATERIAL OF THE WALL, CEILING AND/OR FLOOR PENETRATED.

ALL PATCHING SHALL BE NEATLY FINISHED TO THE SATISFACTION OF THE ARCHITECT.

11. ACCESS PANELS

THIS CONTRACTOR SHALL LOCATE AND FURNISH FOR INSTALLATION BY THE GENERAL CONTRACTOR, ALL ACCESS PANELS AS REQUIRED FOR ACCESS TO VALVES, AND THE PROPER SERVICING OF EQUIPMENT AND LINES INSTALLED UNDER THE CONTRACT.

ALL PANELS SHALL BE MILCOR, STYLE "M" FOR MASONRY, "A" FOR ACOUSTICAL TILE AND "K" FOR PLASTER; EXCEPT FOR FIRE-RATED UL 1-1/2 HOUR AND "B" LABEL ACCESS PANELS SHALL BE FURNISHED IN FIRE-RATED WALLS AND CEILINGS AS INDICATED ON THE DRAWINGS. ACCESS DOORS SHALL BE 12" X 12" MINIMUM SIZE FOR VALVES.

12. DIELECTRIC UNIONS

FOR THE PREVENTION OF ELECTROLYTIC CORROSION AT CONNECTIONS BETWEEN PIPE OF DISSIMILAR METALS OR BETWEEN PIPE AND EQUIPMENT CONNECTIONS OF DISSIMILAR METALS, PROVIDE DIELECTRIC UNIONS OR FLANGES.

13. MOTORS, STARTERS AND DISCONNECTS

UNLESS SPECIFIED TO BE FURNISHED WITH EQUIPMENT, ALL MOTOR STARTERS AND DISCONNECT SWITCHES SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR.

14. JOINTS AND FITTINGS

THREADS ON SCREWED PIPE SHALL BE STANDARD, CLEAN BUTT AND TAPERED. PIPE SHALL BE REAMED OF BURRS AND KEPT CLEAN OF SCALE, DIRT AND SHAVINGS. TREADS SHALL BE MADE WITH FLAKED GRAPHITE AND LUBRICATING OIL OR APPROVED PIPE COMPOUND ON THE MALE THREAD ONLY.

COPPER-TO-STEEL AND COPPER-TO-BRASS JOINTS SHALL BE PRESS-CONNECT ALL OTHER COPPER-TO-COPPER JOINTS ABOVE GROUND SHALL BE PRESS-CONNECT. COPPER PIPE SHALL BE CUT SQUARE, BURRS REMOVED AND CARE SHALL BE GIVEN TO KEEP THE LINES FREE OF DIRT AND MOISTURE. ALL TUBING AND FITTINGS SHALL BE THOROUGHLY CLEANED.

UNIONS SHALL BE PROVIDED AT EACH SCREWED VALVE AND UNIONS OR FLANGES AT EACH EQUIPMENT CONNECTION.

15. EXPANSION JOINTS

FURNISH AND INSTALL FLEXONICS EXPANSION JOINTS IN PIPING SYSTEM WHERE SHOWN OR NECESSARY FOR EXPANSION AND CONTRACTION.

EXPANSION JOINTS IN PIPE 4" AND GREATER SHALL BE THE PACKLESS TYPE WITH STAINLESS STEEL BELLOWS AND HAVE WELDED OR FLANGED END. JOINTS SHALL HAVE TRAVERSE AS INDICATED ON THE PLANS. EXPANSION JOINTS SHALL BE OF THE CONTROLLED FLEXING TYPE.

EXPANSION JOINTS IN COPPER PIPE UNDER 4" IN SIZE SHALL BE OF THE COMPENSATOR TYPE CONSTRUCTED OF TWO-PLY STAINLESS STEEL BELLOWS AND CARBON STEEL SHROUDS AND END FITTINGS, INTERNAL GUIDES AND ANTI-TORQUE DEVICES.

EXPANSION JOINTS IN STEEL PIPE UNDER 4" IN SIZE SHALL BE OF THE COMPENSATOR TYPE CONSTRUCTED OF TWO-PLY STAINLESS STEEL ELBOWS AND CARBON STEEL SHROUDS AND END FITTINGS, INTERNAL GUIDES AND ANTI-TORQUE DEVICES.

PROVIDE GUIDES ON EACH SIDE OF EXPANSION JOINT, AT 4 PIPE DIAMETERS, 14 PIPE DIAMETERS, AND A THIRD GUIDE AS RECOMMENDED BY THE MANUFACTURER.

16. PIPE FLEXIBLE CONNECTIONS

FLEXIBLE PIPE CONNECTIONS SHALL BE RESISTOFLEX #R6904 OR APPROVED EQUAL FLEXIBLE CONNECTIONS MADE FROM TEFLON.

PROVIDE FOR MOVEMENT IN PIPING BY USE OF SWING JOINTS AT CONNECTION OF ALL BRANCHES TO MAINS AND RISERS. ALL BRANCHES FROM MAINS AND RISERS SHALL HAVE 1/4" CLEARANCE BETWEEN PIPE INSULATION AND SLEEVE TO PERMIT PIPE MOVEMENT.

17. VALVES

THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL VALVES OF ONE MANUFACTURER, FIGURE NUMBER AND TYPE THROUGHOUT THE ENTIRE INSTALLATION OF THE WORK, UNLESS OTHERWISE SPECIFIED. THE FOLLOWING NUMBERS ARE FROM THE CRANE CATALOG. EQUAL VALVES OF REPUTABLE MANUFACTURERS, SUCH AS HAMMOND, NIBCO-SCOTT AND/OR JENKINS WILL BE CONSIDERED EQUIVALENT.

ALL VALVES SHALL BE BUILT FOR A MINIMUM OF 125 PSIG WORKING PRESSURE.

ISOLATION VALVES SHALL BE PROVIDED ON ALL INDIVIDUAL FIXTURES AND FIXTURE GROUPS.

CHECK VALVES 2-1/2" AND SMALLER SHALL BE COPPER PRESS FITTING. SWING-TYPE WITH BRONZE BODY AND BRONZE TRIM.

BUTTERFLY VALVES 2" AND LARGER SHALL BE #12F, IRON BODY, CAST-IRON WAFER W/LOCK LEVER.

BALL VALVE UP TO 3" IN SIZE SHALL BE APOLLO SERIES #70 BRONZE VALVE WITH CHROME-PLATED BALL AND TEFLON SEAT.

GAS LINE COCKS UP TO 4" SHALL BE #320. 1/2 PSI FOR INDOOR APPLIANCE CONNECTIONS SHALL CONFORM TO ANSI Z21.15 AND CSA 9.1, 5 PSI FOR INDOOR SHUTOFF SHALL CONFORM TO CGA 91-002 AND ASME B16.44

HOSE END VALVES SHALL BE #438 GATE VALVES WITH HOSE END NIPPLES.

18. PIPE SLEEVES AND COLLARS

THIS CONTRACTOR SHALL LAY OUT ALL HIS WORK AND SET SLEEVES IN NEW CONSTRUCTION AS CONCRETE FORMS AND WALL ARE ERECTED SO AS TO BE ABLE TO INSTALL HIS WORK WITHOUT CUTTING OR BREAKING OF FLOORS OR WALLS. ALL SLEEVES FOR INSULATED PIPING SHALL BE LARGE ENOUGH TO ALLOW INSULATION TO PASS THROUGH SLEEVE.

ALL SLEEVES PASSING THROUGH FLOORS WHICH ARE WATERPROOFED SHALL BE COPPER TUBING SLEEVES EXTENDING 1" ABOVE FINISHED FLOOR. ALL OTHER SLEEVES SHALL BE 24 GAUGE GALVANIZED PIPES AND SLEEVES TO BE THOROUGHLY PACKED WITH WATERPROOF SEALANT AND THE REMAINING SPACE FILLED WITH MASTIC AND MUST BE WATERTIGHT.

ALL SLEEVES PASSING THROUGH INNER WALLS SHALL BE STANDARD PIPE THIMBLES EQUAL TO THE THICKNESS OF THE WALL.

SPACES BETWEEN PIPES AND SLEEVES THROUGH OUTSIDE WALLS, ABOVE GRADE, SHALL BE CAULKED WITH CAULKING COMPOUND; THOSE BELOW GRADE SHALL BE MADE WATERTIGHT.

SPACE AROUND ALL PIPING THROUGH FIRE OR SMOKE RATED PARTITIONS OR FLOORS SHALL BE SEALED AIRTIGHT WITH MATERIALS OR EQUIPMENT AS SPECIFIED UNDER FIRESTOPPING.

ALL PIPE PENETRATIONS OF SLABS ON GRADE SHALL BE WRAPPED WITH #15 BUILDING FELTS OR FOAM WRAP.

19. HANGERS

A. PIPE HANGER AND SUPPORT PRODUCTS INSTALLATION
   a. VERTICAL PIPING: MSS TYPE 8 OR 42 CLAMPS.
   b. INDIVIDUAL, STRAIGHT, HORIZONTAL PIPING RUNS: 100 FEET AND LESS: MSS TYPE 1, ADJUSTABLE, STEEL CLEVIS HANGERS. LONGER THAN 100 FEET: MSS TYPE 43, ADJUSTABLE ROLLER HANGERS. LONGER THAN 100 FEET IF INDICATED: MSS TYPE 49, SPRING CUSHION ROLLS.
   c. MULTIPLE, STRAIGHT, HORIZONTAL PIPING RUNS 100 FEET OR LONGER:MSS TYPE 44, PIPE ROLLS. SUPPORT PIPE ROLLS ON TRAPEZE.
   d. BASE OF VERTICAL PIPING: MSS TYPE 52, SPRING HANGERS.

B. SUPPORT VERTICAL PIPING AND TUBING AT BASE AND AT EACH FLOOR.
C. ROD DIAMETER MAY BE REDUCED ONE SIZE FOR DOUBLE-ROD HANGERS, TO A MINIMUM OF 3/8 INCH
D. INSTALL HANGERS FOR ALL PIPING PER MSS SP-69, MANUFACTURERS MANUALS AND AS PER HANGER SUPPORT DETAIL ON DRAWINGS
E. INSTALL SUPPORTS FOR VERTICAL COPPER TUBING EVERY 10 FEET.
F. INSTALL SUPPORTS FOR VERTICAL STEEL PIPING EVERY 15 FEET.
G. SUPPORT PIPING AND TUBING NOT LISTED IN THIS ARTICLE ACCORDING TO MSS SP-69 AND MANUFACTURER'S WRITTEN INSTRUCTIONS.

20. DAMAGE BY LEAKS

THIS CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGES TO THE GROUNDS, WALKS, ROADS, ALL BUILDING COMPONENTS AND FINISHES, PIPING SYSTEMS, ELECTRICAL SYSTEMS AND THEIR EQUIPMENT AND CONTENT, CAUSED BY LEAKS IN THE PIPING SYSTEMS BEING INSTALLED OR HAVING BEEN INSTALLED HEREIN. ALL REPAIRS WILL BE MADE AT THIS CONTRACTOR'S EXPENSE.

21. PIPE MARKERS

FURNISH AND INSTALL BRADY #B-350 THIN FILM OR APPROVED EQUAL PIPE MARKERS. MARKERS SHALL BE 1-1/8" HIGH FOR PIPES 3" AND UNDER AND 2-1/4" HIGH FOR PIPES OVER 3". MARKERS SHALL INDICATE TYPE OF SERVICE AND DIRECTION OF FLOW.

PIPE MARKERS SHALL BE LOCATED:
- AT EQUIPMENT CONNECTIONS
- AT ACCESS DOORS
- AT BRANCH MAINS
- ON ALL ACCESSIBLE PIPE A MAXIMUM OF 75' BETWEEN MARKERS.
- AT ALL PENETRATIONS ON EITHER SIDE OF PENETRATION

22. FLOOR, WALL AND CEILING PLATES

PIPES PASSING THROUGH FLOORS AND FINISHED CEILINGS, FITTED WITH CHROME- PLATED PLATES OR ESCUTCHEONS LARGE ENOUGH TO COMPLETELY CLOSE OPENING AROUND PIPE OR PIPE COVERING AND FLOOR SUPPORT IN THE CASE OF VERTICAL PIPING, SECURELY HELD IN PLACE; CAULK WATERTIGHT AROUND PIPE IN UNFINISHED ROOMS.

23. FIRE STOPPING

THE PENETRATIONS OF FIRE AND/OR SMOKE RATED WALLS OR FLOORS SHALL BE PROTECTED BY A UL APPROVED MATERIAL TO RETAIN THE INTEGRITY OF THE TIME-RATED CONSTRUCTION BY MAINTAINING AS EFFECTIVE BARRIER AGAINST THE SPREAD OF FLAME, SMOKE AND GASES. IT SHALL BE USED IN ALL DUCT CABLE, CONDUIT AND PIPING PENETRATIONS THROUGH FLOOR SLABS AND TIME-RATED WALLS, AND/OR FLOORS. THE RATING OF THE FIRESTOPPING SHALL EQUAL THE RATING OF THE TIME-RATED ASSEMBLY.

FIRESTOPPING MATERIAL SHALL BE 3M FIRE BARRIER SEALING SYSTEM OF APPROVED EQUAL. FIRESTOPPING MATERIAL SHALL CONSTITUTE ONE OR MORE OF THE FOLLOWING PRODUCTS:
- CAULK: CP-25
- PUTTY: #303
- WRAP/STRIP: FS195
- COMPOSITE SHEET: CS195
- PENETRATING SEALING SYSTEMS: 7900 SERIES

INSTALLATION OF FIRESTOPPING SHALL BE INSTALLED IN ACCORDANCE WITH AND IN STRICT CONFORMITY WITH MANUFACTURER'S PRINTED INSTRUCTIONS AS TO SURFACE PREPARATION, INSTALLATION AND QUALITY CONTROL. AREAS OF WORK SHALL REMAIN ACCESSIBLE UNTIL INSPECTION AND APPROVAL BY THE APPLICABLE CODE AUTHORITIES.

ON INSULATED PIPES, THE FIRE-RATING CLASSIFICATION SHALL NOT REQUIRE REMOVAL OF THE INSULATION.

QUALITY ASSURANCE:
SUBMIT MANUFACTURER'S PRODUCT DATA, LETTER OF CERTIFICATION OR CERTIFIED LABORATORY TEST REPORT THAT THE MATERIAL OR COMBINATION OF MATERIALS MEET THE REQUIREMENTS SPECIFIED IN ASTM E814 AND ARE SO CLASSIFIED IN UL'S BUILDING MATERIALS DIRECTORY. MATERIALS SHALL MEET AND BE ACCEPTABLE FOR USE BY ALL MODEL BUILDING CODES. MATERIALS SHALL MEET THE REQUIREMENTS OF NFPM61- LIFE SAFETY CODE AND NFPA 70 NATIONAL ELECTRICAL CODE.
SUBMITTALS:
SUBMIT SHOP DRAWINGS, PRODUCT DATA, CERTIFICATES AND MANUFACTURER'S INSTALLATION INSTRUCTIONS. SUBMIT MANUFACTURER'S PRODUCT DATA FOR ALL MATERIALS AND PREFABRICATED DEVICES, PROVIDING DESCRIPTIONS SUFFICIENT FOR IDENTIFICATION AT THE JOB SITE. INCLUDE MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
SUBMIT SHOP DRAWINGS SHOWING PROPOSED MATERIAL, REINFORCEMENT, ANCHORAGE, FASTENINGS, AND METHOD OF INSTALLATION. CONSTRUCTION DETAILS SHALL ACCURATELY REFLECT ACTUAL JOB CONDITIONS.

24. CLEANUP AND ADJUSTMENT

ALL PARTS WORK LEFT CLEAN: EQUIPMENT, FIXTURES, VALVES, PIPES AND FITTINGS CLEANED OF GREASE AND METAL CUTTINGS. ANY DISCOLORATION OR OTHER DAMAGE TO PORTIONS OF BUILDING, ITS FINISH OR FURNISHING DUE TO THIS CONTRACTORS FAILURE TO PROPERLY CLEAN INTERIOR OF PIPING, REPAIRED AT THIS CONTRACTOR'S EXPENSE. ALL AUTOMATIC CONTROL DEVISES ADJUSTED FOR PROPER OPERATION. ALL SURPLUS MATERIALS AND ANY RUBBISH REMOVED AS IT ACCUMULATES. ALL EQUIPMENT LEFT IN SAFE, PROPER OPERATING CONDITION.
DAMAGE TO ANY PORTIONS MUST BE REPAIRED OF THE PART REPLACED BY THIS CONTRACTOR AND ALL PARTS LEFT WITHOUT DENTS, SCRATCHES, THROUGH THE FINISH PAINT, LOOSE PLASTER, STAINS OR OTHER BLEMISHES.

25. PIPE TESTING AND START-UP

ALL PIPING TO BE TESTED IN ACCORDANCE WITH THE FOLLOWING:
WATER - 100 PSI WATER PRESSURE
ALL TESTING MUST HOLD FOR AT LEAST 24 HOURS WITHOUT LOSS OF PRESSURE OR VACUUM. ALL CONCEALED PIPING SHALL BE TESTED IN THE PRESENCE OF THE OWNERS REPRESENTATIVE PRIOR TO COVERING. BEFORE STARTING ANY SYSTEM, ALL EQUIPMENT SHALL BE LUBRICATED PER MANUFACTURERS REQUIREMENTS BY THIS CONTRACTOR. TEST ENTIRE BUILDING SYSTEMS UNDER FULL LOAD CONDITIONS FOR A PERIOD OF NOT LESS THAT ONE (1) WEEK DURING WHICH TIME THE OPERATING PERSONNEL SHALL BE FULLY INSTRUCTED IN THE OPERATION AND MAINTENANCE OF THE PLANT. AFTER THE PLANT IS IN FULL OPERATION, THIS CONTRACTOR IS TO FURNISH WHATEVER ADDITIONAL SERVICE IS REQUIRED TO RECALIBRATE AND RESET CONTROLS, VALVES, BALANCING COCKS, ETC. TO ENSURE PROPER OPERATION OF THIS SYSTEM.

26. TESTING AND BALANCING

THIS CONTRACTOR SHALL AT THE TIME OF INSTALLATION ENSURE THAT ALL DEVICES TO COMPLETE TESTING AND BALANCING AS DIRECTED HEREIN ARE FURNISHED AND INSTALLED DURING FABRICATION AND INSTALLATION OF WORK. THIS WORK SHALL BE PERFORMED PRIOR TO TURNOVER TO BUILDING OCCUPANT AND WITH AMPLE TIME TO MAKE ANY NECESSARY REPAIRS OR CHANGES TO ACHIEVE A PROPERLY OPERATING SYSTEM.

27. SEISMIC RESTRAINTS ON MECHANICAL EQUIPMENT

ALL PLUMBING EQUIPMENT SHALL BE PROVIDED WITH SEISMIC RESTRAINING SERVICES AS REQUIRED BY LOCAL BUILDING CODES. CONTRACTOR SHALL HAVE LOCAL BUILDING OFFICE REVIEW EACH PIECE OF EQUIPMENT WHEN INSTALLED AND THE CONTRACTOR SHALL INSTALL ALL REQUIRED TIE DOWN, ANCHORS, STRAPS OR OTHER DEVICES REQUIRED.

28. GUARANTEE

THIS CONTRACTOR SHALL GUARANTEE ALL EQUIPMENT, MATERIALS, AND LABOR FURNISHED UNDER THIS CONTRACT TO BE FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION AND SHALL REPAIR OR REPLACE ANY EQUIPMENT OR MATERIAL WHICH IS DEFECTIVE OR IMPROPERLY INSTALLED. IN ADDITION, THIS CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY DAMAGE TO THE BUILDINGS AND ITS CONTENTS OR OTHER EQUIPMENT, CAUSED BY DEFECTS OR IMPROPER INSTALLATION OF EQUIPMENT OR MATERIALS INSTALLED UNDER THIS SECTION OF THE SPECIFICATIONS.

29. TEMPORARY WATER

TEMPORARY WATER SERVICE (IF REQUIRED) TO THE BUILDING SHALL BE PROVIDED BY THIS CONTRACTOR TO THE BUILDING FOR CONSTRUCTION PURPOSES. THIS CONTRACTOR TO MAINTAIN WATER SERVICE AS REQUIRED DURING CONSTRUCTION.

30. DOMESTIC WATER SERVICE

THIS CONTRACTOR SHALL COORDINATE EXACT AVAILABLE DELIVERY PRESSURE AND PROVIDE ALTERNATE FEE FOR A PRESSURE BOOSTING SYSTEM IF PRESSURE IS LESS THAN 65PSI STATIC. PROVIDE PRESSURE REDUCING VALVE WITH STRAINER IN SERVICE LINE IF REQUIRED BY LOCAL CODES OR PRESSURE IS ABOVE 80 PSI.

ALL WATER SUPPLY LINES LESS THAN 1" IN DIAMETER SHALL BE COPPER OR COPPER ALLOY. USE ONLY CAST AND WROUGHT COPPER AND COPPER ALLOY PRESS-CONNECT PRESSURE FITTINGS: ASME B16.51, DO NOT USE SOLDER OR BRAZED CONNECTIONS. PRESS-CONNECT JOINTS: PRESS-CONNECT JOINTS SHALL BE MADE IN ACCORDANCE WITH THE FITTING MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS USING A PRESS-CONNECT TOOL AND JAWS APPROVED FOR USE FOR THE MANUFACTURER'S SPECIFIC FITTING CONFIGURATION. COPPER ALLOY TUBE SHALL BE MECHANICALLY CLEANED AND REAMED PRIOR TO JOINING TO REMOVE ALL BURRS (INTERIOR AND EXTERIOR) AND RESTORE FULL INSIDE DIAMETER AND A SMOOTH, CHAMFERED EXTERIOR SURFACE. FITTINGS SHALL HAVE EPDM SEALING ELEMENTS.

ABOVE GRADE - WHERE FITTINGS ARE PRESS-CONNECT BOTH FITTINGS AND TUBING SHALL BE CLEANED AS DESCRIBED ABOVE. UNDER NO CIRCUMSTANCES SHALL DISSIMILAR METALS COME INTO DIRECT CONTACT WITH COPPER TUBING; E.G., GALVANIZED STRAPPING, HANGERS, OR CLAMPS TO SECURE THE TUBING.

BELOW GRADE, OR FLOOR SLAB ON EARTH OR STONE FILL - PIPING SHALL BE CONTINUOUS WITH NO FITTING OR JOINTS BELOW GRADE.

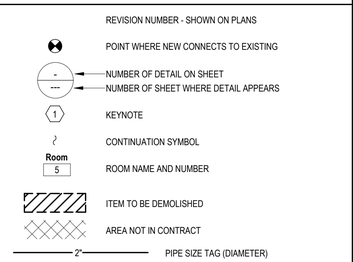
NOTE: WATER PIPE TO BE PROPERLY SECURED AND ALIGNED SO AS NOT TO EXERT VERTICAL OR HORIZONTAL STRESSES ON THE SEATING OF THE MATING (MALE AND FEMALE) SURFACES OF THE UNIONS.

MATERIALS - UNDERGROUND: TYPE "K" COPPER TUBE, SOFT TEMPER
MATERIALS - ABOVEGROUND: TYPE "L" COPPER TUBE, HARD DRAWN.

31. STERILIZATION OF DOMESTIC WATER SYSTEM

THE ENTIRE DOMESTIC WATER DISTRIBUTION SYSTEM SHALL BE FLUSHED CLEAR OF ANY DEBRIS AND THOROUGHLY STERILIZED WITH A SOLUTION CONTAINING NOT LESS THAN 100

GENERAL MECHANICAL SYMBOLS



ABBREVIATIONS

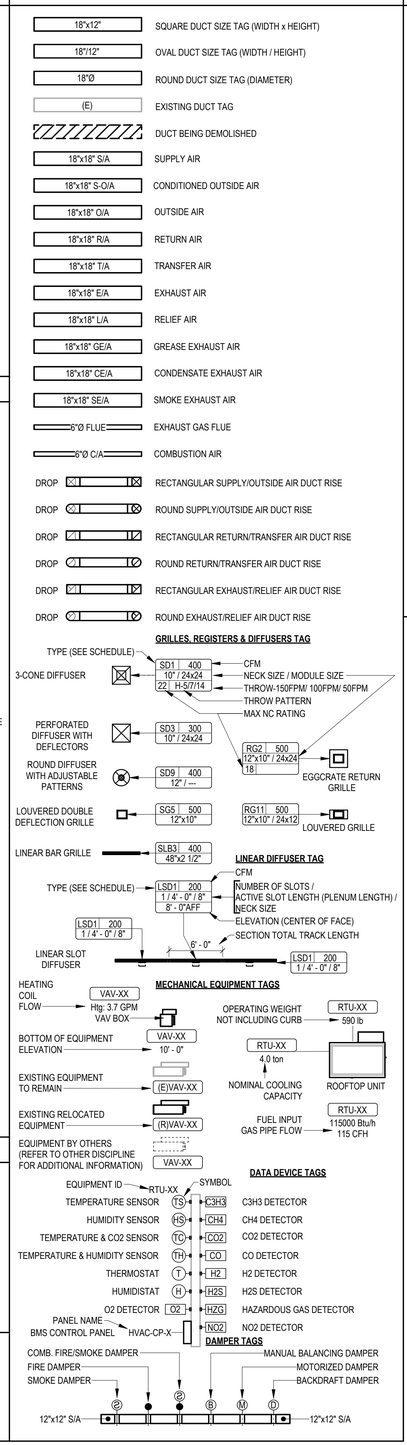
Ø	ROUND	LVR	LOUVER
ABV	ABOVE	LWT	LEAVING WATER TEMPERATURE
AC	AIR CONDITIONING	M/A	MIXED AIR
AD	AREA DRAIN	MAX	MAXIMUM
ADD	ADDENDUM	MBH	ONE THOUSAND BTU PER HOUR
AFF	ABOVE FINISHED FLOOR	MCF	ONE THOUSAND CUBIC FEET
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY	MD	MOTORIZED DAMPER
ALT	ALTERNATE	MECH	MECHANICAL
AP	ACCESS PANEL	MFR	MANUFACTURER
ARCH	ARCHITECT/ARCHITECTURAL	MIN	MINIMUM
BFF	BELOW FINISHED FLOOR	MISC	MISCELLANEOUS
BLW	BELOW	MTR	MOTOR
BTU	BRITISH THERMAL UNITS	MU/A	MAKE-UP/AIR
BTUH	BRITISH THERMAL UNITS PER HOUR	NC	NOISE CRITERIA
CAP	CAPACITY	NC	NORMALLY CLOSED
CB	CATCH BASIN	NIC	NOT IN CONTRACT
CFM	CUBIC FEET PER MINUTE	NO	NUMBER
CLG	CEILING	NO	NORMALLY OPEN
CO	CLEAN OUT	NTS	NOT TO SCALE
CW	COLD WATER	O	OXYGEN
D	DEGREE	O/A	OUTSIDE AIR
DB	DRY BULB	ORD	OVERFLOW ROOF DRAIN
DIA	DIAMETER	PD	PRESSURE DROP
DN	DOWN	PIV	POST INDICATOR VALVE
DW	DISTILLED WATER	PLBG	PLUMBING
EA	EACH	PRESS	PRESSURE
EAT	ENTERING AIR TEMPERATURE	PRV	PRESSURE REDUCING VALVE
ELEC	ELECTRICAL	PSI	POUNDS PER SQUARE INCH
EQUIP	EQUIPMENT	PSIG	POUNDS PER SQUARE INCH GAUGE
EWC	ELECTRIC WATER COOLER	PWR	POWER
EWT	ENTERING WATER TEMPERATURE	R	DUCT RISER
E/A	EXHAUST AIR	R/A	RETURN AIR
EXIST	EXISTING	RCP	RADIANT CEILING PANEL
F	DEGREES FAHRENHEIT	RD	ROOF DRAIN
FCO	FLOOR CLEAN OUT	REC	RECESSED
FD	FLOOR DRAIN	RED	REDUCER
FDC	FIRE DEPARTMENT CONNECTION	RH	RELATIVE HUMIDITY
FL	FLOOR	RL/A	RELIEF AIR
FO	FUEL OIL	RM	ROOM
FOV	FUEL OIL VENT	RPM	REVOLUTIONS PER MINUTE
FOR	FUEL OIL RETURN	RW	RAIN WATER
FOS	FUEL OIL SUPPLY	SF	SQUARE FOOT
FPM	FEET PER MINUTE	S/A	SUPPLY AIR
FS	FLOOR SINK	SAN	SANITARY
FT	FOOT/FEET	SF	SQUARE FOOT
FTR	FIN TUBE RADIATION	SD	SMOKE DAMPER
GAL	GALLON	SM	SURFACE MOUNT
GF	GAS-FIRED	SP	STANDPIPE
GC	GENERAL CONTRACTOR	SP	STATIC PRESSURE
GPM	GALLONS PER MINUTE	STM	STEAM
GW	GREASE WASTE	T	THERMOSTAT
HB	HOSE BIB	TD	TEMPERATURE DROP
HP	HORSE POWER	TDR	TRENCH DRAIN
HTG	HEATING	TEMP	TEMPERATURE
HTR	HEATER	TYP	TYPICAL
HW	HOT WATER	UG	UNDERGROUND
HYD	HYDRANT	VAC	VACUUM
ID	INDIRECT	V	VENT
IN	INCH	VAV	VARIABLE AIR VOLUME
INV	INVERT	VENT	VENTILATION
LB	POUND	VTR	VENT THROUGH ROOF
LB/HR	POUNDS PER HOUR	W	WASTE
LAT	LEAVING AIR TEMPERATURE	WB	WET BULB
LP	LOW PRESSURE	WCO	WALL CLEAN OUT
LPG	LIQUEFIED PETROLEUM GAS	WH	WALL HYDRANT

EQUIPMENT ABBREVIATIONS

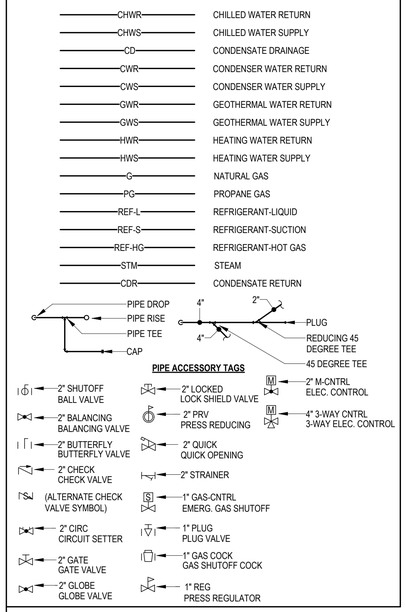
AC	AIR CONDITIONING UNIT	ET	EXPANSION TANK
ACCU	AIR COOLING CONDENSING UNIT	EWH	ELECTRIC WATER HEATER
AHU	AIR HANDLING UNIT	FCU	FAN COIL UNIT
AS	AIR SEPARATOR	FP	FIRE PUMP
B	BOILER	GI	GREASE INTERCEPTOR
CH	CHILLER	GRV	GRAVITY ROOF VENTILATOR
CT	COOLING TOWER	HWP	HEATING WATER PUMP
CUH	CABINET UNIT HEATER	HRU	HEAT RECOVERY UNIT
CHWP	CHILLED WATER PUMP	PRV	POWER ROOF VENTILATOR
DBP	DOMESTIC WATER BOOSTER PUMP	RE	RETURN/EXHAUST FAN
DC	DUCT MOUNTED COIL	RTU	ROOFTOP UNIT
DCP	DOMESTIC WATER CIRCULATING PUMP	SP	SUMP PUMP
EF	EXHAUST FAN	UH	UNIT HEATER
EDC	ELECTRIC DUCT COIL	WH	WATER HEATER

* NOTE *
ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET.THE SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THIS SET OF DRAWINGS.

HVAC SYMBOLS



PIPING SYMBOLS



MECHANICAL GENERAL NOTES

1. DO NOT SCALE DRAWINGS.

2. CONTRACTOR SHALL COORDINATE WORK INDICATED HEREON W/ PLUMBING, ELECTRICAL & FIRE PROTECTION SECTIONS. SUBMIT ¼" SCALE SHOP DRAWINGS FOR DUCT SYSTEMS, DIMENSIONED TO INCORPORATE THE WORK OF OTHER TRADES. INDICATE SPACES RESERVED FOR FIRE SPRINKLER, PIPING & ELECTRICAL CONDUIT MAINS.

3. UNLESS NOTED OTHERWISE, BRANCH DUCTS TO INDIVIDUAL TERMINALS, DIFFUSERS AND GRILLES SHALL BE SAME SIZE AS NECK INLET.

4. PROVIDE EQUIPMENT SCHEDULED OR INDICATED ON THE DRAWINGS BUT NOT INCLUDED WITHIN THE SPECIFICATIONS. INSTALLATION SHALL CONFORM TO MANUFACTURER`S RECOMMENDATIONS AND APPLICABLE CODES. PROVIDE SUBMITTALS.

5. ELECTRICAL CHARACTERISTICS OF MECHANICAL EQUIPMENT SHALL BE VERIFIED WITH ELECTRICAL DRAWINGS PRIOR TO EQUIPMENT ORDER RELEASE. ADDITIONAL ELECTRICAL WORK RESULTING FROM EQUIPMENT SUBSTITUTION IS THE RESPONSIBILITY OF THIS CONTRACTOR.

6. LENGTH OF FLEXIBLE DUCTWORK SHALL BE LIMITED TO 5`-0" MAX. HORIZONTAL RUN WITH ONLY ONE 90 DEG. ELBOW PERMITTED. SECURE FLEXIBLE DUCTWORK WITH SCREWS & DRAW BANDS.

7. DUCT SIZES INDICATED ARE NET INSIDE CLEAR DIMENSIONS.

8. PROVIDE CEILING OPERATIONS FOR INACCESSIBLE M.V.D.`S WHERE INDICATED, EQUAL TO YOUNG REGULATOR, REMOTE FEAR OPERATED, WITH CEILING ESCUTCHEON.

9. ITEM DESIGNATIONS INDICATED HEREON ARE FOR PURPOSES OF THESE DOCUMENTS ONLY. CONTRACTOR SHALL VERIFY W/ OWNERS REPRESENTATIVE ACTUAL "TAGGING" INFORMATION TO BE PROVIDED FOR EACH ITEM OF MECHANICAL EQUIP. PRIOR TO NAMEPLATE ORDER RELEASE.

10. CEILING DIFFUSERS SHALL BE 36" MIN. FROM CEILING MOUNTED SMOKE DETECTORS. COORD. W/ ELECTRICAL DIVISION.

11. SECURE DIFFUSERS & GRILLES TO T-BAR CEILINGS, WHERE APPLICABLE. SUBMIT SHOP DWG. FOR APPROVAL PRIOR TO BEGIN. WORK.

12. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR ACTUAL LOCATION OF GRILLES & DIFFUSERS IN CEILING, AS WELL AS ACCESS DOORS.

13. COORDINATE EQUIP. DIMENSIONS AND LAYOUT W/ PLUMBING SECTION WHERE FLOOR SINKS ARE INDICATED.

14. PIPES PASSING THRU FIRE RATED WALLS & FLOORS SHALL BE SEALED WITH U.L. LISTED MATERIAL EQUAL TO 3M FIRE BARRIER, CAULK OR PUTTY. SEALANT`S RATING SHALL MATCH THE RATING OF THE ASSEMBLY.

15. PROVIDE VALVE TAGS AND PIPE IDENTIFICATION BANDS. TAGS SHALL BE BRASS W/ CHAIN. IDENTIFICATION BANDS SHALL BE LOCATED EVERY 25 FEET AND ON EITHER SIDE OF INTERMEDIATE BARRIER.

16. PROVIDE 18" X 18" MIN. ACCESSIBLE CEILINGS AND WALLS FOR EQUIP. REQUIRING ACCESS OR ADJUSTMENT. COORDINATE LOCATIONS AND SUBMIT TO ARCHITECT FOR APPROVAL PRIOR TO BEGINNING WORK.

17. TURNING VANE RUNNERS SHALL HAVE A VANE IN EVERY SLOT IN STRICT CONFORMANCE WITH MFR. `S INSTRUCTIONS AND SMACNA DUCT CONSTRUCTION STANDARDS.

18. VERIFY FIT DUCTWORK AND PIPING PRIOR TO FABRICATION.

19. INSULATED PIPING EXPOSED TO VIEW (THROUGHOUT THE FACILITY), SHALL BE COVERED FINISHED W/ PVC JACKET EQUAL TO MANVILLE PVC/ PERMA-WELD PIPE JACKETING SYSTEM USING 30 MIL THICK JACKET. FITTINGS, FLANGES VALVES & ACCESSORIES SHALL BE JACKETED. INSTALL PER MFRS. INSTRUCTIONS W/ SEAM ON TOP OF PIPE SO AS NOT TO BE VISIBLE FROM OCCUPIED SPACE.

20. DUCTWORK LOCATED BEL. 7`-6" IN MECHANICAL ROOMS SHALL BE EQUIPPED W/ PADDING MATERIAL ON ALL CORNERS, EDGES & OTHER SURFACES WHICH MAY BE HAZARDOUS.

21. COORDINATE & VERIFY ACTUAL APPROVED EQUIP. DIMENSIONS PRIOR TO POURING EQUIP. PADS

22. DUCT MOUNTED SMOKE DETECTORS SHALL BE ZERO VELOCITY TYPE WHERE INDICATED ON DRAWINGS

23. DRAIN PIPING FROM A/C EQUIPMENT SHALL BE ROUTE SO AS NOT TO CREATE A TRIPPING HAZARD. COORDINATE ACTUAL DRAIN CONNECTIONS WITH PLUMBING SECTIONS. COORDINATE FLOOR SINK LOCATIONS ACCORDINGLY.

24. CONDENSATE DRAIN TRAPS SHALL BE 3" DEEP, MINIMUM.

25. COORDINATE ALL CHASE, SLEEVE AND SLAB BLOCK OUT REQUIREMENTS BEFORE CONCRETE IS POURED OR BLOCK IS SET.

26. PROVIDE ACCESS DOOR IN DUCTWORK UPSTREAM OF EACH REHEAT COIL. DUCTMATE METU ROUND DUCT ACCESS DOOR.

27. DUCTWORK VISIBLE BEHIND DIFFUSERS, RESISTERS, OR GRILLES SHALL BE PAINTED FLAT BLACK.

28. REFER TO EQUIPMENT DRAWINGS, SPECS, & SHOP DRAWINGS FOR CONNECTIONS TO EQUIPMENT.

29. MANUAL VOLUME DAMPERS AND VALES ON INSULATED DUCTWORK AND PIPING SHALL HAVE EXTENDED STEMS TO ALLOW FOR THE INSULATION THICKNESS. PROVIDE MIN. 12" LONG RED RIBBON QUADRANT LOCATOR ON VOLUME DAMPER HANDLES.

30. HVAC EQUIPMENT SHALL BE SEALED OFF, KEPT FREE FROM DEBRIS, AND SHALL REMAIN UNOPERATIONAL DURING CONSTRUCTION FOR ANY REASON. CONTRACTOR SHALL PROVIDE TEMPORARY HEAT AS REQUIRED.

31. THE CONTRACTOR SHALL BRING ERRORS AND OMISSIONS WHICH MAY OCCUR IN THE CONTRACT DOCUMENTS TO THE ATTENTION OF THE ARCHITECT VERBALLY AND IN WRITING. WRITTEN INSTRUCTIONS SHALL BE OBTAINED BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE RESULTS OF ANY ERRORS, DISCREPANCIES OR OMISSIONS IN THE CONTRACT DOCUMENTS, OF WHICH THE CONTRACTOR FAILED TO NOTIFY THE ARCHITECT BEFORE CONSTRUCTION AND/OR FABRICTION OF THE WORK.

HVAC SHEET INDEX

M000	HVAC TITLE SHEET
M001	MECHANICAL SPECIFICATIONS
M002	MECHANICAL SPECIFICATIONS
M100	MECHANICAL FLOOR PLAN
M200	ROOF MECHANICAL PLAN
M400	MECHANICAL DETAILS
M500	MECHANICAL SCHEDULES
SHEET COUNT: 7	

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4/11/2025

STATE OF TEXAS
MATTHEW RICHARD CASE
128362
LICENSED
PROFESSIONAL ENGINEER

PROJECT #:

DRAWN BY: EC CHECKED BY: JT

PERMIT SET - 4/11/2025
1 -
2 -
3 -
4 -
5 -
6 -

SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
HVAC TITLE SHEET

SHEET NUMBER:
M000

GENERAL SPECIFICATIONS

1. SCOPE:

PROVIDE ALL MATERIALS, LABOR, TOOLS AND INCIDENTALS NECESSARY TO INSTALL AND MAKE READY FOR OWNER'S USE COMPLETE SYSTEMS OF HEATING, VENTILATION, AIR CONDITIONING (HVAC), PLUMBING, FOR THE PROPOSED WORK AND BUILDING RENOVATIONS AS SHOWN ON THE DRAWINGS AND CALLED FOR IN THESE SPECIFICATIONS.

VISIT THE SITE TO OBTAIN DIMENSIONS, EXISTING LAYOUTS AND LOCATIONS AND EXISTING CONSTRUCTION DETAILS NOT SHOWN ON THESE DRAWINGS.

THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION WITH OTHER DIVISIONS OF WORK FOR THE FULL EXTENT OF THE SCOPE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL ASPECTS, COMPONENTS, SYSTEMS, ETC. AND ACCOMMODATE THE PERFORMANCE INTENT OF THE CONSTRUCTION DOCUMENTS THROUGHOUT THE PROJECT SCOPE.

2. BIDDERS RESPONSIBILITY:

EXAMINE THE DRAWINGS AND SPECIFICATIONS AND VISIT THE WORK SITE. BECOME FAMILIAR WITH THE CHARACTER OF THE WORK, THE COORDINATION WITH OTHER TRADES REQUIRED, AND ANY OTHER CONDITIONS THAT AFFECT THE COMPLETION OF THIS WORK.

3. PERMITS, CODES AND LAWS:

APPLY FOR ALL PERMITS AND PAY ALL FEES.

ALL WORK SHALL BE IN ACCORDANCE WITH LATEST EDITIONS OF THE FOLLOWING RULES AND REGULATIONS, HEREIN REFERRED TO AS "CODES":

THE LATEST OR ADOPTED EDITION OF THE APPLICABLE LOCAL, STATE, AND FEDERAL BUILDING, MECHANICAL, SANITATION, PLUMBING, ETC. CODES.
UNDERWRITER'S LABORATORIES, INC. (U.L.)
NATIONAL FIRE PROTECTION ASSOCIATION (N.F.P.A.)
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (O.S.H.A)

WHERE ANY OF THESE CODES ARE AT VARIANCE WITH THE DRAWINGS AND SPECIFICATIONS, THEIR REQUIREMENTS SHALL TAKE PRECEDENCE, UNLESS THE DRAWINGS AND SPECIFICATIONS REQUIREMENTS EXCEED THESE CODES. INCLUDE ANY COST NECESSARY TO MEET THESE CODES IN THE BID PRICE.

4. MECHANICAL PLANS:

THE MECHANICAL PLANS ARE DIAGRAMMATIC AND BASED ON ONE MANUFACTURER'S EQUIPMENT. THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION, THE EXACT DIMENSIONS, OR ALL THE DETAILS OF THE EQUIPMENT. VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO BE USED.

INSTALLATION SHALL BE WITHIN THE LIMITATIONS IMPOSED BY THE ARCHITECTURAL, STRUCTURAL, HVAC, ELECTRICAL, AND PLUMBING REQUIREMENTS WITH ADEQUATE SPACE FOR MAINTENANCE.

5. QUESTIONS AND CLARIFICATIONS OF BID DOCUMENTS:

BIDDERS SHALL NOT RELY ON ANY ORAL CLARIFICATION OF THE DRAWINGS OR SPECIFICATIONS. ANY QUESTIONS OR CLARIFICATIONS SHALL BE REFERRED IN WRITING TO THE ARCHITECT.

6. GUARANTEES:

ALL EQUIPMENT, MATERIALS, AND WORKMANSHIP SHALL BE GUARANTEED IN WRITING. WARRANTIES SHALL INCLUDE FACTORY WARRANTIES FOR EACH PIECE OF EQUIPMENT. PROVIDE A CERTIFICATE FOR EACH PIECE OF EQUIPMENT. CLEARLY INDICATE ON EACH WARRANTY CERTIFICATE THE MODEL NO., SERIAL NO., LOCATION, AND OWNER'S NAME UNLESS OTHERWISE REQUIRED BY THE OWNER.

ALL WARRANTIES SHALL BE FULLY TRANSFERABLE TO ANY AND ALL SUBSEQUENT BUILDING AND/OR CONDOMINIUM OWNERS, AND THEIR AGENTS, FOR THE LIFE OF EACH WARRANTY.

BIND THE ORIGINAL COPIES OF WARRANTIES FOR EACH PIECE OF EQUIPMENT IN A RING BINDERS, FOR THE BUILDING AND CONDOMINIUM UNIT, AND TURN OVER TO THE BUILDING OWNER AT FINAL ACCEPTANCE OF THE PROJECT, FOR DISTRIBUTION TO THE CONDOMINIUM OWNERS. ORGANIZE THE WARRANTIES WITHIN THE BINDER USING INDEX AND TABS, AS TO LOCATION WITHIN THE BUILDING.

INCLUDE COPIES OF THESE WARRANTIES IN THE MAINTENANCE MANUALS, SEE OPERATION AND MAINTENANCE MANUAL SPECIFICATION SECTION.

7. COMPLETE SYSTEM:

ALL PRODUCTS, MATERIALS AND ACCESSORIES SHALL BE FURNISHED AND INSTALLED AS REQUIRED FOR A COMPLETE SYSTEM READY FOR OWNER'S BENEFICIAL USE.

8. WORKMANSHIP:

ALL WORK SHALL BE PERFORMED BY COMPETENT MECHANICS USING PROPER TOOLS AND EQUIPMENT TO PRODUCE FIRST QUALITY WORK. ALL WORK SHALL BE NEATLY INSTALLED, ACCESSIBLE FOR MAINTENANCE, AND COMPLETE WITH ALL ACCESSORIES REQUIRED.

9. ACCESSIBILITY:

INSTALL ALL EQUIPMENT AND THEIR APPURTENANCES SUCH AS, BUT NOT LIMITED TO, VALVES, COILS, DRAIN PANS, DRAINS, DAMPERS, CONTROLS, MOTORS, CONTROLLERS, ETC., SO THAT THEY CAN BE SERVICED, RESET, REPLACED OR RECALIBRATED, ETC. INSTALL ALL NECESSARY ACCESS PANELS AND BUILDING ACCESS DOORS, AS BELOW, WHERE REQUIRED TO ACCOMPLISH THIS. IF ANY EQUIPMENT OR COMPONENTS DO NOT FIT WHERE INTENDED, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING, REQUESTING FURTHER GUIDANCE.

PROVIDE BUILDING ACCESS DOORS FOR ALL MECHANICAL EQUIPMENT REQUIRING SERVICE, INCLUDING BUT NOT LIMITED TO, AHU'S, FANS, DAMPERS, DUCT ACCESS PANELS, CONTROLS, PIPING, VALVES, REGULATORS, TRAPS, ETC., INSTALLED ABOVE HARD CEILINGS, BEHIND WALLS, AND BELOW FLOORS, FOR INSTALLATION BY OTHER DIVISIONS OF THE WORK. BUILDING ACCESS DOORS ARE NOT REQUIRED WHERE THE MECHANICAL EQUIPMENT IS INSTALLED ABOVE LAY-IN AND ACCESSIBLE SPLINE CEILINGS. OTHER TYPES OF SPLINE CEILINGS REQUIRE BUILDING ACCESS DOORS.

SIZE THE BUILDING ACCESS DOORS FOR THE USE INTENDED, BUT NOT LESS THAN 12 INCHES BY 12 INCHES. WHERE HUMAN ACCESS IS REQUIRED, PROVIDE 24 INCHES BY 24 INCHES, OR LARGER.

WHERE BUILDING ACCESS DOORS CANNOT BE INSTALLED FOR STRUCTURAL OR ARCHITECTURAL REASONS, NOTIFY THE ARCHITECT.

PRIME COAT BUILDING ACCESS DOORS IN PAINTED AREAS WITH FINISH PAINTING AS SPECIFIED IN OTHER DIVISIONS.

IN WET AREAS, TOILET ROOMS, OR AREAS WITH CERAMIC TILE FLOORS OR WALLS, PROVIDE STAINLESS STEEL BUILDING ACCESS DOORS.

PROVIDE BUILDING ACCESS DOORS WITH A CONCEALED KEY OPERATED LOCK AND CONCEALED HINGES. ALL LOCKS SHALL BE KEYED ALIKE.

PROVIDE BUILDING ACCESS DOORS AS SPECIFIED IN OTHER DIVISIONS OF THE WORK OR PROVIDE MILCOR DOORS, OR EQUIVALENT, SUITABLE FOR THE INSTALLATION INTENDED. PROVIDE FIRE RATED DOORS FOR ALL FIRE RATED WALLS, PARTITIONS, AND CEILINGS.

10. WORK BY OTHER TRADES:

FURNISH ALL SLEEVE FRAMES, BUILDING ACCESS DOORS, PREFABRICATED EQUIPMENT CURBS, ROOF CURBS, ETC. FOR INSTALLATION BY OTHER TRADES.

INSTALL ALL MOTORS AND FURNISH THE STARTING EQUIPMENT AND DISCONNECTS TO THE ELECTRICAL SUBCONTRACTOR FOR INSTALLATION. CONTROL WIRING, INCLUDING SWITCHES, THERMOSTATS, INTERLOCKS, ETC. SHALL BE FURNISHED BY MECHANICAL SUBCONTRACTOR. ENSURE THAT THE ELECTRICAL EQUIPMENT MOUNTED NEAR THE MECHANICAL EQUIPMENT DOES NOT BLOCK ACCESS TO SERVICE AREAS OF THE MECHANICAL EQUIPMENT. DO NOT ALLOW ANY EQUIPMENT TO BE INSTALLED ON THE HVAC EQUIPMENT ENCLOSURES.

11. FIRE STOPPING

ALL PENETRATIONS OF FLOORS AND OTHER FIRE-RATED ASSEMBLIES SHALL BE FIRE AND SMOKE-STOPPED IN STRICT ACCORDANCE WITH THE APPLICABLE CODES.

12. FOUNDATIONS AND SPECIAL SUPPORTS:

FURNISH AND INSTALL ALL SPECIAL FOUNDATIONS AND SUPPORTS REQUIRED FOR EQUIPMENT INSTALLED UNDER THIS SECTION, UNLESS THEY ARE A PART OF THE BUILDING STRUCTURE AND ARE SHOWN IN OTHER SECTIONS.

13. CLEANING AND PAINTING:

THOROUGHLY CLEAN ALL EQUIPMENT AND REMOVE ALL TRASH, CARTONS, ETC. MAKE ANY NECESSARY CORRECTIONS OR REPAIR/REPLACE ANY DAMAGED MATERIALS OR EQUIPMENT. LEAVE THE ENTIRE SYSTEM IN A THOROUGHLY CLEAN AND ORDERLY MANNER.

ANY FINISHED SURFACES THAT HAVE BEEN SCRATCHED OR DISCOLORED SHALL BE TOUCHED-UP OR REPAINTED BREAK TO BREAK WITH PAINT TO MATCH THE ORIGINAL COLOR. TOUCH UP PAINTED SURFACES OR REPAINT THE ENTIRE PAINTED SURFACE IF TOUCH UP IS UNACCEPTABLE. SEE ARCHITECTURAL PAINTING SPECIFICATIONS.

ALL METAL ITEMS SUBJECT TO RUSTING, INSIDE OR EXPOSED TO WEATHER SHALL BE GIVEN ONE COAT OF PROPER TYPE RUST PREVENTATIVE PRIMER AS SOON AS INSTALLED. APPLY TWO FINISH COATS WITH COLOR TO BE SELECTED BY THE ARCHITECT.

FOR ALL INTERIOR OR EXTERIOR STRUCTURAL GALVANIZED STEEL, COLD GALVANIZE ALL EXPOSED METAL CUT ENDS, HOLES, WELDS, SCRATCHES, ETC., OR HOT DIP GALVANIZE THE ENTIRE STRUCTURE OR FRAME AFTER FABRICATION AND MOUNTING HOLES ARE CUT.

UPON COMPLETION OF THE INSTALLATION, BUT NOT BEFORE, AND BEFORE ACCEPTANCE., THOROUGHLY CLEAN ALL EXPOSED EQUIPMENT, PIPING, DUCTWORK, INSULATION JACKETS, ETC., REMOVING ALL STICKERS, LABELS, MARKING, WRITING, FABRICATION MARKINGS, IDENTIFICATION, ADHESIVE, SEALER, GLUE, RUST, CORROSION, ETC., FROM THEIR EXTERIOR SURFACES.

THE CLEANLINESS AND PAINTING ACCEPTABILITY IS AT THE SOLE DISCRETION OF THE ARCHITECT AND MAY REQUIRE ADDITIONAL CLEANING AND COATS OF PAINT BEFORE ANY SURFACE IS ACCEPTED.

14. SUBMITTALS:

SUBMITTAL AND SHOP DRAWINGS:

SUBMIT MANUFACTURER'S CERTIFIED DATA RELATIVE TO ALL EQUIPMENT, PIPING, DUCTWORK, CONTROLS, ETC. REQUIRED FOR THE INSTALLATION OF THE HVAC, PLUMBING AND FIRE PROTECTION SYSTEMS. SUBMIT FOR REVIEW ALL NECESSARY ENGINEERING, PRODUCT AND INSTALLATION DATA, SHOP DRAWINGS, SAMPLES ETC. FOR ALL EQUIPMENT, MATERIAL, AND SYSTEMS TO ASCERTAIN COMPLIANCE WITH THE TECHNICAL REQUIREMENTS OF THE CONTRACT DOCUMENTS.

SUBMIT ELECTRONIC (PDF) COPIES OF ALL NECESSARY DATA, CUTS, MANUFACTURER'S SELECTIONS, CATALOGS, BULLETINS, INSTALLATION INSTRUCTIONS, DRAWINGS, DIAGRAMS, CURVES, ETC. CLEARLY INDICATE ON THE SUBMITTED DATA, THE MANUFACTURER'S NAME, PRODUCT NUMBER(S), OPTIONS, EQUIPMENT CAPACITY, DIMENSIONAL DATA, WEIGHTS, AND OTHER APPLICABLE TECHNICAL DATA FOR THE PROJECT.

TRADE NAMES, MANUFACTURERS, AND CATALOGUE NUMBERS ARE MENTIONED HEREIN AND ON THE DRAWINGS SOLELY IN ORDER TO ESTABLISH A STANDARD FOR THE TYPE, GENERAL DESIGN, AND QUALITY OF PRODUCT REQUIRED. OTHER PRODUCTS SIMILAR IN DESIGN OF EQUIVALENT QUALITY CAPABLE OF FITTING WITHIN THE SPACES ALLOCATED AND COMPLYING WITH THE DRAWINGS AND SPECIFICATIONS WILL BE CONSIDERED AFTER THE CONTRACT IS LET UNLESS "PRIOR APPROVAL" REQUIREMENTS ARE SET FORTH IN THESE DOCUMENTS.

WHERE TWO OR MORE MANUFACTURERS OR MATERIALS ARE NAMED, THE CONTRACTOR MAY SUBMIT ANY OF THOSE NAMES, PROVIDED THEY CONFORM TO THE SPECIFICATIONS AND DESIGN INTENT. CONTRACTOR SHALL INCLUDE WITH THE SUBMITTAL A LIST OF ALL COMPARATIVE FEATURES INDICATING COMPLIANCE WITH THE SPECIFICATIONS.

THE ARCHITECT AND/OR ENGINEER MAY REQUIRE THE SUBMISSION OF SAMPLES, PARTICULARLY WHEREVER EQUIPMENT OR APPLIANCES ARE VISIBLE IN FINISHED AREAS, SUCH AS CEILINGS, INTERIOR AND EXTERIOR WALLS. THE CONTRACTOR AND SUPPLIER SHALL ARRANGE FOR DEMONSTRATIONS OF THE INSTALLATION OF ANY OF THESE PRODUCT'S AND THEIR ABILITY TO PERFORM AS SPECIFIED, IF REQUIRED.

REVIEW OF SUBMITTALS AND SHOP DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR FITTING THE EQUIPMENT IN THE SPACE ALLOTTED WITH SPACE FOR ALL CONNECTIONS AND SERVICING AND FOR THE COORDINATION OF THE WORK WITH WORK OF OTHER TRADES.

THE CONTRACTOR SHALL REVIEW ALL SUBMITTALS AND SHOP DRAWINGS AND INDICATE BY STAMP OR LETTER THAT HE HAS REVIEWED THEM, BEFORE FORWARDING THEM TO THE ARCHITECT AND/OR ENGINEER. SUBMITTALS AND DRAWINGS WILL BE RETURNED AFTER REVIEW INDICATING WHETHER EXCEPTIONS ARE TAKEN, THE SUBMITTAL RETURNED WITH CORRECTIONS, OR IS COMPLETELY REJECTED. RESUBMISSION OF REVISED SUBMITTALS AND SHOP DRAWINGS, IF REQUIRED, SHALL BE DONE BEFORE INSTALLATION AND CONSTRUCTION IS BEGUN.

CORRECTIONS OR COMMENTS MADE ON THE SUBMITTALS AND DRAWINGS DURING THIS REVIEW DOES NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THIS REVIEW IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, FABRICATION PROCESSES, TECHNIQUES OF CONSTRUCTION, COORDINATING THE WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING WORK IN A SAFE AND SATISFACTORY MANNER. REVIEW OF THE SUBMITTALS SHALL NOT PERMIT ANY DEVIATION FROM PLANS AND SPECIFICATIONS.

SUBMITTALS FOR A SPECIFIC CLASS OF PRODUCTS, SYSTEMS, INSTALLATION PROCEDURES, SHOP DRAWINGS, ETC. WILL BE REVIEWED BY THE ENGINEER ONE TIME AND ITS RESUBMITTAL ONE TIME, IF NECESSARY, AS ABOVE, AT NO COST TO THE CONTRACTOR. THE CONTRACTOR WILL BEAR THE FULL COST FOR ALL SUBSEQUENT RESUBMITTAL REVIEWS AT THE ENGINEER'S STANDARD HOURLY RATES. PAYMENT WILL BE REQUIRED AT COMPLETION OF RESPECTIVE REVIEW.

REQUIRED SHOP DRAWINGS:

SUBMIT THE FOLLOWING SHOP DRAWINGS BEFORE ANY MECHANICAL DUCTWORK, PIPING, EQUIPMENT, ETC. IS FABRICATED AND INSTALLED. SUBMIT THESE SHOP DRAWINGS IN 1/4 INCH PER FOOT MINIMUM SCALE WITH NECESSARY PLANS, ELEVATIONS, SECTIONS, DETAILS, AND ISOMETRICS. SUBMIT SIX (6) PAPER COPIES AND ONE (1) CD-ROM WITH ALL THESE DRAWINGS IN AUTOCAD DRAWING DWG FILES, LATEST AUTOCAD FORMAT.

SOON AFTER AWARD OF THE CONTRACT, DETERMINE WHERE THERE MAY BE INSTALLATION, SPACE CONCERNS, AND/OR WHERE OTHER CONFLICTS MAY OCCUR. SUBMIT COORDINATION DRAWINGS, RELATING TO THESE CONFLICTS WITH THE MECHANICAL EQUIPMENT, DUCT, PIPING, ELECTRICAL, STRUCTURAL AND ARCHITECTURAL SYSTEMS ETC., SHOWING CLEARANCES AND RELATIONSHIP TO STRUCTURAL MEMBERS, PIPING, LIGHTS, CONDUITS, ELECTRICAL EQUIPMENT, AND BUILDING COMPONENTS. IN PREPARING THESE SHOP DRAWINGS, ESTABLISH LINES AND LEVELS FOR ALL DIVISIONS OF THE WORK IN THE AFFECTED AREA. IMMEDIATELY CALL TO THE ATTENTION OF THE ARCHITECT ANY INTERFERENCE OR CONFLICT FOR CLARIFICATION IN WRITING.

SUBMIT SHOP DRAWINGS FOR ALL DUCTWORK.

SUBMIT LAYOUT DRAWINGS OF EACH MECHANICAL SYSTEM SHOWING THE LOCATION, ARRANGEMENT, ETC. OF ALL EQUIPMENT, ALL TRADES, ETC. TO BE INSTALLED RELATED TO THE RESPECTIVE SYSTEM.

MAINTAIN DAILY UPDATED DRAWINGS SHOWING DEVIATIONS FROM CONSTRUCTION DOCUMENTS. AT THE END OF THE PROJECT, PROFESSIONALLY PREPARE AS-BUILT DRAWINGS AND SUBMIT THREE COPIES, ONE REPRODUCIBLE.

15. AS-BUILT DRAWINGS:

MAINTAIN DAILY UPDATED DRAWINGS SHOWING DEVIATIONS FROM CONSTRUCTION DOCUMENTS. AT THE END OF THE PROJECT, PROFESSIONALLY PREPARE AS-BUILT DRAWINGS AND SUBMIT THREE COPIES, ONE REPRODUCIBLE.

16. OPERATION AND MAINTENANCE MANUALS:

UPON COMPLETION OF THE PROJECT, SUBMIT THREE COPIES OF ALL OPERATION AND MAINTENANCE MANUALS, WARRANTIES, SPARE PARTS LIST, AS-BUILT DRAWINGS, TEST AND BALANCE REPORTS, AND LETTER OF GUARANTEE ALL BOUND IN THREE RING BINDERS, CLEARLY SHOWING WHICH EQUIPMENT WAS SUPPLIED TO THE JOB.

17. PROJECT COMPLETION:

BEFORE STARTING AND TESTING ANY SYSTEM, HVAC, OR PLUMBING, TO PREVENT INADVERTENT OPERATION OF THE MECHANICAL EQUIPMENT BEFORE THE MANUFACTURER'S INSPECTION AND TESTING, THE CONTRACTOR SHALL:

VERIFY THAT ALL ELECTRICAL POWER IS OFF TO ALL MECHANICAL EQUIPMENT, INCLUDING THE AHU'S, ACCU'S, BOOSTER PUMPS, FIRE PUMPS, ETC.

LOCK OUT EACH SYSTEM USING SETON MODEL NUMBER 70329; "DO NOT OPERATE" LOCK ON LOCKOUT TAGS, OR EQUIVALENT. INSTALL LOCKOUT TAGS AT EACH PIECE OF EQUIPMENT, ELECTRICAL DISCONNECTS, STARTERS, SWITCHES, ETC.

REMOVE THESE TAGS ONLY WHEN THE MANUFACTURER APPROVES OF THE EQUIPMENT INSTALLATION IN WRITING.

EACH MANUFACTURER OR THEIR REPRESENTATIVE SHALL INSPECT THEIR EQUIPMENT FOR COMPLIANCE TO THEIR INSTALLATION REQUIREMENTS AND RECOMMENDATIONS.

IN ADDITION, THE COMPRESSOR MANUFACTURER SHALL INSPECT EACH REFRIGERANT PIPING INSTALLATION FOR ADHERENCE TO THE APPROVED REFRIGERANT PIPING DIAGRAMS, ROUTING.

EACH MANUFACTURER SHALL PREPARE A PUNCH LIST OF ALL DEFICIENCIES, IN WRITING WITH COPIES TO THE ARCHITECT AND CONTRACTOR.

EACH MANUFACTURER SHALL REINSPECT THE EQUIPMENT AFTER THE CONTRACTOR HAS CORRECTED ALL DEFICIENCIES.

WHEN THE MANUFACTURER HAS GIVEN THEIR WRITTEN APPROVAL WITH COPIES TO THE ARCHITECT AND CONTRACTOR, THE CONTRACTOR MAY REMOVE THE LOCKOUT TAGS, SAFELY START, AND TEST THE EQUIPMENT, AS REQUIRED HEREIN.

CONTRACTOR SHALL PROVIDE FOR ALL NECESSARY DRILLING OF WALL STUDS, CEILING JOISTS, PLATES, FINISHES, ETC. TO ACCOMMODATE ROUTING AND INSTALLATION OF ALL PIPING, DUCT, ETC.

18. VALUE ENGINEERING

IF THE OWNER, ARCHITECT, OR CONTRACTOR RETAINS THE SERVICES OF A VALUE ENGINEER (VE) TO REVIEW THESE PLANS PREPARED BY THE CONSULTANT, THESE SERVICES SHALL BE AT THEIR SOLE EXPENSE AND SHALL BE PERFORMED IN A TIMELY MANNER SO AS NOT TO DELAY THE ORDERLY PROGRESS OF THE CONSULTANT 'S SERVICES. THE CONSULTANT SHALL BE NOTIFIED IN WRITING OF THE VE AND THE VE SCOPE OF SERVICES. ALL RECOMMENDATIONS OF THE VE SHALL BE GIVEN TO THE CONSULTANT FOR REVIEW, AND ADEQUATE TIME WILL BE PROVIDED FOR THE CONSULTANT TO RESPOND TO THESE RECOMMENDATIONS.

IF THE CONSULTANT OBJECTS TO ANY RECOMMENDATIONS MADE BY THE VE, IS SHALL SO STATE IN WRITING, ALONG WITH THE REASONS FOR OBJECTING. IF, IN SPITE OF THE CONSULTANT 'S OBJECTIONS, CHANGES IN THE CONSTRUCTION DOCUMENTS ARE ORDERED BY THE OWNER, ARCHITECT, OR CONTRACTOR, THEY AGREE, TO THE FULLEST EXTENT PERMITTED BY LAW, TO WAIVE ALL CLAIMS AGAINST THE CONSULTANT AND TO INDEMNIFY AND HOLD HARMLESS THE CONSULTANT FROM ANY DAMAGES, LIABILITIES OR INCORPORATION OF SUCH DESIGN CHANGES ORDERED.

IN ADDITION, THE CONSULTANT SHALL BE COMPENSATED FOR SERVICES NECESSARY TO INCORPORATE RECOMMENDED VALUE ENGINEERING CHANGES INTO REPORTS, DRAWINGS, SPECIFICATIONS, BIDDING OR OTHER DOCUMENTS. THE CONSULTANT SHALL BE COMPENSATED AS ADDITIONAL SERVICE FOR ALL TIME SPENT TO PREPARE FOR, REVIEW AND RESPOND TO THE RECOMMENDATIONS OF THE VE. THE CONSULTANTS TIME PERFORMANCE OF ITS SERVICES SHALL BE EQUITABLY ADJUSTED.

DIVISION 23 SPECIFICATIONS:

HVAC EQUIPMENT, METHODS AND MATERIALS

19. DUCTWORK GENERAL:

DUCT SIZES SHOWN ON THE DRAWINGS ARE INSIDE DIMENSIONS AND DO NOT TAKE INTO ACCOUNT LINING THICKNESS. DUCTWORK SHALL BE GALVANIZED SHEET METAL WITH GAUGES, CONSTRUCTION DETAILS AND INSTALLATION ACCORDING TO N.F.P.A. STANDARD 90A, ASHRAE, AND SMACNA DUCT CONSTRUCTION MANUALS AND REQUIREMENTS.

PROVIDE FLEXIBLE CONNECTIONS AT AIR HANDLING UNITS AND FANS.

PROVIDE SINGLE THICKNESS TURNING VANES IN ELBOWS.

ALL DUCTS 18" AND OVER SHALL BE CROSSBROKEN.

PAINT DUCTS, SLEEVES, PLENUMS, ETC., INTERIORS VISIBLE THROUGH AIR DEVICES WITH A MINIMUM OF ONE COAT OF PROPER TYPE RUST PREVENTATIVE PRIMER, SUITABLE FOR GALVANIZED STEEL, AND TWO FINISH COATS OF FLAT BLACK PAINT.

20. DUCT CONSTRUCTION MATERIALS:

RECTANGULAR SUPPLY, RETURN, OUTSIDE AIR, AND EXHAUST: LINED GALVANIZED SHEET METAL.
ROUND DUCT AND RUN-OUTS: EXTERNALLY INSULATED GALVANIZED SHEET METAL DUCTS WITH SPIRAL LOCK SEAMS.
FLEXIBLE DUCT: PRE-INSULATED FLEXIBLE DUCT. NO FLEXIBLE DUCT RUNS LONGER THAN 5 FEET.

PROVIDE DRYER VENT PIPING INSTALLED AS REQUIRED BY THE MANUFACTURER AND PER CODE USING 4 INCH ROUND GALVANIZED STEEL, SEALED AND SUPPORTED. THE USE OF FLEXIBLE DRYER VENT PIPE IS PROHIBITED.

21. FABRICATION, ERECTION, AND SUPPORT:

ALL DUCTWORK SHALL BE FABRICATED, ERECTED, BRACED, AND SUPPORTED IN STRICT ACCORDANCE WITH THE LATEST EDITIONS OF SMACNA AND ASHRAE REQUIREMENTS.

22. ACOUSTIC LINED DUCTWORK:

ACOUSTICALLY AND THERMALLY LINE 10' OF RECTANGULAR SUPPLY, RETURN, OUTSIDE AIR, AND EXHAUST DUCT AND PLENUMS WITH 1-1/2" THICK, 1-1/2" PCF FIBERGLASS DUCT LINER (R-6 MIN.), APPLIED PER THE MANUFACTURER'S AND NAIMA REQUIREMENTS. DUCT LINER SHALL MEET OR EXCEED ASHRAE'S I.A.Q. STANDARD 62 AND IEEC. USE WELDED STICK CLIPS, IN LIEU OF ADHESIVE TYPE FASTENERS AND FULL COVERAGE ADHESIVE. PROVIDE EDGE NOSINGS WERE REQUIRED. COAT ALL EXPOSED FIBERGLASS WITH HARDCAST "LAG-GRIP 671".

23. JOINT SEALING:

SEAL ALL DUCT JOINTS AND SEAMS (LONGITUDINAL AND TRANSVERSE) WITH HIGH PRESSURE DUCT SEALER, HARDCAST "IRON-GRIP 601" OR APPROVED EQUIVALENT. REINFORCED FOIL BACKED TAPES, CLOTH OR PLASTIC BACKED TAPES (DUCT TAPE) ARE NOT ACCEPTABLE.

24. FLEXIBLE AIR DUCT:

DUCT SHALL BE UL LISTED UL-181, CLASS I AIR DUCT MATERIAL AND SHALL COMPLY WITH N.F.P.A 90A AND 90B AND ALL LOCAL REQUIREMENTS DUCT SHALL HAVE AN OPERATING AIR PRESSURE OF 6 INCHES WG POSITIVE AND 4 INCHES WG NEGATIVE, ACOUSTICAL DOUBLE LAMINATED INNER FABRIC BONDED TO A STEEL HELIX WIRE. OUTER JACKET FIRE RETARDANT REINFORCED ALUMINUM MYLAR WITH FIBER GLASS INSULATION. FLEXMASTER TYPE "8M" ACOUSTICAL INSULATED OR EQUIVALENT.

MAKE ALL FLEXIBLE DUCT CONNECTIONS TO HARD DUCT USING STAINLESS STEEL SCREW CLAMPING BANDS AND SEALED AIR TIGHT WITH HIGH PRESSURE DUCT SEALER. PLASTIC BANDS ARE NOT ACCEPTABLE.

SEAL FLEXIBLE DUCT VAPOR BARRIER TO HARD DUCT AND/OR ADJACENT INSULATION. NO EXPOSED FIBERGLASS SHALL BE VISIBLE.

25. AIR DISTRIBUTION DEVICES:

COORDINATE THE EXACT LOCATIONS OF ALL AIR DEVICE NEEDS WITH THE ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION. COORDINATE THE EXACT LOCATION OF EACH OUTLET WITH THE ARCHITECT WITH REGARD TO CEILING AND WALL SPACING, CENTERING ALONG SOFFITS, WALLS, ETC.

FURNISH AND INSTALL WHERE SHOWN ON THE DRAWINGS ALL DIFFUSERS, GRILLES, AND REGISTERS OF THE SIZE, TYPE, AND CAPACITY AS INDICATED IN THE AIR DEVICE SCHEDULE.

ELBOWS:

26. TURNING VANES AND SMOOTH RADIUS ELBOW (WITHOUT VANES):

AT ALL DUCT TURNS OF 45 DEGREES OR MORE, PROVIDE SINGLE THICKNESS TURNING VANES PER SMACNA REQUIREMENTS. ALTERNATIVELY, USE SMOOTH RADIUS ELBOW (R/W = 1.5).

27. BRANCH TAKEOFF FITTINGS:

AT ALL MAIN TO BRANCH DUCT TAPS, TAKEOFFS, OR RUN-OUTS PROVIDE 45 DEGREE ENTRANCE TAPS, AS DETAILED BY SMACNA STANDARDS.

28. DUCT MOUNTED ACCESS PANELS:

INSTALL ACCESS PANELS AS FOLLOWS:

AT INLET OF EACH DUCT MOUNTED FIRE AND MOTORIZED DAMPER.

FOR DUCT MOUNTED CONTROLS.

AS REQUIRED AND DIRECTED BY THE TEST AND BALANCE CONTRACTOR.

WHERE REQUIRED FOR DUCT INSPECTION, MAINTENANCE, AND CLEANING.

ACCESS PANELS SHALL BE 18 INCHES X 18 INCHES OR LARGEST DUCT WILL ALLOW. NORMALLY CENTER THE ACCESS PANEL IN THE BOTTOM OF THE DUCT AS CLOSE AS POSSIBLE TO THE DUCT MOUNTED DEVICE. ACCESS PANELS MAY BE INSTALLED ON THE SIDE OF THE DUCT, WHERE NECESSARY.

ACCESS PANELS SHALL BE DOUBLE WALL INSULATED HINGED WITH NEOPRENE GASKETS AND CAM LOCKS ON EACH UNHINGED SIDE. WHERE REQUIRED BECAUSE OF PANEL OPENING CLEARANCE, SUBSTITUTE UNHINGED ACCESS PANELS WITH CAM LOCKS ON EACH SIDE AND CAPTIVE CHAIN. ACCESS PANELS SHALL BE FLEXMASTER "TBSM-TAB DOOR" GREENHECK MODEL "HAD-10", OR EQUIVALENT.

REFRIGERANT PIPING

29. GENERAL

REFRIGERANT PIPING SHALL CONFORM TO THE REQUIREMENTS OF THE SAFETY CODES FOR MECHANICAL REFRIGERATION AND REFRIGERANT PIPING AND THE MANUFACTURER REQUIREMENTS.

RUN ALL PIPING SQUARE TO BUILDING LINES WHEREVER POSSIBLE. FIELD ROUTE PIPING IN ORDER TO PROVIDE FOR EASE OF ACCESS TO VALVES AND OTHER APPURTENANCES.

SUPPORT INTERIOR PIPING FROM THE BUILDING STRUCTURE USING COPPER OR PVC COATED HANGERS. SUPPORT REFRIGERANT PIPING 4 FOOT ON CENTER AND AT EACH CHANGE OF DIRECTION. PROVIDE 4" WIDE INSULATION SADDLES.

SUBMIT REFRIGERANT PIPING LAYOUT SHOP DRAWINGS FOR EACH UNIQUE SYSTEM, REVIEWED AND APPROVED BY THE MANUFACTURER, IN WRITING. SHOW ALL FILTERS, DRIERS, SIGHT-GLASSES, VALVES, ETC. AS REQUIRED BY THE MANUFACTURER.

30. MATERIAL AND INSTALLATION

USE REFRIGERANT GRADE, TYPE "K" HARD DRAWN COPPER PIPE WITH LONG RADIUS ELBOWS. NO CAST FITTINGS ARE ACCEPTABLE.

INSTALL FILTER DRIER EQUIVALENT TO SPORLAN CATCH-ALL.

INSTALL SIGHT GLASSES WITH MOISTURE INDICATORS COVERED BY A PROTECTIVE CAP. LOCATE THE SIGHT GLASSES INSIDE THE BUILDINGS, CLOSE TO THE FAN COIL IN THEIR RESPECTIVE MECHANICAL CLOSETS.

PROVIDE EXTERNAL FRONT SEATED BRASS SERVICE VALVES WITH SWEAT CONNECTIONS, WITH SERVICE PORTS FOR CHECKING OPERATING REFRIGERANT PRESSURES.

COPPER SHALL BE CLEANED AND SHINED BEFORE BRAZING. BRAZE USING J.W. HARRIS "DYNAFLOW" 6% SILVER BRAZING ALLOY.

31. PURGING

PIPING SHALL BE PURGED WITH DRY NITROGEN WHILE BRAZING TO PREVENT OXIDATION. UPON COMPLETION OF A WELD, THE WELD SHALL BE WIPED WITH A DAMP RAG TO REMOVE FLUX WHILE STILL HOT.

32. TESTING

ALL PIPING SHALL BE TESTED FOR 24 HOURS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE AND PROVEN TIGHT:

DISCHARGE AND LIQUID REFRIGERANT PIPING--300 PSIG, NITROGEN.

SUCTION REFRIGERANT PIPING--150 PSIG NITROGEN.

REFRIGERANT PIPING, AFTER PROVEN TIGHT, SHALL BE EVACUATED BY MEANS OF AN APPROVED VACUUM PUMP TO A VACUUM OF 2.5 MM HG ABSOLUTE. SYSTEMS SHALL STAND UNDER VACUUM WITH VACUUM PUMP OFF FOR A MINIMUM OF 12 HOURS. SYSTEMS MAY BE CHARGED WITH PROPER REFRIGERANT AFTER ARCHITECT'S APPROVAL OF VACUUM TEST. A DEHYDRATOR SHALL BE USED IN CHARGING H

GENERAL SPECIFICATIONS (CONTINUED)

40. AGENCY QUALIFICATIONS:

TEST & BALANCE AGENCY (TBA) SHALL BE PERFORMED BY AN INDEPENDENT AGENCY ENGAGED SOLELY IN TEST AND BALANCE WORK. AGENCY SHALL BE MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR NATIONAL ENVIRONMENTAL BALANCING BUREAU, (NEBB).

SUBMIT A WRITTEN REPORT WITHIN 30 DAYS OF COMMENCING WORK, WITH ANY RECOMMENDED CHANGES TO INSURE BALANCING CAPABILITY.

SUBMIT A DETAILED TEST PLAN TO THE ARCHITECT ILLUSTRATING ALL FORMATS, DRAWINGS, AND TEST PROCEDURE TO BE USED FOR TESTING THE COMPLETED SYSTEM. THE APPROVED PLAN WILL BE USED FOR TESTING THE SYSTEMS. PROCEDURES SHALL INCLUDE REQUIREMENTS LISTED IN AABC / NEBB STANDARDS, LATEST EDITION AND ANY SPECIAL REQUIREMENTS FOR THIS PROJECT.

MAKE PROJECT VISITS AS REQUIRED DURING CONSTRUCTION PERIOD INSPECTING FOR PROPER INSTALLATION OF THE SYSTEM AND RELATED BALANCING DEVICES. PROJECT VISIT REPORTS SHALL BE MADE TO THE ARCHITECT IN WRITING.

41. CONTRACTORS REQUIREMENTS PRIOR TO TEST & BALANCE:

THE CONTRACTOR SHALL PERFORM ALL REQUIRED PRELIMINARY TESTS AND OTHER PREPARATORY WORK, INCLUDING BUT NOT LIMITED TO:

MAKE SURE ALL FANS ARE OPERATING, CHECK ROTATION, RPM, AND AMPS.
CHECK ALL DAMPERS FOR OPERATION.
PUT ALL HVAC EQUIPMENT IN FULL OPERATION INCLUDING AIR UNITS, ACCU'S AND FANS.
MAKE SURE ALL HVAC CONTROLS ARE INSTALLED AND FULLY OPERATIONAL.
CLEAN/REPLACE FILTERS JUST PRIOR TO TESTING.
PROVIDE ALL BALANCING DEVICES AND DRIVE CHANGES THAT ARE DEEMED NECESSARY BY T & B AGENCY FOR BALANCE AT NO ADDITIONAL COST TO THE OWNER.

42. TEST AND BALANCE:

TEST & BALANCE AGENCY SHALL BALANCE ALL AIR SYSTEMS FOR OPERATION WITHIN DESIGN CRITERIA. PRIME MOVERS SHALL BE WITHIN 5% OF DESIGN AND TERMINALS WITHIN 10% OF DESIGN.

AIR SYSTEMS SHALL BE BALANCED AS DESCRIBED HEREIN.

43. TEST REPORT:

THE TBA SHALL PROVIDE AN ELECTRONIC (PDF) COPY OF A FINAL COMPREHENSIVE TEST REPORT IN THE FOLLOWING FORMAT.

REPORT SHALL BE BOUND 8-1/2 X 11" WITH SUBSTANTIAL COVERS USING APPROVED FORMS, TYPED OR COMPUTER GENERATED REPORTS ARE ACCEPTABLE.

REPORT SHALL BE INDEXED.

TABLE OF CONTENTS SHALL LIST ALL REPORTS.

ALL AIR OUTLETS SHALL BE LOCATED ON CODED DRAWINGS PREPARED BY THE T&B AGENCY. AIR OUTLETS FORMS SHALL BE PREPARED AND CORRELATED TO THE CODED DRAWINGS.

TEST SUMMARY SHALL DESCRIBE FINAL TEST PROCEDURES AND SPECIAL CONDITIONS DURING TESTS (SUCH AS THERMOSTAT OUTSIDE/RETURN AIR RELATIONSHIP, AND DUCT STATIC PRESSURE.

DESCRIBE OTHER DATA THAT MAY ASSIST OPERATING PERSONNEL IN THE CONTINUING OPERATION OF THE SYSTEM.

T&B CONTRACTOR SHALL TAKE AND RECORD ALL NECESSARY READINGS AT THE FINAL BALANCE POINTS, SUCH AS BUT NOT LIMITED TO: AIR QUANTITIES, PRESSURES, SETPOINTS, ENTERING AND LEAVING COIL TEMPERATURES, SPACE INDOOR AND OUTSIDE WET AND DRY BULB TEMPERATURES, OUTDOOR WEATHER CONDITIONS, ELECTRICAL READINGS OF ALL NEW AND EXISTING MOTORS, COMPRESSORS, ETC.

TEST REPORT SHALL CONTAIN TBA CERTIFICATION OF TEST DATA AND SYSTEM CONDITIONS.

SUBMIT THE TEST REPORTS, FOR REVIEW, BEFORE SUBSTANTIAL COMPLETION.

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4/11/2025

STATE OF TEXAS
MATTHEW RICHARD CASE
128362
LICENSED
PROFESSIONAL ENGINEER

PROJECT #:

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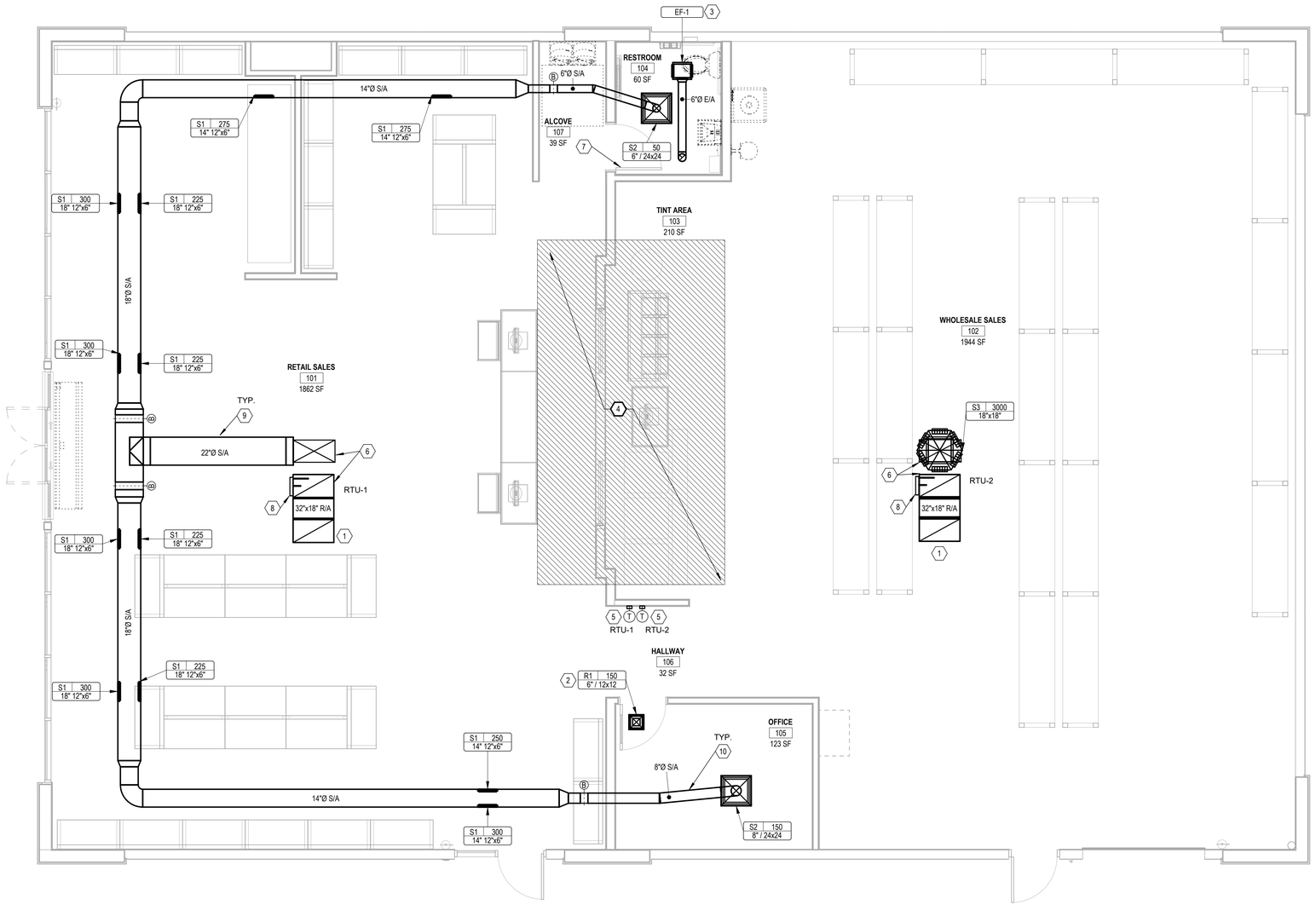
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:

MECHANICAL
SPECIFICATIONS

SHEET NUMBER:

M002



1 M100 MECHANICAL FLOOR PLAN
1/4" = 1'-0"

GENERAL NOTES

1. MECHANICAL DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS. CERTIFIED EQUIPMENT DRAWINGS AND FROM THE STRUCTURE ITSELF BEFORE FABRICATING ANY WORK. VERIFY ALL SPACE REQUIREMENTS COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT EXTRA CHARGES TO THE OWNER.

2. CONTRACTOR SHALL COORDINATE WORK INDICATED WITH PLUMBING, ELECTRICAL, FIRE PROTECTION, STRUCTURAL, AND ARCHITECTURAL DIVISIONS. SUBMIT 1/4" SCALE SHOP DRAWINGS FOR MECHANICAL SYSTEMS, DIMENSIONED TO INCORPORATE THE WORK OF OTHER TRADES. INDICATE SPACES RESERVED FOR PLUMBING PIPING, MECHANICAL PIPING, MECHANICAL DUCTWORK, & ELECTRICAL CONDUIT MAINS. VERIFY FIT OF MECHANICAL SYSTEMS PRIOR TO FABRICATION. COORDINATE ALL CHASE, SLEEVE, AND SLAB BLOCKOUT REQUIREMENTS BEFORE CONCRETE IS POURED OR BLOCK IS SET.

3. BOTTOM OF ALL DUCTWORK SHALL NOT BE LOWER THAN 12'-0" AFF. AND SHALL BE INSTALLED TIGHT TO BOTTOM OF TRUSSES/STRUCTURE

4. FURNISH AND INSTALL GALVANIZED STEEL DUCTWORK, SIZES AS NOTED ON DRAWINGS. SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS. SEE ARCHITECTURAL DRAWINGS FOR EXTERNAL FINISH. SUSPEND WITH AIRCRAFT CABLE.

MECHANICAL KEYNOTES

#	
1	INSTALL TWO 90° ELBOWS WITH TURNING VANES TO TURN DUCT UP TOWARDS STRUCTURE. TERMINATE RA DUCT WITH 1/2" WIRE MESH APPROX. 18" BELOW STRUCTURE.
2	INSTALL RETURN GRILLE IN OFFICE CEILING AS SHOWN. LEAVE OPEN TO SPACE ABOVE CEILING.
3	NSTALL EF-1 IN BATHROOM CEILING AS SHOWN. ROUTE 6" DUCT FROM FAN UP THROUGH ROOF ABOVE. TERMINATE WITH RAINCAP AND BIRDSCREEN. VERIFY LOCATION IN FIELD.
4	DO NOT INSTALL ANY DUCTWORK, PLENUMS, ETC. IN THIS AREA.
5	FURNISH AND INSTALL 24/7 PROGRAMABLE THERMOSTAT WITH AUTO CHANGEOVER AND RELATED WIRING TO CONTROL ROOFTOP UNIT. MOUNT AT 42" AFF IN LOCATION SHOWN. THERMOSTAT TO BE HONEYWELL VISIONPRO 8000 WITH REDLINK OR APPROVED EQUAL. VERIFY FINAL MOUNTING LOCATION WITH OWNERIARCH. VERIFY PROPER OPERATION IN FIELD. PROVIDE 100' T-STAT WIRE.
6	33"x18" SA AND 32"x18" RA DOWN FROM RTU ON ROOF. SEE ROOF PLAN ON SHEET M200. OR FULL SIZE DROP FROM FLANGED CONNECTIONS AT RTU BASE & THROUGH RTU ROOF CURB.
7	GENERAL CONTRACTOR TO UNDERCUT DOOR 3/4" ABOVE THRESHOLD FOR TRANSFER AIR.
8	FURNISH AND INSTALL RETURN DUCT MOUNTED SMOKE DETECTOR. UPON DETECTION OF SMOKE, DETECTOR SHALL SHUT DOWN UNIT. COORDINATE WIRING REQUIREMENTS WITH ELECTRICAL CONTRACTOR. PROVIDE WITH VISUAL OR AUDIBLE SIGNAL AT AN APPROVED LOCATION. SMOKE DETECTOR SHALL ACTIVATE VISIBLE OR AUDIBLE SIGNAL AT REMOTE ANNUNCIATOR WITHIN 5' OF THE MAIN SERVICE ENTRANCE, INSTALLED BETWEEN 42" AND 48" AFF THAT IDENTIFIES THE ACTIVATION OF THE DUCT SMOKE DTECTOR TORUBLE CONDITIONS (EG ELECTRICAL FAILURE, DISCONNECTED DEVICE, GORUND FAULT) SHALL ACTIVATE AUDIBLE AND VISIBLE ALARM AND SHALL BE IDENTIFIED AS "AIR DUCT DETECTOR TROUBLE".
9	PROVIDE SPIRAL DUCT, DIMENSIONS SHOWN ARE CLEAR INSIDE DIMENSIONS. PROVIDE DOUBLE WALL DUCT AND 1" THICK INSULATION. CONCEALED DUCTWORK TO BE EXTERNALLY INSULATED WITH A MINIMUM OF R-6 INSULATION.
10	FLEX DUCT SHALL NOT BE USED IN LIEU OF RIGID ELBOWS OR FITTINGS.

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4/11/2025

STATE OF TEXAS
MATTHEW RICHARD CASE
128362
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PROFESSIONAL ENGINEER

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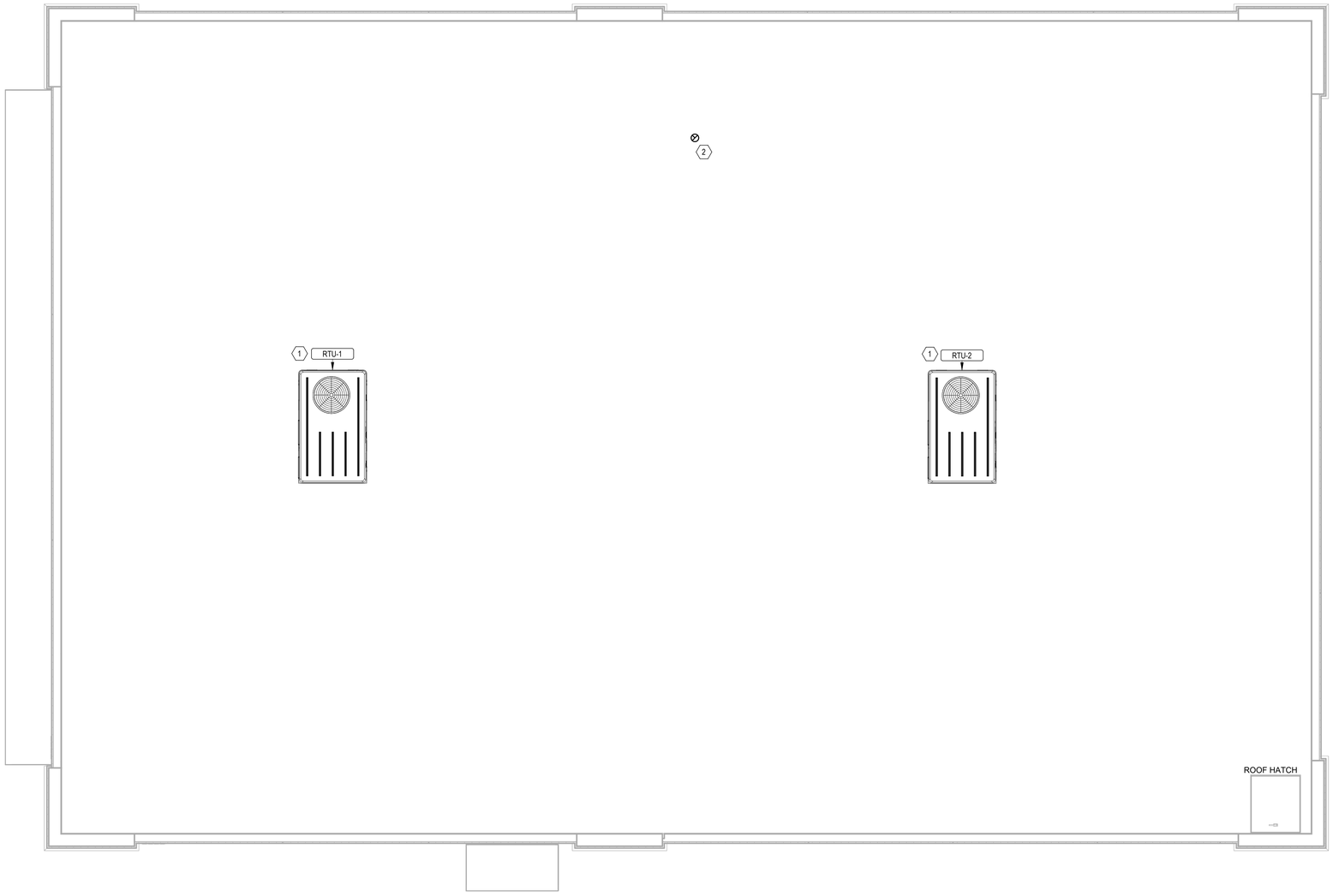
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ADDRESS:
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SHEET TITLE:
MECHANICAL FLOOR PLAN

SHEET NUMBER:
M100



1 M200 MECHANICAL ROOF PLAN
1/4" = 1'-0"

GENERAL NOTES

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MECHANICAL KEYNOTES

#	
1	INSTALL RTU IN LOCATION SHOWN PER MANUFACTURE'S SPECIFICATIONS. ROUTE FULL DIAMETER CONDENSATE DRAIN TO NEAREST ROOF DRAIN OR GUTTER. RTU LOCATIONS ARE APPROXIMATE. ACTUAL LOCATIONS ARE TO BE VERIFIED WITH STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
2	EXHAUST FAN DUCT UP THROUGH ROOF TO APPROVED VENT CAP & BIRDSCREEN. SEE DETAIL 2/M400.

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SHEET TITLE:
ROOF MECHANICAL PLAN

SHEET NUMBER:
M200

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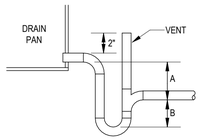
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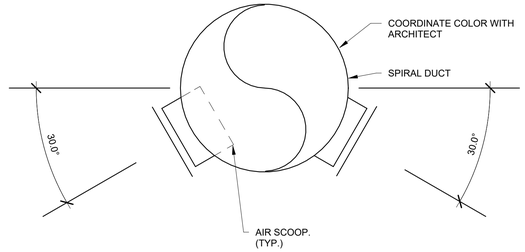
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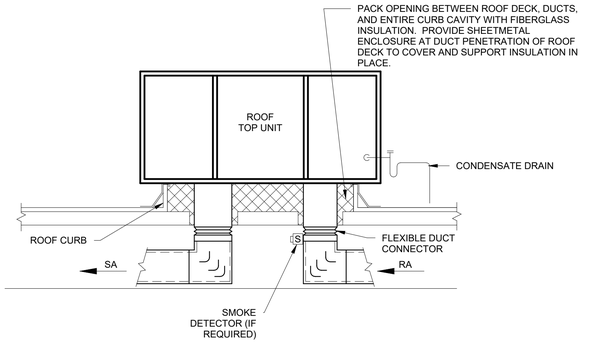


A= SCHEDULED FAN STATIC PLUS ONE INCH
B= 1/2 OF SCHEDULED FAN STATIC

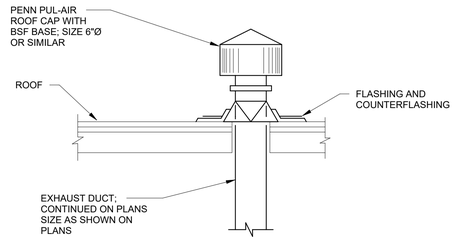
5 M400 CONDENSATE DRAIN DETAIL
NO SCALE



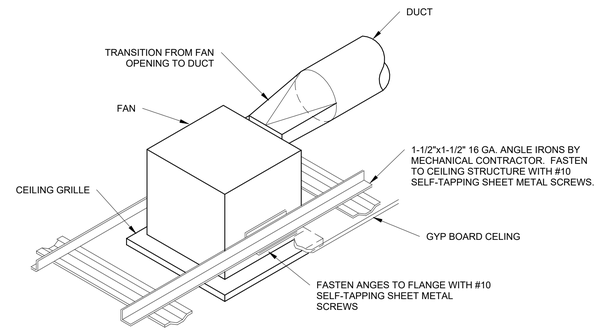
4 M400 SPIRAL DUCT DIFFUSER TAKE OFF DETAIL
NOT TO SCALE



3 M400 ROOFTOP UNIT DETAIL
NOT TO SCALE



2 M400 EXHAUST THROUGH ROOF DETAIL
NOT TO SCALE



1 M400 CEILING EXHAUST FAN DETAIL
NOT TO SCALE

SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:

1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:

MECHANICAL DETAILS

SHEET NUMBER:

M400

ROOFTOP UNIT SCHEDULE (ELECTRIC HEATING - DX COOLING)

TAG	MANUFACTURER/ MODEL	LOCATION/ SERVICE	UNIT TON	SUPPLY FAN					ELECTRIC HEATING CAPACITY				COOLING CAPACITY					EFFICIENCY (IEER)	MCA	MOCP	VOLT/PH/HZ	WEIGHT* (LBS)	OVERALL DIMENSIONS	NOTES
				TOTAL CFM	OUTDOOR AIR CFM	SUPPLY ESP (IN W.C.)	DRIVE	MAX FAN MOTOR RPM	HEATING KW	OUTPUT (MBH)	EAT	LAT	TOTAL MBH	SENSIBLE MBH	EER	EAT (DB/WB)	LAT (DB/WB)							
RTU-1	TRANE/ TSK102	ROOF/ SALES AREA	8.5	3400	576	0.89	DIRECT	1225	36	122.9	62.4	95.86	105.96	92.1	11.20	78.76/64.68	53.68/53.2	14.8	121	125	208/3/60	1100	SEE MANUF.	1-7
RTU-2	TRANE/ TSK090	ROOF/ WHOLESALE AREA	7.5	3000	600	0.81	DIRECT	1118	36	122.9	61.04	98.97	94.3	73.4	11.20	79.45/65.06	56.8/56.3	14.8	121	125	208/3/60	1000	SEE MANUF.	1-7

OR EQUIVALENT BY OTHERS

NOTES:

1. FURNISH AND INSTALL ROOFTOP UNIT. PROVIDE WITH 100% OA ECONOMIZER WITH INTEGRATED DIFFERENTIAL ENTHALPY CONTROLS, 2" MERV 8 FILTERS, MODULATING OA DAMPER, STANDARD EFFICIENCY UNIT, TWO STAGE COOLING, TWO STAGE HEATING, SINGLE ZONE VAV OPERATION, BAROMETRIC RELIEF, COIL HAIL GUARD, AND MANUF. RECOMMENDED ROOF CURB. VERIFY LOCATION IN FIELD WITH STRUCTURAL ENGINEER.
2. VERIFY ELECTRICAL VOLTAGE WITH ELECTRICAL CONTRACTOR PRIOR TO ORDERING EQUIPMENT.
3. PROVIDE WITH 24/7 PROGRAMABLE THERMOSTAT. THERMOSTAT TO BE HONEYWELL VISIONPRO 8000 WITH REDLINK OR APPROVED EQUAL. SEE FLOOR PLAN FOR MORE INFORMATION.
4. PROVIDE WITH RA MOUNTED SMOKE DETECTOR WITH UNIT CONTROLS AND WIRE TEST STATION INSTALLED PER LOCAL CODE.
5. PROVIDE WITH ETL OR UL LISTED NON-FUSED DISCONNECT SWITCH.
6. PROVIDE UN-POWERED CONVENIENCE OUTLET TO BE WIRED ON SEPERATE CIRCUIT BY ELECTRICAL CONTRACTOR.
7. FAN MOTORS ARE TO BE PROVIDED WITH NEMA PREMIUM EFFICIENCY MOTORS RATED.

*WEIGHT INCLUDES WEIGHT OF ADDED ACCESSORIES

FAN SCHEDULE

TAG	MANUFACTURER/ MODEL	LOCATION/ SERVICE	CFM	ESP (IN. WC)	AMPS	VOLT/HZ/ PHASE	WEIGHT (LBS)	OVERALL DIMENSIONS	METHOD OF CONTROL	NOTES
EF-1	GREENHECK/ SP-A125	CEILING/ RESTROOM	100	0.25	0.62	115/60/1	17	SEE MANUF.	LIGHT SWITCH	1-2

OR EQUIVALENT BY COOK, ACME, AND S&P

NOTES:

1. PROVIDE WITH BACKDRAFT DAMPER, ROOF PORTAL, TALL FLASHING CONE, STORM COLLAR, RAINCAP AND BIRDSCREEN.
2. INTERLOCK OPERATION WITH LIGHT SWITCH.

GRILLE, DIFFUSER, AND REGISTER SCHEDULE

TAG	USE	PATTERN	ACCESSORIES	FINISH	MAKE & MODEL	REMARKS
S1	SPIRAL DUCT DIFFUSER	AS SHOWN	AIR SCOOP	BY ARCH	PRICE SDG	NOMINAL SIZE VARIES, SEE DRAWINGS
S2	CEILING DIFFUSER	4-WAY	O.B.D.	BY ARCH	PRICE SCD	24"x24" FACE NECK SIZE VARIES, SEE DRAWINGS
S3	CONCENTRIC DIFFUSER	6-WAY	NA	BY ARCH	UNITEC ENERTECH DPD6-7.5T	12"x6" GRILLE SIZE 3000 CFM
R1	CEILING RETURN GRILLE	N/A	RA BOOT	BY ARCH	PRICE PDDR	12"x12" FACE NECK SIZE VARIES, SEE DRAWINGS

OR EQUIVALENT BY TITUS, KRUEGER, METAL-AIRE, OR NAILOR

NOTES:

1. UNLESS SPECIFICALLY INDICATED ON PLANS, GRILLE, REGISTER AND DIFFUSER RUN-OUT SIZES ARE AS FOLLOWS:

RUN-OUT	CFM
4"Ø	<40
6"Ø	41-100
8"Ø	101-210
10"Ø	211-375
12"Ø	376-600
14"Ø	601-910

OUTDOOR AIR VENTILATION SCHEDULE

Room Name-Number	Served By:	Floor Number:	Occupancy Category	Area (sq.ft.)	People Outdoor Air Rate CFM/Person Table 403.3.1.1	Area Outdoor Airflow Rate CFM/Ft2 Table 403.3.1.1	Default Occupant Density Per Table 403.3.1.1 (People/ 1000 Ft2)	Area Outdoor Air	Zone Population 0* Az/1000	Occupant Outdoor Air	Breathing Zone Outdoor Air	Zone Air Distribution Effectiveness Table 403.3.1.1.1.2	Zone Outdoor Air Req'd	Zone Outdoor Air Provided	Supply Air Design
				Az	Rp	Ra	O	Ra*Az	Pz	Rp*Pz	Vbz=RpPz+RaAz	Ez	Voz=Vbz/Ez	Voz	Vpz
RETAIL SALES - 101	RTU-1	1	SALES	1864	7.5	0.12	15	224	28	210	433	0.8	542	542.12	3200
WHOLESALE AREA - 102	RTU-2	1	SALES/STORAGE	1944	7.5	0.12	15	233	29	219	452	0.8	565	600.00	3000
TINT AREA - 103	RTU-2	1	SALES/STORAGE	210	7.5	0.12	15	25	3	24	49	1.8	27	0.00	0
RESTROOM - 104	RTU-1	1	RESTROOM	60	0	0	0	0	0	0	0	0.8	0	8.47	50
OFFICE - 105	RTU-1	1	OFFICE	123	5	0.06	5	7	1	5	12	0.8	15	25.41	150
HALLWAY - 106	RTU-2	1	CORRIDOR	32	0	0.06	0	2	0	0	2	1.8	1	0.00	0
ALCOVE - 107	RTU-1	1	CORRIDOR	39	0	0.06	0	2	0	0	2	2.8	1	0.00	0
												TOTAL	1151	1176	6400

PER IMC 2021

An entry of "0" indicates "not required per code"

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4/11/2025

STATE OF TEXAS
MATTHEW RICHARD CASE
128362
LICENSED
PROFESSIONAL ENGINEER

PROJECT #:

DRAWN BY: EC CHECKED BY: JT

PERMIT SET - 4/11/2025

1 -
2 -
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5 -
6 -

SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
MECHANICAL SCHEDULES

SHEET NUMBER:
M500

SYMBOL LEGEND

LIGHTING, BATTERY BACK-UP AND LIGHTING CONTROL SYSTEM

- 2X4 LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR EXACT TYPE
- 2X4 LIGHTING FIXTURE-LIFE SAFETY BRANCH, SEE FIXTURE SCHEDULE FOR EXACT TYPE
- 2X2 LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR EXACT TYPE
- 2X2 LIGHTING FIXTURE-LIFE SAFETY BRANCH POWERED, SEE FIXTURE SCHEDULE FOR EXACT TYPE
- FIXTURE, SEE FIXTURE SCHEDULE FOR EXACT TYPE
- FIXTURE WITH EMERGENCY BATTERY BACK-UP BALLAST, SEE FIXTURE SCHEDULE FOR EXACT TYPE
- EMERGENCY FIXTURE W/BATTERY BACKUP,SEE FIXTURE SCHEDULE FOR EXACT TYPE
- POLE BASE, POLE AND POLE MOUNTED LIGHT FIXTURE, SEE FIXTURE SCHEDULE FOR EXACT TYPE
- RECESSED LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR EXACT TYPE
- RECESSED LIGHTING FIXTURE WITH EMERGENCY BATTERY BACK-UP BALLAS, SEE FIXTURE SCHEDULE FOR EXACT TYPE
- RECESSED WALL WASHER LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR EXACT TYPE
- WALL MOUNTED LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR EXACT TYPE
- TRACK LIGHTING, SEE FIXTURE FOR EXACT TYPE
- CEILING MOUNTED EXIT LIGHT FIXTURE, SEE FIXTURE SCHEDULE FOR EXACT TYPE. PROVIDE ARROWS WHERE SHOWN
- WALL MOUNTED EXIT LIGHT FIXTURE, SEE FIXTURE SCHEDULE FOR EXACT TYPE. PROVIDE ARROWS WHERE SHOWN
- WALL MOUNTED EXIT LIGHT FIXTURE – SELF-CONTAINED, BATTERY OPERATED WITH EMERGENCY HEADS. SEE FIXTURE SCHEDULE FOR EXACT TYPE
- SINGLE POLE SWITCH (MOUNTED AT 48" A.F.F.)
- 3 THREE WAY SWITCH (MOUNTED AT 48" A.F.F.)
- 4 FOUR WAY SWITCH (MOUNTED AT 48" A.F.F.)
- DIM DIMMER SWITCH (MOUNTED AT 48" A.F.F.)
- P WALL MOUNTED PIR OCCUPANCY SENSOR (MOUNTED AT 48" A.F.F.)
- DD WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY DIMMABLE SENSOR (MOUNTED AT 48" A.F.F.)
- DT WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR (MOUNTED AT 48" A.F.F.)
- TS WALL MOUNTED DIGITAL TIMER SWITCH (MOUNTED AT 48" A.F.F.)
- U WALL MOUNTED ULTRASONIC OCCUPANCY SENSOR (MOUNTED AT 48" A.F.F.)
- OR WALL MOUNTED OVERRIDE SWITCH (MOUNTED AT 48" A.F.F.)
- LV1 WALL MOUNTED LOW VOLTAGE SWITCH (MOUNTED AT 48" A.F.F.)
- 5B WALL MOUNTED 5 BUTTON SCENE CONTROLLER (MOUNTED AT 48" A.F.F.)
- OS P CEILING MOUNTED PIR OCCUPANCY SENSOR
- OS DT DLM CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR
- OS DT1 CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR
- OS U CEILING MOUNTED ULTRASONIC OCCUPANCY SENSOR
- PS CEILING MOUNTED PHOTOSENSOR
- PC CEILING MOUNTED PHOTOCELL
- LC LIGHTING CONTACTOR
- LC1 LIGHTING CONTROL DEVICE

RECEPTACLES

- DUPLEX RECEPTACLE (MOUNTED AT 18" A.F.F.)
- GROUND FAULT CIRCUIT INTERRUPTED DUPLEX RECEPTACLE
- TAMPER PROOF DUPLEX RECEPTACLE
- DUPLEX RECEPTACLE WITH USB
- DUPLEX RECEPTACLE MOUNTED ABOVE COUNTERTOP BACK SPLASH
- H DUPLEX RECEPTACLE MOUNTED HORIZONTAL (MOUNTED ABOVE COUNTER BACKSPLASH)
- GROUND FAULT CIRCUIT INTERRUPTED DUPLEX RECEPTACLE MOUNTED ABOVE COUNTERTOP BACK SPLASH
- +XX DUPLEX RECEPTACLE (MOUNTED XX" A.F.F.)
- D DEDICATED DUPLEX RECEPTACLE (MOUNTED THAT 18" A.F.F.)
- E DUPLEX RECEPTACLE ON EMERGENCY POWER
- WP DUPLEX RECEPTACLE WITH WATERPROOF COVER (MOUNTED 18" A.F.F.) FS BOX WITH WATERPROOF COVER
- EWC DUPLEX RECEPTACLE MOUNTED BEHIND ELECTRICAL WATER COOLER
- CLG DUPLEX RECEPTACLE MOUNTED AND CEILING
- DOUBLE DUPLEX (QUAD) RECEPTACLE (MOUNTED AT 18" A.F.F.)
- GROUND FAULT CIRCUIT INTERRUPTED DOUBLE DUPLEX (QUAD) RECEPTACLE
- TAMPER PROOF DOUBLE DUPLEX (QUAD) RECEPTACLE
- DOUBLE DUPLEX (QUAD) RECEPTACLE WITH USB
- DOUBLE DUPLEX (QUAD) RECEPTACLE MOUNTED ABOVE COUNTERTOP BACK SPLASH
- GROUND FAULT CIRCUIT INTERRUPTED DOUBLE DUPLEX (QUAD) RECEPTACLE MOUNTED ABOVE COUNTERTOP BACK SPLASH
- +XX DOUBLE DUPLEX (QUAD) RECEPTACLE (MOUNTED XX" A.F.F.)
- SPECIAL-PURPOSE OUTLET - SEE PLANS FOR TYPE VERIFY
- SINGLE RECEPTACLE - AMPERAGE/PHASE AS NOTED
- POWER POLE PROVIDED BY SYSTEM FURNITURE
- WIREMOLD - SEE PLANS FOR EXACT SPECIFICATIONS AND MOUNTING HEIGHT. TYPE W/ EQUIPMENT SHOP DRAWINGS PRIOR TO ROUGH-IN

ELECTRICAL CONNECTIONS

- E1 120V, SINGLE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT.
- E2 208V, SINGLE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT.
- E3 208V, THREE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT.
- E4 277V, SINGLE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT.
- E5 480V, SINGLE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT.
- E6 480V, THREE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT.

MOTOR CONNECTIONS

- M1 120V, SINGLE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT.
- M2 208V, SINGLE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT.
- M3 208V, THREE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT.
- M4 277V, SINGLE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT.
- M5 480V, SINGLE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT.
- M6 480V, THREE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT.
- M MOTOR AND DISCONNECT. DISCONNECT SHALL BE FURNISHED AND INSTALL BY E.C.
- M MOTOR AND COMBINATION MOTOR STARTER. COMBINATION MOTOR STARTER SHALL BE FURNISHED AND INSTALL BY E.C.
- M VFD MOTOR AND VFD. VFD SHALL BE FURNISHED BY OTHERS AND INSTALL BY E.C.
- J JUNCTION BOX OR PULL BOX.

ELECTRICAL DISTRIBUTION EQUIPMENT

- RECESSED 120/208V PANELBOARD
- RECESSED 277/480V PANELBOARD
- SURFACE 120/208V PANELBOARD
- SURFACE 277/480V PANELBOARD
- M METER
- T TRANSFORMER
- NON FUSED DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- COMBINATION MAGNETIC MOTOR STARTER
- VFD VARIABLE FREQUENCY DRIVE (FURNISHED BY OTHERS AND INSTALLED BY E.C.)
- M MANUAL MOTOR STARTER
- CEILING FAN
- SD SMOKE DAMPER - 120V (PROVIDED BY OTHERS)

RACEWAY ABBREVIATIONS

C - INDICATES CONDUIT.
P - INDICATES SCHEDULE 40 PVC
E - INDICATES EMT

- RACEWAY IN GRADE OR CONCEALED IN FLOOR SLAB.
- RACEWAY - LONG STROKE INDICATES NEUTRAL CONDUCTORS. SHORT STROKE INDICATES PHASE OR SWITCHED WIRES. LONG STROKE WITH HOOK INDICATES GROUNDING CONDUCTOR. LONG STROKE WITH HOOK AND CROSS INDICATES ISOLATED GROUND. HOMERUN TO BE #12 THHN IN 1/2" EMT UNLESS NOTED OTHERWISE
- MC CABLE INSTALLED IN CEILING OR DRYWALL PARTITIONS. (90° THHN) ALL MC CABLE IS #12 AWG U.N.O.
- MODULAR SYSTEM CABLE INSTALLED IN CEILING OR EXPOSED FOR LIGHTING ONLY.
- CONDUIT UP, CONDUIT DOWN
- 3/4" x 10'-0" COPPER CLAD GROUND ROD OR AS NOTED.

FIRE ALARM HORN/STROBE SYSTEM

- F FIRE ALARM HORN - WALL MOUNTED
- F FIRE ALARM PULL STATION
- F FIRE ALARM STROBE - WALL MOUNTED. 15/75 CANDELLA UNLESS OTHERWISE NOTED.
- F S/S FIRE ALARM HORN/STROBE - WALL MOUNTED. 15/75 CANDELLA UNLESS OTHERWISE NOTED.
- F FIRE ALARM STROBE - CEILING MOUNTED. 15/75 CANDELLA UNLESS OTHERWISE NOTED.
- F FIRE ALARM HORN - CEILING MOUNTED.
- F S/S FIRE ALARM HORN/STROBE - CEILING MOUNTED. 15/75 CANDELLA UNLESS OTHERWISE NOTED.
- F DD FIRE ALARM DUCT DETECTOR
- F FS FIRE ALARM WATER FLOW SWITCH (FBO)
- F TS FIRE ALARM TAMPER SWITCH - VALVE SUPERVISION (FBO)
- F SD FIRE ALARM SMOKE DETECTOR
- F SE FIRE ALARM SMOKE DETECTOR - ELEVATOR RECALL
- F H FIRE ALARM HEAT DETECTOR
- F MM FIRE ALARM MONITORING MODULE
- F CM FIRE ALARM CONTROL MODULE (RELAY)
- F DH FIRE ALARM DOOR HOLD OPEN DEVICE
- FACP FIRE ALARM CONTROL PANEL
- FANP FIRE ALARM ANNUCIATOR PANEL
- F FIRE ALARM FIREMAN'S JACK

TELE/DATA SYSTEMS

- TELE/DATA WALL-MOUNTED ROUGH-IN BOX (18" A.F.F.). DOUBLE GANG BOX WITH A SINGLE GANGE FRAME AND A 3/4" BUSHED CONDUIT STUB UP 6" AFC
- TELE/DATA WALL-MOUNTED ROUGH-IN BOX ABOVE COUNTER TOP OR BY HEIGHT. DOUBLE GANGE BOX WITH A SINGLE GANG FRAME AND A 3/4" BUSHED CONDUIT STUB UP 6" AFC
- CLG TELE/DATA OUTLET CEILING MOUNTED. DOUBLE GANGE BOX WITH A SINGLE GANG FRAME AND A 3/4" BUSHED CONDUIT KNOCKOUT.
- W TELEPHONE OUTLET WALL-MOUNTED ROUGH-IN BOX (48" A.F.F. - U.N.O.) DOUBLE GANG BOX WITH A SINGLE GANG FRAME AND A 3/4" BUSHED CONDUIT STUB UP 6" AFC.
- WAP WIRELESS ACCESS POINT ROUGH IN ABOVE CEILING.
- EQUIPMENT DESIGN, LOADS, ROUGH-IN BASED ON UNVERIFIED OR ASSUMED INFORMATION. VERIFY ALL REQUIRED INFO. W/ VENDOR, SHOP DRAWINGS AND SCOPE OF WORK PRIOR TO ROUGH-IN.

ELECTRICAL SHEET INDEX

SHEET	DESCRIPTION
E000	ELECTRICAL TITLE SHEET
E001	SITE PLAN
E002	SITE PHOTOMETRIC PLAN
E100	ELECTRICAL SPECIFICATIONS
E101	ELECTRICAL SPECIFICATIONS
E200	LIGHTING PLAN
E300	POWER PLAN
E400	ELECTRICAL RISER & SCHEDULES
SHEET COUNT: 8	

GENERAL NOTES:

1. ALL SPARE CIRCUIT BREAKERS AND DISCONNECT SWITCHES SHALL BE LEFT IN THE OFF POSITION

2. E.C. SHALL VERIFY THE VOLTAGE AND AMPERAGE REQUIREMENTS OF ALL EQUIPMENT DELIVERED TO THE SITE PRIOR TO CONNECTION.

3. ALL 120V CIRCUITS OVER 90' SHALL BE #10 WIRE. ALL 120V CIRCUITS OVER 150' SHALL BE #8 WIRE UNLESS NOTED OTHERWISE.

4. ALL OUTLETS WITHIN 6'-0" OF WATER SHALL BE GFCI TYPE.

5. CONTRACTOR SHALL ENSURE LOADS BETWEEN PHASES ON PANEL BOARDS ARE BALANCED WITHIN 10%

6. EC TO PROVIDE HANDLE TIE ON ALL MULTIWIRE BRANCH CIRCUITS PER NEC 210.4B

8. CIRCUIT ALL EXIT LIGHTS AND EMERGENCY LIGHTS TO AN UNSWITCHED LEG OF LOCAL LIGHTING CIRCUIT.

9. NEW TELEPHONE BOARD (TTB0. PROVIDE 3/4" PLYWOOD PAINTED WITH FLAME RETARDANT PAINT AND GROUND BUS WITH #6 EQUIPMENT GROUND BACK TO GROUNDING SYSTEM. FURNISH AND INSTALL QUADPLEX RECEPTACLES. VERIFY LOCATION WITH OWNER AND CONSTRUCTION MANAGER PRIOR TO ROUGH IN. MASK OFF MANUFACTURE'S FIRE RATING LABEL PRIOR TO PAINTING BACKBOARD.

10. EC TO PROVIDE HANDLE TIE ON ALL MULTIWIRE BRANCH CIRCUITS PER NEC 210.4(B).

11. ALL ELECTRICAL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND ALL REGULATIONS, LAWS, AND ORDINANCES WHICH MAY BE APPLICABLE.

12. ALL EQUIPMENT SHALL BE U.L. LISTED.

LINGLE DESIGN GROUP, INC
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CERTIFICATE OF AUTHORITY NO. 10975461-0143

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4/11/2025

STATE OF TEXAS
MATTHEW RICHARD CASE
128362
LICENSED
PROFESSIONAL ENGINEER

PROJECT #:

DRAWN BY: BW CHECKED BY: DRC

PERMIT SET - 4/11/2025
1 -
2 -
3 -
4 -
5 -
6 -

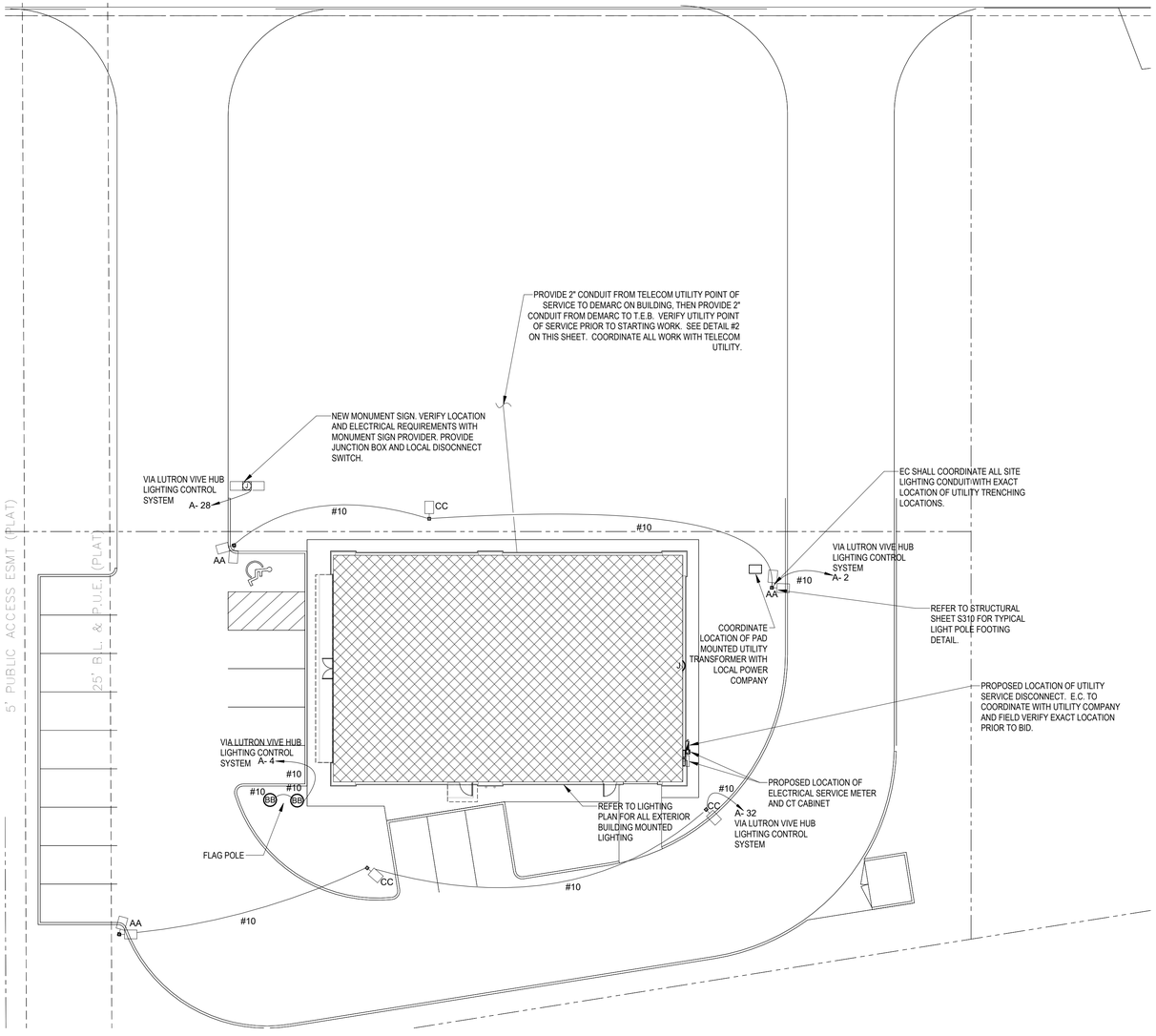
SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
ELECTRICAL TITLE SHEET

SHEET NUMBER:
E000



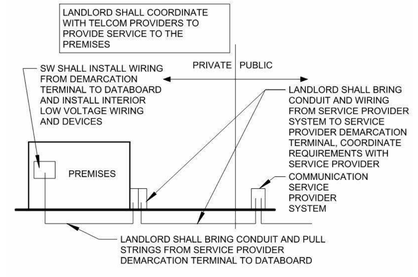
1 E001 ELECTRICAL SITE PLAN
1/16" = 1'-0"

SITE PLAN SHEET NOTES

A ALL LIGHTING AND POWER CONDUCTORS SHALL BE INSTALLED BETWEEN 24" (MINIMUM) AND 36" (MAXIMUM) BELOW FINISHED GRADE.

B ALL COMMUNICATIONS CONDUIT AND CABLES SHALL BE INSTALLED 36" (MINIMUM) BELOW FINISHED GRADE.

C ALL CONDUCTORS FOR EXTERIOR LIGHTING AND POWER CIRCUITS SHALL BE #10 AWG MINIMUM.



2 E001 TELEPHONE SERVICE DETAIL
NTS

LINGLE DESIGN GROUP, INC
LingleDesignGroup,Inc
158 West Main Street
Lena, IL 61048
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STORE #:
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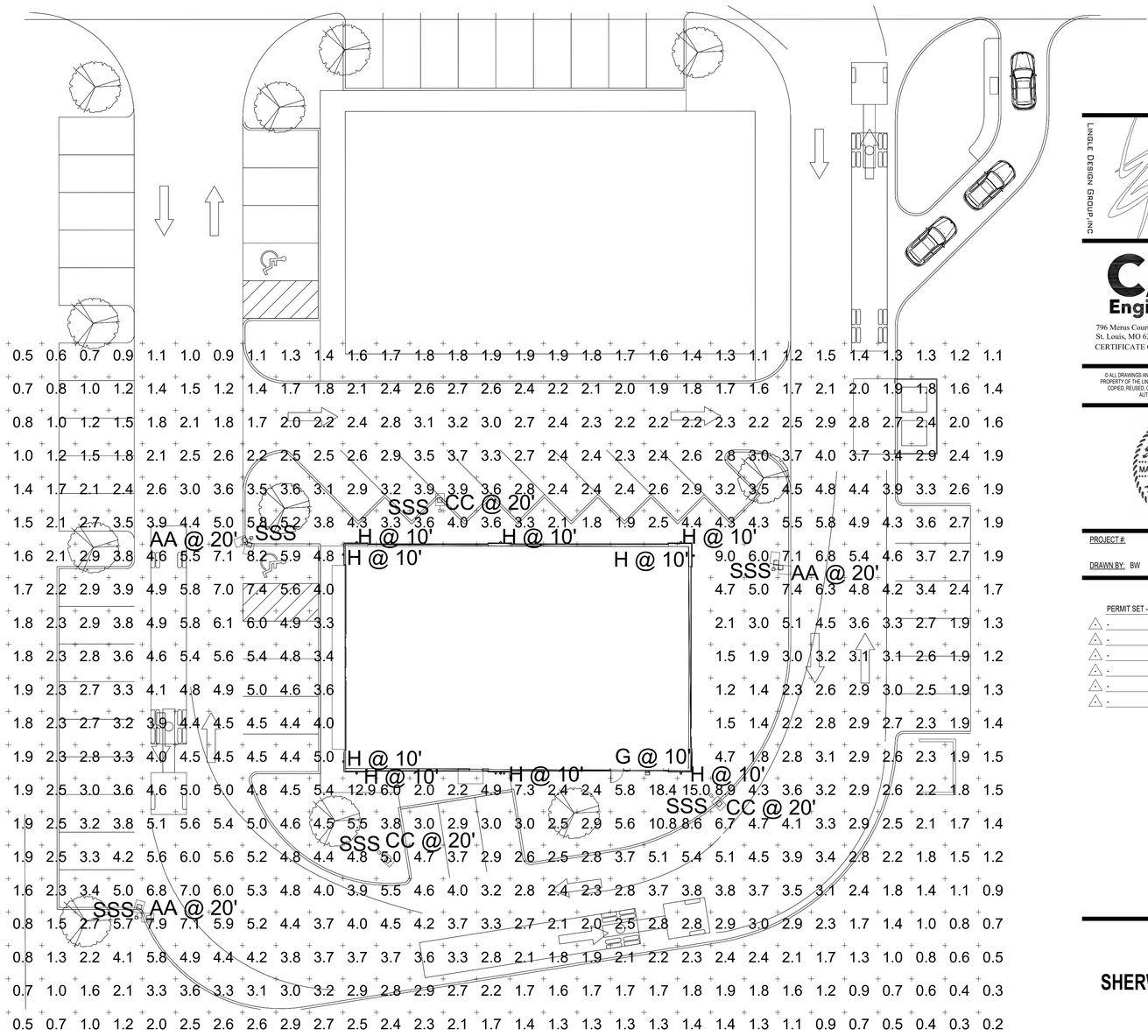
ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
E001

Schedule									
Symbol	Label	QTY	Manufacturer	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage
	H	9	PROGRESS	P5641□20/30K BZ	OUTDOOR CYLINDER	1	915	1	30
	G	1	HUBBELL OUTDOOR	LNC3-24L5K-050-4	Medium LNC3 Litepak	1	8548	1	41
	AA	3	Lithonia Lighting	DSX1 LED P4 40K 80CRI T4M	D-Series Size 1 Area Luminaire P4 Performance Package 4000K CCT 80 CRI Type 4 Medium	2	14930	1	247.88
	CC	3	Lithonia Lighting	DSX1 LED P4 40K 80CRI T4M HS	D-Series Size 1 Area Luminaire P4 Performance Package 4000K CCT 80 CRI Type 4 Medium Houseside Shield	1	14930	1	123.9373
	SSS	3	Lithonia Lighting	SSS-QS-20-4C	SQUARE STRAIGHT STEEL POLE	-	-	-	-

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
SITE	+	2.8 fc	18.4 fc	0.0 fc	N/A	N/A



1 E002 SITE PHOTOMETRIC1
1/16" = 1'-0"
0 8' 16' 32'

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4/11/2025

STATE OF TEXAS
MATTHEW RICHARD CASE
128362
LICENSED
PROFESSIONAL ENGINEER

PROJECT #:

DRAWN BY: BW CHECKED BY: DRC

PERMIT SET - 4/11/2025

1 -
2 -
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SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:

1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:

SITE PHOTOMETRIC PLAN

SHEET NUMBER:

E002

SUMMARY

A. GENERAL AND SUPPLEMENTARY CONDITIONS WITHIN THE SPECIFICATIONS ARE HEREBY INCORPORATED AND BECOME PART OF THESE SPECIFICATIONS AND AS SUCH SHALL BE APPLICABLE TO THE WORK OF THE ELECTRICAL CONTRACT.

B. PRIOR TO SUBMISSION OF A BID PROPOSAL, THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS AND LIMITATIONS THAT IMPACT THE WORK OF THIS CONTRACT. NO ADDITIONAL COSTS TO THE OWNER SHALL BE PERMITTED FOR CHANGES TO THE WORK AS A RESULT OF THE CONTRACTORS FAILURE TO VISIT THE SITE PRIOR TO BIDDING AND IDENTIFY ITEMS THAT WERE ABLE TO BE VERIFIED DURING A SITE VISIT PRIOR TO THE SUBMISSION OF A BID PROPOSAL.

C. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, RIGGING, AND MISCELLANEOUS ITEMS AS REQUIRED FOR A COMPLETE, OPERATIONAL, FUNCTIONAL AND CODE COMPLIANT ELECTRICAL INSTALLATION AS SHOWN ON THE DRAWINGS AND AS SPECIFIED IN THESE SPECIFICATIONS.

LANDLORDS REQUIREMENTS

A. ALL WORK OF THIS CONTRACT SHALL BE COMPLETED IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF THE LANDLORD'S WORK LETTER, LANDLORD'S CONSTRUCTION CRITERIA AND/OR THE TENANT/LANDLORD AGREEMENT. THIS CONTRACTOR SHALL EXAMINE THESE DOCUMENTS PRIOR TO THE SUBMISSION OF A BID PROPOSAL.

B. ALL APPLICABLE REQUIREMENTS OF THE LANDLORD'S WORK LETTER, LANDLORDS CONSTRUCTION CRITERIA AND/OR THE TENANT/LANDLORD AGREEMENT DOCUMENTS SHALL BE CONSIDERED PART OF THESE SPECIFICATIONS.

EXISTING CONDITIONS

A. THE CONTRACT DOCUMENTS ARE BASED ON INFORMATION PROVIDED TO THE CONSULTANT AT THE TIME OF DESIGN. THIS CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING A BID PROPOSAL.

BIDS AND SUBSTITUTIONS

A. PRIOR TO SUBMISSION OF A BID PROPOSAL, CONTRACTOR SHALL THOROUGHLY REVIEW THE BID INSTRUCTIONS AND ALL CIVIL, ARCHITECTURAL, STRUCTURAL, FOOD SERVICE AND MEPFP CONSTRUCTION DOCUMENTS.

B. SHOULD THE CONTRACTOR WISH TO SUBMIT AN ALTERNATE PRODUCT TO THE MANUFACTURERS NAMED IN THESE SPECIFICATIONS OR ON THE DRAWINGS FOR ANY EQUIPMENT, THE CONTRACTOR SHALL SUBMIT A VOLUNTARY ALTERNATIVE A MINIMUM OF SEVEN (7) CALENDAR DAYS PRIOR TO BID, STATING THE MANUFACTURER'S NAME, MODEL NUMBER, WRITTEN, DETAILED PRODUCT DATA.

C. WORK PERFORMED OR CONSTRUCTED WITH UNAPPROVED EQUALS IS AT CONTRACTOR'S RISK AND ANY REQUIRED CORRECTION OF WORK INCORPORATING UNAPPROVED EQUALS SHALL BE AT CONTRACTOR'S SOLE COST AND EXPENSE.

D. NO SUBSTITUTIONS PERMITTED FOR LIGHTING FIXTURES.

QUALITY ASSURANCE

A. ALL MATERIALS AND EQUIPMENT SHALL BE NEW.

B. PROVIDE PERMITS, INSPECTIONS, FINAL CERTIFICATES OF INSPECTION BY THE AUTHORITY HAVING JURISDICTION, PERMIT AND INSPECTION FEES AND ALL MATERIALS, EQUIPMENT AND LABOR AS REQUIRED FOR A COMPLETE, FUNCTIONAL, FULLY OPERATIONAL AND CODE COMPLIANT ELECTRICAL SYSTEM.

C. THIS CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND ACCESSORIES FOR A COMPLETE FUNCTIONAL AND CODE COMPLIANT ELECTRICAL INSTALLATION, WHETHER OR NOT SHOWN ON THE DRAWINGS OR SPECIFIED IN THESE SPECIFICATIONS.

D. EC SHALL VERIFY THE VOLTAGE AND AMPERAGE REQUIREMENTS OF ALL EQUIPMENT DELIVERED TO THE SITE PRIOR TO CONNECTION. EC SHALL NOTIFY THE OWNER OF ANY DIFFERENCES

E. REQUIREMENTS OF REGULATORY AGENCIES:

1. PERMITS: ARRANGE AND PAY FOR ALL PERMITS, INSPECTIONS AND UTILITY CONNECTIONS REQUIRED.
2. PROVIDE ALL TESTS AND INSPECTIONS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
3. PROVIDE A SIGNED CERTIFICATE OF INSPECTION AT THE COMPLETION OF THE PROJECT. INCLUDE IN OPERATION AND MAINTENANCE MANUALS.

F. CODES AND STANDARDS

1. COMPLY WITH SPECIFIED CODES AND STANDARDS. IF CONFLICT EXISTS BETWEEN CODES OR STANDARDS AND DRAWINGS, PROJECT MANUAL OR ADDENDA REQUIREMENTS, REQUEST CLARIFICATION FROM ARCHITECT/ENGINEER.
2. CONFORM TO THE INSTALLATION RULES AND REGULATIONS OF THE CODES AND STANDARDS LISTED INCLUDING ALL SUBSEQUENTLY PUBLISHED AMENDMENTS THERETO ISSUED PRIOR TO THE DATE OF THE BIDDING DOCUMENTS.
3. CONFORM TO THE REQUIREMENTS OF ALL LOCAL, STATE AND FEDERAL AGENCIES WHICH HAVE AUTHORITY OVER THIS PROJECT.
4. COMPLY WITH THE APPLICABLE EDITION OF THE FOLLOWING CODES AND STANDARDS THAT HAVE BEEN ADOPTED BY AND ARE ENFORCED BY THE AUTHORITY HAVING JURISDICTION:
   a. INTERNATIONAL BUILDING CODE.
   b. INTERNATIONAL ENERGY CONSERVATION CODE
   c. INTERNATIONAL MECHANICAL CODE
   d. NATIONAL ELECTRICAL CODE
   e. INTERNATIONAL FIRE CODE
   f. LIFE SAFETY CODE, NFPA 101
   g. AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES
   h. ALL LOCAL CODES AND ORDINANCES ADOPTED AND ENFORCED BY THE AUTHORITY HAVING JURISDICTION.

G. REFERENCED STANDARDS:

1. ALL EQUIPMENT, APPARATUS, MATERIALS AND SYSTEMS SHALL BE RATED, TESTED, FABRICATED AND INSTALLED IN ACCORDANCE WITH THE APPLICABLE INDUSTRY STANDARDS.
2. FURNISH ONLY MATERIAL AND EQUIPMENT THAT IS LISTED, LABELED, CERTIFIED (OR ALL THREE) BY A NATIONALLY RECOGNIZED TESTING LABORATORY FOR THE TYPES OF MATERIAL AND EQUIPMENT SELECTED

ELECTRICAL CONTRACT DOCUMENTS

A. THE ELECTRICAL DRAWINGS (DRAWINGS) AND THE SPECIFICATIONS SHALL TOGETHER FORM A SET OF CONTRACT DOCUMENTS FOR THE ELECTRICAL WORK. NEITHER THE DRAWINGS OR THE SPECIFICATIONS SHALL BE COMPLETE WITHOUT THE OTHER. ANY ITEM SHOWN ONLY ON THE DRAWINGS OR SPECIFIED ONLY IN THE SPECIFICATIONS SHALL BE CONSIDERED AS IF SHOWN AND SPECIFIED IN BOTH.

B. ELECTRICAL DRAWINGS AND SPECIFICATIONS: COMPLY WITH THE FOLLOWING REQUIREMENTS:

1. CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH ALL DRAWINGS AND SPECIFICATIONS WITHIN THE CONTRACT DOCUMENTS, INCLUDING, BUT NOT NECESSARILY LIMITED TO, GEOTECHNICAL, LANDSCAPE, CIVIL, ARCHITECTURAL, STRUCTURAL, FOOD SERVICE, MECHANICAL, PLUMBING, TELECOMMUNICATION AND FIRE PROTECTION DRAWINGS AND SPECIFICATIONS.
2. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE INTENDED TO INDICATE APPROXIMATE LOCATION ONLY OF ELECTRICAL WORK. THE ACTUAL LOCATION OF ANY ELECTRICAL WORK SHALL NOT INTERFERE WITH THE LOCATION, CLEARANCES, ETC. REQUIRED BY THE WORK OF OTHER TRADES.
3. PRIOR TO ROUGH-IN, CONTRACTOR SHALL COORDINATE ALL DEVICE LOCATIONS WITH THE ARCHITECTURAL WALL ELEVATIONS, CASEWORK/CABINETRY ELEVATIONS AND DETAILS AND THE FINAL, APPROVED FOOD SERVICE SHOP DRAWINGS.

C. DEFINITIONS: THE FOLLOWING TERMS ARE USED ON THE ELECTRICAL DRAWINGS AND IN THE SPECIFICATIONS AND SHALL BE DEFINED AS FOLLOWS:

1. CONTRACTOR - THE ELECTRICAL CONTRACTOR OR ANY OF THEIR SUB-CONTRACTORS.
2. WORK - ALL MATERIAL, LABOR, TRANSPORTATION OF THE ELECTRICAL CONTRACTOR OR ANY OF THEIR SUB-CONTRACTORS.
3. FURNISH - PURCHASE, SUBMIT FOR REVIEW AND APPROVAL, COORDINATE WITH THE CONTRACT DOCUMENTS AND DELIVER TO THE PROJECT SITE IN NEW, UNDAMAGED CONDITION, STORE AS DIRECTED, PROTECT FROM DAMAGE DURING STORAGE.
4. INSTALL - INSTALL IN PLACE, MAKE READY FOR CONNECTION TO THE REQUIRED SERVICE.
5. CONNECT - CONNECT TO THE REQUIRED SERVICE AS REQUIRED FOR PROPER OPERATION, TEST FOR PROPER OPERATION AND FUNCTIONALITY IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS AND REQUIREMENTS SPECIFIED WITHIN THESE SPECIFICATIONS AND TURN OVER TO THE OWNER IN FULL OPERATING CONDITION.
6. PROVIDE - FURNISH, INSTALL AND CONNECT AS DEFINED HEREIN FOR A COMPLETE, FUNCTIONAL AND CODE COMPLIANT INSTALLATION READY FOR INTENDED USE.
7. FINISHED SPACE - SPACES HAVING WALLS PAINTED OR FINISHED WITH WALL COVERING, LAY-IN OR DRYWALL CEILINGS, AND FINISHED FLOORING MATERIALS. EXAMPLES OF FINISHED SPACES INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, ALL SPACES IN A DWELLING UNIT, OFFICES, LOBBIES, CORRIDORS, TOILET ROOMS, ETC.
8. UNFINISHED SPACES - SPACES WITH UNFINISHED WALLS AND FLOORS AND TYPICALLY ARE NOT EQUIPPED WITH A CEILING. EXAMPLES INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, MECHANICAL ROOMS, ELECTRICAL ROOMS, SERVICE AREAS, ETC.
9. SHALL - ACTION THAT IS REQUIRED WITHOUT OPTION OR QUALIFICATION.
10. REMOVE - DETACH ITEMS FROM EXISTING CONSTRUCTION AND LEGALLY DISPOSE OF THEM OFF SITE UNLESS INDICATED TO BE REMOVED AND SALVAGED OR REMOVED AND RE-INSTALLED.
11. REMOVE AND SALVAGE - CAREFULLY DETACH FROM EXISTING CONSTRUCTION IN A MANNER TO PREVENT DAMAGE AND DELIVER TO OWNER READY FOR RE-USE.
12. REMOVE AND REINSTALL - DETACH ITEMS FROM EXISTING CONSTRUCTION, PREPARE FOR RE-USE, RE-INSTALL AND RECONNECT WHERE INDICATED SUCH THAT THE RE-INSTALLED ITEM IS FULLY OPERATIONAL.
13. EXISTING TO REMAIN - EXISTING ITEMS OF CONSTRUCTION THAT ARE NOT TO BE PERMANENTLY REMOVED AND THAT ARE NOT OTHERWISE INDICATED TO BE REMOVED, REMOVED AND SALVAGED OR REMOVED AND RE-INSTALLED.

SUBMITTALS

A. REVIEW OF THE SHOP DRAWINGS IS RENDERED AS A SERVICE ONLY AND SHALL NOT BE CONSIDERED AS A GUARANTEE OF MEASUREMENTS OR OF BUILDING CONDITIONS; NOR SHALL IT BE CONSTRUED AS RELIEVING THE CONTRACTOR'S OF BASIC RESPONSIBILITIES UNDER HIS CONTRACT. ARCHITECT/ENGINEER WILL REVIEW SHOP DRAWINGS ONLY FOR CONFORMANCE WITH DESIGN CONCEPT OF THE PROJECT. REVIEW BY THE ARCHITECT/ENGINEER SHALL NOT BE CONSTRUED:

1. AS PERMITTING ANY DEPARTURE FROM THE CONTRACT REQUIREMENTS.
2. AS RELIEVING THE CONTRACTOR OF THE RESPONSIBILITY FOR ANY ERROR IN DETAILS, DIMENSIONS OR OTHERWISE THAT MAY EXIST.
3. AS APPROVED DEPARTURES FROM ADDITIONAL DETAILS OR INSTRUCTIONS PREVIOUSLY FURNISHED BY THE ARCHITECT/ENGINEER.

B. SHOP DRAWINGS:

1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND DESCRIPTIVE LITERATURE OF EQUIPMENT TO BE FURNISHED UNDER THIS CONTRACT. DRAWINGS SHALL STATE CAPACITIES, SIZES, ETC., OF ALL EQUIPMENT AND SHALL BE CERTIFIED. SEE GENERAL CONDITIONS AND SUPPLEMENTARY CONDITIONS FOR ADDITIONAL REQUIREMENTS.
2. PROVIDE SUBMITTALS FOR LIGHTING FIXTURES, TRANSFORMERS, PANELBOARDS, LIGHTING CONTROL DEVICES, CONTACTORS, WIRING DEVICES, DISCONNECT SWITCHES, POWER SYSTEM STUDY.

C. THE CONTRACTOR SHALL PERFORM NO PORTION OF THE WORK REQUIRING SUBMITTAL AND REVIEW OF SHOP DRAWINGS, PRODUCT DATA, SAMPLES OR SIMILAR SUBMITTALS UNTIL THE RESPECTIVE SUBMITTALS HAS BEEN APPROVED BY THE ENGINEER.

ELECTRICAL COORDINATION DRAWINGS

A. PREPARE ELECTRICAL COORDINATION DRAWINGS AS REQUIRED BY THE WORK AND AS DIRECTED BY THE GENERAL CONTRACTOR.

B. MEET WITH REPRESENTATIVES OF THE OTHER DISCIPLINES/TRADES TO COORDINATE THE ELECTRICAL WORK WITH THE WORK OF EACH DISCIPLINE AND TO OBTAIN INFORMATION REGARDING THEIR WORK THAT IS TO BE INDICATED ON THE COORDINATION DRAWINGS.

POWER SYSTEM STUDIES - GENERAL

A. PROVIDE COMPUTER-BASED, POWER SYSTEM STUDIES THAT INCLUDES:

1. A SHORT CIRCUIT STUDY TO DETERMINE THE MINIMUM INTERRUPTING CAPACITY OF CIRCUIT PROTECTIVE DEVICES;
2. AN ARC-FLASH STUDY TO DETERMINE THE ARC-FLASH HAZARD DISTANCE AND THE INCIDENT ENERGY TO WHICH PERSONNEL COULD BE EXPOSED DURING WORK ON OR NEAR ELECTRICAL EQUIPMENT.

B. STUDIES SHALL BE PERFORMED UTILIZING COMPUTER PROGRAMS THAT ARE DISTRIBUTED NATIONALLY AND ARE IN WIDE USE. SOFTWARE ALGORITHMS SHALL COMPLY WITH REQUIREMENTS OF STANDARDS AND GUIDES SPECIFIED IN THIS SECTION. MANUAL CALCULATIONS ARE UNACCEPTABLE.

C. SOFTWARE DEVELOPERS: SUBJECT TO COMPLIANCE WITH SPECIFIED REQUIREMENTS, PERFORM STUDIES UTILIZING SOFTWARE PRODUCTS BY ONE OF THE FOLLOWING:

1. EASY POWER
2. POWER ANALYTICS CORPORATION
3. SKM SYSTEMS ANALYSIS

D. ALL STUDIES SHALL BE BASED ON THE DEVICE CHARACTERISTICS OF ACTUAL EXISTING COMPONENTS AND THE NEW COMPONENTS BEING INSTALLED.

E. PROVIDE ALL FIELD LABOR AS REQUIRED TO OBTAIN ALL DATA NECESSARY TO CONDUCT THE STUDIES SPECIFIED HEREIN.

F. SUBMIT STUDIES FOR REVIEW BEFORE SUBMITTING THE SYSTEM OVERCURRENT PROTECTIVE DEVICE AND POWER DISTRIBUTION EQUIPMENT SUBMITTALS. SUBMIT STUDY REPORT FOR REVIEW PRIOR TO RECEIVING FINAL APPROVAL OF THE OVERCURRENT PROTECTIVE DEVICE AND DISTRIBUTION EQUIPMENT SUBMITTALS.

G. WHERE FORMAL COMPLETION OF STUDIES WILL CAUSE A DELAY IN THE ORDERING AND MANUFACTURING OF OVERCURRENT PROTECTIVE DEVICES AND POWER DISTRIBUTION EQUIPMENT, OBTAIN APPROVAL FROM ENGINEER FOR PRELIMINARY SUBMITTAL OF SUFFICIENT STUDY DATA TO ENSURE THAT THE SELECTION OF DEVICES AND ASSOCIATED CHARACTERISTICS IS SATISFACTORY AND IN COMPLIANCE WITH THE RESULTS OF THE STUDIES BEING PERFORMED.

H. STUDY SHALL BE SIGNED AND SEALED BY THE PROFESSIONAL ENGINEER RESPONSIBLE FOR PROVIDING THE STUDY.

SHORT CIRCUIT STUDY

A. PROVIDE A COMPUTER-BASED, SHORT CIRCUIT STUDY TO DETERMINE THE MINIMUM INTERRUPTING CAPACITY OF CIRCUIT PROTECTIVE DEVICES.

B. FOR NEW EQUIPMENT, USE CHARACTERISTICS SUBMITTED UNDER THE PROVISIONS OF ACTION SUBMITTALS AND INFORMATION SUBMITTALS FOR THIS PROJECT.

C. FOR EXISTING RELOCATED EQUIPMENT AND EXISTING EQUIPMENT THAT IS EXISTING TO REMAIN, OBTAIN REQUIRED ELECTRICAL DISTRIBUTION SYSTEM DATA BY FIELD INVESTIGATION AND SURVEYS, CONDUCTED BY QUALIFIED TECHNICIANS AND ENGINEERS. THE QUALIFICATIONS OF TECHNICIANS AND ENGINEERS SHALL BE QUALIFIED AS DEFINED BY NFPA 70E.

D. GATHER AND TABULATE ALL REQUIRED DATA TO SUPPORT THE SHORT-CIRCUIT STUDY. COMPLY WITH RECOMMENDATIONS IN IEEE 551 AS TO THE AMOUNT OF DETAIL THAT IS REQUIRED TO BE ACQUIRED IN THE FIELD.

E. BEGIN SHORT-CIRCUIT CURRENT ANALYSIS AT THE SERVICE, EXTENDING DOWN TO THE SYSTEM OVERCURRENT PROTECTIVE DEVICES AS FOLLOWS:

1. TO NORMAL SYSTEM LOW-VOLTAGE LOAD BUSES WHERE FAULT CURRENT IS 10 KA OR LESS.

ARC FLASH HAZARD STUDY

A. PROVIDE A COMPUTER-BASED, ARC-FLASH HAZARD STUDY TO DETERMINE THE ARC-FLASH HAZARD DISTANCE AND THE INCIDENT ENERGY TO WHICH PERSONNEL COULD BE EXPOSED DURING WORK ON OR NEAR EXISTING AND NEW ELECTRICAL EQUIPMENT.

B. ELECTRICAL SURVEY DATA: GATHER AND TABULATE ALL REQUIRED INPUT DATA TO SUPPORT STUDY. COMPLY WITH RECOMMENDATIONS IN IEEE 1584 AND NFPA 70E AS TO THE AMOUNT OF DETAIL THAT IS REQUIRED TO BE ACQUIRED IN THE FIELD.

C. FOR NEW EQUIPMENT, USE CHARACTERISTICS SUBMITTED UNDER THE PROVISIONS OF ACTION SUBMITTALS AND INFORMATION SUBMITTALS FOR THIS PROJECT.

D. FOR EXISTING EQUIPMENT, WHETHER OR NOT RELOCATED, OBTAIN REQUIRED ELECTRICAL DISTRIBUTION SYSTEM DATA BY FIELD INVESTIGATION AND SURVEYS, CONDUCTED BY QUALIFIED TECHNICIANS AND ENGINEERS.

E. HAZARD LABELS SHALL HAVE AN ORANGE HEADER WITH THE WORDING, "WARNING, ARC-FLASH HAZARD," AND SHALL INCLUDE THE FOLLOWING INFORMATION TAKEN DIRECTLY FROM THE ARC-FLASH HAZARD ANALYSIS:

1. LOCATION DESIGNATION.
2. NOMINAL VOLTAGE.
3. FLASH PROTECTION BOUNDARY.
4. HAZARD RISK CATEGORY.
5. INCIDENT ENERGY.
6. WORKING DISTANCE.
7. ENGINEERING REPORT NUMBER, REVISION NUMBER, AND ISSUE DATE.

F. ARC FLASH HAZARD WARNING LABELS SHALL BE A 3.5-BY-5-INCH THERMAL TRANSFER LABEL OF HIGH-ADHESION POLYESTER FOR EACH WORK LOCATION INCLUDED IN THE ANALYSIS.

G. LABELS SHALL BE MACHINE PRINTED, WITH NO FIELD-APPLIED MARKINGS.

RECORD DOCUMENTS

A. DURING THE PROGRESS OF THE WORK, CONTRACTOR SHALL MAINTAIN A CURRENT (DAILY) AS-BUILT SET OF THE DRAWINGS AND SPECIFICATIONS, INDICATING THEREON ALL WORK INSTALLED AT VARIANCE WITH SUCH CONTRACT DOCUMENTS INCLUDING, WITHOUT LIMITATION, WORK COVERED BY ADDENDA, FIELD WORK ORDERS, CHANGE ORDERS, AND ENGINEERS

B. CONTRACTOR SHALL PROVIDE THE TENANT WITH THE FINAL AS-BUILT SET OF DRAWINGS AT THE COMPLETION OF THE WORK.

COORDINATION WITH LANDLORD AND UTILITY COMPANIES

A. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL COORDINATE THE WORK OF THIS CONTRACT WITH THE LANDLORD'S AUTHORIZED REPRESENTATIVE AND AUTHORIZED REPRESENTATIVES OF EACH SERVING UTILITY THAT WILL PROVIDE SERVICE TO THIS SITE, INCLUDING BUT NOT NECESSARILY LIMITED TO, ELECTRIC, TELEPHONE AND CABLE/SATELLITE TV SERVICE PROVIDERS.

B. CONTRACTOR SHALL MEET WITH AUTHORIZED REPRESENTATIVES OF THE LANDLORD AND EACH UTILITY TO DISCUSS LANDLORD UTILITY COMPANY SCOPE OF WORK, CONTRACTOR SCOPE OF WORK, POINT OF SERVICE PICK-UP, DETAILS REGARDING SYSTEM INTERFACE, UTILITY COMPANY STANDARDS TO BE COMPLIED WITH, ETC.

COORDINATION WITH OTHER TRADES

A. ELECTRICAL WORK SHALL BE INSTALLED SO AS TO NOT CONFLICT WITH THE WORK OF OTHER TRADES.

B. SET ALL SLEEVES AND CUT AND PATCH ALL MISCELLANEOUS HOLES NECESSARY FOR THE CONVENIENT AND PROPER INSTALLATION OF THE WORK.

C. CONFER WITH THE OTHER CONTRACTORS REGARDING THE LOCATION AND SIZE OF PIPES, EQUIPMENT, DUCTS, OPENINGS AND SPECIAL ARCHITECTURAL TREATMENTS IN ORDER THAT THERE MAY BE NO INTERFERENCES BETWEEN THE INSTALLATION OR THE PROGRESS OF THE WORK OF ANY CONTRACTOR ON THE PROJECT.

D. ALL LINE VOLTAGE WIRING AND FINAL CONNECTIONS TO COMPLETE MECHANICAL SYSTEMS SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR.

E. PROVIDE FINAL ELECTRICAL CONNECTIONS TO EQUIPMENT FURNISHED/PROVIDED BY OTHERS, (HVAC EQUIPMENT, PLUMBING EQUIPMENT, COMMERCIAL KITCHEN EQUIPMENT, ETC.

F. COORDINATE THE NEMA CONFIGURATION OF THE RECEPTACLE TO BE PROVIDED WITH THE NEMA PLUG CONFIGURATION OF THE CORD/PLUG ASSEMBLY FURNISHED WITH THE EQUIPMENT TO BE INSTALLED. PROVIDE RECEPTACLES HAVING A NEMA CONFIGURATION THAT MATCHES THE NEMA CONFIGURATION OF THE PLUG ON THE EQUIPMENT.

G. PROVIDE FINAL COORDINATION OF AVAILABLE POWER (VOLTAGE/PHASE) WITH OTHER TRADES PRIOR TO THEIR ORDERING OF EQUIPMENT.

H. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION REGARDING ELECTRICAL WORK TO BE PROVIDED ASSOCIATED WITH MECHANICAL EQUIPMENT.

I. WHERE ELECTRICAL WORK (CONDUIT BOXES, RECEPTACLES, DISCONNECT SWITCHES, ETC.) ARE SECURED DIRECTLY TO THE HOUSING OF MECHANICAL EQUIPMENT, THEY SHALL BE INSTALLED ON A PORTION OF THE EQUIPMENT HOUSING NOT REQUIRED TO BE REMOVED FOR ROUTINE MAINTENANCE. PRIOR TO INSTALLATION, COORDINATE ALL ELECTRICAL WORK AT MECHANICAL EQUIPMENT WITH MECHANICAL CONTRACTOR.

TEMPORARY POWER

A. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY CONSTRUCTION POWER AND LIGHTING TO ALLOW ALL CONTRACTORS AND SUB-CONTRACTORS TO PERFORM THE WORK OF THEIR CONTRACTS.

B. PRIOR TO THE SUBMISSION OF A BID PROPOSAL, THE CONTRACTOR SHALL CONTACT THE GENERAL CONTRACTOR TO COORDINATE THE TYPE OF EQUIPMENT TO BE UTILIZED DURING THE WORK OF THIS CONTRACT

SEQUENCING AND SCHEDULING

A. COORDINATE ELECTRICAL EQUIPMENT INSTALLATION WITH OTHER BUILDING COMPONENTS AND THE PROJECT PHASING PLAN.

UTILITY COMPANY METERING EQUIPMENT

A. PROVIDE ALL EQUIPMENT REQUIRED FOR ELECTRICITY METERING BY UTILITY COMPANY. ALL METERING EQUIPMENT AND THE INSTALLATION OF THE EQUIPMENT SHALL BE IN COMPLIANCE WITH ALL UTILITY COMPANY REQUIREMENTS.

B. ELECTRICAL SERVICE CONNECTIONS: COORDINATE WITH UTILITY COMPANIES AND COMPONENTS THEY FURNISH AS FOLLOWS:

1. COMPLY WITH REQUIREMENTS OF UTILITIES PROVIDING ELECTRICAL POWER SERVICES.
2. COORDINATE INSTALLATION AND CONNECTION OF UTILITIES AND SERVICES, INCLUDING PROVISION FOR ELECTRICITY-METERING COMPONENTS.

C. METERS SHALL BE FURNISHED BY UTILITY COMPANY; INSTALLED BY ELECTRICAL CONTRACTOR.

D. METER SOCKETS: COMPLY WITH REQUIREMENTS OF ELECTRICAL-POWER UTILITY COMPANY.

E. INSTALL ALL CONDUITS AND EQUIPMENT ACCORDING TO UTILITY COMPANY'S WRITTEN REQUIREMENTS. PROVIDE EMPTY CONDUITS FOR METERING LEADS AND EXTEND GROUNDING CONNECTIONS AS REQUIRED BY UTILITY COMPANY.

FIRE STOPPING

A. PROVIDE FIRE STOPPING FOR PENETRATIONS BY CONDUIT OR CABLES AND OTHER EQUIPMENT THROUGH FIRE-RATED VERTICAL BARRIERS (WALLS AND PARTITIONS), HORIZONTAL BARRIERS (FLOOR/CEILING ASSEMBLIES) AND VERTICAL SHAFT WALLS AND PARTITIONS.

B. FIRESTOP SYSTEM INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF ATME E 814 OR UL 1479 TESTED ASSEMBLIES THAT PROVIDE A FIRE RATING EQUAL TO OR GREATER THAN THAT OF THE CONSTRUCTION BEING PENETRATED.

SEISMIC RESTRAINT

A. PROVIDE SEISMIC RESTRAINT FOR ELECTRICAL WORK AND SYSTEMS AND EQUIPMENT IN STRICT ACCORDANCE WITH THE APPLICABLE BUILDING CODE AND THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.

B. SUBMIT ALL REQUIRED DETAILS TO THE AUTHORITY HAVING JURISDICTION FOR REVIEW AND APPROVAL.

CUTTING & PATCHING

A. PRIOR TO CORE DRILLING OR SAW CUTTING OPERATIONS, CONTRACTOR SHALL X-RAY OR GROUND PENETRTING RADAR (GPR) THE EXISTING SLAB TO DETERMINE THE LOCATION OF ANY EXISTING UTILITIES, STRUCTURAL MEMBERS. ETC. COORDINATE ALL SCANNING, CUTTING AND CORE DRILLING OPERATIONS WITH GC AND LANDLORD PRIOR TO COMMENCEMENT OF WORK.

B. CORE-DRILL OR SAW-CUT EXISTING FLOORS, WALLS, ROOF, ETC., AS REQUIRED FOR THE INSTALLATION OF THE ELECTRICAL WORK. STRUCTURAL COMPONENTS, INCLUDING BUT NOT NECESSARILY LIMITED TO, COLUMNS, BEAMS, GIRDERS, PLATES OR JOISTS SHALL NOT BE CUT.

C. PATCH SURROUNDING AREAS FLUSH WITH ADJACENT SURFACES AND PREPARE TO RECEIVE SPECIFIED FINISHES. PATCH AND REPAIR ROOF TO MATCH EXISTING ROOFING SYSTEM. ALL ROOF WORK SHALL BE PERFORMED TO MEET THE WARRANTY REQUIREMENTS OF THE EXISTING ROOFING SYSTEM.

D. PATCH AND REPAIR ROOF TO MATCH EXISTING ROOFING SYSTEM. ALL ROOF WORK SHALL BE PERFORMED TO MEET THE WARRANTY REQUIREMENTS OF THE EXISTING ROOFING SYSTEM.

GROUNDING

A. PROVIDE ELECTRICAL SYSTEM AND EQUIPMENT GROUNDING IN ACCORDANCE WITH APPLICABLE N.E.C. REQUIREMENTS.

B. THE METALLIC CONDUIT SYSTEM SHALL BE GROUNDED AND BONDED TO FORM AN EQUIPMENT GROUNDING CONDUCTOR.

C. PROVIDE AN INSULATED EQUIPMENT GROUND CONDUCTOR WITHIN ALL FEEDERS AND BRANCH CIRCUITS. THIS EQUIPMENT GROUND CONDUCTOR SHALL BE IN ADDITION TO THE EQUIPMENT GROUND CONDUCTOR FORMED BY THE METALLIC CONDUIT SYSTEM.

D. PROVIDE AN ISOLATED GROUND CONDUCTOR IN ADDITION TO THE EQUIPMENT GROUNDING CONDUCTOR IN SELECT BRANCH CIRCUITS AS NOTED ON THE DRAWINGS.

E. PROVIDE A #6 AWG GREEN INSULATED GROUNDING CONDUCTOR FROM THE GROUND BAR AT TELEPHONE TERMINAL BOARD TO THE ELECTRICAL SERVICE GROUND.

F. PROVIDE A COPPER GROUNDING BAR AT THE TELEPHONE TERMINAL BACKBOARD. GROUNDING BAR SHALL BE ¼ INCH X 4 INCHES X 12 INCHES, PRE-DRILLED FOR CONDUCTOR TERMINATIONS, WITH NON-METALLIC STAND-OFF BRACKETS WITH INSULATORS. CHATSWORTH PRODUCTS 10622-012 OR APPROVED EQUAL.

EQUIPMENT IDENTIFICATION

A. PROVIDE EQUIPMENT LABELS ON PANELBOARDS, DISCONNECT SWITCHES, CONTACTORS, TRANSFORMERS, CONTROLS, ETC. EQUIPMENT LABELS SHALL BE ENGRAVED PHENOLIC RESIN NAMEPLATES ATTACHED TO ENCLOSURE WITH MECHANICAL FASTENERS. SELF-ADHESIVE NAMEPLATES ARE NOT ACCEPTABLE. LETTERING SHALL BE 1/2" HIGH, BLACK TEXT ON WHITE BACKGROUND.

B. ENGRAVED NAMEPLATES ATTACHED TO COMPONENTS SHALL IDENTIFY THE EQUIPMENT DESIGNATION, NAME OF THE "UPSTREAM" POWER SOURCE (AS APPLICABLE), VOLTAGE AND PHASE.

C. THE COVERS OF ALL OUTLET AND JUNCTION BOXES INSTALLED ABOVE CEILINGS AND INSTALLED EXPOSED IN UNFINISHED SPACES SHALL BE LABELED TO IDENTIFY THE SERVING PANEL, VOLTAGE, PHASE AND CIRCUIT NUMBERS CONTAINED WITHIN THE BOX. LABEL SHALL BE LEGIBLY HANDWRITTEN WITH BLACK, FELT TIP PERMANENT MARKER.

D. THE COVER PLATES OF ALL WIRING DEVICES SHALL BE LABELED TO IDENTIFY THE SERVING PANEL AND THE CIRCUITS SERVING THE DEVICE. LABELS SHALL BE MACHINE PRINTED, BLACK TEXT ON A CLEAR, SELF ADHESIVE LABEL.

CONDUIT AND FITTINGS

A. ALL INTERIOR AND EXTERIOR CONDUITS SHALL BE INSTALLED AND SUPPORTED IN ACCORDANCE WITH N.E.C. REQUIREMENTS.

B. MINIMUM CONDUIT SIZE SHALL BE ¾" TRADE SIZE. SWITCH LEGS SHALL BE ½" TRADE SIZE.

C. WITHIN INTERIOR FINISHED AREAS, ALL CONDUIT SHALL BE INSTALLED CONCEALED WITHIN NEW AND EXISTING WALLS AND ABOVE NEW AND EXISTING CEILINGS.

D. CONDUIT INSTALLED WITHIN THE INTERIOR OF THE BUILDING SHALL BE GALVANIZED ELECTRICAL METALLIC TUBING (EMT). CONDUIT FITTINGS FOR INDOOR EMT CONDUITS SHALL BE CAST METAL, COMPRESSION TYPE.

E. EMT SHALL BE USED FOR INTERIOR FEEDERS AND BRANCH CIRCUITS INSTALLED EXPOSED IN UNFINISHED SPACES, CONCEALED ABOVE NEW OR EXISTING CEILINGS OR CONCEALED WITHIN EXISTING AND NEW INTERIOR PARTITIONS.

F. CONDUITS INSTALLED EXPOSED ON THE EXTERIOR OF THE BUILDING SHALL BE GALVANIZED RIGID STEEL. FITTINGS SHALL BE THREADED TYPE.

G. CONDUITS INSTALLED UNDER SLAB ON GRADE CONSTRUCTION SHALL BE RIGID NON-METALLIC (RNC), SCHEDULE 40 PVC. RNC COMPLYING WITH NEMA TC 2 AND UL 651 UNLESS OTHERWISE INDICATED. FITTINGS FOR RIGID NON-METALLIC CONDUIT SHALL COMPLY WITH NEMA TC 3; MATCH TO CONDUIT TYPE AND MATERIAL.

H. PROVIDE CONDUIT EXPANSION FITTINGS IN ALL CONDUIT RUNS THAT EXTEND ACROSS BUILDING EXPANSION JOINTS AND WHERE MOVEMENT MAY BE ENCOUNTERED.

I. CONDUIT SHALL BE SUPPORTED FROM STRUCTURE ONLY

CONDUCTORS

A. ALL CONDUCTORS SHALL BE SOFT DRAWN, ANNEALED COPPER, #12 AWG MINIMUM.

B. CONDUCTORS #12 AND #10 AWG SHALL BE SOLID; #8 AWG AND LARGER SHALL BE STRANDED.

C. THE USE OF ALUMINUM CONDUCTORS IS NOT ACCEPTABLE.

D. EXPOSED, INTERIOR FEEDERS: TYPE THHN-THWN, SINGLE CONDUCTORS IN CONDUIT.

E. FEEDERS INSTALLED CONCEALED IN CEILINGS, WALLS, PARTITIONS: TYPE THHN-THWN, SINGLE CONDUCTORS IN CONDUIT.

F. FEEDERS INSTALLED CONCEALED IN CONCRETE, BELOW SLABS-ON-GRADE AND UNDERGROUND: TYPE THHN-THWN, SINGLE CONDUCTORS IN PVC CONDUIT.

G. EXPOSED, INTERIOR, BRANCH CIRCUITS: TYPE THHN-THWN, SINGLE CONDUCTORS IN CONDUIT.

H. BRANCH CIRCUITS CONCEALED IN EXISTING AND NEW CEILINGS, WALLS, AND PARTITIONS: TYPE THHN-THWN, SINGLE CONDUCTORS IN CONDUIT.

I. BRANCH CIRCUITS CONCEALED BELOW SLABS-ON-GRADE, AND UNDERGROUND: TYPE THHN-THWN, SINGLE CONDUCTORS IN CONDUIT.

J. ACCEPTABLE MANUFACTURERS FOR CONDUCTORS: GENERAL CABLE COMPANY, CAROL, ANACONDA, ROME, SOUTHWIRE.

K. CLASS 1 CONTROL CIRCUITS: TYPE THHN-THWN, IN CONDUIT.

L. CLASS 2 CONTROL CIRCUITS: POWER-LIMITED PLENUM RATED CABLE, CONCEALED IN BUILDING FINISHES.

M. THE USE OF NON-METALLIC-SHEATHED CABLE (TYPE NM) AND ARMORED CABLE (TYPE AC OR BX) IS NOT ACCEPTABLE

N. WIRE CONNECTORS SHALL BE EQUAL TO SCOTCH LOCK FOR #8 AWG AND SMALLER, THOMAS AND BETTS LOCK-TITE FOR #6 AND LARGER.

O. PROVIDE #10 AWG CONDUCTORS FOR BRANCH CIRCUITS HAVING A CONDUCTOR LENGTH LONGER THAN 60 FEET.

P. SIZE OF CONDUCTORS AND CABLES INDICATED OR SPECIFIED ARE IN AMERICAN WIRE GAGE (AWG - BROWN AND SHARPE).

Q. INSTALL ALL WIRING IN APPROVED RACEWAY AND ENCLOSURES, EXCEPT WHERE SPECIFIED OR INDICATED, FOR LOW-VOLTAGE WIRING OR, WHERE TYPE MC CABLE IS INDICATED, SPECIFIED AS ACCEPTABLE, OR BOTH.

R. SUPPORT ALL CONDUCTORS AND CABLES IN VERTICAL INSTALLATIONS, AS REQUIRED BY NFPA-70, BY INSTALLING CABLE SUPPORTS OR PLUG-TYPE CONDUIT RISER SUPPORTS, OR WIRE-MESH SAFETY GRIPS.

S. INSTALL ALL CONDUCTORS AND CABLE IN RACEWAYS CONTINUOUS WITHOUT TAPS OR SPLICES. SPLICE OR TAP ONLY IN APPROVED BOXES AND ENCLOSURES WITH APPROVED SOLDERLESS CONNECTORS, OR CRIMP CONNECTORS AND TERMINAL BLOCKS FOR CONTROL WIRING, AND KEEP TO THE MINIMUM REQUIRED. INSULATE ALL SPLICES, TAPS, AND JOINTS AS REQUIRED BY CODE.

T. ALL MATERIALS USED TO TERMINATE, SPLICE OR TAP CONDUCTORS: DESIGNED, PROPERLY SIZED, AND UL LISTED FOR THE SPECIFIC APPLICATION AND CONDUCTORS INVOLVED, AND INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, USING THE MANUFACTURER'S RECOMMENDED TOOLS.

U. WHERE WIRING IS INDICATED AS INSTALLED, BUT THE CONNECTION IS INDICATED "FUTURE" OR "BY OTHER DIVISION, TRADES, OR CONTRACTS", LEAVE A MINIMUM OF 3' FOOT "PIGTAIL" AT THE BOX, TAPE THE ENDS OF CONDUCTORS, AND COVER THE BOX.

V. VOLTAGE DROP IN BRANCH CIRCUITS SHALL NOT EXCEED 3 PERCENT.

W. WHEN NEW CONDUCTORS ARE CONNECTED TO EXISTING CONDUCTORS, THE NEW CONDUCTORS SHALL BE OF THE SAME AWG, CONDUCTOR MATERIAL, INSULATION TYPE TEMPERATURE RATING,. ETC. AS THE EXISTING CONDUCTORS TO WHICH BEING CONNECTED.

TYPE MC CABLE

A. A. TYPE MC CABLE: 600V, UNJACKETED: ANSI E119 AND E814, UL STANDARDS 44 OR 83 (AS APPLICABLE), AND 1569, NFPA 70 ARTICLE 330; ALUMINUM OR GALVANIZED STEEL INTERLOCKED ARMOR; THHM- OR XHHW-INSULATED CONDUCTORS; COLOR CODE: ICEA METHOD 1, WITH GREEN INSULATED GROUNDING CONDUCTOR.

B. USES PERMITTED

B.1. IN LIEU OF FLEXIBLE CONDUIT AND WIRING FROM LIGHT FIXTURES IN ACCESSIBLE CEILINGS TO JUNCTION BOXES (ATTACHED TO BUILDING STRUCTURE) ABOVE THE CEILING. PROVIDE CABLE WHIPS OF SUFFICIENT LENGTHS TO ALLOW FOR RELOCATING EACH LIGHT FIXTURE WITHIN A 5' FOOT RADIUS OF ITS INSTALLED LOCATION, BUT NOT EXCEEDING 6' FEET IN UNSUPPORTED LENGTHS.

B.2. FOR VERTICAL DROPS IN STUD WALLS.

C. USES NOT PERMITTED:

C1. HOMERUNS TO PANELBOARDS.

C2. WHERE EXPOSED TO VIEW.

C3. WHERE EXPOSED TO DAMAGE.

C4. HAZARDOUS LOCATIONS.

C5. WET LOCATIONS.

C6. INSTALLED HORIZONTALLY WITHIN STUD WALL.

C7. WHEN RESTRICTED OTHERWISE ABOVE, AND WHEN SPECIFICALLY DISALLOWED BY THE LOCAL AHJ, OWNER OR BOTH.

D. PRIOR TO THE SUBMISSION OF A BID PROPOSAL, EC SHALL VERIFY THE PERMISSIBLE USE OF MC CABLE WITH THE AHJ.

CONDUCTOR COLOR CODING

A. PROVIDE COLOR CODING SYSTEM AS LISTED BELOW FOR ALL FEEDERS AND BRANCH CIRCUITS AND USED AS A BASIS FOR BALANCING LOAD ON PANELS.

B. COLOR CODING FOR CONDUCTOR #12 AWG THROUGH #6 AWG SHALL CONSIST OF COLOR CODED THERMOPLASTIC INSULATION OF THE COLORS SPECIFIED HEREIN.

C. COLOR CODING FOR CONDUCTORS #8 AWG AND LARGER SHALL BE FIELD APPLIED SELF ADHESIVE TAPE OF THE COLOR SPECIFIED HEREIN FOR THE PARTICULAR PHASE.

D. 120/208V: PHASE A--BLACK, PHASE B--RED, PHASE C--BLUE, NEUTRAL--WHITE, EQUIPMENT GROUND--GREEN, ISOLATED GROUND--GREEN WITH DISTINCTIVE WHITE OR YELLOW MARKINGS.

BOXES AND FITTINGS

A. FURNISH ONLY MATERIAL AND EQUIPMENT THAT IS LISTED, LABELED, CERTIFIED (OR ALL THREE) BY A NATIONALLY RECOGNIZED TESTING LABORATORY FOR THE TYPES OF MATERIAL AND EQUIPMENT SELECTED.

B. SHEET METAL OUTLET AND DEVICE BOXES FOR DRY, INTERIOR APPLICATIONS: COMPLY WITH NEMA OS 1 AND UL 514A.

C. CAST-METAL OUTLET AND DEVICE BOXES FOR EXTERIOR APPLICATIONS: COMPLY WITH NEMA FB 1, FERROUS ALLOY, TYPE FS OR FD, WITH GASKETED COVER.

D. OUTLET BOXES INSTALLED WITHIN FIRE RATED ASSEMBLIES SHALL HAVE A FIRE RATING EQUAL TO OR GREATER THAN THE RATING OF THE WALL IN WHICH IT IS INSTALLED.

E. OUTLET BOXES SHALL BE 4 INCHES SQUARE BY 2 1/8 INCHES DEEP , EXCEPT FOR 2" PARTITIONS SHALL BE AT LEAST 1-1/2" DEEP.

F. OUTLET BOXES FOR VOICE AND DATA DEVICES SHALL BE 4 11/16 INCHES SQUARE BY 2 1/8 INCHES DEEP.

G. ALL PULLBOXES SHALL BE CONSTRUCTED OF GALVANIZED STEEL, OF METAL GAUGE AND PHYSICAL SIZE AS REQUIRED BY THE N.E.C. FOR THE NUMBER AND SIZE OF CONDUITS AND CONDUCTORS ASSOCIATED WITH THE PULLBOX.

H. FIXTURE OUTLET BOXES IN/OR ON CEILINGS SHALL NOT BE LESS THAN 1-1/2" DEEP OR LESS THAN 4" SQUARE. ALL OUTLET BOXES INTENDED TO SUPPORT FIXTURES SHALL BE EQUIPPED WITH 3/8" FIXTURE STUDS FASTENED THROUGH THE BOTTOM OF THE BOX WITH FOUR BOLTS.

I. NEW OUTLET BOXES INSTALLED WITHIN NEW OR EXISTING STUD WALL CONSTRUCTION SHALL BE MOUNTED TO A STUD OR MOUNTED IN A BRACKET THAT SPANS STUD-TO-STUD, CADDY TSGB BRACKET OR APPROVED EQUAL. THE USE OF "OLD WORK" TYPE BOXES THAT.

J. ACCEPTABLE MANUFACTURERS FOR BOXES: APPLETON, STEEL CITY, RACO.

K. PROVIDE JUNCTION BOXES, PULL BOXES, CABINETS, AND WIREWAYS AS NECESSARY FOR PROPER INSTALLATION OF VARIOUS ELECTRICAL SYSTEMS PER NFPA 70. SIZE AS REQUIRED FOR THE SPECIFIC FUNCTION PER NFPA 70. CONSTRUCTION SHALL BE A NEMA DESIGN SUITABLE FOR THE ENVIRONMENT INSTALLED.

PANELBOARDS

A. PANELBOARDS SHALL BE LIGHTING AND APPLIANCE TYPE, DEAD FRONT, SAFETY TYPE, FURNISHED WITH BRANCH CIRCUIT BREAKER OVERCURRENT PROTECTIVE DEVICES, COPPER PHASE, NEUTRAL AND EQUIPMENT GROUNDING BUS BARS, MAIN CIRCUIT BREAKER OR MAIN LUG ONLY AS NOTED ON THE DRAWINGS. MAIN BUSES AND CONNECTORS SHALL BE HARD DRAWN COPPER OF 98% CONDUCTIVITY. LOAD CENTERS ARE NOT ACCEPTABLE FOR USE.

B. CIRCUIT BREAKERS SHALL BE MOLDED CASE, BOLT-ON TYPE SUITABLE FOR VOLTAGE AND AMPERE RATINGS INDICATED ON DRAWINGS AND IN PANEL SCHEDULES. REFER TO THE PANEL SCHEDULES ON THE DRAWINGS FOR ADDITIONAL ACCESSORIES TO BE PROVIDED AT SELECT CIRCUIT BREAKERS.

C. CIRCUIT BREAKERS SHALL HAVE A MINIMUM AMPERE INTERRUPTING CAPACITY (AIC) OF 10,000 AMPERES FOR 120/208V SYSTEMS.

D. WHERE THE POWER SYSTEM STUDY IDENTIFIES AVAILABLE FAULT CURRENT VALUES AT NEW PANELS THAT ARE HIGHER THAN THE MINIMUM AIC RATINGS SPECIFIED HEREIN, PROVIDE CIRCUIT BREAKERS IN THE PANELS THAT HAVE AIC RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT AT THE PANEL AS DETERMINED BY THE POWER SYSTEM STUDY.

E. PROVIDE NEMA 1 ENCLOSURES FOR INTERIOR PANELS.

F. PANELBOARDS SHALL BE EQUIPPED WITH FLUSH TYPE LOCK AND CATCH. ALL LOCKS SHALL BE KEYED ALIKE, WITH TWO KEYS SUPPLIED WITH EACH LOCK.

G. CIRCUIT BREAKERS SERVING LIGHTING CIRCUITS SHALL BE RATED FOR SWITCH DUTY.

H. CIRCUIT BREAKERS SERVING HVAC EQUIPMENT SHALL BE HACR RATED.

I. ALL LUGS SHALL BE OF THE SOLDERLESS TYPE AND RATED AT A MINIMUM OF 75°C.

J. PROVIDE NEW CIRCUIT DIRECTORIES WITHIN NEW PANELS TO REFLECT THE WORK OF THIS CONTRACT. DIRECTORY SHALL BE TYPEWRITTEN OR COMPUTER GENERATED. HANDWRITTEN CIRCUIT DIRECTORIES ARE NOT ACCEPTABLE.

K. UTILIZE FINAL, OWNER ASSIGNED ROOM NAMES AND NUMBERS TO IDENTIFY SPACES WITHIN THE CIRCUIT DIRECTORIES. COMPLY WITH NEC 408.4 WHEN IDENTIFYING CIRCUITS IN CIRCUIT DIRECTORIES.

L. PANEL CIRCUITS SHALL BE CONFIGURED SUCH THAT THE LOAD IS DISTRIBUTED EVENLY ACROSS ALL THREE PHASES TO WITHIN 10% IN ACCORDANCE WITH N.E.C. REQUIREMENTS.

M. ALL NEW PANELBOARDS SHALL BE LABELED TO IDENTIFY THE AMOUNT OF FAULT CURRENT AVAILABLE AT THE PANEL AS DETERMINED BY THE POWER SYSTEM STUDY TO BE PERFORMED. LABEL SHALL BE MACHINE PRINTED, BLACK TEXT ON CLEAR, SELF ADHESIVE TAPE. INSTALL LABEL ADJACENT TO PANELBOARDS ENGRAVED NAMEPLATE.

N. ALL NEW PANELBOARDS SHALL BE LABELED TO IDENTIFY THE ARC FLASH HAZARD CHARACTERISTICS AT THE PANEL AS DETERMINED BY THE POWER SYSTEM STUDY TO BE PERFORMED.

O. ALL "SPARE" CIRCUIT BREAKERS SHALL BE SET TO THE "OFF" POSITION.

P. PROVIDE HANDLE TIES ON ALL MULTI-WIRE BRANCH CIRCUITS IN ACCORDANCE WITH NEC 210.4(B)

Q. ACCEPTABLE MANUFACTURERS FOR PANELBOARDS BY SCHNEIDER, ABB, SIEMENS OR EATON.

SWITCHES

A. TOGGLE SWITCHES SHALL BE SINGLE POLE, 3-WAY OR 4-WAY AS NOTED ON THE DRAWINGS, 20 AMPERES, 120/277 VOLT AC TYPE, SPECIFICATION GRADE WITH SCREW TERMINALS. HUBBELL 1221-X, 1223-X OR 1224-X OR APPROVED EQUIVALENT BY ONE OF THE ADDITIONAL MANUFACTURERS SPECIFIED HEREIN.

B. TOGGLE SWITCHES SHALL BE MOUNTED AT DOORS, INSTALLED ADJACENT TO THE TRIM ON THE STRIKING SIDE OF THE DOOR, REGARDLESS OF THE LOCATION INDICATED ON THE DRAWINGS. VERIFY ALL DOOR SWINGS PRIOR TO INSTALLATION OF OUTLET BOXES FOR SWITCHES.

C. DEVICE COLOR SHALL BE AS SELECTED BY THE OWNER/ARCHITECT.

D. PROVIDE A NEUTRAL CONDUCTOR TO ALL SWITCH LOCATIONS

E. SWITCHES SHALL BE INSTALLED SURFACE MOUNTED IN UNFINISHED AREA. FLUSH MOUNTED IN FINISHED SPACES.

F. ADDITIONAL ACCEPTABLE MANUFACTURERS FOR SWITCHES: LEGRAND, LEVITON.

RECEPTACLES

A. RECEPTACLES SHALL BE 20 AMP, 125 VOLT, 2-POLE, 3-WIRE, GROUNDING TYPE, NEMA 5-20R WITH SCREW TERMINALS. HUBBELL 5362-W OR APPROVED EQUAL BY ONE OF THE ADDITIONAL MANUFACTURERS SPECIFIED HEREIN.

B. GFCI RECEPTACLES SHALL BE 20 AMP, 125 VOLT, 2-POLE, 3-WIRE, GROUNDING TYPE, FEED THROUGH TYPE CAPABLE OF PROTECTING DOWNSTREAM RECEPTACLES ON A SINGLE CIRCUIT, SOLID STATE GROUND FAULT SENSING AND SIGNALING, 5 MILLIAMP TRIP LEVEL, NEMA 5-20R WITH SCREW TERMINALS. HUBBELL GF5362-X OR APPROVED EQUAL BY ONE OF THE ADDITIONAL MANUFACTURERS SPECIFIED HEREIN.

C. ISOLATED GROUND RECEPTACLES SHALL BE ORANGE, 20 AMP, 125 VOLT, 2-POLE, 3-WIRE, GROUNDING TYPE, NEMA 5-20R WITH SCREW TERMINALS. HUBBELL IG-5362-W OR APPROVED EQUAL BY ONE OF THE ADDITIONAL MANUFACTURERS SPECIFIED HEREIN.

D. PROVIDE SPECIAL PURPOSE RECEPTACLES HAVING NEMA CONFIGURATIONS THAT MATE AND MATCH THE NEMA PLUG CONFIGURATION PROVIDED WITH THE EQUIPMENT TO BE CONNECTED.

E. COVER PLATES FOR EXTERIOR RECEPTACLES SHALL BE RATED FOR "WEATHERPROOF WHILE IN USE".

F. ADDITIONAL ACCEPTABLE MANUFACTURERS FOR SWITCHES AND RECEPTACLES: LEGRAND, LEVITON.

G. DEDICATED CIRCUITS (CIRCUITS SERVING A SINGLE DEVICE) SHALL HAVE SEPARATE NEUTRAL AND GROUND WIRES AND SHALL HAVE GRAY TRIM AND GRAY FACE PLATES. UNLESS NOTED OTHERWISE.

H. INSTALL BLUE COLORED 20A RATED SURGE PROTECTOR RECEPTACLES WITH LIGHT AND ALARM, HUBBELL HBL5362SA OR EQUAL.

I. INSTALL RECEPTACLES PER NFPA AND LOCAL ELECTRICAL CODE AND WHEN:

I.A. VERTICALLY ALIGNED, WITH THE GROUND SLOT MOUNTED AT THE TOP:

I.B. HORIZONTALLY ALIGNED, WITH THE NEUTRAL SLOT AT THE TOP.

J. RECEPTACLES SHALL BE COMMERCIAL GRADE

GFCI PROTECTION:

A. ALL KITCHEN SINGLE PHASE RECEPTACLES RATED 150 VOLTS TO GROUND OR LESS, 50 AMPS OR LESS AND THREE PHASE RECEPTACLES RATED 150 VOLTS TO GROUND OR LESS, 100 AMPS OR LESS SHALL HAVE GROUND FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL IN ACCORDANCE WITH NEC 210.8, (B), (1) - (10), OR THE EQUIVALENT REQUIREMENT WITHIN THE APPLICABLE ELECTRICAL CODE.

B. THE "GFCI" NOTATION AT A DEVICE OR CIRCUIT BREAKER INDICATES THAT GFCI PROTECTION SHALL BE PROVIDED FOR THE CIRCUIT OR CIRCUITS INDICATED. GFCI PROTECTION SHALL BE PROVIDED BY ONE OF THE FOLLOWING MEANS:

- INTEGRAL GFCI PROTECTION WITHIN THE DEVICE (NEMA 5-20R RECEPTACLES), WHEN THE DEVICE IS ABLE TO BE INSTALLED IN A READILY ACCESSIBLE LOCATION AS DEFINED BY THE APPLICABLE ELECTRICAL CODE.
- GFCI CIRCUIT BREAKER INSTALLED WITHIN THE PANEL FOR SERVICE TO THE CIRCUIT OR CIRCUITS.
- GFCI CIRCUIT BREAKER INSTALLED WITHIN AN INDIVIDUAL ENCLOSURE EXTERNAL TO THE PANEL FOR SERVICE TO THE CIRCUIT.
- DEAD-FRONT GFCI DEVICE INSTALLED IN A READILY ACCESSIBLE LOCATION AS DEFINED BY THE NEC (APPLICABLE TO 20 AMP, 120 VOLT CIRCUITS).
- AN INDIVIDUALLY MOUNTED EXTERNAL SPECIAL PURPOSE GROUND FAULT CIRCUIT INTERRUPTER (SPGFCI) DEVICE SIMILAR TO "SHOCK BLOCK" PRODUCTS AS MANUFACTURED BY LITTLEFUSE, OR APPROVED EQUAL.
- DEAD FRONT DEVISES SHALL BE BE LABELED TO IDENTIFY THE CIRCUIT AND THE LOAD SERVED BY THE DEVICE.

COVER PLATES FOR TOGGLE SWITCHES AND RECEPTACLES

A. COVER PLATES WITHIN NON-FOOD SERVICE AREAS SHALL BE NYLON, OF CONFIGURATION TO MATCH THE WIRING DEVICE.

B. COVER PLATES WITHIN THE FOOD SERVICE AREA SHALL BE STAINLESS STEEL WITH STAINLESS STEEL HARDWARE, UNLESS OTHERWISE NOTED.

C. CONFIGURATION AND COLOR OF COVER PLATE SHALL MATCH THAT OF THE WIRING DEVICE THAT THE PLATE WILL BE INSTALLED ON.

D. COVER PLATE COLOR SHALL BE AS SELECTED BY THE OWNER/ARCHITECT.

E. ADDITIONAL ACCEPTABLE MANUFACTURERS FOR COVER PLATES: LEGRAND, LEVITON.

MOUNTING HEIGHTS FOR ELECTRICAL DEVICES AND EQUIPMENT

A. DEVICES AND EQUIPMENT SHALL BE INSTALLED AT THE MOUNTING HEIGHTS NOTED BELOW UNLESS NOTED OTHERWISE ON THE DRAWINGS OR REQUIRED BY APPLICABLE CODES AND STANDARDS:

1. TOGGLE SWITCHES, WALL SWITCH OCCUPANCY SENSORS AND DIMMERS FOR LIGHTING CONTROL - TOP OF DEVICE 48" AFF
2. CONVENIENCE RECEPTACLES -TOP OF DEVICE 18" AFF
3. CONVENIENCE RECEPTACLES AT COUNTERTOPS - BOTTOM OF DEVICE 44" AFF OR AS NOTED ON THE DRAWINGS
4. TELEPHONE AND DATA OUTLETS - TOP OF DEVICE 18" AFF OR AS REQUIRED BY THE ADJACENT CASEWORK
5. DISCONNECT SWITCHES - TOP OF ENCLOSURE 66" AFF
5. PANELBOARDS-TOP OF ENCLOSURE 72" AFF

DISCONNECT SWITCHES

A. DISCONNECT SWITCHES SHALL BE HEAVY DUTY TYPE, UL LISTED AND LABELED, EQUIPPED WITH A LUG FOR TERMINATION OF THE EQUIPMENT GROUNDING CONDUCTOR.

B. DISCONNECT SWITCHES SHALL HAVE NEMA 1 ENCLOSURES FOR DRY, INDOOR APPLICATIONS; NEMA 3R ENCLOSURES FOR OUTDOOR OR WET LOCATION APPLICATIONS.

C. DISCONNECT SWITCHES INSTALLED EXPOSED IN FOOD SERVICE AREAS SHALL BE NEMA 4X STAINLESS STEEL.

D. TOGGLE DISCONNECTS SHALL BE 20A OR 30A AS REQUIRED. SINGLE POLE, 2-POLE OR 3-POLE AS REQUIRED, SINGLE THROW, MOTOR RATED SWITCH WITHOUT OVERLOAD PROTECTION. NEMA 1, 3R OR 4X STAINLESS STEEL ENCLOSURE AS REQUIRED BY APPLICATION, PADLOCK ATTACHMENT

E. ALL DISCONNECT SWITCHES SHALL BE EQUIPPED WITH AN ENGRAVED NAMEPLATE TO IDENTIFY THE SERVING PANEL, CIRCUIT NUMBERS AND THE LOAD SERVED BY THE SWITCH.

F. ACCEPTABLE MANUFACTURERS FOR DISCONNECT SWITCHES: SCHNEIDER, ABB, SIEMENS OR EATON.

MOTOR CONTROLLERS

A. PROVIDE ENCLOSED MOTOR CONTROLLERS AS SPECIFIED HEREIN FOR CONTROL OF MOTORS RATED FOR 600 VOLTS AND LESS.

B. FRACTIONAL HORSEPOWER MANUAL CONTROLLERS: "QUICK-MAKE, QUICK-BREAK" TOGGLE OR PUSH-BUTTON ACTION; PILOT LIGHT TO INDICATE "MOTOR RUNNING", MARKED TO SHOW WHETHER UNIT IS OFF, ON, OR TRIPPED.

1.CONFIGURATION: NON-REVERSING.
2.OVERLOAD RELAYS: INVERSE-TIME-CURRENT CHARACTERISTICS; NEMA ICS 2, CLASS 10 TRIPPING CHARACTERISTICS; HEATERS MATCHED TO NAMEPLATE FULL-LOAD CURRENT OF ACTUAL PROTECTED MOTOR; EXTERNAL RESET PUSH BUTTON.
3.FLUSH MOUNTED WITHIN FINISHED SPACES; SURFACE MOUNTED WITHIN UNFINISHED SPACES.
4. ACCEPTABLE MANUFACTURERS: SCHNEIDER, ABB, SIEMENS, EATON.

FUSES

A. PROVIDE CARTRIDGE FUSES RATED FOR 250 VAC AND 600 VAC AND LESS FOR USE AS SPECIFIED HEREIN.

B. COORDINATE FUSE RATINGS WITH UTILIZATION EQUIPMENT NAMEPLATE LIMITATIONS OF MAXIMUM FUSE SIZE AND WITH SYSTEM SHORT-CIRCUIT CURRENT LEVELS.

C. CARTRIDGE FUSE APPLICATIONS:

1. FEEDERS, UP TO AND INCLUDING 600 AMPS: CLASS RK1, BUSSMANN LPN-RK-SP FOR 250 VOLTS, BUSSMANN LPS-RK-SP FOR 600 VOLTS .
2. CONTROL POWER TRANSFORMER (CPT) CIRCUITS: CLASS CC, TIME DELAY, CONTROL TRANSFORMER DUTY.
3. BASIS OF DESIGN FOR FUSES SHALL BE BUSSMANN. ADDITIONAL ACCEPTABLE MANUFACTURERS FOR SPECIFIED FUSES SHALL BE LITTLEFUSE AND MERSEN.

LIGHTING FIXTURES

A. ALL LIGHTING FIXTURES AND LIGHT SOURCES SHALL BE FURNISHED, INSTALLED AND CONNECTED BY THE ELECTRICAL CONTRACTOR, UNLESS NOTED OTHERWISE.

B. THIS CONTRACTOR SHALL INSTALL LIGHTING FIXTURES AND LIGHT SOURCES AS INDICATED ON THE DRAWINGS AND AS SPECIFIED BELOW. PROVIDE LIGHTING FIXTURES COMPLETE WITH HANGERS, PLASTER FRAMES, AND ALL OTHER NECESSARY ACCESSORIES

C. LED DRIVERS SHALL BE SOLID STATE AND ACCEPT 120 THROUGH 277 VAC AT 60 HZ INPUT.

D. THE LED LIGHT SOURCE SHALL BE FULLY DIMMABLE WITH USE OF COMPATIBLE DIMMER SWITCH DESIGNATED FOR LOW VOLTAGE LOADS.

E. THE CONTRACTOR SHALL PROVIDE LIGHTING CONTROL DEVICES (DIMMERS) THAT ARE COMPATIBLE WITH LED DRIVER BEING PROVIDED WITH THE FIXTURE.

F. EXIT SIGNS INDICATED AS PROVIDING POWER TO REMOTE EXTERIOR EGRESS LIGHTS SHALL BE EQUIPPED WITH THE INCREASED BATTERY CAPACITY TO SERVE THE REMOTE EMERGENCY LIGHT. REMOTE EMERGENCY LIGHT SHALL BE A STANDARD ACCESSORY OF THE INTERIOR EXIT SIGN TO WHICH CONNECTED.

LIGHTING CONTROLS

A. TIME SWITCHES, PHOTOCELLS AND CONTACTORS SHALL BE AS DETAILED ON DRAWINGS.

B. WALL SWITCH OCCUPANCY SENSORS SHALL BE WATT STOPPER WS-250 OR APPROVED EQUAL.

C. CEILING MOUNTED OCCUPANCY SENSORS SHALL BE DUAL TECHNOLOGY TYPE WITH POWER PACK. WATT STOPPER DT-300 WITH BZ-200 POWER PACK, OR APPROVED EQUAL.

D. PROVIDE A NEUTRAL CONDUCTOR TO ALL SWITCH LOCATIONS

ROUGH-IN SYSTEM FOR VOICE AND DATA

A. PROVIDE A ROUGH-IN SYSTEM AS SPECIFIED HEREIN FOR SERVICE TO THE OWNER'S VOICE AND DATA NETWORK.

B. PROVIDE SHALL INSTALL A 4'x8'x3/4 INCH PLYWOOD BOARD TO SUPPORT SHERWIN-WILLIAMS PHONE, COMPUTER AND SATELLITE EQUIPMENT. SEE ELEVATIONS FOR INSTALLATION INSTRUCTIONS AND SPECIAL ELECTRICAL REQUIREMENTS. PLYWOOD SHALL BE MINIMUM APA STRUCTURAL I RATED SHEATHING EXTERIOR C-C

C. OUTLET BOXES FOR TELEPHONE AND DATA DEVICES SHALL CONSIST OF 4 11/16 IN SQUARE BY 2 1/8 INCH DEEP OUTLET BOXES WITH SINGLE DEVICE COVER.

D. PROVIDE A 3" EMPTY CONDUIT WITH PULLSTRING FROM THE WALL MOUNTED PLYWOOD TELEPHONE TERMINAL BOARD IN THE TENANT SPACE TO THE LANDLORDS TELEPHONE DISTRIBUTION OR POINT OF SERVICE DELIVERY. PROVIDE A NYLON BUSHING ON EACH END OF CONDUIT FOR CABLE PROTECTION.

E. ROUGH-IN FOR WIRING DROPS TO WALL MOUNTED VOICE AND DATA DEVICES SHALL BE INSTALLED WITHIN EMT CONDUIT, 1". PROVIDE A CONDUIT STUB FROM THE DEVICE BOX TO ABOVE ACCESSIBLE CEILING. PROVIDE A PLENUM RATED NYLON BUSHING ON THE END OF THE CONDUIT STUB FOR PROTECTION OF THE WIRING.

F. PRIOR TO BEGINNING WORK, THIS CONTRACTOR SHALL FULLY COORDINATE HIS CONSTRUCTION OPERATIONS AND ALL TERMINATION LOCATIONS WITH AUTHORIZED REPRESENTATIVE OF THE TELEPHONE UTILITY COMPANY AND THE OWNER'S DATA NETWORK PROVIDER BY TIMELY NOTICE OR SCHEDULING OF SERVICE EQUIPMENT DATES, SERVICE MODIFICATION DATES AND NOTIFICATION OF REQUIRED OWNER AUTHORIZATIONS INVOLVING THE UTILITY COMPANY.

DUCT MOUNTED SMOKE DETECTORS

A. PROVIDE A 120 VOLT POWER SOURCE TO ALL DUCT MOUNTED SMOKE DETECTORS INSTALLED WITHIN NEW AND EXISTING MECHANICAL EQUIPMENT

B. PROVIDE A DUCT MOUNTED SMOKE DETECTORS WITHIN NEW AND EXISTING MECHANICAL EQUIPMENT AS REQUIRED BY APPLICABLE CODES. FINAL ELECTRICAL CONNECTION AND ALL INTERLOCK WIRING BY THE ELECTRICAL CONTRACTOR.

C. PROVIDE ALL INTERLOCK WIRING IN CONDUIT BETWEEN ALL DUCT DETECTORS SUCH THAT UPON DETECTING SMOKE IN ANY ONE DETECTOR, ALL ROOF TOP UNITS SHALL BE SHUT DOWN.

D. PROVIDE TEST/RESET SWITCH AND PIEZO ALERT SOUNDER AND REMOTE ANNUNCIATOR ALARM LED MOUNTED AS DIRECTED BY LOCAL AHJ. EC TO PROVIDE ALL REQUIRED INTERLOCK WIRING BETWEEN DUCT DETECTOR AND REMOTE SWITCH.

E. REFER TO DETAILS ON MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.

TESTING

A. PROVIDE ALL TESTS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.

B. PROVIDE THE TESTS AS OUTLINED HEREINAFTER AND OTHER TESTS REQUIRED TO ESTABLISH THE ADEQUACY, QUALITY, SAFETY, COMPLETED STATUS AND SUITABLE OPERATION OF EACH SYSTEM.

C. PROMPTLY CORRECT ANY FAILURES, DEFICIENCIES AND/OR DEFECTS REVEALED BY THESE TESTS. AFTER CORRECTING FAILURES, DEFICIENCIES OF DEFECTS, CONDUCT NEW TESTING TO VERIFY THAT THE DEFICIENCY HAS BEEN RECTIFIED AND THE SYSTEM IS FUNCTIONING PROPERLY.

D. NEW PANELBOARDS SHALL HAVE PHASE CURRENTS BALANCED TO WITHIN +/- 10% VARIATION BETWEEN AVERAGE PHASE CURRENT AND MEASURED INDIVIDUAL PHASE.

E. AN OPERATIONAL TEST OF THE EMERGENCY LIGHTING/EXIT SIGNAGE SYSTEM SHALL BE PERFORMED IN THE PRESENCE OF THE OWNER AND THE AUTHORITY HAVING JURISDICTION TO DEMONSTRATE PROPER OPERATION AND COMPLIANCE WITH APPLICABLE CODES AND SPECIFIED REQUIREMENTS.

OPERATION AND MAINTENANCE MANUALS

A. THIRTY (30) DAYS PRIOR TO SUBSTANTIAL COMPLETION, SUBMIT OPERATING AND MAINTENANCE MANUALS FOR EQUIPMENT TO ENGINEER FOR APPROVAL. INCLUDE ONE COPY OF EACH FINAL APPROVED SUBMITTAL FOR RECORD PURPOSES, INDICATING THE ACTUAL PRODUCT INSTALLED. INCLUDE SIGNIFICANT CHANGES IN THE PRODUCT DELIVERED TO PROJECT SITE AND CHANGES IN MANUFACTURER'S WRITTEN INSTRUCTIONS FOR INSTALLATION.

B. PROVIDE COMPREHENSIVE CONTACT LIST INCLUDING CONTRACTOR AND SUBCONTRACTOR'S NAMES, ADDRESSES, TELEPHONE AND CONTACT PERSON FOR OWNER'S USE.

TRAINING OF OWNER'S DESIGNATED PERSONNEL

A. PREPARE AND SUBMIT OPERATING INSTRUCTIONS AND PROVIDE ON-SITE TRAINING OF OWNER'S PERSONNEL IN USE AND MAINTENANCE OF OPERATING EQUIPMENT.

WARRANTY

A. THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS, EQUIPMENT AND THE INSTALLATION TO BE FREE OF DEFECTS THAT MAY DEVELOP IN ANY PART OF THEIR WORK CAUSED BY FAULTY WORKMANSHIP, MATERIAL OR EQUIPMENT FAILURES, FOR A MINIMUM OF ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION OR FOR AS LONG AS NORMAL EQUIPMENT MANUFACTURER WARRANTIES ARE IN EFFECT FROM THE DATE OF OWNER ACCEPTANCE OF THE PROJECT, WHICHEVER IS LATER.

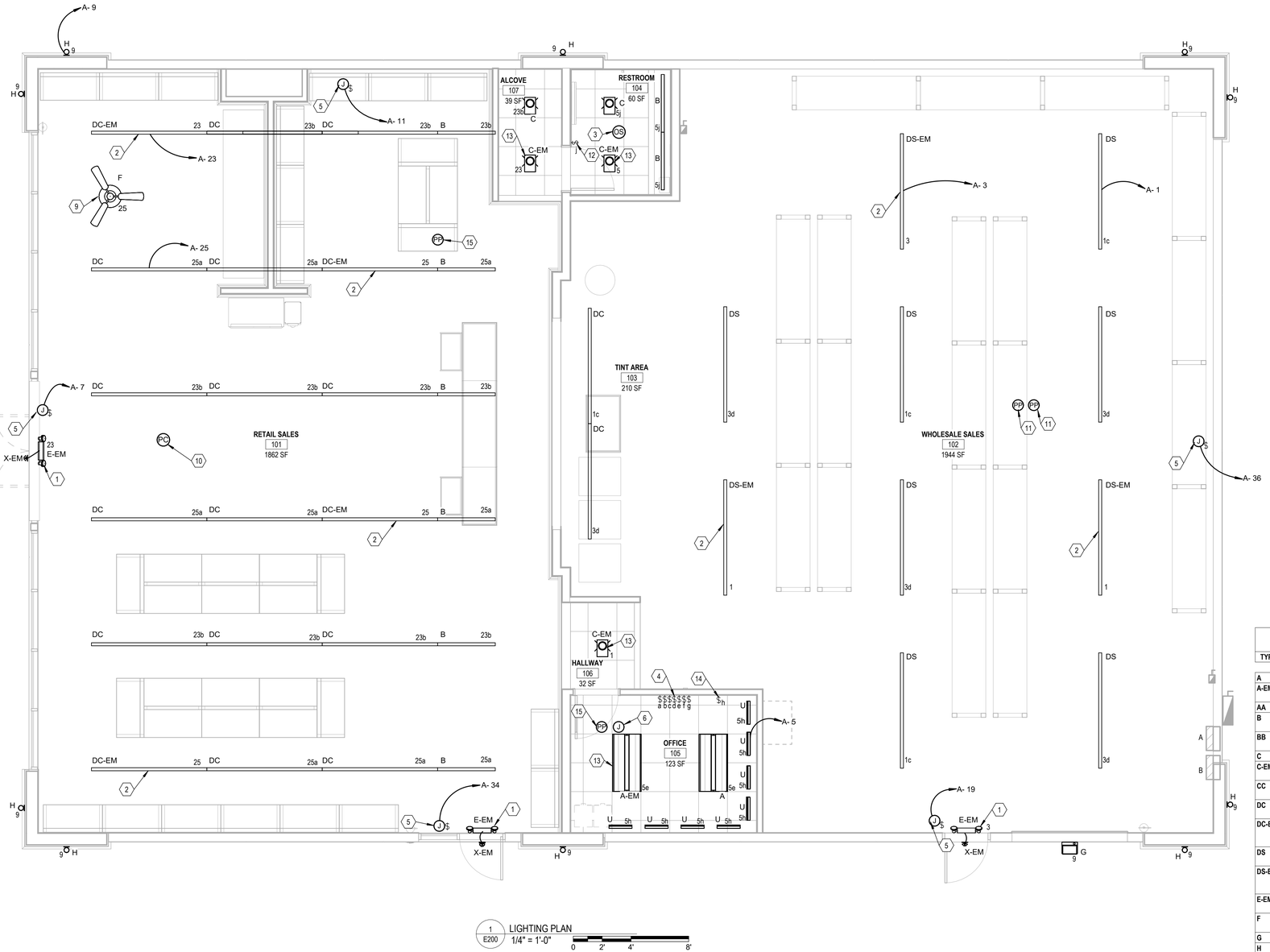
B. DURING THE ONE (1) YEAR WARRANTY PERIOD, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE PREMISES CAUSED BY DEFECTS IN WORKMANSHIP OR DEFECTS IN THE WORK OR EQUIPMENT FURNISHED AND/OR INSTALLED UNDER THE WORK OF THE ELECTRICAL CONTRACT.

FIRE ALARM SYSTEM

A. FIRE ALARM SYSTEM WORK IS A DELEGATED DESIGN AND IS NOT INCLUDED AS PART OF THE ELECTRICAL SCOPE OF WORK.

B. FIRE ALARM SYSTEM WORK SHALL BE PROVIDED BY THE GENERAL CONTRACTOR AS A DELEGATED DESIGN.

C. GENERAL CONTRACTOR (GC) SHALL BE RESPONSIBLE FOR RETAINING THE SERVICES OF A FIRE ALARM SYSTEM VENDOR/DESIGN PROFESSIONAL TO PREPARE THE FIRE ALARM SYSTEM DESIGN, DETAILS, CALCULATIONS, ETC. AS REQUIRED BY ALL APPLICABLE CODES AND THE AUTHORITY HAVING JURISDICTION.



1 LIGHTING PLAN
E200
1/4" = 1'-0"
0 2' 4' 8'

KEYNOTES

1	CONNECT EMERGENCY EGRESS LIGHTING FIXTURES AHEAD OF ALL LIGHTING CONTROLS OF GENERAL LIGHTING CIRCUIT SERVING AREA.
2	NIGHT LIGHTING TO BE CONNECTED TO UNSWITCHED LEG OF CIRCUIT SERVING SPACE. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN AND INSTALLATION.
3	E.C. TO PROVIDE LUTRON #LFR2-OCR28-0-WH OCCUPANCY SENSOR FOR CONTROL OF AREA LIGHTING AT CEILING MOUNTED HEIGHT OR AS DIRECTED BY G.C. INSTALL PER MANUFACTURER SPECIFICATIONS.
4	LOCATION OF MAIN LIGHTING SWITCHBANK. REFER TO SWITCHBANK DETAIL ON SHEET E400 FOR ADDITIONAL INFORMATION. PROVIDE PERMANENT LABELS.
5	INSTALL A DEDICATED 20-AMP, SINGLE PHASE, 120 VOLT CIRCUIT THROUGH AN ELECTRONIC TIME CONTROL PANEL AND TERMINATE IN A J-BOX JUST BEHIND THE EXTERIOR WALL/FACIA AT EACH LOCATION SHOWN. SHERWIN WILLIAMS WILL INSTALL SIGNAGE AT THESE LOCATIONS. THE LANDLORD SHALL CONNECT THE SIGNAGE TO THESE CIRCUITS.
6	E.C. TO PROVIDE LUTRON #HJS-0-FM HUB WITH INTEGRATED TIME CLOCK ABOVE CEILING AS REQUIRED TO CONTROL LIGHTING AND SIGNAGE. SEE VIVE LIGHTING CONTROL HUB DIAGRAM ON SHEET E400 FOR ADDITIONAL INFORMATION.
7	NOT USED.
8	NOT USED.
9	VERIFY FAN CONTROLS WITH OWNER.
10	PROVIDE LUTRON EXTERIOR DAYLIGHT CONTROL PACKAGE FOR CONTROL OF EXTERIOR LIGHTING.
11	PROPOSED LOCATION OF LUTRON #RMJS-8T-DV-B DIMMING MODULE FOR 0-10V DIMMING CONTROL OF LIGHTING. COORDINATE WITH LUTRON SYSTEMS AND ASSOCIATED SWITCHING AS SHOWN.
12	E.C. TO PROVIDE LUTRON #PJ2-4B-GWH-L01 (CW-1-WH) PICO 4 BUTTON CONTROL FOR LIGHTING CONTROL SWITCHING. CONNECT TO ASSOCIATED POWER PACK DIMMING MODULE FOR CONTROL DIMMING OF LIGHTING.
13	CONNECT FIXTURE TO SWITCHED LEG AND CONNECT EMERGENCY DRIVER TO UNSWITCHED LEG OF CIRCUIT NOTED.
14	E.C. TO PROVIDE LUTRON #MRF2S-6ELV120-WH WIRELESS DIMMING CONTROL SWITCHING FOR CONTROL OF UNDER COUNTER TASK LIGHTING. COORDINATE WITH LUTRON SYSTEMS AND MANUFACTURER SPECIFICATIONS.
15	PROPOSED LOCATION OF LUTRON #RMJS-5R-DV-B POWER PACK RELAY MODULE FOR CONTROL OF AREA LIGHTING. COORDINATE WITH LUTRON SYSTEMS AND ASSOCIATED SWITCHING AS SHOWN.

LIGHTING CONTROL NOTES:

RETAIL AND WHOLESALE SALES LIGHTING TO BE TIMECLOCK ON/OFF WITH MANUAL OVERRIDE AT SWITCHBANK.

OFFICE AND RESTROOM LIGHTING TO BE OCCUPANCY SENSOR ON/OFF WITH MANUAL OVERRIDE SWITCH/DIMMER PER PLANS.

EXTERIOR LIGHTING AND SIGNAGE TO BE PHOTOCELL ON/TIMECLOCK OFF.

FLAG POLE LIGHTING TO BE PHOTOCELL ON/OFF.

COORDINATE TIMECLOCK ON/OFF TIMES WITH OWNER.

LIGHTING CONTROL DEVICES ON PLANS REPRESENT DESIGN INTENT ONLY. COORDINATE ALL DEVICES WITH LUTRON REPRESENTATIVE TO ENSURE A COMPLETE SYSTEM.

Lighting Fixture Schedule

TYPE	Manufacturer	Model	Apparent Load	Voltage	Comments	Lamp
A	GE CURRENT	LVT24B048MM840VQLTWHTE	44 VA	120 V	2X4 LED TROFFER. TO BE SOURCED FROM WESCO	LED
A-EM	GE CURRENT	LVT24B048MM840VQLTWHTEEL	44 VA	120 V	2X4 LED TROFFER W/EM BATTERY. TO BE SOURCED FROM WESCO	LED
AA	LITHONIA	(2) DSX1-LED-P4-40K-80CRI-T4M	250 VA	120 V	POLE LIGHT. PROVIDE W/20' POLE	LED
B	GE CURRENT	ALV204T04T481DSQVQSTKQW	33 VA	120 V	48" STRIP LIGHT SUSPENDED FROM CEILING AT 12'AFF. TO BE SOURCED FROM WESCO	LED
BB	FC OUTDOOR LIGHTING	FCD601-UNV-27K-3L-CRI85-SS	6 VA	120 V	GROUND MOUNTED UPLIGHT	LED
C	GE CURRENT	LRXBR61X9CWVQ	33 VA	120 V	6" RECESSED DOWNLIGHT. TO BE SOURCED FROM WESCO	LED
C-EM	GE CURRENT	LRXR610840MDEL	33 VA	120 V	6" RECESSED DOWNLIGHT W/EM BATTERY. TO BE SOURCED FROM WESCO	LED
CC	LITHONIA	DSX1-LED-P4-40K-80CRI-T4M	<varies>	120 V	<varies>	<varies>
DC	GE CURRENT	ALV208T08T481DCQVQSTKQW	72 VA	120 V	96" LED STRIP LIGHT SUSPENDED FROM CEILING AT 12'AFF U.N.O. TO BE SOURCED FROM WESCO	LED
DC-EM	GE CURRENT	ALV208T08T481DCQVESTKQW	72 VA	120 V	96" LED STRIP LIGHT SUSPENDED FROM CEILING AT 12'AFF U.N.O. PROVIDE WITH EM BALLAST. TO BE SOURCED FROM WESCO	LED
DS	GE CURRENT	ALV208T08T481DCQVESTKQW	72 VA	120 V	96" LED STRIP LIGHT SUSPENDED FROM CEILING AT 12'AFF U.N.O. TO BE SOURCED FROM WESCO	LED
DS-EM	GE CURRENT	ALV208T08T481DSQVESTKQW	72 VA	120 V	96" LED STRIP LIGHT SUSPENDED FROM CEILING AT 12'AFF U.N.O. PROVIDE WITH EM BALLAST. TO BE SOURCED FROM WESCO	LED
E-EM	COOPER	APCH7R/APWR	1 VA	120 V	COMBO EMERGENCY/EXIT LIGHT AND REMOTE HEAD. MINIMUM 90 MINUTE BATTERY. W/ REMOTE HEAD	LED
F	CRAFTMADE	MND54BNK3-54"	72 VA	120 V	MOUNT @ 8'-0" A.F.F. - INSTALL "LIGHTING BOX" FOR STABILITY	LED
G	HUBBELL	LN3	41 VA	120 V	WALL SCONE	LED
H	PROGRESS	P5641 20/30K BZ	30 VA	120 V	OUTDOOR CYLINDER	LED
U	JUNO	UPLD 22IN SWW4 90CRI WH	11 VA	120 V	USE SPLICE BOX & JUMPER CONNECTORS	LED

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4/11/2025

STATE OF TEXAS
MATTHEW RICHARD CASE
128362
LICENSED PROFESSIONAL ENGINEER

PROJECT #:

DRAWN BY: BW CHECKED BY: DRC

PERMIT SET - 4/11/2025

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2 -
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4 -
5 -
6 -

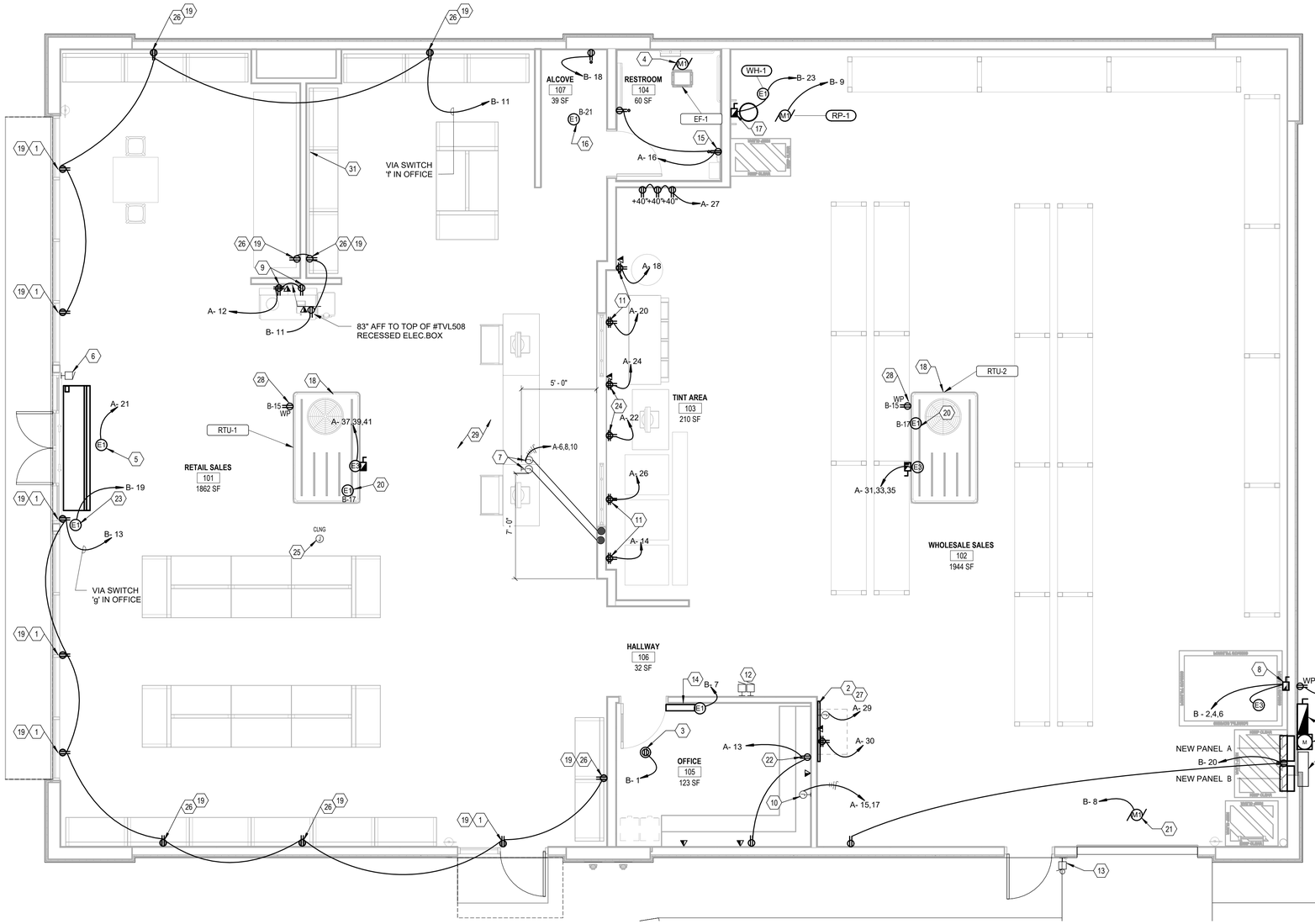
SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
LIGHTING PLAN

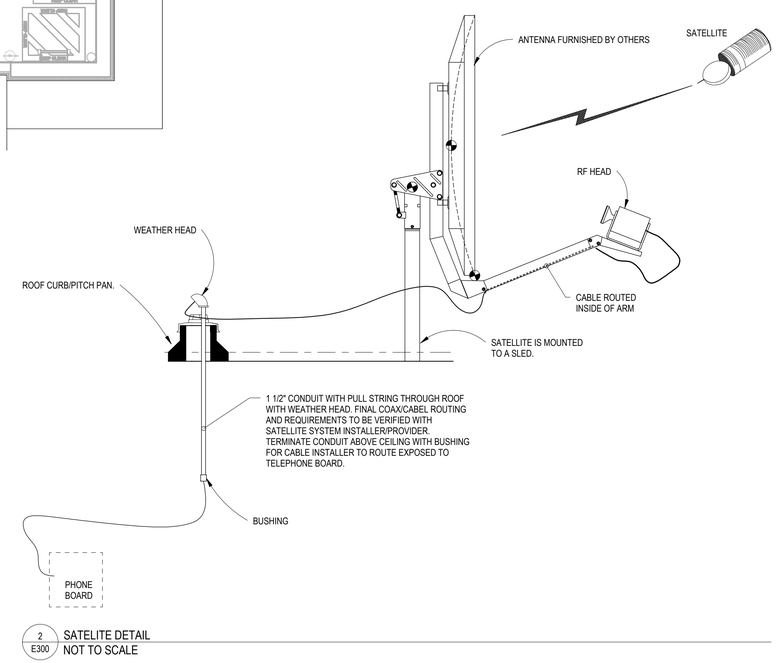
SHEET NUMBER:
E200



1 E300 POWER PLAN
1/4" = 1'-0"
0 8' 16' 24'

KEYNOTES

1	E.C. TO PROVIDE DUPLEX RECEPTACLE MOUNTED IN SOFFIT ABOVE WINDOW FOR SHOW WINDOW REQUIREMENTS PER NEC 210.62 FIELD VERIFY EXACT LOCATION PRIOR TO ROUGH-IN AND INSTALLATION.
2	E.C. TO INSTALL TTB / PHONE BOARD FOR CONNECTION TO LOW VOLTAGE EQUIPMENT AND DATA REQUIREMENTS. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN AND INSTALLATION. INSTALL PER MANUFACTURER RECOMMENDATIONS.
3	INSTALL A STANDARD DUPLEX ELECTRICAL OUTLET JUST ABOVE THE CEILING OF THE OFFICE. LOCATE THIS OUTLET IN THE APPROXIMATE CENTER OF THE ROOM.
4	BATHROOM EXHAUST FAN TO BE AUTOMATICALLY CONTROLLED WITH AREA OCCUPANCY LIGHTING SENSOR. COORDINATE INSTALLATION WITH M.C.
5	E.C. TO PROVIDE J-BOX AT 10'-0" A.F.F. OR AS DIRECTED BY G.C. FOR CONNECTION TO AUTOMATIC DOOR CONTROL. VERIFY CONNECTION REQUIREMENTS AND INSTALL PER MANUFACTURER SPECIFICATIONS.
6	E.C. TO PROVIDE LOW VOLTAGE CONDUIT FROM AUTOMATIC DOOR SENSOR TO OFFICE FOR FUNCTION OF DOOR CONTROL COORDINATE EXACT REQUIREMENTS WITH MANUFACTURER SPECIFICATIONS.
7	EC TO INSTALL PULL BOXES RECESSED INTO THE SLAB IN THE SALES AREA. THE CONDUITS AND FEEDS FOR THE PULL BOXES SHALL EXTEND FROM A WALL AND UNDER THE SLAB. PULL BOX "A" SHALL RECEIVE TWO DEDICATED, 20-AMP, SINGLE PHASE, 120 VOLT CIRCUITS AND ONE STANDARD SINGLE PHASE, 120 VOLT CIRCUIT. PULL BOX "B" SHALL RECEIVE (2) 1-1/4 INCH CONDUITS WITH PULL WIRES FROM THE PULL BOX AND TERMINATE AT THE SATELLITE BOARD.
8	VERIFY FORKLIFT CHARGER POWER REQUIREMENTS PRIOR TO ROUGH-IN. SEE DETAIL 2/E400 FOR ELEVATION.
9	E.C. TO INSTALL DUPLEX AND DATA OUTLET IN TVL508 RECESSED ELECTRICAL BOX AT +83" A.F.F. TO TOP OF RECESSED ELECTRICAL BOX. REFER TO NOTE #2 AND #3 ON SHEET A300 FOR ADDITIONAL INFORMATION. COORDINATE EXACT LOCATIONS WITH G.C. PRIOR TO ROUGH-IN AND INSTALLATION.
10	E.C. TO PROVIDE J-BOX AS DIRECTED BY G.C. ABOVE COUNTER FOR CONNECTION TO PLUGMOLD WITH (4) DUPLEX AND DATA BOXES. PLUGMOLD TO BE INSTALLED BY G.C. / E.C. VERIFY SCOPE OF WORK PRIOR TO BID.
11	OUTLET MOUNTED AT +40" A.F.F. RECEPTACLE SHALL BE DEDICATED 20A, 1P, 120V CIRCUIT WITH GRAY DUPLEX RECEPTACLE AND COVER PLATE PER ARCHITECT SPECIFICATIONS.
12	INSTALL OPTEX CHIME SYSTEM RECEIVER UNIT. BUZZER AND REQUIRED STANDARD OUTLET ON STAGING WALL AT +108". PROVIDE CONNECTION TO EXTERIOR WEATHERPROOF BUZZER BUTTON AS SHOWN. CHIME RECEIVER SHALL BE OPTEX MODEL #RCTD-20U. BUZZER SHALL BE EDWARDS COMPANY MODEL #725.
13	EXTERIOR WEATHERPROOF BUZZER BUTTON TO BE INSTALLED AT +48" A.F.F. AS SHOWN. VERIFY CONNECTION REQUIREMENTS PRIOR TO ROUGH-IN AND INSTALLATION. BUZZER BUTTON SHALL BE EDWARDS COMPANY MODEL #1786-B.
14	E.C. TO COORDINATE WITH AUTOMATIC DOOR MANUFACTURER. MANUFACTURER SPECIFICATIONS FOR INSTALLATION OF AUTOMATIC DOOR CONTROL PANEL. VERIFY CONNECTION AND POWER REQUIREMENTS PRIOR TO ROUGH-IN AND INSTALLATION.
15	E.C. TO PROVIDE GFCI PROTECTED OUTLETS FOR CONNECTION TO AUTOMATIC FAUCETS BENEATH LAVATORY. COORDINATE WITH P.C. VERIFY CONNECTION AND POWER REQUIREMENTS PRIOR TO ROUGH-IN AND INSTALLATION.
16	E.C. TO PROVIDE LUTRON #HJS-O-FM HUB WITH INTEGRATED TIMECLOCK ABOVE CEILING AS REQUIRED TO CONTROL LIGHTING AND SIGNAGE. SEE LIGHTING CONTROL PANEL DIAGRAM ON SHEET E400 FOR ADDITIONAL INFORMATION.
17	E.C. TO PROVIDE J-BOX AND 60A, 1P, 120V DISCONNECT SWITCH WITH 2#8 + # 10G WIRE IN 3/4" CONDUIT TO ELECTRIC WATER HEATER. COORDINATE CONNECTION REQUIREMENTS PER MANUFACTURER RECOMMENDATIONS. VERIFY MOUNTING HEIGHT OF J-BOX WITH ARCHITECT PRIOR TO ROUGH-IN AND INSTALLATION.
18	E.C. TO COORDINATE PER MECHANICAL PLANS FOR ALL WORK REQUIRED FOR RTU-1 & RTU-2. VERIFY SCOPE OF WORK PRIOR TO ANY BID.
19	E.C. TO INSTALL OUTLETS AT LOCATION AND HEIGHTS NOTED. PROVIDE RECEPTACLE IN TVBS503 RECESSED BOX. OUTLETS SHALL BE WIRED TO ASSOCIATED LUTRON #RMJS-20R-DV-B RECEPTACLE CONTROL RELAY MODULE AND CONTROLLED VIA MAIN SWITCHBANK LOCATED INSIDE OFFICE AND BEHIND DOOR. OUTLETS SHALL BE WHITE DUPLEX RECEPTACLE AND COVER PLATE. SHALL BE INSTALLED HORIZONTALLY AND SHALL BE PAINTED TO MATCH SURROUNDING WALL. INSTALL SAME TYPE OF OUTLET IN HEADER OF EACH RUN OF STOREFRONT. ALL OUTLETS MOUNTED AT 18" A.F.F. UNLESS OTHERWISE NOTED.
20	RETURN-AIR DUCT SMOKE DETECTOR FURNISHED WITH RTU. EC TO CONNECT TO CIRCUIT NOTED. PROVIDE TEST/RESET SWITCH AND PIEZO ALERT SOUNDER AND REMOTE ANNUNCIATOR ALARM LED MOUNTED AS DIRECTED BY LOCATION AHJ.
21	E.C. TO PROVIDE CONNECTION FOR MOTORIZED DOOR. COORDINATE REQUIREMENTS WITH DOOR VENDOR AND VERIFY ALL CONNECTION AND DISCONNECTING REQUIREMENTS PRIOR TO INSTALLATION. VERIFY SCOPE OF WORK PRIOR TO BID.
22	UNDER COUNTER TYPICAL OF 2.
23	DEDICATED CIRCUIT FOR FUTURE AIR CURTAIN. COORDINATE LOCATION IN FIELD WITH MECHANICAL CONTRACTOR.
24	PROVIDE BLUE-COLORED HBL53623A OR EQUAL 4-PLEX SURGE SUPPRESSION RECEPTACLE WITH LIGHT AND ALARM. +40"AFF.
25	J-BOX WITH CONDUIT AND PULL WIRES INSTALLED AT ROOF STRUCTURE. REFER TO DETAIL #2 ON THIS SHEET FOR MORE INFORMATION.
26	MOUNT OUTLETS AT 84" A.F.F.
27	THE EC SHALL INSTALL A 4'X8'X3/4 INCH PLYWOOD BOARD TO SUPPORT SHERWIN-WILLIAMS PHONE, COMPUTER AND SATELLITE EQUIPMENT. PLYWOOD SHALL BE MINIMUM APA STRUCTURAL I RATED SHEATHING EXTERIOR C-C.
28	WEATHER PROOF GFCI DUPLEX RECEPTACLE FURNISHED WITH RTU. EC TO CONNECT TO CIRCUIT NOTED.
29	GC/EC TO INSTALL CONDUIT FOR SATELITE ANTENNA SYSTEM, REFER TO DETAIL 02 THIS SHEET FOR CONDUIT SIZING
30	NOT USED.
31	RACEWAYS FOR POWER AND DATA TO FREE STANDING SALES FLOOR WALL TO BE RUN UNDER SLAB.



2 E300 SATELITE DETAIL
NOT TO SCALE

RECEPTACLE NOTE:

INSTALL RECEPTACLES PER NFPA AND LOCAL CODE. WHEN THE RECEPTACLE IS:

A. VERTICALLY ALIGNED, THE GROUND SLOT SHALL BE MOUNTED AT THE TOP.
B. HORIZONTALLY ALIGNED, THE NEUTRAL SLOT SHALL BE AT THE TOP.

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4/11/2025

STATE OF TEXAS
MATTHEW RICHARD CASE
128362
LICENSED
PROFESSIONAL ENGINEER

PROJECT #:

DRAWN BY: BW CHECKED BY: DRC

	PERMIT SET - 4/11/2025
1	REVISION 1 LL COMMENTS - 9/6/2024
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3	-
4	-
5	-
6	-

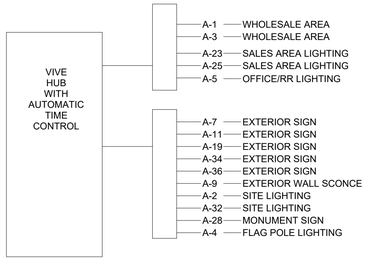
SHERWIN WILLIAMS

STORE #:
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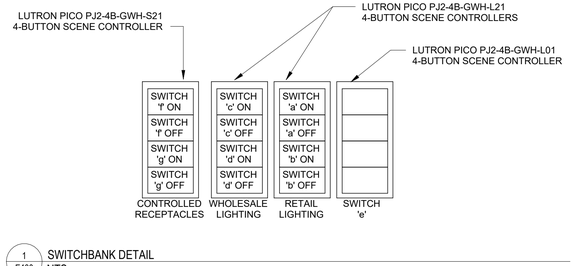
ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
POWER PLAN

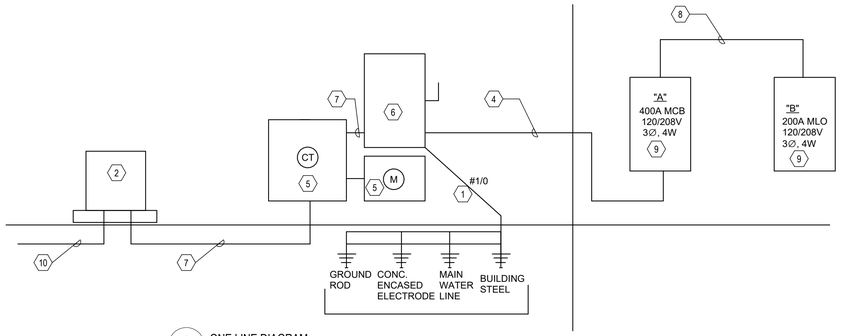
SHEET NUMBER:
E300



6 E400 LIGHTING CONTROL DETAIL
NOT TO SCALE



1 E400 SWITCHBANK DETAIL
NTS



3 E400 ONE LINE DIAGRAM
NTS

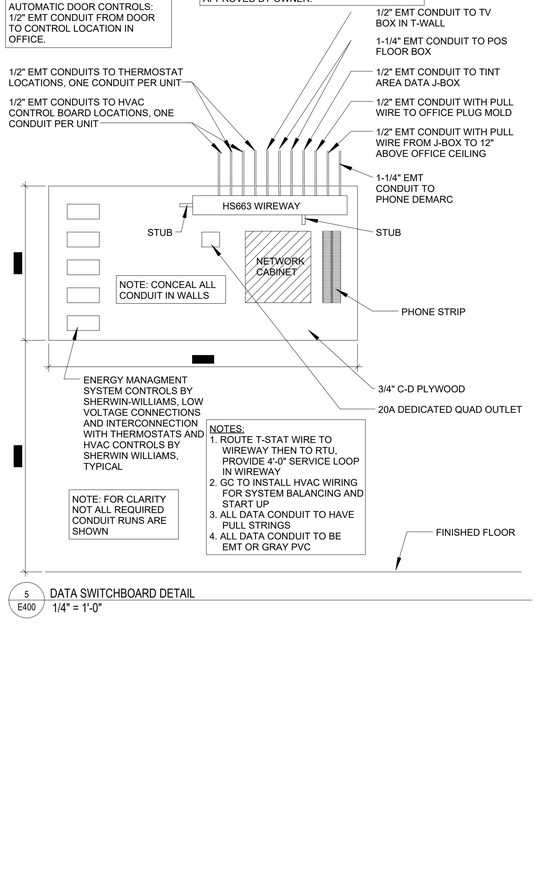
KEYED NOTES

1. NEW ELECTRICAL SERVICE GROUND PER NEC 250.
2. NEW PAD MOUNTED UTILITY COMPANY TRANSFORMER. EC TO PROVIDE PAD FOR TRANSFORMER.
3. NOT USED.
4. PROVIDE 4 #500 KCMIL + #3 GRD IN 4"CONDUIT..
5. PROVIDE UTILITY APPROVED 400 AMP, 120/208V, 3PH, 4W CT CABINET AND METER.
6. PROVIDE 120/208V, 3Ø, 4W, 400AS/400AF SERVICE ENTRANCE RATED DISCONNECT SWITCH. LOCKABLE, NEMA 3R ENCLOSURE.
7. PROVIDE 4 #500 KCMIL IN 4"CONDUIT.
8. PROVIDE 4 #3/0 & #6 GRD IN 2" CONDUIT.
9. PROVIDE NEW PANEL. SEE PANEL SCHEDULES FOR INFORMATION.
10. PROVIDE 4" PRIMARY CONDUIT AS DIRECTED BY UTILITY COMPANY. COORDINATE REQUIREMENTS AND LOCATION(S) WITH UTILITY PRIOR TO ROUGH-IN.

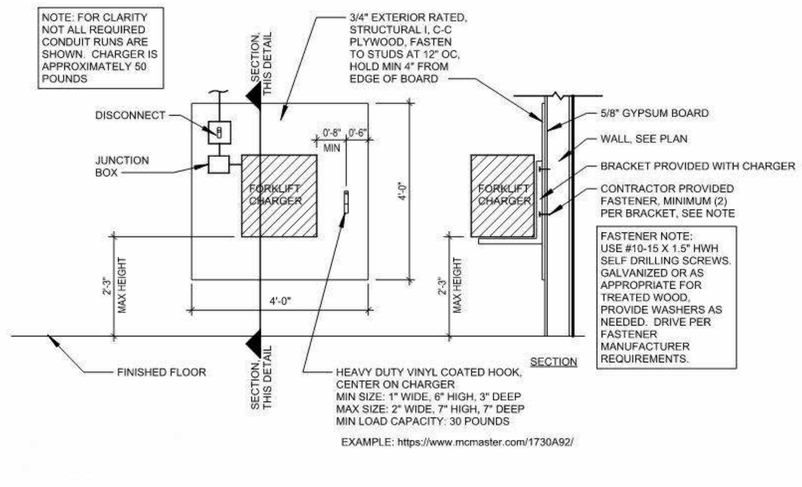
NOTE:
SEE EXHIBIT D FOR COMMUNICATIONS REQUIREMENTS

NOTE: ALL CONDUITS PROVIDED & INSTALLED BY CONTRACTOR. CONTRACTOR SHALL PREPARE LOW VOLTAGE PLAN SHOWING DEVICES. LOCATIONS AND CONDUIT MUST BE APPROVED BY OWNER.

NOTE:
AUTOMATIC DOOR CONTROLS:
1/2" EMT CONDUIT FROM DOOR TO CONTROL LOCATION IN OFFICE.



5 E400 DATA SWITCHBOARD DETAIL
1/4" = 1'-0"



2 E400 FORKLIFT CHARGER ELEVATION
NTS

UTILITY TRANSFORMER FAULT CALCULATION

SERVICE ENTRANCE		CALCULATION
VOLTAGE (L-L):	208V	I-FLA=[RATED KVA * 1000]/
PHASE (PH):	3	[V-L-L*SQRT(PHASE)]
AMPS:	400A	I-FLA= 416A
FULL LOAD KVA:	144KVA	
TRANSFORMER:	150KVA	M=100/%Z= 93.5
IMPEDANCE (%Z):	1.1%Z	I-SC=I-FLA*M= 39 KA

CALCULATION IS BASED ON ESTIMATED TRANSFORMER SIZE WITH %Z FROM BUSSMANN SPD. CONTRACTOR SHALL CONTACT UTILITY AND VERIFY I-SC AVAILABLE AT SECONDARY OF TRANSFORMER. CONTACT ENGINEER FOR RE-CALCULATION IF LARGER THAN CALCULATED.

CT CABINET FAULT CALC

STARTING I-SC:	39 KA	IMPEDANCE BASED ON 3 SINGLE
VOLTAGE (L-L):	208V	CONDUCTORS IN NON-MAGNETIC
PHASE (PH):	3	CONDUIT
FEEDER SIZE:	500	CALCULATION
FEEDER MATERIAL:	CU	"f=[SQRT(PHASE)*L*IS-C]/
PARALLEL SETS (Q):	1	[Q*C*V-LL]
FEEDER LENGTH (L):	30FT	f= 0.364
FEET PER OHMS (C):	26,706 FT/OHMS	M=1/(1+f)= 0.733
		I-SC=I-SC*M= 29 KA

NOTE: CALCULATION BASED ON BUSSMANN SPD

PANEL A FEEDER FAULT CALCULATION

STARTING I-SC:	29 KA	IMPEDANCE BASED ON 3 SINGLE
VOLTAGE (L-L):	208V	CONDUCTORS IN NON-MAGNETIC
PHASE (PH):	3	CONDUIT
FEEDER SIZE:	500	CALCULATION
FEEDER MATERIAL:	CU	"f=[SQRT(PHASE)*L*IS-C]/
PARALLEL SETS (Q):	1	[Q*C*V-LL]
FEEDER LENGTH (L):	10FT	f= 0.089
FEET PER OHMS (C):	26,706 FT/OHMS	M=1/(1+f)= 0.918
		I-SC=I-SC*M= 26 KA

NOTE: CALCULATION BASED ON BUSSMANN SPD

PANEL B FEEDER FAULT CALCULATION

STARTING I-SC:	26 KA	IMPEDANCE BASED ON 3 SINGLE
VOLTAGE (L-L):	208V	CONDUCTORS IN NON-MAGNETIC
PHASE (PH):	3PHASE	CONDUIT
FEEDER SIZE:	3/0	CALCULATION
FEEDER MATERIAL:	CU	"f=[SQRT(PHASE)*L*IS-C]/
PARALLEL SETS (Q):	1	[Q*C*V-LL]
FEEDER LENGTH (L):	10FT	f= 0.157
FEET PER OHMS (C):	13,923 FT/OHMS	M=1/(1+f)= 0.865
		I-SC=I-SC*M= 22.6 KA

NOTE: CALCULATION BASED ON BUSSMANN SPD

FAULT CURRENT NOTE

FAULT CURRENT CALCULATIONS WERE PERFORMED BY CASE ENGINEERING BASED ON AN ASSUMED TRANSFORMER KVA RATING AND ASSUMED TRANSFORMER IMPEDANCE VALUE FOR THE UTILITY COMPANY TRANSFORMER TO ESTABLISH BASIS OF DESIGN AIC RATINGS AS IDENTIFIED ON THE DRAWINGS.

PRIOR TO SUBMITTING THE POWER DISTRIBUTION EQUIPMENT PRODUCT DATA FOR REVIEW, THE ELECTRICAL CONTRACTOR SHALL CONTACT THE SERVING UTILITY COMPANY TO VERIFY THE FAULT CURRENT VALUES AVAILABLE FROM THE UTILITY COMPANY. CONTRACTOR SHALL SUBMIT THE UTILITY COMPANY FAULT CURRENT INFORMATION TO THE ENGINEER FOR REVIEW AND EVALUATION.

AFTER THE UTILITY FAULT CURRENT INFORMATION HAS BEEN REVIEWED AND EVALUATED BY THE ENGINEER, ANY REVISIONS TO THE BASIS OF DESIGN AIC VALUES IDENTIFIED ON THE DRAWINGS THAT MAY BE REQUIRED SHALL BE COMMUNICATED BY THE ENGINEER TO THE ELECTRICAL CONTRACTOR.

CONTRACTOR SHALL NOT SUBMIT THE POWER DISTRIBUTION EQUIPMENT FOR REVIEW OR ORDER THE POWER DISTRIBUTION EQUIPMENT UNTIL THE FAULT CURRENT INFORMATION FROM THE UTILITY COMPANY HAS BEEN EVALUATED BY THE ENGINEER AND PROVIDED FINAL DIRECTION REGARDING THE AIC RATING OF THE POWER DISTRIBUTION EQUIPMENT HAS BEEN PROVIDED BY THE ENGINEER.

MECHANICAL EQUIPMENT CONNECTION SCHEDULE

	MOTOR / LOAD DATA			SOURCE DATA		
EQUIP	VA	VOLTS	PHASE	SOURCE	CKT	WIRE SIZE
EF-1	150 VA	120 V	1	A	5	2 #12, #12G, 3/4"C
FORKLIFT CHARGER	9120 VA	208 V	3	B	2,4,6	3 #8, #10G, 3/4"C
RP-1	200 VA	120 V	1	B	9	2 #12, #12G, 3/4"C
RTU-1	43592 VA	208 V	3	A	37,39,41	3 #1, #6G, 1-1/4"C
RTU-2	43592 VA	208 V	3	A	31,33,35	3 #1, #6G, 1-1/4"C
WH-1	3000 VA	120 V	1	B	23	2 #8, #10G, 3/4"C

Branch Panel: A

Location: SERVICE DISCONNECT
Supply From:
Mounting: SURFACE
Enclosure: Type 1
Volts: 208Y/120
Phases: 3
Wires: 4
A.I.C. Rating: 22K SERIES RATED
Mains Type: MCB
Mains Rating: 400.0 A

Notes:

CL...	C...	Schedule Circuit Notes	CB	Note	P	A	B	C	P	Note	CB	Schedule Circuit Notes	C...	CL...
Lig...	1	WHOLESALE AREA...	20.0 A		1	547 VA	625 VA		1		20.0 A	SITE LIGHTING	2	Lig...
Lig...	3	WHOLESALE AREA...	20.0 A		1			628 VA 12 VA	1		20.0 A	FLAG POLE LIGHTS	4	Lig...
Lig...	5	OFFICE/RR LIGHTING	20.0 A		1								6	
-LTG	7	EXTERIOR SIGN	20.0 A		1	125 VA	120 VA		3		20.0 A	POS STATOPM	8	-REC
Oth...	9	EXTERIOR LIGHTS	20.0 A		1			500 VA 120 VA					10	
-LTG	11	EXTERIOR SIGN	20.0 A		1			1200 VA 180 VA	1		20.0 A	SALES AREA TV & BAR	12	-REC
-REC	13	OFFICE RECEPTACLES	20.0 A		1	360 VA	180 VA		1		20.0 A	TINTING AREA...	14	-REC
-REC	15	OFFICE PLUGMOLD	20.0 A	2				500 VA 360 VA	1		20.0 A	RESTROOM RECEPTACLES	16	-REC
	17							500 VA 180 VA	1		20.0 A	TINTING AREA...	18	-REC
-LTG	19	EXTERIOR SIGN	20.0 A		1	125 VA	180 VA		1		20.0 A	TINTING AREA...	20	-REC
-P...	21	AUTOMATIC DOOR	20.0 A		1			500 VA 180 VA	1		20.0 A	TINTING AREA...	22	-REC
Lig...	23	SALES AREA LIGHTING	20.0 A		1			1294 VA 180 VA	1		20.0 A	TINTING AREA...	24	-REC
Lig...	25	SALES AREA LIGHTING	20.0 A		1	1056 VA	180 VA		1		20.0 A	TINTING AREA...	26	-REC
-REC	27	TINT AREA RECEPTS	20.0 A		1			540 VA 1200 VA	1		20.0 A	MONUMENT SIGN	28	Other
-REC	29	DATA RACK	20.0 A		1			180 VA 360 VA	1		20.0 A	TINTING AREA...	30	-REC
-HVAC	31	RTU-2	125.0 A	3		14531 VA	625 VA		1		20.0 A	SIGHT LIGHTING	32	Lig...
	33							14531 VA 1200 VA	1		20.0 A	EXTERIOR SIGN	34	-LTG
	35							14531 VA 1200 VA	1		20.0 A	EXTERIOR SIGN	36	-LTG
-HVAC	37	RTU-1	125.0 A	3		14531 VA	6840 VA						38	Other
	39							14531 VA 3980 VA	3		200.0 A	PANEL B	40	
	41							14531 VA 7760 VA					42	
		Total Load:				40024 VA		38781 VA				43063 VA		
		Total Amps:				335.1 A		323.2 A				360.5 A		

Legend:
G = GFCI (5mA), GE = GF Equipment Protection (30mA), ST = Shunt Trip, A = AFCI Breaker, AG = AFCI / GFCI Combo Breaker, LO = Lock On Device, R = Red Mark On Breaker, SW = SWD Rated

		DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
LIGHTS	4094 VA	125%	5118 VA		
RECEPTACLE	8200 VA	FIRST 10K 100% REMAINING @50%	8200 VA	**Total Conn. Load:**	121869 VA
GENERAL POWER	2600 VA	100%	2600 VA	**Total Est. Demand:**	122943 VA
WATER HEATER	3000 VA	100%	3000 VA		
MOTOR	350 VA	100% PLUS 25% OF LARGEST MOTER	400 VA	**Total Conn. Current:**	338.3 A
HEATING		125%		**Total Est. Demand Current:**	341.3 A
HVAC	87184 VA	100%	87184 VA		
KITCHEN		65%			

Branch Panel: B

Location:
Supply From: A
Mounting: SURFACE
Enclosure: Type 1
Volts: 208Y/120
Phases: 3
Wires: 4
A.I.C. Rating: 22K SERIES RATED
Mains Type: MLO
Mains Rating: 200.0 A

Notes:

CL...	C...	Schedule Circuit Notes	CB	Note	P	A	B	C	P	Note	CB	Schedule Circuit Notes	C...	CL...
Rec...	1	OFFICE RECEPTACLE	20.0 A		1	180 VA	3040 VA						2	Other
-REC	3	IRRIGATION CONTROLLER	20.0 A		1		180 VA	3040 VA	3		35.0 A	FORKLIFT CHARGER	4	
-REC	5	BAR RECEPTACLE	20.0 A		1			180 VA 3040 VA					6	
-P...	7	AUTOMATIC DOOR...	20.0 A		1	500 VA	500 VA		1		20.0 A	OVERHEAD DOOR	8	-P...
-MTR	9	CIRCULATING PUMP	20.0 A		1		200 VA	0 VA	1	--	20.0 A	SPARE	10	--
-REC	11	SALES RECEPTACLES	20.0 A		1			1260 VA 0 VA	1	--	20.0 A	SPARE	12	--
-REC	13	SHOW WINDOW RECEPTS	20.0 A		1	1260 VA	0 VA		1	--	20.0 A	SPARE	14	--
-REC	15	HVAC RECEPTACLES	20.0 A		1		360 VA	0 VA	1	--	20.0 A	SPARE	16	--
-P...	17	SMOKE DETECTORS	20.0 A		1			100 VA 180 VA	1		20.0 A	WATER COOLER	18	-REC
-P...	19	DOOR OPENER	20.0 A		1	1000 VA	360 VA		1		20.0 A	TINTING AREA...	20	-REC
-LTG	21	LUTRON HUB	20.0 A		1		200 VA	0 VA	1	--	20.0 A	SPARE	22	--
Oth...	23	WATER HEATER	40.0 A		1			3000 VA 0 VA	1	--	20.0 A	SPARE	24	--
--	25	SPACE	--	--	1	--	--		1	--	--	SPACE	26	--
--	27	SPACE	--	--	1		--	--	1	--	--	SPACE	28	--
--	29	SPACE	--	--	1			-- --	1	--	--	SPACE	30	--
--	31	SPACE	--	--	1	--	--		1	--	--	SPACE	32	--
--	33	SPACE	--	--	1		--	--	1	--	--	SPACE	34	--
--	35	SPACE	--	--	1			-- --	1	--	--	SPACE	36	--
--	37	SPACE	--	--	1	--	--		1	--	--	SPACE	38	--
--	39	SPACE	--	--	1		--	--	1	--	--	SPACE	40	--
--	41	SPACE	--	--	1			-- --	1	--	--	SPACE	42	--
		Total Load:				6840 VA		3980 VA				7760 VA		
		Total Amps:				60.7 A		33.2 A				68.3 A		

Legend:
G = GFCI (5mA), GE = GF Equipment Protection (30mA), ST = Shunt Trip, A = AFCI Breaker, AG = AFCI / GFCI Combo Breaker, LO = Lock On Device, R = Red Mark On Breaker, SW = SWD Rated

		DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
LIGHTS	200 VA	125%	250 VA		
RECEPTACLE	3780 VA	FIRST 10K 100% REMAINING @50%	3780 VA	**Total Conn. Load:**	18580 VA
GENERAL POWER	2100 VA	100%	2100 VA	**Total Est. Demand:**	18680 VA
WATER HEATER	3000 VA	100%	3000 VA		
MOTOR	200 VA	100% PLUS 25% OF LARGEST MOTER	250 VA	**Total Conn. Current:**	51.6 A
HEATING		125%		**Total Est. Demand Current:**	51.9 A
HVAC		100%			
KITCHEN		65%			

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4/11/2025

STATE OF TEXAS
MATTHEW RICHARD CASE
128362
LICENSED
PROFESSIONAL ENGINEER

PROJECT #:

DRAWN BY: BW CHECKED BY: DRC

PERMIT SET - 4/11/2025
1 -
2 -
3 -
4 -
5 -
6 -

SHERWIN WILLIAMS

STORE #:
XXXX

ADDRESS:
1816 S. COLORADO ST.
LOCKHART, TX 78644

SHEET TITLE:
ELECTRICAL RISER & SCHEDULES

SHEET NUMBER:
E400