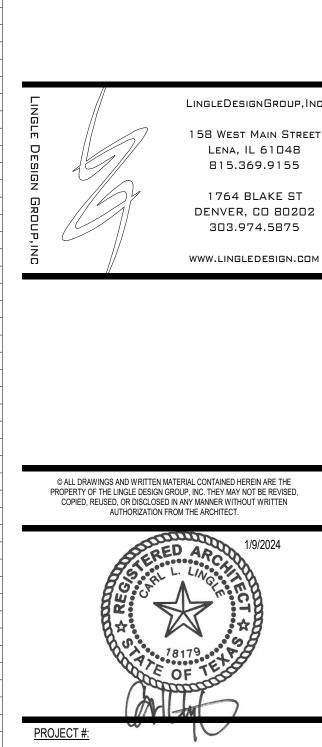
PROJECT TEAM DIRECTORY OWNER COMPANY NAME: | LIBERTY HILL DEVELOPMENT GROUP, LLC CONTACT NAME: GAVIN MELIA & EVA NEWTON ADDRESS: PO BOX 3289, 120 MARKET SQ., FLOOR 2 PINEHURST, NC 28374 FAX: GAVIN@BASELINEDEVELOPMENT.COM ARCHITECT COMPANY NAME: LINGLE DESIGN GROUP CONTACT NAME: | MICHAEL PUCKETT ADDRESS: 1860 W EVANS AVE - ENGLEWOOD, CO 80110 PHONE: (303) 974-5873 FAX: (815) 369-4495 EMAIL: MPUCKETT@LINGLEDESIGN.COM MEP ENGINEER COMPANY NAME: | CASE ENGINEERING INC CONTACT NAME: LUKE WILD ADDRESS: 796 MERUS COURT ST. LOUIS MO 63026 PHONE: (636) 349-1600 FAX: (636) 349-1730 EMAIL: LWILD@CASEENGINEERINGINC.COM STRUCTURAL ENGINEER COMPANY NAME: | CASE ENGINEERING INC CONTACT NAME: | ARDIE MANSOURI ADDRESS: 796 MERUS COURT ST. LOUIS MO 63026 PHONE: (636) 349-1600 FAX: (636) 349-1730 EMAIL: AMANSOURI@CASEENGINEERINGINC.COM CIVIL ENGINEER COMPANY NAME: TRIANGLE ENGINEERING LLC CONTACT NAME: JACK ZANGER ADDRESS: 1782 W MCDERMOTT DRIVE ALLEN, TEXAS 75013 PHONE: (469) 331-8566 EMAIL: JZANGER@TRIANGLE-ENGR.COM

SHERWIN WILLIAMS

12360 W. SH 29, LIBERTY HILL, TX, 78642



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G100	Accessibility & Egress Plan		A111	Wall Types & Details	
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			M002	MECHANICAL SPECIFICATIONS	
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			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	1
			E101	ELECTRICAL SPECIFICATIONS	1
			E200	LIGHTING PLAN	1
			E300	POWER PLAN	
			E400	ELECTRICAL RISER AND SCHEDULES	



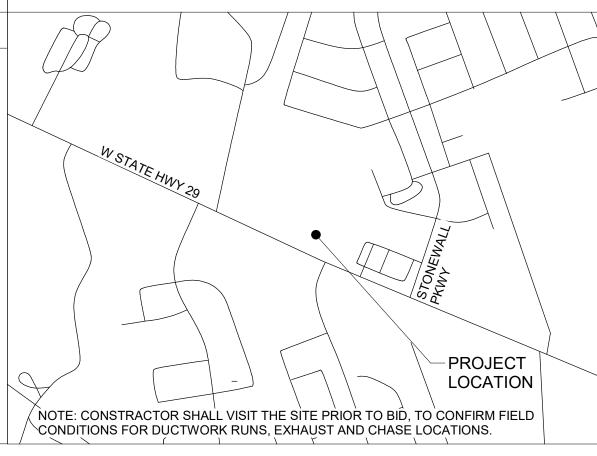
CONSTRUCTION PHASE NOTE ARCHITECT'S DESIGN WITHOUT CONSTRUCTION PHASE SERVICES SINCE DIRECT CONSTRUCTION OBSERVATIONS AND REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INCLUDED AS PART OF THE ARCHITECT'S BASIC SERVICES, IT IS UNDERSTOOD THAT SUCH RESPONSIBILITIES WILL BE ASSUMED BY OTHERS. LINGLE DESIGN 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

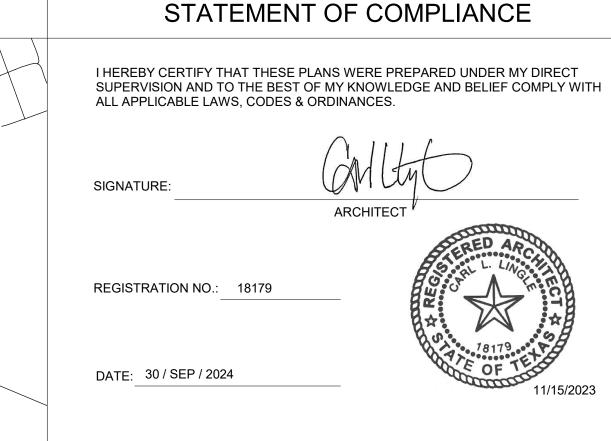
MODIFICATIONS OR CHANGES MADE TO THE DESIGN (WITHOUT THE KNOWLEDGE

OF THE ARCHITECT) DUE TO CONDITIONS OR CIRCUMSTANCES (ANTICIPATED OR

HARMLESS FROM LOSS, CLAIM, OR COSTS ARISING OR RESULTING FROM

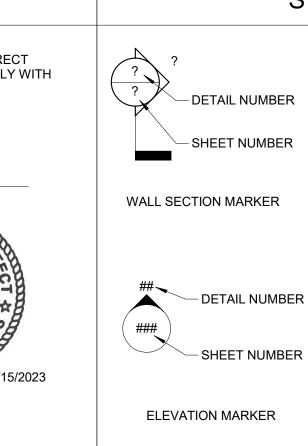


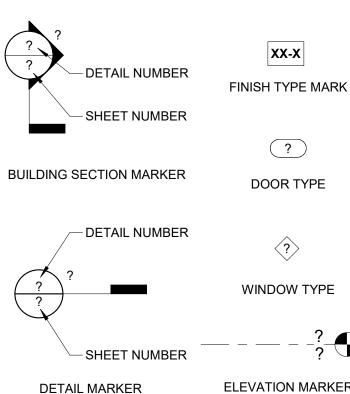
VICINITY MAP



ABBREVIATIONS

OFD.





SYMBOL LEGEND

	CODE / B	BUILDING INFORMATION
	BUILDING CODES:	
	BUILDING:	2015 INTERNATIONAL BUILDING CODE
	MECHANICAL:	2015 INTERNATIONAL MECHANICAL CODE
RK	ELECTRICAL:	2017 NATIONAL ELECTRICAL CODE
	PLUMBING:	2015 INTERNATIONAL PLUMBING CODE
	FUEL GAS:	2015 INTERNATIONAL FUEL GAS CODE
	FIRE:	2021 INTERNATIONAL FIRE CODE 1
	ENERGY:	2015 INTERNATIONAL ENERGY CONSERVATION CODE
	ACCESSIBILITY:	2009 ICC/ANSI A117.1
	BUILDING INFORMATION:	
	CONSTRUCTION TYPE:	V-B
_	SCOPE OF WORK:	NEW CONSTRUCTION
E	FLOOR AREA:	4,499 SQ. FT.
	STORIES / HEIGHT:	1 STORY / 24' - 6"
	FIRE PROTECTION:	PORTABLE FIRE EXTINGUISHERS
	INTERIOR FINISHES:	CLASS A FLAME SPREAD RATING
KER	NUMBER OF EMPLOYEES:	4

OCCUPANCY: M (MERCANTILE) - OCCUPANT LOAD: 71

POUND OR NUMBER **EXISTING** PLUS OR MINUS DIAMETER ANCHOR BOLT ACOUSTICAL (CLG) TILE ABOVE FINISH FLOOR

SYSTEM

ABOVE

BOARD

BELOW

BEARING

BUILDING

BLOCK(ING)

BEARING PLATE

BUILDING SECTION

APPROX. APPROXIMATE

ACOUSTICAL

ALUMINUM

AIR HANDLING UNIT

AIR CONDITIONING

ARCHITECT(URAL)

BOTTOM OF CURB

AUTOMATIC SPRINKLER

A.H.U.

A.S.S.

ABV.

B.O.C.

BLDG.

BLW.

BD.

ACOUS.

NOT) BEYOND THE ARCHITECT'S CONTROL.

CONTSTRUCTION MANAGER C.M.U. CONCRETE MASONRY UNIT **CEILING JOIST** C/O CLEANOUT **CONTROL JOINT CENTER LINE** CLG. CEILING CLR. CLEAR COL COLUMN COMP COMPOSITE CONC. CONCRETE COND CONDENSING UNIT CONN. CONNECTION CONSTR. CONSTRUCTION CONT. CONTR. CONTRACTOR CTR. CENTER CUBIC FOOT

CONTINUOUS / CONTINUE CU YD CUBIX YARD DRINKING FOUNTAIN D.S. DOWNSPOUT DBL. DOUBLE DEPT. DEPARTMENT DET. DIA DIAMETER DIAG DIAGONAL DIM. DIMENSION DISP DISPENSER / DISPOSAL DL DEAD LOAD

DOWN DW DISHWASHER DWG. DRAWING E.P. **ELECTRIC PANEL** E.W. **EACH WAY** EACH **EXPANSION JOINT ELEVATION** ELECTRICAL **EMERGENCY** EQUAL

EA. EJ EL. ELEC. EMER. EQ. EQUIP. EQUIPMENT EXIS. **EXISTING** EXT. EXTERIOR FINISH FLOOR F.H. FIRE HYDRANT 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 FACE OF SHEATHING F.O.SH. FIRE SPRINKLER RISER F/S FLOOR SINK FCO FLOOR CLEANOUT FD FLOOR DRAIN FE FIRE EXTINGUISHER

FIRE EXTINGUISHER CABINET FIXT. FIXTURE FLOUR. FLOURESCENT FLOOR FOUNDATION FOOT/FEET FTG. FOOTING FUT. FUTURE G.C. G.I. GALVANIZED IRON GA. GAUGE GALV. GALVANIZED GL. GLASS / GLAZING GND. GROUND GR. GRADE / GRADING

GENERAL CONTRACTOR GYPSUM WALL BOARD GYP BD GYPSUM BOARD HOSE BIB **HOLLOW CORE** HOLLOW METAL HEADER **HARDWARE** HDWD. HARDWOOD HOR. HORIZONTAL HT. HEIGHT

HEATING HEATING / VENTILATION / HVAC AIR CONDITIONING I.D. INSIDE DIAMETER INSULATE / INSULATION INT. INV. INVERT JST. JOIST JOINT KO. KNOCKOUT KPL. KICKPLATE LENGTH LAG BOLT L.B. L.H. LEFT HAND L.L. LIVE LOAD LAMINATED VENEER UMBER

LAMINATED

LAVATORY

LIGHT

LINTEL

LOUVER

MACHINE BOLT

LAV.

LT.

LTL

LVR.

M.B.

MANHOLE M.O. MASONRY OPENING MAS. MASONRY MATL. MATERIAL MAXIMUM MECHANICAL MEMB. MEMBRANE MFR. MANUFACTURE(ER)(ING) MIN. MINIMUM MISC MISCELANEOUS MOD. MODULAR / MODULE MTD. MOUNTED MTFR METAL FURRING MTL. MUL. MULLION NORTH NOT IN CONTRACT N.T.S. NOT TO SCALE NO. NUMBER NOM. NOMINAL OVERALL O.C. ON CENTER O.D. OUTSIDE DIAMETER O.H.D. OVERHEAD DOOR OWNER FURNISHED /

OVERFLOW DRAIN

OWNER FURNISHED OWNER INSTALLED OVERHEAD OPG. OPENING OPPOSITE OPQ OPAQUE PROPERTY LINE P.L. P.T. PRESSURE TREATED PART'N PARTITION 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 POUNDS PER SQUARE INCH PTD. POLYVINYL CHLORIDE PAVEMENT PVMT. Q.T. QUARRY TILE QTY. QUANTITY CONTRACTOR INSTALLED

RISER

RETURN AIR R.D. **ROOF DRAIN** R.H. RIGHT HAND R.O. **ROUGH OPENING** R.O.W. RIGHT OF WAY RUBBER BASE REF. REFERENCE REFRIGERATOR REINF. REINFORCED REQ'D. REQUIRED RESIL. RESILIENT RET. RETURN REV REVISION RFG. ROOFING ROOM RVRS. REVERSE S.A.N. SCALE AS NOTED SUSPENDED ACOUSTICAL S.A.T. SOLID CORE STORM DRAIN SCHED. SCHEDULE SECT. SECTION SQUARE FEET

SHTG.

SIM.

SHEATHING

SIMILAR

SPEAKER SQ. SQUARE SS. STAINLESS STEEL SSK. SERVICE SINK STD. STANDARD STL. STEEL STOR. STORAGE STRUCT STRUCTURAL SYMETRICAL SYS. SYSTEM T&G **TONGUE AND GROOVE** TREAD 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** TENANT FURNISHED /

CONTRACTOR INSTALLED

TENANT FURNISHED /

TENANT INSTALLED

THICK(NESS)

THRESHOLD

THRES

SLOPE

SPECIFICATION

TMPD TEMPERED TOL TOLERANCE TYP. TYPICAL UNLESS NOTED OTHERWISE UBC UNIFORM BUILDING CODE UNFIN. UNFINISH(ED) VINYL BASE VINYL COMPOSITION TILE VENT THROUGH ROOF VERT. VERTICAL W.B. WEATHER BARRIER W.C. WATER CLOSET WATER HEATER WIRE MESH WATER RESISTANT W.T. WALL TILE W.W.F. WELDED WIRE FABRIC W/ WITH W/O WITHOUT

WOOD

WAINSCOT

WSCT.

TINTED

SHERWIN WILLIAMS

FIRE & DEVELOPER COMMENTS - 1/9/2024

STORE #: XXXX

12360 W. SH 29, LIBERTY

HILL, TX, 78642

Cover Sheet

SHEET NUMBER:

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

- 1. DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE COMPLIMENTARY. SPECIFIC INFORMATION MAY BE FOUND IN
- 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.
- ANY EXHIBITS THAT PERTAIN TO TENANT BUILD OUT. ALL INFORMATION SHALL BE NOTED FOR RESPONSIBILITIES AND
- 4. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS GOVERN PARTITION LOCATIONS, DIMENSIONS AND TYPES. DOOR 6. ALL ROUGH OPENINGS AND DIMENSIONS LABELED "HOLD" ARE CRITICAL AND ARE NOT TO BE ADJUSTED WITHOUT 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 9. CONTRACTOR SHALL INSTALL PORTABLE FIRE EXTINGUISHERS (TYPE 2A10BC) PER IFC SECTION 906. 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. 21. ANY CHANGES IN THE SCOPE OF WORK INVOLVING A CHANGE IN THE CONSTRUCTION COST OR TIME SHALL BE 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 OWNER/LL 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 1. REFER TO MECHANICAL, ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR DESIGN OF THESE SYSTEMS (DUCT 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 6. LAY-IN LIGHTING FIXTURES SHALL NOT RELY ON THE CEILING SYSTEM ALONE FOR SUPPORT. LAY-IN LIGHTING 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 7. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL REQUIRED ACCESSORIES, OPTIONS, MOUNTING 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 9. ALL ELECTRICAL DEVICES SHALL BEAR THE U.L. LABEL.
- 5. LOADS AND CODE RESTRICTIONS FOR ALL DESIGN CONSIDERATIONS SHALL CONFORM TO LOCAL, STATE AND ALL GOVERNING CODES.
- 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
- 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

- 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.
- 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.
- 3. PRIOR TO SUBMITTING BID, GENERAL CONTRACTOR SHALL OBTAIN A COPY OF THE LEASE/TENANT AGREEMENT, AND 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.
 - 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

 - 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
 - 20. THE CONTRACTOR SHALL COORDINATE AND SCHEDULE WORK BY OUTSIDE VENDORS INCLUDING BUT NOT LIMITED TO, TELEPHONE, DATA, "TENANT'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.
 - APPROVED BY THE OWNER IN WRITING PRIOR TO THE CONTRACTOR COMMENCING WITH THE WORK SCOPE CHANGE.

- 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".
- FIXTURES SHALL BE SUPPORTED FROM THE STRUCTURE BY NO LESS THAN TWO HANGER WIRES AND SECURED TO 4. ALL MATERIALS AND FINISHES INDICATED ON DRAWINGS SHALL BE NEW AND UNUSED. THE CEILING GRID SYSTEM WITH THE APPROPRIATE ATTACHMENT HARDWARE.
- HARDWARE AND FIELD FABRICATION REQUIRED TO PROPERLY ADAPT THE FIXTURES TO THE SPECIFIC
- 8. ELECTRICAL CONTRACTOR SHALL CLEARLY LABEL PANEL BOARD CIRCUITING AS TO OPERATION.
- 10. ALL ELECTRICAL WORK SHALL FOLLOW ALL APPLICABLE NATIONAL, STATE & LOCAL CODES, REGULATIONS AND
- 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"
- 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) TENANT FURNISHED ITEMS

- 1. PRODUCTS TO BE FURNISHED AND PAID FOR BY THE TENANT AND INSTALLED BY THE CONTRACTOR ARE INDICATED AS "TENANT SUPPLIED" IN THE EQUIPMENT SCHEDULE.
- 2. TENANT'S RESPONSIBILITIES FOR TENANT FURNISHED PRODUCTS:
- SUPPLY CONTRACTOR WITH PRODUCT LITERATURE, TENANT 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 TENANT 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 TENANT.

- . ARRANGE WITH LANDLORD/TENANT 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.
- PERFORM DEMOLITION WORK AND SUCH SPRINKLER WORK, CONCRETE SAW CUTTING, PAINTING AND SIMILAR WORK 6. EMERGENCY WARNING SYSTEMS SHALL COMPLY WITH ADA REQUIREMENTS FOR THE HEARING IMPAIRED. VISUAL 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

- 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 11. REFER TO ACCESSIBILITY DETAILS IN PLANS FOR TYPICAL ACCESSIBILITY GUIDELINES. 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
- 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.
- 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

FABRICATION OR PURCHASING.

INABILITY TO SECURE SPECIFIED ITEMS.

1. GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL A TEMPORARY JOB SITE SIGN. SIGN SHALL BE PREPARED BY A 4. "TENANT SUPPLIED" - SUPPLIED BY SHERWIN-WILLIAMS. 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
- 5. ANY SUBSTITUTIONS MUST BE REVIEWED AND APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO
- 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
- 7. COORDINATE WITH TENANT'S REPRESENTATIVE FOR DELIVERY AND PLACEMENT OF TENANT SUPPLIED ITEMS AND FURNISHINGS.
- 8. REFER TO FINISH SCHEDULE FOR SPECIFIED FINISHES.
- 9. ALL DOOR AND WINDOW FRAMES SHALL BE CAULKED AROUND ENTIRE PERIMETER.
- 13. IF ANY LIGHTS ARE SPECIFIED IN A LOCATION EXPOSED TO THE WEATHER, ELECTRICAL CONTRACTOR SHALL OBTAIN 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 BRAND OWNER DESIGN AND CONSTRUCTION DEPARTMENT AND THE FRANCHISEE. ANY MATERIAL SUBSTITUTIONS WITHOUT AUTHORIZATION WILL SUBJECT THE GENERAL CONTRACTOR TO REPLACEMENT OF SUCH SUBSTITUTED MATERIALS WITH APPROVED MATERIALS AT THE SOLE EXPENSE OF THE GENERAL CONTRACTOR.
- O) GENERAL CLEANING
- 1. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL TRASH REMOVAL, INCLUDING TRASH MADE BY ALL OTHER TRADES, AND SHALL KEEP THE SPACE CLEAN AND CLEAR OF REFUSE AT ALL TIMES. AT COMPLETION OF PROJECT GENERAL CONTRACTOR SHALL REMOVE ALL CONTRACTOR'S TOOLS, CONSTRUCTION EQUIPMENT, MACHINERY & SURPLUS MATERIALS FROM THE JOB SITE, & SHALL HIRE A PROFESSIONAL CLEANING COMPANY FOR FINAL CLEANUP BEFORE TURNING COMPLETED STORE OVER TO OWNER/TENANT.

P) ACCESSIBILITY

- 1. NOTE: FOLLOWING ARE ADA GUIDELINES AND FOR GENERAL CONTRACTOR INFORMATION ONLY. LISTED ITEMS DO NOT REPLACE OR AMEND FEDERAL, STATE OR LOCAL CODES. IN CASE OF CONFLICT IN THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION, THE MOST RESTRICTIVE REQUIREMENTS SHALL GOVERN.
- 2. ALL EXTERIOR DOORS SHALL HAVE A 24" CLEAR HORIZONTAL OPEN SURFACE/AREA AT THE STRIKESIDE/PULLSIDE OF DOORS. ALL INTERIOR DOORS SHALL HAVE 18" CLEAR AT THE STRIKESIDE/PULLSIDE OF DOORS. PROVIDE 12" CLEAR HORIZONTAL SURFACE ON THE PUSH SIDE/STRIKE OF ALL DOORS. ALL LOCKSETS SHALL HAVE A LEVER HANDLE UNLESS NOTED OTHERWISE & SHALL OPEN FROM INSIDE OF THE SPACE WITH ONE MOTION AND REQUIRE NO SPECIAL KNOWLEDGE OR EFFORT. THUMBTURNS OR SEPARATE DEADBOLTS ARE NOT ALLOWED ON EGRESS
- 3. THRESHOLDS SHALL NOT EXCEED 1/2" IN HEIGHT AND SHALL HAVE A SLOPE NO GREATER THAN 1:2.
- 4. ALL EMERGENCY EXITING ALARM AND SIGNAGE TO COMPLY WITH FEDERAL, STATE AND MUNICIPAL CODES FOR
- 5. GENERAL CONTRACTOR SHALL ALLOW FOR APPLIED FINISH DIMENSIONS IN ADDITION TO STANDARD CONSTRUCTION
- TOLERANCES IN ACHIEVING ALL ACCESSIBILITY CLEARANCES PER DRAWINGS AND/OR ADA GUIDELINES.
- WARNING STROBE LIGHTS TO BE DESIGNED TO HAVE A FREQUENCY OF NOT MORE THAN 60 FLASHES PER MINUTE.
- 8. WATER CLOSET AND URINAL FLUSH VALVE CONTROLS, & 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.
- THE FORCE REQUIRED TO ACTIVATE WATER CLOSET AND URINAL FLUSH VALVE CONTROLS, & FAUCET AND
- 10. SELF-CLOSING FAUCET CONTROL VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.

PRESENCE OF THE FRANCHISEE, BEFORE TURNING COMPLETED STORE OVER TO FRANCHISEE.

OPERATING MECHANISM CONTROLS SHALL BE NO GREATER THAN 5 LBS.

7. REFER TO TOILET ROOM ELEVATIONS FOR ACCESSIBILITY REQUIREMENTS/MOUNTING HEIGHTS.

- 1. UPON NOTIFICATION BY THE GENERAL CONTRACTOR THAT THE WORK IS SUBSTANTIALLY COMPLETE, THE OWNER'S REPRESENTATIVE SHALL PREPARE A PUNCH LIST OF THE PROJECT AND THE GENERAL CONTRACTOR SHALL MAKE GOOD ALL PUNCH LIST ITEMS TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE PRIOR TO FINAL PAYMENT.
- 2. GENERAL CONTRACTOR AND HIS JOB SUPERVISOR SHALL TEST ALL EQUIPMENT FOR PROPER OPERATION, IN THE

R) RECORD DRAWINGS/WARRANTIES

1. THE CONTRACTOR SHALL LEAVE A COPY OF REDLINED AS-BUILT DRAWINGS AT THE STORE NOTING ALL REVISIONS OF WORK UPON COMPLETION OF CONSTRUCTION. DRAWINGS SHALL BE PLACED IN A 36" LONG 4" PVC PIPE WITH A

CAP. PVC PIPE SHALL BE ATTACHED TO WALL AT LOCATION AS SPECIFIED BY THE PROJECT MANAGER.

2. UPON COMPLETION OF THE WORK AND BEFORE FINAL PAYMENT IS MADE, THE CONTRACTOR SHALL SECURE AND DELIVER TO THE OWNER ALL GUARANTEES AND/OR WARRANTIES ON ALL EQUIPMENT SUPPLIED AND/OR INSTALLED. BY THE CONTRACTOR AND HIS SUB-CONTRACTORS, AND ALL PROVIDE ELECTRONIC COPIES OF

OPERATIONS/MAINTENANCE MANUALS.

- THE GENERAL CONTRACTOR SHALL GUARANTEE IN WRITING ALL MATERIALS & LABOR FOR ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER, AND WILL, AT HIS OWN COST, REPAIR OR REPLACE ALL WORK OR DAMAGES CAUSED BY THE WORK WHICH BECOMES DEFECTIVE DURING THE TERM OF THE GUARANTEE. THE TERM
- OF THE GUARANTEE MAY BE MODIFIED OR EXTENDED BY THE OWNER/CONTRACTOR AGREEMENT. 2. OWNER MAY WITHHOLD FINAL PAYMENT UNTIL GENERAL CONTRACTOR SUPPLIES OWNER WITH A WARRANTY

LETTER AND SUBCONTRACTORS LIEN WAIVERS.

- T) DEFINITIONS 1. "FURNISH" - SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY,
- INSTALLATION AND SIMILAR OPERATIONS. 2. "INSTALL" - OPERATIONS AT THE PROJECT SITE INCLUDING THE ACTUAL UNLOADING, UNPACKING, ASSEMBLY, ERECTING, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING
- AND SIMILAR OPERATIONS.
- 3. "PROVIDE" FURNISH AND INSTALL, COMPLETE AND READY FOR INTENDED USE.



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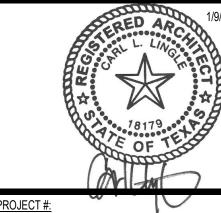
1764 BLAKE ST

DENVER, CO 80202

303.974.5875

WWW.LINGLEDESIGN.COM

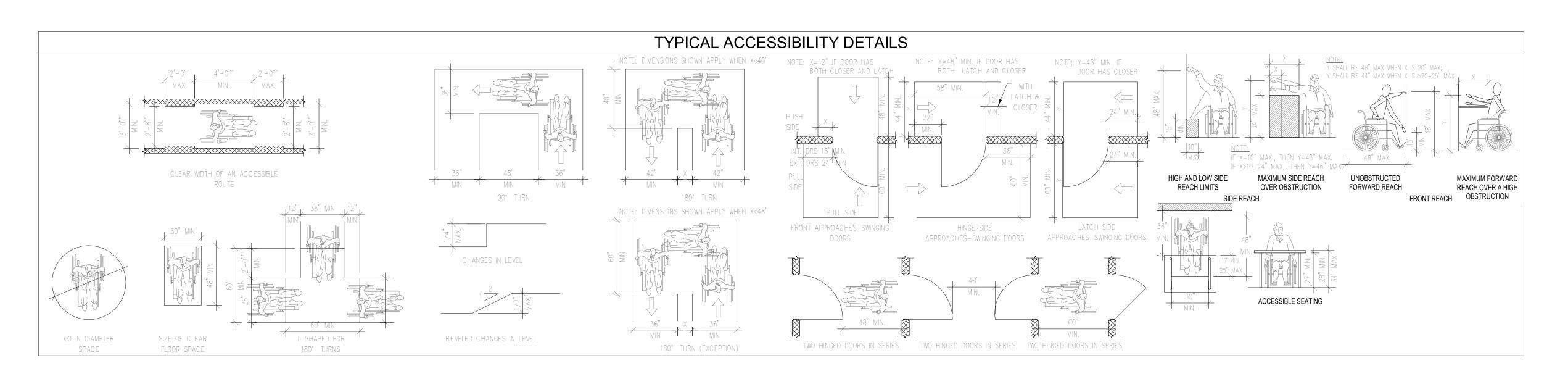
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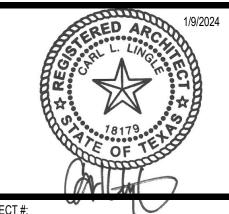
ACCESSIBILITY PLAN CODED NOTES

A5 Exit Signage Detail
1/2" = 1'-0"

RESTROOM FIXTURES REQUIRED PROVIDED WATER CLOSET 1 PER 500 URINAL >50% OF WC LAVATORIES 1 PER 750

A. G.C. TO VERIFY QUANTITY & LOCATIONS OF FIRE EXTINGUISHERS WITH LOCAL AUTHORITIES. FIRE EXTINGUISHERS TO BE SUPPLIED BY G.C. - REFER TO FLOOR PLAN. G.C. TO PROVIDE FIRE DEPARTMENT REQUIRED KEY BOX. COORDINATE LOCATION AND TYPE WITH LOCAL AUTHORITIES. SEE MEP DRAWINGS AND RESPONSIBILITY SCHEDULE FOR INFORMATION REGARDING FIRE ALARM SYSTEM - SYSTEM BY GENERAL

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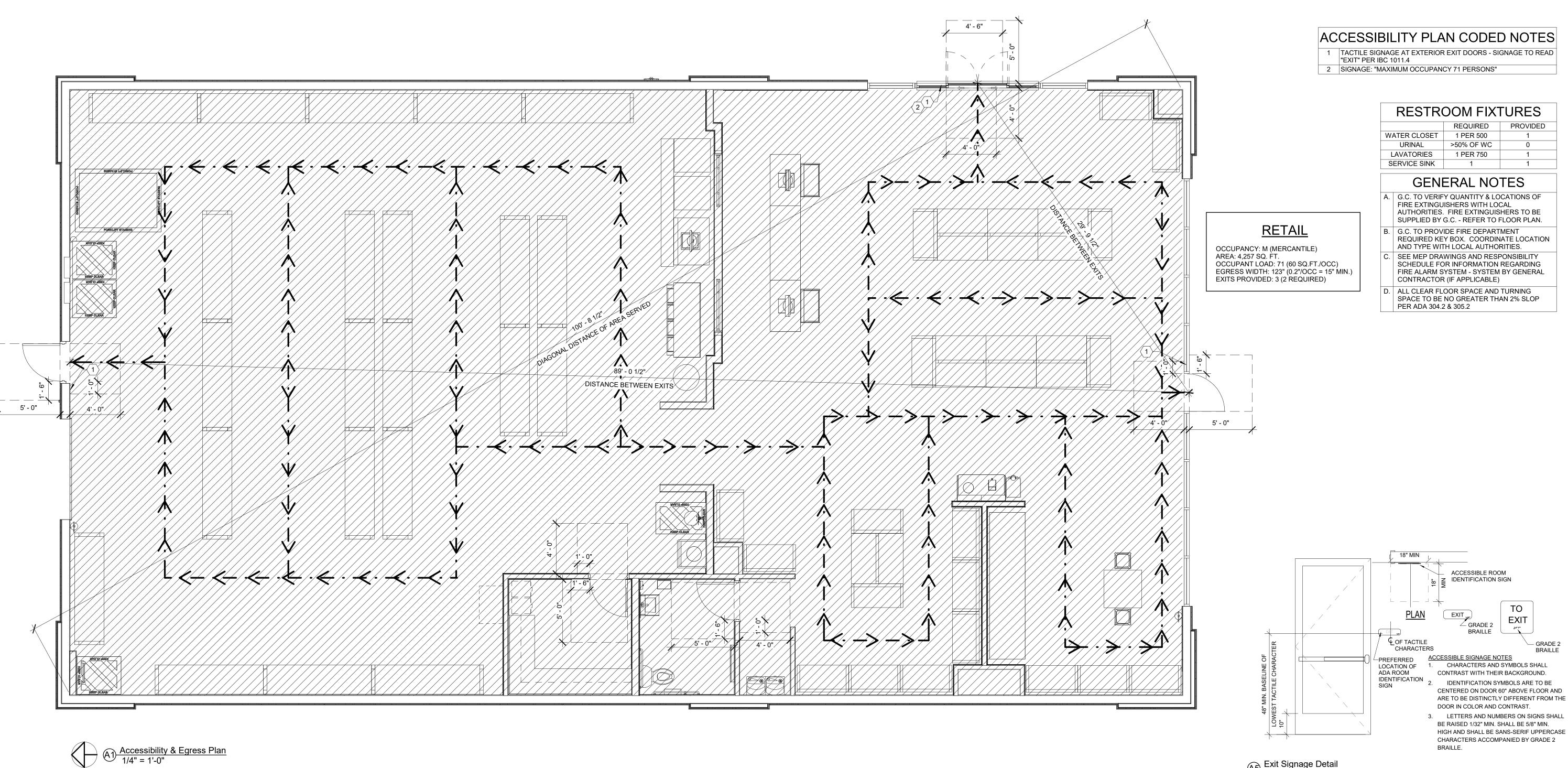
SHERWIN WILLIAMS

STORE #:

12360 W. SH 29, LIBERTY HILL, TX, 78642

Accessibility & Egress Plan

SHEET NUMBER: G100



CITY SIGNATURE BLOCK BASED ON THE DESIGN ENGINEER'S CERTIFICATION OF COMPLIANCE WITH ALL APPLICABLE CITY, STATE, AND FEDERAL REGULATIONS, THE PLANS AND SPECIFICATIONS CONTAINED HEREIN HAVE BEEN REVIEWED AND ARE FOUND TO BE IN COMPLIANCE WITH THE REQUIREMENTS OF THE CITY OF LIBERTY HILL. **CURTIS STEGER, PE** DATE CITY ENGINEER CITY OF LIBERTY HILL, TEXAS DATE LIZ BRANIGAN, MAYOR CITY OF LIBERTY HILL, TEXAS ELAINE, CITY SECRETARY CITY OF LIBERTY HILL, TEXAS

SITE DEVELOPMENT PLANS **FOR**

SHERWIN WILLIAMS

STONEWALL COMMERCIAL WEST 12360 W. STATE HIGHWAY 29 LOT 1A, BLOCK A STONEWALL RANCH SUBDIVISION TRACT 1 CITY OF LIBERTY HILL WILLIAMSON COUNTY, TEXAS 0.851 ACRES CITY PROJECT # 23-019SDP



VICINITY MAP N.T.S.

GROSS SITE ACREAGE:	0.851 ACRES OR 37,069 S.F.
EXISTING ZONING:	(C3) GENERAL COMMERCIAL
PROPOSED ZONING:	(C3) GENERAL COMMERCIAL
FUTURE LAND USE CATAGORY:	COMMERCIAL
PROPOSED USE:	COMMERCIAL
BUILDING AREA:	4,500 S.F.
IMPERVIOUS COVERAGE:	26,560 S.F. OR 71.65%
PERVIOUS/LANDSCAPE AREA:	10,509 S.F. OR 28.35%

A REPLAT OF LOT I, BLOCK A,
OF A REPLAT OF LOT 4, BLOCK A STONE WALL RANCH SUBDIVISION SECTION I

CITY APPROVAL DATE: 01/06/22

COUNTY RECORD DATE: 02/02/22

DOC.#: 2022014805

PROJECT CO	ONTACT LIST
ENGINEER TRIANGLE ENGINEERING LLC 1782 W MCDERMOTT DRIVE ALLEN, TEXAS 75013 CONTACT: JACK ZANGER TEL: 469-331-8566	OWNER/DEVELOPER LIBERTY HILL DEVELOPMENT GROUP, LLC 120 MARKET SQ., FLOOR 2, PINEHURST, NC 28374 CONTACT: GAVIN MELIA TEL: 910 724 6720

SURVEYOR TRAVERSE LAND SURVEYING LLC 14200 MIDWAY ROAD, SUITE 130 DALLAS, TX 75224 CONTACT: GRAYSON CEBALLOS TEL: 469-426-7339

SHEET NO.	DESCRIPTION
C-1.0	COVER SHEET
C-1.1	PLAT
C-1.2	SURVEY
C-1.3	GENERAL NOTES
C-2.0	DEMOLITION PLAN
C-3.0	SITE PLAN
C-3.1	SITE DETAILS
C-3.2	SITE DETAILS
C-4.0	GRADING PLAN
C-5.0	OVERALL DRAINAGE
C-5.1	OVERALL DRAINAGE
C-5.2	PRE-DRAINAGE PLAN
C-5.3	POST-DRAINAGE PLAN
C-5.4	STORM SEWER PLAN & PROFILE
C-5.5	STORM SEWER DETAILS
C-6.0	PAVING PLAN
C-6.1	PAVING DETAILS
C-6.2	PAVING DETAILS
C-7.0	UTILITY PLAN
C-7.1	UTILITY DETAILS
C-7.2	UTILITY DETAILS
C-7.3	UTILITY DETAILS
C-7.4	LIGHTING PLAN
C-7.5	LIGHTING DETAILS
C-7.6	LIGHTING DETAILS
C-7.7	LIGHTING DETAILS
C-8.0	EROSION CONTROL PLAN
C-8.1	EROSION CONTROL DETAILS
1	TREE PLAN
L.2	LANDSCAPE PLAN
3	LANDSCAPE SPECIFICATIONS
L.4	IRRIGATION PLAN
5	IRRIGATION SPECIFICATIONS





	ВУ	KP	KP	КР	KP	
	DESCRIPTION	1ST SUBMITTAL	2ND SUBMITTAL	3RD SUBMITTAL	4TH SUBMITTAL	
	DATE	07-24-23	09-28-23	10-06-23	11-14-23	
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11/14/23 047-23

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http://www.pec.coop

HOUSTON, TEXAS 77027

Firm: 10194104 512-915-4950 1430 N. Robertson Road, Salado, Texas 76571

SHEET 1 OF 1



TX PE FIRM #11525

TX PE FIRM #11525

ENGINEERING LIC

T: 469.331.8566 | F: 469.213.7145 | E: info@triangle-engr.com
W: triangle-engr.com | 0: 1782 W. McDermott Drive, TX 75013

 NO.
 DATE
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 07-24-23
 1ST SUBMITTAL
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 2ND SUBMITTAL
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 10-06-23
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KARTAVYA S. PATEL

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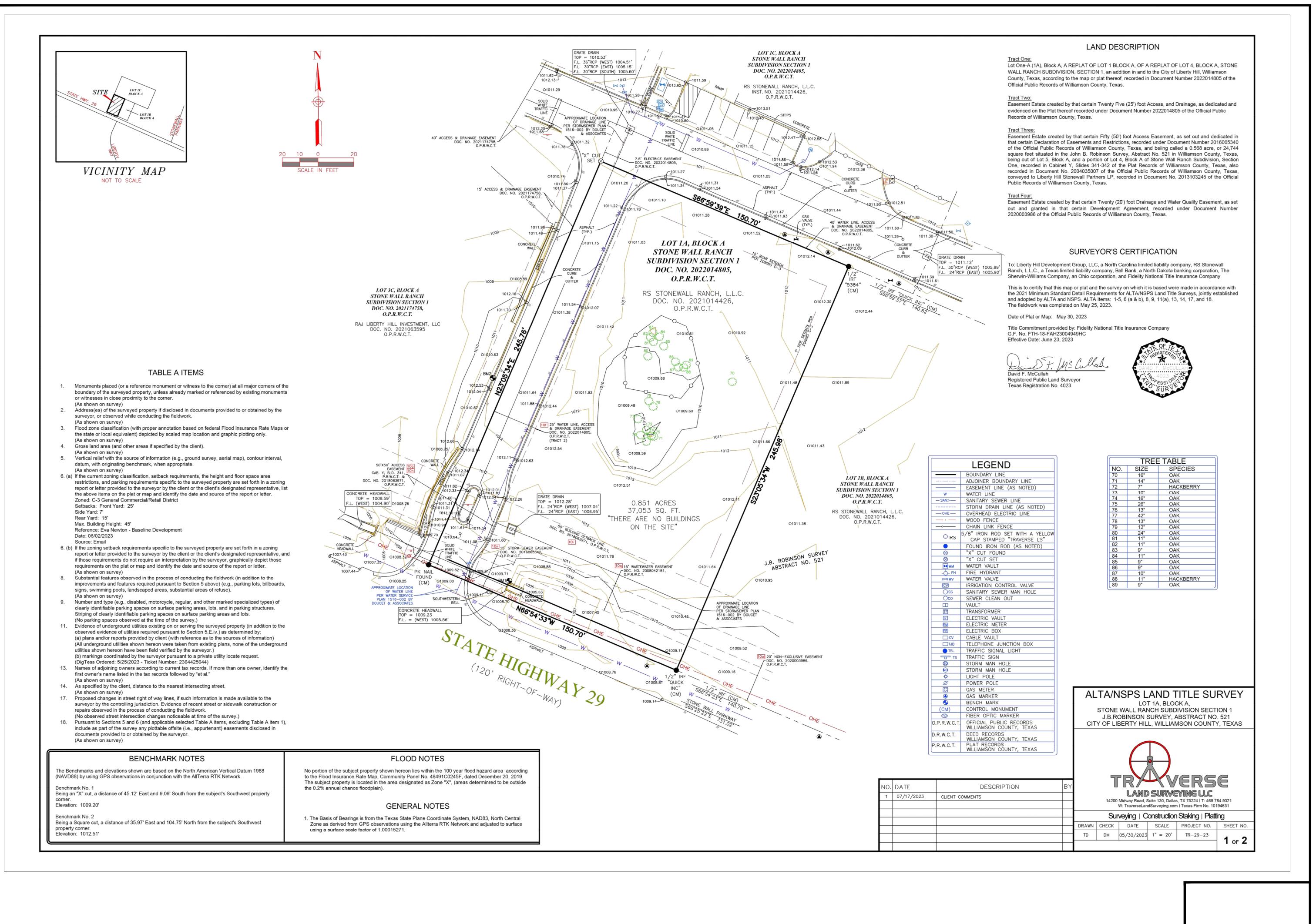
14/4/2022

SHERWIN WILLIAMS 2360 W. STATE HIGHWAY 29 CITY OF LIBERTY HILL

DATE PROJECT
11/14/23 047-23
P.E. DESIGN
KP JZ

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TX PE FIRM #11525

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SHERWIN WILLIAMS 12360 W. STATE HIGHWAY 29 CITY OF LIBERTY HILL WILLIAMSON COUNTY, TEXAS

12360 SI CI.

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 047-23

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GENERAL NOTES:

- 1. All construction shall be in accordance with the City of Round Rock Standard Specifications Manual.
- 2. Any existing utilities, pavement, curbs, sidewalks, structures, trees, etc., not planned for destruction or removal that are damaged or removed shall be repaired or replaced at contractor's expense.
- 3. The Contractor shall verify all depths and locations of existing utilities prior to any construction. Any discrepancies with the construction plans found in the field shall be brought immediately to the attention of the Engineer who shall be responsible for revising the plans as appropriate.
- 4. Manhole frames, covers, valves, cleanouts, etc. shall be raised to finished grade prior to final paving construction.
- 5. The Contractor shall give the City of Liberty Hill 48 hours notice before beginning each phase of construction. Telephone 512-778-5449 (Planning & Development Department).
- 6. All areas disturbed or exposed during construction shall be revegetated in accordance with the plans and specifications. Revegetation of all disturbed or exposed areas shall consist of sodding or seeding, at the Contractor's option. However, the type of revegetation must equal or exceed the type of vegetation present before construction.
- 7. Prior to any construction, the Engineer shall convene a preconstruction conference between the City of Liberty Hill, himself, the Contractor, other utility companies, any affected parties and any other entity the City or Engineer may require.
- 8. The Contractor and the Engineer shall keep accurate records of all construction that deviates from the plans. The Engineer shall furnish the City of Liberty Hill accurate "As-Built" drawings following completion of all construction. These "As-Built" drawings shall meet with the satisfaction of the Planning & Development Department prior to final approval.
- 9. The Liberty Hill City Council shall not be petitioned for approval until all necessary easement documents have been signed and recorded.
- 10. When construction is being carried out within easements, the Contractor shall confine contractor's work to within the permanent and any temporary easements. Prior to final approval the Contractor shall be responsible for removing all trash and debris within the permanent and temporary easements. Clean-up shall be to the satisfaction of the City Engineer and/or City inspector.
- 11. Prior to any construction, the Contractor shall apply for and secure all proper permits from the appropriate authorities.

12. Benchmarks utilized for the construction of this project are described as follows:

TRENCH SAFETY NOTES:

- 1. In accordance with the Laws of the State of Texas and the U. S. Occupational Safety and Health Administration regulations, all trenches over 5 feet in depth in either hard and compact or soft and unstable soil shall be sloped, shored, sheeted, braced or otherwise supported. Furthermore, all trenches less than 5 feet in depth shall also be effectively protected when hazardous ground movement may be expected. Trench safety systems to be utilized for this project (will be provided by the contractor; are on sheet _____, etc.).
- 2. In accordance with the U. S. Occupational Safety and Health Administration regulations, when persons are in trenches 4-feet deep or more, adequate means of exit, such as a ladder or steps, must be provided and located so as to require no more than 25 feet of lateral travel.
- 3. If trench safety system details were not provided in the plans because trenches were anticipated to be less than 5 feet in depth and during construction it is found that trenches are in fact 5 feet or more in depth or trenches less than 5 feet in depth are in an area where hazardous ground movement is expected, all construction shall cease, the trenched area shall be barricaded and the Engineer notified immediately. Construction shall not resume until appropriate trench safety system details, as designed by a professional engineer, are retained and copies submitted to the City of Liberty Hill.

STREET AND DRAINAGE NOTES:

- 1. All testing shall be done by an independent laboratory at the Owner's expense. Any retesting shall be paid for by the Contractor. A City inspector shall be present during all tests. Testing shall be coordinated with the City inspector and he shall be given a minimum of 24 hours notice prior to any testing. Telephone 512-778-5449 (Inspections).
- 2. Backfill behind the curb shall be compacted to obtain a minimum of 95% maximum density to within 3" of top of curb. Material used shall be primarily granular with no rocks larger than 6" in the greatest dimension. The remaining 3" shall be clean topsoil free from all clods and suitable for sustaining plant life.
- 3. Depth of cover for all crossings under pavement including gas, electric, telephone, cable tv, water services, etc., shall be a minimum of 30" below subgrade.
- 4. Street rights-of-way shall be graded at a slope of 1/4" per foot toward the curb unless otherwise indicated. However, in no case shall the width of right-of-way at 1/4" per foot slope be less than 10 feet unless a specific request for an alternate grading scheme is made to and accepted by the City of Liberty Hill

Planning & Development Department.

- 5. Barricades built to City of Liberty Hill standards shall be constructed on all dead-end streets and as necessary during construction to maintain job and public
- All R.C.P. shall be minimum class III.
- 7. The subgrade material for the streets shown herein was tested by
 ______ and the paving sections designed in accordance
 with the current City of Liberty Hill design criteria. The paving sections are to be
 constructed as follows:

Flex. Base HMAC Limo

Street Station Thickness Thickness

The Geotechnical Engineer shall inspect the subgrade for compliance with the design assumptions made during preparation of the Soils Report. Any adjustments that are required shall be made through revision of the construction plans.

8. Where PI's are over 20, subgrades must be stabilized utilizing a method acceptable to the City Engineer. The Geotechnical Engineer shall recommend an appropriate subgrade stabilization if sulfates are determined to be present.

WATER AND WASTEWATER NOTES:

- 1. Pipe material for water mains shall be PVC (AWWA C-900, min. class 200), or Ductile Iron (AWWA C-100, min. class 200). Water services (2" or less) shall be polyethylene tubing (black, 200 psi, DR 9).
- 2. Pipe material for pressure wastewater mains shall be PVC (AWWA C-900, min. class 150), or Ductile Iron (AWWA C-100, min. class 200). Pipe material for gravity wastewater mains shall be PVC (ASTM D2241 or D3034, max. DR-26), Ductile Iron (AWWA C-100, min. class 200).
- 3. Unless otherwise accepted by the City Engineer, depth of cover for all lines out of the pavement shall be 42" min., and depth of cover for all lines under pavement shall be a min. of 30" below subgrade.
- 4. All fire hydrant leads shall be ductile iron pipe (AWWA C-100, min. class 200).
- 5. All iron pipe and fittings shall be wrapped with minimum 8-mil polyethylene and sealed with duct tape or equal accepted by the City Engineer.
- 6. The Contractor shall contact the City Inspector at 512-778-5449 to

coordinate utility tie-ins and notify him at least 48 hours prior to connecting to existing lines.

- 7. All manholes shall be concrete with cast iron ring and cover. All manholes located outside of the pavement shall have bolted covers. Tapping of fiberglass manholes shall not be allowed.
- 8. The Contractor must obtain a bulk water permit or purchase and install a water meter for all water used during construction. A copy of this permit must be carried at all times by all who use water.
- 9. Line flushing or any activity using a large quantity of water must be scheduled with the water & wastewater superintendent, telephone 512-778-5449.
- 10. The Contractor, at contractor's expense, shall perform sterilization of all potable water lines constructed and shall provide all equipment (including test gauges), supplies (including concentrated chlorine disinfecting material), and necessary labor required for the sterilization procedure. The sterilization procedure shall be monitored by City of Liberty Hill personnel. Water samples will be collected by the City of Liberty Hill to verify each treated line has attained an initial chlorine concentration of 50 ppm. Where means of flushing is necessary, the Contractor, at contractor's expense, shall provide flushing devices and remove said devices prior to final approval by the City of Liberty Hill.
- 11. Sampling taps shall be brought up to 3 feet above grade and shall be easily accessible for City personnel. At the Contractor's request, and in contractor's presence, samples for bacteriological testing will be collected by the City of Liberty Hill not less than 24 hours after the treated line has been flushed of the concentrated chlorine solution and charged with water approved by the City. The Contractor shall supply a check or money order, payable to the City of Liberty Hill, to cover the fee charged for testing each water sample. City of Liberty Hill fee amounts may be obtained by calling the Planning & Development Department at 512-778-5449 .
- 12. The Contractor, at contractor's expense, shall perform quality testing for all wastewater pipe installed and pressure pipe hydrostatic testing of all water lines constructed and shall provide all equipment (including pumps and gauges), supplies and labor necessary to perform the tests. Quality and pressure testing shall be monitored by City of Liberty Hill personnel.
- 13. The Contractor shall coordinate testing with the City of Inspector and provide no less than 24 hours notice prior to performing sterilization, quality testing or pressure testing.
- 14. The Contractor shall not open or close any valves unless authorized by the City of Liberty Hill.
- 15. All valve boxes and covers shall be cast iron.
- 16. All water service, wastewater service and valve locations shall be appropriately marked as follows:

Tools for marking the curb shall be provided by the Contractor. Other appropriate means of marking service and valve locations shall be provided in areas without curbs. Such means of marking shall be as specified by the Engineer and accepted by the City of Liberty Hill.

- 17. Contact the City of Liberty Hill water & wastewater superintendent at 512-778-5449 for assistance in obtaining existing water and wastewater locations.
- 18. The City of Liberty Hill Fire Department shall be notified 48 hours prior to testing of any building sprinkler piping in order that the Fire Department may monitor such testing.
- 19. Sand, as described in Specification item 510 pipe, shall not be used as bedding for water and wastewater lines. Acceptable bedding materials are pipe bedding stone, pea gravel and in lieu of sand, a naturally occurring or manufactured stone material conforming to ASTM C33 for stone quality and meeting the following gradation specification:

	Sieve Size		Percent	Retained
	By Weight			
1/2"		0		
3/8"		0-2		
#4		40-85		
#10		95-100		

- 20. The Contractor is hereby notified that connecting to, shutting down, or terminating existing utility lines may have to occur at off-peak hours. Such hours are usually outside normal working hours and possibly between 12 a.m. and 6 a.m.
- 21. All wastewater construction shall be in accordance with the Texas Commission on Environmental Quality (TCEQ) Regulations, 30 TAC Chapter 213 and 317, as applicable. Whenever TCEQ and City of Liberty Hill Specifications conflict, the more stringent shall apply.

TRAFFIC MARKING NOTES:

- 1. Any methods, street markings and signage necessary for warning motorists, warning pedestrians or diverting traffic during construction shall conform to the Texas Manual of Uniform Traffic Control Devices for Streets and Highways, latest edition.
- All pavement markings, markers, paint, traffic buttons, traffic controls and signs shall be installed in accordance with the Texas Department of Transportation Standard Specifications for Construction of Highways, Streets and Bridges and, the

Texas Manual of Uniform Traffic Control Devices for Streets and Highways, latest editions.

EROSION AND SEDIMENTATION CONTROL NOTES:

- Erosion control measures, site work and restoration work shall be in accordance with the City of Liberty Hill Erosion and Sedimentation Control Ordinance.
- 2. All slopes shall be sodded or seeded with approved grass, grass mixtures or ground cover suitable to the area and season in which they are applied.
- 3. Silt fences, rock berms, sedimentation basins and similarly recognized techniques and materials shall be employed during construction to prevent point source sedimentation loading of downstream facilities. Such installation shall be regularly inspected by the City of Liberty Hill for effectiveness. Additional measures may be required if, in the opinion of the City Engineer, they are warranted.
- 4. All temporary erosion control measures shall not be removed until final inspection and approval of the project by the Engineer. It shall be the responsibility of the Contractor to maintain all temporary erosion control structures and to remove each structure as approved by the Engineer.
- 5. All mud, dirt, rocks, debris, etc., spilled, tracked or otherwise deposited on existing paved streets, drives and areas used by the public shall be cleaned up immediately.





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	DATE	07-24-23	09-28-23	10-06-23	11-14-23	
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SHERWIN WILLIAMS
360 W. STATE HIGHWAY 29
CITY OF LIBERTY HILL
LLIAMSON COUNTY, TEXAS

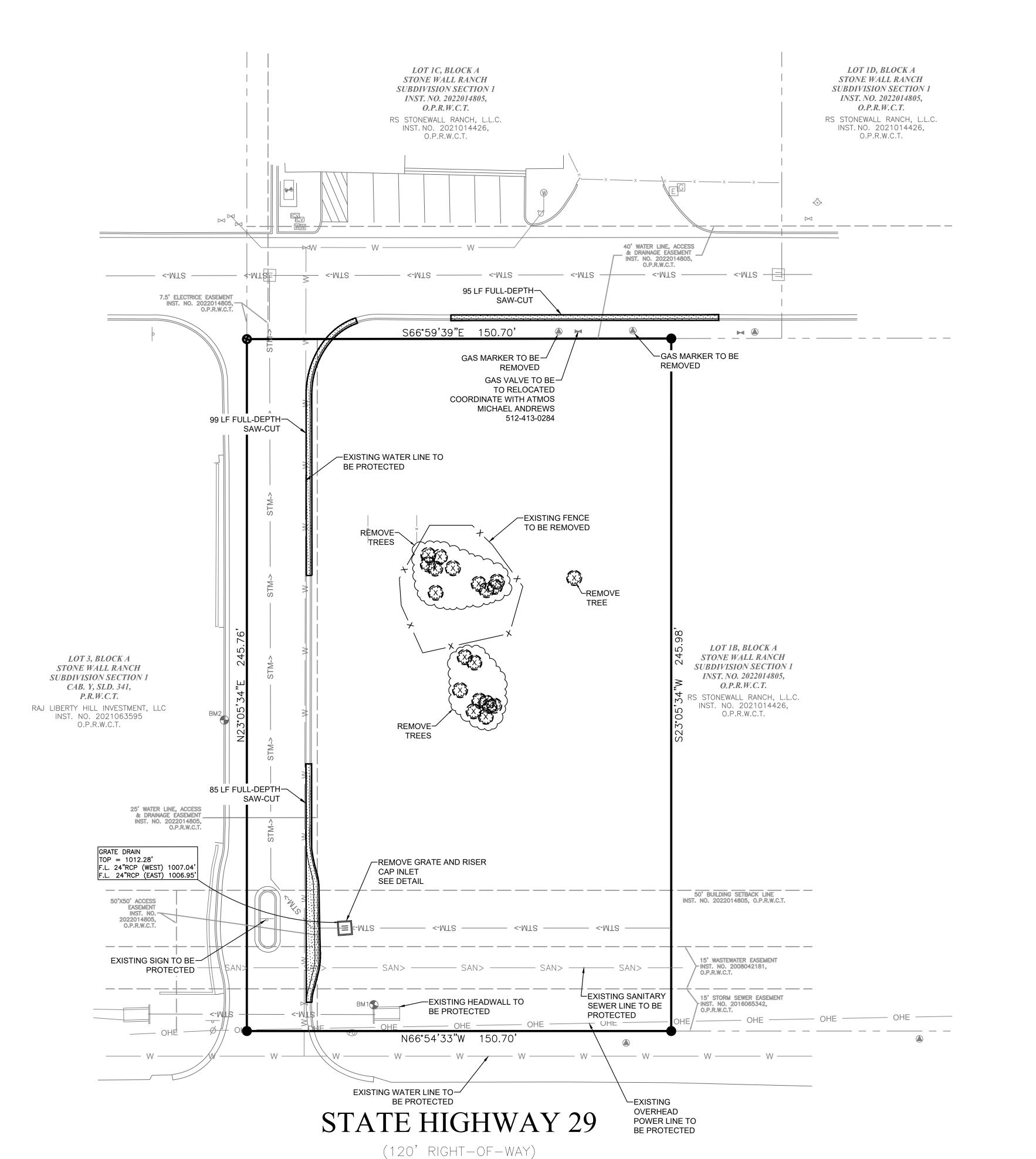
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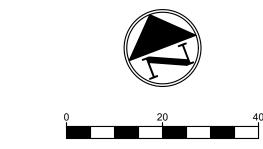
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DATE PROJECT
11/14/23 047-23
P.E. DESIGN
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VICINITY MAP

DEMOLITION GENERAL NOTES

1. ANY DEMOLITION IS TO BE PERFORMED IN STRICT CONFORMANCE WITH ALL APPLICABLE CITY, COUNTY AND STATE, AND/OR GOVERNING BODY'S STANDARDS.

2. EROSION AND SEDIMENT CONTROL MEASUREMENTS SHALL BE MAINTAINED AT ALL TIMES DURING DEMOLITION.

3. THE PURPOSE OF THIS DRAWING IS TO CONVEY THE OVERALL SCOPE OF WORK AND IT IS NOT INTENDED TO COVER ALL DETAILS OR SPECIFICATIONS REQUIRED TO COMPLY WITH GENERALLY ACCEPTED DEMOLITION PRACTICES. CONTRACTOR SHALL THOROUGHLY GET FAMILIARIZED WITH THE SITE, SCOPE OF WORK, AND ALL EXISTING CONDITIONS AT THE JOB SITE PRIOR TO BIDDING AND COMMENCING THE WORK. THE DEMOLITION CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, OR PROCEDURES USED TO COMPLETE THE WORK IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND IS LIABLE FOR THE SAFETY OF THE PUBLIC OR CONTRACTOR'S EMPLOYEES DURING THE COURSE OF THE PROJECT.

4. THE DEMOLITION PLAN IS INTENDED TO SHOW REMOVAL OF KNOWN SITE FEATURES AND UTILITIES AS SHOWN ON THE SURVEY. THERE MAY BE OTHER SITE FEATURES, UTILITIES, STRUCTURES, AND MISCELLANEOUS ITEMS BOTH BURIED AND ABOVE GROUND THAT ARE WITHIN THE LIMITS OF WORK THAT MAY NEED TO BE REMOVED FOR THE PROPOSED PROJECT THAT ARE NOT SHOWN HEREON. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE CITY, ENGINEER AND/OR OWNER PRIOR TO REMOVING ITEMS NOT SHOWN ON THE PLANS.

5. THE CONTRACTOR SHALL CONTACT RESPECTIVE UTILITY COMPANIES PRIOR TO DEMOLITION TO COORDINATE DISCONNECTION AND REMOVAL OF EXISTING UTILITIES WITHIN THE AREA OF WORK.

6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES THAT ARE INTENDED TO CONTINUE TO PROVIDE SERVICE WHETHER THESE UTILITIES ARE SHOWN ON THE PLAN OR NOT.

7. UPON DISCOVERY OF ANY UNDERGROUND TANKS, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE. NO REMOVAL OF TANKS SHALL OCCUR UNTIL AUTHORIZED BY OWNER.

8. BUILDING AND APPURTENANCES DESIGNATED FOR DEMOLITION SHALL NOT BE DISTURBED BY THE CONTRACTOR UNTIL HE HAS BEEN FURNISHED WITH NOTICE TO PROCEED BY THE OWNER. AS SOON AS SUCH NOTICE HAS BEEN GIVEN, THE CONTRACTOR SHALL PERFORM THE DEMOLITION, UNDER THE DIRECTION OF THE OWNER'S REPRESENTATIVE.

9. DEBRIS SHALL NOT BE BURIED ON THE SUBJECT SITE. ALL UNSUITABLE MATERIAL AND DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH ALL CITY, STATE, AND FEDERAL LAWS AND ORDINANCES.

10. AS SOON AS DEMOLITION WORK HAS BEEN COMPLETED, THE FINAL GRADE OF BACKFILL IN DEMOLITION AREAS SHALL BE COMPACTED PER THE GEOTECHNICAL REPORT. CONTRACTOR TO PREVENT WATER FROM DRAINING ONTO ADJACENT

11. EXISTING TREES TO REMAIN SHOULD BE PROTECTED FROM DAMAGE DURING DEMOLITION AND CONSTRUCTION.

DEMOLITION LEGEND				
SAWCUT LINE				
DEMOLITION AREA				
TREES TO BE REMOVED	(x)			



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⋈ W WATER VALVE BOUNDARY LINE TRAFFIC SIGNAL BOX --- ADJOINER BOUNDARY LINE ---- EASEMENT LINE (AS NOTED) GAS SIGN MARKER WATER METER — SANITARY SEWER LINE ELECTRIC PEDESTAL --sm->- STORM DRAIN LINE (AS NOTED) TELEPHONE MANHOLE -OHE - OVERHEAD ELECTRIC LINE STORM MAN HOLE — G — GAS LINE ÇLP LIGHT POLE --U/F-- UNDERGROUND FIBER OPTIC LINE OPP POWER POLE BENCH MARK SET IRON ROD (AS NOTED) (CM) CONTROL MONUMENT FOUND IRON ROD (AS NOTED) Oco SANITARY SEWER CLEANOUT

"X" CUT FOUND

SANITARY SEWER MAN HOLE

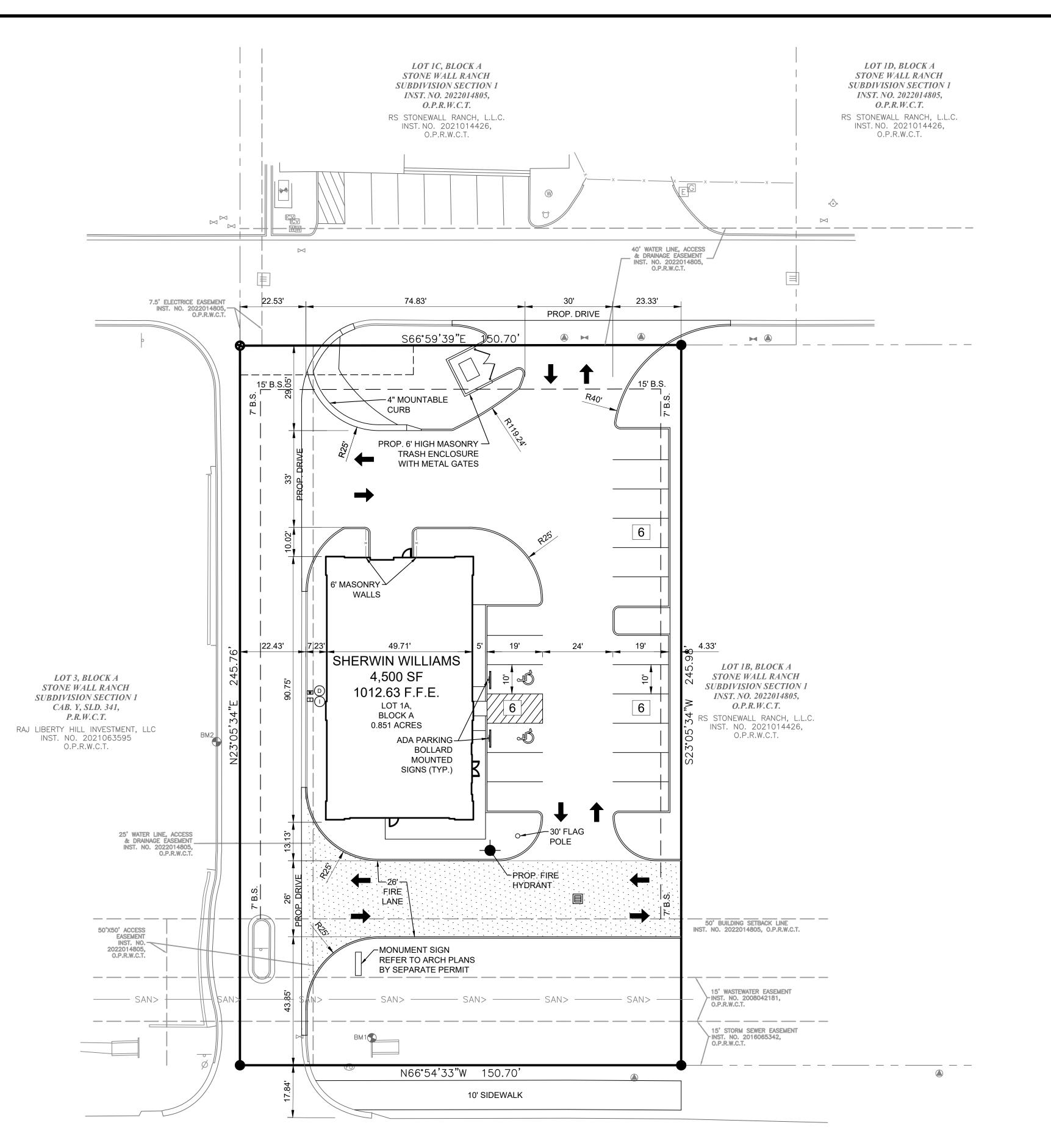
"X" CUT SET

← FH FIRE HYDRANT

FIRE H

EXISTING LEGEND

O.P.R.B.C.T. OFFICIAL PUBLIC RECORDS BOWIE COUNTY, TEXAS DEED RECORDS BOWIE COUNTY, TEXAS



STATE HIGHWAY 29

(120' RIGHT-OF-WAY)

PARKING SPACES	5				
MONUMENT/PYLON SIGN					
WHEEL STOPS	—				
HANDICAP LOGO	٨				
HANDICAP SIGN					
RAMP		W	ATER MET	ER & SAN	ITARY S
BOLLARD	•				
TRAFFIC ARROW	→	ID	TYPE	SIZE	NO.
FIRE HYDRANT	•	D	DOM.	3/4"	1
DUMPSTER	$\ \cdot\ \geq -1$				
LIGHT POLE			IRR.	3/4"	1

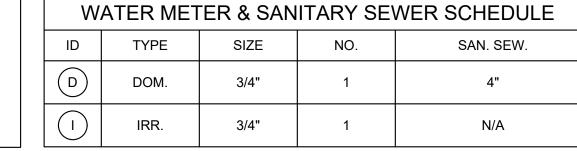
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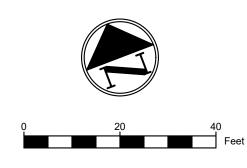
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CONCRETE CURB SAW-CUT LINE

FIRE LANE STRIPING

LIGHT POLE







VICINITY MAP

SITE GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE CITY OR LOCAL JURISDICTION STANDARDS.

2. THE LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS IS TAKEN FROM AS-BUILTS, UTILITY PLANS OR SURVEY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE ARRANGEMENTS WITH THE OWNERS OF SUCH UNDERGROUND UTILITIES PRIOR TO WORKING IN THE AREA TO CONFIRM THEIR EXACT LOCATION AND TO DETERMINE WHETHER ANY ADDITIONAL UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL UNDERGROUND UTILITIES. IF EXISTING UNDERGROUND UTILITIES ARE DAMAGED, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPAIRING THE UTILITY.

3. WHERE EXISTING UTILITIES OR SERVICE LINES ARE CUT, BROKEN OR DAMAGED, THE CONTRACTOR SHALL REPLACE OR REPAIR THE UTILITIES OR SERVICE LINES WITH THE SAME TYPE OF ORIGINAL MATERIAL AND CONSTRUCTION, OR BETTER, UNLESS OTHERWISE SHOWN OR NOTED ON THE PLANS, AT HIS OWN COST AND EXPENSE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICTS WITH UTILITIES.

4. ALL EXCAVATIONS, TRENCHING AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE U. S. DEPARTMENT OF LABOR, OSHA, CONSTRUCTION SAFETY AND HEALTH REGULATIONS AND ANY AMENDMENTS THERETO.

5. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO ORIGINAL CONDITION OR BETTER. RESTORED AREAS INCLUDE, BUT ARE NOT LIMITED TO TRENCH BACKFILL, SIDE SLOPES, FENCES, DRAINAGE DITCHES, DRIVEWAYS, PRIVATE YARDS AND ROADWAYS.

6. ANY CHANGES NEEDED AFTER CONSTRUCTION PLANS HAVE BEEN RELEASED, SHALL BE APPROVED BY THE CITY ENGINEER. THESE CHANGES MUST BE RECEIVED IN WRITING.

7. THE CONTRACTOR SHALL PROVIDE "RED LINED" MARKED PRINTS TO THE ENGINEER PRIOR TO FINAL INSPECTION INDICATING ALL CONSTRUCTION WHICH DEVIATED FROM THE PLANS OR WAS CONSTRUCTED IN ADDITION TO THAT INDICATED ON THE PLANS.

8. ALL CURB RADIUS TO BE 10' OR 2' UNLESS OTHERWISE NOTED ON THE SITE PLAN.

9. FIRE LANE SHALL BE CONSTRUCTED OF CONCRETE OR ASPHALT ABLE TO WITHSTAND AN IMPOSED LOAD OF 80,000 LBS.

10. THERE SHALL BE NO OVERHEAD OBSTRUCTIONS OF LESS THAN 13'6" OVER THE FIRE LANE

11. FIRE LANE SHALL BE MARKED "FIRE LANE - TOW-AWAY ZONE."

12. EACH REQUIRED OFF-STREET PARKING SPACE AND OFF-STREET PARKING AREA SHALL BE IDENTIFIED BY SURFACE MARKINGS AT LEAST FOUR (4) INCHES IN WIDTH. MARKINGS SHALL BE VISIBLE AT ALL TIMES. SUCH MARKINGS SHALL BE ARRANGED TO PROVIDE FOR ORDERLY AND SAFE LOADING, UNLOADING, PARKING, AND STORAGE OF VEHICLES."

13. ALL OFF-STREET PARKING AREAS, DRIVE AISLES, INTERNAL ROADWAYS, AND LOADING AREAS SHALL BE KEPT CLEAR OF DIRT, REFUSE, AND DEBRIS AT ALL TIMES.

14. ALL OFF-STREET PARKING AREAS, DRIVE AISLES, INTERNAL ROADWAYS, AND LOADING AREAS SHALL BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH THE MOST RECENTLY ADOPTED INTERNATIONAL PROPERTY MAINTENANCE CODE. (LIBERTY HILL UDC SECTION 6.10, LIBERTY HILL OFF-STREET PARKING AND LOADING ORDINANCE)

COMMERCIAL SITE DA	TA SUMMARY	TABLE
GROSS SITE ACREAGE:	0.851 ACRES OR 37	,069 S.F.
EXISTING ZONING:	(C3) GENERAL COM	IMERCIAL
PROPOSED ZONING:	(C3) GENERAL COM	IMERCIAL
BUILDING AREA:	4,500 S.F.	
NUMBER OF STORIES:	1	
BUILDING HEIGHT:	24.5'	
PARKING REQUIRED: 1 PER 250 FT. GFA	18 PARKING SPACE	S
REGULAR PARKING PROVIDED:	16 PARKING SPACE	S
HANDICAP PARKING REQUIRED:	1 SPACE (1 VAN AC	CESSIBLE)
HANDICAP PARKING PROVIDED:	2 SPACE (1 VAN AC	CESSIBLE)
TOTAL PARKING PROVIDED:	18 PARKING SPACE	S
IMPERVIOUS COVERAGE:	26,560 S.F. OR 71.65	5%
PERVIOUS/LANDSCAPE AREA:	10,509 S.F. OR 28.35	5%
ZONING REQUIREMENTS GC	REQUIRED	PROVIDED
FRONT YARD SETBACK	25'	25'
SIDE YARD SETBACK	7'	7'
REAR YARD SETBACK	15'	15'
MAXIMUM IMPERVIOUS COVER	< 85%	73%
	1 2070	





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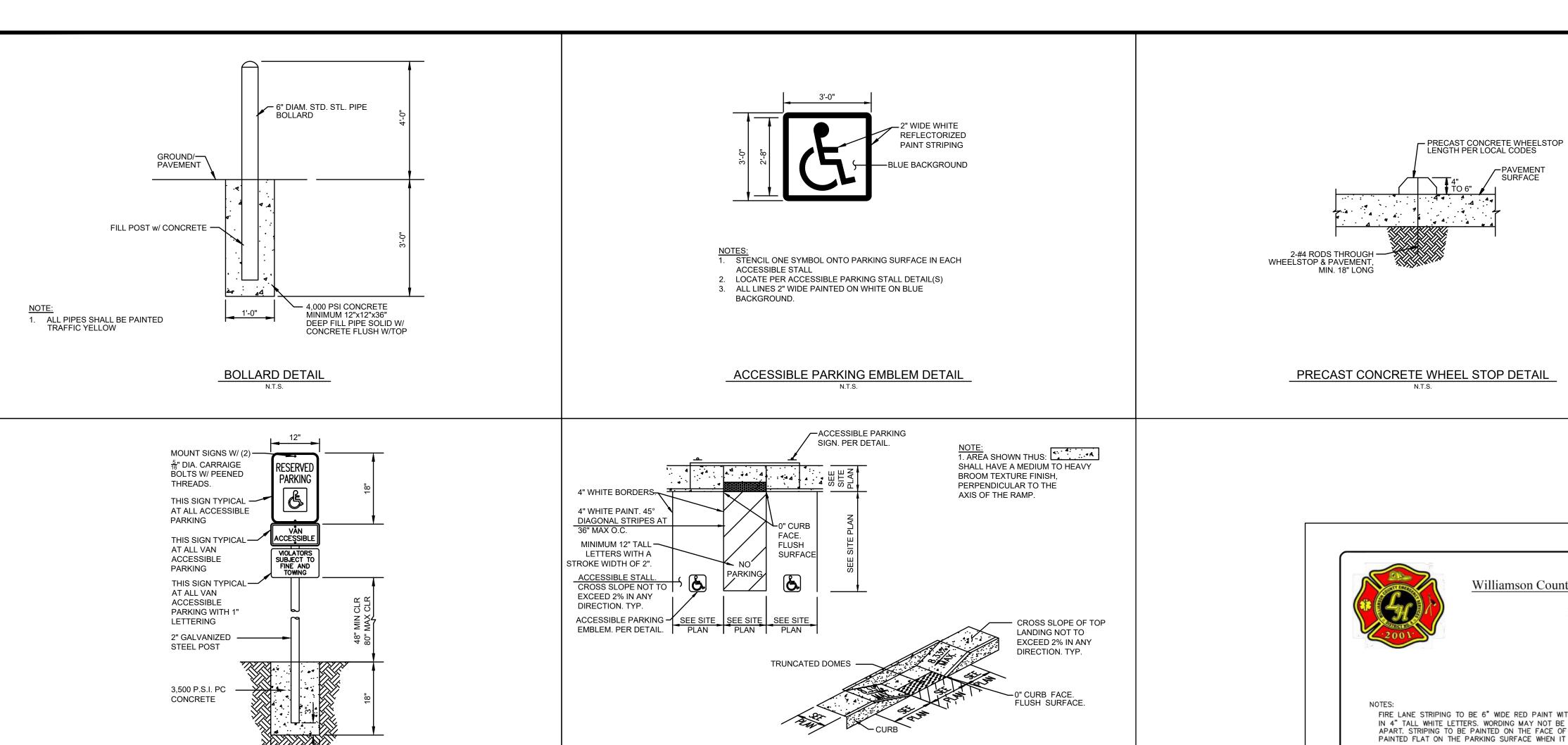
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ACCESSIBLE PARKING STALL DETAIL

ACCESSIBLE PARKING SIGN DETAIL





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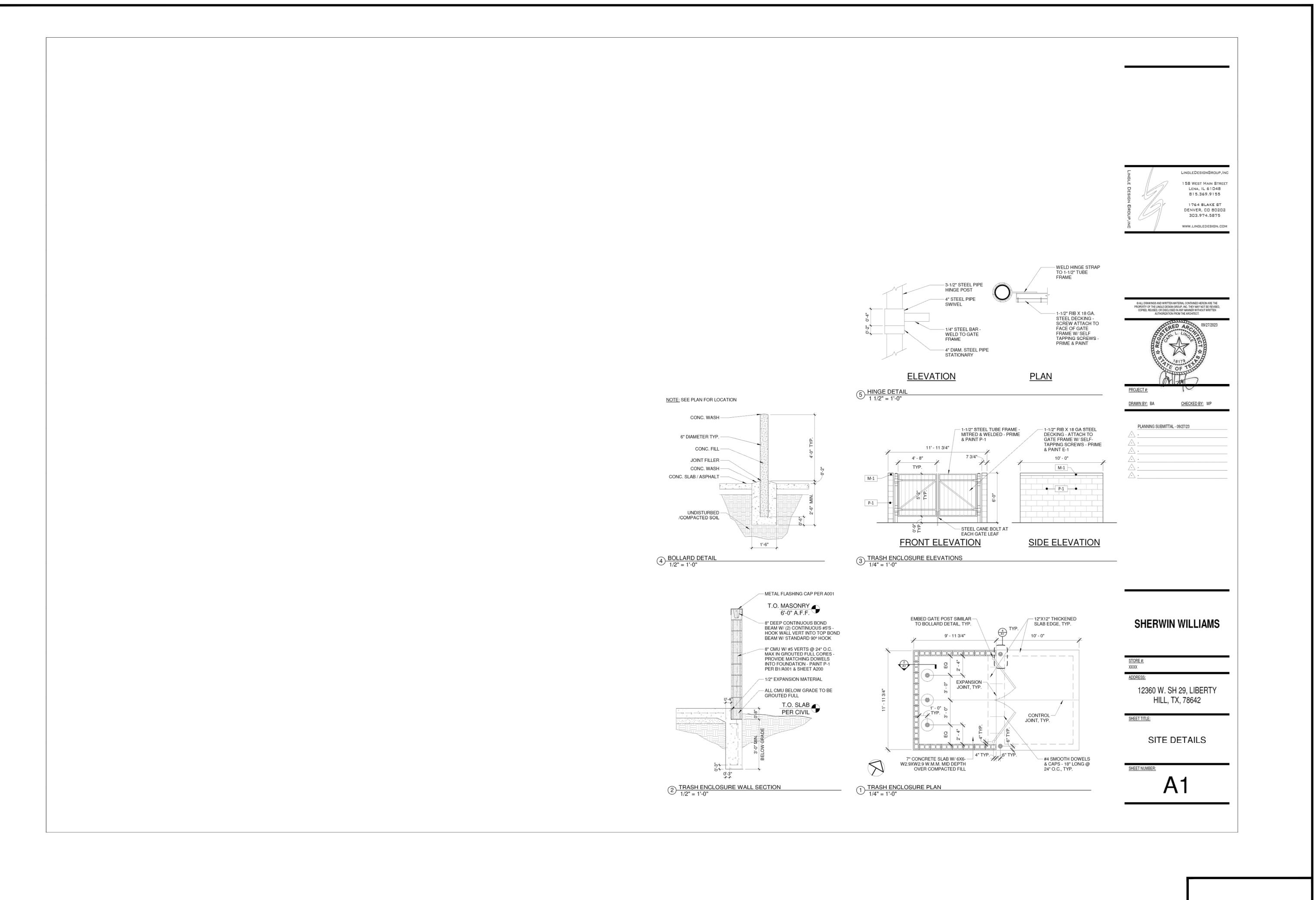
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SHERWIN WILLIAMS 360 W. STATE HIGHWAY 29

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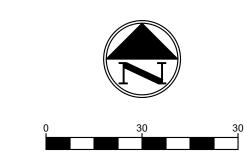
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GRADING GENERAL NOTES

LOT 1D, BLOCK A

STONE WALL RANCH SUBDIVISION SECTION 1

INST. NO. 2022014805,

O.P.R.W.C.T.

RS STONEWALL RANCH, L.L.C. INST. NO. 2021014426,

O.P.R.W.C.T.

LOT 1B, BLOCK A

STONE WALL RANCH

INST. NO. 2022014805,

O.R.R.W.C.T.

RS STONEWALL RANCH, L.L.C. INST. NO. 2021014426, O.P.R.W.C.T.

56° BUILDING SETBACK LINE INST. NO. 2022014805, O.P.R.W.C.T.

15' WASTEWATER EASEMENT INST. NO. 2008042181, O.P.R.W.C.T.

NST. NO. 2016065342, O.P.R.W.C.T.

1011.68 EX DIVISION SECTION 1

1. ALL SURPLUS EXCAVATION AND WASTE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND IT SHALL BE HIS SOLE RESPONSIBILITY TO REMOVE SUCH SURPLUS EXCAVATION AND WASTE MATERIAL FROM THE SITE TO A PUBLIC DUMP SITE APPROVED FOR THE DISPOSAL OF SUCH MATERIALS. IF SURPLUS EXCAVATION IS REMOVED FROM THIS SITE TO ANOTHER PROPERTY, IT SHALL BE PLACED ON SUCH PROPERTY WITH THE WRITTEN CONSENT OF THE OWNER(S) OF SUCH PROPERTY. A COPY OF SUCH WRITTEN CONSENT SHALL BE PROVIDED TO THE OWNER. IF THE CONTRACTOR WISHES TO DISPOSE OF SURPLUS EXCAVATION ON-SITE, IT SHALL BE ONLY WITH THE PRIOR APPROVAL OF THE OWNERS PROJECT REPRESENTATIVE AND CARE SHOULD BE TAKEN TO AVOID BLOCKING NATURAL DRAINAGE AND INCREASING STEEP SLOPES. IF ANY OF THE HAULED EXCAVATION MATERIAL IS TAKEN TO ANOTHER LOCATION WITHIN THE CITY LIMITS, THE OWNER OF THE PROPERTY IS REQUIRED TO OBTAIN A LOT GRADING PERMIT BEFORE MATERIAL IS DELIVERED.

2. THE CONTRACTOR IS REQUIRED TO PROVIDE HIS OWN STAKING AND TO VERIFY PROJECT ELEVATIONS. "MATCH EXISTING" SHALL BE UNDERSTOOD TO

3. THE CONTRACTOR SHALL PREPARE ALL LANDSCAPE AREAS INCLUDING STREET RIGHT-OF-WAY AREAS TO AN ACCEPTABLE SUBGRADE CONDITION IN ACCORDANCE WITH THE LANDSCAPE PLANS. IF THE CONTRACTOR IS NOT EMPLOYED TO PROVIDE AND INSTALL LANDSCAPING, HE SHALL PREPARE A FINISHED AND COMPACTED SUB-GRADE IN THE LANDSCAPING AREAS.

4. NO SLOPES TO EXCEED 4H:1V

5. WALL GREATER THAN 4' TO BE DESIGNED BY A STRUCTURAL ENGINEER.

6. RETAINING WALLS GREATER THAN 2' IN HEIGHT SHALL BE PERMITTED THROUGH THE CITY OF FRISCO BUILDING DEPARTMENT AND THE REVIEW OF SAID WALL IS NOT INCLUDED IN THIS SCOPE OF WORK.

THE SUBJECT PROPERTY LIES WITHIN THE ZONE "X" UNSHADED (DETERMINED TO BE OF THE 0.20% ANNUAL CHANGE FLOODPLAIN) AS DETERMINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY NATIONAL FLOOD INSURANCE PROGRAM (NFIP) FLOOD INSURANCE RATE MAP NUMBER 48491C0245F, DATED DECEMBER 20, 2019 FOR WILLIAMSON COUNTY, TEXAS AND INCORPORATED AREAS.

BENCHMARKS

THE BENCHMARKS AND ELEVATIONS SHOWN ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88) BY USING GPS OBSERVATIONS IN CONJUNCTION WITH THE ALL TERRA RTK NETWORK.

BENCHMARK NO. 1

BEING AN "X" CUT, A DISTANCE OF 45.12' EAST AND 9.09' SOUTH FROM THE SUBJECT'S SOUTHWEST PROPERTY CORNER. ELEVATION: 1009.20'

BENCHMARK NO. 2

BEING A SQUARE CUT, A DISTANCE OF 35.97' EAST AND 104.75' NORTH FROM THE SUBJECT'S SOUTHWEST PROPERTY CORNER.

VICINITY MAP

APPLY TO BOTH VERTICAL ELEVATION AND HORIZONTAL ALIGNMENT.

FLOOD PLAIN NOTE

ELEVATION: 1012.51'

GRADING L	EGEND
EXISTING MINOR CONTOURS	750
EXISTING MAJOR CONTOURS	———— 750 ———
TOP OF CURB & GUTTER ELEVATION	TC 740.31 G 739.81
FINISHED GRADE	000.00 FG
EXISTING GRADE	000.00 EX
DRAINAGE FLOW DIRECTION	2.0%
MINOR CONTOURS	
MAJOR CONTOURS	
SWALE	
HIGH POINT	—— HP—— HP—— HP——
STORM PIPE	STM->
CURB INLET	<u> </u>
STORM MANHOLE	•
STORM CLEANOUT	②
RETAINING WALL	

RIP RAP



(120' RIGHT-OF-WAY)

-∬8N66°54'33"W 150.70"∤

LOT 1C, BLOCK A

STONE WALL RANCH

SUBDIVISION SECTION 1 INST. NO. 2022014805,

O.P.R.W.C.T.

INST. NO. 2021014426,

O.P.R.W.C.T.

S66759'39"E

SHERWIN WILLIAMS

4,500 SF 1012.63 F.F.E.

7.5' ELECTRICE EASEMENT INST. NO. 2022014805, O.P.R.W.C.T.

LOT 3, BLOCK A

STONE WALL RANCH

SUBDIVISION SECTION 1

CAB. Y, SLD. 341,

P.R.W.C.T.

25' WATER LINE, ACCESS & DRAINAGE EASEMENT INST. NO. 2022014805,

50'X50' ACCESS EASEMENT INST.\ NO. -2022014805, O.P.R.W.C.T.

RAJ LIBERTY HILL INVESTMENT, L INST. NO. 2021063595 O.P.R.W.C.T.

1011.26 EX

1012.00 EX

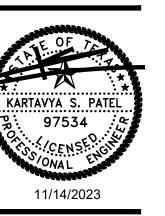
1012.10 EX

1011.70 EX

RS STONEWALL RANCH, L.L.C.



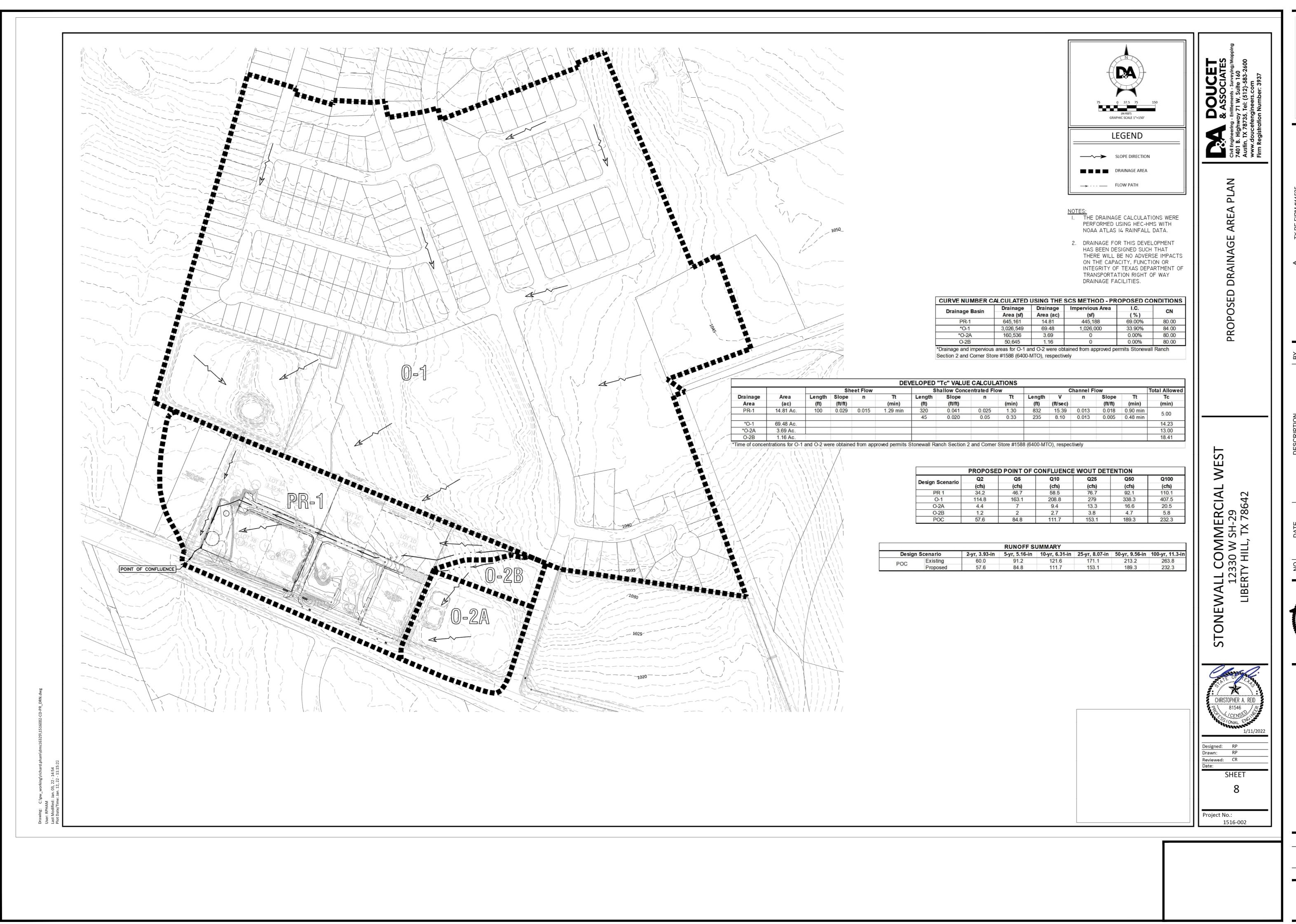
DESCRIPTION	1ST SUBMITTAL	2ND SUBMITTAL	3RD SUBMITTAL	4TH SUBMITTAL	
. DATE	07-24-23	09-28-23	10-06-23	11-14-23	



DATE | PROJECT

11/14/23 047-23 P.E. DESIGN
KP JZ

SHEET# C-4.0 of 33





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KARTAVYA S. PATEL

DATE PROJECT 11/14/23 047-23 P.E. DESIGN
KP JZ

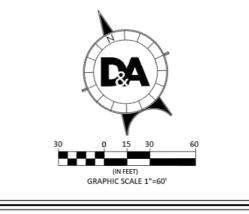
SHEET#

C-5.0 of 33

DEVELOPED RUNOFF (Q) CALCULATIONS USING RATIONAL METHOD FOR STORM SEWER SYSTEM

T_c (Min.)

Drainage Basin



LEGEND

─────── SLOPE DIRECTION DRAINAGE AREA

NOTES:

I. THE DRAINAGE CALCULATIONS WERE PERFORMED USING HEC-HMS WITH NOAA ATLAS 14 RAINFALL DATA.

2. DRAINAGE FOR THIS DEVELOPMENT HAS BEEN DESIGNED SUCH THAT THERE WILL BE NO ADVERSE IMPACTS ON THE CAPACITY, FUNCTION OR INTEGRITY OF TEXAS DEPARTMENT OF TRANSPORTATION RIGHT OF WAY DRAINAGE FACILITIES.

DRAINAGE ш

DEVELOPE

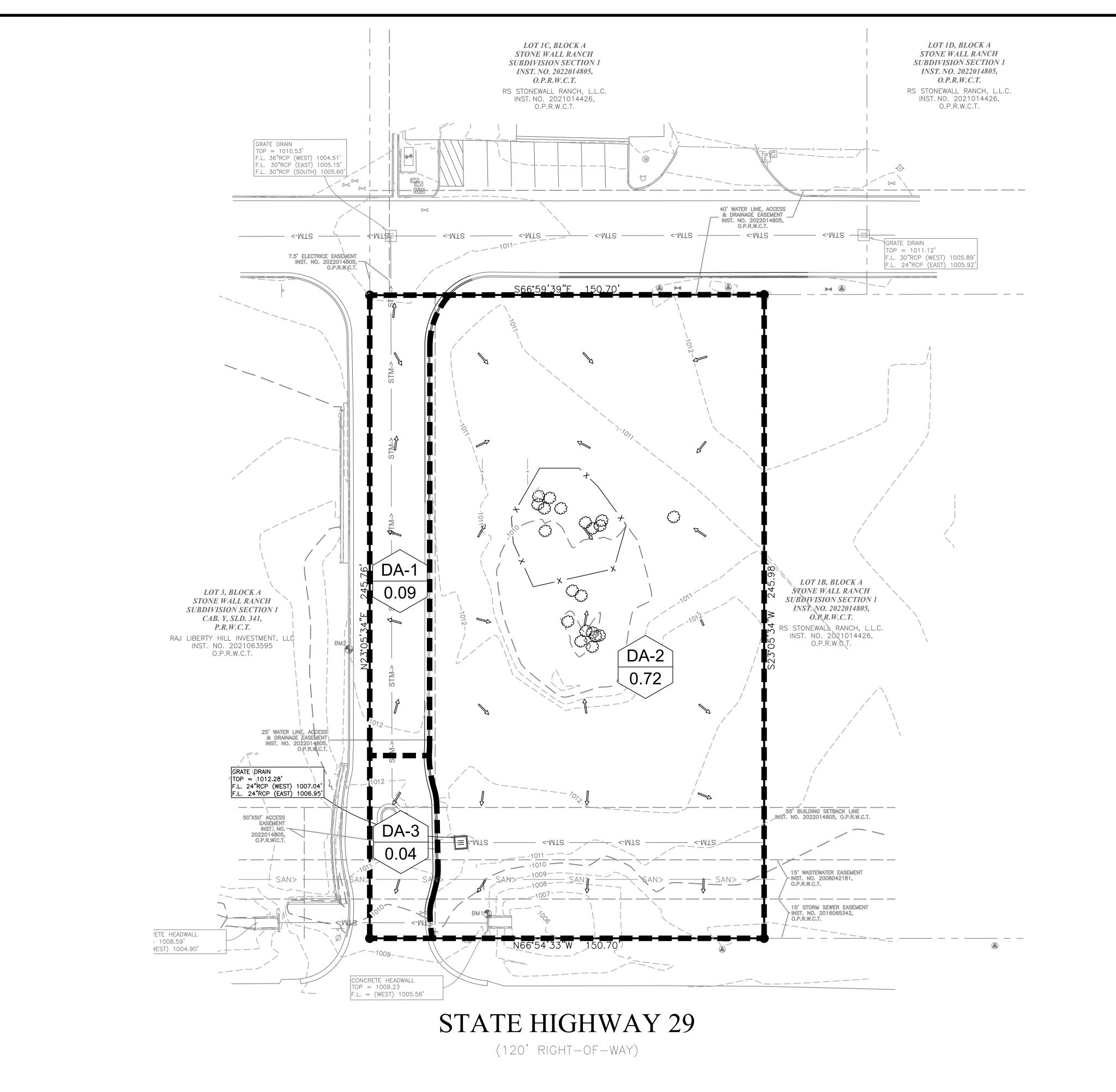
11/14/23 047-23

SHEET# C-5.1 of 33

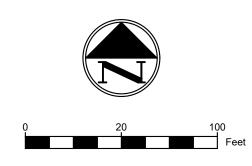
STONEWALL COMMERCIAL 12330 W SH-29 LIBERTY HILL, TX 78642

Reviewed: CR

1516-002



ORAINAGE AREA	С	Tc (min)	I-2 (in/hr)	l-10 (in/hr)	I-25 (in/hr)	I-100 (in/hr)	A (acres)	Q-2 (cfs)	Q-10 (cfs)	Q-25 (cfs)	Q-100 (cfs)	REMARKS
DA-1	0.90	10	4.35	7.41	8.65	10.89	0.09	0.35	0.60	0.70	0.88	TO OFF-SITE GRATE INLET
DA-2	0.30	10	4.35	7.41	8.65	10.89	0.72	0.94	1.60	1.87	2.35	TO ON-SITE DITCH
DA-3	0.90	10	4.35	7.41	8.65	10.89	0.04	0.16	0.27	0.31	0.39	TO OFF-SITE DITCH
		•	TOTAL				0.85	1.45	2.47	2.88	3.63	





VICINITY MAP

PRE-DRAINAGE	LEGEND
EXISTING MINOR CONTOURS EXISTING MAJOR CONTOURS	750 750
DRAINAGE AREA NO. DRAINAGE AREA ACREAGE	DA-1 0.25
DRAINAGE DIVIDE	
DRAINAGE FLOW DIRECTION	

FLOOD PLAIN NOTE

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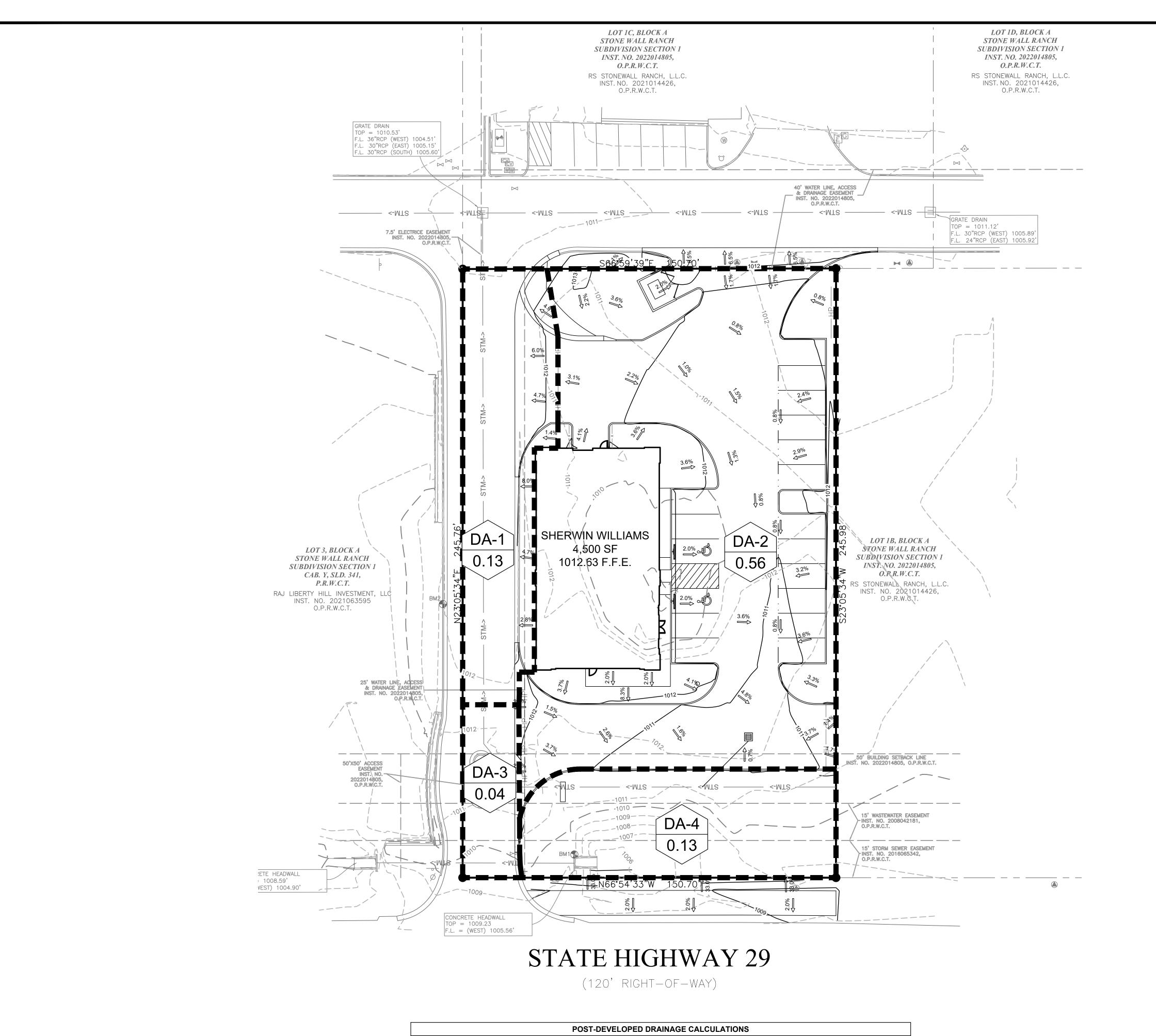
ВУ	KP	ΑA	А	KP		
DESCRIPTION	1ST SUBMITTAL	2ND SUBMITTAL	3RD SUBMITTAL	4TH SUBMITTAL		
DATE	07-24-23	09-28-23	10-06-23	11-14-23		
NO.	_	2	3	4		

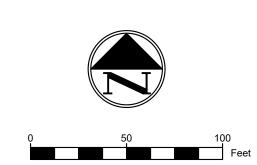


11/14/23 047-23 P.E. DESIGN
KP JZ

SHEET#

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VICINITY MAP

POST-DRAINAGE	LEGEND
EXISTING MINOR CONTOURS EXISTING MAJOR CONTOURS MINOR CONTOURS MAJOR CONTOURS	750 750 740 740
DRAINAGE AREA NO. DRAINAGE AREA ACREAGE	DA-2 0.50
DRAINAGE DIVIDE	
DRAINAGE FLOW DIRECTION	1.0%
HIGH POINT	—— HP—— HP—— HP——

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POST-DEVELOPED DRAINAGE CALCULATIONS												
DRAINAGE AREA	С	Tc (min)	l-2 (in/hr)	I-10 (in/hr)	I-25 (in/hr)	l-100 (in/hr)	A (acres)	Q-2 (cfs)	Q-10 (cfs)	Q-25 (cfs)	Q-100 (cfs)	REMARKS
DA-1	0.90	10	4.35	7.41	8.65	10.89	0.13	0.51	0.87	1.01	1.27	TO OFF-SITE GRATE INLET
DA-2	0.90	10	4.35	7.41	8.65	10.89	0.56	2.19	3.73	4.36	5.49	TO ON-SITE GRATE IN LET
DA-3	0.90	10	4.35	7.41	8.65	10.89	0.04	0.16	0.27	0.31	0.39	TO OFF-SITE DITCH
DA-4	0.90	10	4.35	7.41	8.65	10.89	0.13	0.51	0.87	1.01	1.27	TO ON-SITE DITCH
			TOTAL				0.86	3.37	5.74	6.70	8.43	



DESCRIPTION					
DE	1ST SUBMITTAL	2ND SUBMITTAL	3RD SUBMITTAL	4TH SUBMITTAL	
DATE	07-24-23	09-28-23	10-06-23	11-14-23	
9	_	2	3	4	

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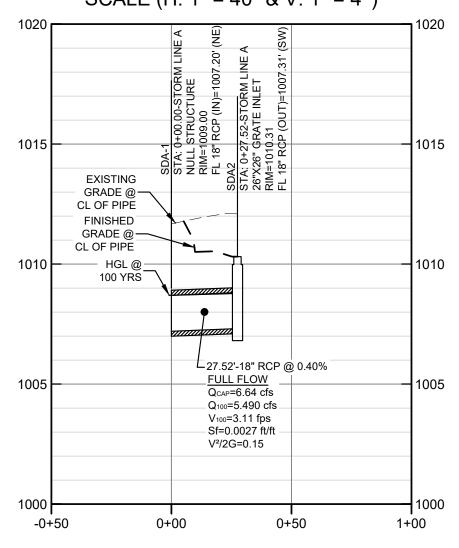
POST DRAINAGE

ATE	PROJECT	
14/23	047-23	
P.E.	DESIGN	
KP	JZ	

SHEET#

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STORM LINE A PROFILE SCALE (H: 1" = 40" & V: 1" = 4')



UTILITY L	.EGEND
UNDERGROUND TELEPHONE LINE UNDERGROUND ELECTRIC LINE GAS LINE SANITARY SEWER LINE WATER MAIN DOMESTIC WATER LINE STORM LINE	UGT UGT UGT UGE UGE UGE UGE UGE UGE UGE UGE UGE SAN SAN SAN SAN SAN SAN D D D D
STORM SEWER MANHOLE STORM SEWER CLEANOUT SANITARY SEWER MANHOLE SANITARY SEWER CLEANOUT SANITARY SEWER DOUBLE CLEANOUT SANITARY SEWER SAMPLE PORT WATER METER IRRIGATION METER GAS METER	
FIRE HYDRANT TRANSFORMER LIGHT POLE	_

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(120' RIGHT-OF-WAY)

GRATE INLET IN SUMP										
INLET DESCRIPTION	Q-100 (cfs)	AREA (sf.)	DEPTH AT OPENING (ft.)	Q	Q, 50%	REMARKS				
LINE A STA. 2+33.11	5.78	4.00	0.50	13.60	6.80	2' X 2' GRATE INLET				
NOTE: CAPACITY FOR A GRATE INLET IN SUMP IS $Q = 4.82Ah^{\circ}0.5$										

Line No.	Line ID	Line Length	Known Q	Flow Rate	Capac Full	Vel Ave	Line Size	Line Slope	Invert Dn	Invert Up	HGL Dn	HGL Up	Gnd/Rim El Dn	Gnd/Rim El Up	J-Loss Coeff	Sf Ave	Vel Hd Up	
		(ft)	(cfs)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)		(%)	(ft)	
1	SDA1 TO SDA2	27.522	5.49	5.49	6.64	3.11	18	0.40	1007.20	1007.31	1009.20	1009.28	1009.00	1010.30	1.25	0.273	0.15	

BENCHMARKS

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DESCRIPTION						
	1ST SUBMITTAL	2ND SUBMITTAL	3RD SUBMITTAL	4TH SUBMITTAL		
ATE	1-23	3-23	3-23	1-23		

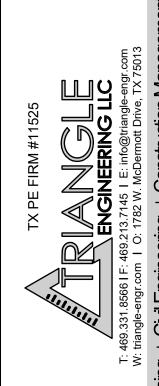
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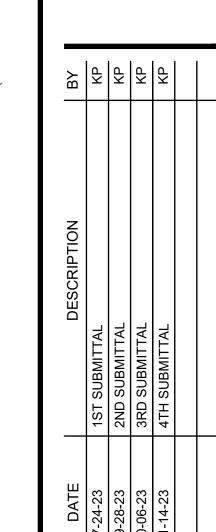


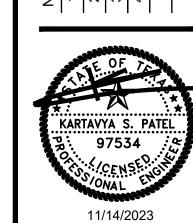
11/14/23 047-23

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FORTERRA

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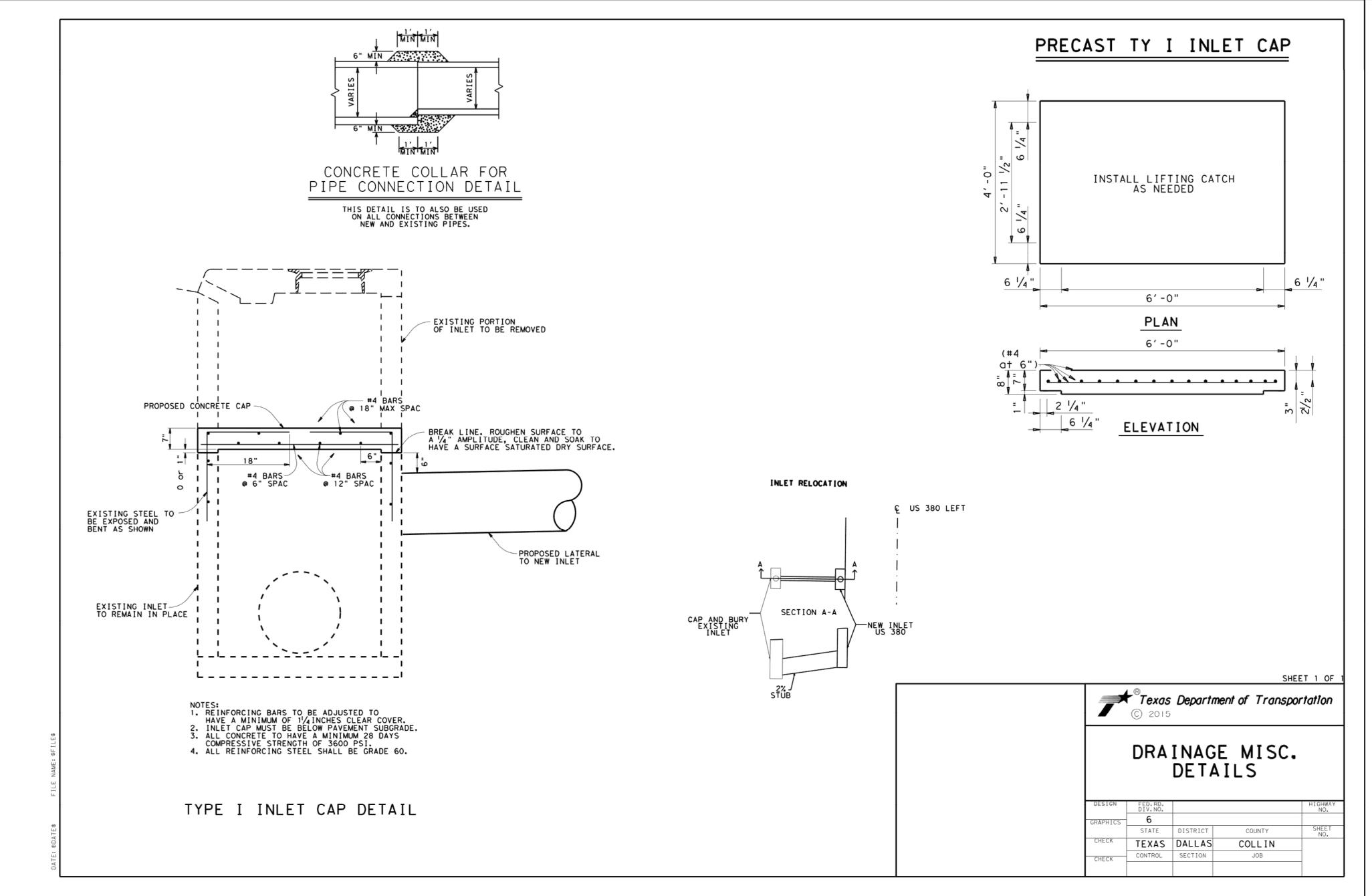
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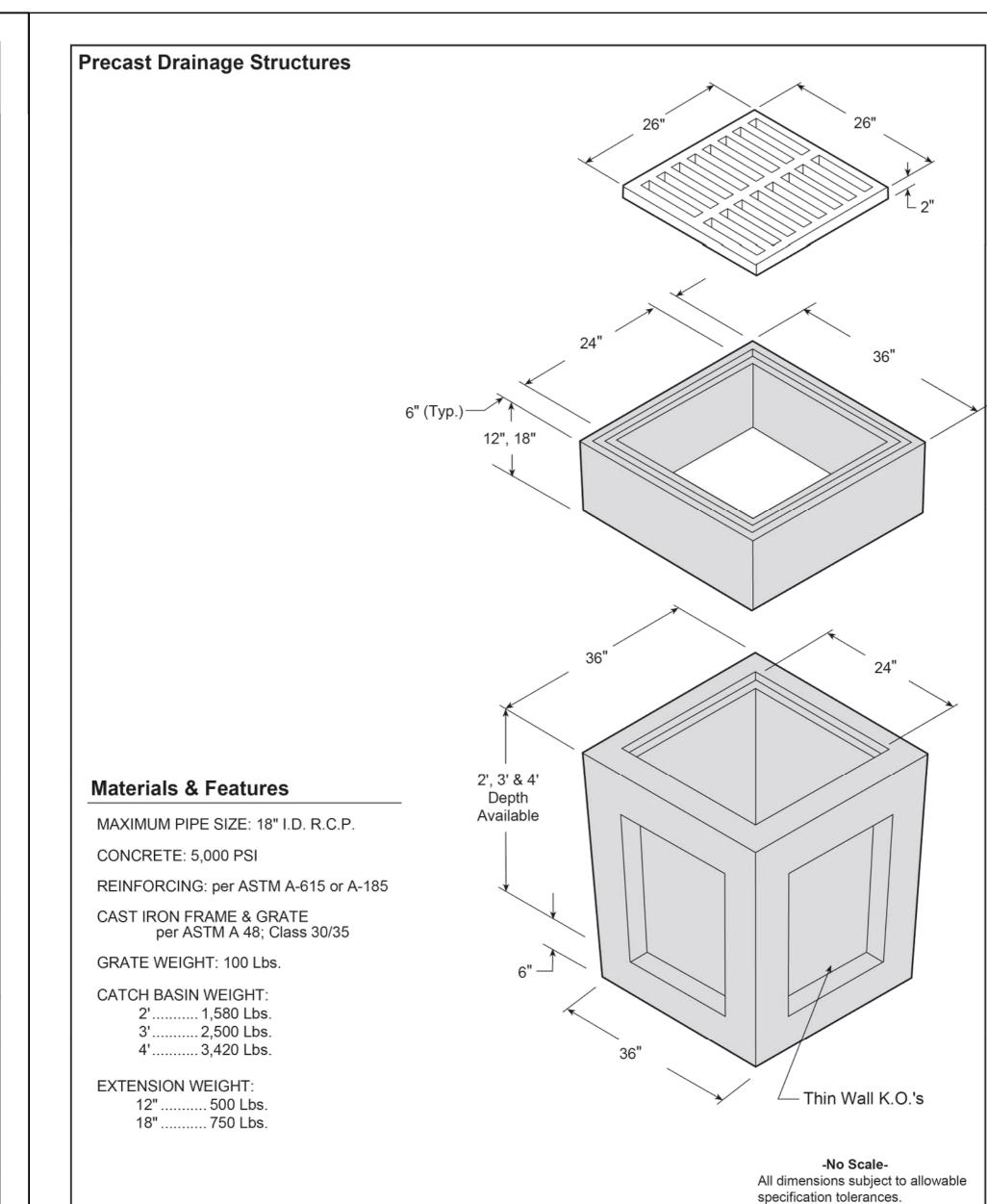
Feb 2016

SHERWIN WILLIAMS 12360 W. STATE HIGHWAY 29 CITY OF LIBERTY HILL WILLIAMSON COUNTY, TEXAS

DATE PROJECT
11/14/23 047-23
P.E. DESIGN
KP JZ

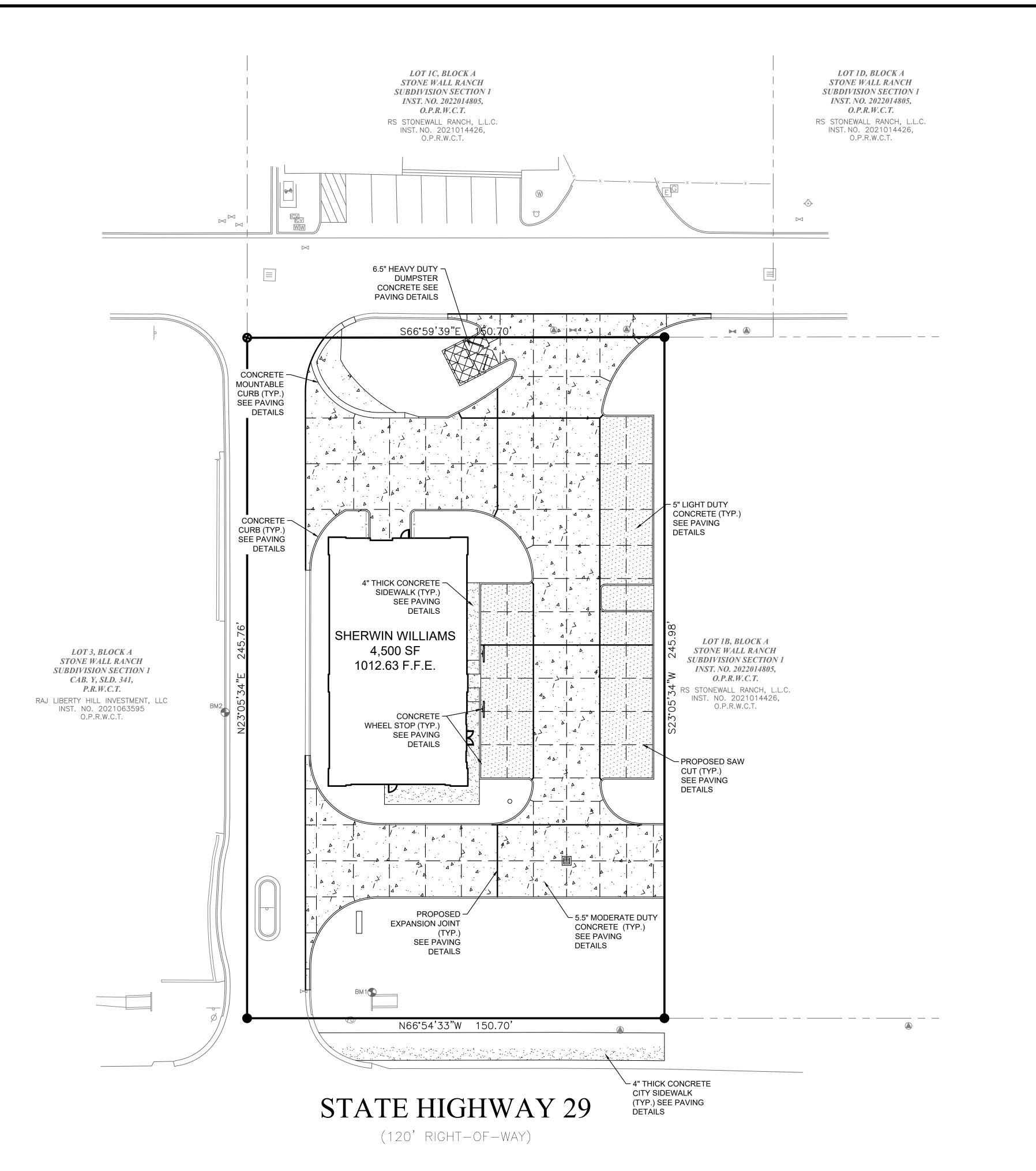
SHEET #
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TITLE

#26 Catch Basin



EXISTING LEGEND

⋈ wv WATER VALVE

TRAFFIC SIGNAL BOX

GAS SIGN MARKER

ELECTRIC PEDESTAL

STORM MAN HOLE LIGHT POLE

CONTROL MONUMENT

○co SANITARY SEWER CLEANOUT

TELEPHONE MANHOLE

WATER METER

POWER POLE

BENCH MARK

O.P.R.B.C.T. OFFICIAL PUBLIC RECORDS BOWIE COUNTY, TEXAS

D.R.B.C.T. DEED RECORDS BOWIE COUNTY, TEXAS

BOUNDARY LINE

— san> — SANITARY SEWER LINE

— G — GAS LINE

♣ FH FIRE HYDRANT

0

--- ADJOINER BOUNDARY LINE

"X" CUT FOUND
"X" CUT SET

SANITARY SEWER MAN HOLE

---- EASEMENT LINE (AS NOTED)

STORM DRAIN LINE (AS NOTED)

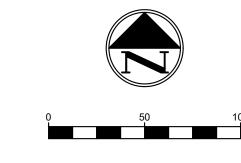
—U/F— UNDERGROUND FIBER OPTIC LINE

✓PP

FOUND IRON ROD (AS NOTED)

SET IRON ROD (AS NOTED)

OVERHEAD ELECTRIC LINE





VICINITY MAP

PAVING GENERAL NOTES

1. STRIP & REMOVE FROM THE CONSTRUCTION AREA ALL TOPSOIL, ORGANICS & VEGETATION TO A MINIMUM DEPTH OF 6 INCHES.

2. CONTROL JOINTS FORMED BY SAWING ARE RECOMMENDED BOTH LONGITUDINAL AND TRANSVERSE DIRECTIONS. CONTROL JOINT SHALL BE SAWED WITHIN 3 HOURS AFTER PLACING CONCRETE. JOINTS SHALL BE PROPERLY CLEANED AND SEALED AS SOON AS POSSIBLE AFTER JOINTS ARE CUT.

3. DRAINAGE SHOULD BE MAINTAINED AWAY FROM THE FOUNDATION, BOTH DURING AND AFTER CONSTRUCTION. WATER SHOULD NOT BE ALLOWED TO POND NEAR THE FOUNDATION. THE FOLLOWING ITEMS SHOULD PROVIDE FOR POSITIVE DRAINAGE OF WATER AWAY FROM THE FOUNDATION: SIDEWALKS AND OTHER CONCRETE FLAT WORK, PARKING AREAS, DRIVEWAYS AND OTHER SURFACE DRAINAGE FEATURES, AND LANDSCAPING.

4. FRENCH DRAINS ARE RECOMMENDED AROUND ANY SLABS WHERE SEEPING GROUND WATER IS ENCOUNTERED DURING CONSTRUCTION.

5. SIDEWALK AROUND THE BUILDING SHALL NOT BE STRUCTURALLY CONNECTED TO THE BUILDING FOUNDATION UNLESS IT'S NOTED ON THE STRUCTURAL PLANS.

6. ALL EXPANSION JOINTS AND CRACK CONTROL JOINTS SHOULD BE SEALED TO PREVENT THE INFILTRATION OF WATER INTO THE SUBSURFACE. THIS IS PARTICULARLY IMPORTANT AROUND IRRIGATED LANDSCAPING AND ALONG THE DRAINAGE PATH OF ROOF DOWNSPOUTS.

7. LANDSCAPE ISLANDS SHOULD BE BACKFILLED WITH LOW PLASTICITY CLAYS TO REDUCE WATER INTRUSION INTO THE SUBSURFACE PAVEMENT STRUCTURES. CURBS SHOULD BE PROVIDED WITH WEEP HOLES IN LANDSCAPE AREAS TO REDUCE THE BUILD UP OF HYDROSTATIC PRESSURE AND TO REDUCE THE INTRUSION OF WATER INTO THE SUBSURFACE MATERIAL.

13. CURB AND GUTTER SHALL CONSIST OF STEEL REINFORCED CONCRETE AND SHALL BE SIX (6") INCHES HIGH, UNLESS OTHERWISE NOTED ON THE SITE/GRADING

14. THE CONTRACTOR SHALL PROCEED WITH PAVING NO MORE THAN SEVENTY-TWO (72) HOURS AFTER DENSITY/MOISTURE TESTS HAVE BEEN TAKEN

AND PASSED BY A REGULAR TESTING FIRM.

15. MANHOLE RIM ELEVATIONS, CLEAN-OUTS, VALVE BOXES, ETC. SHALL BE ADJUSTED TO FINISHED GRADE BY THE PAVING CONTRACTOR AT THE TIME OF

16. SEE IRRIGATION PLAN FOR IRRIGATION SLEEVE PLACEMENT PRIOR TO PAVING CONSTRUCTION.

17. FIRE LANE SHALL BE CONSTRUCTED OF CONCRETE OR ASPHALT ABLE TO WITHSTAND AN IMPOSED LOAD OF 80,000 LBS.

PAVING LEG	GEND
EXPANSION JOINT (@ 60' MAX.)	
SAWCUT JOINT (@ 15 'MAX.)	
I IDDIOATION OF EENEO	

SAWCUT JOINT (@ 15 'MAX.)

IRRIGATION SLEEVES

5" LIGHT DUTY CONCRETE

7" HEAVY DUTY CONCRETE

8" DUMPSTER CONCRETE

4" SIDEWALK

SHERWII

TX PE FIRM #11525

TX PE FIRM #1

DESCRIPTION	1ST SUBMITTAL	2ND SUBMITTAL	3RD SUBMITTAL	4TH SUBMITTAL	
DATE	07-24-23	09-28-23	10-06-23	11-14-23	
ON	_	2	3	4	

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SHERWIN WILLIAMS
2360 W. STATE HIGHWAY 29
CITY OF LIBERTY HILL

DATE PROJECT

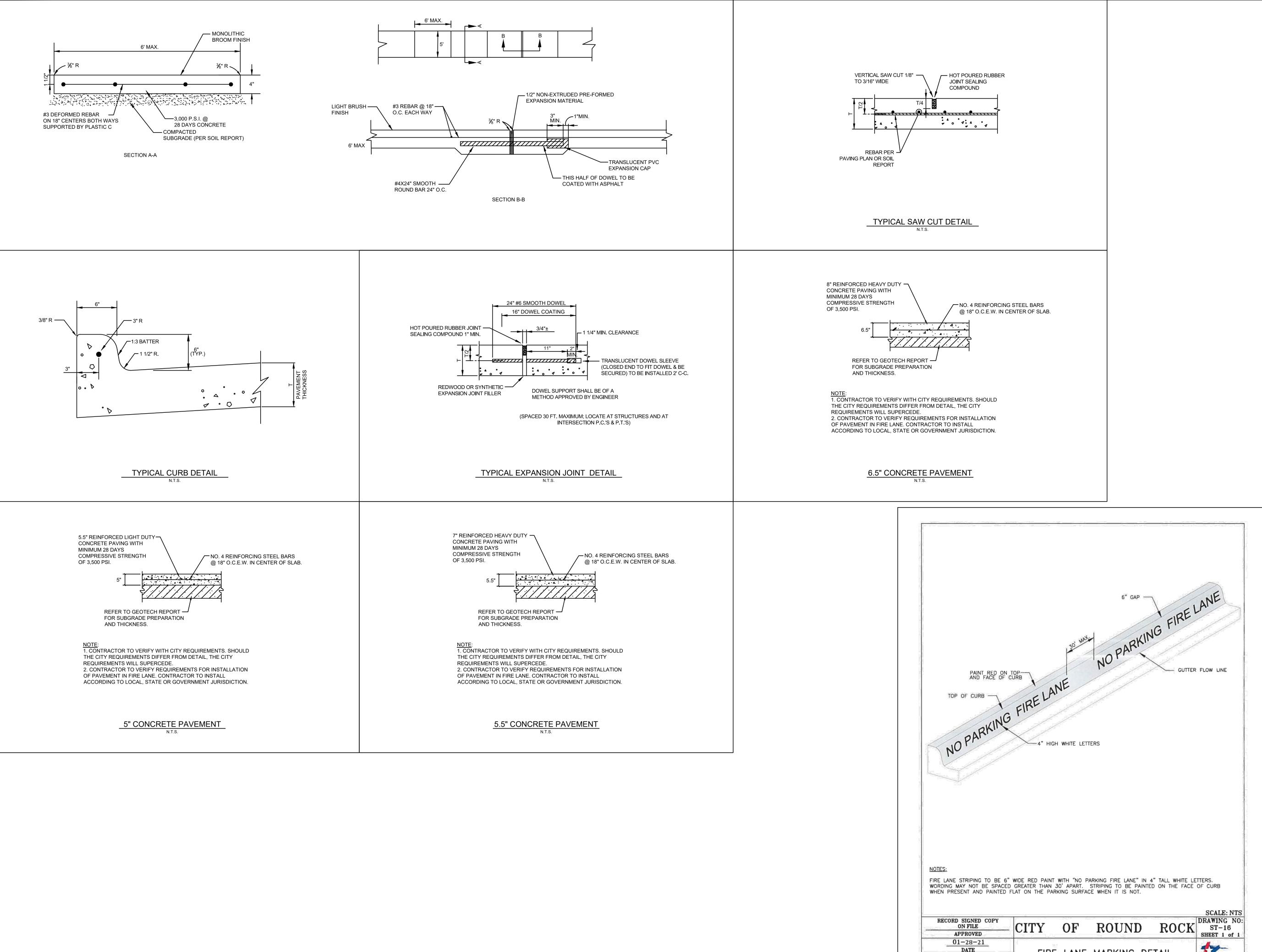
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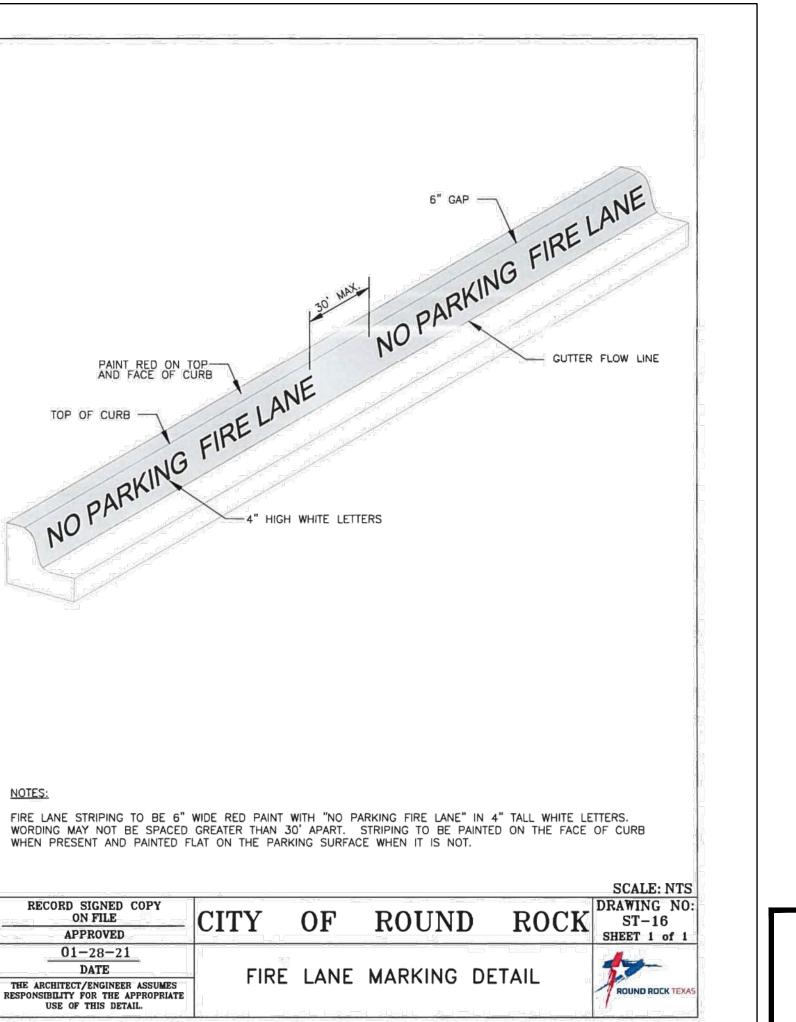
P.E. DESIGN

KP JZ

SHEET#

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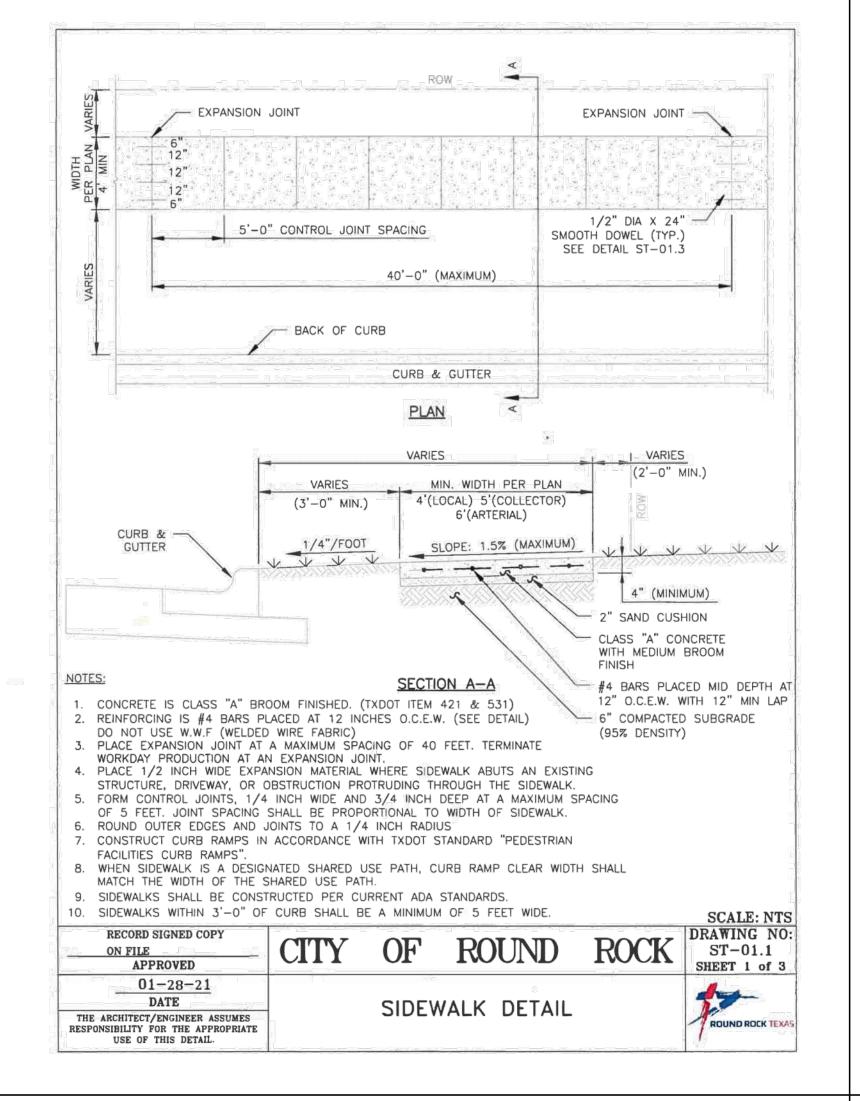


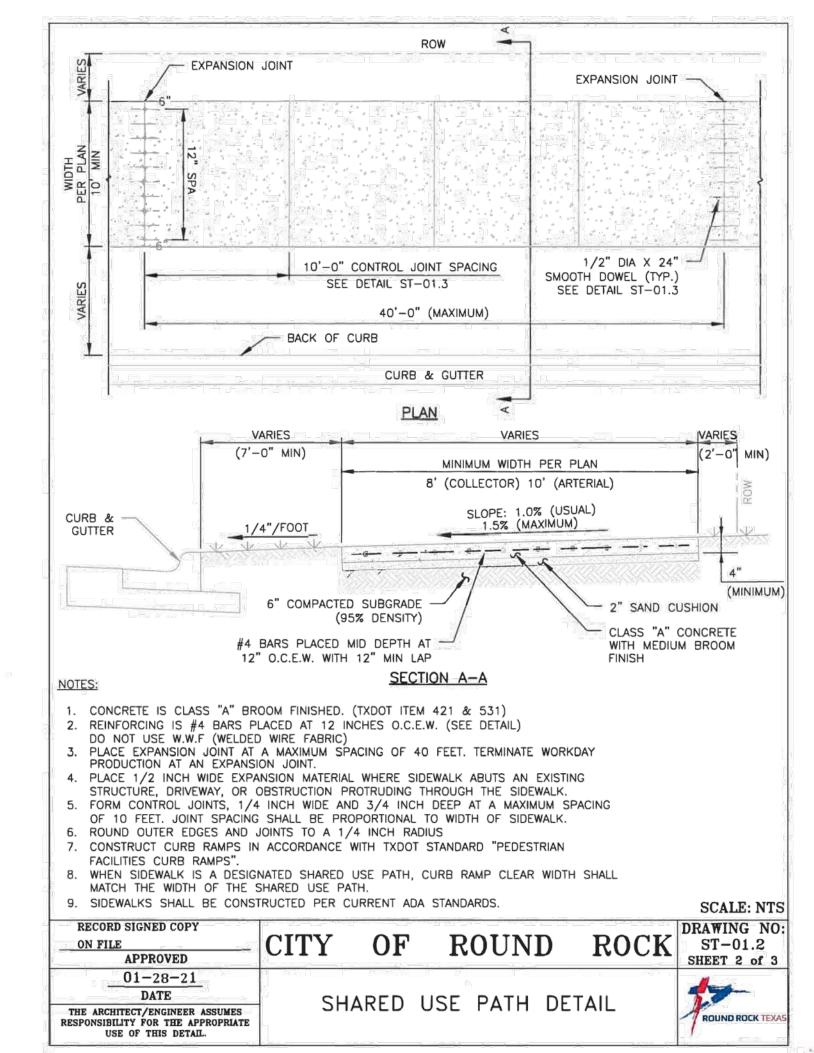


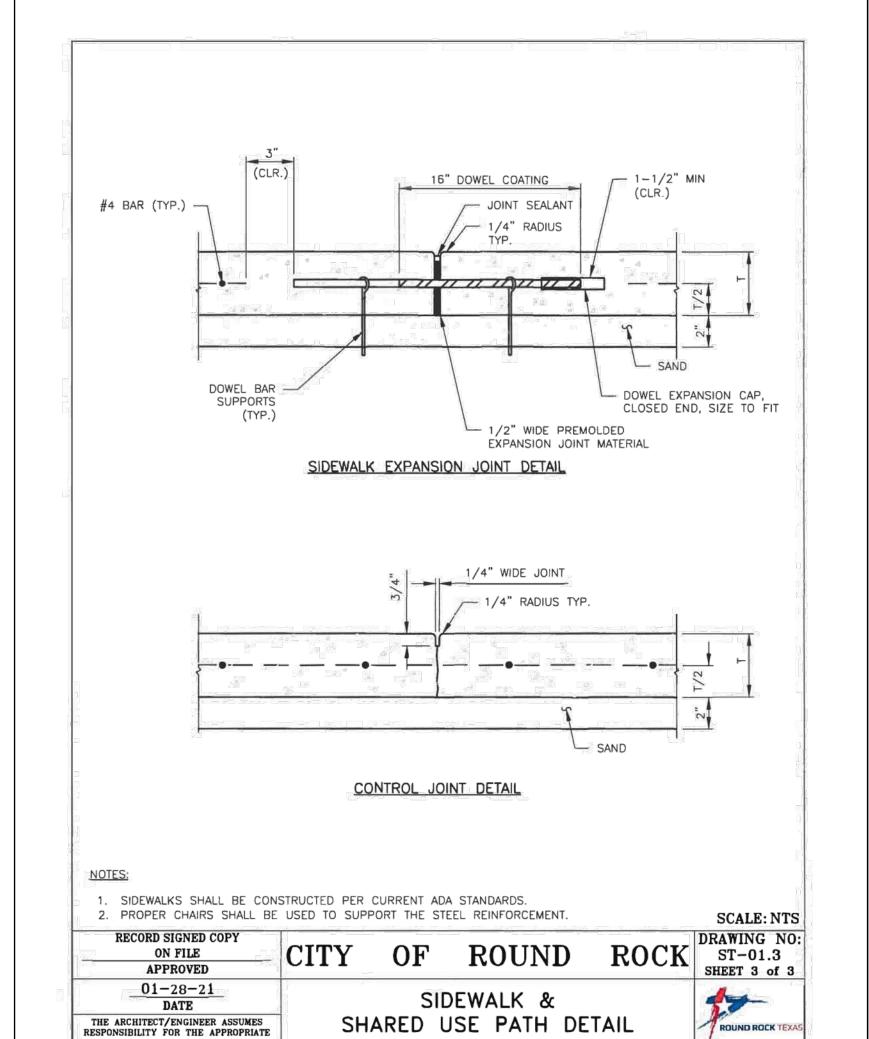
KARTAVYA S. PATEL

DATE | PROJECT 11/14/23 047-23 P.E. DESIGN
KP JZ

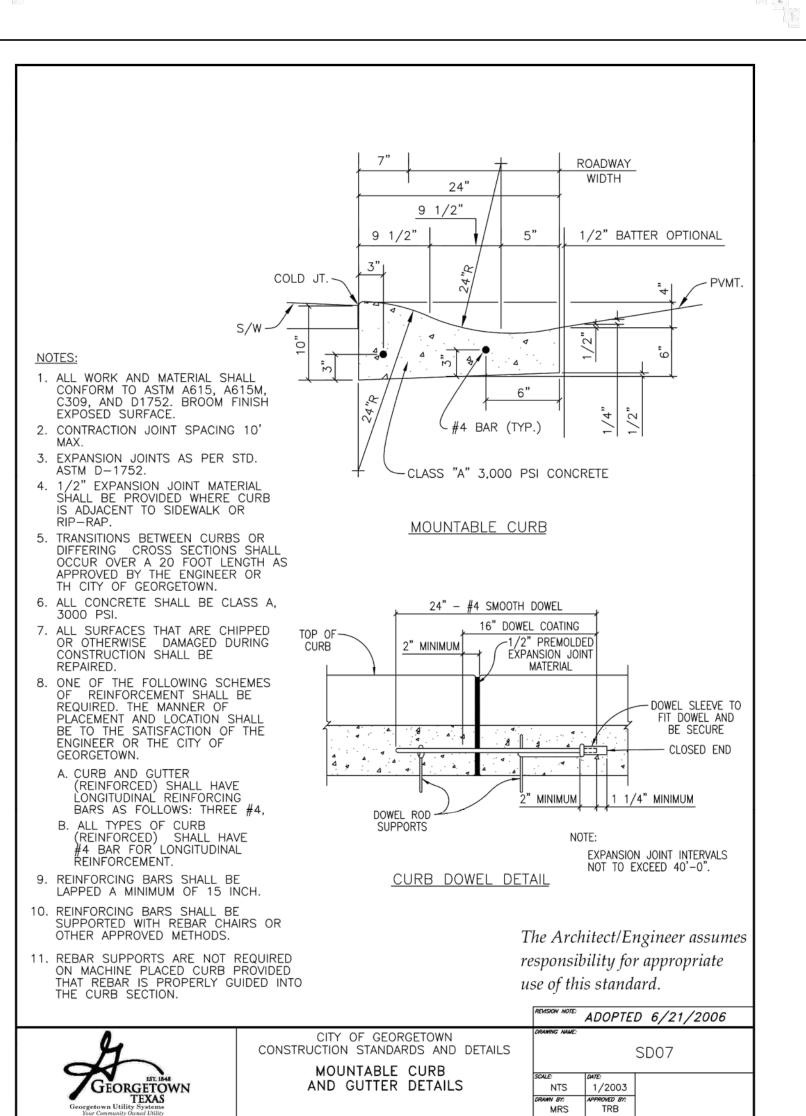
SHEET# C-6.1 of 33







USE OF THIS DETAIL.





TX PE FIRM #11525

; ;	ВУ	КР	KP	KP	KP			-
-	DESCRIPTION	1ST SUBMITTAL	2ND SUBMITTAL	3RD SUBMITTAL	4TH SUBMITTAL			
	DATE	07-24-23	09-28-23	10-06-23	11-14-23			
-	ON	1	2	3	4			•
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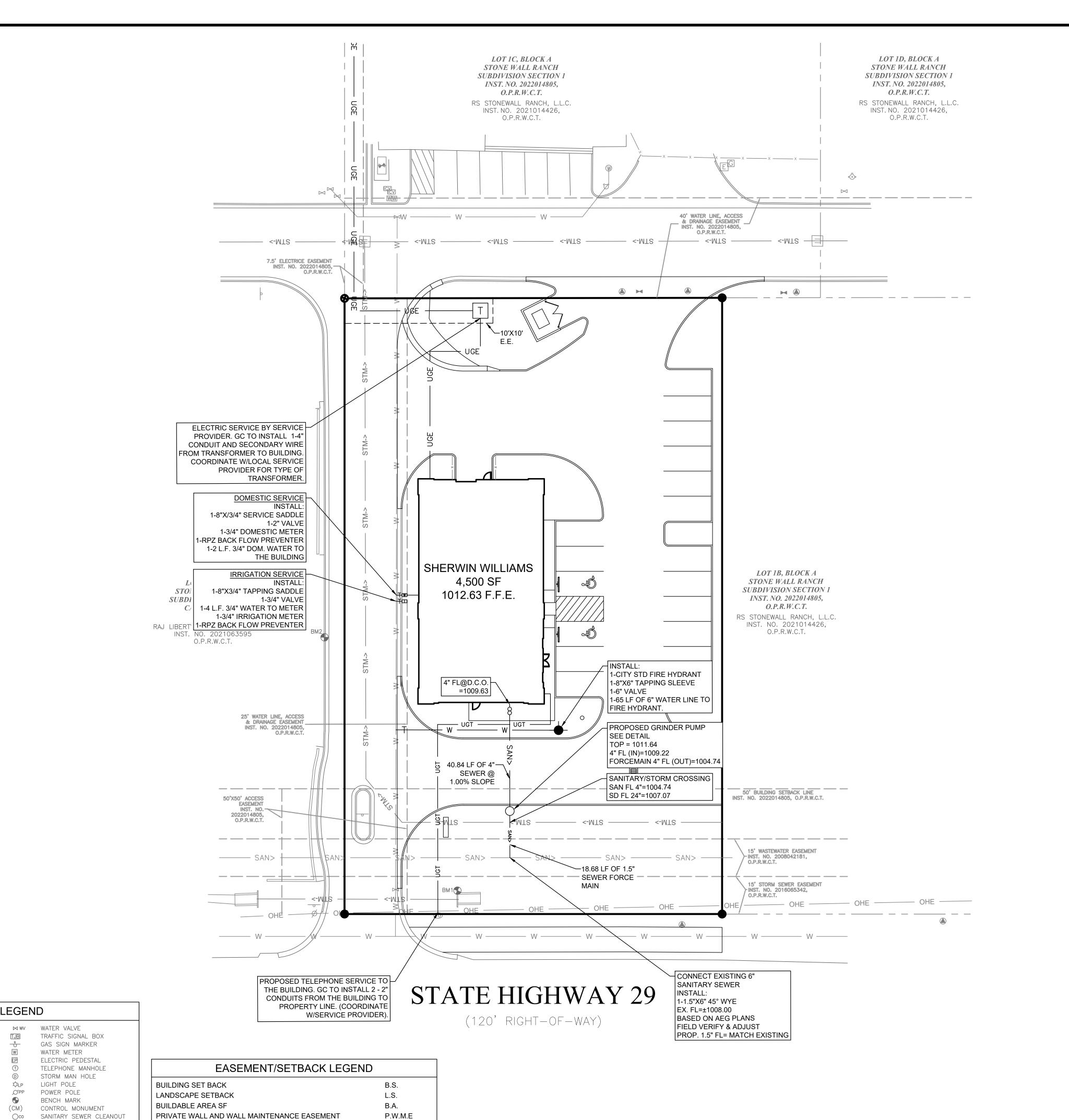


SHERWIN WILLIAMS
2360 W. STATE HIGHWAY 29
CITY OF LIBERTY HILL

DATE	PROJECT	
/14/23	047-23	
P.E.	DESIGN	
KP	JZ	

SHEET#

C-6.2 of 33



EXISTING LEGEND

⋈ W WATER VALVE

TJB TRAFFIC SIGNAL BOX

LIGHT POLE

POWER POLE

O.P.R.B.C.T. OFFICIAL PUBLIC RECORDS

BENCH MARK

(CM) CONTROL MONUMENT

D.R.B.C.T. DEED RECORDS BOWIE COUNTY, TEXAS

GAS SIGN MARKER

ELECTRIC PEDESTAL

STORM MAN HOLE

TELEPHONE MANHOLE

BOWIE COUNTY, TEXAS

UNDERGROUND UTILITIES (SUE)

PRIVATE FENCE AND FENCE MAINTENANCE EASEMENT

SIDEWALK EASEMENT

ELECTRICAL EASEMENT

UTILITY EASEMENT

P.F.M.E

S.E.

E.E.

U.E.

BOUNDARY LINE

— SANITARY SEWER LINE

— G — GAS LINE

--- ADJOINER BOUNDARY LINE

-OHE - OVERHEAD ELECTRIC LINE

"X" CUT FOUND

"X" CUT SET

← FH FIRE HYDRANT

FIRE H

--- EASEMENT LINE (AS NOTED)

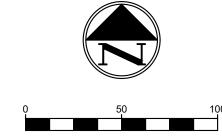
STORM DRAIN LINE (AS NOTED)

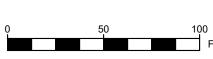
-U/F- UNDERGROUND FIBER OPTIC LINE OPP

SET IRON ROD (AS NOTED)

SANITARY SEWER MAN HOLE

FOUND IRON ROD (AS NOTED)







VICINITY MAP

UTILITY GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH THE CITY/UTILITY COMPANY STANDARDS.

2. FIELD VERIFY LOCATION OF EXISTING WATER MAIN, SEWER MAIN, GAS, TELEPHONE AND ELECTRICAL LINE. POT HOLE RECOMMENDED PRIOR TO CONSTRUCTION BEGIN. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH UTILITY SERVICE PROVIDERS.

3. THE LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS IS TAKEN FROM AS-BUILTS, UTILITY PLANS OR SURVEY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAKE ARRANGEMENTS WITH THE OWNERS OF SUCH UNDERGROUND UTILITIES PRIOR TO WORKING IN THE AREA TO CONFIRM THEIR EXACT LOCATION AND TO DETERMINE WHETHER ANY ADDITIONAL UTILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL UNDERGROUND UTILITIES. IF EXISTING UNDERGROUND UTILITIES ARE DAMAGED, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPAIRING THE UTILITY.

4. WHERE EXISTING UTILITIES OR SERVICE LINES ARE CUT, BROKEN OR DAMAGED, THE CONTRACTOR SHALL REPLACE OR REPAIR THE UTILITIES OR SERVICE LINES WITH THE SAME TYPE OF ORIGINAL MATERIAL AND CONSTRUCTION, OR BETTER, UNLESS OTHERWISE SHOWN OR NOTED ON THE PLANS, AT HIS OWN COST AND EXPENSE. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICTS WITH UTILITIES.

5. ALL EXCAVATIONS, TRENCHING AND SHORING OPERATIONS SHALL COMPLY WITH THE REQUIREMENTS OF THE U. S. DEPARTMENT OF LABOR, OSHA, CONSTRUCTION SAFETY AND HEALTH REGULATIONS AND ANY AMENDMENTS THERETO.

6. ADEQUATE MEASURES SHALL BE TAKEN TO PREVENT EROSION. IN THE EVENT THAT SIGNIFICANT EROSION OCCURS AS A RESULT OF CONSTRUCTION THE CONTRACTOR SHALL RESTORE THE ERODED AREA TO ORIGINAL CONDITION OR

7. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO ORIGINAL CONDITION OR BETTER. RESTORED AREAS INCLUDE, BUT ARE NOT LIMITED TO TRENCH BACKFILL, SIDE SLOPES, FENCES, CULVERT PIPES, DRAINAGE DITCHES, DRIVEWAYS, PRIVATE YARDS AND ROADWAYS.

8. ANY CHANGES NEEDED AFTER CONSTRUCTION PLANS HAVE BEEN RELEASED, SHALL BE APPROVED BY THE CITY ENGINEER. THESE CHANGES MUST BE RECEIVED IN WRITING.

9. THE CONTRACTOR SHALL PROVIDE "RED LINED" MARKED PRINTS TO THE ENGINEER PRIOR TO FINAL INSPECTION INDICATING ALL CONSTRUCTION WHICH DEVIATED FROM THE PLANS OR WAS CONSTRUCTED IN ADDITION TO THAT INDICATED ON THE PLANS.

UTILITY LEGEND						
UNDERGROUND TELEPHONE LINE	——— UGT ——	UGT				
UNDERGROUND ELECTRIC LINE	UGE	—— UGE ——				
GAS LINE	——— G ——	— G ——				
SANITARY SEWER LINE	SAN>	SAN>				
WATER MAIN	w	w				
DOMESTIC WATER LINE	D	D				
STORM LINE	STM->	STM->				
STORM SEWER MANHOLE	0					
STORM SEWER CLEANOUT						
SANITARY SEWER MANHOLE	(
SANITARY SEWER CLEANOUT	C	•				
SANITARY SEWER DOUBLE CLEANOUT	α	-				
SANITARY SEWER SAMPLE PORT						
GREASE TRAP WATER METER	[O_					
IRRIGATION METER	П	_				
GAS METER		- 3				
FIRE HYDRANT	-	-				
FIRE DEPARTMENT CONNECTION-FDC	5	3				
TRANSFORMER	Ī	-				
LIGHT POLE	о-{					
POWER POLE	Q	3				





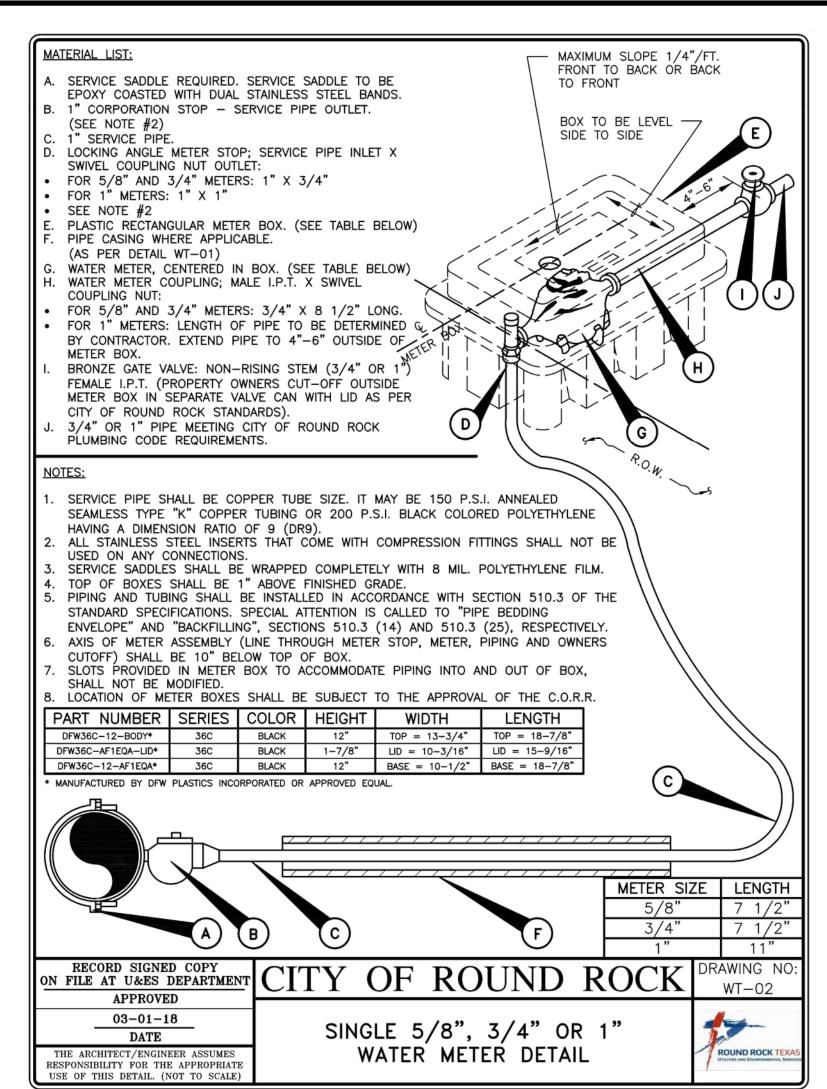
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DATE	07-24-23	09-28-23	10-06-23	11-14-23	
NO.	1	2	3	4	

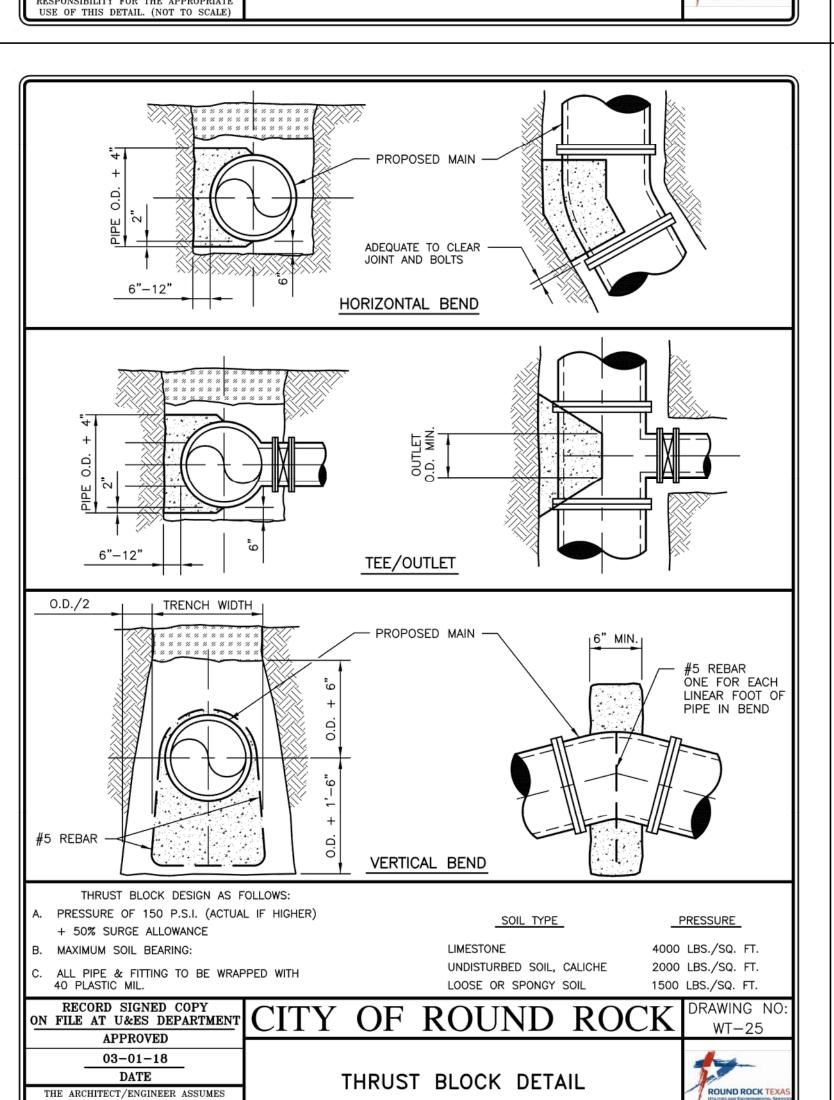


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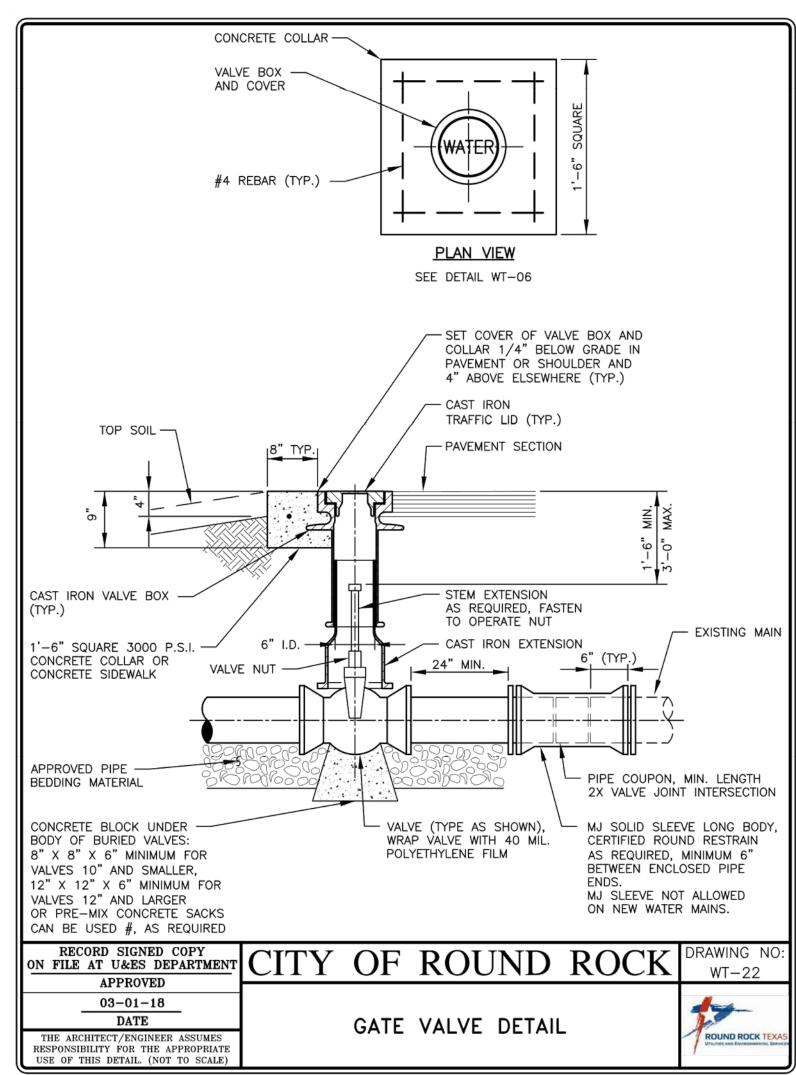
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KP	JZ

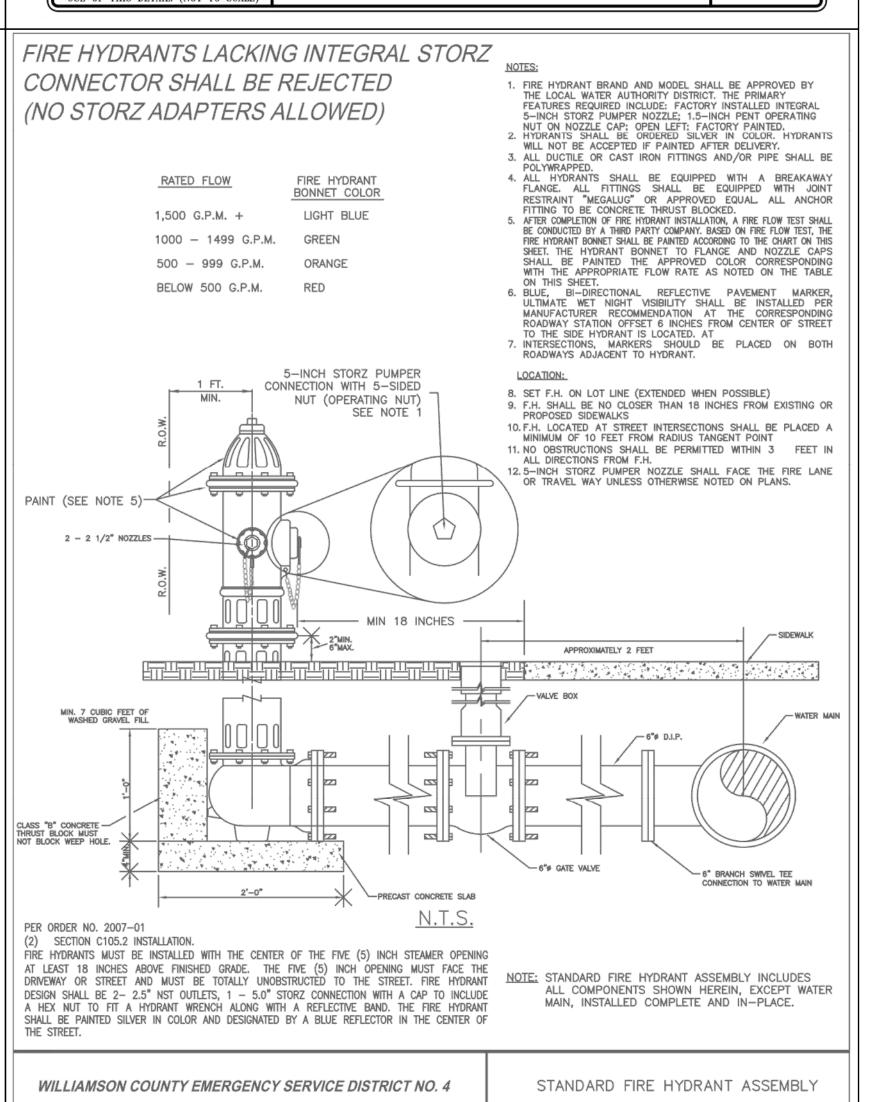
SHEET# C-7.0 of 33

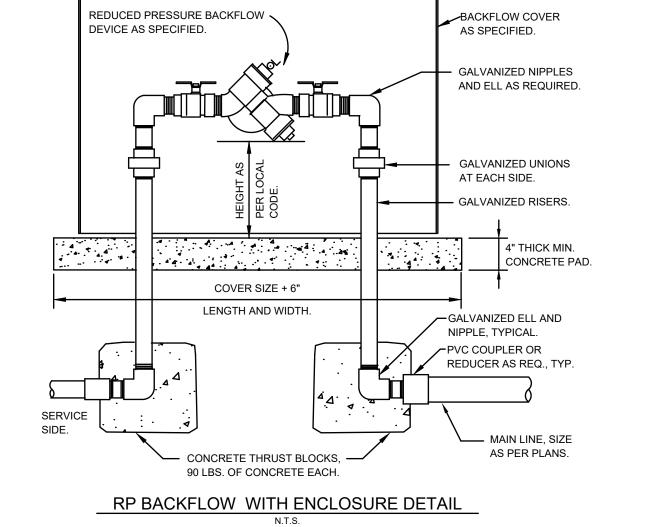


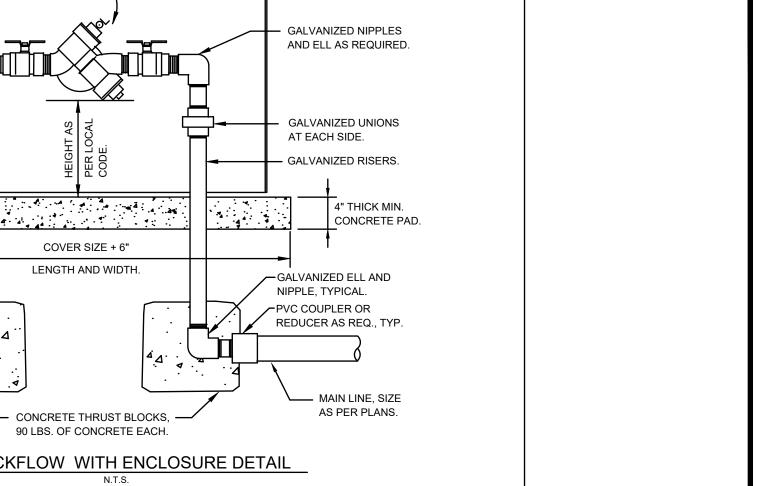


RESPONSIBILITY FOR THE APPROPRIATE









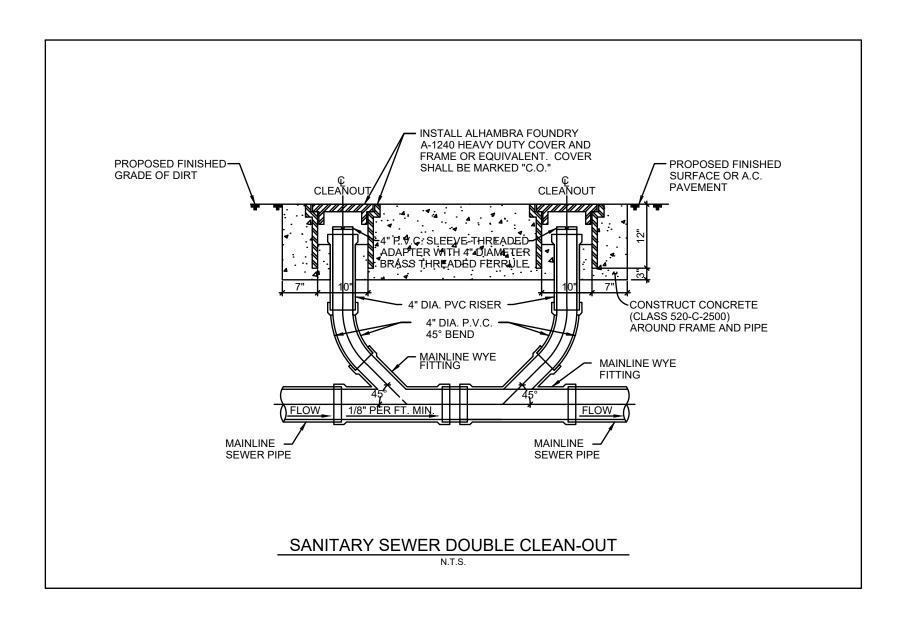
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DATE	07-24-23	09-28-23	10-06-23	11-14-23	
NO.	1	2	3	4	

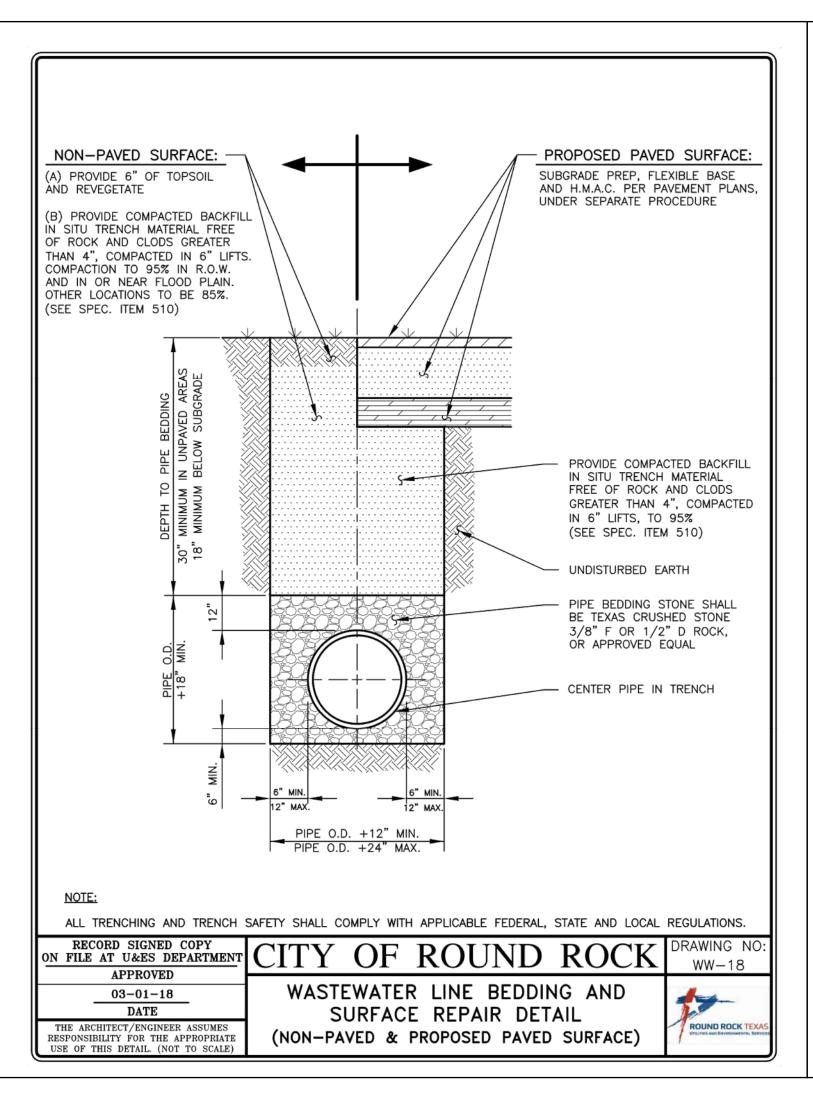


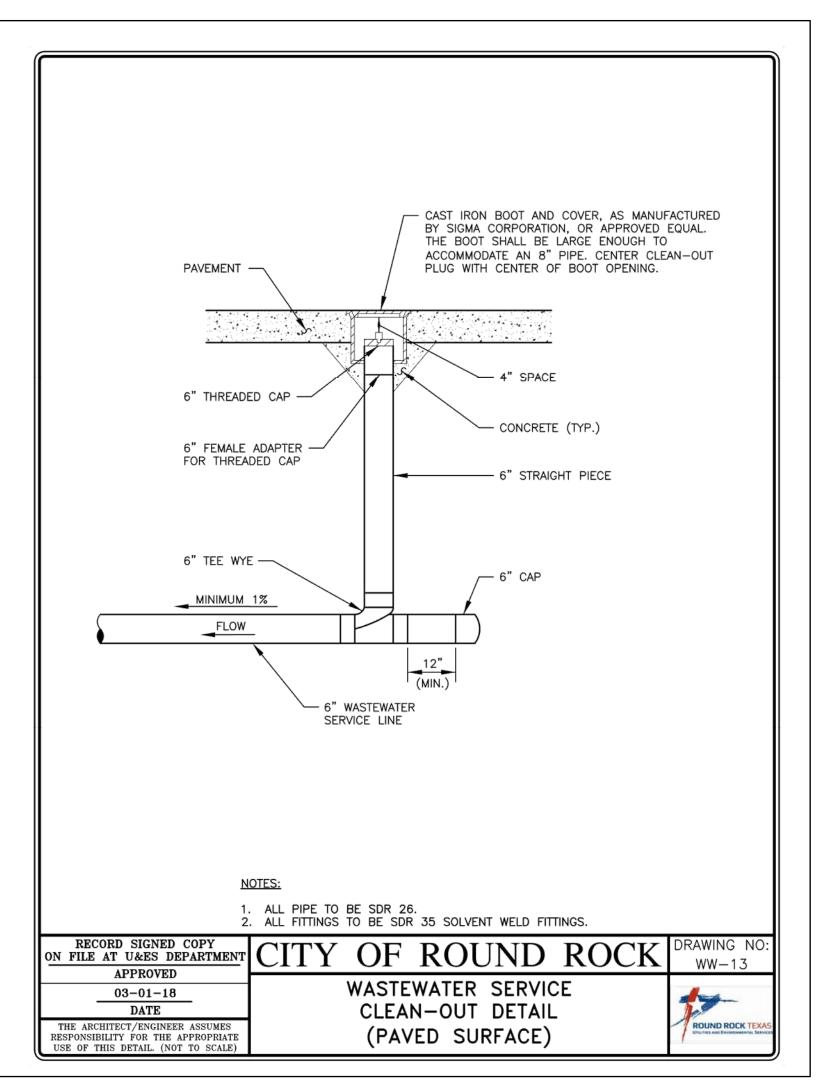
DATE PROJECT 11/14/23 | 047-23 KP JZ

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DESCRIPTION	1ST SUBMITTAL	2ND SUBMITTAL	3RD SUBMITTAL	4TH SUBMITTAL	
DATE	07-24-23	09-28-23	10-06-23	11-14-23	
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SHERWIN WILLIAMS 2360 W. STATE HIGHWAY 29

DATE PROJECT
11/14/23 047-23
P.E. DESIGN
KP JZ

SHEET # C-7.2 of 33

2018-01-18 DATE

JMC APPROVED BY:



TX PE FIRM #11525

	ВУ	KP	ΚP	KP	KP	
	DESCRIPTION	1ST SUBMITTAL	2ND SUBMITTAL	3RD SUBMITTAL	4TH SUBMITTAL	
	DATE	07-24-23	09-28-23	10-06-23	11-14-23	
	NO.	1	2	3	4	



SHERWIN WILLIAMS 12360 W. STATE HIGHWAY 29 CITY OF LIBERTY HILL WILLIAMSON COUNTY, TEXAS

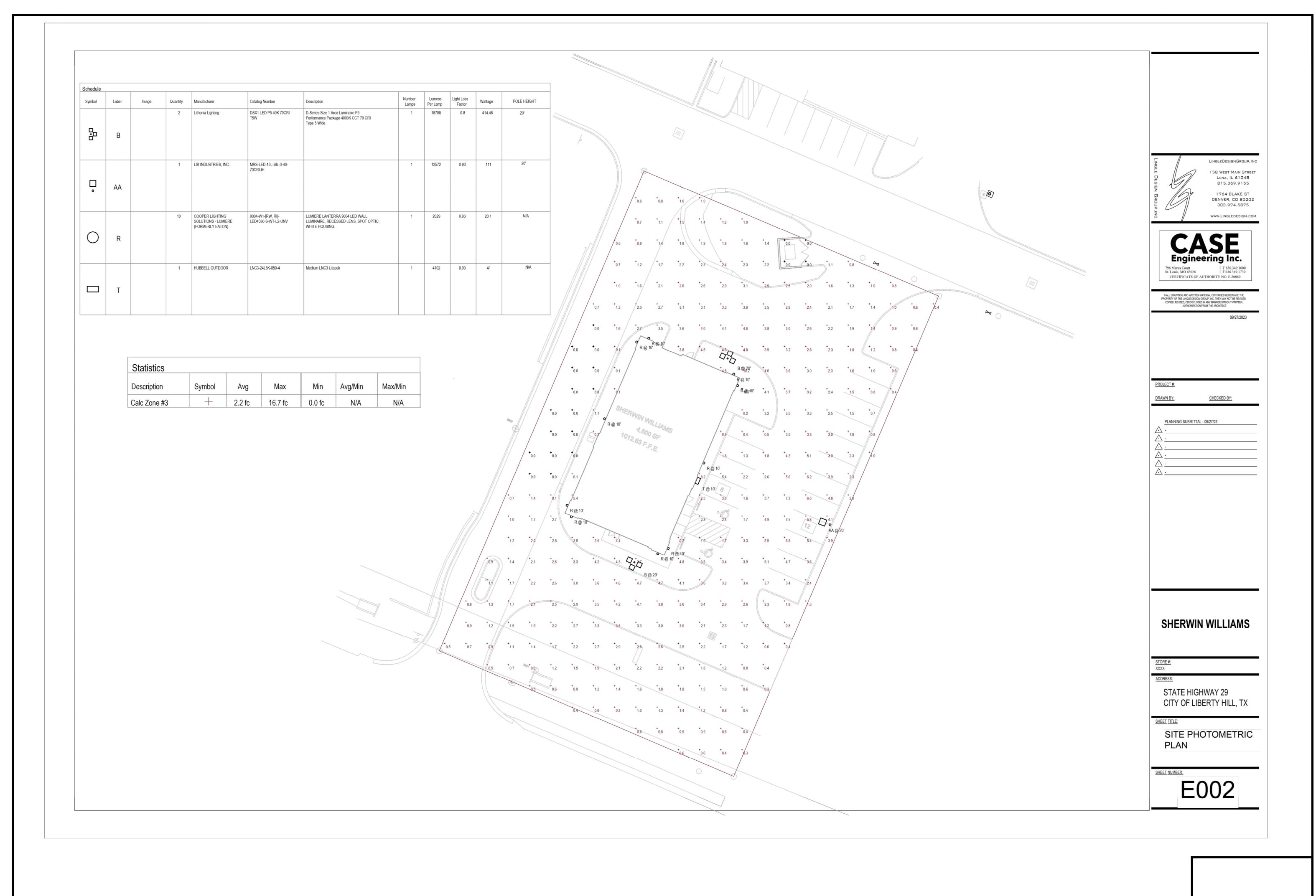
DETAILS

Sheet Number: 1 of 1

TD360

DATE PROJECT
11/14/23 047-23
P.E. DESIGN
KP JZ

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TX PE FIRM #11525

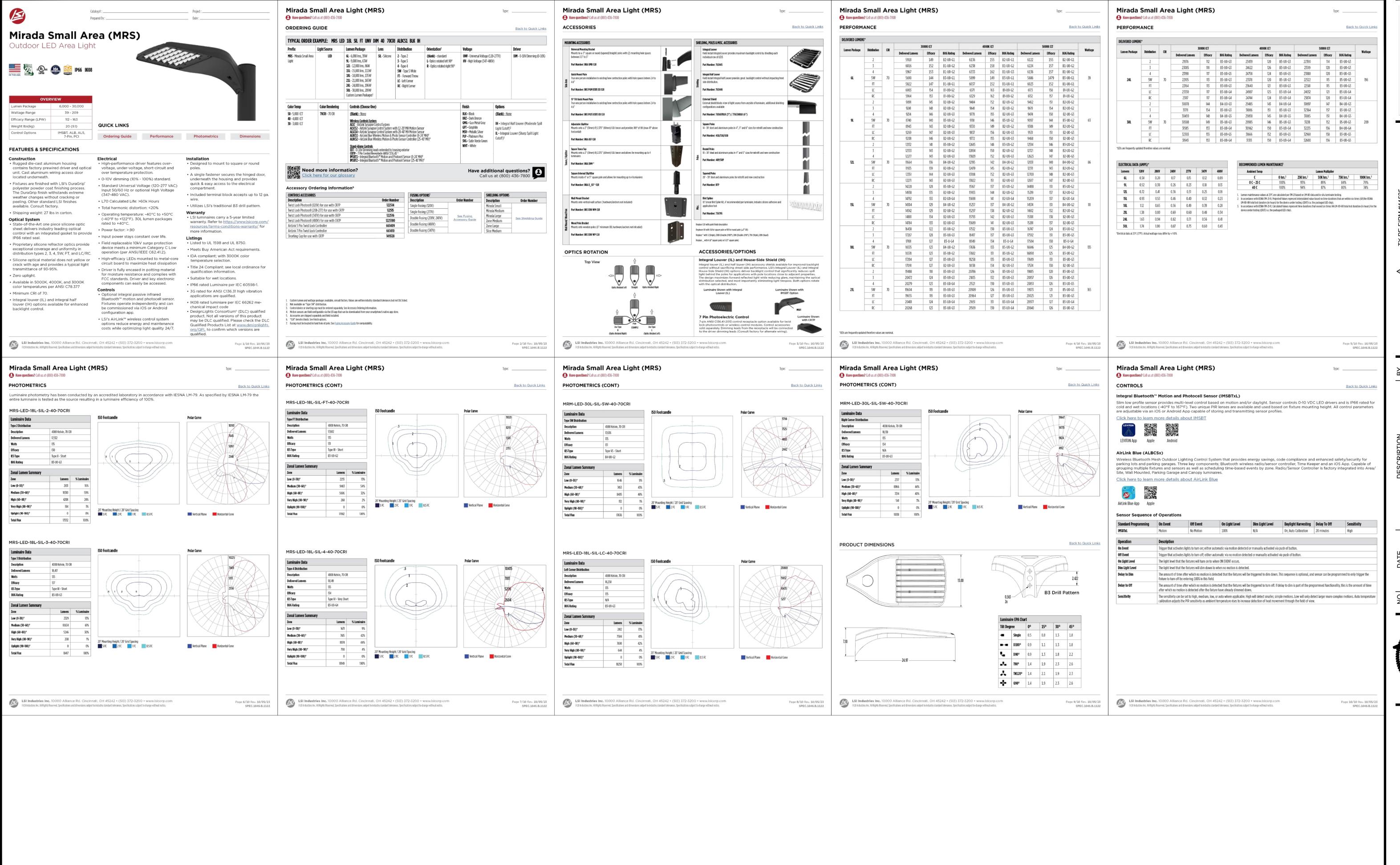
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DATE	07-24-23	09-28-23	10-06-23	11-14-23	
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SHERWIN WILLIAMS
12360 W. STATE HIGHWAY 29
CITY OF LIBERTY HILL

DATE PROJECT
11/14/23 047-23
P.E. DESIGN
KP JZ

SHEET # C-7.4 of 33



0	DATE	DESCRIPTION	ВУ
	07-24-23	1ST SUBMITTAL	KP
	09-23	2ND SUBMITTAL	КР
	10-06-23	3RD SUBMITTAL	КР
	11-14-23	4TH SUBMITTAL	КР

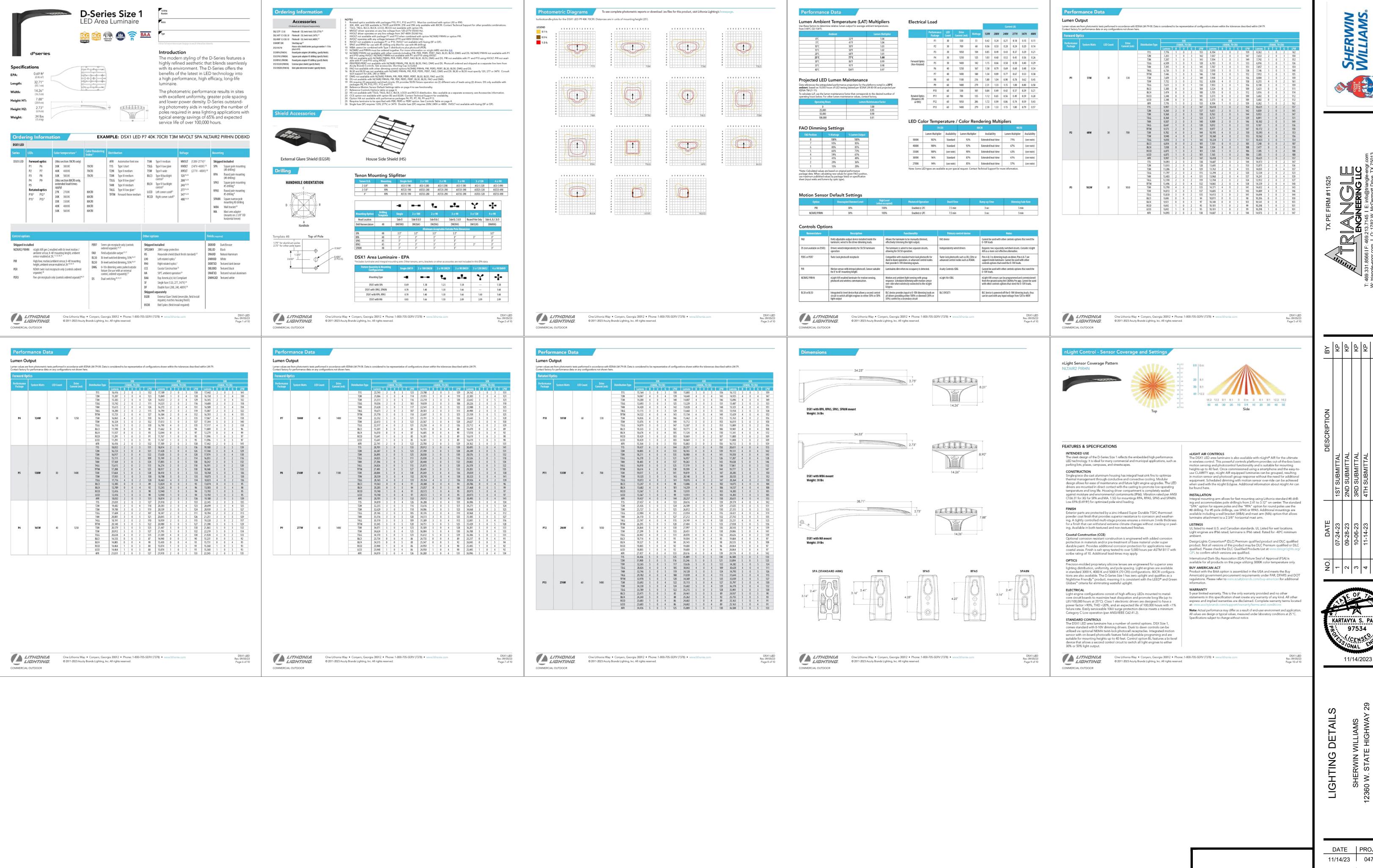
KARTAVYA S. PATEL 97534 11/14/2023

SHERWIN WILLIAMS
12360 W. STATE HIGHWAY 2
CITY OF LIBERTY HILL
WILLIAMSON COUNTY, TEXA

11/14/23 047-23

KP JZ SHEET#

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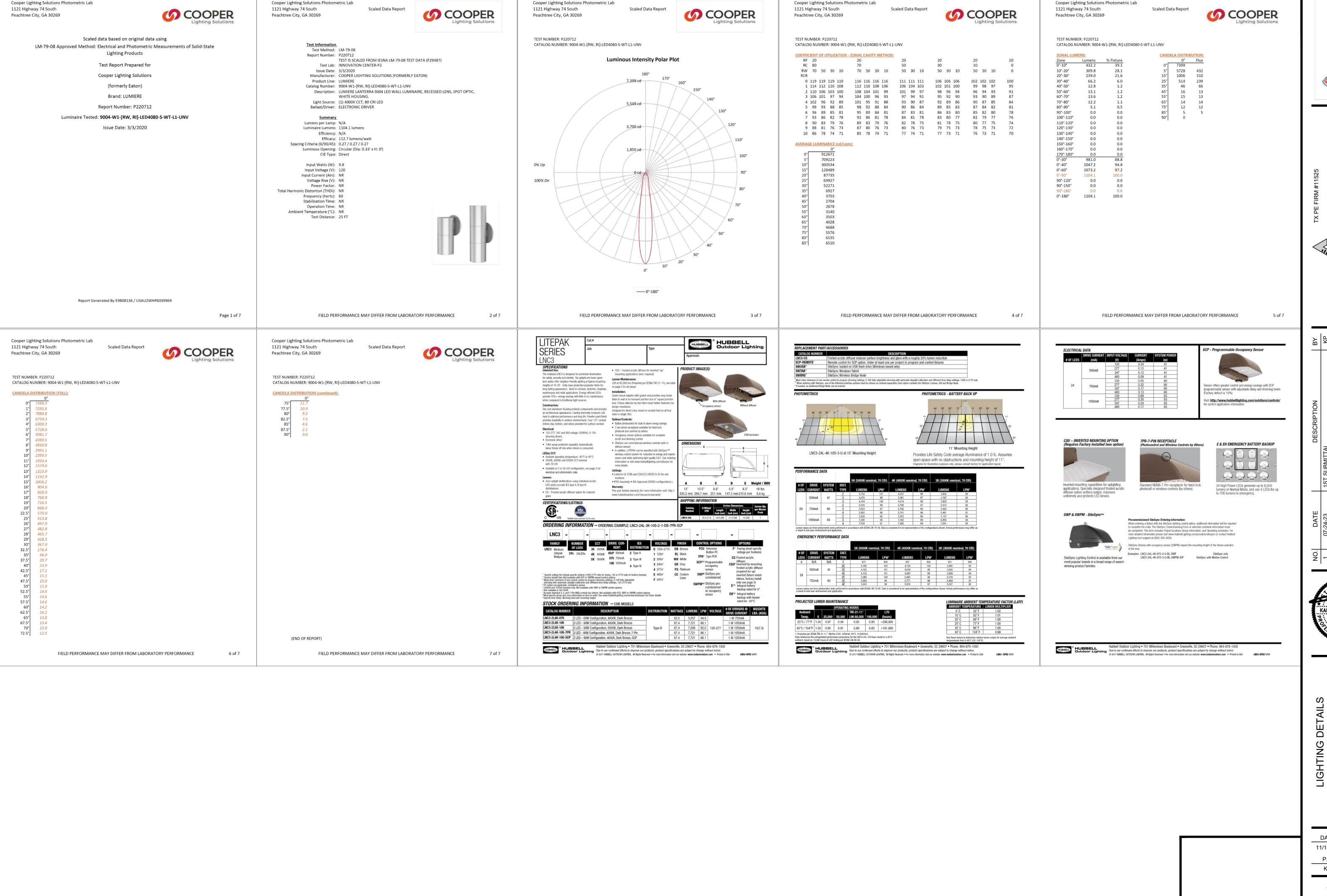


KARTAVYA S. PATEL 97534 11/14/2023

SHERWIN WILLIAMS 12360 W. STATE HIGHWAY 29 CITY OF LIBERTY HILL WILLIAMSON COUNTY, TEXAS

DATE | PROJECT 11/14/23 | 047-23 P.E. DESIGN

KP JZ SHEET# C-7.6 of 33





	ВУ	KP	KP	KP	KP	
	DESCRIPTION	1ST SUBMITTAL	2ND SUBMITTAL	3RD SUBMITTAL	4TH SUBMITTAL	
	DATE	07-24-23	09-28-23	10-06-23	11-14-23	
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SHERWIN WILLIAMS 12360 W. STATE HIGHWAY 29 CITY OF LIBERTY HILL WILLIAMSON COUNTY, TEXAS

DATE | PROJECT 11/14/23 | 047-23 P.E. | DESIGN KP JZ

SHEET# C-7.7 of 33

LOT 1D, BLOCK A

STONE WALL RANCH

SUBDIVISION SECTION 1 INST. NO. 2022014805,

O.P.R.W.C.T.

RS STONEWALL RANCH, L.L.C.

-SILT FENCE REFER TO

LOT 1B, BLOCK A

STONE WALL RANCH

SUBDIVISION SECTION 1

INST. NO. 2022014805,

O.R.R.W.C.T.

O.P.R.W.C.T.

WASHOUT AREA

REFER TO

└ INLET

PROTECTION

DETAIL SHEET

REFER TO

DETAIL SHEET

STONEWALL RANCH, L.L.C. INST. NO. 2021014426,

DETAIL SHEET

DISTURBANCE

_LIMITS OF

INST. NO. 2021014426, O.P.R.W.C.T.



EROSION CONTROL GENERAL NOTES 1. EVERY SOIL DISTURBING ACTIVITY SHALL HAVE AN ACCOMPANYING EROSION

2. THE STORM WATER POLLUTION PREVENTION PLAN (SWP3) SHALL BE READILY AVAILABLE FOR REVIEW BY FEDERAL, STATE, OR LOCAL OFFÍCIALS.

3. NO SOIL DISTURBING ACTIVITIES WILL OCCUR PRIOR TO THE SWP3 AND ASSOCIATED BEST MANAGEMENT PRACTICES (BMP) BEING FULLY IMPLEMENTED

4. THE CONTRACTOR SHALL COMPLY WITH THE CITY'S STORM WATER ORDINANCE, THE TPDES GENERAL CONSTRUCTION PERMIT TXR150000 AND ANY OTHER STATE AND/OR LOCAL REGULATIONS.

5. THE SITE SHALL BE INSPECTED BY THE CONTRACTOR OR HIS REPRESENTATIVE WEEKLY, AND AFTER ANY MAJOR STORM. ADJUSTMENTS/REPAIRS TO THE

COMPLETION OF GRADING ACTIVITIES. FINAL ACCEPTANCE OF A SITE SHALL BE

7. ADEQUATE MEASURES SHALL BE TAKEN TO PREVENT EROSION. IN THE EVENT THAT SIGNIFICANT EROSION OCCURS AS A RESULT OF CONSTRUCTION THE CONTRACTOR SHALL RESTORE THE ERODED AREA TO ORIGINAL CONDITION OR

8. THE CONCRETE WASHOUT AREA IS TO BE USED AS A VEHICLE WASH DOWN

EROSION CONTROL LEGEND 6060606



VICINITY MAP

CONTROL PLAN.

AND THEN INSPECTED.

EROSION CONTROL MEASURES SHOULD BE MADE AS NEEDED. 6. CONTRACTOR SHALL VEGETATE ALL DISTURBED AREAS IMMEDIATELY UPON

CONTINGENT UPON VEGETATION BEING ESTABLISHED IN ALL DISTURBED AREAS.

AREA FOR DEBRIS AND SOIL REMOVAL PRIOR TO EXITING THE SITE.

9. NO STEEL POSTS IN RIGHT-OF-WAY

TEMPORARY CONSTRUCTION ENTRANCE TEMPORARY CONCRETE WASHOUT AREA RIP RAP TURF REINFORCEMENT MAT TEMPORARY SILT FENCE TEMPORARY COMPOST FILTER SOCK LIMITS OF DISTURBANCE TEMPORARY INLET PROTECTION HIGH POINT —— HP—— HP—— HP—— HP—— ROCK BERM ∞

EROSION & SEDIMENT CONTROLS

SOIL STABILIZATION PRACTICES: SELECT T = TEMPORARY OR P = PERMANENT (AS APPLICABLE)

MULCHING (HAY OR STRAW) **BUFFER ZONES**

P PLANTING SEEDING

SODDING

PRESERVATION OF NATURAL RESOURCES FLEXIBLE CHANNEL LINER RIGID CHANNEL LINER

SOIL RETENTION BLANKET COMPOST MANUFACTURED TOPSOIL

EROSION CONTROL BLANKET

EROSION CONTROL SUMMARY

PROJECT DESCRIPTION: SITE GRADING, CONSTRUCTION OF PARKING LOT, UNDERGROUND AND ABOVE GROUND UTILITIES & CONSTRUCTION OF PROPOSED BUILDING.

SEQUENCE OF ACTIVITIES: THE CONTRACTOR WILL SCHEDULE THE PROJECT IN A SERIES OF PHASES. IN GENERAL, THE

SEQUENCE OF THESE PHASES WILL CONSIST OF: 1. INSTALL EROSION CONTROL BMP'S.

2. BEGIN EARTHWORK. 3. INSTALL WET AND DRY UTILITIES. 4. INSTALL STORM SEWER LINES AND INLETS. 5. BEGIN SITE GRADING.

6. INSTALL CURBS, DRIVEWAY AND PARKING LOT. 7. POUR BUILDING FOUNDATION PAD. 8. BEGIN VERTICAL BUILDING CONSTRUCTION. 9. INSTALL TREES, SHRUBS, ETC. AND RESTORE ALL

DISTURBED VEGETATION. 10. REMOVAL OF EXISTING EROSION CONTROL BMP'S & INSTALLATION OF PERMANENT EROSION

CONTROL BMP'S.

SOIL DISTURBING SOIL DISTURBING ACTIVITIES WILL INCLUDE ACTIVITIES: CLEARING & GRUBBING, GRADING, TRENCHING IN PREPARATION FOR INSTALLING UTILITIES, BUILDING PAD, PARKING LOT, EROSION & SEDIMENTATION CONTROLS AND TOPSOIL WORK

FOR FINAL PLANTING AND SEEDING. TOTAL PROJECT AREA: 0.85 ACRES TOTAL AREA DISTURBED: 0.49 ACRES

STATE HIGHWAY 29

(120' RIGHT-OF-WAY)

LOT 1C, BLOCK A

STONE WALL RANCH

SUBDIVISION SECTION 1

INST. NO. 2022014805,

O.P.R.W.C.T.RS STONEWALL RANCH, L.L.C.

INST. NO. 2021014426, O.P.R.W.C.T.

SHERWIN WILLIAMS

4,500 SF

1012.63 F.F.E.

-CONSTRUCTION

DETAIL SHEET

ENTRANCE REFER TO

₩<mark>₩</mark> N66°54'33"W 150.70

LOT 3, BLOCK A

STONE WALL RANCH

SUBDIVISION SECTION 1

CAB. Y, SLD. 341, P.R.W.C.T.

INST. NO. 2021063595 O.P.R.W.C.T.

RAJ LIBERTY HILL INVESTMENT,

KARTAVYA S. PATEL

11/14/2023

11/14/23 047-23 KP JZ

SHEET#

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SILT FENCE DETAIL

NOTES

1. SEE PLAN VIEW FOR CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRANAIGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS WITH INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINE ABOVE GROUND STORAGE SHOULD BE USED.

THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
 CWA SHALL INCLUDE FLAT SUBSURFACE PIT THAT IS AT LEAST 8' x 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR

FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.

6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND

PUMP RIGS.

8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

9. INSPECT BMPs EACH WORKDAY, AND MAINTAIN IN EFFECTIVE
OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE,
NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS
WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE

EROSION, AND PERFORM NECESSARY MAINTENANCE.

10. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

11. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE

INITIATED UPON DISCOVERY OF THE FAILURE.

12. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS
NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE
MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE

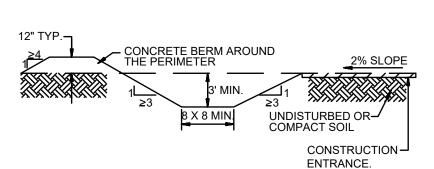
MATERIALS HAVE REACHED A DEPTH OF 2'.

13. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN SHALL BE TRANSPORTED FROM THE JOB SITE IN A CONTAINER AND DISPOSED OF PROPERLY.

14. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE

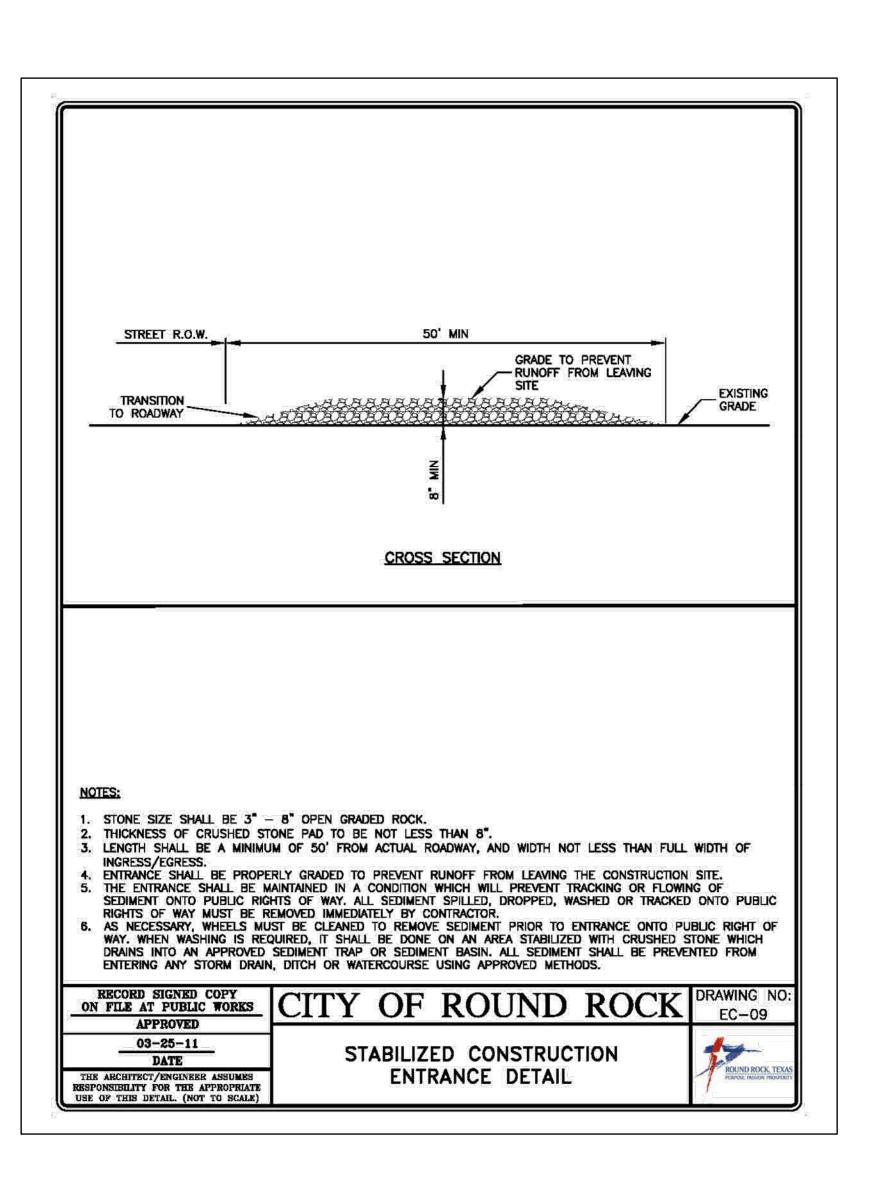
PROJECT IS PLACED.

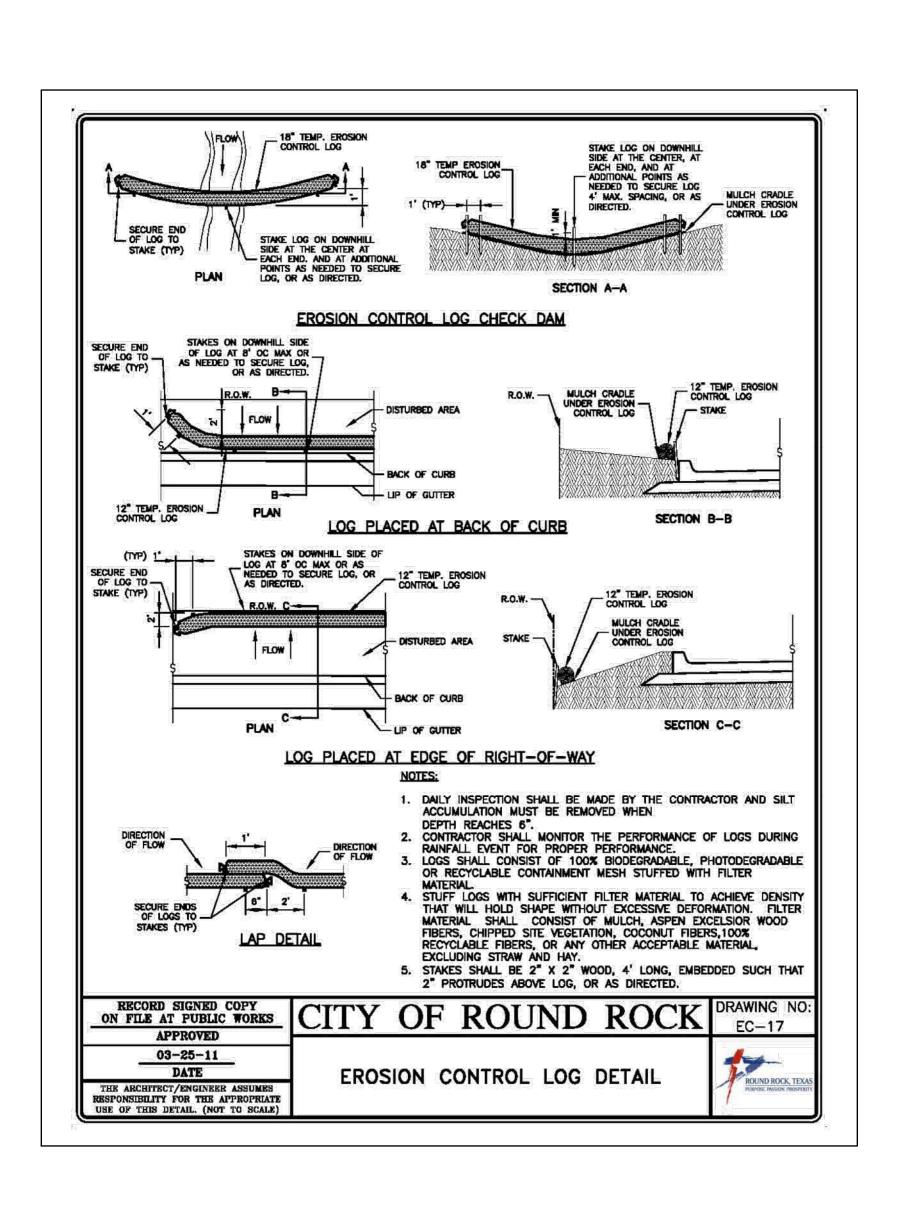
15. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BE THE LOCAL JURISDICTION.



CONCRETE WASHOUT AREA DETAIL

CONSTRUCTION – ENTRANCE.







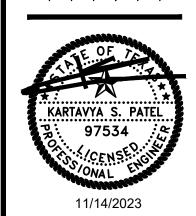
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 BY

 07-24-23
 1ST SUBMITTAL
 KP

 09-28-23
 2ND SUBMITTAL
 KP

 10-06-23
 3RD SUBMITTAL
 KP

 11-14-23
 4TH SUBMITTAL
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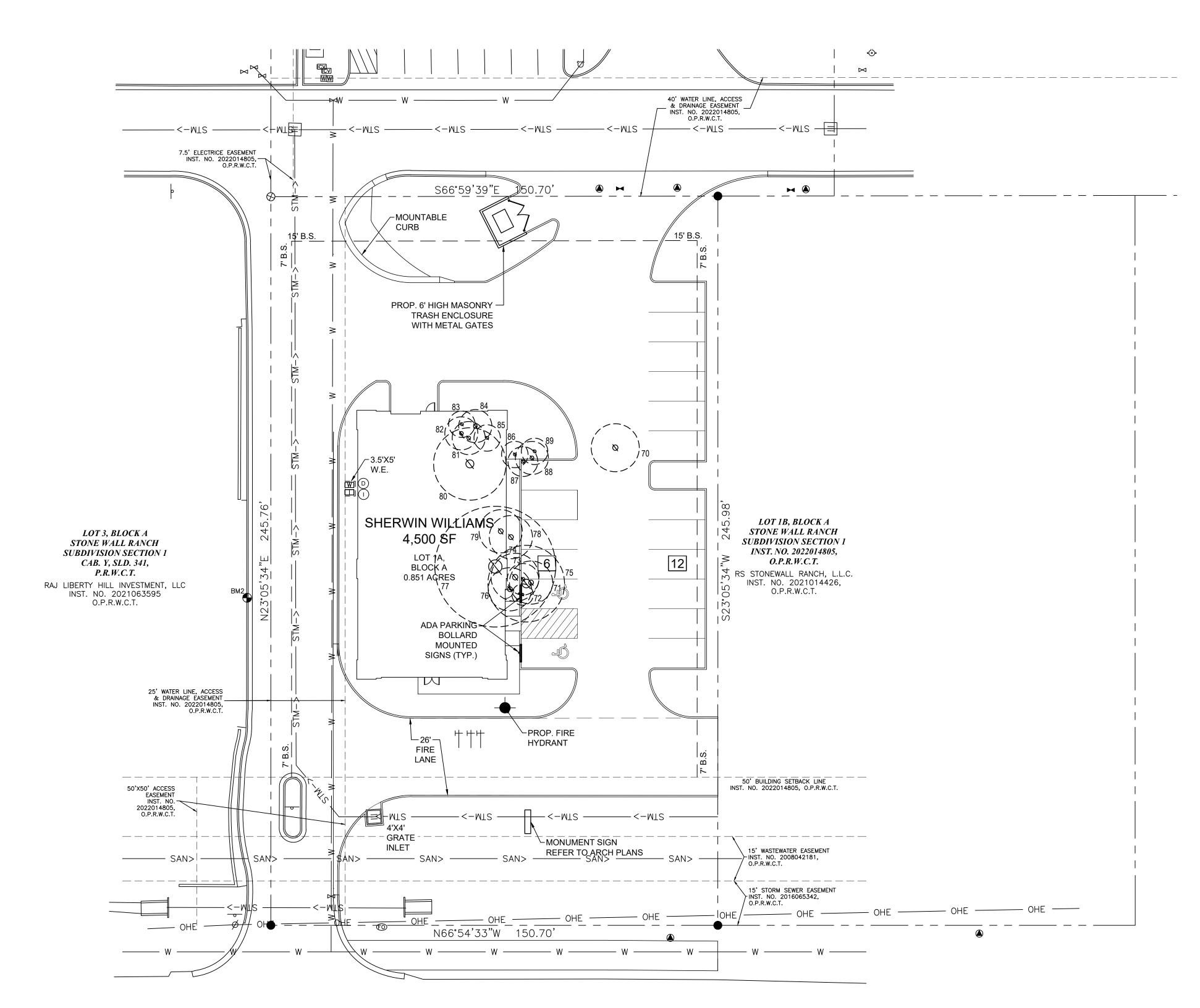
SHERWIN WILLIAMS 12360 W. STATE HIGHWAY 29

DATE | PROJECT | 11/14/23 | 047-23 | P.E. | DESIGN

SHEET#

KP JZ

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STATE HIGHWAY 29

(120' RIGHT-OF-WAY)

TREE SURVEY FIELD DATA

NO.	DIA. INCHES	SPECIES (COMMON NAME)	REMARKS	PROTECTED/ UNPROTECTED	MITIGATION/ REPLACEMENT RATE	30% EXEMPTION
70 71 72 73 74 75 76 77 78 79 80	16 14 7 10 16 26 13 42 13 12	OAK OAK HACKBERRY OAK OAK OAK OAK OAK OAK OAK OAK OAK	TO BE REMOVED	PROTECTED PROTECTED UNPROTECTED PROTECTED PROTECTED PROTECTED PROTECTED PROTECTED PROTECTED PROTECTED PROTECTED PROTECTED	16" x \$150 = \$2,400 14" x \$150 = \$2,100 X 10" x \$150 = \$1,500 16" x \$150 = \$2,400 26" x \$450 = \$11,700 13" x \$150 = \$1,950 42" x \$450 = \$18,900 13" x \$150 = \$1,950 12" x \$150 = \$1,500 24" x \$300 = \$7,200	

NO.	DIA. INCHES	SPECIES (COMMON NAME)	REMARKS	PROTECTED/ UNPROTECTED	MITIGATION/ REPLACEMENT RATE	30% EXEMPTION
81 82 83 84 85 86 87 88	11 11 9 11 9 9 10 11	OAK OAK OAK OAK OAK OAK OAK OAK HACKBERRY	TO BE REMOVED	PROTECTED PROTECTED PROTECTED PROTECTED PROTECTED PROTECTED PROTECTED UNPROTECTED PROTECTED PROTECTED	11" x \$150 = \$1,650 11" x \$150 = \$1,650 9" x \$150 = \$1,350 11" x \$150 = \$1,350 9" x \$150 = \$1,350 9" x \$150 = \$1,350 10" x \$150 = \$1,500 X 9" x \$150 = \$1,350	11" x \$150 = \$1,650 11" x \$150 = \$1,650 9" x \$150 = \$1,350 11" x \$150 = \$1,350 9" x \$150 = \$1,350 9" x \$150 = \$1,350 10" x \$150 = \$1,350 9" x \$150 = \$1,350

TREE SURVEY SUMMARY

TOTAL INCHES REMOVED: 283" REMOVED

30% OF THE PROTECTED TREES (IN) WILL BE REMOVED WITHOUT FEES OR REPLACEMENT TREES= 79 INCHES

186" = 51,600

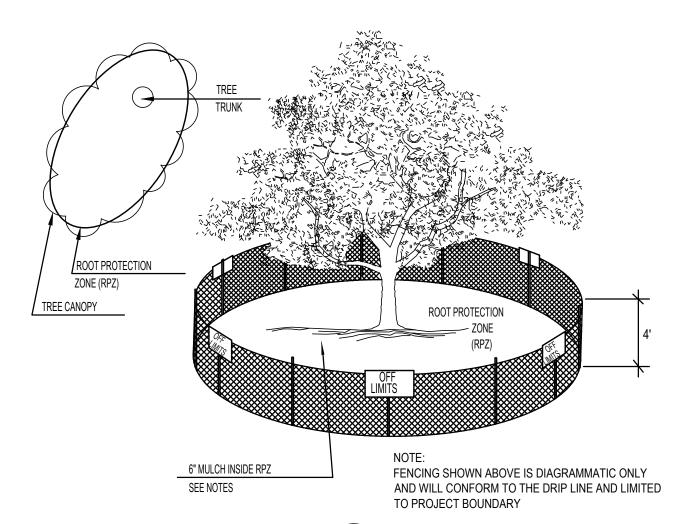
TOTAL PRICE OF MITIGATION: \$51,600 REQUIRED TO COMPLETE MITIGATION OF (186") OF PROTECTED

TOTAL INCHES TO BE MITIGATED: TOTAL INCHES PROTECTED REMOVED: 265" REMOVED

TOTAL INCHES UNPROTECTED REMOVED: 18" REMOVED

EXISTING TREE NOTES

- 1. Existing trees to remain shall be protected during construction from tree structure damage and compaction of soil under and around dripline (canopy)
- 2. If any root structure is damaged during adjacent excavation/construction, notify the Architect immediately. It is recommended that a licensed Arborist be secured for the treatment of any possible tree wounds.
- 3. No disturbance of the soil greater than 4" shall be located closer to the tree trunk than 1/2 the distance of the drip line to the tree trunk. A minimum of 75% of the drip line and root zone shall be preserved at natural grade.
- 4. Any fine grading done within the critical root zones of the protected trees must be done with light machinery such as a bobcat or light tractor. No earth moving equipment with tracks is allowed within the critical root zone of the
- 5. Material Storage: No materials intended for use in construction or waste materials accumulated due to excavation or demolition shall be placed within the limits of the dripline of any tree.
- 6. Equipment Cleaning/Liquid Disposal: No equipment may be cleaned, toxic solutions, or other liquid chemicals shall be deposited within the limits of the dripline of a tree. This would include but not be limited to paint, oil, solvents, asphalt, concrete, mortar, primers, etc.
- 7. Tree Attachments: No signs, wires or other attachments, other than those of a protective nature shall be attached to any tree.
- 8. Vehicular Traffic: No vehicular and construction equipment traffic or parking is allowed within the limits of the dripline of trees.
- 9. Boring of Utilities: May be permitted under protected trees in certain circumstances. The minimum length of the bore shall be the width of the tree's canopy and shall be a minimum depth of forty-eight (48") inches.
- 10. Trenching: Any irrigation trenching which must be done within the critical root zone of a tree shall be dug by hand and enter the area in a radial manner.
- 11. Tree Flagging: All trees to be removed from the site shall be flagged by the Contractor with bright red vinyl tape (3" width) wrapped around the main trunk at a height of four (4') feet above grade. Flagging shall be approved by Landscape Architect prior to any tree removal. Contractor shall contact Landscape Architect with 72 hour notice to schedule on-site meeting.
- 12. Protective Fencing: All trees to remain, as noted on drawings, shall have protective fencing located at the tree's dripline. The protective fencing may be comprised of snow fencing, orange vinyl construction fencing, chain link fence or other similar fencing with a four (4') foot approximate height. The protective fencing will be located as indicated on the Tree Protection Detail(s).
- 13. Bark Protection: In situations where a tree remains in the immediate area of intended construction, the tree shall be protected by enclosing the entire circumference of the tree's trunk with lumber encircled with wire or other means that does not damage the tree. Refer to Tree Protection Detail(s).
- 14. Construction Pruning: In a case where a low hanging limb is broken during the course of construction, the Contractor shall notify the Landscape Architect immediately. In no instance shall the Contractor prune any portion of the damaged tree without the prior approval by the Landscape Architect.



EXISTING TREE LEGEND

EXISTING TREE

EXISTING TREE TO BE REMOVED

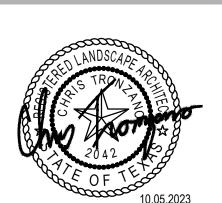
TREE PROTECTION FENCING TO REMAIN DURING CONSTRUCTION REFER TO 01/L1.00

NOT TO SCALE

TREE PROTECTION FENCE A

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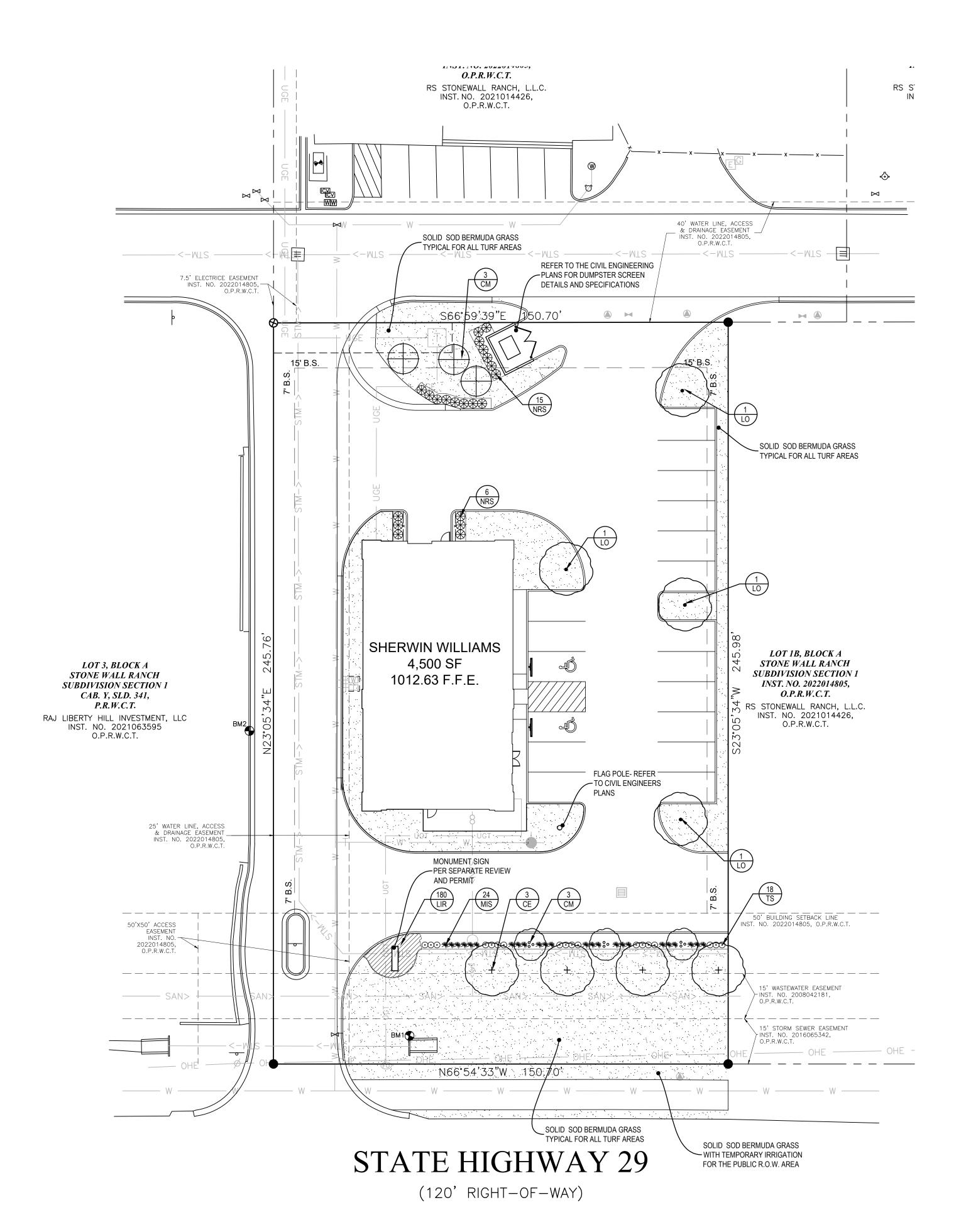
ISSUE: FOR APPROVAL 07.06.2023 **CITY COMMENTS 10.05.2023**

SHERWIN

DATE: 10.05.2023

SHEET NAME: EXISTING TREE PLAN

SHEET NUMBER:



GENERAL LAWN NOTES

- 1. FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS INDICATED ON CIVIL
- ADJUST CONTOURS TO ACHIEVE POSITIVE DRAINAGE AWAY FROM BUILDINGS. PROVIDE UNIFORM ROUNDING AT TOP AND BOTTOM OF SLOPES AND OTHER BREAKS IN GRADE. CORRECT IRREGULARITIES AND AREAS WHERE WATER MAY STAND.
- ALL LAWN AREAS TO RECEIVE SOLID SOD SHALL BE LEFT IN A MAXIMUM OF 1" BELOW FINAL FINISH GRADE. CONTRACTOR TO COORDINATE OPERATIONS WITH ON-SITE CONSTRUCTION MANAGER.
- 4. IMPORTED TOPSOIL SHALL BE NATURAL, FRIABLE SOIL FROM THE REGION, KNOWN AS BOTTOM AND SOIL, FREE FROM LUMPS, CLAY, TOXIC SUBSTANCES, ROOTS, DEBRIS, VEGETATION, STONES, CONTAINING NO SALT AND BLACK TO BROWN IN COLOR.
- ALL LAWN AREAS TO BE FINE GRADED, IRRIGATION TRENCHES COMPLETELY SETTLED, AND FINISH GRADE APPROVED BY THE OWNER'S CONSTRUCTION MANAGER OR ARCHITECT PRIOR TO INSTALLATION.
- 6. ALL ROCKS 3/4" DIAMETER AND LARGER, DIRT CLODS, STICKS, CONCRETE SPOILS, ETC. SHALL BE REMOVED PRIOR TO PLACING TOPSOIL AND ANY LAWN INSTALLATION
- 7. CONTRACTOR SHALL PROVIDE (1") ONE INCH OF IMPORTED TOPSOIL ON ALL AREAS TO RECEIVE LAWN.

SOLID SOD NOTES

- 1 FINE GRADE AREAS TO ACHIEVE FINAL CONTOURS INDICATED.
 LEAVE AREAS TO RECEIVE TOPSOIL 3" BELOW FINAL DESIRED
 GRADE IN PLANTING AREAS AND 1" BELOW FINAL GRADE IN TURF
 AREAS
- 2. ADJUST CONTOURS TO ACHIEVE POSITIVE DRAINAGE AWAY FROM BUILDINGS. PROVIDE UNIFORM ROUNDING AT TOP AND BOTTOM OF SLOPES AND OTHER BREAKS IN GRADE. CORRECT IRREGULARITIES AND AREAS WHERE WATER MAY STAND.
- 3. ALL LAWN AREAS TO RECEIVE SOLID SOD SHALL BE LEFT IN A MAXIMUM OF 1" BELOW FINAL FINISH GRADE. CONTRACTOR TO COORDINATE OPERATIONS WITH ON-SITE CONSTRUCTION MANAGER.
- 4. CONTRACTOR TO COORDINATE WITH ON-SITE CONSTRUCTION MANAGER FOR AVAILABILITY OF EXISTING TOPSOIL.
- 5. PLANT SOD BY HAND TO COVER INDICATED AREA COMPLETELY. INSURE EDGES OF SOD ARE TOUCHING. TOP DRESS JOINTS BY HAND WITH TOPSOIL TO FILL VOIDS.
- 6. ROLL GRASS AREAS TO ACHIEVE A SMOOTH, EVEN SURFACE, FREE FROM UNNATURAL UNDULATIONS.
- 7. WATER SOD THOROUGHLY AS SOD OPERATION PROGRESSES.
- 8. CONTRACTOR SHALL MAINTAIN ALL LAWN AREAS UNTIL FINAL ACCEPTANCE. THIS SHALL INCLUDE, BUT NOT LIMITED TO: MOWING, WATERING, WEEDING, CULTIVATING, CLEANING AND REPLACING DEAD OR BARE AREAS TO KEEP PLANTS IN A VIGOROUS, HEALTHY CONDITION.
- 9. CONTRACTOR SHALL GUARANTEE ESTABLISHMENT OF AN ACCEPTABLE TURF AREA AND SHALL PROVIDE REPLACEMENT FROM LOCAL SUPPLY IF NECESSARY.
- 10. IF INSTALLATION OCCURS BETWEEN SEPTEMBER 1 AND MARCH 1, ALL SOD AREAS TO BE OVER-SEEDED WITH WINTER RYEGRASS, AT A RATE OF (4) POUNDS PER ONE THOUSAND (1000) SQUARE FEET.

LANDSCAPE NOTES

- CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED SITE ELEMENTS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES.
 SURVEY DATA OF EXISTING CONDITIONS WAS SUPPLIED BY OTHERS.
- 2. CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES AND NOTIFY ARCHITECT OF ANY CONFLICTS. CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN THE VICINITY OF UNDERGROUND UTILITIES.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED LANDSCAPE AND IRRIGATION PERMITS.
- 4. CONTRACTOR TO PROVIDE A MINIMUM 2% SLOPE AWAY FROM ALL STRUCTURES.
- 5. ALL PLANTING BEDS AND LAWN AREAS TO BE SEPARATED BY STEEL EDGING. NO STEEL TO BE INSTALLED ADJACENT TO SIDEWALKS OR CURBS
- 6. ALL LANDSCAPE AREAS TO BE 100% IRRIGATED WITH AN UNDERGROUND AUTOMATIC IRRIGATION SYSTEM AND SHALL INCLUDE RAIN AND FREEZE SENSORS.
- 7. ALL LAWN AREAS TO BE SOLID SOD BERMUDAGRASS, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 8. ALL PLANTING AREAS SHALL RECEIVE FOUR INCHES OF HARDWOOD
- 9. TREE STAKES SHALL BE REMOVED AFTER ONE YEAR TO ENSURE PROPER ROOT DEVELOPMENT.

LANDSCAPE TABULATIONS

INTERIOR PARKING LOT REQUIREMENTS- 18 PARKING SPACES REQUIREMENT: (1) LARGE TREE PER 10 PARKING SPACES

REQUIRED PROVIDED
(2) LARGE TREES (4) LARGE TREES

PARKING LOT LANDSCAPE BUFFERS- 150.70

REQUIREMENT: 8' WIDE LINEAR LANDSCAPE AREA, (1) LARGE TREE PER 40 L.F., (1) SMALL TREE PER 40 L.F. AND (1) LARGE SHRUB, SMALL SHRUB OR ORNAMENTAL GRASS PER 4 L.F.

REQUIRED PROVIDED

(4) LARGE TREES (4) LARGE TREES

(3) SMALL TREES (3) SMALL TREES

(38) SHRUBS / ORNAMENTAL GRASSES

GRASSES

LANDSCAPE POINTS SYSTEM-STREET SIDE BUILDING FACADE: 53 L.F. POINTS REQUIRED: (LENGTH OF BUILDING FACADE X 4) = 212 POINTS

OPTIONS (MIN. 3):

LARGE TREES - 50 POINTS

SMALL TREES - 25 POINTS

LARGE SHRUBS - 5 POINTS

SMALL SHRUBS - 3 POINTS

GROUNDCOVER - 2 POINTS (PER SF)

PERENNIAL/ANNUALS - 0.5 POINTS (PER SF)

IRRIGATED CONTAINER PLANTERS - 5 (PER SF)

DECORATIVE PAVING - 2.5 POINTS (PER SF)

SHADE STRUCTURE - 30 POINTS

SITE FURNITURE - 30 POINTS

BACK RACK - 20 POINTS

TRASH RECEPTACLE - 20 POINTS

PROVIDED: (2) LARGE TREES - 50 POINTS (34) LARGE SHRUBS - 5 POINTS (235) GROUNDCOVER - 470 POINTS

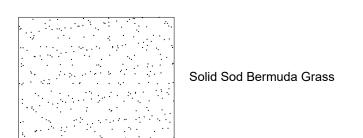
TOTAL: 525 POINTS

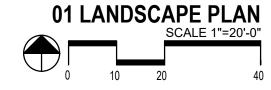
PLANT MATERIAL SCHEDULE

TREES					
TYPE	QTY	COMMON NAME	BOTANICAL NAME	SIZE	REMARKS
LO	4	Live Oak	Quercus virginiana	3" cal.	container, 12' ht., 5' spread, 6' straight clear trunk
CE	3	Cedar Elm	Ulmus crassifolia	3" cal.	container, 12' ht., 5' spread, 6' straight clear trunk
СМ	6	Crepe Mrytle	Lagerstroemia indica	2" cal.	container, 8' ht., 4' spread, multi-trunk
SHRUBS		I	I	I	I
TYPE	QTY.	COMMON NAME	BOTANICAL NAME	SIZE	REMARKS
NRS	21	Nellie R. Stevens	Ilex x 'Nellie R. Stevens'	7 gal.	container 36" ht., 24" spread
MIS	24	Adagio Maiden Grass	Miscanthus sinensis 'Agagio'	3 gal.	container full, well rooted
TS	18	Compact Texas Sage	Leucophyllum frutenscens 'Compacta'	5 gal.	container, 24" ht., 20" spread
GROUND	COVERS				
TYPE	QTY	COMMON NAME	BOTANICAL NAME	SIZE	REMARKS
LIR	180	Liriope Bermudagrass '419'	Liriope muscari Cynodon dactylon '419'	4" pots	container full, well rooted solid sod refer to notes

NOTE: Plant list is an aid to bidders only. Contractor shall verify all quantities on plan. All heights and spreads are minimums. All plant material shall meet or exceed remarks as indicated. All trees to have straight trunks and be matching within varieties.

MATERIAL LEGEND





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ALLEN, TEXAS 75013 (469) 369-4448 CHRIS@STUDIOGREENSPOT.COM

ANDSCAPE AND THE OF THE OF

STATE HIGHWAY 29

SHERWIN WILLIAN

ISSUE:

CITY COMMENTS 10.05.2023

FOR APPROVAL 07.06.2023

DATE:

10.05.2023

SHEET NAME: LANDSCAPE PLAN

SHEET NUMBER:

_.2

SECTION 02900 - LANDSCAPE

PART 1 - GENERAL

1.1 REFERENCED DOCUMENTS

Refer to bidding requirements, special provisions, and schedules for additional requirements.

1.2 DESCRIPTION OF WORK

Work included: Furnish all supervision, labor, materials, services, equipment and appliances required to complete the work covered in conjunction with the landscaping covered in these specifications and landscaping plans, including:

- Planting (trees, shrubs, and grass)
- Bed preparation and fertilization
- Notification of sources Water and Maintenance until final acceptance

1.3 REFERENCE STANDARDS

5. Guarantee

American Standard for Nursery Stock published by American Association of Nurserymen: 27 October 1980, Edition; by American National Standards Institute, Inc. (Z60.1) – plant

- American Joint Committee on Horticultural Nomenclature: 1942 Edition of Standardized

Texas Association of Nurserymen, Grades and Standards.

Hortis Third, 1976 - Cornell University 1.4 NOTIFICATION OF SOURCES AND SUBMITTALS

The Contractor shall, within ten (10) days following acceptance of bid, notify the Architect/Owner of the sources of plant materials and bed preparation required for the

- Samples: Provide representative quantities of sandy loam soil, mulch, bed mix material, gravel, and crushed stone. Samples shall be approved by Architect before use on
- Product Data: Submit complete product data and specifications on all other specified materials.
- Submit three representative samples of each variety of ornamental trees, shrubs, and groundcover plants for Architect's approval. When approved, tag, install, and maintain as representative samples for final installed plant materials.
- File Certificates of Inspection of plant material by state, county, and federal authorities with Architect, if required.
- Soil Analysis: Provide sandy loam soil analysis if requested by the Architect

PART 3 - EXECUTION

3.1 BED PREPARATION & FERTILIZATION

- Landscape Contractor to inspect all existing conditions and report any deficiencies to the
- All planting areas shall be conditioned as follows:
 - 1. Prepare new planting beds by scraping away existing grass and weeds as necessary. Till existing soil to a depth of six (6") inches prior to placing compost and fertilizer. Apply fertilizer as per manufacturers recommendations. Add six (6") inches of compost and till into a depth of six (6") inches of the topsoil. Apply organic fertilizer such as Sustane or Green Sense at the rate of twenty (20) pounds per one thousand
 - . All planting areas shall receive a two (2") inch layer of specified mulch. 3. Backfill for tree pits shall be as follows: Use existing top soil on site (use imported
 - topsoil as needed) free from large clumps, rocks, debris, caliche, subsoils, etc., placed in nine (9") inch layers and watered in thoroughly.

C. Grass Areas:

- 1. Areas to be Solid Sod Bermudagrass: Blocks of sod should be laid joint to joint. (staggered joints) after fertilizing the ground first. Roll grass areas to achieve a smooth, even surface. The joints between the blocks of sod should be filled with topsoil where they are evidently gaped open, then watered thoroughly.
- 2. Areas to be Hydromulch Common Bermudagrass: Hydromulch with bermudagrass seed at a rate of two (2) pounds per one thousand (1,000) square feet. Use a 4' x 8' batter board against the bed areas.

3.2 INSTALLATION

- Maintenance of plant materials shall begin immediately after each plant is delivered to the site and shall continue until all construction has been satisfactorily accomplished
- Plant materials shall be delivered to the site only after the beds are prepared and area ready for planting. All shipments of nursery materials shall be thoroughly protected from the drying winds during transit. All plants which cannot be planted at once, after delivery to the site, shall be well protected against the possibility of drying by wind and sun. Balls of earth of B & B plants shall be kept covered with soil or other acceptable material. All plants remain the property of the Contractor until final acceptance.
- Position the trees and shrubs in their intended location as per plan.
- Notify the Landscape Architect for inspection and approval of all positioning of plant materials
- Excavate pits with vertical sides and horizontal bottom. Tree pits shall be large enough to permit handling and planting without injury to balls of earth or roots and shall be of such depth that, when planted and settled, the crown of the plant shall bear the same relationship to the finish grade as it did to soil surface in original place of growth.

JOB CONDITIONS

- General Contractor to complete the following punch list: Prior to Landscape Contractor initiating any portion of landscape installation, General Contractor shall leave planting bed areas three (3") inches below finish grade of sidewalks, drives and curbs as shown on the drawings. All lawn areas to receive solid sod shall be left one (1") inch below the finish grade of sidewalks, drives, and curbs. All construction debris shall be removed prior to Landscape Contractor beginning any work.
- General Contractor shall provide topsoil as described in Section 02200 Earthwork.
- Storage of materials and equipment at the job site will be at the risk of the Landscape Contractor. The Owner cannot be held responsible for theft or damage.

1.6 MAINTENANCE AND GUARANTEE

A. Maintenance:

- 1. The Landscape Contractor will be held responsible for the maintenance of all work from the time of planting until final acceptance by the Owner. No trees, shrubs, groundcover or grass will be accepted unless they show a healthy growth and satisfactory foliage conditions.
- 2. Maintenance shall include watering of trees and plants, cultivation, weeding spraying, edging, pruning of trees, mowing of grass, cleaning up and all other work necessary
- 3. A written notice requesting final inspection and acceptance should be submitted to the Owner at least seven (7) days prior to completion. An on-site inspection by Owner and Landscape Contractor will be completed prior to written acceptance. 4. After final acceptance of installation, the Landscape Contractor will not be required to
- Guarantee:

do any of the above listed work.

- 1. Trees shall be guaranteed for a twelve (12) month period after acceptance. Shrubs and groundcover shall be guaranteed for twelve (12) months. The Contractor shall replace all dead materials as soon as weather permits and upon notification of the Owner. Plants, including trees, which have partially died so that shape, size, or symmetry has been damaged, shall be considered subject to replacement. In such
- cases, the opinion of the Owner shall be final. a. Plants used for replacement shall be of the same size and kind as those originally planted and shall be planted as originally specified. All work, including materials, labor and equipment used in replacements, shall carry a twelve (12) month guarantee. Any damage, including ruts in lawn or bed areas, incurred as a result of making replacements shall be immediately
- b. At the direction of the Owner, plants may be replaced at the start of the next year's planting season. In such cases, dead plants shall be removed from the premises immediately.
- c. When plant replacements are made, plants, soil mix, fertilizer and mulch are to be utilized as originally specified and reinspected for full compliance with Contract requirements. All replacements are to be included under "Work" of

Shrub and tree pits shall be no less than two (2") feet, twenty-four (24") inches, wider than the lateral dimension of earth ball and six (6") inches deeper than it's vertical dimension.

Remove and haul from site all rocks and stones over one (1") inch in diameter. Plants

Dig a wide, rough sided hole exactly the same depth as the height of the ball, especially at

the surface of the ground. The sides of the hole should be rough and jagged, never slick

Percolation Test: Fill the hole with water. If the water level does not percolate within 24

Backfill only with 5 parts existing soil or sandy loam and 1 part bed preparation. When

the hole is dug in solid rock, topsoil from the same area should not be used. Carefully

as well as all nylon, plastic string and wire mesh. Container trees will usually be pot

settle by watering to prevent air pockets. Remove the burlap from the top 1/3 of the ball,

Mulch the top of the ball. Do not plant grass all the way to the trunk of the tree. Leave the

area above the top of the ball and mulch with at least two (2") inches of specified mulch.

All plant beds and trees to be mulched with a minimum settled thickness of two (2")

Obstruction below ground: In the event that rock, or underground construction work or

section, alternate locations may be selected by the Owner. Where locations cannot be

properly set at the required grade. The work of this section shall include the removal from

changed, the obstructions shall be removed to a depth of not less than three (3') feet

below grade and no less than six (6") inches below the bottom of ball when plant is

Trees and large shrubs shall be staked as site conditions require. Position stakes to

Pruning and Mulching: Pruning shall be directed by the Architect and shall be pruned in

. Dead wood or suckers and broken badly bruised branches shall be removed. General

3. Immediately after planting operations are completed, all tree pits shall be covered with

a layer of organic material two (2") inches in depth. This limit of the organic material

1. Curbing shall be aligned as indicated on plans. Stake out limits of steel curbing and

. Stakes are to be installed on the planting bed side of the curbing, as opposed to the

accordance with standard horticultural practice following Fine Pruning, Class I pruning

tipping of the branched is not permitted. Do not cut terminal branches

the site of such rock or underground obstructions encountered at the cost of the

obstructions are encountered in any plant pit excavation work to be done under this

stand pipe per tree planting detail as approved by the Landscape Architec

bound, if so follow standard nursery practice of 'root scoring'.

Do not wrap trees.

Do not over prune.

inches over the entire bed or pit.

secure tree against seasonal prevailing winds.

standards provided by National Arborist Association

Pruning shall be done with clean, sharp tools.

obtain Owners approval prior to installation.

grass side.

Do not install steel edging along sidewalks.

All steel curbing shall be free of kinks and abrupt bends. Top of curbing shall be 3/4" maximum height above grade.

areas clean by sweeping or hosing at end of each days work.

3. Cut steel edging at 45 degree angle where edging meets sidewalk.

END OF SECTION

Cleanup: During the work, the premises shall be kept neat and orderly at all times. Storage areas for all materials shall be so organized that they, too, are neat and orderly All trash and debris shall be removed from the site as work progresses. Keep paved

Steel Curbing Installation

3.3 CLEANUP AND ACCEPTANCE

hours, the tree needs to move to another location or have drainage added. Install a PVC

should be thoroughly moist before removing containers.

- 2. The Owner agrees that for the guarantee to be effective, he will water plants at least twice a week during dry periods and cultivate beds once a month after final
- 3. The above guarantee shall not apply where plants die after acceptance because of injury from storms, hail, freeze, insects, diseases, injury by humans, machines or
- 4. Acceptance for all landscape work shall be given after final inspection by the Owner provided the job is in a completed, undamaged condition, and there is a stand of grass in all lawn areas. At this time, the Owner will assume maintenance on the accepted work.
- Repairs: Any necessary repairs under the Guarantee must be made within ten (10) days after receiving notice, weather permitting, and in the event the Landscape Contractor does not make repairs accordingly, the Owner, without further notice to Contractor, may provide materials and men to make such repairs at the expense of the Landscape Contractor.

1.7 QUALITY ASSURANCE

- General: Comply with applicable Federal, State, County and Local regulations governing landscape materials and work
- Personnel: Employ only experienced personnel who are familiar with the required work. Provide full time supervision by a qualified foreman acceptable to Landscape Architect.

Selection of Plant Material:

- 1. Make contact with suppliers immediately upon obtaining notice of contract acceptance to select and book materials. Develop a program of maintenance (pruning and fertilization) which will insure the purchased materials will meet and/or exceed project specifications.
- 2. Landscape Architect will provide a key identifying each tree location on site. Written verification will be required to document material selection, source and delivery schedules to site.
- 3. Owner and/or Architect shall inspect all plant materials when reasonable at place of growth for compliance with requirements for genus, species, cultivar/variety, size and 4. Owner and/or Architect retains the right to further inspect all plant material upon
- arrival at the site and during installation for size and condition of root balls, limbs, branching habit, insects, injuries, and latent defects 5. Owner and/or Architect may reject unsatisfactory or defective material at any time during the process of work. Remove rejected materials from the site immediately. Plants damaged in transit or at job site shall be rejected.

1.8 PRODUCT DELIVERY, STORAGE AND HANDLING

4" DIA. PERFORATED

PVC PIPE W/ CAP -

PAINTED BLACK

- 1. Balled and Burlapped (B&B) Plants: Dig and prepare shipment in a manner that will not damage roots, branches, shape, and future development.
- 2. Container Grown Plants: Deliver plants in rigid container to hold ball shape and protect root mass.

A. Delivery:

- 1. Deliver packaged materials in sealed containers showing weight, analysis and name of manufacturer. Protect materials from deterioration during delivery and while stored
- 2. Deliver only plant materials that can be planted in one day unless adequate storage
- and watering facilities are available on job site. Protect root balls by heeling in with sawdust or other approved moisture retaining
- material if not planted within 24 hours of delivery. 4. Protect plants during delivery to prevent damage to root balls or desiccation of leaves.
- Keep plants moist at all times. Cover all materials during transport. 5. Notify Architect of delivery schedule 72 hours in advance so plant material may be
- observed upon arrival at job site. 6. Remove rejected plant material immediately from site.
- 7. To avoid damage or stress, do not lift, move, adjust to plumb, or otherwise manipulate plants by trunk or stems.

PART 2 - PRODUCTS

2.1 PLANTS

— DO NOT CUT CENTRAL LEADER

2 STRANDS NO. 12 GAUGE

GALVANIZED WIRE, TWISTED

- 2" HIGH WATERING RING

(3) METAL T-POST PAINTED

GREEN TRIANGULAR SPACING.

INISH GRADE SCARIFY SIDES

ROOTBALL, DO NOT DISTURB. TOP

OF ROOTBALL TO BE SET 1" ABOVE

-NATIVE SOIL, REF. SPECIFICATIONS

NOTE: LOCATE STAKES OUTSIDE

OF TREE WELL. POSITION STAKES

TO SECURE TREE AGAINST SEASONAL

- CRUSHED ROCK

PREVAILING WINDS.

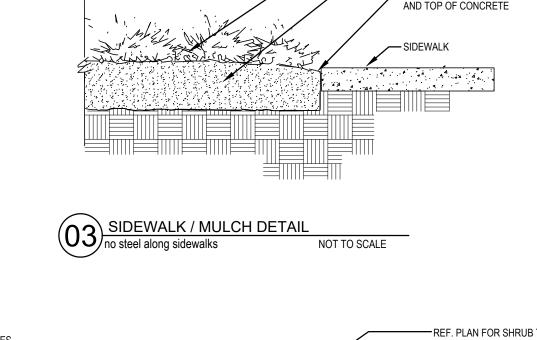
- 2" LAYER MULCH, REF. SPECIFICATIONS

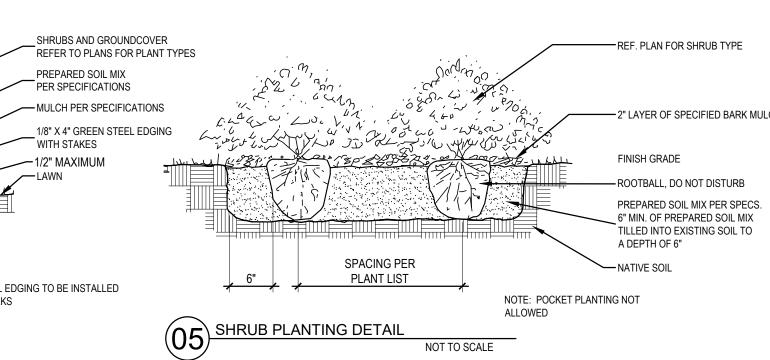
- REFERENCE PLAN FOR TREE TYPE

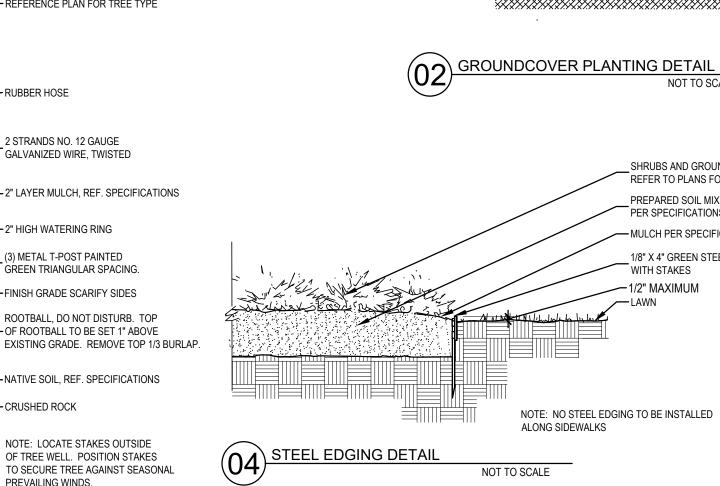
- A. General: Well-formed No. 1 grade or better nursery grown stock. Listed plant heights are from tops of root balls to nominal tops of plants. Plant spread refers to nominal outer width of the plant, not to the outer leaf tips. Plants will be individually approved by the Architect and his decision as to their acceptability shall be final.
- Quantities: The drawings and specifications are complimentary. Anything called for on one and not the other is as binding as if shown and called for on both. The plant schedule is an aid to bidders only. Confirm all quantities on plan.
- Quality and size: Plant materials shall conform to the size given on the plan, and shall be healthy, symmetrical, well-shaped, full branched, and well rooted. The plants shall be free from injurious insects, diseases, injuries to the bark or roots, broken branches, objectionable disfigurements, insect eggs and larvae and are to be of specimen quality.
- Approval: All plant materials shall be subject to the approval of the Owner. All plants which are found unsuitable in growth, or in any unhealthy, badly shaped, or undersized condition, will be rejected by the Landscape Architect, either before or after planting, and shall be removed at the expense of the Landscape Contractor and replaced with acceptable plants as specified.
- Trees shall be healthy, full-branched, well-shaped and shall meet the trunk diameter and height requirements of the plant schedule. Balls shall be firm, neat, slightly tapered, and well wrapped in burlap. Any tree loose in the ball or with broken ball at time of planting will be rejected. Balls shall be ten (10") inched in diameter for each one (1") inch of trunk diameter, Measured six (6") inched above ball.
- Nomenclature conforms to the customary nursery usage: for clarification, the term "multi-trunk" defines a plant having three (3) or more trunks of nearly equal diameter.
- Pruning: All pruning of trees and shrubs, as directed by the Landscape Architect, shall be executed by the Landscape Contractor at no additional cost to the Owner.

A = ROW SPACING B = ON CENTER SPACING SPACE PLANTS IN A TRIANGULAR PATTERNAS SHOWN, SPACED EQUALLY FROM EACHOTHER AT SPACING INDICATED ON PLANT LIST. PLANT ROW SPACING 'D' ROW SPACING 'A' PLANTS/10SF 2" MULCH DOUBLE SHREDDED HARDWOOD MULCH IN BED PRIOR TO -PLANTING GROUNDCOVER/ANNUALS. PREPARE GROUNDCOVER BED BY TILLING ENTIRE BED _____ \ AREA. PROVIDE SOIL MIX SPECIFICATIONS







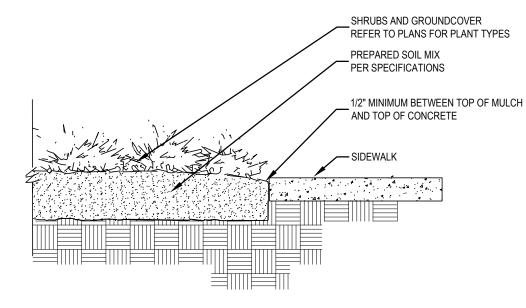


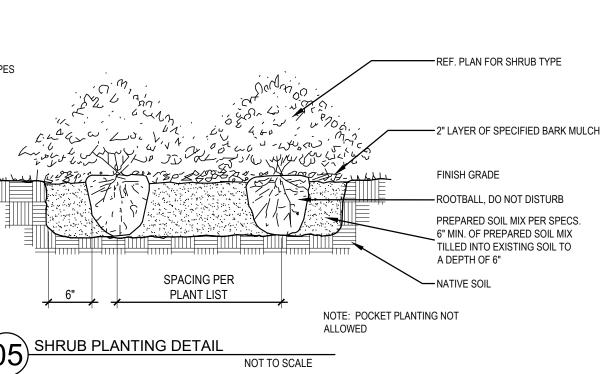
2.2 SOIL PREPARATION MATERIALS

- A. Sandy Loam:
 - 1. Friable, fertile, dark, loamy soil, free of clay lumps, subsoil, stones and other extraneous material and reasonably free of weeds and foreign grasses. Loam
 - containing Dallasgrass or Nutgrass shall be rejected. 2. Physical properties as follows:
 - Clay between 7-27 percent Silt – between 15-25 percent
 - Sand less than 52 percent 3. Organic matter shall be 3%-10% of total dry weight.
- 4. If requested, provide a certified soil analysis conducted by an approved soil testing laboratory verifying that sandy loam meets the above requirements.
- Organic Material: Compost with a mixture of 80% vegetative matter and 20% animal waste. Ingredients should be a mix of course and fine textured material.
- Premixed Bedding Soil as supplied by Vital Earth Resources, Gladewater, Texas; Professional Bedding Soil as supplied by Living Earth Technology, Dallas, Texas or Acid Gro Municipal Mix as supplied by Soil Building Systems, Dallas, Texas or approved equal.
- Sharp Sand: Sharp sand must be free of seeds, soil particles and weeds.
- Mulch: Double Shredded Hardwood Mulch, partially decomposed, dark brown. Living Earth Technologies or approved equal.
- Organic Fertilizer: Fertilaid, Sustane, or Green Sense or equal as recommended for required applications. Fertilizer shall be delivered to the site in original unopened
- containers, each bearing the manufacturer's guaranteed statement of analysis. Commercial Fertilizer: 10-20-10 or similar analysis. Nitrogen source to be a minimum
- 50% slow release organic Nitrogen (SCU or UF) with a minimum 8% sulphur and 4% iron, plus micronutrients.
- Peat: Commercial sphagnum peat moss or partially decomposed shredded pine bark or other approved organic material.

2.3 MISCELLANEOUS MATERIALS

- A. Steel Edging: Shall be Ryerson "Estate Curbing", 1/8" x 4" with stakes 4' on center.
- Staking Material for Shade Trees:
 - 1. Post: Studded T-Post, #1 Armco with anchor plate; 6'-0" length; paint green. 2. Wire: 12 gauge, single strand, galvanized wire. 3. Rubber hose: 2 ply, fiber reinforced hose, minimum ½ inch inside diameter. Color:
- C. Gravel: Washed native pea gravel, graded 1 in. to 1-1/2 in.
- Filter Fabric: Mirafi 140N by Celanese Fibers Marketing Company, available at Loftland Co., (214) 631-5250 or approved equal.





TREE PLANTING DETAIL NOT TO SCALE

2X DIAMETER

OF ROOTBALL

SHERWIN WILLIAMS

LANDSCAPE ARCHITEC STUDIO GREEN SPOT, INC

1782 W. McDERMOTT DR.

ALLEN, TEXAS 75013

(469) 369-4448

CHRIS@STUDIOGREENSPOT.COM

ISSUE: FOR APPROVAL 07.06.2023

DATE:

07.06.2023

SHEET NAME: LANDSCAPE SPECIFICATIONS

SHEET NUMBER:

(120' RIGHT-OF-WAY)

TCEQ NOTES

- All irrigation equipment to be located no closer than 4" to any pavement and / or structure
- Electrical splices at each valve and controller only.
- Irrigation in Texas is regulated by the Texas Commission on Environmental Quality (TECQ) MC-178 / P.O. BOX 13087 Austn, Texas 78711-3087 www.teceq.state.tx.us

BUBBLER PIPING CHART

1-5 BUBBLERS - 1/2" PIPE 6-10 BUBBLERS - 3/4" PIPE 11-20 BUBBLERS - 1" PIPE 21-30 BUBBLERS - 1 1/4" PIPE 31-40 BUBBLERS - 1 1/2" PIPE

IRRIGATION LEGEND

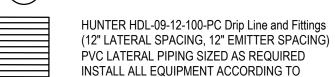
- Hunter PRS30-04 4" Pop-up Spray Head with Plastic Hunter Pro Adjustable Nozzle
- Ø Hunter PRS30-12 12" Pop-up Spray Head with Plastic Hunter Pro Adjustable Nozzle
- Hunter PGP Ultra-04 Rotors
- Hunter Multi-Stream Bubbler Nozzle on Hunter PRS30-06 Pop-up Spray Head
- Spray, Rotor & Bubbler Zones-Hunter PGV Control Valves (See Plan for Size)

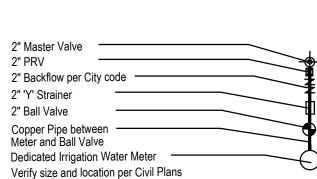
 Drip Zones-Hunter ICZ Drip Zone Control Kits (See Plan for Size)
- Hunter I-Core series Controller with Hunter Solar Sync Sensor
- WATER METER, SIZE AS INDICATED D.C.A., SIZE AS INDICATED
- to Include Wye Strainer, Isolation Valve, Master Valve, and Pressure Regulator

MANUFACTURERS SPECIFICATIONS

- PVC CLASS 200 LATERAL LINE
- PVC CLASS 200 MAINLINE
- PVC SCHEDULE 40 SLEEVING
- VALVE SIZE







SLEEVING NOTES

- 1. Contractor shall lay sleeves and conduits at twenty-four (24") inches below finish grade of the top of pavement.
- 2. Contractor shall extend sleeves one (1') foot beyond edge of all pavement.
- Contractor shall cap pipe ends using PVC caps.
- 4. All sleeves shall be Schedule 40 PVC pipe.
- 5. Contractor shall furnish Owner and Irrigation Contractor with an 'as-built' drawing showing all sleeve locations.

Water Pressure Calculations

Static Pressure (at the water meter)- 65 psi
Design Pressure for Remote Zone- 54.7 psi
Pressure Losses for Remote Zone and Meter Components- 19.7 psi

Water Meter Components- Pressure Losses

Master Valve Pressure- 2 psi Pressure Requlator- 1.2 psi Back Flow- 5 psi Wye Strainer-.75 psi

Ball Valve- .8 psi

Irrigation Zones Pressure Losses- (most remote zone)

Main Line- 6.2 psi Valve- 2 psi Later Line- 1.7 psi Sprinkler requirements-35 psi

IRRIGATION NOTES

- All sprinkler equipment numbers reference the HUNTER equipment catalog unless otherwise indicated.
- 2. LAWN SPRAY HEADS are SRS-04 installed as per detail shown.
- 3. SHRUB SPRAY HEADS are SRS-12 installed as per detail shown.
- 4. ELECTRIC CONTROL VALVES shall be HUNTER PGV-S SERIES installed per detail shown. Size valves as sown on plan. Valves shall be installed in value boxes large enough to permit manual operation, removal of solenoid and/or valve cover without any earth excavation.
- QUICK COUPLING VALVES shall be HQ-44-LRC-AW installed per detail shown. Swing joints shall be constructed using 1" Schedule 80 elbows. Contractor shall supply owner with three (3) HK couplers and three (3) #10 swivel hose ells as part of this contract.
- 6. AUTOMATIC CONTROLLER shall be installed at location shown. Power (120V) shall be located in a junction box within five (5') feet of controller location by other trades.
- 7. All 24 volt valve wiring is to be UF 14 single conductor. All wire splices are to be permanent and waterproof.
- 8. SLEEVES shall be installed by General Contractor. Sleeve material shall be Schedule 40. Size as indicated on plan.
- Ten days prior to start of construction, Landscape or Irrigation Contractor shall verify static water pressure. If static pressure is less than 65 P.S.I., do not work until notified to do so by Owner.
- All main line and lateral piping to a minimum of 12 inches of cover. All piping under paving shall have a minimum of 18" of cover.
- 11. The Irrigation Contractor shall coordinate installation of the system with the Landscape Contractor so that all plant material will be watered in accordance with the intent of the plans and specifications.
- 12. The Irrigation Contractor shall select the proper arc and radius for each nozzle to insure 100% and proper coverage of all lawn areas and plant material. All nozzles in parking lot islands and planting beds shall be low angle to minimize over spray on pavement surfaces. No water will be allowed to spray on building.

DRIP IRRIGATION NOTES

- 1. Drip Irrigation Equipment numbers reference Rainbird Equipment Catalog unless otherwise noted.
- Landscape Contractor shall be required to supply Owner's Construction Manager with all equipment specifications and maintenance guidelines.
- 3. Landscape Contractor shall be required to follow Manufacturer's Specifications and Installation guidelines for drip system.
- 4. PRESSURE COMPENSATING EMITTERS shall be: Multioutlet Rain Bug EM6-M101, Multi outlet Shrub Bug EMT6-M101 or approved equal. (1 PER EVERY 6 4" POTS)
- 5. SINGLE OUTLET PRESSURE COMPENSATING EMITTERS shall be: Rain Bug Emitters EM-Mo5, -M10, -M20 and Shrub Bug Emitters EMT-M10, -M20 or approved equal. (1 PER EACH 1 OR 5 GAL PLANT)
- 6. DRIP PRESSURE REGULATORS shall be: PSI-HLA-15, PSI-HLA-20, PSI-HMB-20, PSI-HMB-25 or approved equal.
- 7. Y-FILTERS shall be: RBY-075-200, RBY-100-200 or approved equal.
- 8. MAIN IRRIGATION TUBING shall be:RBT-150P,RBT-160V or approved equal.
- 9. EMITTER DISTRIBUTION TUBING shall be: RBT-150P, RBT-160V or approved equal.
- 10. SUBTERRANEAN EMITTER BOX shall be: SEB-6 or approved equal.
- 11. Drip system piping only occurs within shrub / groundcover beds and rock mulch areas. Piping shall be a maximum 4" depth and a minimum 2" depth.
- 12. Contractor shall verify that all drip system valves and spray system valves are sectioned separately on controller.

FOR APPROVAL 07.06.2023
CITY COMMENTS 10.05.2023

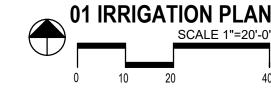
ISSUE:

DATE: 10.05.2023

SHEET NAME: IRRIGATION PLAN

SHEET NUMBER:

L.4





LANDSCAPE ARCHITECT

STUDIO GREEN SPOT, INC.
1782 W. McDERMOTT DR.
ALLEN, TEXAS 75013
(469) 369-4448
CHRIS@STUDIOGREENSPOT.COM

STATE HIGHWAY 29 TY OF LIBERTY HILL, TEXA

SHERWIN WILLIAN

1.1 SCOPE

- Provide complete sprinkler installation as detailed and specified herein, includes furnishing all labor, materials, and equipment for the proper installation. Work includes but is not limited to:
- Trenching and backfill Automatic controlled system.
- 3. Upon completion of installation, supply drawings showing details of construction including location of mainline piping, manual and automatic valves, electrical supply to valves, and specifically exact location of automatic valves.
- B. All sleeves as shown on plans will be furnished by General Contractor. Meter and power source to be provided by General Contractor.

1.2 RELATED WORK SPECIFIED ELSEWHERE

- A. See Irrigation Plans. See plans for controller, heads, and valves.
- B. Section 02900-Landscape
- C. Section 02811-Underground Irrigation Sleeve and Utility Conduits

1.3 APPLICABLE STANDARDS

A. America Standard for Testing and Materials (ASTM) – Latest edition.

D2287 Flexible Poly Vinyl Chloride (PVC) Plastic Pipe

- D2241 Poly (Vinyl Chloride) (PVC) Plastic Pipe (SDR-PR) 2. D2464 Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Thread, Schedule 80
- . D2455 Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40 4. D2467 Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Socket Type, Schedule 80. D2564 Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings
- F656 Poly Vinyl Chloride (PVC) Solvent Weld Primer 8. D2855 Making Solvent - Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and
- 1.4 MAINTENANCE AND GUARANTEE
- A. Materials and workmanship shall be fully guaranteed for one (1) year after final acceptance.
- Provide maintenance of system, including raising and lowering of heads to compensate for lawn growth, cleaning and adjustment of heads, raising and lowering of shrub heads to compensate for shrub growth, for one (1) year after completion of installation.
- C. Guarantee is limited to repair and replacement of defective materials or workmanship, including repair of backfill settlement.

SIDEWALK OR CURB

ROTARY HEAD

SWING JOINT

LATERAL PIPING

1.5 SUBMITTALS

- A. Procedure: Comply with Division I requirements.
- Product Data: Submit (5) copies of equipment manufacturer's specifications and literature for approval by Landscape Architect prior to installation.
- C. Project Record Documents
- 1. Comply with Division I requirements. 2. Locate by written dimension, routing of mainline piping, remote control valves and quick coupling valves. Locate mainlines by single dimensions from permanent site features provided they run parallel to these elements. Locate valves, intermediate
- electrical connections, and quick couplers by two dimensions from a permanent site feature at approximately 70 degrees to each other. 3. When dimensioning is complete, transpose work to mylar reproducible tracings. 4. Submit completed tracings prior to final acceptance. Mark tracings "Record Prints
- Showing Significant Changes". Date and sign drawings. 5. Provide three complete operation manuals and equipment brochures neatly bound in a hard back three-ring binder. Include product data on all installed materials. Include warranties and guarantees extended to the Owner by the manufacturer of all
- Quick Coupler Keys: Provide 3 coupler keys with boiler drains attached using brass
- Controller Keys: Provide three sets of keys to controller enclosure(s).
- Use of materials differing in quality, size, or performance from those specified will only be allowed upon written approval of the Landscape Architect. The decision will be based on comparative ability of material or article to perform fully all purposes of mechanics and general design considered to be possessed by item specified.
- G. Bidders desiring to make a substitution for specified sprinklers shall submit manufacturer's catalog sheet showing full specification of each type sprinkler proposed as a substitute, including discharge in GPM maximum allowable operating pressure at
- H. Approval of substitute sprinkler shall not relieve Irrigation Contractor of his responsibility to demonstrate that final installed sprinkler system will operate according to intent of originally designed and specified system.
- It is the responsibility of the Irrigation Contractor to demonstrate that final installed sprinkler system will operate according to intent of originally designed and specified system. If Irrigation Contractor notes any problems in head spacing or potential coverage, it is his responsibility to notify the Landscape Architect in writing, before proceeding with work. Irrigation Contractor guarantees 100% coverage of all areas to be

1.6 TESTING

FINISHED GRADE

- Perform testing required with other trades, including earthwork, paving, plumbing, electrical, etc. to avoid unnecessary cutting, patching and boring.
- Wire Connectors: Waterproof splice kit connectors. Type DBY by 3M.

SPECIFIED SPRAY NOZZLE AND BODY

CLASS 200 PVC LATERAL LINE

SXSXTPVCSCHEDULE 40 PVC

MALE ADAPTER (MIPT X S)

(LENGTH AS REQUIRED)

SCHEDULE 40 PVC STREET ELL

2.6 SCHEDULE 80 PVC NIPPLES

- A. Composed of Standard Schedule 40 PVC Fittings and PVC meeting noted standards. No clamps or wires may be used. Nipples for heads and shrub risers to be nominal one-half inch diameter by eight inches long, where applicable.
- B. Polyethylene nipples six (6") inches long to be used on all pop-up spray heads. such as Permatex No. 2 on threaded PVC adapters into which pipe may be welded.

2.7 MATERIALS - See Irrigation Plan

- A. Sprinkler heads in lawn area as specified on plan.
- PVC Pipe: Class 200, SPR 21 Copper Tubing (City Connection): Type "M"
- 24V Wire: Size 14, Type U.F. C. Electric valves to be all plastic construction as indicated on plans.
- D. Refer to drawing for backflow prevention requirements and flow valve.

PART 3 - EXECUTION

3.1 INSTALLATION - GENERAL

- Staking: Before installation is started, place a stake where each sprinkler is to be located, in accordance with drawing. Staking shall be approved by Landscape Architect before proceeding.
- Excavations: Excavations are unclassified and include earth, loose rock, rock or any combination thereof, in wet or dry state. Backfill trenches with material that is suitable for compaction and contains no lumps, clods rock, debris, etc. Special backfill specifications, if furnished take preference over this general specification.
- Backfill: Flood or hand-tamp to prevent after settling. Hand rake trenches and adjoining area to leave grade in as good or better condition than before installation.
- Piping Layout: Piping layout is diagrammatic. Route piping around trees and shrubs in such a manner as to avoid damage to plantings. Do not dig within ball of newly planted

3.2 PIPE INSTALLATION

- Sprinkler Mains: Install a four (4") inch minimum trench with a minimum of eighteen (18") inches of cover
- Lateral Piping: Install a four (4") inch wide minimum trench deep enough to allow for installation of sprinkler heads and valves, but in no case, with less than twelve (12*) of
- Trenching: Remove lumber, rubbish, and large rocks from trenches. Provide firm, uniform bearing for entire length of each pipe line to prevent uneven settlement. Wedging or blocking of pipe will not be permitted. Remove foreign matter or dirt from inside of pipe before welding, and keep piping clean by approved means during and after laying of pipe.

3.3 PVC PIPE AND FITTING ASSEMBLY

- Solvent: Use only solvent recommended by manufacturer to make solvent-welded joints. Thoroughly clean pipe and fittings of dirt, dust and moisture before applying solvent.
- PVC to metal connection: Work metal connections first. Use a non-hardening pipe dope

3.4 COPPER TUBING AND FITTING ASSEMBLY

Clean pipe and fitting thoroughly and lightly sand pipe connections to remove residue from pipe. Attach fittings to tubing in an approved manner using 50-50 soft solid core solder.

3.5 POP-UP SPRAY HEADS

Supply pop-up spray heads in accordance with materials list and plan. Attach sprinkler to lateral piping with a semi-flexible polyethylene nipple not less than three (3") inches or more than six (6") inches long.

3.6 VALVES

Supply valves in accordance with materials list and sized according to drawings. Install valves in a level position in accordance with Manufacturer's Specifications. See plan for typical installation of electric valve, valve box.

- Supply wire from the automatic sprinkler controls to the valves. No conduit will be required for U.F. wire unless otherwise noted on the plan. Wire shall be tucked under the
- B. A separate wire is required from the control to each electric valve. A common neutral wire is also required from each control to each of the valves served by each particular
- Bundle multiple wires and tape them together at ten (10') foot intervals. Install ten (10") inch expansion coil at not more than one hundred (100') foot intervals. Make splices

3.8 AUTOMATIC SPRINKLER CONTROLS

Supply in accordance with Irrigation Plan. Install according to manufacturer's recommendations.

3.9 TESTING

A. Sprinkler Mains: Test sprinkler main only for a period of twelve (12) to fourteen (14) hours under normal pressure. If leaks occur, replace joint or joints and repeat test.

FINISH GRADE

B. Complete tests prior to backfilling. Sufficient backfill material may be placed in trenches between fittings to insure stability of line under pressure. In each case, leave fittings and couplings open to visual inspection for full period of test.

3.10 FINAL ADJUSTMENT

CONTROLLER AS SPECIFIED MOUNT @ 4'-4" HT.=/-- KEYED LOCK OR PADLOCK

STEEL MALE CONNECTOR

— 1 1/4" RIGID STEEL CONDUIT

— STEEL COUPLING (AS REQUIRED)

HARD WIRE 117 VOLT A.C. POWER TO

RIGID STEEL CONDUIT (SAME SIZE AS

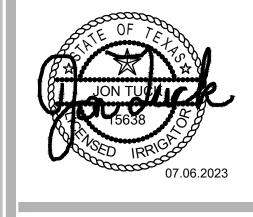
- CONDUIT BELOW GRADE) CONDUIT SHALL

TO FLUSH OUTLET BEHIND CONTROLLER

STEEL SPLICE BOX WITH FRONT ACCESS PANEL

After installation has been completed, make final adjustment of sprinkler system in preparation for Landscape Architect's final inspection. Completely flush system to remove debris from lines and turning on system. Check sprinklers for proper operation and proper alignment for direction of flow. Check each section of spray heads for operating pressure and balance to other sections by use of flow adjustment and top of each valve. Check nozzling for proper coverage. Prevailing wind conditions may indicate that arch of angle of spray should be other than shown on drawings. In this case, change nozzles to provide correct coverage.

END OF SECTION



LANDSCAPE ARCHITECT

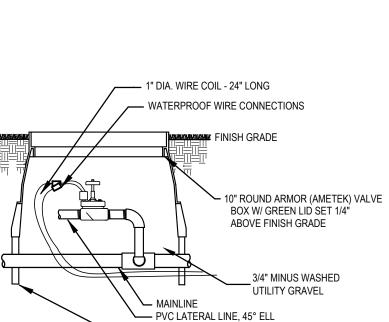
STUDIO GREEN SPOT, INC

1782 W. McDERMOTT DR.

ALLEN, TEXAS 75013

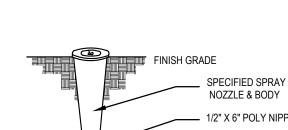
(469) 369-4448

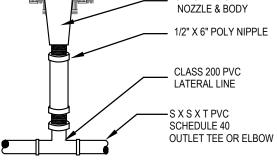
CHRIS@STUDIOGREENSPOT.COM

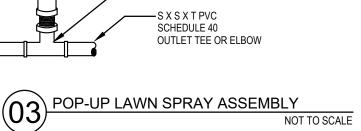


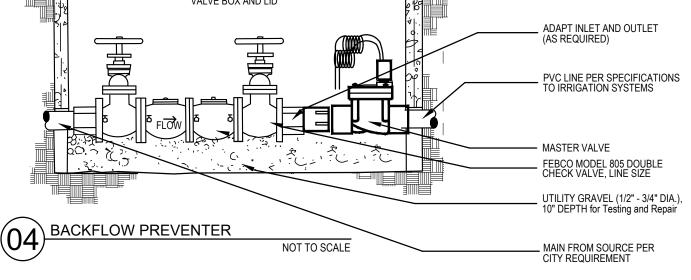
— 6" VALVE BOX EXTENSIONS

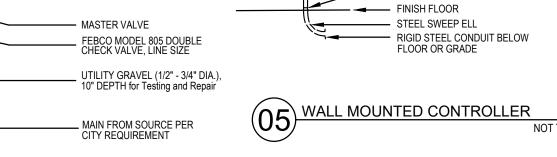




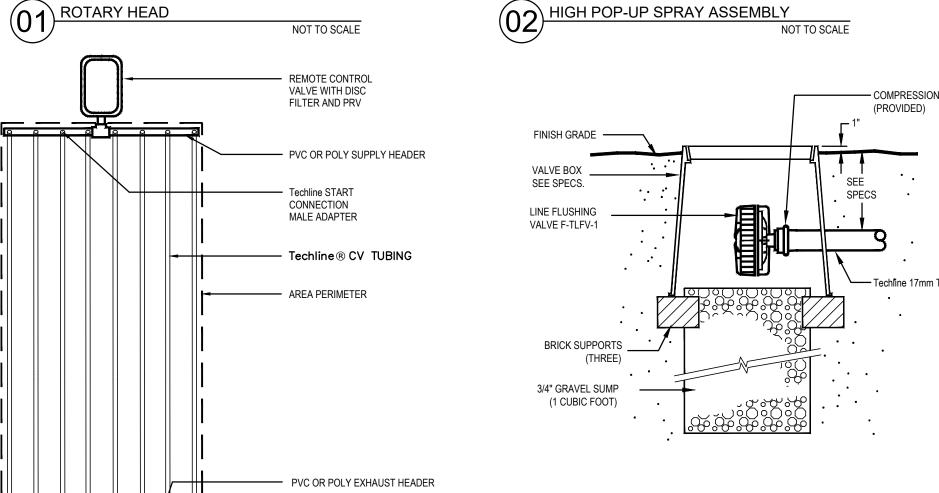












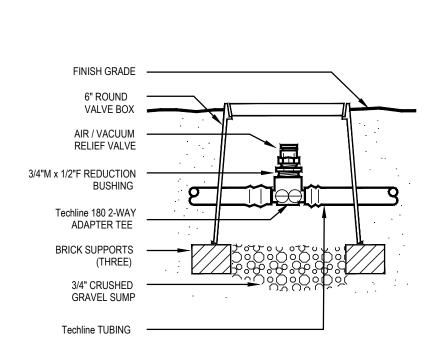
PERIMETER LATERALS

MANUAL LINE FLUSHING VALVE

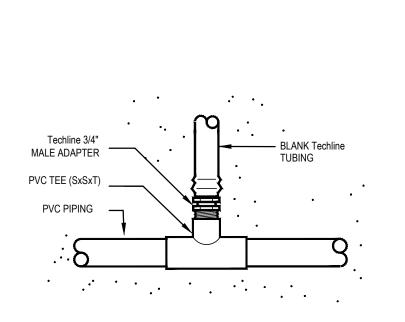
2" TO 4" FROM EDGE

NOT TO SCALE

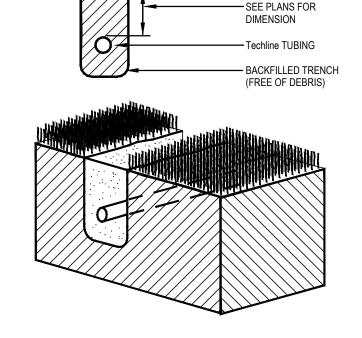






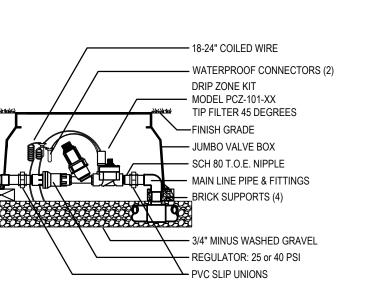




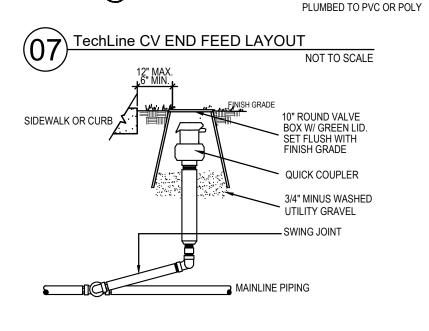


FINISH GRADE

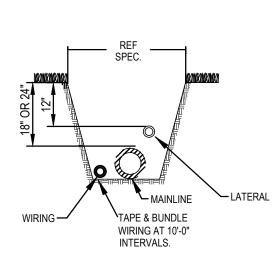


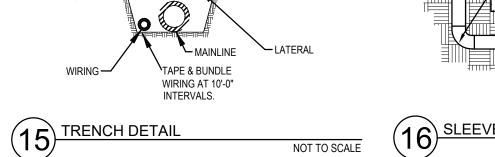


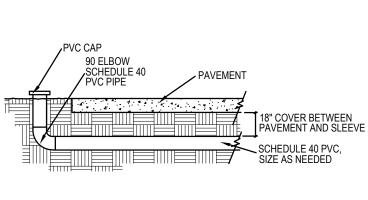
(13) DRIP CONTROL VALVE NOT TO SCALE



(14) QUICK COUPLER









ISSUE: FOR APPROVAL 07.06.2023

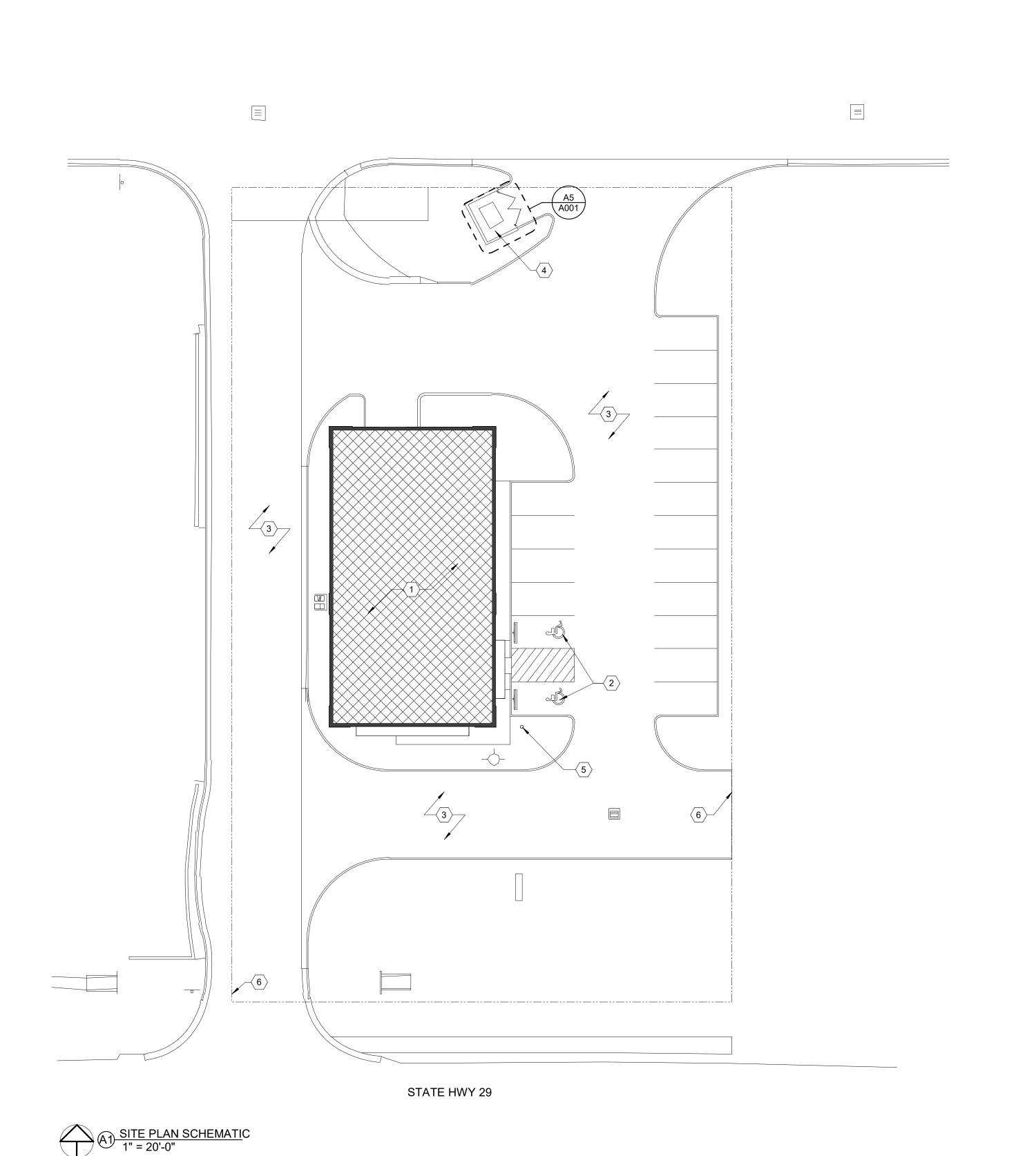
SHERWIN WILLIAMS

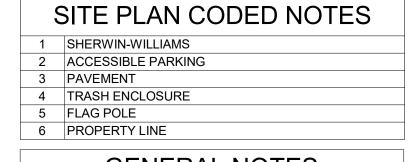
DATE:

07.06.2023

SHEET NAME: IRRIGATION SPECIFICATIONS

SHEET NUMBER:





GENERAL NOTES

- WELD HINGE STRAP TO 1-1/2" TUBE

– 1-1/2" RIB X 18 GA.

STEEL DECKING -

FRAME W/ SELF

- 1-1/2" RIB X 18 GA STEEL

DECKING - ATTACH TO

TAPPING SCREWS - PRIME

GATE FRAME W/ SELF-

& PAINT P-1

M-1

P-1

SIDE ELEVATION

<u>PLAN</u>

SCREW ATTACH TO FACE OF GATE

TAPPING SCREWS -PRIME & PAINT

FRAME

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

UTILITIES SCHEDULING & CONNECTIONS.

- 3-1/2" STEEL PIPE HINGE POST

-4" STEEL PIPE SWIVEL

- 1/4" STEEL BAR -

WELD TO GATE

STATIONARY

- 4" DIAM. STEEL PIPE

___ 1-1/2" STEEL TUBE FRAME -

— STEEL CANE BOLT AT EACH GATE LEAF

& PAINT P-1

7 3/4"—

MITRED & WELDED - PRIME

FRAME

ELEVATION

11' - 11 3/4"

FRONT ELEVATION

4' - 8"

TYP.

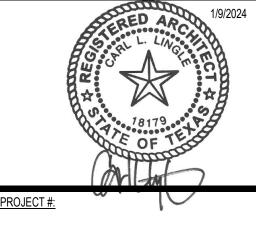
© HINGE DETAIL
1 1/2" = 1'-0"

P-1



158 WEST MAIN STREET LENA, IL 61048 815.369.9155 1764 BLAKE ST DENVER, CO 80202 303.974.5875 WWW.LINGLEDESIGN.COM

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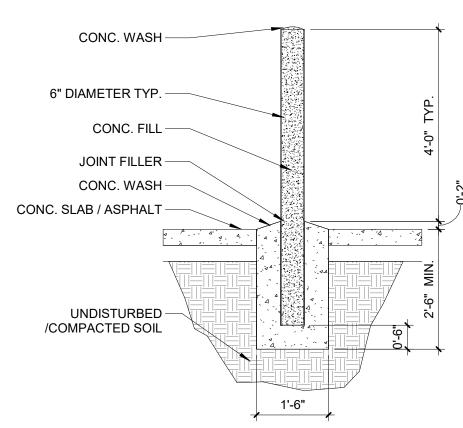
PERMIT SET - 11/15/2023 FIRE & DEVELOPER COMMENTS - 1/9/2024

- REVOLVING TRUCK — HALYARD - SWIVEL SNAP HOOK — COUNTERWEIGHT BEADED RETAINER RING ALUMINUM FLAG POLE LOCKABLE CLEAT BOX — ALUMINUM COLLAR — CONCRETE OR GROUT CAP CENTERING WEDGES - STEEL GROUND SLEEVE CENTERING WEDGES - CONCRETE PIER - #4 BAR WELDED TO GROUND SLEEVE AND EMBEDDED MIN 12" INTO EARTH

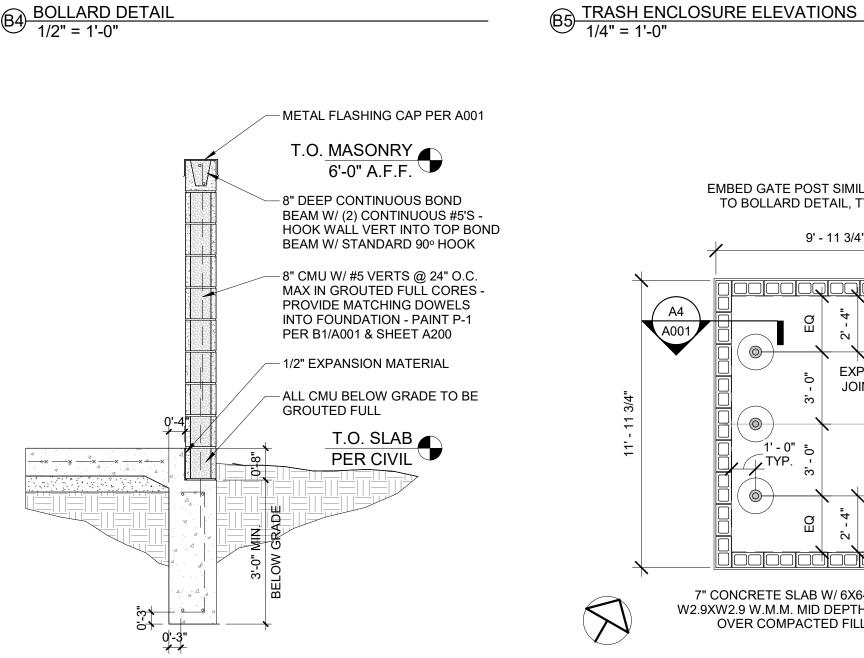
FLAG POLE

1/4" = 1'-0"

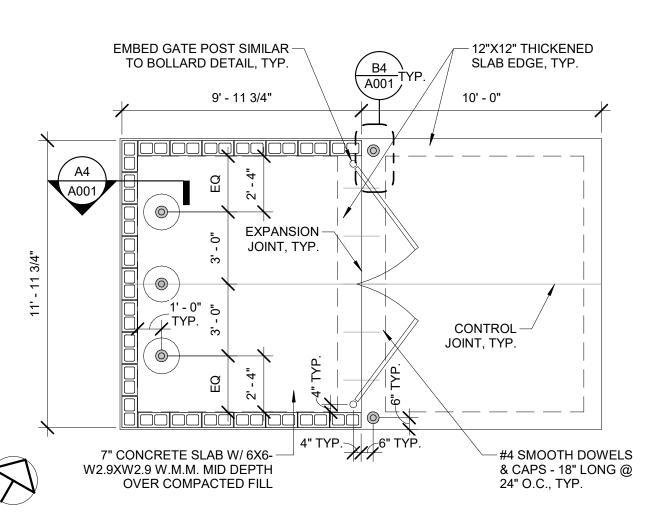
NOTE: SEE PLAN FOR LOCATION



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



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



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



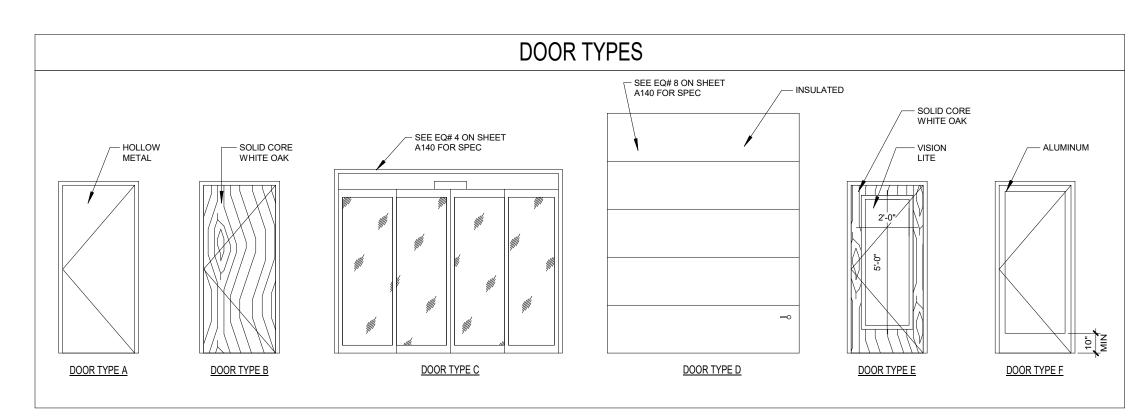
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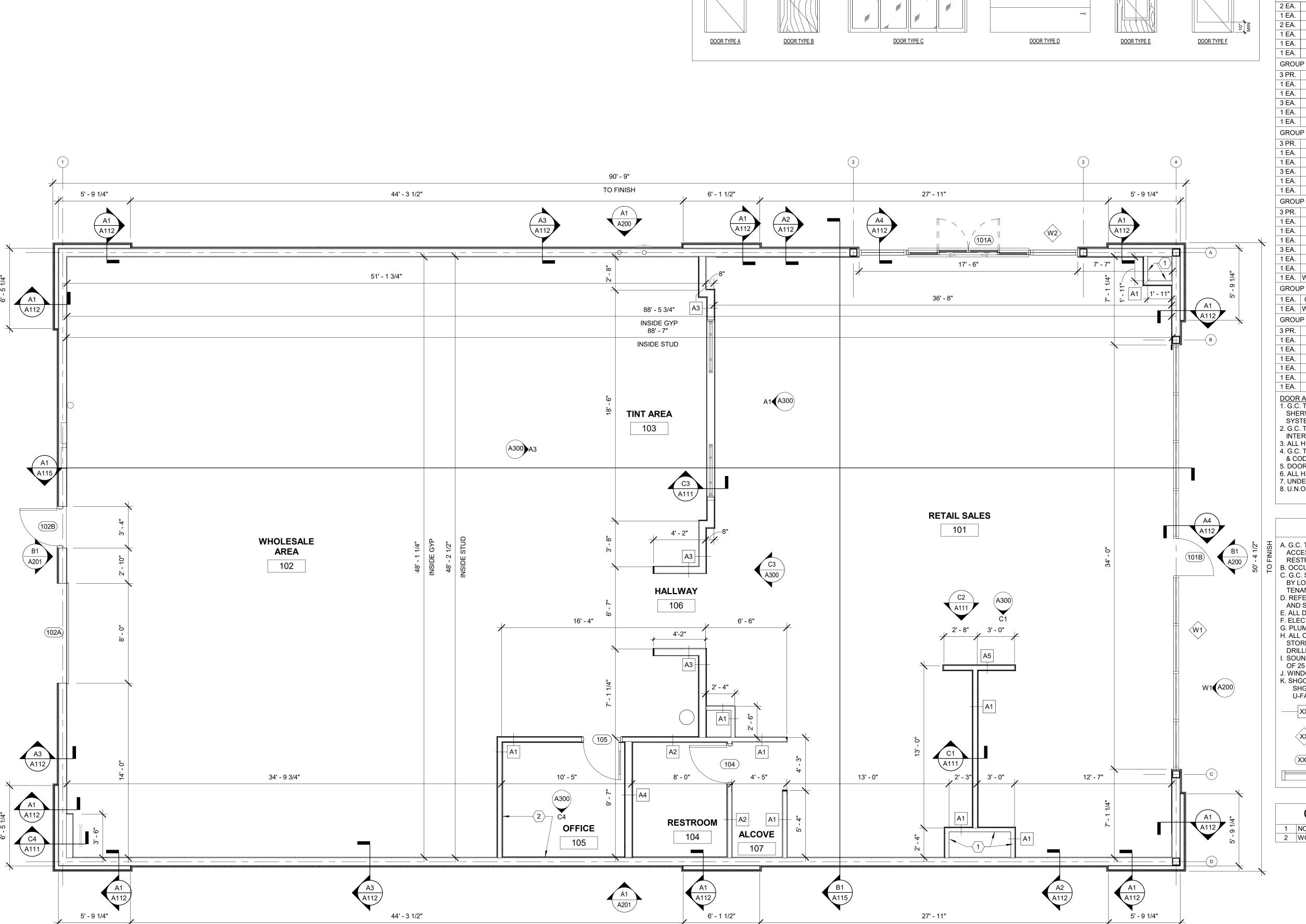
12360 W. SH 29, LIBERTY HILL, TX, 78642

SHEET TITLE:

Architectural Site Plan

SHEET NUMBER:





Door Schedule							
Mark	Width	Height	Thickness	DOOR TYPE	DOOR MATERIAL	FRAME MATERIAL	HARDWARE GROUP
101A	10' - 0"	7' - 8"	0' - 4 1/2"	С	ALUM	ALUM	1
101B	3' - 0"	7' - 0"	0' - 1 3/4"	F	ALUM	ALUM	6
102A	8' - 0"	10' - 0"	0' - 1 1/2"	D	STEEL		5
102B	3' - 0"	7' - 0"	0' - 1 3/4"	Α	HM-STL	HM-STL	4
104	3' - 0"	7' - 0"	0' - 1 3/4"	В	WOOD	HM-STL	2
105	3' - 0"	7' - 0"	0' - 1 3/4"	Е	WOOD	HM-STL	3

105	3' - 0"	7' - 0"	0' - 1 3/4"	Е	WOOD	HM-STL	3			
	HA	ARD	WARE	E SC	HEDULE	• •				
GROU	GROUP 1 - SLIDING DOORS									
2 EA.	EXIT DEVICE	MOTI	ON DETECT	TION UN	IIT					
1 EA.	LOCK	MANU	JFACTURE	RLOCK	SYSTEM					
2 EA.	CLOSER	AUTO	MATIC DO	ORS				Ē	//	LingleDesignGroup,Inc
1 EA.	SIGNAGE	"DOO	R TO REMA	AIN UNL	OCKED DURING	BUISINESS H	HOURS"	LINGLE		
1 EA.	SIGNAGE	"MAX	IMUM OCCI	JPANCY	/" - POST AT MAIN	N ENTRY				158 WEST MAIN STREET LENA, IL 61048
1 EA.	THRESHOLD	MANU	JFACTURE	R THRE	SHOLD SYSTEM			Design		815.369.9155
GROU	P 2 - RESTROOM	DOORS	S (PRIVACY	SET)						
3 PR.	HINGE	STAN	LEY - #FBB	179 - 4-1	I/2" X 4-1/2"					1764 BLAKE ST
1 EA.	LATCH	SCHL	AGE - ND40	S-TLR (PRIVACY HARDV	VARE) - 626	FINISH	GROUP, INC		DENVER, CO 80202 303.974.5875
1 EA.	CLOSER	DORN	ЛА - 8616FF	I P				Þ,		303.974.5875
3 EA.	SILENCERS	GLYN	N - GJ64					Z	//	WWW.LINGLEDESIGN.COM
1 EA.	SIGNAGE	"RES	TROOM" SI	GNAGE	PER DETAIL ON	SHEET A400			//	
1 EA.	STOP	AS RE	EQUIRED - \	WALL: #	407 1/2 PA28 - FL	OOR: #436 C	OR #438 PA28			
GROU	P 3 - OFFICE DOC)R								
3 PR.	HINGE	STAN	LEY - #FBB	179 - 4-1	I/2" X 4-1/2"					
1 EA.	LATCH	SCHL	AGE - ND50	PD-TLF	R-SFIC - 626 FINIS	Н				
1 EA.	LOCK	LATC	H-COMPAT	IBLE SM	IALL FORMAT IN	TERCHANGE	ABLE CORE			
3 EA.	SILENCERS	GLYN	N - GJ64							
1 EA.	STOP	AS RE	EQUIRED - \	WALL: #	407 1/2 PA28 - FL	OOR: #436 C	OR #438 PA28			
1 EA.	VISION LITE	FULL	GLASS - VE	ERIFY W	/ SHERWIN-WILL	IAMS CORP	ORATE			
GROU	P 4 - SERVICE DO	OR								
3 PR.	HINGE	STAN	LEY - #FBB	179 - 4-1	I/2" X 4-1/2"					
1 EA.	PULL	YALE	- 632F-626							EN MATERIAL CONTAINED HEREIN ARE THE IGN GROUP, INC. THEY MAY NOT BE REVISED,
1 EA.	EXIT DEVICE				SH (PANIC BAR)				COPIED, REUSED, OR DISCL	OSED IN ANY MANNER WITHOUT WRITTEN ON FROM THE ARCHITECT.
1 EA.	CLOSER		· · · · · · · · · · · · · · · · · · ·	SERIES)	- HEAVY DUTY C	LOSER				
3 EA.	SILENCERS		N - GJ64						S.	1/9/2024
1 EA.	THRESHOLD				S REQUIRED				FAE	REDARCE
1 EA.	SWEEP				AS REQUIRED				85	at L. LING.
	WEATHERSTRIP		CO - #303AV	- SIZE /	AS REQUIRED				8 11 10	- Marical
	P 5 - DELIVERY D								H.	
1 EA.	OPENER/LOCK				R - LIFTMASTER L	J8900W			B.c.	108
	WEATHERSTRIP			' - SIZE /	AS REQUIRED				W.	18179
	P 6 - STOREFRON	NT DOO	R							E OF TEST
3 PR.	HINGE	4-1/2"	X 4-1/2" B.E	3. WITT	NON REMOVABL	E PINS			()	1111
1 EA.	LOCK			LTS WIT	TH INSIDE THUME	BTURN			10/	rl-AMT)
1 EA.	EXIT DEVICE	PUSH						PROJE	ECT #:	
1 EA.	PULL				O OR APPROVED					
1 EA.	CLOSER		•		- HEAVY DUTY C	LOSER		DRAW	N BY: BA	CHECKED BY: MP
1 EA.	THRESHOLD				S REQUIRED					
1 EA.	SWEEP	-		' - SIZE /	AS REQUIRED					
	AND HARDWARE				DIN ALL DEDIME	TED DOOD				
	TO FURNISH & IN							<u> </u>	PERMIT SET - 11/15/	2023
	TEM. PROVIDE KE					ILLII (IVIO IVII) (STERRET	<u> 1</u> 1	FIRE & DEVELOPER	COMMENTS - 1/9/2024
	TO FURNISH & II									
	RIOR DOORS TO					XTERIOR FA	CE.			
	3. ALL HOLLOW METAL DOOR FRAMES ARE TO BE WELDED. 4. G.C. TO FURNISH & INSTALL PANIC HARDWARE PER ALL APPLICABLE REGULATIONS							<u></u>		
& CC	& CODES HAVING JURISDICTION.									
	OR STOPS AND BU							<u>/-\</u> -		
	HARDWARE TO E ERCUT RESTRO				JME, CLEAR ANO	DIZED FINIS	н.			
	O. ALL PAINTED I				D BE PAINTED P-	1.		<u> </u>		
				Λι .	IOTEO					
		G	LINEK	ALI	OTES					

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

I. SOUND BATT INSULATION TO BE MINIMUM CLASS 2 WITH FLAME SPREAD RATING OF 25 TO 75.

J. WINDOWS AND DOORS TO HAVE SAFETY GLAZING

K. SHGC & U-FACTOR MINIMUMS

SHGC: .27

U-FACTOR: .28

XX WALL TYPES - SEE SHEET A111

XXX STOREFRONT TAG - SEE SHEET A201

XXX DOOR TAG - SEE SHEET A110

INDICATES GLAZING

CONSTRUCTION PLAN CODED NOTES

NO GYP. BD. NEEDED INSIDE VOID SPACE
 WOOD BLOCKING FOR DESK SHELVING

SHERWIN WILLIAMS

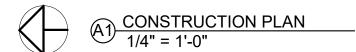
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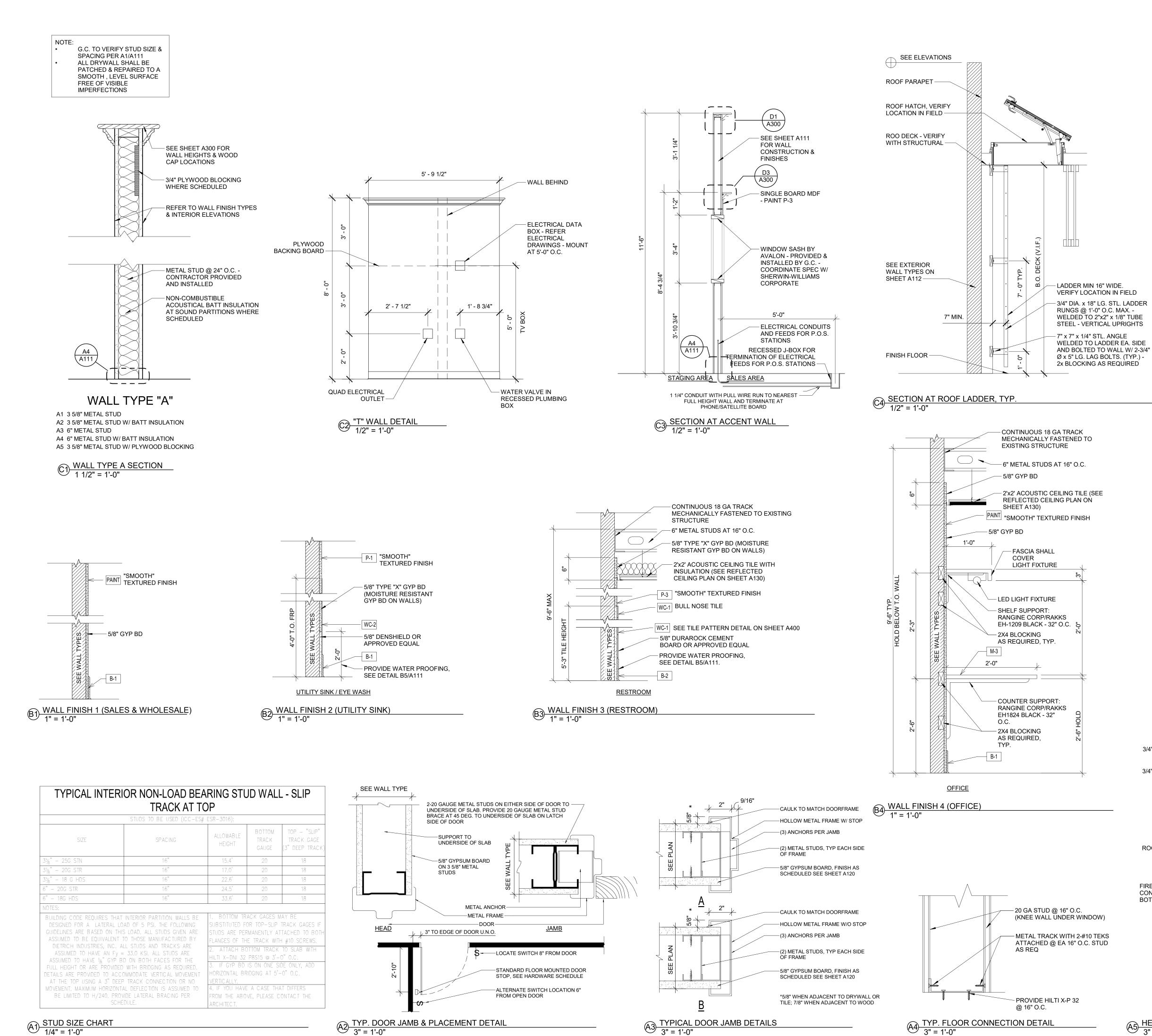
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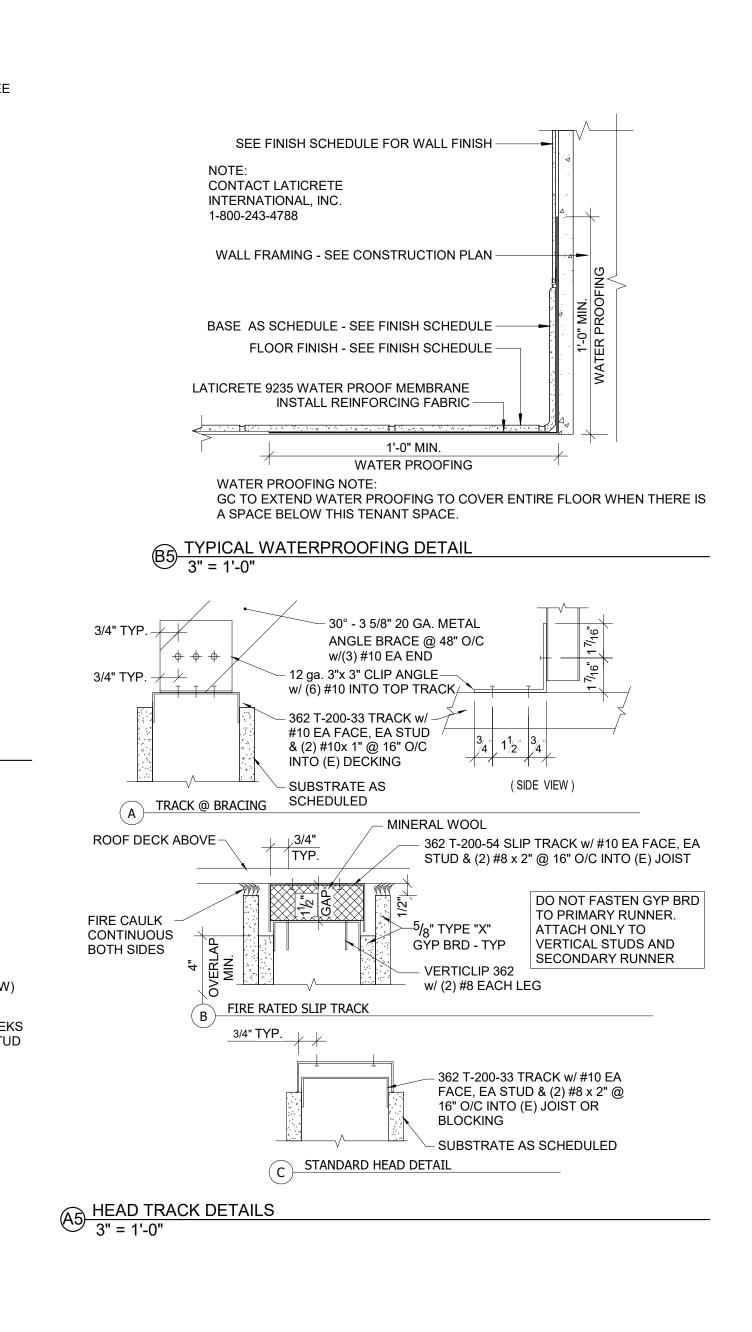
12360 W. SH 29, LIBERTY HILL, TX, 78642

SHEET TITLE:

Construction Plan







1/4" DIAMETER THRU BOLT

METAL STRAP (TYP. OF 2)

1/2" DIA. HOLE IN BOTTOM CAP

PROVIDE HANDLE ON TOP

3/4" X 2" POPLAR TRIM PAINT

4 TO 6" DIA. PVC TUBE

METAL STRAP (TYP. OF 2)

PVC BOTTOM GLUED IN PLACE - G.C. TO DRILL

1/2" DIA. HOLE IN CENTER

© PLANS STORAGE, TYP. 1 1/2" = 1'-0"

CAP TO EASE REMOVAL

PAN HEAD SCREWS

4 TO 6" DIA. PVC TUBE

GYP BD

NOTE: UPON COMPLETION OF

NEW BLUEPRINT SET FOR THE

COMPLETED STORE DRAWINGS

THE PROJECT, GENERAL

ELECTRICAL) AND PLACE

BLUEPRINTS INTO THE PLAN

TUBE HOLDER, LABEL (WITH

DRAWINGS AND IS NOT TO BE

CLEAR TAPE) STATING THIS

TUBE CONTAINS STORE

REMOVED WITHOUT THE

CONSENT OF THE STORE

SUPPLY AND INSTALL

DETERMINED.

ELEVATION

MANAGER. TENANT G.C. TO

DRAWING TUBE ASSEMBLY

APPROVED LOCATION TO BE

ABOVE DOOR OR OTHER

(ARCHITECTURAL,

MECHANICAL, AND

CONTRACTOR MUST RUN A

W/ TOGGLE (TYP. OF 2)



PERMIT SET - 11/15/2023

FIRE & DEVELOPER COMMENTS - 1/9/2024

-

CHECKED BY: MP

DRAWN BY: BA

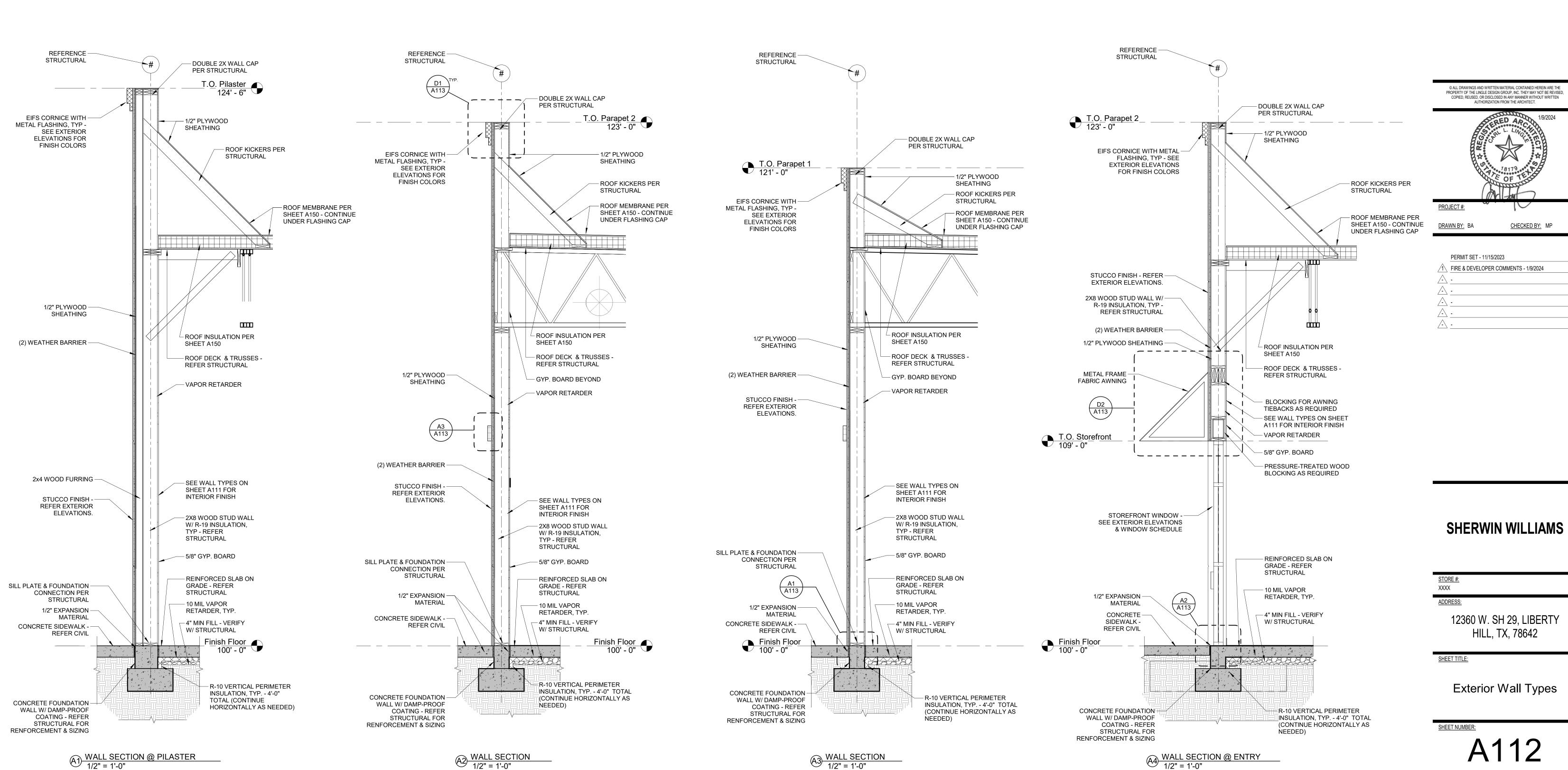
SHERWIN WILLIAMS

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ADDRESS:
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HILL, TX, 78642

SHEET TITLE:

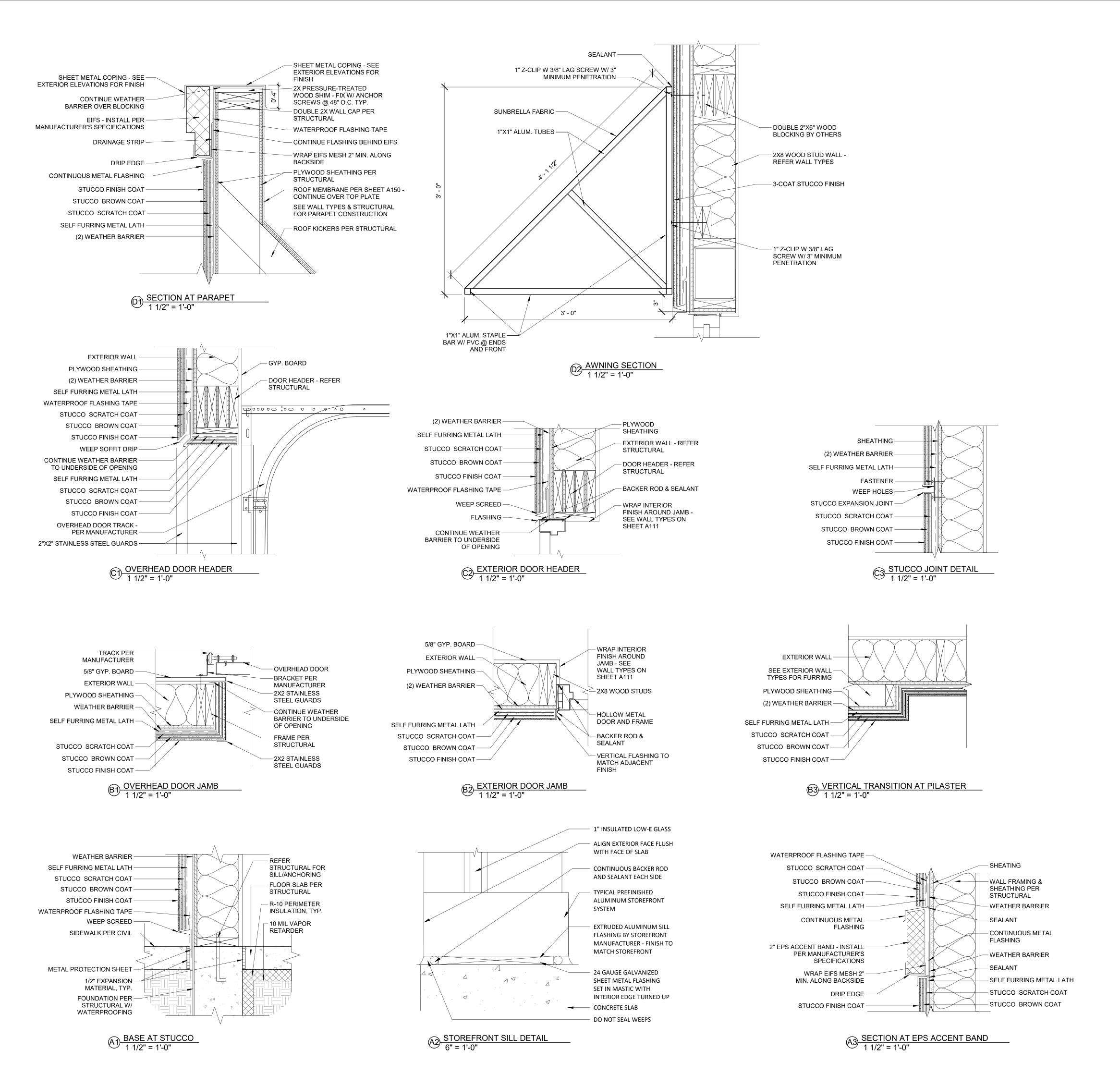
Wall Types & Details

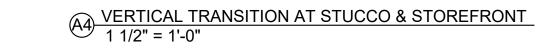
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WALL SECTION @ PILASTER
1/2" = 1'-0"

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

STUCCO FINISH AT WOOD SHEATHING

WEATHER BARRIER

SELF FURRING METAL LATH

WATERPROOF FLASHING TAPE -

STUCCO SCRATCH COAT

STUCCO BROWN COAT-

STUCCO FINISH COAT

CONTINUE WEATHER

MATCH STOREFRONT

BARRIER TO UNDERSIDE

WEEP SCREED

FLASHING -

OF OPENING

BREAK METAL TO

EXTERIOR WALL -

PLYWOOD SHEATHING

SELF FURRING METAL LATH -

STUCCO SCRATCH COAT

STUCCO BROWN COAT -

STUCCO FINISH COAT -

WEATHER BARRIER -

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WOOD STUDS PER WALL TYPES

-PLYWOOD SHEATHING,

TYP. - 1/8" GAP BETWEEN

(2) LAYERS OF WEATHER

RÉSISTIVE BARRIER - 30

SELF FURRING METAL LATH

-STUCCO SCRATCH COAT

STUCCO BROWN COAT

- STUCCO FINISH COAT

EXTERIOR WALL

- WRAP INTERIOR

SHEET A111

- ALUMINUM

STRUCTURAL HEADER

- BACKER ROD & SEALANT

FINISH AROUND JAMB -

STOREFRONT - INSTALL

PER MANUFACTURER'S

SPECIFICATIONS

- WRAP INTERIOR

FINISH AROUND

- ALUMINUM

STOREFRONT -

MANUFACTURER'S

SPECIFICATIONS

-BACKER ROD &

- STUCCO FINISH

SEALANT

RETURN

INSTALL PER

SEE WALL TYPES ON

LB FELT, MIN.

SHEETS AT CONTROL JOINTS

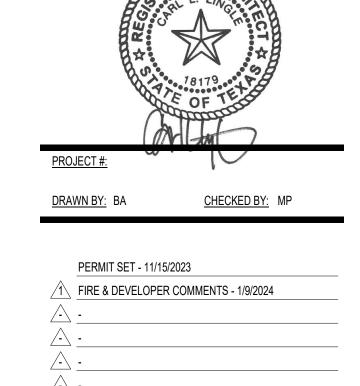
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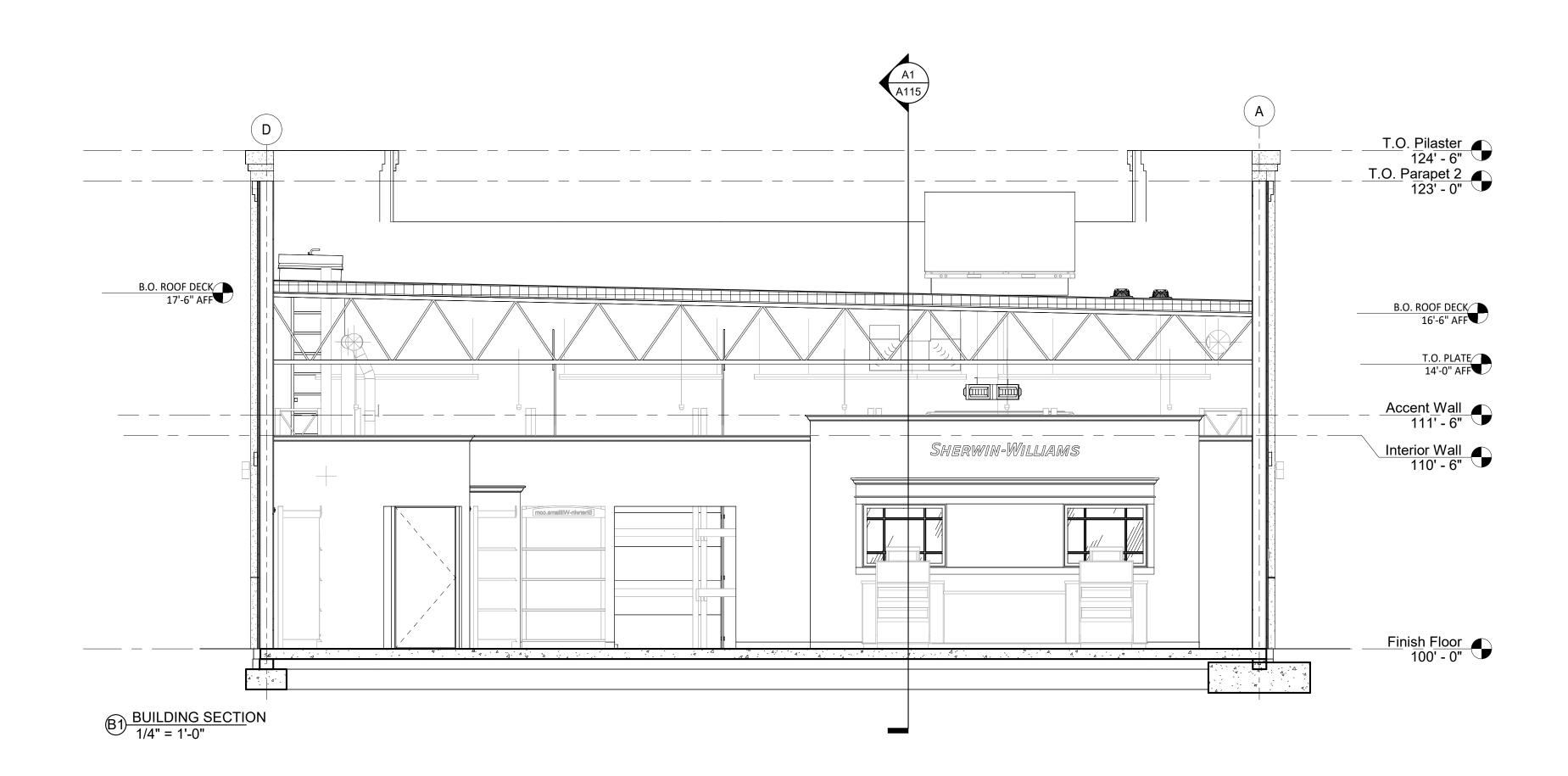
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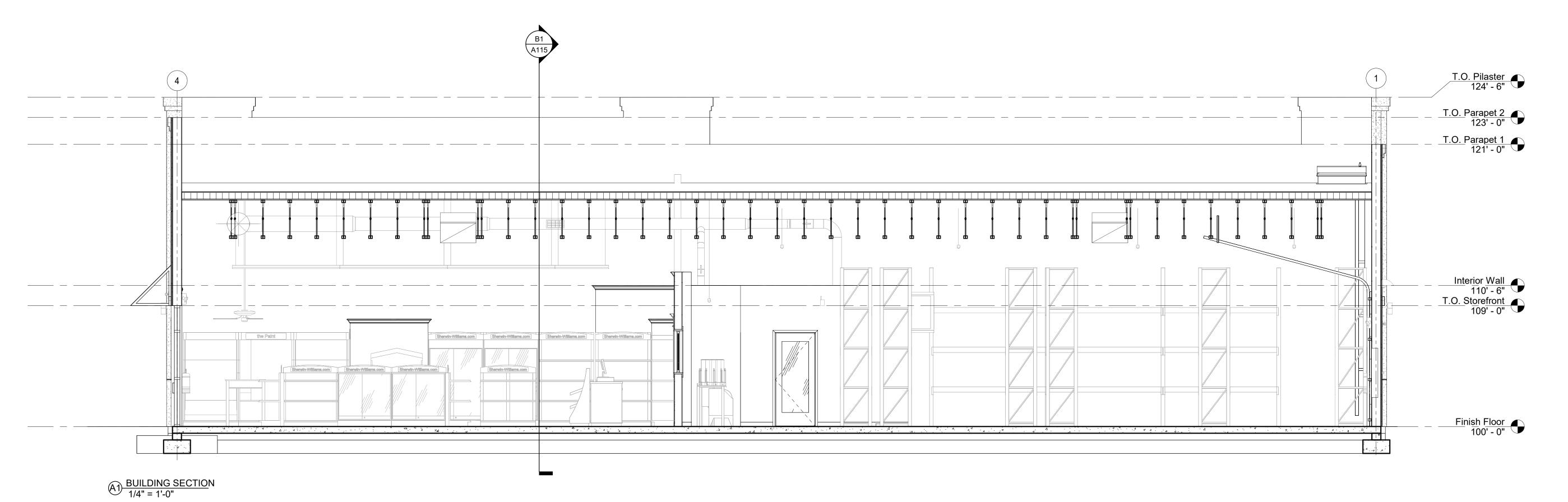
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STORE #:

Exterior Wall Details

SHEET NUMBER:





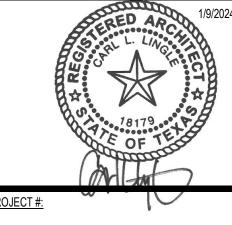
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DRAWN BY: BA CHECKED BY: MP

DERMIT SET - 11/15/2023

PERMIT SET - 11/15/2023

FIRE & DEVELOPER COMMENTS - 1/9/2024
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<u>-</u> -

SHERWIN WILLIAMS

STORE #: XXXX

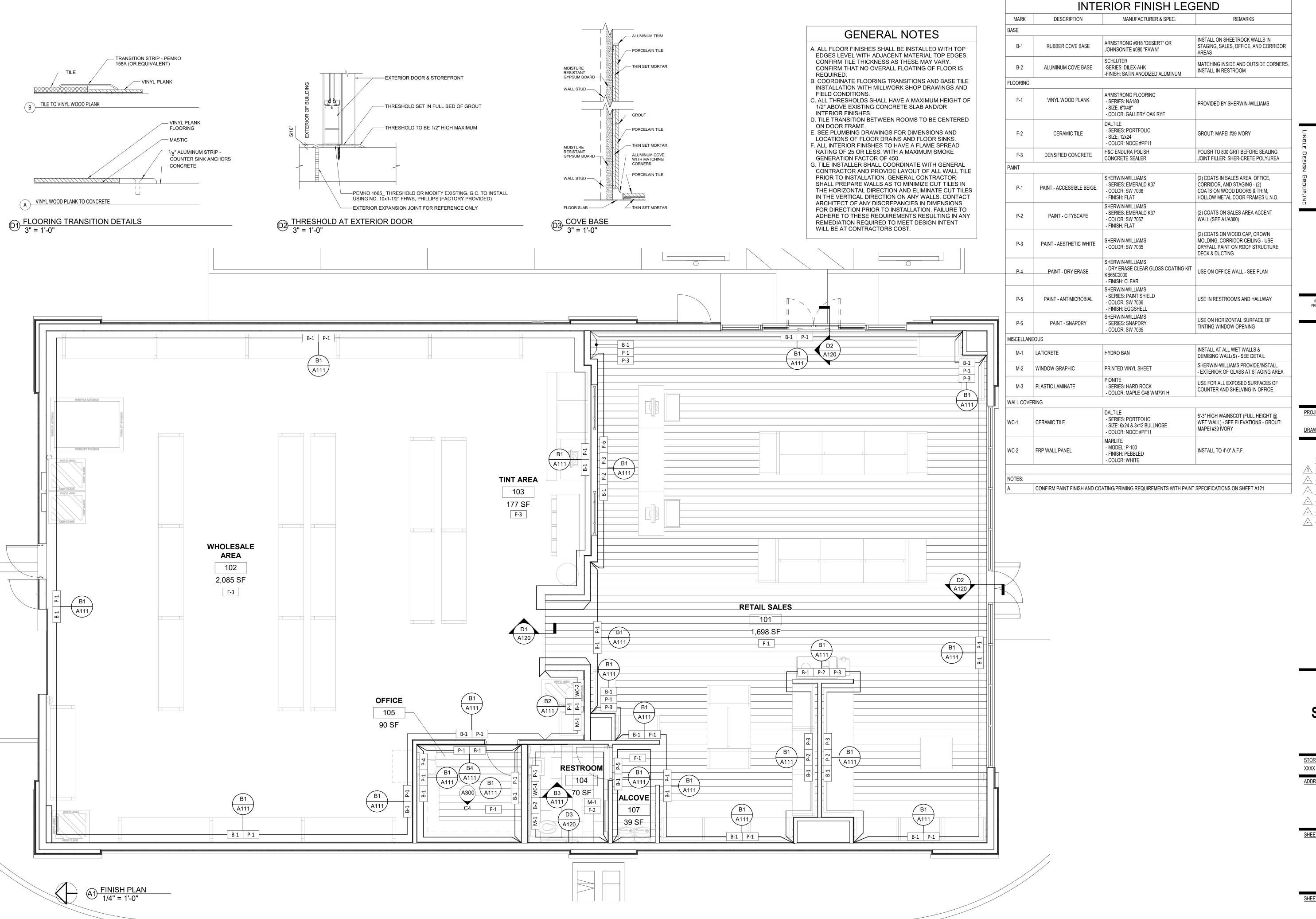
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SHEET TITLE:

Building Sections

SHEET NUMBER:



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SHERWIN WILLIAMS

STORE #:

12360 W. SH 29, LIBERTY HILL, TX, 78642

SHEET TITLE:

Finish Plan

SHEET NUMBER:

PAINT SPECIFICATIONS

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INTERIOR, EXTERIOR AND INDUSTRIAL PAINTS AND COATINGS
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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
- 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
- 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 GENERATEI 1.6.3. PROVIDE LIGHTING LEVELS IN AREAS WHERE COATINGS ARE BEING INSTALLED
- 1.7. EXTRA MATERIALS 1.7.1. DISPOSE OF EXTRA MATERIALS IN ACCORDANCE WITH REGULATIONS OF
- AUTHORITIES HAVING JURISDICTION

OF AT LEAST 80 FOOT CANDLES.

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
- 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
- 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,
- 2.4.1.1.1.2. 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

WET, 2.1 MILS DRY

- 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

2.4.3.1.1.3. THIRD COAT: S-W PRO INDUSTRIAL ACRYLIC, B66-600 SERIES, 6.0 MILS

PAINT SPECIFICATIONS

- 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
- 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,
- 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
- 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

WET, 1.44 MILS DRY

- 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
- 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 OF UNSATISFACTORY 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
- 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

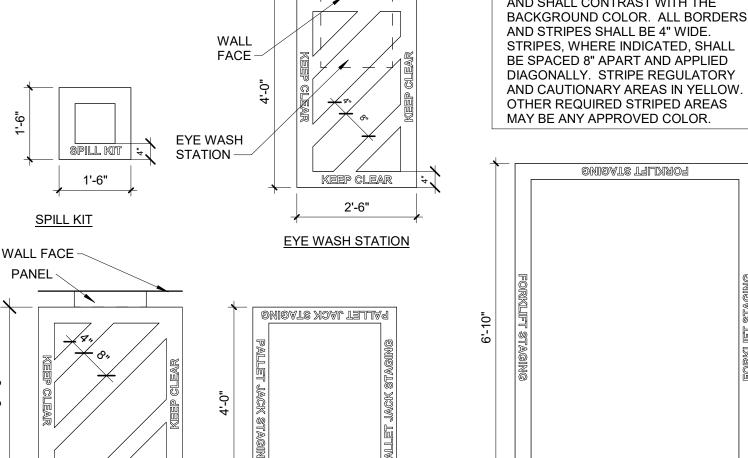
- 3.2.3. CONCRETE AND CONCRETE MASONRY: 3.2.3.1. REMOVE ALL LOOSE MORTAR AND FOREIGN MATERIAL. SURFACE MUST BE FREE OF LAITANCE, CONCRETE DUST, DIRT, FORM RELEASE AGENTS, MOISTURE CURING MEMBRANES, LOOSE CEMENT, ANDHARDENERS. CONCRETE MUST BE CURED AT LEAST 30 DAYS AT 75 DEGREES F (24 DEGREES C). THE 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. 3.2.7.1. 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-SP1
- 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 RECOMMENDED DRY 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

SUBSTANTIAL COMPLETION.





Pallet Jack Staging

3'-0"

PALLET JACK STAGING

3' - 0"

ELECTRICAL PANELS

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

AND CAUTIONARY AREAS IN YELLOW. OTHER REQUIRED STRIPED AREAS FORKLIFT STAGING 5'-0"

FORKLIFT STAGING / CHARGING

1'-6" 3'-6" **DOLLY STAGING HAZMAT CONTAINER** PALLET STAGING 3'-6" 3'-6" WILL CALL PALLET STAGING

COORDINATE FINAL PLACEMENT WITH SHERWIN-WILLIAMS

LETTERS SHALL BE MINIMUM 2" HIGH AND SHALL CONTRAST

SHALL BE 4" WIDE. STRIPES, WHERE INDICATED, SHALL BE

REGULATORY AND CAUTIONARY AREAS IN YELLOW. OTHER

REQUIRED STRIPED AREAS MAY BE ANY APPROVED COLOR.

1'-6"

MOP BUCKET

SPACED 8" APART AND APPLIED DIAGONALLY. STRIPE

WITH THE BACKGROUND COLOR. ALL BORDERS AND STRIPES

CORPORATE

1'-6"

CARDBOARD STAGING

Paint Striping - Operational Areas

LINGLEDESIGNGROUP, INC

158 WEST MAIN STREET

LENA, IL 61048

815.369.9155

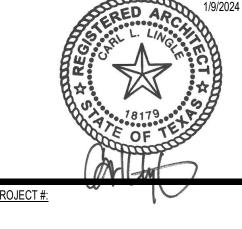
1764 BLAKE ST

DENVER, CO 80202

303.974.5875

WWW.LINGLEDESIGN.COM

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CHECKED BY: MP

PERMIT SET - 11/15/2023 FIRE & DEVELOPER COMMENTS - 1/9/2024

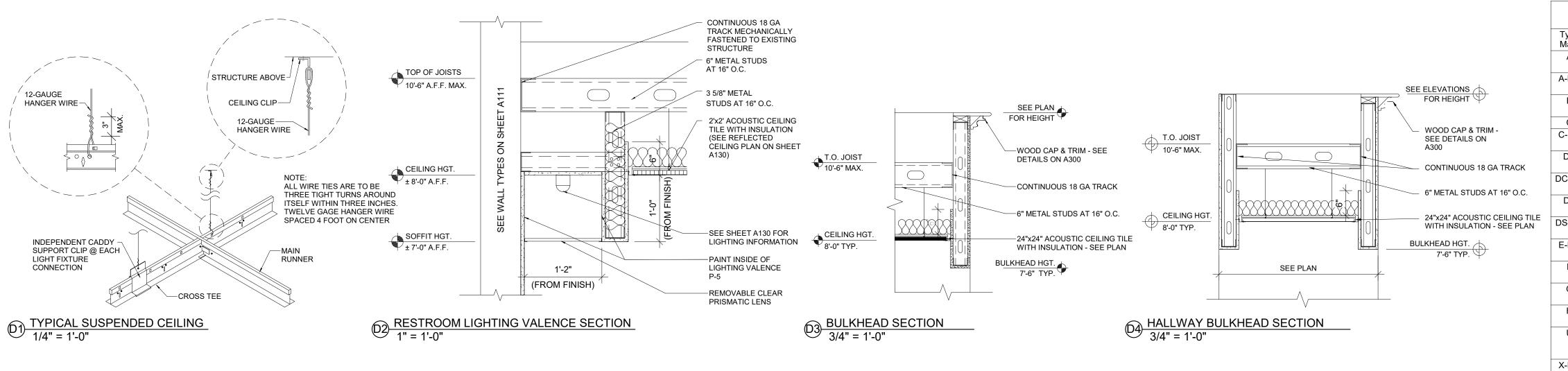
SHERWIN WILLIAMS

STORE #: XXXX

12360 W. SH 29, LIBERTY

SHEET TITLE:

Paint Specifications



		L	ighting	Fixture Sche	dule	
Type Mark	Count	Description	Manufacturer	Model	Lamp	Comments
Α	1	2'x4' Troffer	GE Current	LVT24B048MM840VQ LTWHTE	LED	To be sourced from Wesco
A-EM	1	2'x4' Emergency Troffer	GE Current	LVT24B048MM840VQ LTWHTEEL	LED	To be sourced from Wesco - Connect to non-switched emergency circuit
В	7	48" Standalone Strip	GE Current	ALV204T04T481DSQV QSTKQW	LED	To be sourced from Wesco
С	2 6" 1,000 Lumen LED Trim		GE Current	LRXBR61X9CWVQ	LED	To be sourced from Wesco
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	15	8' Continuous Strip	GE Current	ALV208T08T481DCQV QSTKQW	LED	To be sourced from Wesco
DC-EM	3	8' Continuous EM Strip	GE Current	ALV208T08T481DCQV ESTKQW	LED	To be sourced from Wesco - Connect to non-switched emergency circuit
DS	13	8' Standalone Strip	GE Current	ALV208T08T481DSQV QSTKQW	LED	To be sourced from Wesco
DS-EM	3	8' Standalone EM Strip	GE Current	ALV208T08T481DSQV ESTKQW	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.FInstall "lighting box" for stability
G	1	Wall Pack W/Photocell	GE Current	EWLS02140AF740N3 CBDKBZ	LED	
Н	10	Outdoor Cylinder	PROGRESS	P5641□20/30K BZ	LED	Mount @ 9'-0" A.F.FInstall "lighting box" for stability
U	6	22" Undercabinet	JUNO	UPLD 22IN SWW4 90CRI W H	LED	Use splice box & jumper connectors
X-EM	3	Remote LED Emergency Heads	COOPER	APWR2	LED	Remote from Exit sign/Emergency combo fixture



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PERMIT SET - 11/15/2023

√ FIRE & DEVELOPER COMMENTS - 1/9/2024

CHECKED BY: MP

1 CEILING GRID ORIGIN POINT

RCP CODED NOTES

2 INSTALL LIGHTS ON UNDERSIDE OF OFFICE SHELF - SWITCH WITH OTHER OFFICE LIGHTS

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 "_-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 RUN DUCTWORK IN BEWEEN TRUSSES
- 9 METAL FRAME BLUE FABRIC AWNING
 10 HOLD OVERHEAD DOOR TRACK BELOW LIGHT FIXTURE VERIFY HEIGHT IN
- 11 ROOF ACCESS HATCH 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.

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

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

SHERWIN WILLIAMS

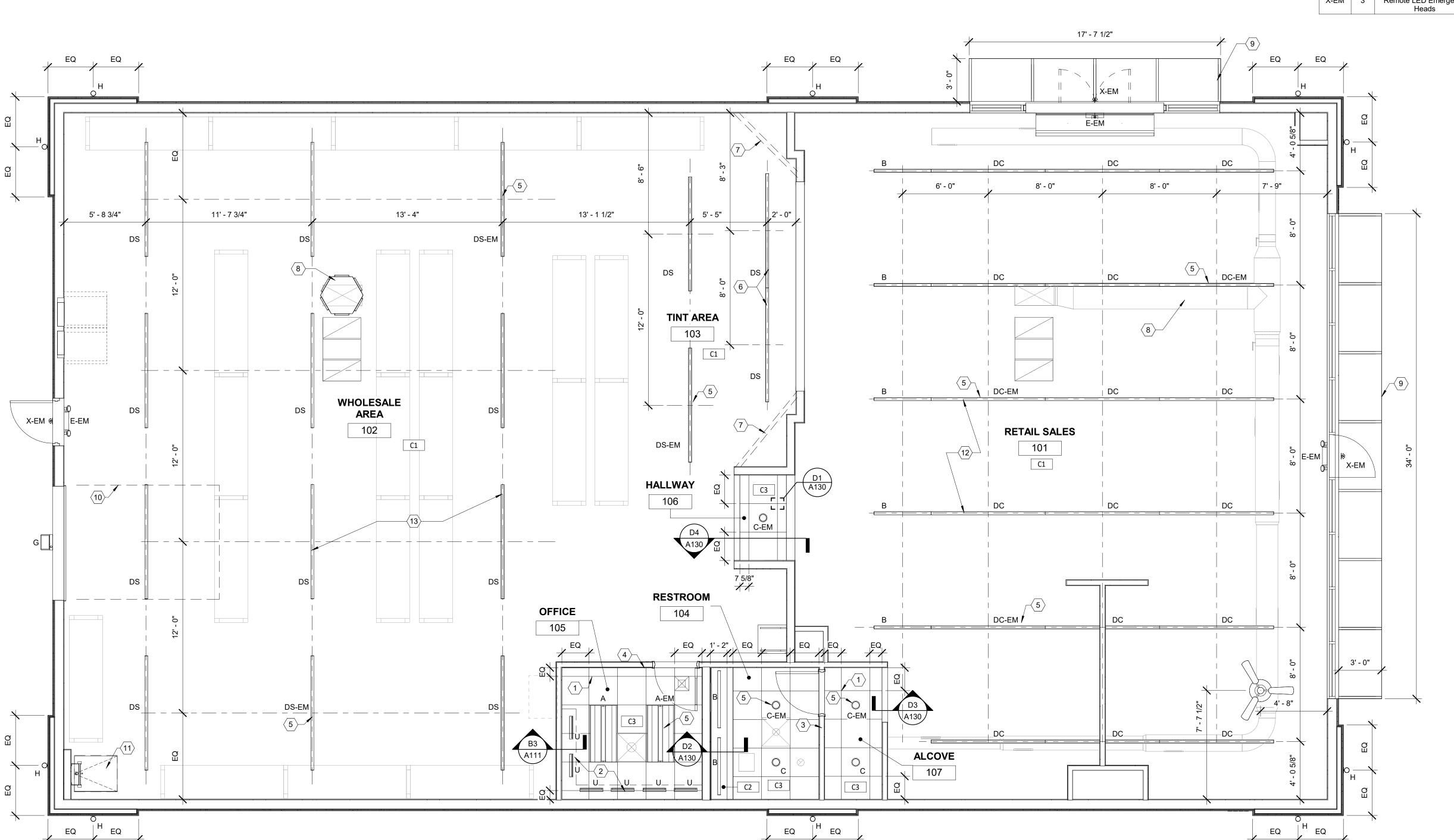
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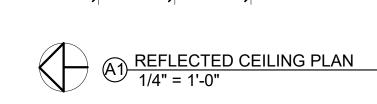
ADDRES

12360 W. SH 29, LIBERTY HILL, TX, 78642

SHEET TITLE:

Reflected Ceiling Plan





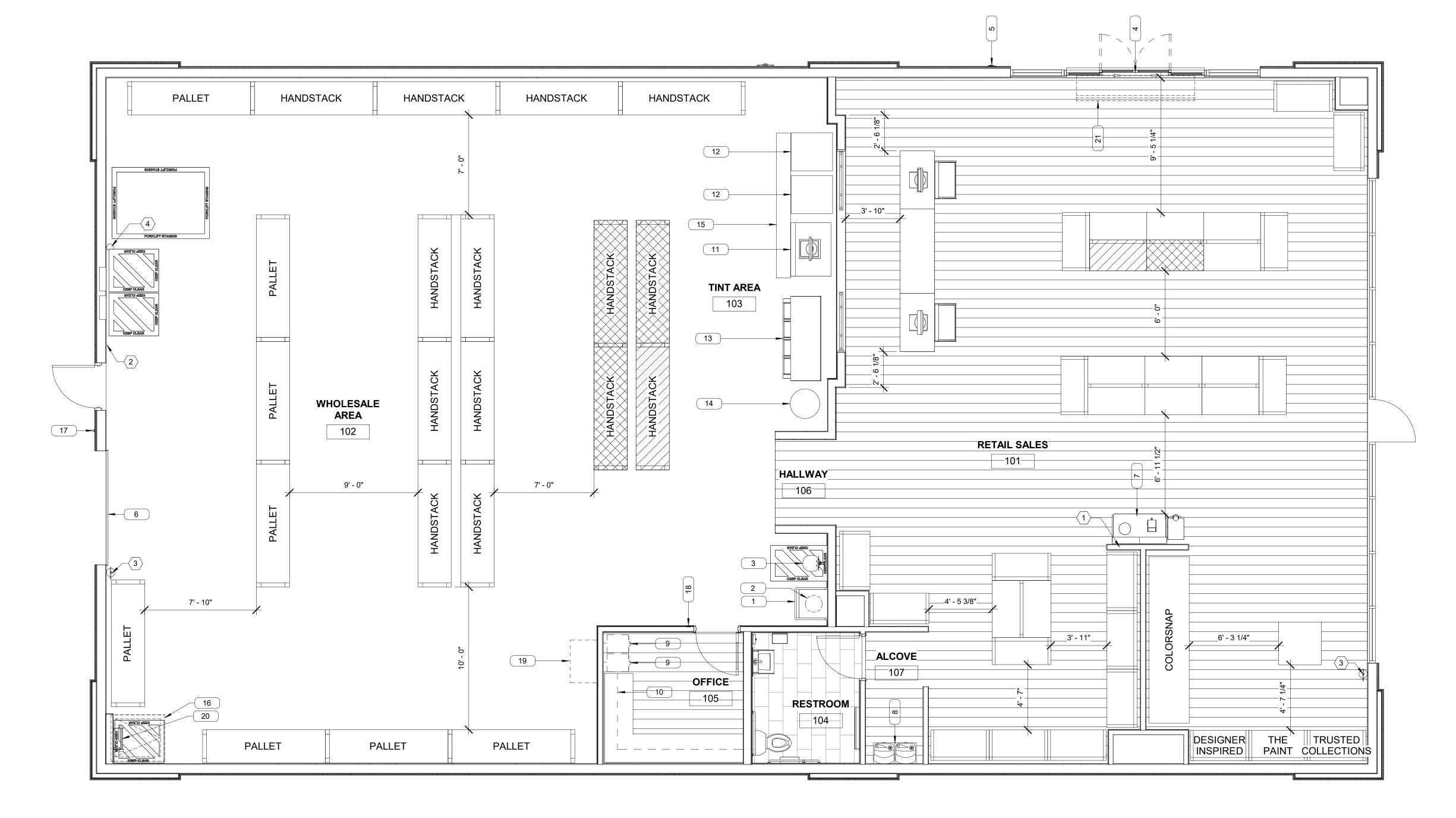
HAZARDOUS MATERIALS STORAGE							
		MAX. STORAGE HEIGHT	MAX. A	MOUNT	ACTUAL A	AMOUNT	
XXXXXXX	1A	4'-0"	30 GAL		0 GAL		
FLAMMABLE CLASS	1B	4'-0"			392 GAL		
VILAGO VI	1C	4'-0"	1,600 GAL TOTAL		60 GAL	654 GAL TOTAL	
OOMBLIOTIBLE	П	6'-0"			150 GAL		
COMBUSTIBLE X-	IIIA	6'-0"			52 GAL		
XXXXXXXX	IIIB	6'-0"	13,200 GAL		330 GAL		
AFROSOL	1	8'-0"			121	LBS	
AEROSOL //- LEVEL /-	2	8'-0"	2,500 LBS	2,500 LBS	203 LBS	224 LBS	
	3	8'-0"	1,000 LBS	TOTAL	21 LBS	TOTAL	
NOTE: TENANT WILL BE RESPONSIBLE FOR ADDING PERMANENT SIGNS ON EACH STORAGE							

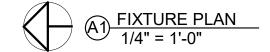
NOTE: TENANT WILL BE RESPONSIBLE FOR ADDING PERMANENT SIGNS ON EACH STORAGE SHELF OR RACK STATING THE ABOVE STORAGE LIMITATIONS AND TRAINING STORE STAFF IN PROPER STORAGE OF FLAMMABLE AND COMBUSTIBLE LIQUIDS. STORE OWNER WILL BE RESPONSIBLE FOR ADDING SIGNAGE TO SHELF AND RACK STORAGE WHERE FLAMMABLE AND COMBUSTIBLE LIQUIDS ARE STORED THAT "WARNING, NO COMBUSTIBLE PRODUCTS ARE TO BE STORED ABOVE ANY FLAMMABLE OR COMBUSTIBLE LIQUIDS" PER 2015 IFC.

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 FIRE EXTINGUISHER SEE DETAIL A5/A140 4 AS-BUILT DRAWING TUBE - SEE DETAIL C5/A111

	EQUIPMENT LIST								
				PROVIDED	INSTALLED				
TAG	DESCRIPTION	MANUFACTURER	MODEL	BY	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	GC	GC	8'-0" W X 10'-0" OPENING - LIGHT GRAY - WALL-MOUNTED MOTORIZED OPERATOR: LIFTMASTER LJ8900W			
7	COFFEE BAR W/ WATER COOLER			TENANT	TENANT				
8	HIGH/LOW DRINKING FOUNTAIN	ELKAY	EDFP217C	GC	GC	REFER PLUMBING			
9	FILE CABINET			TENANT	TENANT				
10	ALUMINUM RACEWAY	LEGRAND	ALA4800 & ALA-G	TENANT	GC	ALTERNATES: HUBBLE HBLALU4800 & MONOSYSTEMS SWA4800			
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	ROOF HATCH	BILCO	GS-50TB - 36x30	GC	GC	COORDINATE PLACEMENT WITH STRUCTURAL			
17	EXTERIOR BUZZER BUTTON	EDWARDS	1786-B	GC	GC	MOUNT 4'-0" A.F.F REFER ELECTRICAL			
18	BUZZER RECEIVER	OPTEX	RCTD-20U	$\sim\sim$	$\sim\sim$	`			
19	DATA CABINET		/1\{	TENANT	TENANT	NSTALL PHONE/COMPUTER BOARD AT DATA CABINET			
20	FIXED ROOF ACCESS LADDER			Megur	ryer.				
21	AMBIENT UNHEATED AIR DOOR UNIT	BERNER	CHD10-2072A	GC	GC				





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

3. THE GC SHALL INSTALL ALL WALLS FACING INTO THE SALES AREA TO BE FLAT, WITH

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.

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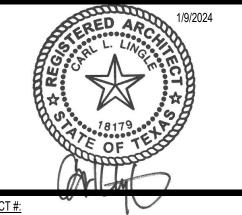
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PERMIT SET - 11/15/2023 √ FIRE & DEVELOPER COMMENTS - 1/9/2024

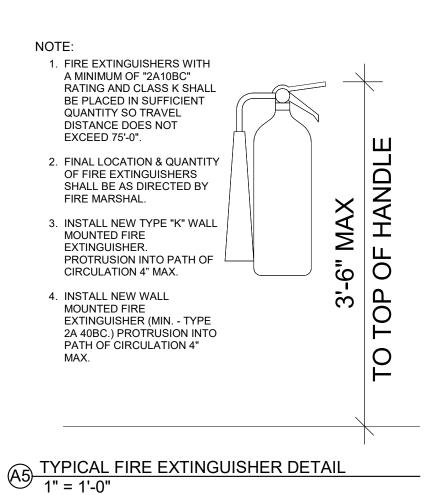
SHERWIN WILLIAMS

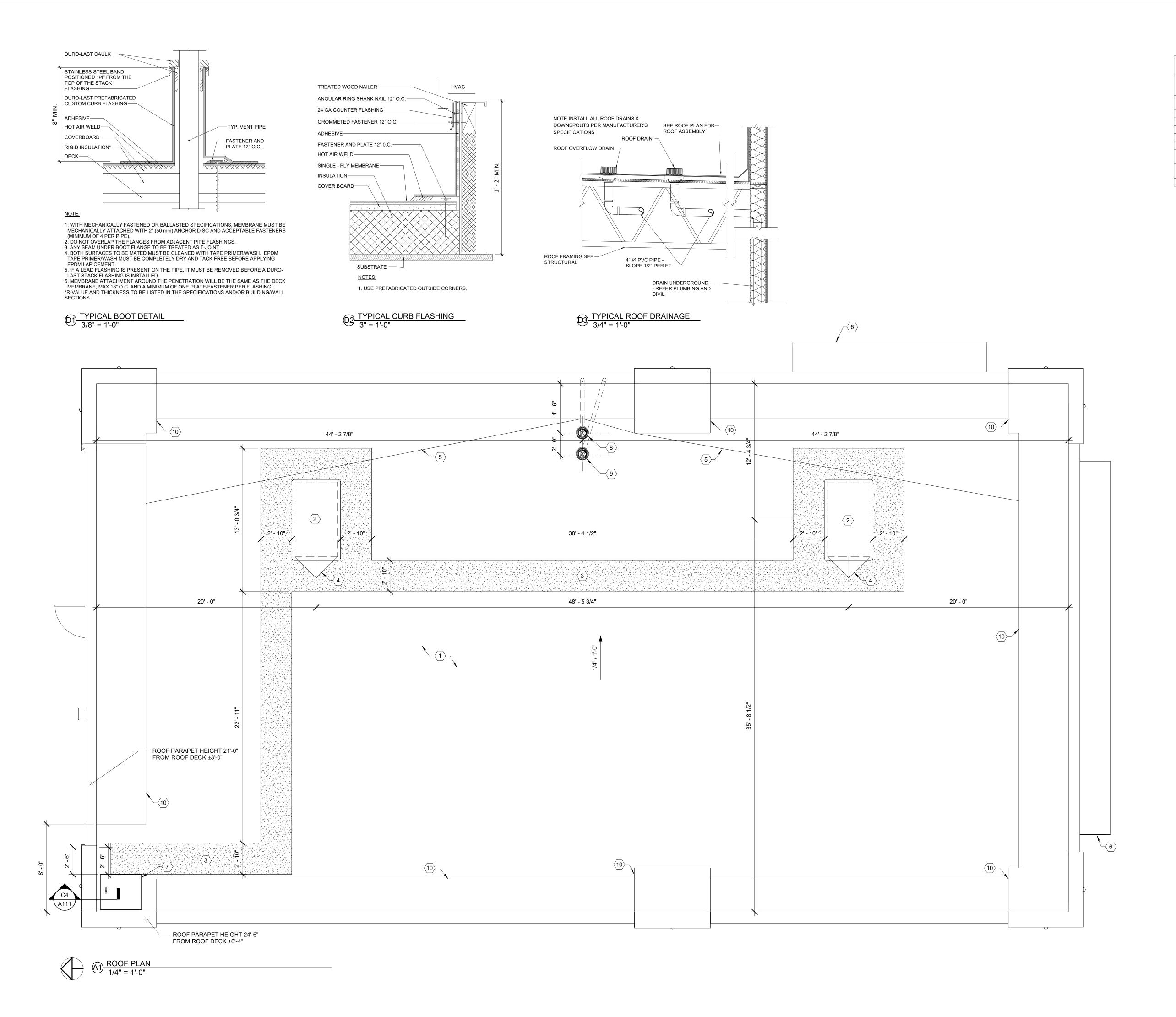
STORE #:

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SHEET TITLE:

Fixture Plan & Schedule





ROOF PLAN CODED NOTES

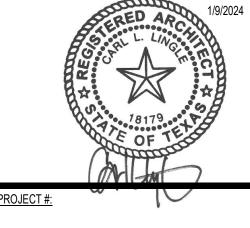
1 WHITE (SRI 29 MIN.) 45 MIL TPO MEMBRANE ROOF OVER R-30 RIGID INSULATION - INSTALL PER MANUFACTURER'S SPEC - ROOF DECK PER STRUCTURAL - 2% SLOPE MIN.

- 2 MECHANICAL ROOFTOP UNIT SEE MECHANICAL FOR INFORMATION,
- REINFORCE PER STRUCTURAL
- 3 REINFORCED WALKWAY FOR EQUIPMENT ACCESS
- 4 TAPERED INSULATION CRICKET AT EQUIPMENT CURB 5 SLOPE CRICKET TO ROOF DRAIN
- 6 METAL FRAME BLUE FABRIC AWNING
- 7 ROOF ACCESS HATC COORDINATE PLACEMENT WITH STRUCTURAL 8 ROOF DRAIN - J.R. SMITH 1010-A04 (OR EQUIVALENT) - CONNECT
- BELOW GRADE TO STORM DRAIN COORDINATE PLACEMENT W/ CIVIL
- 9 ROOF OVERFLOW DRAIN J.R. SMITH 1070-A04 (OR EQUIVALENT) -
- COORDINATE PLACEMENT W/ CIVIL 10 ROOF KICKERS PER STRUCTURAL



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SHERWIN WILLIAMS

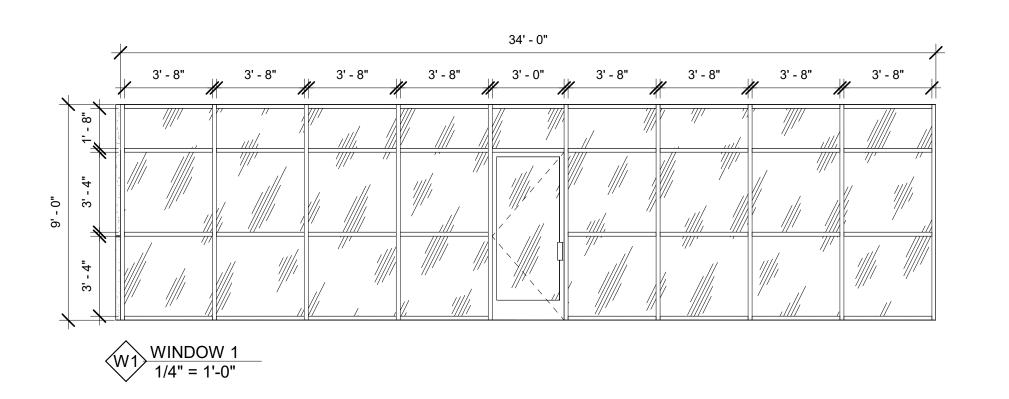
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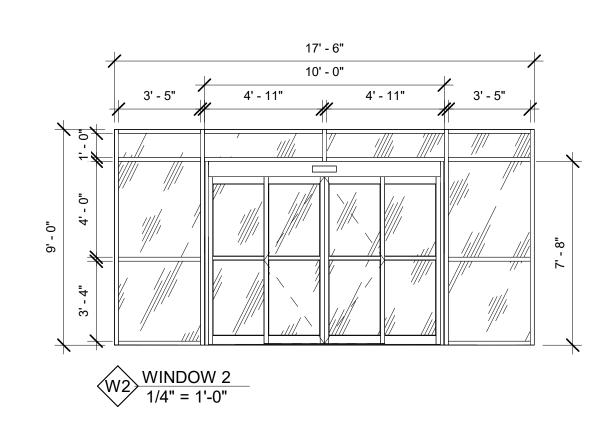
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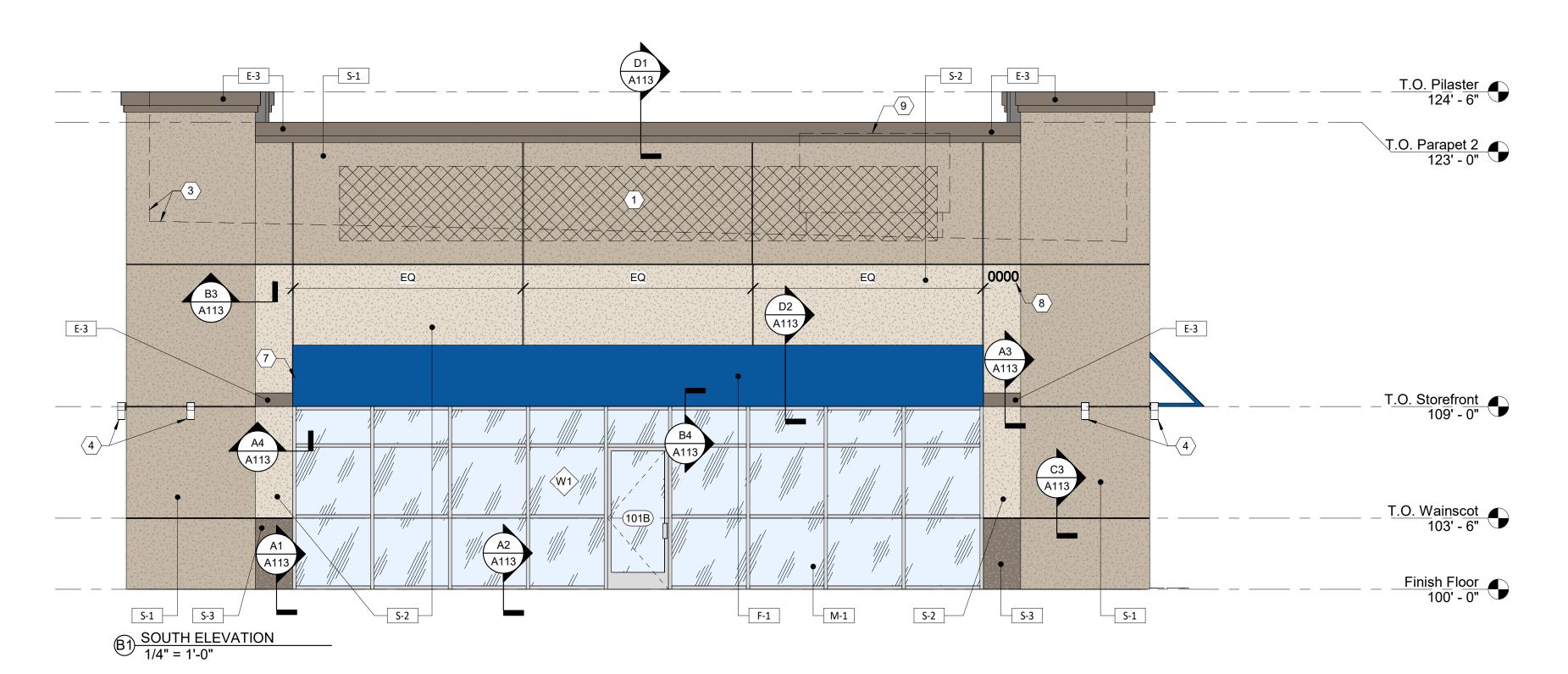
SHEET TITLE:

Roof Plan

SHEET NUMBER:







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

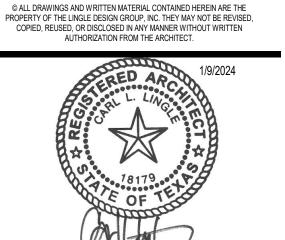
EXTERIOR ELEVATION CODED NOTES

- 1 SIGNAGE UNDER SEPARATE PERMIT 2 UTILITY METER BANK - PAINT TO MATCH ADJACENT FINISH - COORDINATE WITH
- 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 FRAME BLUE FABRIC AWNING

 8 BUILDING ADDRESS PER 2021 IFC 505.1 6" HIGH MIN., 1/2" MIN. STROKE WIDTH

 9 ROOF TOP UNIT BEYOND
- 10 ROOF OVERFLOW DRAIN NOZZLE





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SHERWIN WILLIAMS

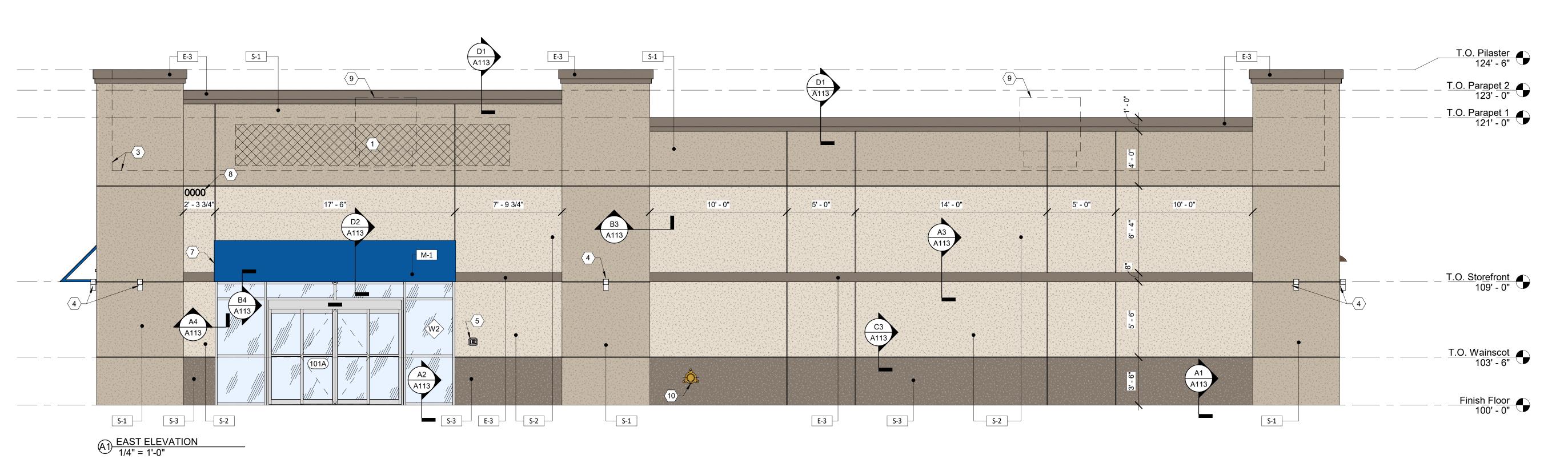
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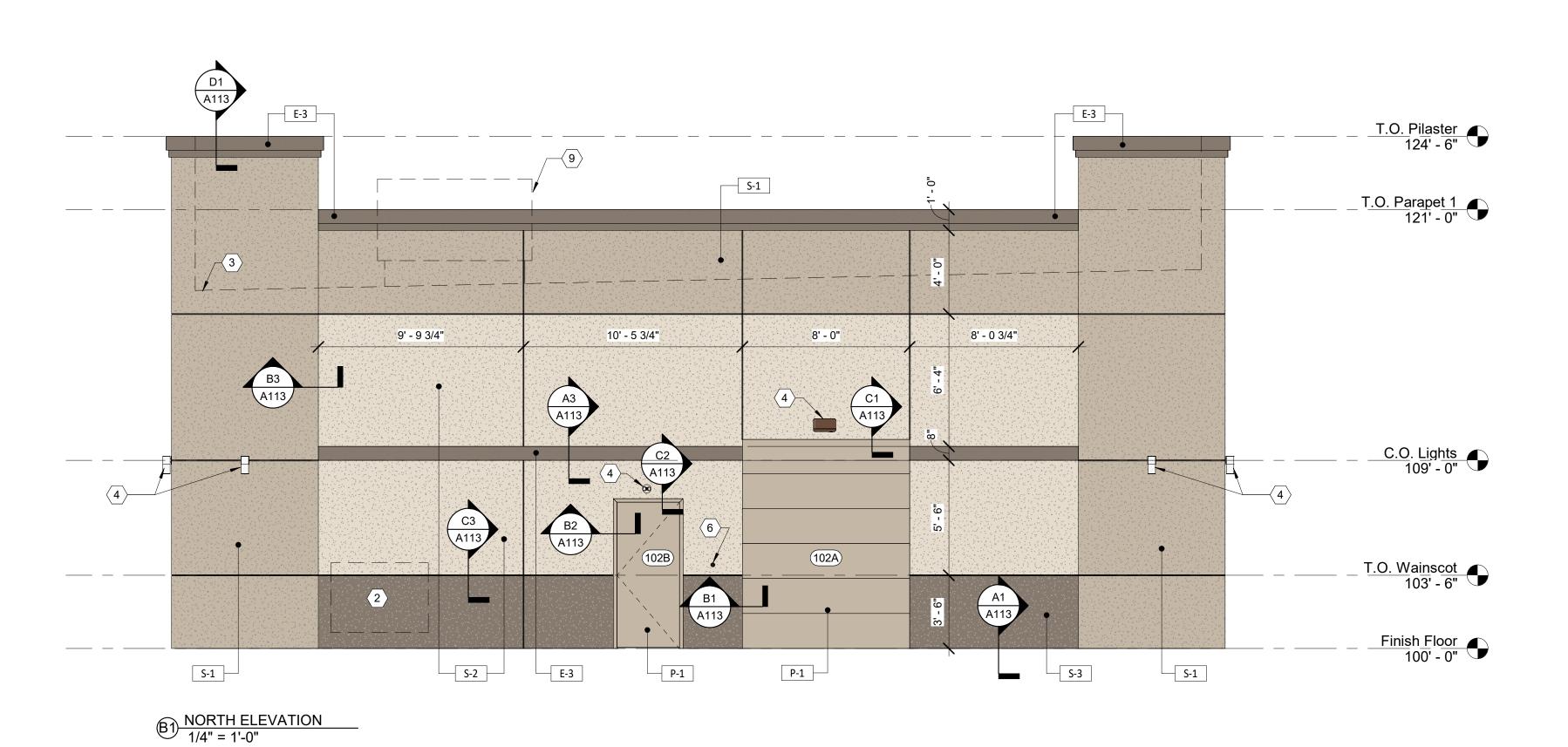
12360 W. SH 29, LIBERTY HILL, TX, 78642

SHEET TITLE:

Exterior Elevations & Window Schedule

SHEET NUMBER:





MARK	DESCRIPTION	SAMPLE	
S-1	STUCCO BAY	SHERWIN-WILLIAMS	
P-1	PAINT	COLOR: SW 7506 LOGGIA	
S-2	STUCCO FIELD	SHERWIN-WILLIAMS	
P-2	PAINT	COLOR: SW 6105 DIVINE WHITE	
S-3	STUCCO BAY	SHERWIN-WILLIAMS	
E-3	EIFS CORNICE & BAND	COLOR: SW 7025 BACKDROP (PARAPET FLASHING TO	
P-3	PAINT	MATCH)	
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 FRAME BLUE FABRIC AWNING				
8	BUILDING ADDRESS PER 2021 IFC 505.1 - 6" HIGH MIN., 1/2" MIN. STROKE WIDTH				
9	ROOF TOP UNIT BEYOND				

10 ROOF OVERFLOW DRAIN NOZZLE

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1/9/2024

1/9/2024

PROJECT #:

DRAWN BY: BA

CHECKED BY: MP

PERMIT SET - 11/15/2023

FIRE & DEVELOPER COMMENTS - 1/9/2024

- -

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SHERWIN WILLIAMS

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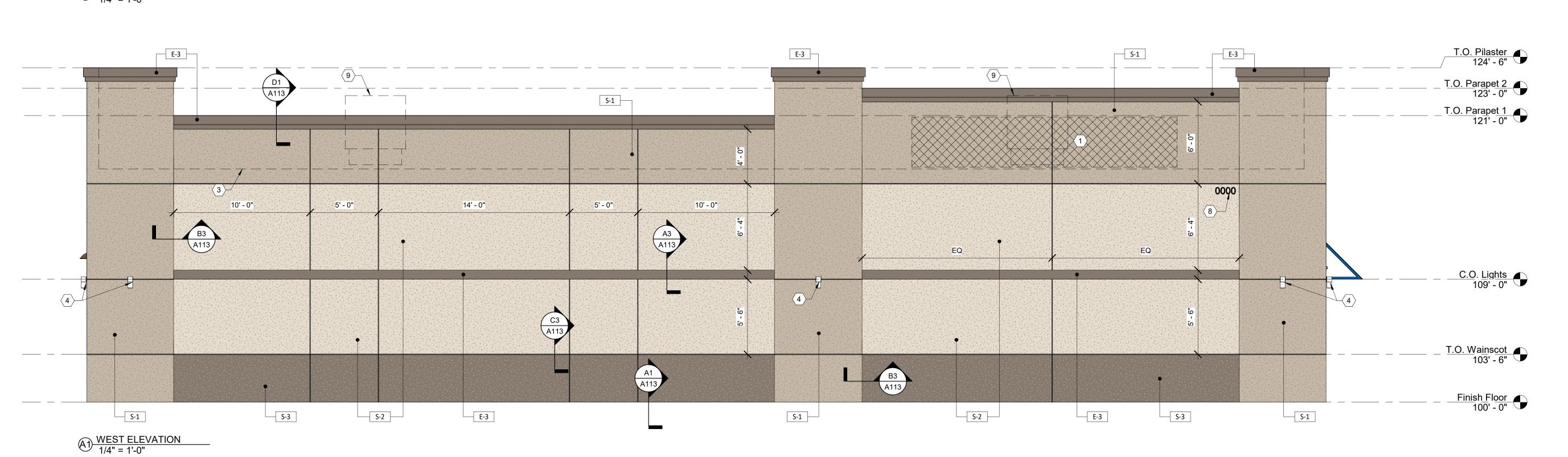
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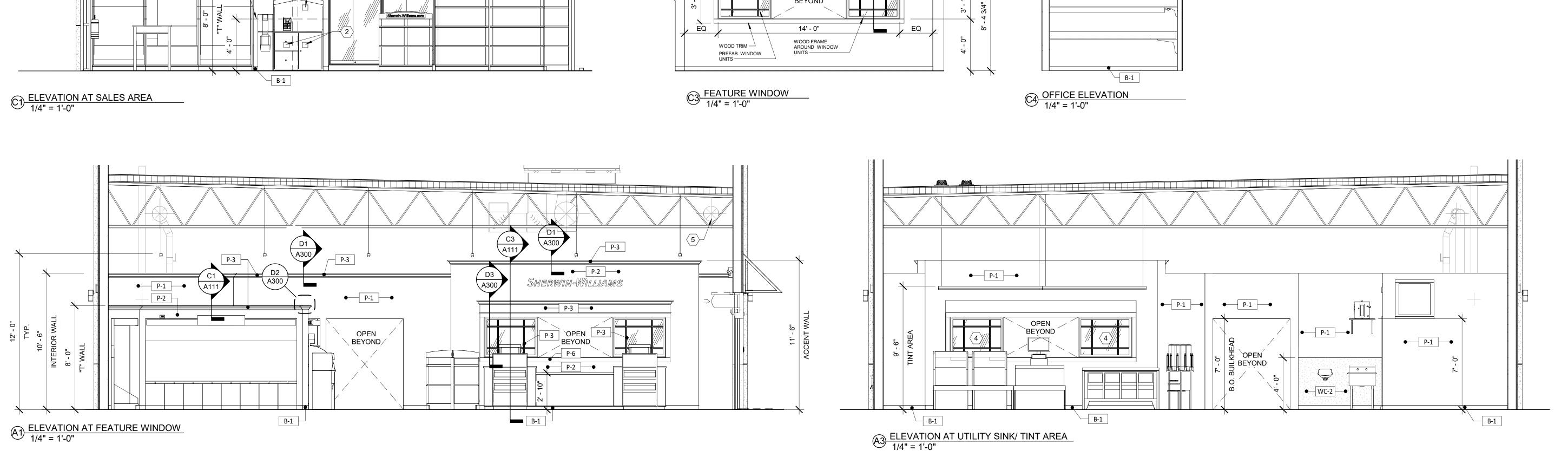
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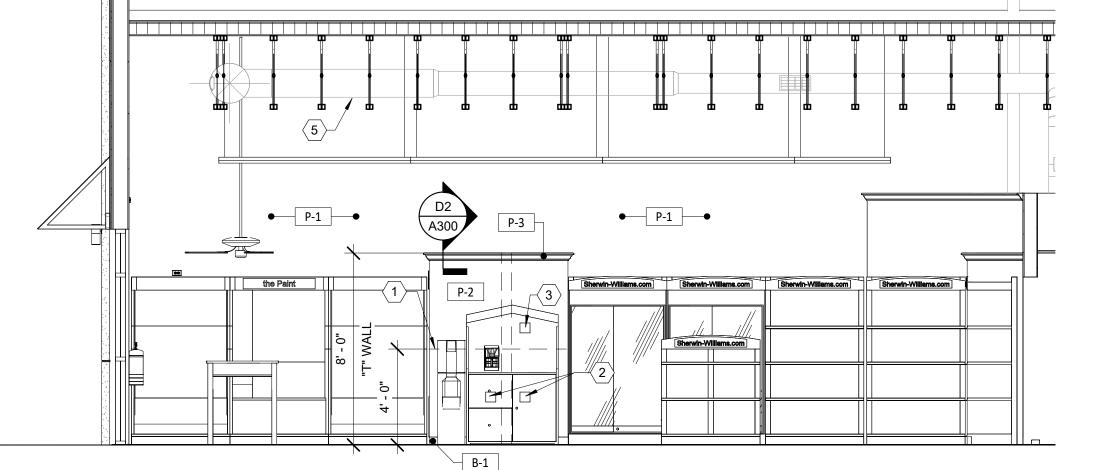
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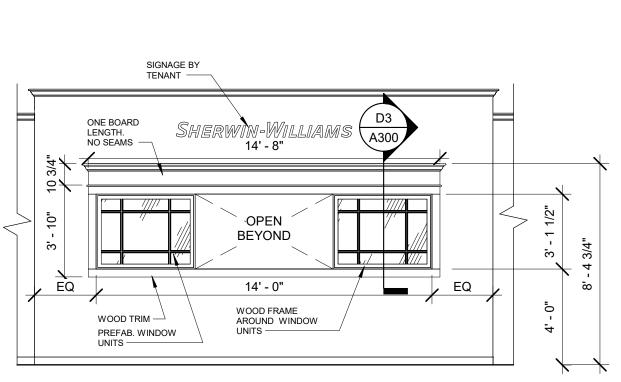
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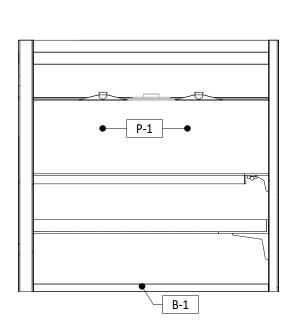
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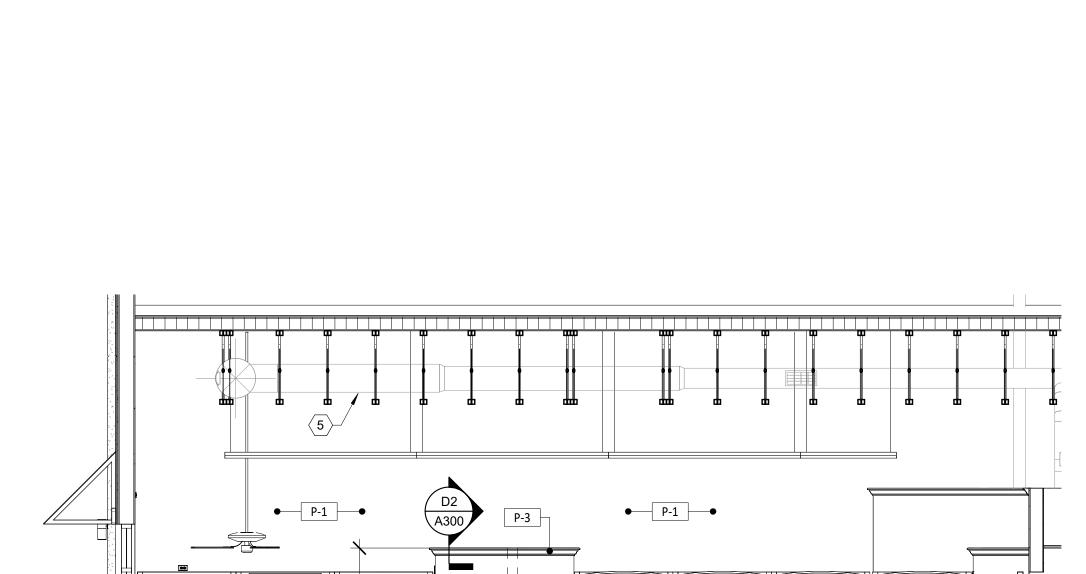












0'-3 1/16" EQ

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

EQ 0'-3 1/16"

- 3/4" WOOD CAP W/

TYP. - PAINT P-3 U.N.O.

ROUTED EDGES,

CONTINUOUS 2X4

WOOD BLOCKING

PAINT P-3 U.N.O.

SEE WALL TYPES

FOR FINISHES &

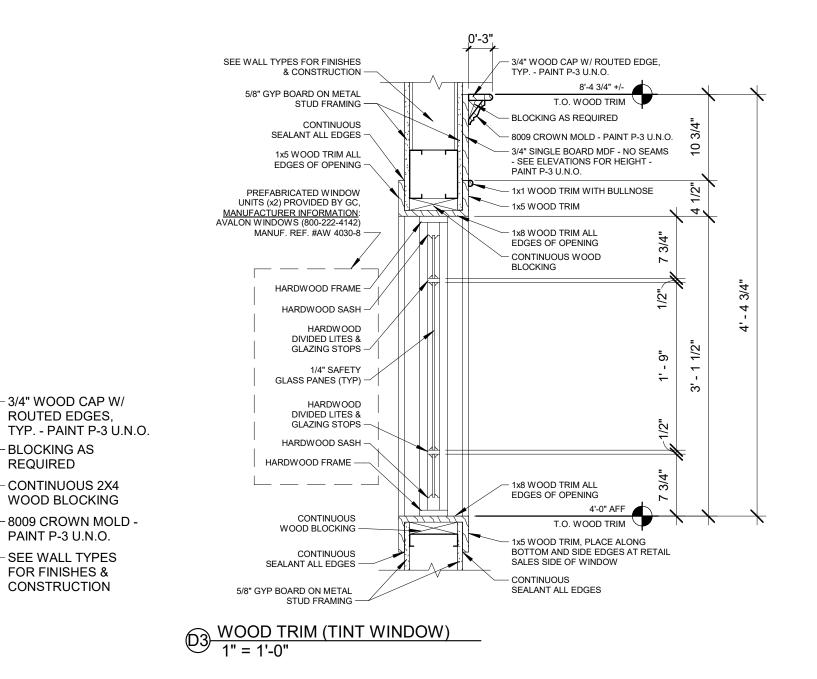
CONSTRUCTION

- 8009 CROWN MOLD -

- BLOCKING AS

REQUIRED

0'-3 1/8"



- 3/4" WOOD CAP W/

ROUTED EDGES,

- CONTINUOUS 2X4

WOOD BLOCKING

PAINT P-3 U.N.O.

SEE WALL TYPES

FOR FINISHES &

CONSTRUCTION

- 8009 CROWN MOLD -

- BLOCKING AS

REQUIRED

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 AVALON G.C. TO PROVIDE & INSTALL COORDINATE SPEC W/ SHERWIN-WILLIAMS CORPORATE
- 5 CONFIRM HVAC DUCTWORK AND DIFFUSER/RETURN LOCATIONS WITH MECHANICAL SHEETS - RUN DUCTWORK IN BEWEEN TRUSSES

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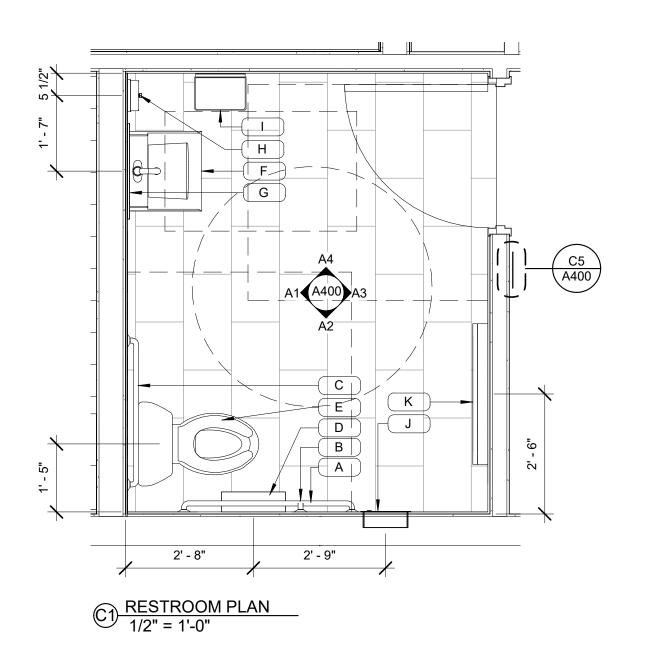
STORE #:

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SHEET TITLE:

Interior Elevations

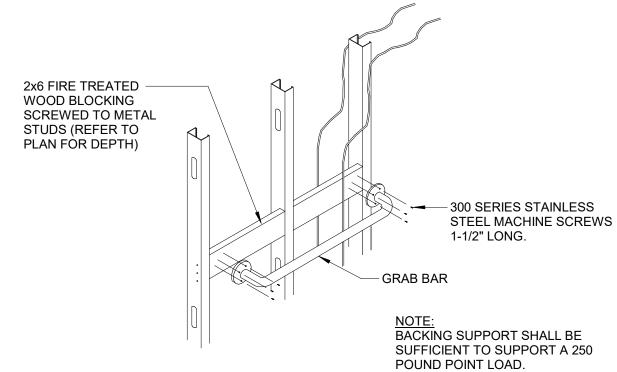
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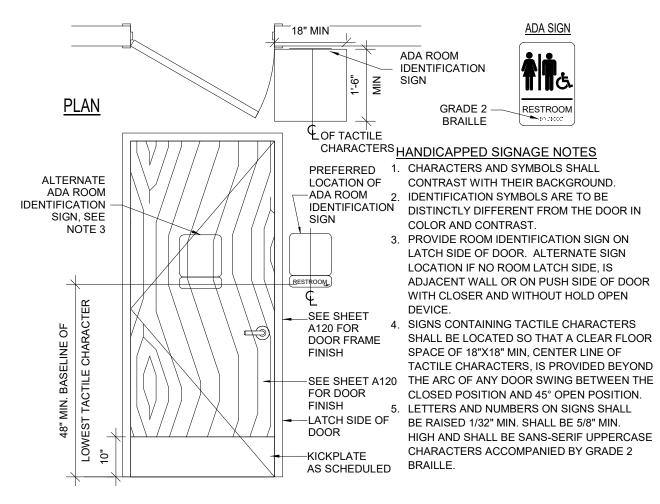


GENERAL NOTES

- 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
- 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

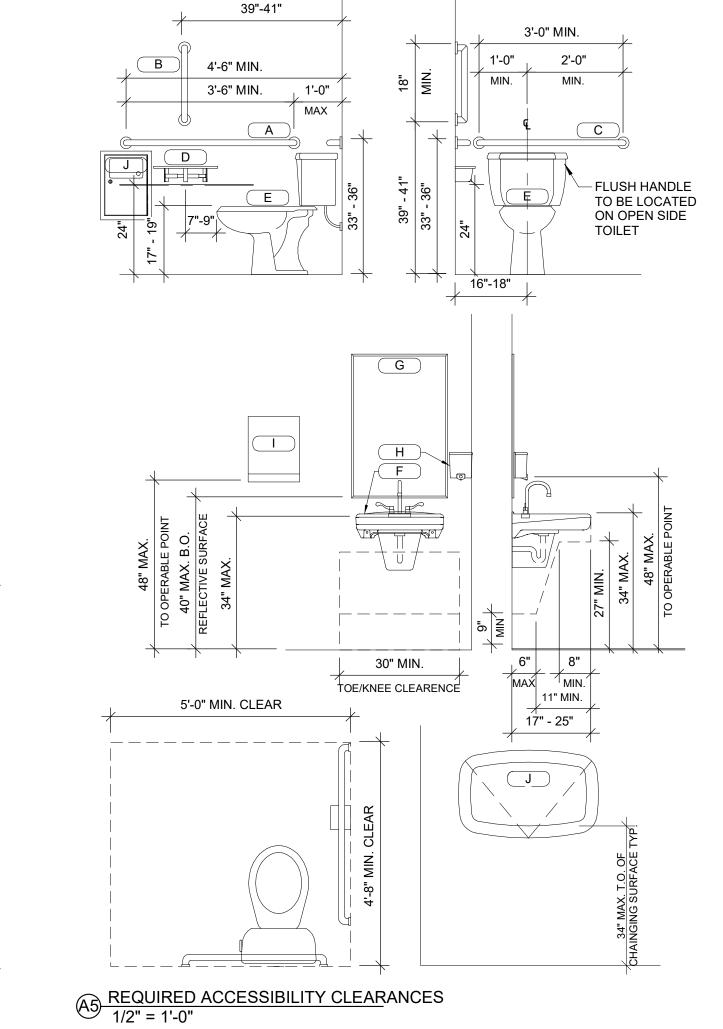


TYP. GRAB BAR ATTACHMENT DETAIL 1/2" = 1'-0"



PER ICC A117.1

C5 RESTROOM SIGNAGE DETA



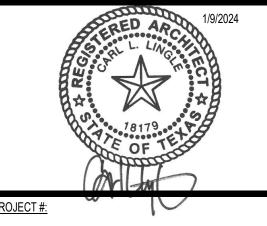
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DRAWN BY: BA CHECKED BY: MP

SHERWIN WILLIAMS

STORE #:
XXXX

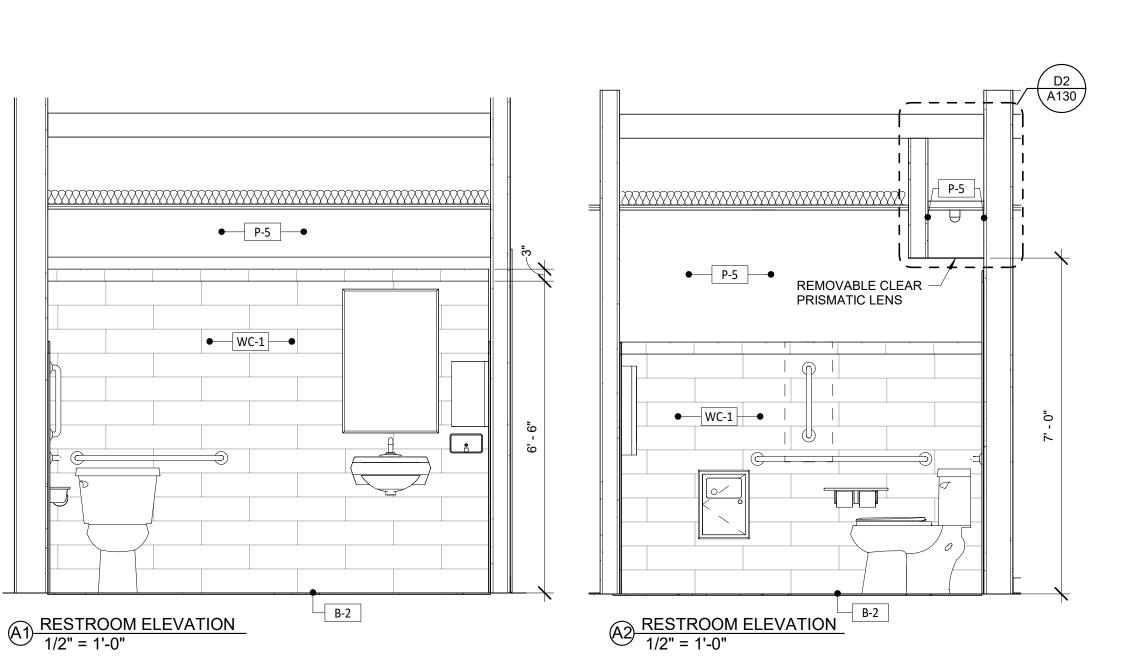
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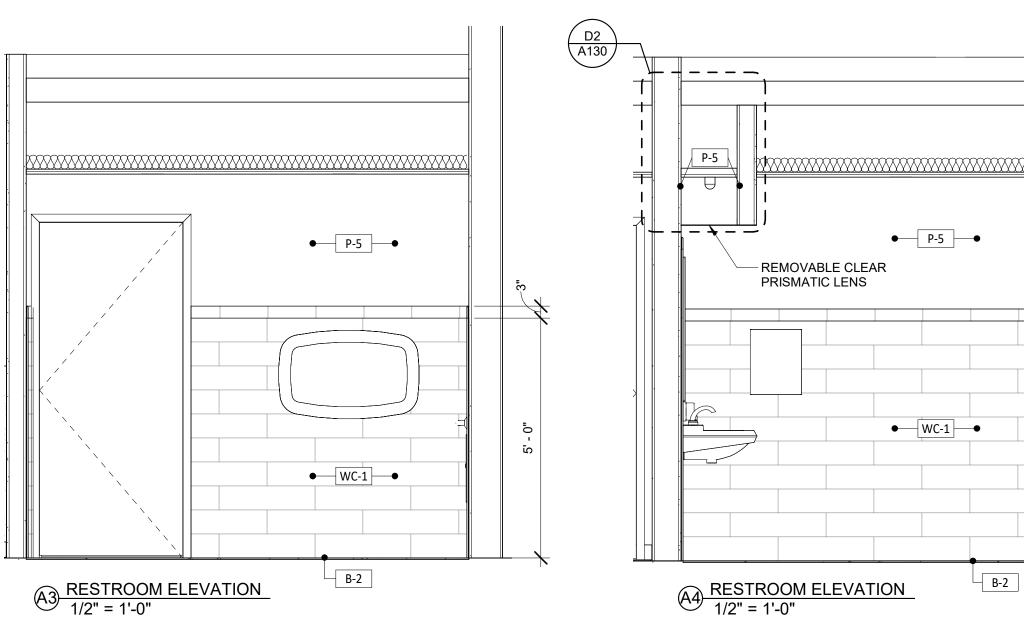
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SHEET TITLE:

Enlarged Restroom Plan

SHEET NUMBER:





STRUCTU	JRAL ABBREVIATIONS	STRUCT	URAL ABBREVIATIONS
#	POUND(S), NUMBER	INT	INTERIOR
&	AND	ISF	INSIDE FACE
(E)	EXISTING	J/BRG	JOIST BEARING
@	AT	JG	
	ANCHOR BOLT (S)	JG/BRG	
	ADDITIONAL	JST	
	ALTERNATE	JT	JOINT
B/FTG	ARCHITECT(URAL) BOTTOM OF FOOTING	kip ksi	
BLDG		ksi LB	kips PER SQUARE INCH POUND
BLKG		LLH	LONG LEG HORIZONTAL
BM	BEAM	LLV	
BMD	BOTTOM OF METAL DECK	MAX	MAXIMUM
BN	BOUNDARY NAIL	MECH	MECHANICAL
_	BOTTOM	MEZZ	
BP	BASE PLATE	MFR	
BRG BS	BEARING BOUNDARY SCREW	MIN	
BTWN		MISC MTL	METAL
CANT	CANTILEVER(ED)	NS	
CFS	COLD-FORMED STEEL	NTS	NOT TO SCALE
CIP	CAST-IN-PLACE	OC	ON CENTER
CJ	CONTROL OR CONST JOINT	ОН	OPPOSITE HAND
CL	CENTER LINE	OPNG	OPENING
CLR	CLEAR	OSF	OUTSIDE FACE
CMU	CONCRETE MASONRY UNIT	PAF	POWER-ACTUATED
COL	COLUMN		FASTENER
CONC	CONCRETE	PARA PEMB	PARAPET PRE-ENGINEERED METAL
CONN CONST	CONNECTION CONSTRUCTION	LEINID	BUILDING (MANUFACTURER)
CONST	CONTINUOUS	PIL	PILASTER
CTR	CENTER	PL	PLATE
DBA	DEAD BAR ANCHOR	PLBG	PLUMBING
DBL	DOUBLE	PLYWD	
DC	DEMAND CRITICAL (WELD)	psf	POUNDS PER SQUARE FOOT
deg	DEGREE	psi	POUNDS PER SQUARE INCH
DET	DETAIL(S)	PTDF	PRESSURE TREATED DOUGLAS FIR
DF DFL	DOUGLAS FIR DOUGLAS FIR LARCH	PTDFL	PRESSURE TREATED DOUGLAS FIR LARCH
dia DIM	DIAMETER DIMENSION	PTSPF	PRESSURE TREATED
DWG	DRAWING	PTSYP	SPRUCE PINE FIR PRESSURE TREATED
DWL EA	DOWEL EACH	ОТ	SOUTHERN YELLOW PINE
EE	EACH END	QT REINF	QUANTITY REINFORCED, REINFORCING
EF	EACH FACE	REQD	REQUIRED
EL	ELEVATION	RTU	ROOF TOP UNIT
ELEV	ELEVATOR	SCHED	SCHEDULE
EMB	EMBEDMENT	SD	SNOW DRIFT
EN	EDGE NAIL	SHTG	SHEATHING
EOJ	END OF JOIST	SIM	SIMILAR
EOS	EDGE OF SLAB	SL	SNOW LOAD
EQ	EQUAL	SPF	
ETC EW	ET CETERA EACH WAY	STD STL	
EXP			STRUCTURAL
EXT		SYP	
FDN		T&B	TOP AND BOTTOM
FF	FINISH FLOOR	T&G	TONGUE AND GROOVE
FIN FLR	FINISH FLOOR	T/BRG	TRUSS BEARING
FLR	FLOOR	T/CONC	TOP OF CONCRETE
FRMG		T/FTG	
	FIRE-RETARDENT TREATED	T/PAN	
FS	FAR SIDE	T/PARA	
FTG FV		T/PIL T/S	TOP OF PILASTER TOP OF SLAB
ga	GAUGE	T/STL	
GALV	GALVANIZE(D)	TYP	TYPICAL
GLB	GLULAM BEAM	UNO	UNLESS NOTED OTHERWISE
HDR		USGS	
HGR	HANGER	VAR	VARIES
HK	HOOK	VERT	
HORIZ	HORIZONTAL	w/	WITH
HSS	HOLLOW STRUCTURAL SECTION	WHS WP	WELDED HEADED STUD(S) WORK POINT
	-	WP WWR	WELDED WIRE
			REINFORCEMENT

SHOP DRAWING AND SUBMITTAL NOTES

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.

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.

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.

BUILDING CODES AND STANDARDS USED FOR DESIGN

INTERNATIONAL BUILDING CODE 2015 EDITION ASCE 7-10 OCCUPANCY CATEGORY: II **DESIGN LOADS** DESIGN LOADS **ROOF LIVE LOAD: ROOF DEAD LOAD:** SNOW LOAD DESIGN CRITERIA

SNOW LOAD IMPORTANCE FACTOR, I: 1.0 GROUND SNOW LOAD, Pg: 5 psf FLAT ROOF SNOW LOAD. Pf: 5 psf THERMAL FACTOR, Ct: 1.0 1.0 EXPOSURE FACTOR, Ce: MINIMUM FROST DEPTH: 1'-0" WIND LOAD DESIGN CRITERIA WIND IMPORTANCE FACTOR, I:

115 MPH (3 SEC GUST) **ULTIMATE WIND SPEED:** WIND EXPOSURE CATEGORY: WIND ENCLOSURE CLASSIFICATION **ENCLOSED** +/- 0.18 - 'a' DIMENSION 18 ft - 'h' DIMENSION SEISMIC LOAD DESIGN CRITERIA REDUNDANCY FACTOR, p SEISMIC IMPORTANCE FACTOR, 1.0 SITE CLASS:

SPECTRAL RESPONSE ACCELERATIONS: Ss=0.054g, S1=0.034g Sds=0.057g, Sd1=0.054g SEISMIC DESIGN CATEGORY: BASIC SEISMIC-FORCE RESISTING SYSTEM: FRAMED WOOD WALLS WITH

20 psf

20 psf

STRUCTURAL WOOD RESPONSE MODIFICATION FACTOR. R: 6.5 SYSTEM OVER-STRENGTH FACTOR, Ωo: 2.5 DEFLECTION AMPLIFICATION FACTOR, Cd: SEISMIC RESPONSE COEFFICIENT, Cs:

ANALYSIS PROCEDURE USED: **EQUIVALENT LATERAL FORCE**

COMPONENT & CLADDING (C & C) DESIGN WIND PRESSURES

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.

TABLES ARE APPLICABLE FOR ENCLOSED LOW-RISE BUILDINGS WITH A MEAN ROOF HEIGHT (h) LESS THAN OR EQUAL TO 60 FT.

REFER TO ASCE 7 DIAGRAMS FOR THE LOCATION OF WIND PRESSURE ZONES BASED ON ADOPTED CODE YEAR.

POSITIVE PRESSURES ACT TOWARD THE BUILDING, NEGATIVE & OVERHANG PRESSURES

ACT AWAY FROM THE BUILDING AND ARE APPLIED NORMAL TO THE C &C SURFACE. DELEGATED DESIGNERS ARE RESPONSIBLE FOR DESIGNING EACH C & C FOR THE

MAXIMUM POSITIVE AND NEGATIVE WIND PRESSURES BASED ON ASCE 7 LOAD

NO C & C SHALL BE DESIGNED FOR A NET PRESSURE OF LESS THAN 16 PSF ULTIMATE ACTING IN EITHER DIRECTION.

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 A MEMBER NET UPLIFT DESIGN.

ASCE 7-10 & EARLIER								
	ALL ROOF TYPES							
ROOF ZONES	10 SF	100 SF	200 SF	700 SF				
NEGATIVE 1	-23.8	-21.8	-21.8	-21.8				
NEGATIVE 2	-39.9	-30.0	-25.8	-25.8				
NEGATIVE 3	-39.9	-30.0	-25.8	-25.8				
POSITIVE 1	16.0	16.0	16.0	16.0				
POSITIVE 2 & 3	21.8	18.5	17.6	16.3				
OVERHANG 1 & 2	-34.3	-32.2	-27.9	-22.2				
OVERHANG 3	-34.3	-32.2	-27.9	-22.2				
WALL ZONES	10 SF	100 SF	200 SF					
NEGATIVE 4	-23.6	-20.4	-19.4					
NEGATIVE 5	-29.0	-22.6	-20.7					
POSITIVE 4 & 5	21.8	18.6	17.6					
PARAPETS	10 SF	100 SF	200 SF					
CASE A - ZONE 2	54.4	37.1	36.2					
- ZONE 3	54.4	37.1	36.2					
CASE B - EDGE ZONE 2	-38.1	-31.7	-29.8					
- CORNER ZONE 3	-43.5	-33.9	-31.0					

GENERAL STRUCTURAL NOTES

- 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.
- THE CONTRACTOR SHALL FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE DRAWINGS. DIMENSIONS NOT SHOWN ON PLAN TO BE COORDINATED WITH ARCHITECTURAL PLANS.
- 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.
- THE STRUCTURE SHALL BE ADEQUATELY BRACED AND SHORED DURING ERECTION AGAINST WIND AND ERECTION LOADS. STRUCTURAL MEMBERS ARE DESIGNED FOR "IN-
- PLACE" LOADS ONLY. THE GENERAL CONTRACTOR SHALL VERIFY ALL OPENING SIZES, PAD SIZES, AND LOCATIONS WITH THE RESPECTIVE CONTRACTORS.
- THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN CONSTRUCTION DOCUMENTS AND ACTUAL FIELD **CONDITIONS**
- 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.
- SEE ARCHITECTURAL PLANS FOR ADDITIONAL DETAILS AND INFORMATION
- ALL ELEVATIONS GIVEN ARE REFERENCED TO FINISHED FLOOR ELEVATIONS AT 0'-0". UNLESS SHOWN AS USGS ELEVATIONS.
- WHERE GENERAL NOTES OR TYPICAL DETAILS CONTRADICT INFORMATION PROVIDED IN BUILDING SECTIONS, THE BUILDING SECTIONS TAKE PRECEDENCE.
- ALL HOLES THROUGH CONSTRUCTION SHALL BE CORE DRILLED OR SAWCUT
- 12. WHERE INFORMATION PROVIDED IN THESE STRUCTURAL DRAWINGS CONTRADICTS INFORMATION PROVIDED IN PROJECT SPECIFICATIONS, THE SPECIFICATIONS SHALL TAKE PRECEDENCE.
- 13. 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
- 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.
- 15. 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

- THE BEARING VALUE AND LATERAL EARTH PRESSURES OF THE SOILS IS PER REPORT BY: ECS SOUTHWEST, LLP, DATED JULY 31 2023. THE FOUNDATION DESIGN IS BASED ON THE FOLLOWING NET ALLOWABLE BEARING AND LATERAL EARTH PRESSURES: SPREAD FOOTINGS 3,000 psf
 - CONT. WALL FOOTINGS 3,000 psf
- PASSIVE PRESSURE 280psf/ft
- FRICTION COEFFICIENT
- 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.
- ALL FOOTING EXCAVATIONS SHALL BE INSPECTED, PRIOR TO CONCRETE PLACEMENT. BY A SOILS ENGINEER TO VERIFY SUITABLE BEARING MATERIAL OF CAPACITY AS
- NOTIFY THE OWNER'S REPRESENTATIVE WHEN ADDITIONAL EXCAVATION IS REQUIRED TO REACH SUITABLE BEARING MATERIAL
- THE SOILS ENGINEER SHALL CERTIFY IN WRITING THAT ALL FOUNDATIONS WERE PLACED ON SOIL WITH THE BEARING VALUE AS SPECIFIED.
- 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. 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.

POST-INSTALLED ANCHOR NOTES

POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE CONSTRUCTION DOCUMENTS. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE ENGINEER OF RECORD PRIOR TO INSTALLING POST-INSTALLED ANCHORS IN PLACE OF MISSING OR MISPLACED CAST-IN-PLACE ANCHORS. CARE SHALL BE TAKEN IN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH EXISTING REBAR. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. SUBSTITUTION REQUESTS FOR PRODUCTS OTHER THAN THOSE SPECIFIED ON THESE DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ENGINEER OF RECORD ALONG WITH CALCULATIONS THAT ARE PREPARED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE CALCULATIONS SHALL DEMONSTRATE THAT THE SUBSTITUTED PRODUCT IS CAPABLE OF ACHIEVING, AT A MINIMUM, THE PERTINENT EQUIVALENT PERFORMANCE VALUES OF THE SPECIFIED PRODUCT USING THE BUILDING CODE. 1. TYPICAL POST-INSTALLED ANCHORS IN CONCRETE SHALL COMPLY WITH THE LATEST

- OF THEIR RESPECTIVE ICC EVALUATION REPORTS.
- WHEN INSTALLING ANCHORS IN CONCRETE, CONTRACTOR SHALL LOCATE EXISTING REINFORCING STEEL, CONDUITS, ETC, PRIOR TO DRILLING FOR ANCHORS. CONTRACTOR SHALL USE CARE AND CAUTION TO PREVENT DAMAGE TO EXISTING REINFORCING BARS.
- CONTRACTOR SHALL PROVIDE 1" MINIMUM CLEARANCE BETWEEN EDGES OF ANY HOLES FOR POST-INSTALLED ANCHORS AND EXISTING REINFORCING STEEL.
- CONTRACTOR SHALL PROVIDE INSPECTION AND TESTING AS REQUIRED PER THE
- "SPECIAL INSPECTIONS" SECTION OF THESE GENERAL STRUCTURAL NOTES. CONTRACTOR SHALL USE A HOLLOW DRILL BIT AND VACUUM SYSTEM WHEN DRILLING INTO CEMENTITIOUS MATERIALS

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.

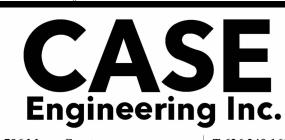
- STRUCTURAL STEEL CONNECTION CALCULATIONS AND SHOP FABRICATION DRAWINGS FOR CONNECTIONS.
- PRE-FABRICATED RED-BUILT TRUSS CALCULATIONS AND FABRICATION DRAWINGS **INCLUDING:**
 - ALL TRUSS-TO-TRUSS CONNECTIONS
 - PLAN AND DETAILS FOR THE LOCATIONS OF ALL ERECTION/TEMPORARY AND PERMANENT LATERAL AND DIAGONAL BRACING AND/OR BLOCKING.
- FRAMING PLAN LAYOUT (DIMENSIONED AND TO SCALE).
- 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
 - IDENTITY OF THE COMPANY MANUFACTURING THE TRUSS
 - DESIGN LOADS
 - TRUSS SPACING



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PROJECT #: LDG-TX-04-23 CHECKED BY: RR DRAWN BY: MLW

	CHECK SET - 10/XX/23
1	DEVELOPER COMMENTS - 12/20/23
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SHERWIN WILLIAMS

STORE #: XXXX

12360 W. SH 29, LIBERTY HILL, TX, 78642

SHEET TITLE:

GENERAL NOTES

CONCRETE NOTES

- 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
- 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.
- 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.
- ALL CONCRETE DENSITY SHALL BE NORMAL WEIGHT (145 pcf +/- 5) UNLESS OTHERWISE INDICATED
- FLY ASH ALLOWANCES:
- 20% MAXIMUM BY WEIGHT OF CEMENTITIOUS IN FOOTINGS
- 15% MAXIMUM BY WEIGHT OF CEMENTITIOUS MATERIAL IN SLABS
- NOT USED
- COORDINATÉ CONCRETE WORK WITH THAT OF OTHER TRADES TO ALLOW FOR SETTING OF SLEEVES, ACCESSORIES, ETC.
- 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.
- TEST CYLINDERS WILL BE REQUIRED, AND RECORDS OF RESULTS SHALL BE SUBMITTED TO ENGINEER OF RECORD. PROVIDE A MINIMUM OF (4) 6"x12" CYLINDERS FOR TESTING (1 AT 7 DAYS, 2 AT 28 DAYS, ONE SPARE). ALTERNATIVELY, PROVIDE A MINIMUM (5) 4"x8" CYLINDERS FOR TESTING (1 AT 7 DAYS, 3 AT 28 DAYS, ONE SPARE). SLUMP TESTS ARE
- CONSTRUCTION JOINTS IN CONCRETE INDICATED WITH A ROUGH, CLEAN SURFACE SHALL HAVE A 1/4" AVERAGE AMPLITUDE.
- 11. ALL COLD JOINTS SHALL BE ROUGHENED AND CLEANED PRIOR TO PLACING CONCRETE.
- 12. 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 PRE-ADDITIVE. MIXES SHALL HAVE A WATER SLUMP OF 2"-3" (3" TO 4" FOR CONCRETE RECEIVING A "DRY-SHAKE" HARDENER). MAXIMUM 4" WATER SLUMP FOR ALL OTHER CONCRETE NOT CONTAINING A WATER REDUCER.
- 13. SELF-CONSOLIDATING CONCRETE MAY BE USED FOR ALL ARCHITECTURAL CONCRETE AND HEAVILY REINFORCED MEMBERS AS SHOWN ON THE DRAWINGS. ALL SELF-CONSOLIDATING CONCRETE SHALL CONTAIN THE SPECIFIED HIGH-RANGE WATER-REDUCING ADMIXTURE AND VISCOSITY-MODIFYING ADMIXTURE WHERE REQUIRED MINIMUM SPREAD OF 22"-30" WHEN MEASURED IN ACCORDANCE WITH ASTM C1611 OR AS REQUIRED BY THE SUCCESSFUL TEST PLACEMENT. THE WORKABILITY, PUMPABILITY, FINISHABILITY, AND SETTING TIME OF THE PROPOSED MIX DESIGN SHALL BE VERIFIED WITH A SUCCESSFUL TEST PLACEMENT ONSITE. COMPRESSIVE STRENGTH: 5000 PSI AT 28 DAYS OR AS NOTED ON THE DRAWINGS.
- 14. AIR CONTENT: ALL CONCRETE EXPOSED TO FREEZING AND THAWING AND/OR REQUIRED TO BE WATER TIGHT SHALL HAVE AN AIR CONTENT OF 4.5% TO 7.5%. ALL INTERIOR SLABS AND ALL SLABS TO RECEIVE DRY-SHAKE SHALL HAVE A MAXIMUM AIR CONTENT
- 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.
- MAINTAIN REINFORCEMENT IN POSITION ON CHAIRS DURING CONCRETE PLACEMENT.
- SCREED SLAB SURFACES WITH A STRAIGHT EDGE AND STRIKE OFF TO CORRECT **ELEVATIONS**
- 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.
- SLOPE SURFACES UNIFORMLY TO DRAINS WHERE REQUIRED.
- 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.
- 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
- A. INSPECT TROWELLING MACHINE AND REMOVE ACCUMULATED MORTAR PRIOR TO EACH PASS.
- FINISH SURFACE SHALL BE FREE OF TROWEL MARKS, BURN MARKS AND MOTTLING. 17. 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.

POSURE	MINI OO DAY				
CLASS	MIN 28 DAY STRENGTH (psi)	MAX WATER-CEMENT RATIO	% TOTAL AIR LIMITS	MACRO SYNTHETIC FIBER (1)	% MAX SHRINKAGE @ 28 DAYS
F0	4,000	0.50	3	NO	0.04
F3	5,000	0.40	4.5 TO 7.5	-	0.05
F3	5,000	0.40	4.5 TO 7.5	-	0.05
F3	5,000	0.40	4.5 TO 7.5	-	0.05
-	F0 F3 F3	F0 4,000 F3 5,000 F3 5,000	F0 4,000 0.50 F3 5,000 0.40 F3 5,000 0.40	F0 4,000 0.50 3 F3 5,000 0.40 4.5 TO 7.5 F3 5,000 0.40 4.5 TO 7.5	F0 4,000 0.50 3 NO F3 5,000 0.40 4.5 TO 7.5 - F3 5,000 0.40 4.5 TO 7.5 -

REINFORCING STEEL NOTES

- NON-WELDED STEEL BAR REINFORCING SHALL CONFORM TO ASTM A615. GRADE 60. WELDED STEEL BAR REINFORCING SHALL CONFORM TO ASTM A706.
- 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.
- 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. MINIMUM CONCRETE COVER FOR REINFORCING STEEL IN CAST-IN-PLACE (NON-PRESTRESSED) CONCRETE SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED ON THE DRAWINGS:
 - CONCRETE CAST AGAINST EARTH = 3"
 - CONCRETE EXPOSED TO EARTH OR WEATHER:
 - #6 BAR AND LARGER = 2"
 - #5 BAR AND SMALLER = 1 1/2" CONCRETE NOT EXPOSED TO EARTH OR WEATHER (SLABS, WALLS, & JOISTS):

 - #14 BARS AND LARGER = 1 1/2" #11 BARS AND SMALLER = 3/4"
 - CONCRETE NOT EXPOSED TO EARTH OR WEATHER (BEAMS & COLUMNS):
- PRIMARY REINFORCEMENT, TIES, STIRRUPS, & SPIRALS = 1 1/2" 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 LAP SPLICE LENGTHS FOR BARS INSTALLED IN CONCRETE SHALL BE IN ACCORDANCE WITH THE TABLE.

<u>DEVELOPMENT LENGTH OF STANDARD HOOKS IN CONCRETE NOTES</u>

- 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. 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.
- 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			
#7	17	16	15			

TENSION LAP SPLICE LENGTH IN CONCRETE NOTES

- 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.
- 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.
- VALUES IN THE TABLE ARE BASED ON 60ksi REBAR. FOR OTHER REBAR YIELD STRENGTHS. MULTIPLY VALUES IN THE TABLE BY THE SPECIFIED YIELD STRENGTH WHERE BARS OF DIFFERENT SIZES ARE SPLICED, PROVIDE THE LAP LENGTH OF THE
- LARGER BAR.
- WELDED WIRE REINFORCEMENT (DEFORMED OR PLAIN WIRE) SHALL BE LAPPED ONE
- FULL MESH SQUARE PLUS 2 INCHES MINIMUM, BUT NOT LESS THAN 12 INCHES. REBAR IN ALL CONCRETE MEMBERS SHALL BE SPLICED IN ACCORDANCE WITH "TENSION LAP SPLICE LENGTH" TABLE, UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS.

<u>T</u>	ENSION LA	P SPLICE L	ENGTH IN	CONCRETI	E - 60 KSI R	EBAR TAB	LE (INCHES	<u>s)</u>
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
#7	58	87	54	81	51	77	49	73

WOOD FRAMING NOTES

- WOOD FRAMING SHALL CONFORM TO THE "LUMBER TABLE" UNLESS NOTED **OTHERWISE**
- 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. FOR WOOD FASTENING REQUIREMENTS, REFER TO TABLE 2304.9.1 FOR IBC 2012 AND OLDER, OR TABLE 2304.10.1 FOR IBC 2015 AND NEWER.
- 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
- 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
- ALL BOLTS SHALL BE RETIGHTENED IMMEDIATELY PRIOR TO CLOSING IN FRAMING 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.
- 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
- 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).
- 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: KILN-DRIED LUMBER: 19%
- TIMBERS: 19%
- LVL & PSL: 12%
- PLYWOOD: 8%
- OSB: 4%
- 11. ALL WOOD IN CONTACT WITH CONCRETE 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.

<u>LUMBER TABLE</u>						
MEMBER	SPECIES	GRADE				
2x PLATES, STRIPPING, MISC CONCEALED FRAMING, BLKG, & FIRE STOPPING	DOUGLAS FIR-LARCH	NO 1				
SILLS ON CONCRETE OR MASONRY	DOUGLAS FIR-LARCH	NO 1				
2x LUMBER	DOUGLAS FIR-LARCH	NO 1				
ALL 4x DIMENSIONED LUMBER	DOUGLAS FIR-LARCH	NO 1				
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)				

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"	

STRUCTURAL STEEL NOTES

- FABRICATION AND ERECTION OF STRUCTURAL STEEL MEMBERS IS TO BE IN ACCORDANCE WITH "AISC CODE OF STANDARD PRACTICE", LATEST EDITION. STEEL FABRICATOR SHALL PARTICIPATE IN THE AISC QUALITY CERTIFICATION
- PROGRAM AND BE DESIGNATED AN AISC-CERTIFIED PLANT, CATEGORY STD IT IS THE RESPONSIBILITY OF THE STEEL FABRICATOR TO DESIGN THE CONNECTIONS. CONNECTIONS ARE TO BE IN ACCORDANCE WITH CURRENT AISC STANDARDS AND APPLICABLE GOVERNMENT CODES. ALL CONNECTIONS SHALL BE BOLTED OR WELDED AND SHALL DEVELOP 60% OF THE ALLOWABLE UNIFORM LOAD TABULATED IN THE AISC "MANUAL OF STEEL CONSTRUCTION" FOR ALLOWABLE STRESS DESIGN. 10k (ASD). OR SHEAR REACTION SHOWN ON THE DRAWINGS, WHICHEVER IS GREATER. PROVIDE MINIMUM NUMBER OF ASTM F3125 GRADE A325 OR A490 BOLTS AS SHOWN IN THE
 - "STRUCTURAL STEEL BOLTED CONNECTIONS" TABLE. ANCHOR RODS TO BE ASTM F1554, GRADE 36 FULLY-THREADED RODS WITH PLATE WASHERS AND NUTS ON THE BOTTOM UNLESS NOTED OTHERWISE-SEE "TYPICAL ANCHOR BOLT" DETAIL
- BOLT HOLES SHALL BE 1/16" OVERSIZE UNLESS OTHERWISE NOTED ON THE DRAWINGS
- FIELD BURNING OF BOLT HOLES SHALL NOT BE PERMITTED
- WELDING SHALL BE PERFORMED BY AWS QUALIFIED WELDERS IN CONFORMANCE WITH AWS D1.1, USING E70 SERIES ELECTRODES, UNLESS OTHERWISE NOTED ON THE DRAWINGS. ADDITIONALLY, WELDING IN LOS ANGELES, CA SHALL BE PERFORMED BY CERTIFIED WELDERS.
- ALL STEEL SHALL BE SHOP PAINTED WITH A STANDARD ALKYD PRIMER (GRAY). FOR HARSH ENVIRONMENTS USE A GRAY ZINC ORGANIC OR INORGANIC PRIMER.
- FABRICATE ALL BEAMS WITH THE MILL CAMBER UP.
- CONNECTION NOTATION IS AS FOLLOWS. LOADS SHOWN ON PLAN/DETAILS ARE
- ALLOWABLE (ASD): SHEAR = V OR []
- MOMENT = MSTRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS AND **GRADES**:
- ANGLES, CHANNELS, PLATES, BARS, AND RODS = A36, fy = 36ksi
- RECTANGULAR HSS = A500 GRADE B, fy = 46ksi OR A500 GRADE C, fy=50ksi REFER TO "DEFERRED SUBMITTALS" FOR ADDITIONAL REQUIREMENTS.



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SHEET TITLE:

GENERAL NOTES

REINFORCED MASONRY NOTES

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) = 1,500 psi]

- 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.
- ALL MASONRY WALLS SHALL HAVE

HEAVY DUTY LADDER TYPE HORIZONTAL JOINT REINFORCING PER MASONRY WALL **ELEVATION**

VERTICAL REINFORCEMENT IS PER FOUNDATION PLAN.

- SUPPLY VERTICAL REINFORCING IN MINIMUM LENGTHS EQUAL TO 4'-0" PLUS LAP SPLICE LENGTH PER TABLE.
- WALL CONSTRUCTION LIFTS FOR REINFORCING BARS AND INSULATION FILL SHALL BE PER ACI 530.
- PORTLAND CEMENT AND LIME TYPE "S" MORTAR IS REQUIRED FOR ALL MASONRY UNLESS NOTED OTHERWISE.
- SEE ARCHITECTURAL PLANS FOR LOCATION AND DETAIL OF CONTROL JOINTS AND
- EXPANSION JOINTS. SEE TYPICAL CONTROL JOINT DETAIL FOR GUIDANCE 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.
- 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
- 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
- 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
- 18. VERTICAL REINFORCING BARS SHALL MAINTAIN MINIMUM CLEARANCES AS FOLLOWS UNLESS NOTED OTHERWISE ON DRAWINGS:
- INSIDE FACE OF MASONRY = 3/4" ADJACENT BARS NOT SPLICED = 1" OR 1 BAR DIAMETER, WHICHEVER IS GREATER.
- 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.

MASONRY LAP SPLICE LENGTH NOTES

- 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

f'm = 1,500 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	13	12	13
#4	6	15	12	23	12	23
#5	8	23	18	36	15	36
#6	9	43	34	70	28	70
#7	10	60	46	84	38	84

SPECIAL INSPECTIONS

- 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.
- 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.
- 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.
- THE SPECIAL INSPECTIONS IDENTIFIED ON THE PLANS ARE IN ADDITION TO, AND NOT A SUBSTITUTE FOR THOSE INSPECTIONS REQUIRED TO BE PERFORMED BY A
- 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
- 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.
- 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 - 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			

	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			
ANCHOR INSTALLATION	PERIODIC	INSPECT POST-INSTALLED MECHANICAL AND ADHESIVE ANCHORS NOT OTHERWISE SPECIFIED			
ANCHOR INSTALLATION	CONTINUOUS	INSPECT POST-INSTALLED MECHANICAL AND ADHESIVE ANCHORS PER THE REQUIREMENTS IN THEIR RESPECTIVE ICC-ES REPORTS			
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 - 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			

SPECIAL INSPECTIONS - OFF-SITE FABRICATION								
(INCLUDING PRE-MANUFACTURED WOOD STRUCTURAL								
	ELEMENTS AND A	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						

SPECIAL INSPECTIONS - STEEL TABLE

ODECLAL INCORPOTIONS OFF CITE EADDICATION

OI LOIAL INGI ECTIONS - STELL TABLE						
ITEM	INSPECTION FREQUENCY	SCOPE				
MATERIAL VERIFICATION	PERIODIC	HIGH STRENGTH BOLTS, NUTS, AND WASHERS: REVIEW MANUFACTURER'S CERTIFICATE OF COMPLIANCE; IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE CONSTRUCTION DOCUMENTS				
MATERIAL VERIFICATION	PERIODIC	STRUCTURAL STEEL: REVIEW MANUFACTURER'S CERTIFIED MILL TEST REPORTS; IDENTIFICATION MARKINGS ON STEEL SHAPES TO CONFORM TO AISC STANDARDS SPECIFIED IN THE CONSTRUCTION DOCUMENTS				
MATERIAL VERIFICATION	PERIODIC	WELD FILLER MATERIALS: REVIEW MANUFACTURER'S CERTIFICATE OF COMPLIANCE; IDENTIFICATION MARKINGS TO CONFORM WITH AWS SPECIFICATIONS IN THE CONSTRUCTION DOCUMENTS				
HIGH-STRENGTH BOLTING	PERIODIC	BEARING-TYPE CONNECTIONS: VERIFY BOLTS, NUTS, WASHERS, PAINT, INSTALLATION, AND TIGHTENING CONFORM TO THEIR RESPECTIVE STANDARDS				
WELDING	PERIODIC	SINGLE PASS FILLET WELDS NOT GREATER THAN 5/16"				
WELDING	PERIODIC	VERIFY WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706; ALL REINFORCING STEEL NOT REQUIRING CONTINUOUS INSPECTION				
WELDING	CONTINUOUS	COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS; MULTIPASS FILLET WELDS; SINGLE PASS FILLET WELDS > 5/16"				
STRUCTURAL DETAILS	PERIODIC	INSPECT STEEL FRAME FOR COMPLIANCE WITH CONSTRUCTION DOCUMENTS FOR MEMBER SIZES AND LOCATIONS, BRACING, AND CONNECTIONS				

SPECIAL INSPECTIONS - MASONRY - LEVEL 1 INSPECTION							
(LEVEL B QUALITY ASSURANCE)							
FOR OCCUPANCY CATEGORY I, II, III STRUCTURES INSPECTION							
ITEM	FREQUENCY	SCOPE					
REINFORCEMENT	PERIODIC	LAPPING AND SPLICING OF REBAR; LOCATION, PLACEMENT, GRADE, SIZE, AND TYPE OF REINFORCEMENT AND CONNECTORS					
REINFORCEMENT	CONTINUOUS	WELDING OF REINFORCING BARS					
INSTALLATION OF MASONRY, GROUT, AND MORTAR	PERIODIC	CONSTRUCTION OF MORTAR JOINTS; SIZE AND LOCATION OF STRUCTURAL ELEMENTS; PROTECTION OF MASONRY IN COLD WEATHER (BELOW 40°F) OR HOT WEATHER (ABOVE 90°F); CLEAN GROUT SPACE					
INSTALLATION OF MASONRY, GROUT, AND MORTAR	CONTINUOUS	GROUT PLACEMENT IN CELLS WITH STEEL REINFORCEMENT					
MIXING OF MORTAR AND GROUT	PERIODIC	PROPORTIONS OF SITE-PREPARED MORTAR AND GROUT					
ANCHORS	PERIODIC	INSPECT POST-INSTALLED MECHANICAL AND ADHESIVE ANCHORS PER THE REQUIREMENTS IN THEIR RESPECTIVE ICC-ES REPORTS					
EVALUATION OF STRENGTH	CONTINUOUS	PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/ OR PRISMS; VERIFY I'm PRIOR TO CONSTRUCTION. A "SET" IS HEREBY DEFINED AS A MINIMUM OF 4 PRISM SPECIMENS. A MINIMUM OF 1 SET SHALL BE PREPARED AND TESTED FOR EACH DAY MASONRY IS INSTALLED. TEST 1 PRISM AT 7 DAYS, 2 AT 28 DAYS, AND THE 4th PRISM AT THE EOR'S DIRECTION, IF REQUIRED. REPORT ALL TEST RESULTS TO THE ARCHITECT AND EOR WITHIN 3 WORKING DAYS OF TESTING.					
MISCELLANEOUS	PERIODIC	COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED					



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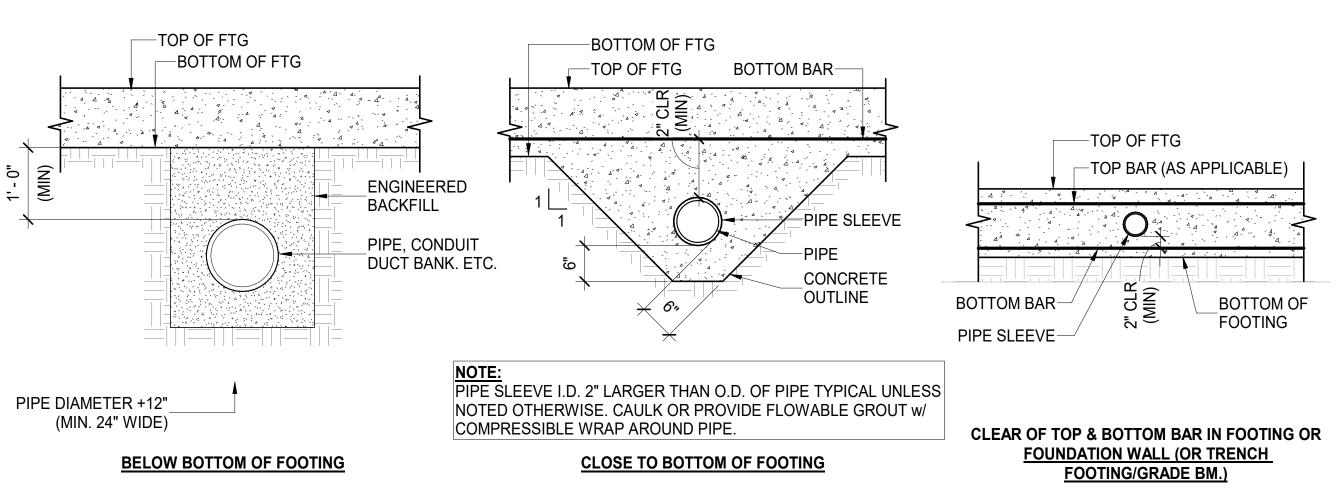
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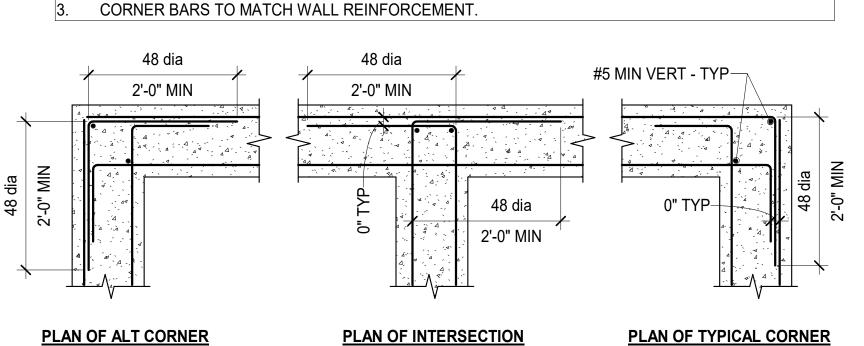
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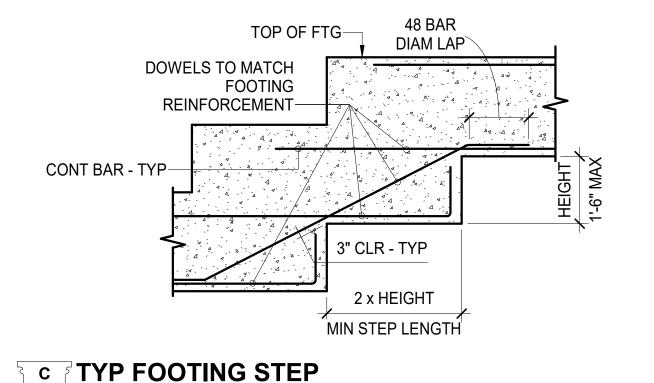
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GENERAL NOTES





WHERE SINGLE CURTAIN OF REINFORCING OCCURS, BEND BARS AS SHOWN FOR OUTSIDE BARS. FOR MORE THAN 2 BARS PER LAYER, EXTEND INNER BARS 12" INTO PERPENDICULAR FOOTING.



╎S1.4 ╴ N.T.S.

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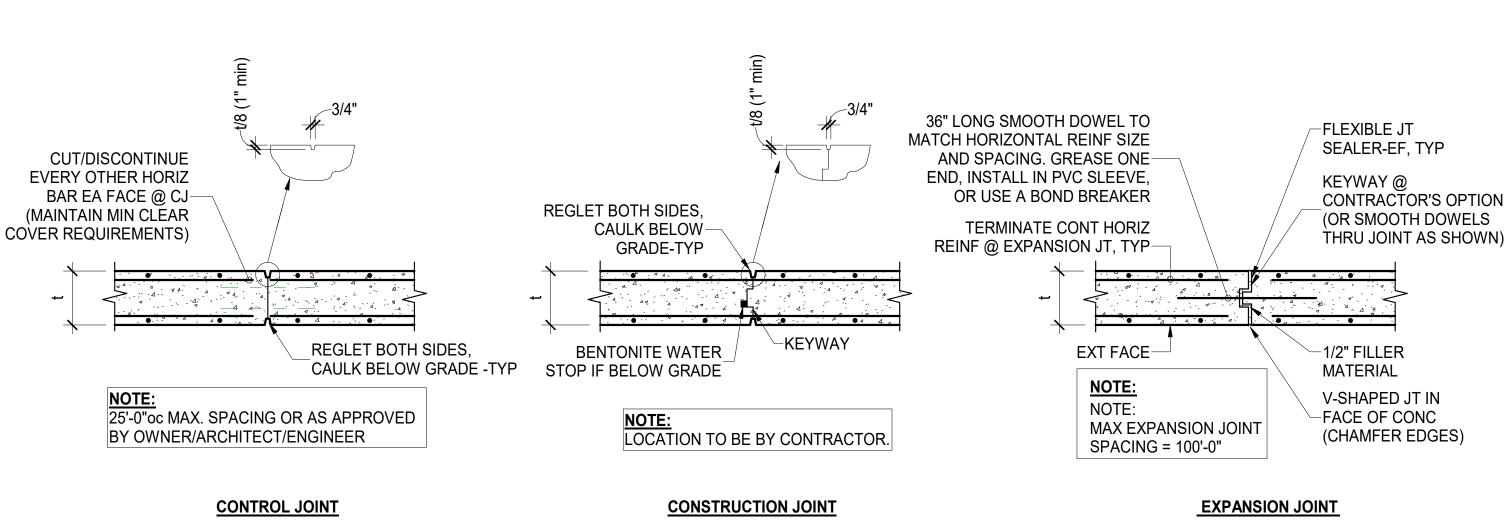
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B TYP CONCRETE WALL REINFORCEMENT └ S1.4 ╎ N.T.S.

OUTER BARS SHALL BE PLACED AS INDICATED



DITYP CONCRETE WALL CONTROL, CONSTRUCTION, AND EXPANSION JOINT DETAILS **TE TYP SLAB-ON-GRADE CONSTRUCTION JOINT DETAILS** ժ Տ1.4 ∖ N.T.S.

SLAB REINF CONTINUITY SHALL BE MAINTAINED **SLAB REINF CONTINUITY** CONT BEVELED SHALL BE MAINTAINED SAWCUT 1/8"x t/4 DEEP **KEYWAY** PROVIDE CAST IN JOINT PLATES OR DOWELS, & SUBMIT PRODUCT DATA. COMPACTED COMPACTED VAPOR BARRIER-**VAPOR BARRIER-**GRANULAR FILL GRANULAR FILL **CONSTRUCTION JOINT CONTROL JOINT**

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)

SPACE CONTROL JOINTS AT 15'-0" MAX. FOR INTERIOR SLABS UNO ON PLANS.

CONSTRUCTION JOINTS TO BE USED AT END OF EACH POUR.

F TYP REINF @ INTERIOR CORNERS S1.4 \ N.T.S.

#4 x 5'-0" @ MID-DEPTH OF

SLAB (WHERE 2'-6" CANNOT

BE OBTAINED, EXTEND AS

FAR AS POSSIBLE AND

-SLAB INTERIOR CORNER

HOOK)

−2X PT SILL AB & WASHER **\Phi** NOTCHED OR (TYP) DRILLED HOLE

NOTES:

္ဒ S1.4 👇 N.T.S.

Տ Տ1.4 է N.T.S.

္ဒ S1.4 👇 N.T.S.

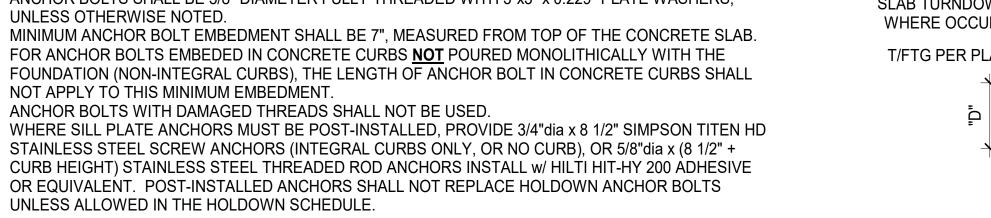
TYPICAL ANCHOR BOLT END DISTANCE L = 4 1/2" MIN, 12" MAX.

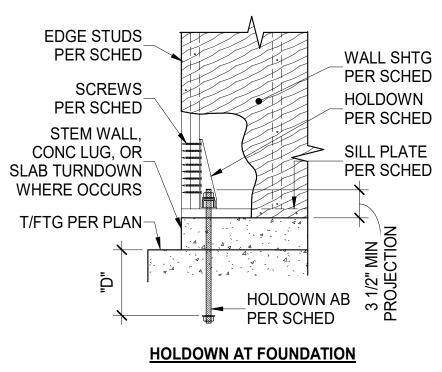
A TYP FOUNDATION PIPE PENETRATION DETAILS

- 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.
- 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.
- ANCHOR BOLTS SHALL BE 5/8" DIAMETER FULLY THREADED WITH 3"x3" x 0.229" PLATE WASHERS,
- 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
- ANCHOR BOLTS WITH DAMAGED THREADS SHALL NOT BE USED.

G TYPICAL SILL PLATE ANCHOR BOLT DETAIL

WHERE SILL PLATE ANCHORS MUST BE POST-INSTALLED, PROVIDE 3/4"dia x 8 1/2" SIMPSON TITEN HD 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





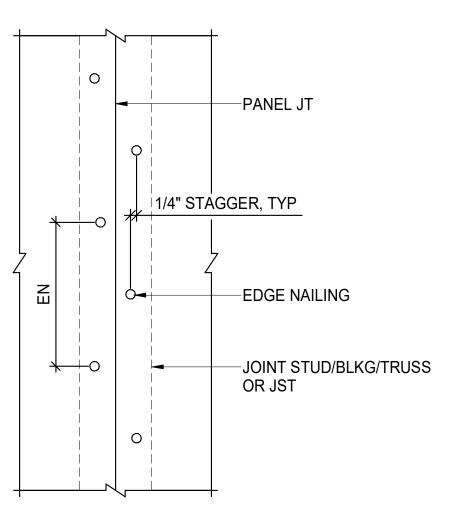
| S1.4 | N.T.S.

H TYP HOLDOWN SCHEDULE & DETAILS

HOLDOWN SCHEDULE									
MARK	EDGE SIMPSON HOLDOWN STUD SCWS STUDS SIMPSON HOLDOWN STUD SCWS STUD SCWS STALLED								
A	2 - 2x	HDU2-SDS2.5	6	5/8" GR.36	8"				
B	2 - 2x	HDU4-SDS2.5	10	5/8" GR.36	10"				
(C)	2 - 2x	HDU5-SDS2.5	14	5/8" GR.36	12"				
D	3 - 2x	HDU8-SDS2.5	20	7/8" GR.36	14"				

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.

- THICKENED FOOTING WHERE REQUIRED TO ACHIEVE MINIMUM ANCHOR BOLT
- WHERE HOLDOWN OCCURS ADJACENT TO A POST ON THE PLAN, USE THE LARGER OF THE INDICATED POST OR THE SCHEDULE EDGE STUDS.



J TYP STAGGERED EDGE NAILING DETAIL ┆ S1.4 ╴ N.T.S.

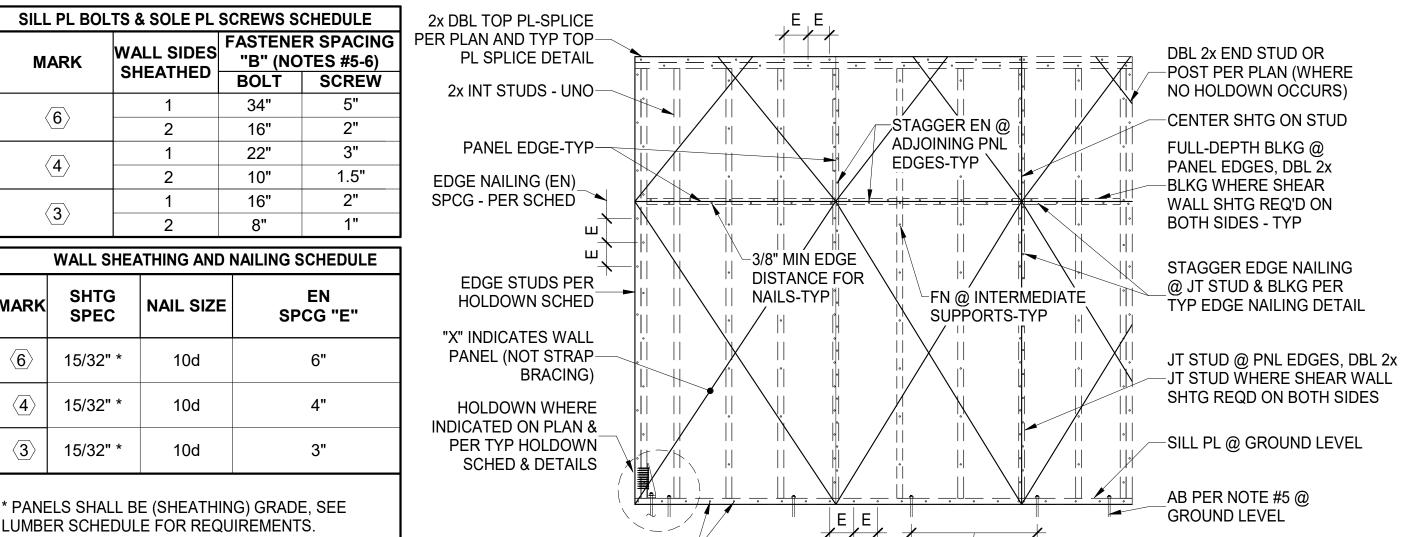
SHERWIN WILLIAMS

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> 12360 W. SH 29, LIBERTY HILL, TX, 78642

SHEET TITLE:

TYPICAL DETAILS



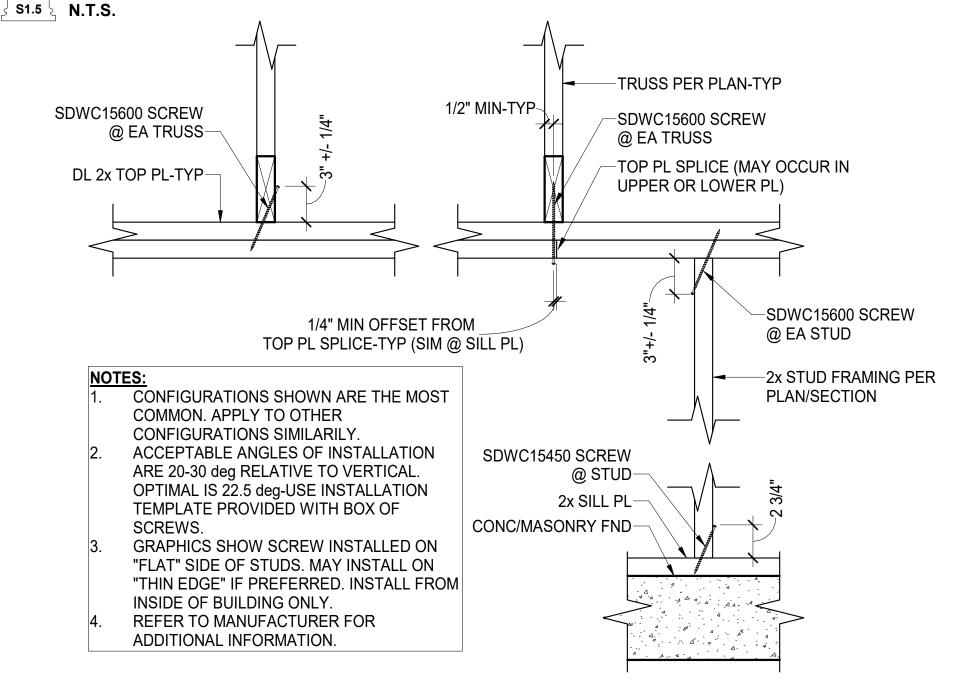
FIELD NAILING (FN): 10d @ 12"oc.

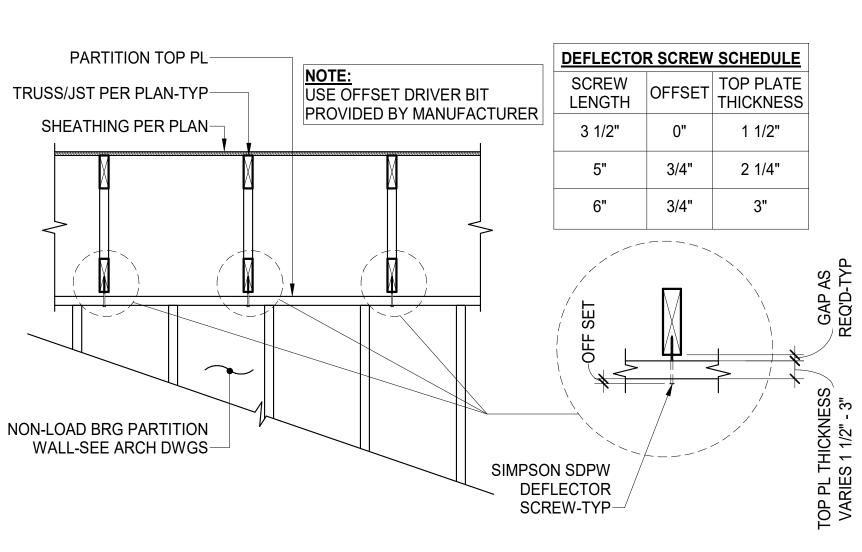
MINIMUM DIMENSION OF ANY SHEATHING SHEET EQUALS 16" OR STUD SPACING, WHICHEVER IS GREATER.

REFER TO ARCH DRAWINGS/ SPECIFICATIONS FOR FIRE-RETARDANT AND PRESERVATIVE TREATMENT, IF REQUIRED.

WHERE WALL HEIGHT NOTES: 1. POWDER-ACTUATED **HEADER PER** EXCEEDS 10'-0", CONT ROW SCHEDULE OF BLK MID-HEIGHT OF WALL FASTENERS (SHOT PINS) AND AT 8'-0"oc AND EXPANSION ANCHORS 2x TRIM STUD/POST SHALL NOT BE USED TO PER PLAN/SCHED ANCHOR WALLS ON CURBS -16d @ 12" OC, TYP SILL PLATE BOLT / OR AT SLAB EDGES. DBL KING STUD EA SIDE OF OPNG SOLE PL SCREW SPCG, "B" -2x SILL HOLDOWN ANCHOR BOLTS (SINGLE KING STUD @ INTERIOR-SHALL NOT REPLACE SILL **NON-BEARING WALLS)** ALL NAILS SHALL BE COMMON OR BOX WIRE NAILS −2x TRIM STUD PLATE ANCHOR BOLTS. 16d @ 12" OC, TYP ALL SHEAR WALL SHEATHING PANEL EDGES SHALL BE FULLY BLOCKED WITH FULL DEPTH 2x STUD BLOCKING-TYP-UNO. SILL PL AB PER SILL PLATES SHALL BE FASTENED WITH 5/8"dia x 7"LG EMBED ANCHOR BOLTS PER FASTENER SPACING "B" IN SCHEDULE ABOVE. TYPICAL DETAIL (2) 16d EA END-ALTERNATIVELY, USE 5/8" x 8"LG SIMPSON TITEN HD SCREW ANCHORS. BOTH OPTIONS REQUIRE 3"x3"x0.229" PLATE WASHERS AT EACH AB. A34 METAL FRAMING 2x PT SILL PL UNO, SEE CONNECTOR-TYP (OMIT FOR TYP DETAIL INTERIOR NON-BEARING WALLS)

A TYP SHEAR WALL SHEATHING AND FASTENER SCHEDULE - WOOD CONSTRUCTION





C TYPICAL SIMPSON SDWC TRUSS SCREW DETAIL

SHEATHING PER PLAN

SIMPSON PDPAW-250 @ 16"oc

STAGGERED - TYP EA SIDE

(WHERE OCCURS)

2x NAILER EA SIDE

MEMBER PER PLAN

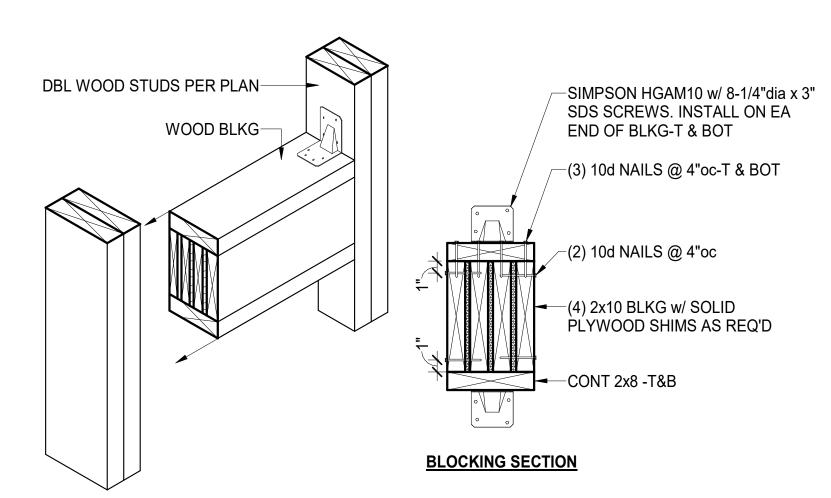
HSS FRAMING

EN - TYP

| S1.5 | N.T.S.

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

| S1.5 | N.T.S.



F TYP NAILER @ HSS COLUMN-NAILED G NAILER ON BEAM - PAF NAILED ج S1.5 کی N.T.S.

ያ S1.5 է **N.T.S.**

1/4" MAX

1/8" MIN - TYP

SIMPSON PDPAW-250

@ 16"oc STAGGERED

STEEL FRAMING MEMBER PER PLAN

-2x NAILER



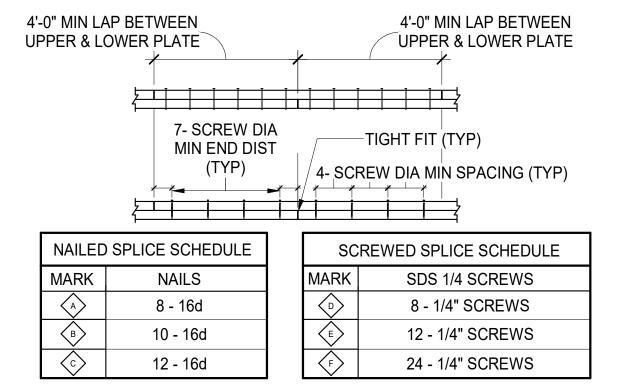


SPLICE DBL TOP PL PER

HDR, EA END

(4) 20d END NAILED TO

TYP DETAIL



CENTER DBL TOP PL

JT OVER STUD, TYP

-2x DBL TOP PL

NOTES)

NAIL PL TO STUDS PER IBC TABLE

-2x STUDS @ 16"oc - UNO

-2304.X.X. (SEE WOOD FRAMING GENERAL

4'-0" MIN DBL

TOP PLATE SPLICE

SPLICE 2x DOUBLE TOP PLATES PER MARK "A" AND 3x DOUBLE TOP PLATES PER MARK "D" OF THE ABOVE SCHEDULE, UNLESS OTHERWISE INDICATED.

- SCREWS SHALL BE 3" LONG FOR 2x PLATES AND 5" LONG FOR 3x
- JOINTS IN UPPER AND LOWER PLATE SHALL BE CENTERED OVER STUD
- OR MULLION.
- ALL NAILS SHALL BE COMMON WIRE NAILS.
- SCHEDULE INDICATES NUMBER OF NAILS OR SCREWS ON EACH SIDE OF EACH JOINT.

E TYPICAL TOP PLATE SPLICE DETAIL

| S1.5 | N.T.S.



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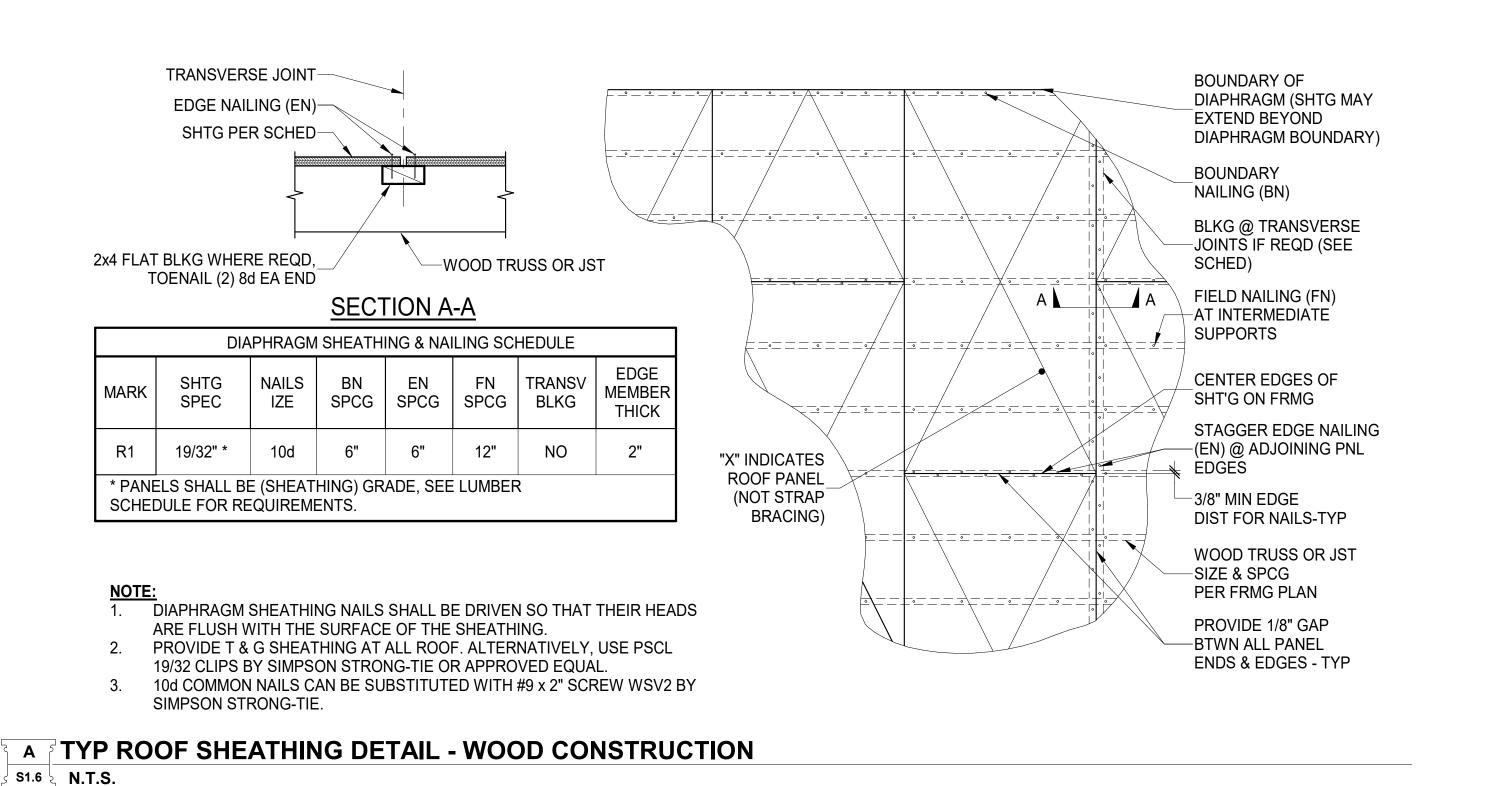
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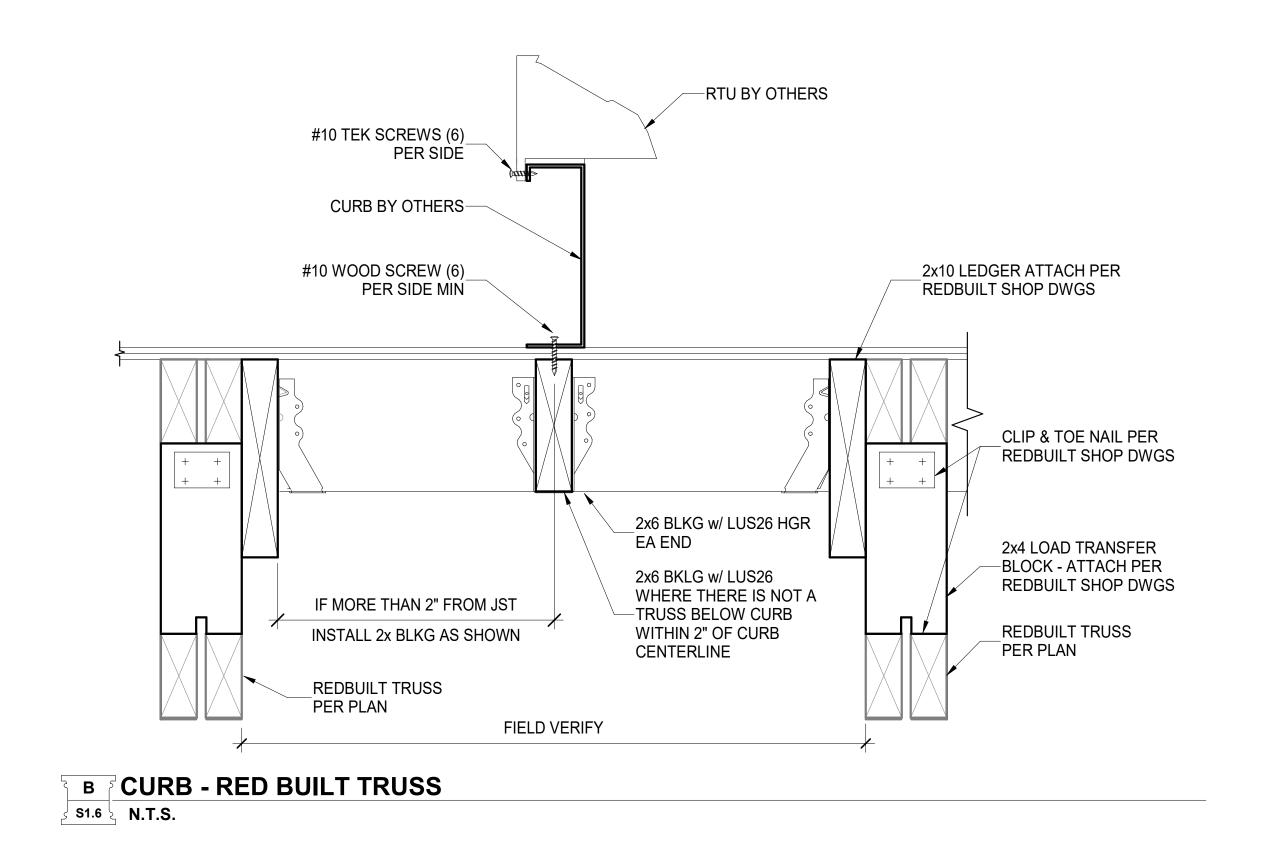
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SHEET TITLE:

TYPICAL DETAILS





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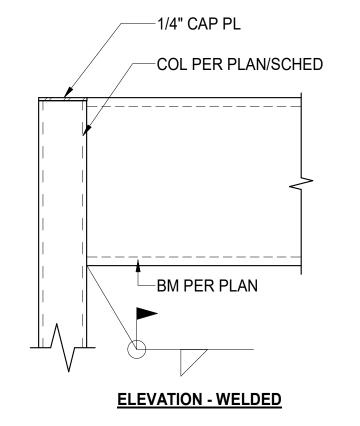
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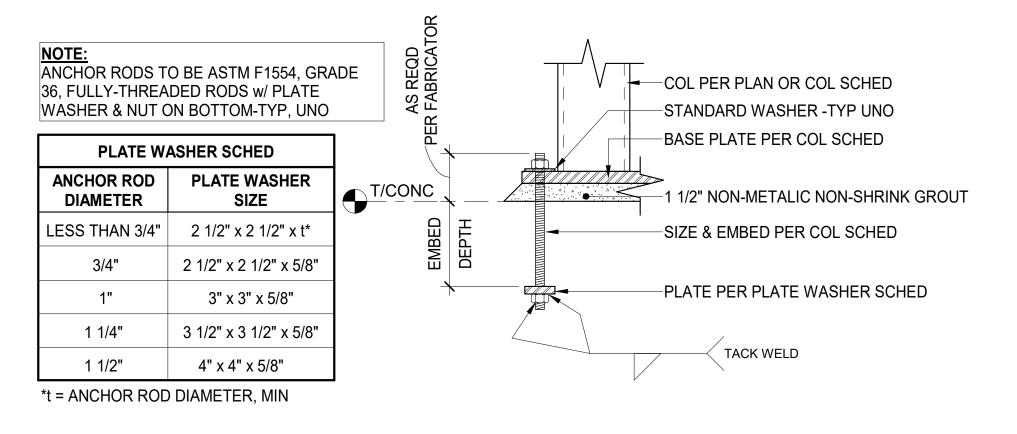
-2x6 BLKG - TYP 8d NAILS @ 3" oc @ PERIMETER OF -OPENING (EXISTING PLYWOOD DECK TO BLKG) -SIMPSON LUS26 HGR - TYP OF (8) LEDGER PER REDBUILT TRUSS ATTACHMENT DETAIL

c 72x6 BLKG - ROOF OPNG - REDBUILT TRUSSES S1.6 \ N.T.S.

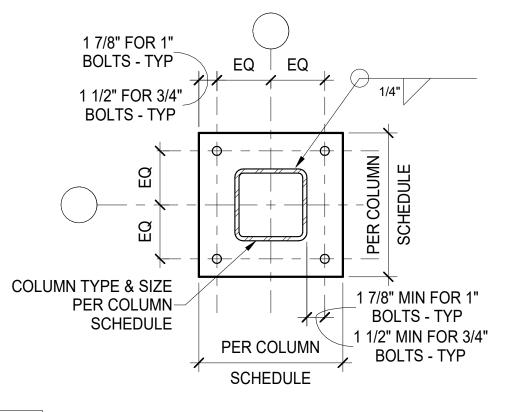
REDBUILT TRUSSES PER PLAN-



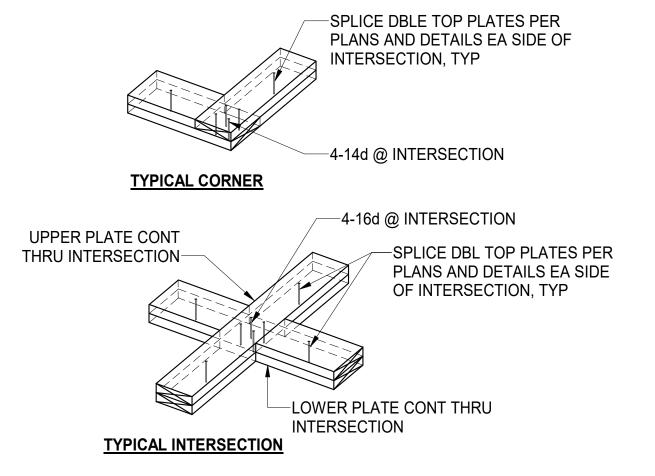
TYP HSS BM TO COL CONN DETAIL | S1.6 | N.T.S.



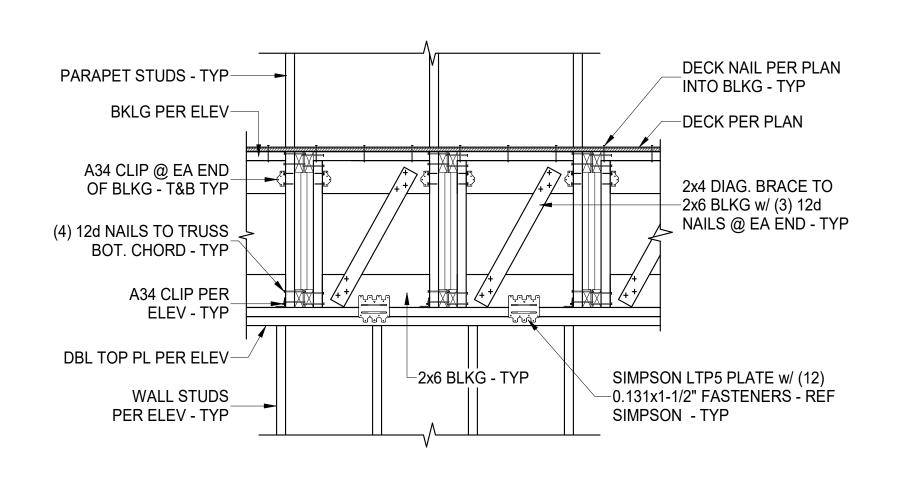
E TYP ANCHOR BOLT DETAIL | S1.6 | N.T.S.



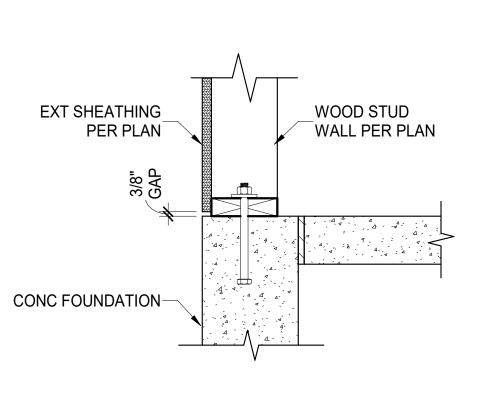
F TYP BASE PLATE DETAIL S1.6 \ N.T.S.



G TYPICAL TOP PLATE CORNERS & INTERSECTION DETAIL | S1.6 | N.T.S.



H TRUSS BLKG DETAIL @ LOAD BEARING WALL | S1.6 | N.T.S.



TYPICAL SHEATHING GAP DETAIL S1.6 \ N.T.S.

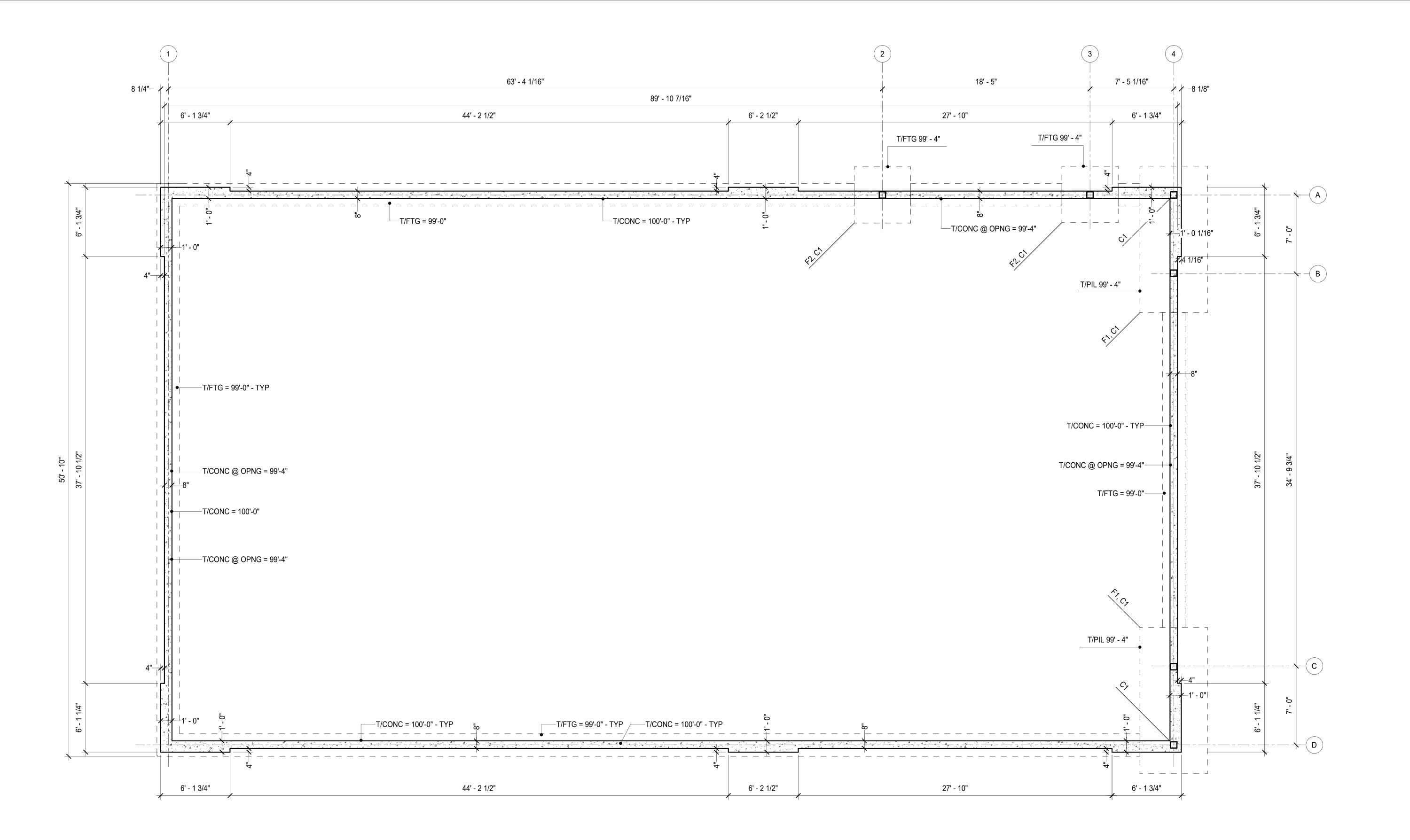
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OIIL	LIVVI		

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SHEET TITLE:

TYPICAL DETAILS



FOOTING SCHEDULE						
ARK SIZE REINFORCING						
F1	13'-0" x 6'-0" x 1'-4"	(9) #5 SW & (8) #5 LW - EW T&B				
F2	5'-0" x 5'-0" x 1'-4"	(7) #5 EW TOP & BOT				

COLUMN SCHEDULE								
MARK	SIZE	BASE PLATE	ANCHOR BOLTS					
C1	HSS 7" x 7" x 3/8"	13" x 13" x 1/2"	(4) - 3/4" dia. w/ 14" MIN EMBED					

FOUNDATION PLAN

PLAN NOTES

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

SEE SHEETS S1.1 - S1.6 FOR GENERAL NOTES AND TYPICAL DETAILS.

SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, SECTIONS, AND ELEVATIONS NOT SHOWN HEREON.
 COORDINATE SIZE AND LOCATION OF ROUGH OPENINGS IN FLOOR OR WALLS WITH ARCHITECTURAL DRAWINGS.
 SEE SHEET S2.2 FOR BALANCE OF INFORMATION

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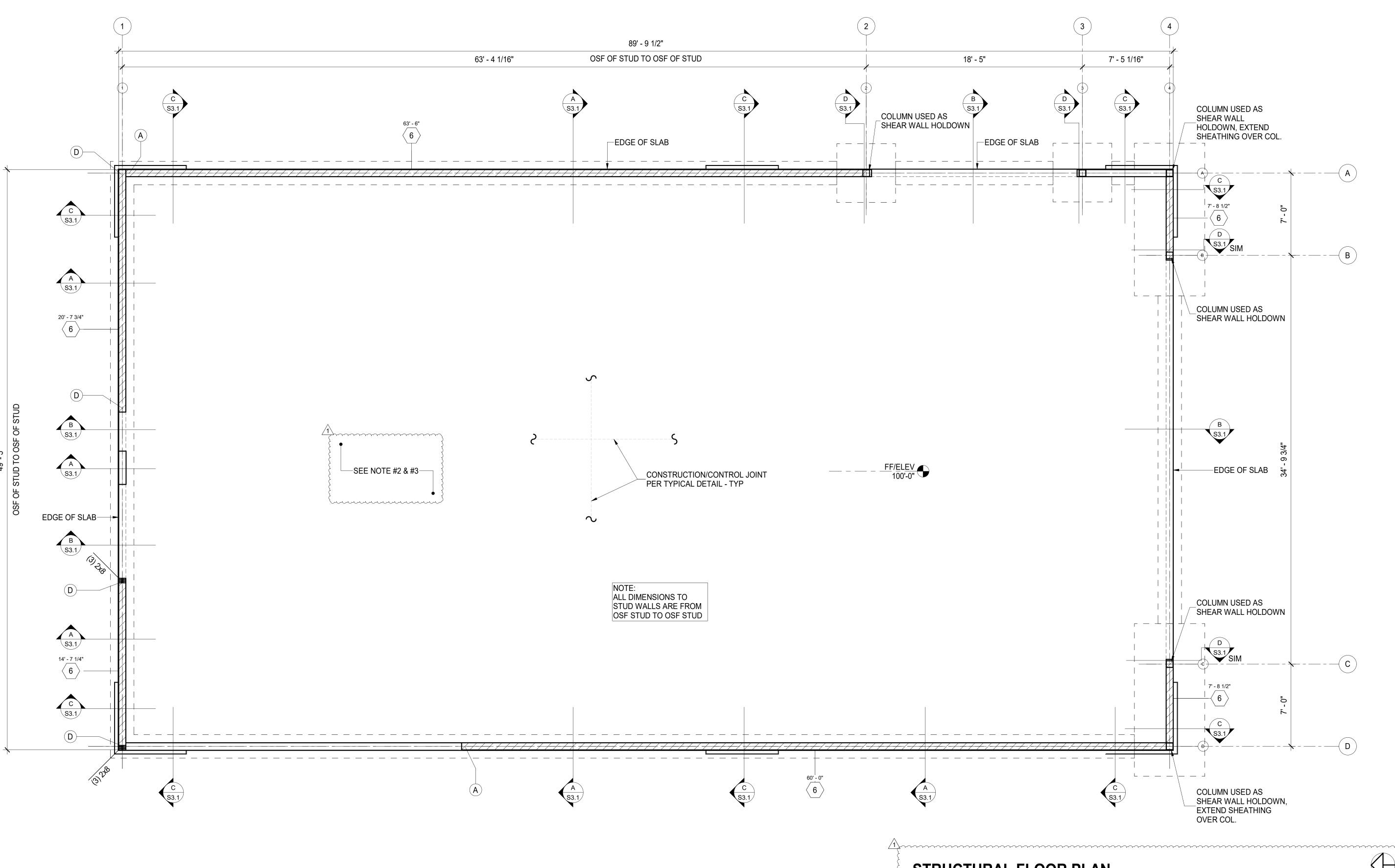
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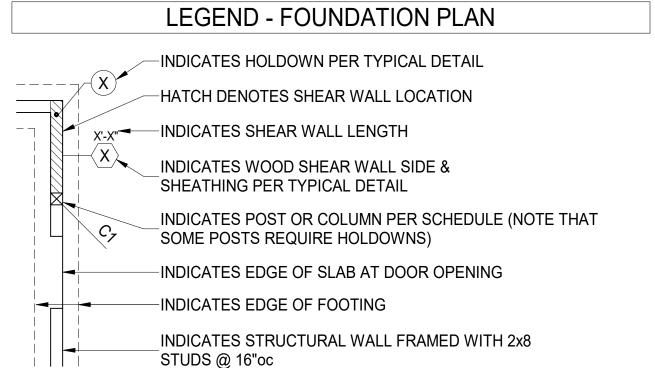
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SHEET TITLE:

STURCTURAL FLOOR PLAN





STRUCTURAL FLOOR PLAN **PLAN NOTES** SCALE: 1/4" = 1'-0" SEE SHEETS S1.1 - S1.6 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 6" MINIMUM COMPACTED SUB-BASE AS RECOMMENDED BY THE SOILS REPORT. REINFORCEMENT TO BE LOCATED IN THE MIDDLE OF THE SLAB. 3. FLOOR FLATNESS PER ACI 117 (SPECIFIED OVERALL, MINIMUM LOCAL): (75, 38); FLOOR LEVELNESS PER ACI 117 (SPECIFIED OVERALL, MINIMUM LOCAL): (50, 25). SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS, SECTIONS, AND ELEVATIONS NOT SHOWN HEREON. COORDINATE SIZE AND LOCATION OF ROUGH OPENINGS IN FLOOR OR WALLS WITH ARCHITECTURAL DRAWINGS. ALL ELEVATIONS ARE REFERENCED FROM FINISHED MAIN FLOOR = 100'-0" T/FTG = TOP OF FOOTING = PER PLAN T/CONC = TOP OF CONCRETE ELEVATION = PER PLAN

7. 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.

ALL DIMENSIONS ARE OUTSIDE FACE OF STUD TO OUTSIDE FACE OF STUD SEE SHEET S2.1 FOR BALANCE OF INFORMATION

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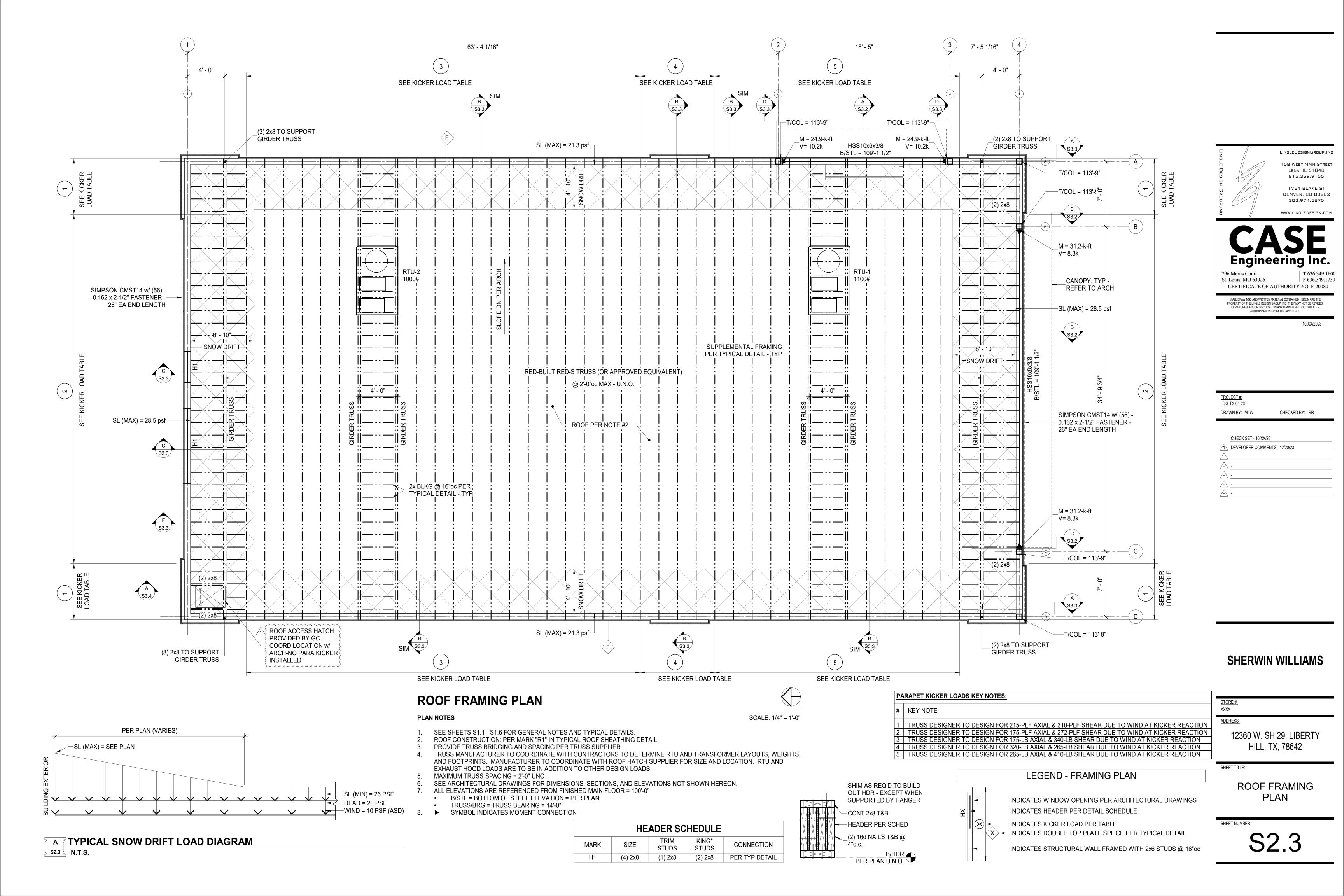
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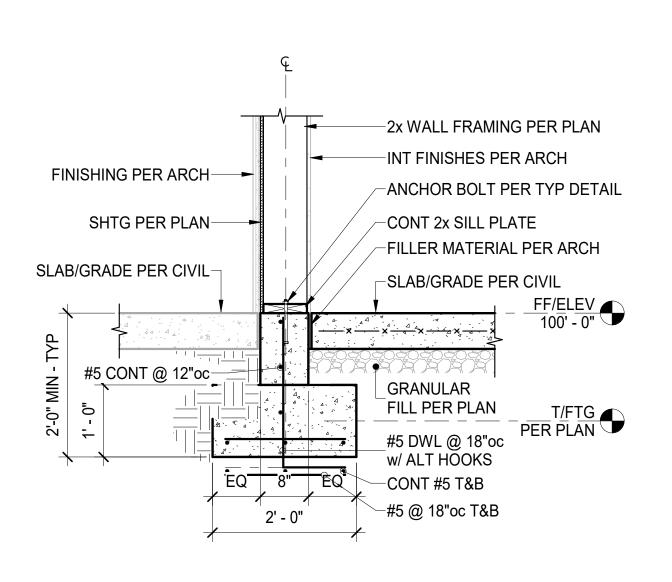
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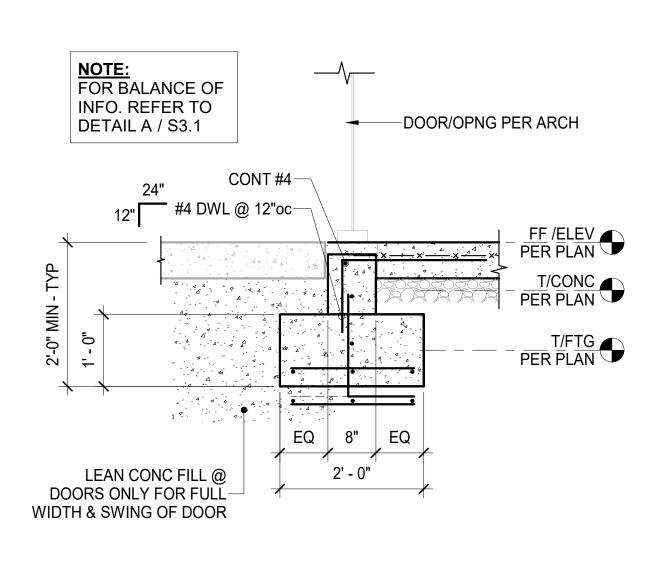
FOUNDATION PLAN





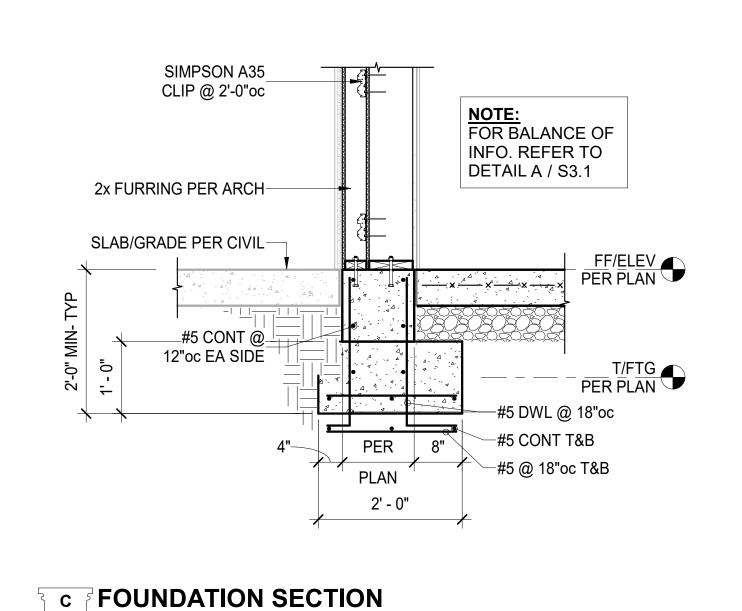
FOUNDATION SECTION

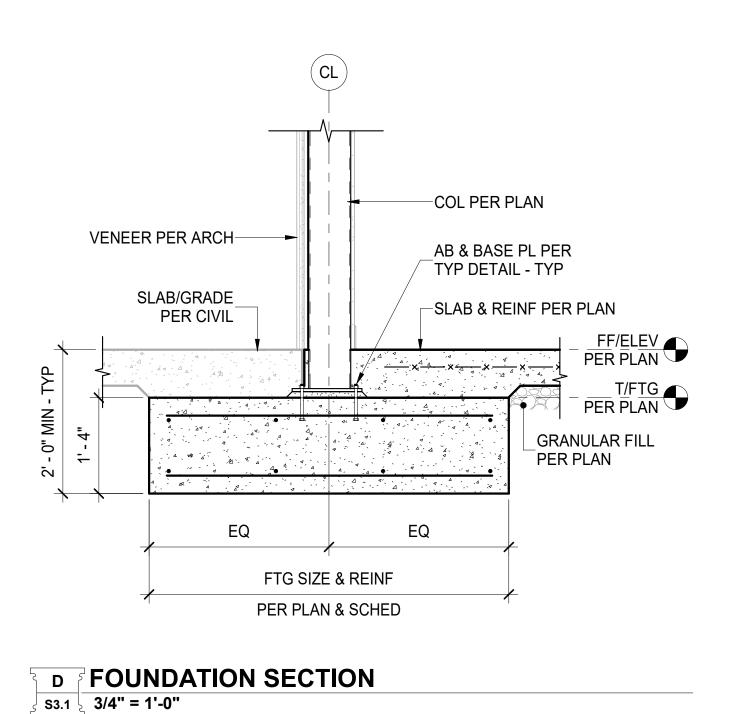
S3.1 3/4" = 1'-0"



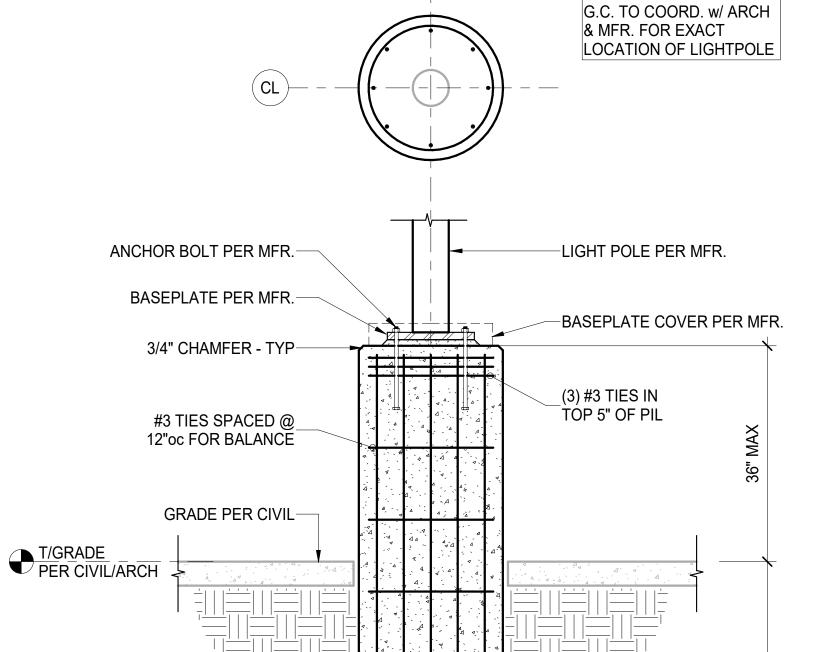
в FOUNDATION SECTION

S3.1 3/4" = 1'-0"





CL NOTE:



2' - 0"

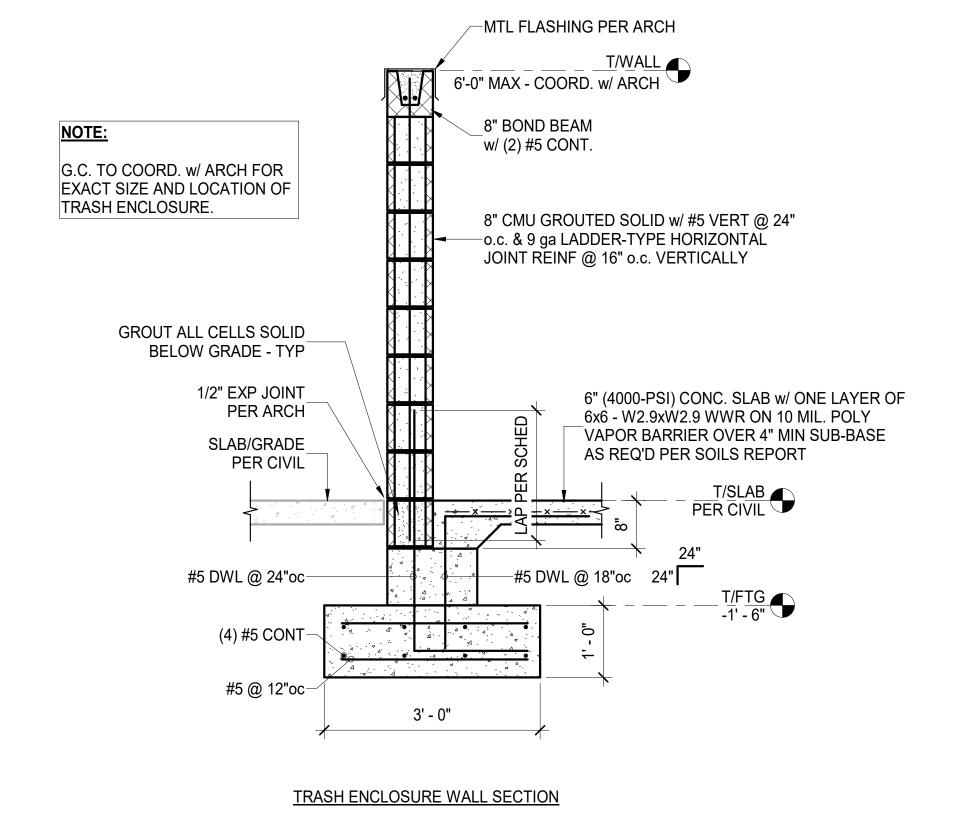
DIAMETER

-3" CLR

(8) #5 VERTS

EQ SPACED





s3.1 3/4" = 1'-0"

F FOUNDATION SECTION
S3.1 3/4" = 1'-0"

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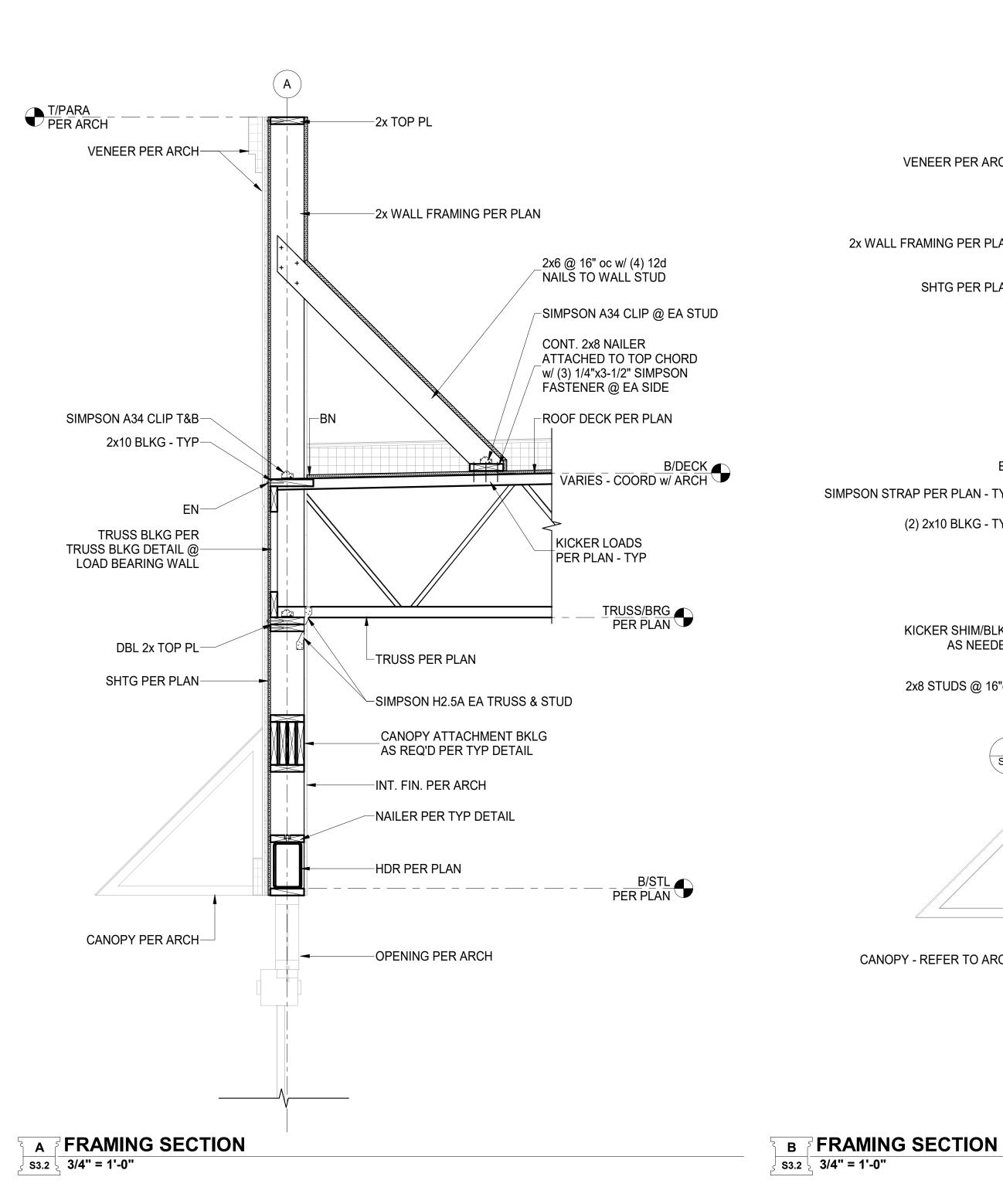
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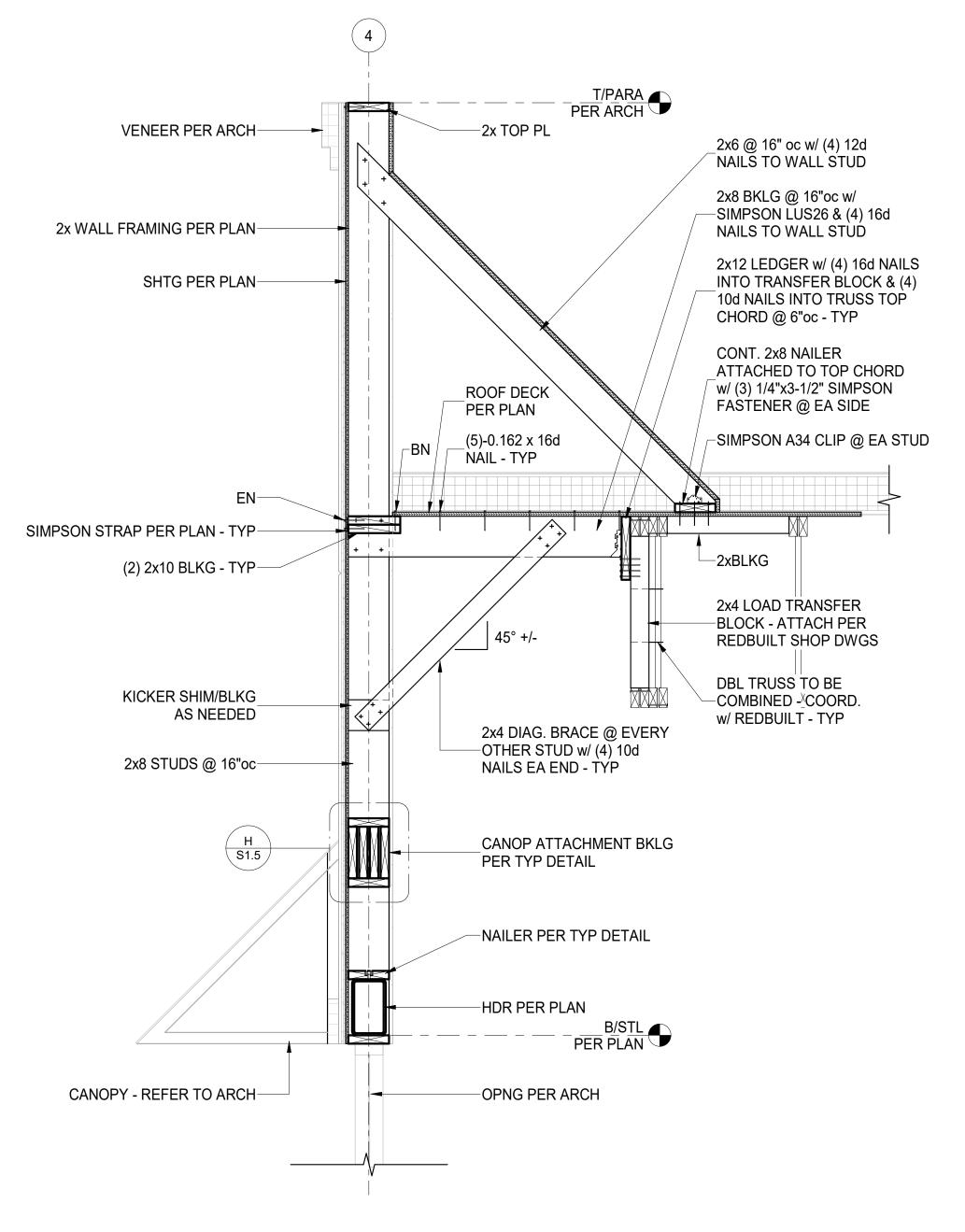
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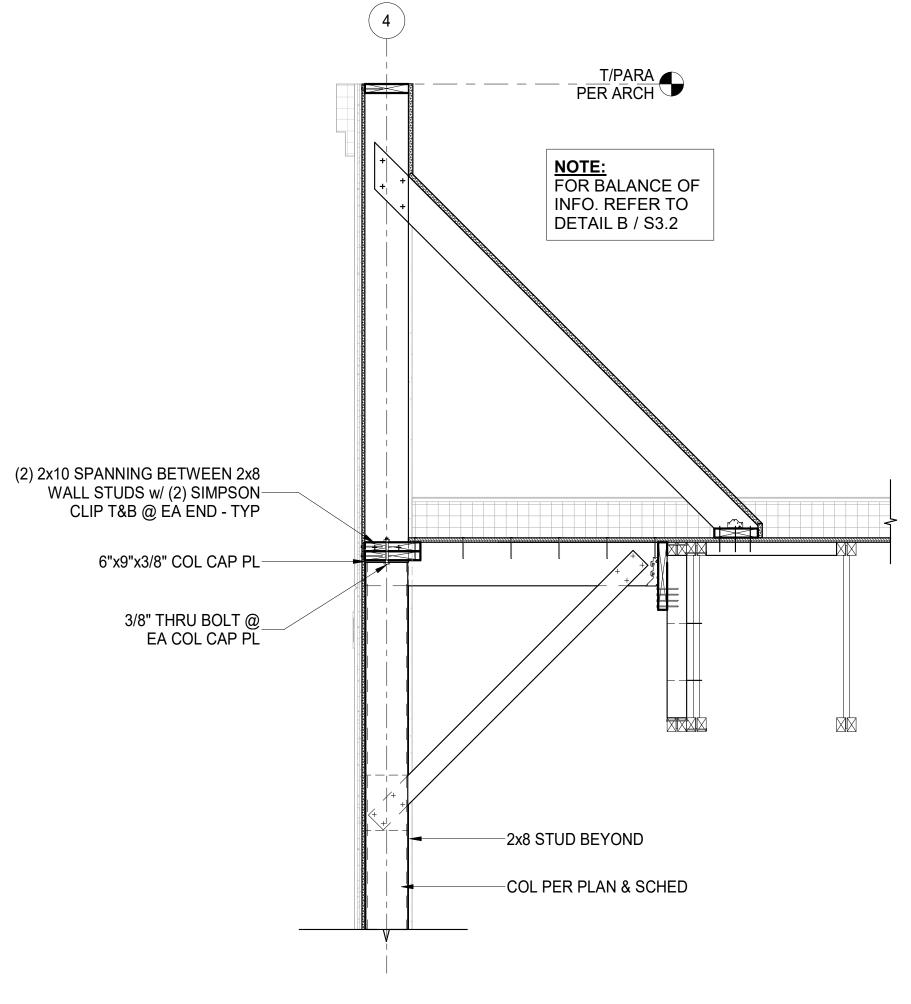
FOUNDATION SECTIONS

SHEET NUMBER:

S3.1







c FRAMING SECTION s3.2 3/4" = 1'-0"

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<u></u>	-
<u>_</u>	

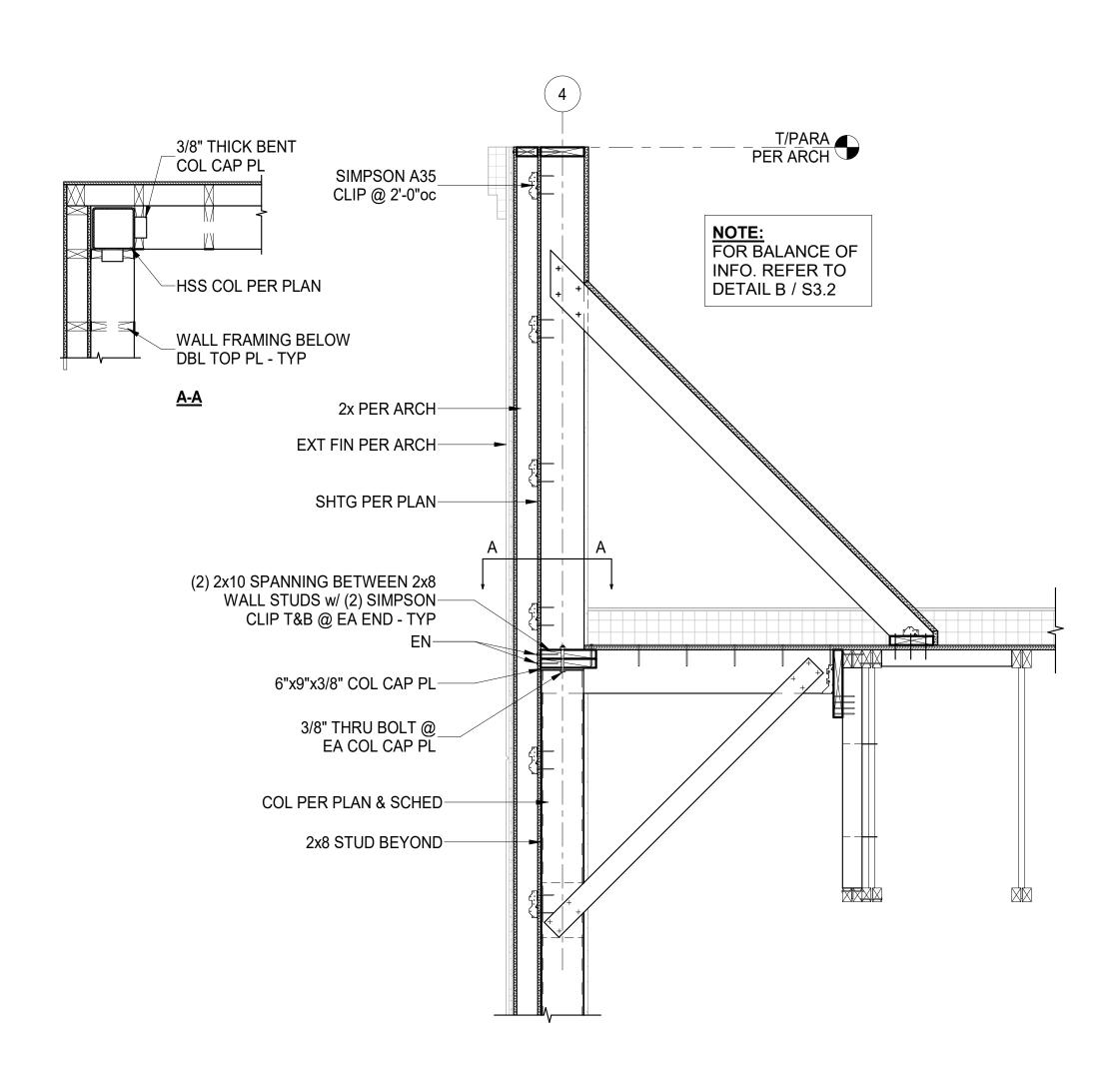
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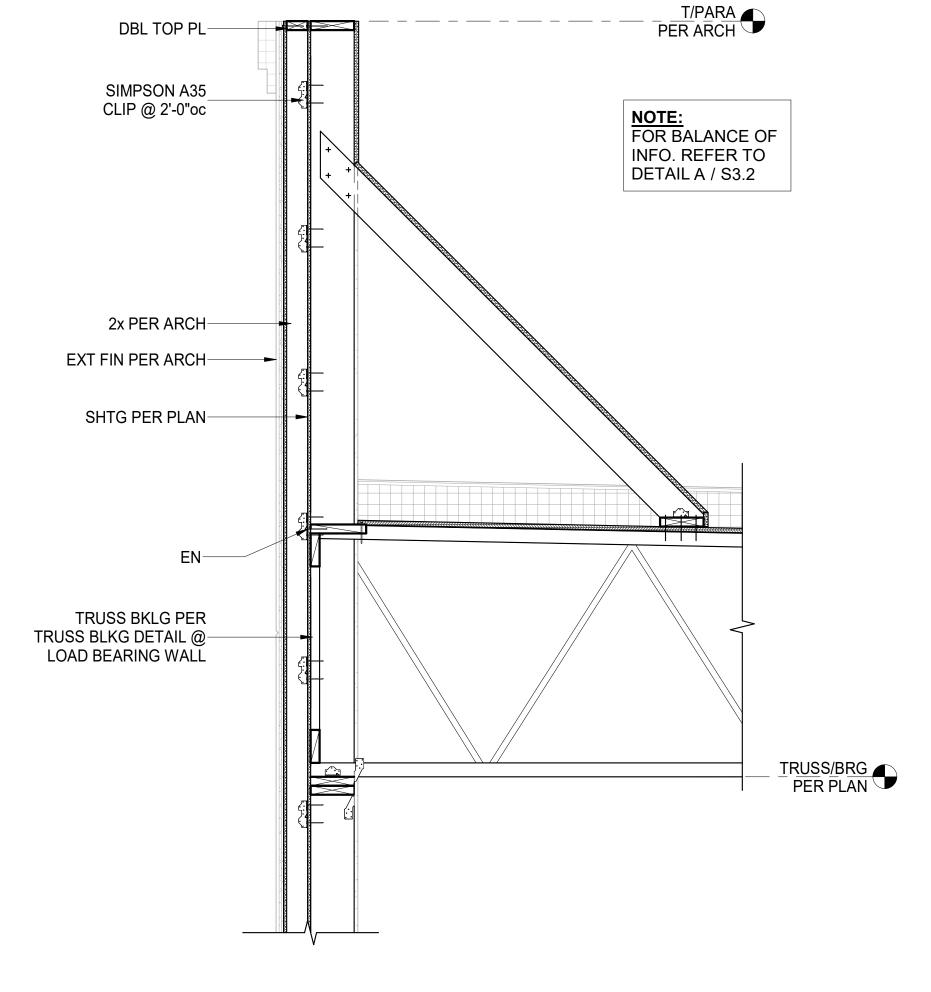
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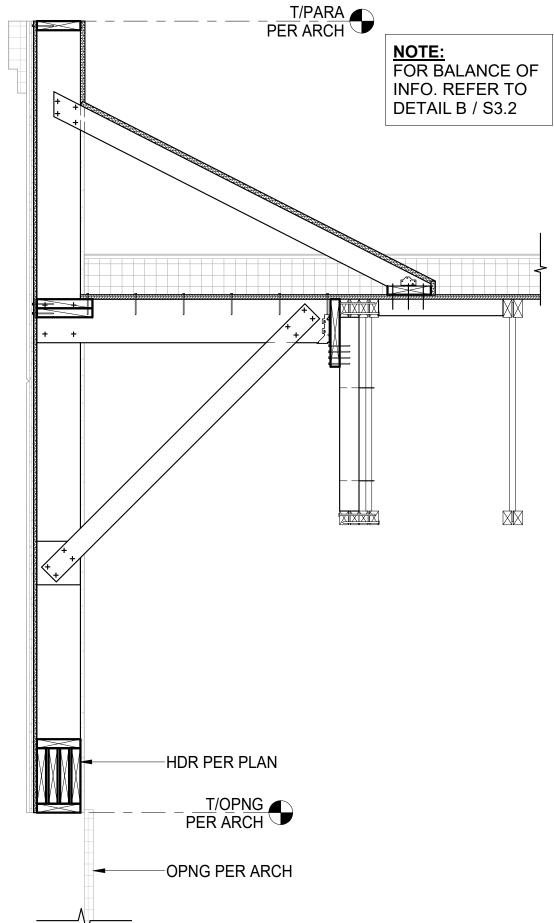
FRAMING SECTIONS





B FRAMING SECTION

S3.3 3/4" = 1'-0"



c FRAMING SECTION

S3.3 3/4" = 1'-0"



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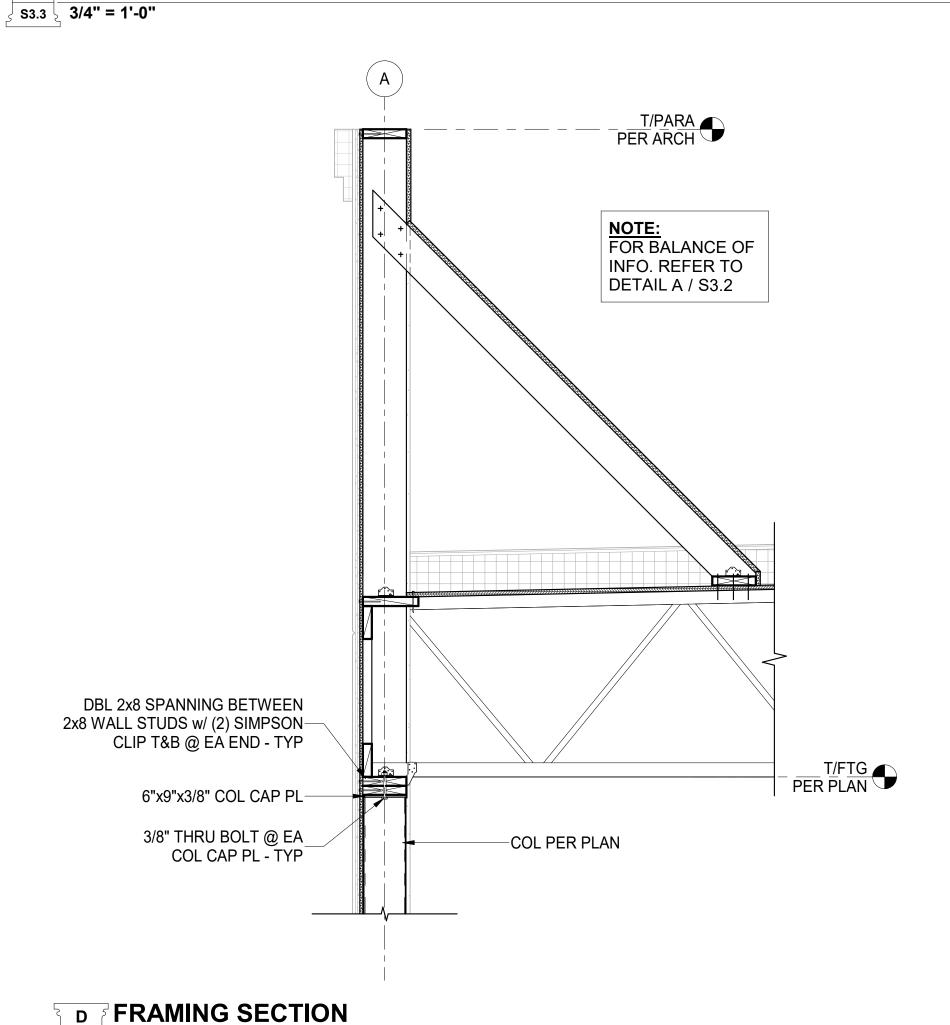
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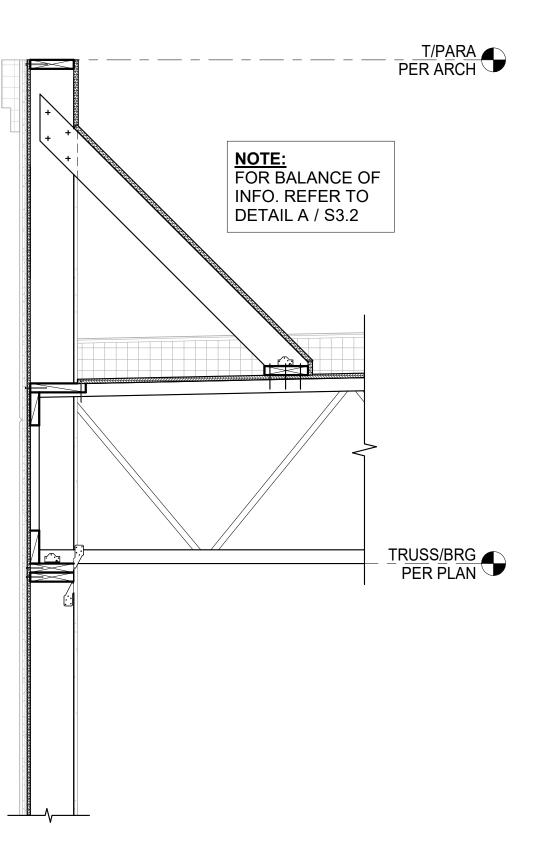
NOTE:
FOR BALANCE OF INFO. REFER TO DETAIL B / S3.2

F FRAMING SECTION
3/4" = 1'-0"

A FRAMING SECTION

s3.3 3/4" = 1'-0"





E FRAMING SECTION

S3.3 3/4" = 1'-0"

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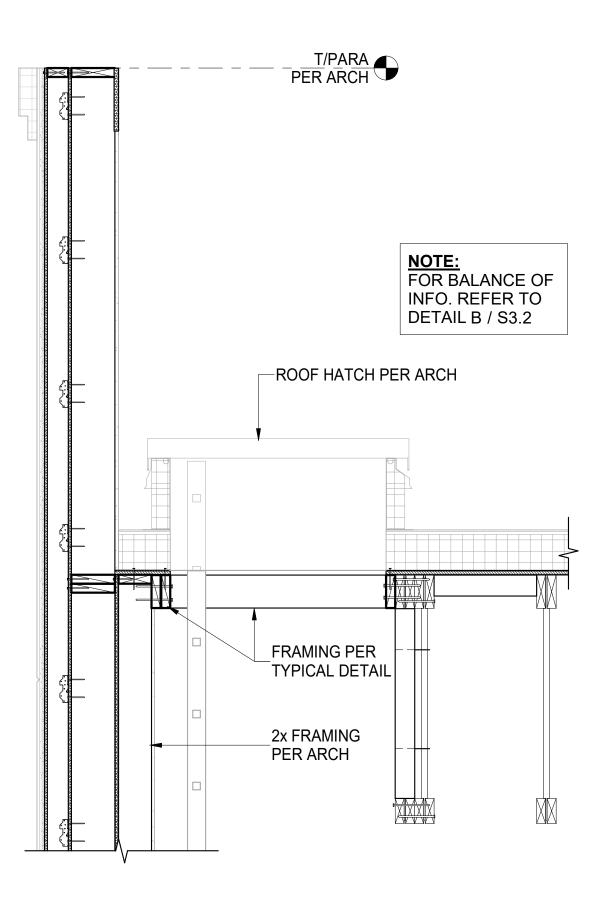
SHEET TITLE:

STORE #:

FRAMING SECTIONS

SHEET NUMBER:

S3.3



FRAMING SECTION

S3.4 3/4" = 1'-0"

1764 BLAKE ST DENVER, CO 80202 303.974.5875 WWW.LINGLEDESIGN.COM

LingLeDesignGroup,Inc

158 WEST MAIN STREET LENA, IL 61048 815.369.9155

Engineering Inc. 796 Merus Court St. Louis, MO 63026 F 636.349.1730 CERTIFICATE OF AUTHORITY NO. F-20080

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CHECKED BY: Checker

PROJECT #: LDG-TX-04-23 DRAWN BY: Author

CHECK SET - 10/XX/23

DEVELOPER COMMENTS - 12/20/23

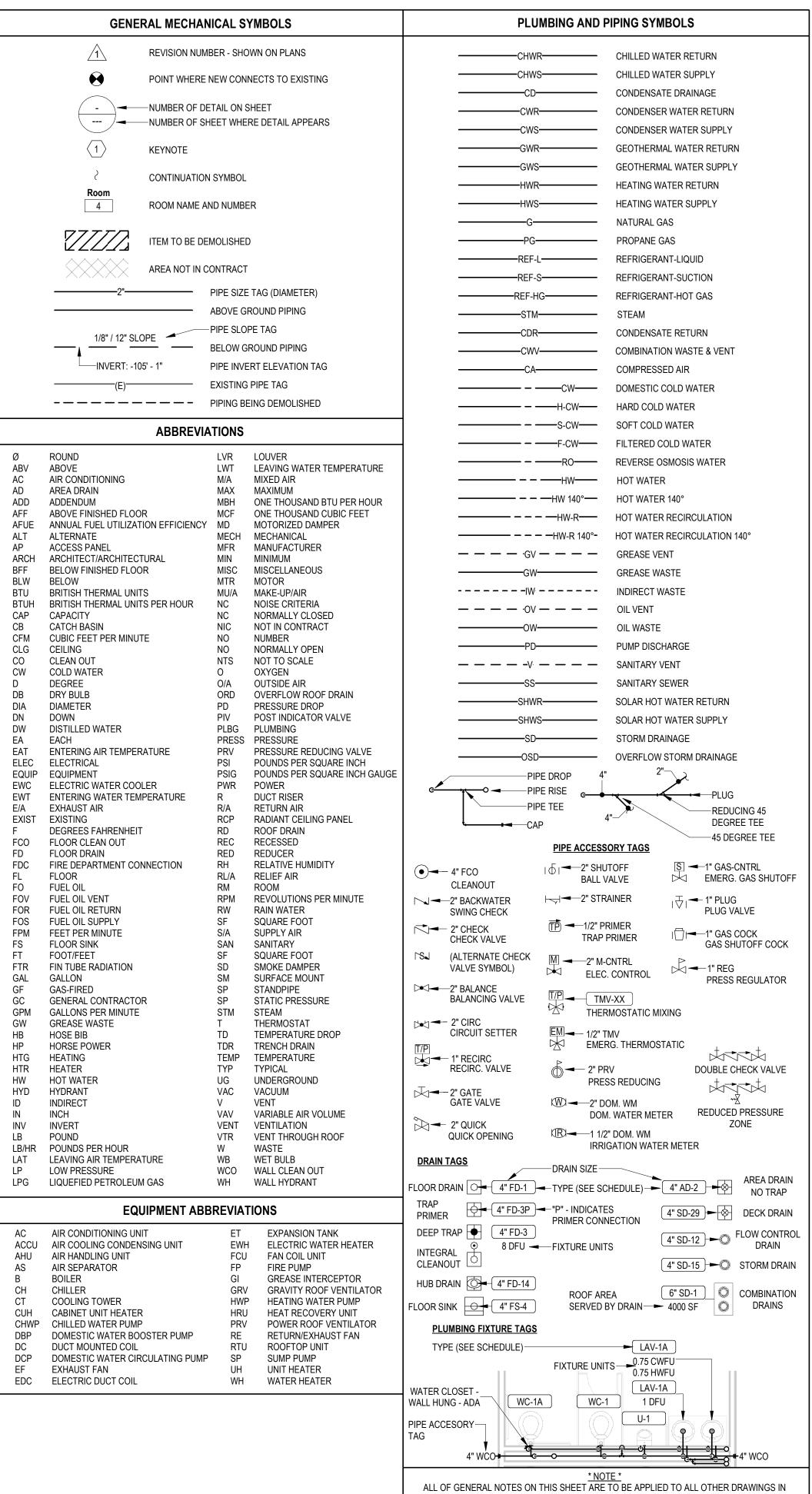
SHERWIN WILLIAMS

STORE #:

12360 W. SH 29, LIBERTY HILL, TX, 78642

SHEET TITLE:

FRAMING SECTIONS



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 PLAN - WASTE & VENT				
P002	PLUMBING FLOOR PLAN - SUPPLY				
P003	PLUMBING DETAILS				
P004	PLUMBING SPECIFICATIONS				
P005	PLUMBING RISERS PLAN				

LINGLEDESIGNGROUP, INC

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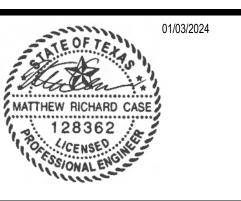
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CHECKED BY: NH

F 636.349.1730

Project Number

DRAWN BY: DM

St. Louis, MO 63026

	CHECK SET - 11/01/23
1	DEVELOPER COMMENTS - 12/20/23
	<u>-</u>
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SHERWIN WILLIAMS

STORE #: XXXX

ADDRESS:

12360 W. SH 29, LIBERTY HILL, TX, 78642

SHEET TITLE:

PLUMBING TITLE SHEET

SHEET NUMBER:

- 1. 1" DOMESTIC CW PIPE FROM OUTSIDE OF BUILDING. SEE CIVIL FOR CONTINUATION.
- 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 EITHER ABOVE OR BELOW FIRE SPRINKLER RISER. 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. COLD WATER CONNECTION TO COFFEE MAKER. PROVIDE SHUTOFF VALVE AND BACKFLOW PREVENTER IN WALL IN A RECESSED VALVE BOX PRIOR TO CONNECTION TO EQUIPMENT.
- 6. ROUTE CW PIPING CONCEALED IN WALL ON WARM SIDE OF INSULATION. PIPING SHALL NOT BE EXPOSED IN SALES FLOOR.
- 7. ROUTE CW/HW PIPING DOWN TO EYEWASH MIXING VALVE. REFER TO DETAIL 6 ON P004.
- 8. ROUTE TEMPERATURE AND PRESSURE RELIEF VALVE DOWN AND INDIRECTLY DRAIN TO UTILITY SINK BELOW.
- 9. 4" SANITARY WASTE LINE OUT OF BUILDING. SEE CIVIL FOR CONTINUATION. PC TO VERIFY EXACT SIZE, LOCATION AND INVERT ELEVATION PRIOR TO WORK. CONTACT ENGINEER IF ANY DISCREPANCIES ARE DISCOVERED.
- 10. ALL VENT PIPING FROM ALL FIXTURES ARE 2" DIAMETER UNLESS SPECIFIED OTHERWISE.
- 11. ROUTE 3" SANITARY VENT UP THROUGH ROOF. MAINTAIN A MINIMUM CLEARANCE OF 10' FROM NEAREST AIR INTAKE. VERIFY EXACT LOCATION IN FIELD.
- 12. INSTALL 2" FLOOR DRAIN IN BATHROOM FLOOR AS SHOWN.
- 13. ROUTE 6" PRIMARY STORM DOWN EXTERIOR WALL TO BELOW GRADE. PROVIDE WITH CLEANOUT PRIOR TO FLOOR PENETRATION. ROUTE BELOW GRADE STORM PIPING AT 2% TO SITE STORM SEWER CONNECTION. VERIFY ROUTING IN FIELD WITH EXISTING FIELD CONDITIONS AND LOCAL UTILITY REQUIREMENTS.
- 14. ROUTE 6" OVERFLOW STORM DOWN EXTERIOR WALL TO DISCHARGE 12" ABOVE GRADE VIA A SCUPPER.

	FOUNTAIN SCHEDULE ACCEPTABLE MANUFACTURE						RS AND MODELS		
GENERAL NOTES:									
	MARK	FIXTURE	SAN.	VENT	C.W.	VOLT/PHASE	MANUFACTURER	MODEL#	REMARKS
PLUMBING DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY	EWC-1	ELECTRIC WATER COOLER	2"	2"	1/2"	115V/60Hz	ELKAY	VRCGRNTL8C	
INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DRAWINGS ARE NOT TO BE		WALL MOUNT HIGH EFFICIENCY	_	_	"/_	1100700112			
SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL		VANDAL RESISTANT BI-LEVEL ADA							
DRAWINGS, CERTIFIED EQUIPMENT DRAWINGS AND FROM THE STRUCTURE		COOLER							

ITSELF BEFORE FABRICATING ANY WORK, VERIFY ALL SPACE REQUIREMENTS

2. CONTRACTOR SHALL COORDINATE WORK INDICATED WITH MECHANICAL,

ELECTRICAL, FIRE PROTECTION, STRUCTURAL, CIVIL, AND ARCHITECTURAL DIVISIONS. CONTRACTOR SHALL VERIFY SIZE & LOCATION OF EXISTING UTILITIES

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

3. PROVIDE ACCESSIBLE SHUT-OFF VALVES ON ALL NEW FIXTURE HW & CW

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

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

INSTALLATION INSTRUCTIONS USING A PRESS-CONNECT TOOL AND JAWS

APPROVED FOR USE FOR THE MANUFACTURER'S SPECIFIC FITTING

SURFACE. FITTINGS SHALL HAVE EPDM SEALING ELEMENTS.

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

PRIOR TO COMMENCING WORK, COORDINATE WITH OTHER TRADES AND MAKE

FABRICATION. COORDINATE ALL CHASE, SLEEVE, AND SLAB BLOCKOUTS BEFORE

PROVIDED WITHOUT EXTRA CHARGES TO THE OWNER.

CONCRETE IS POURED OR BLOCK SET.

BRANCHES.

COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE

							FOR A COMPLETE SYSTEM.
		PLUN	MBIN	G FIX	(TUF	3: CONFIRM VOLTAGE WITH ELECTRICAL CONTRACTOR PRIOR TO PURCHASE AND ROUGH IN.	
MARK	FIXTURE	SAN.	VENT	C.W.	H.W.	REMARKS	
WC-1	WATER CLOSET -ADA FLOOR SET	4"	2"	1/2"	-	WATER CLOSET: TOTO, 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	2ª	2"	1/2"	1/2"	LAVATORY: AMERICAN STANDARD "COMRADE" 0124.024.020 WHITE, WALL HUNG OR EQUAL. FAUCET: BRADLEY CORP S53-315 "AERADA 1200 SERIES CS FAUCET", PLUG IN ADAPTER, CAPACITIVE SENSING ACTIVATION NO SUBSTITUTIONS.	
MV	THERMOSTATIC MIXING VALVE POINT OF USE	-	-	1/2"	1/2"	ACORN ST-70 SET TO 105°	
EEW-1	EMERGENCY EYE WASH	2"	2"	1/2" (MIXED)	-	EYE WASH: BRADLEY S19224DC WALL MOUNTED WITH EMERGENCY MIXING VALVE BRADLEY S19-20000EFX OR EQUAL	
MS-1	UTILITY SINK	3"	2"	1/2"	1/2"	UTILITY SINK: ELKAY B1C24X24X STAINLESS STEEL, FAUCET: CHICAGO FAUCET 897 WITH WALL BRACE, PAIL HOOK, AND MALE HOSE THREADED OUTLET	
FD-1	FLOOR DRAIN	2"	2"	-	-	J.R. SMITH 2010Y, CAST IRON FLANGED, ROUND	
WH-1	WATER HEATER	-	-	3/4"	3/4"	AO SMITH MODEL DEL-20-4 ELECTRIC WATER HEATER. 20 GALLON STORAGE CAPACITY WITH 4 KW SINGLE HEATING ELEMENT. HEATING ELEMENT POWERED AT 120 V / 3 PH. PROVIDE 1/2" DRAIN PAN AND ROUTE 3/4" DRAIN LINE TO SERVICE SINK BELOW.	
RP-1	CIRCULATING PUMP	-	-	3/4"	-	VARIABLE SPEED CONTROLLER PROVIDE WITH ALL ACCESSORIES, VALVES, AND INSTALL PER MANUFACTURER'S GUIDELINES	

WATER HEATER SCHEDULE								
MFR	MODEL	STORAGE	RECOVERY	°F. RISE	VOLT/PHASE	HEAT INPUT	REMARKS	
.O. SMITH	DEL-20	20 GAL	12 GPH	100	120V/1PH	3KW	1,2,3	
FT WATER HEATER TEMPERATURE TO 140°f								
SET WATER HEATER TEMPERATURE TO 140°f. CONSULT MANUFACTURER PRIOR TO PURCHASE FOR EXACT MODEL AND ALL ACCESSORIES								

MARKS	PL	UMBING SYMBOLS LEGEND
1,2,3	— СА —	COMPRESSED AIR PIPING
	— G —	NATURAL GAS PIPING
RIES	— CD —	CONDENSATE DRAIN PIPING
		COLD WATER PIPING
IN.		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
	<u> </u>	CHECK VALVE
		UNION
	AFF	ABOVE FINISHED FLOOR
	co	CLEAN OUT
	8	PRESSURE REGULATING VALVE (PRV)
		BALL VALVE
	GCO	GRADE CLEAN OUT
		POINT OF CONNECTION
	Ø	BALANCE VALVE

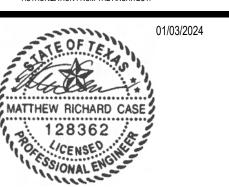
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Design	815.369.9155
	1764 BLAKE ST
ä	DENVER, CO 80202
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GROUP, INC	www.lingledesign.com

CASE Engineering Inc. T636 349 160

796 Merus Court T 636.349.1600 St. Louis, MO 63026 F 636.349.1730 CERTIFICATE OF AUTHORITY NO. F-20080

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PROJECT #:
Project Number

DRAWN BY: DM CHECKED BY: NH

CHECK SET - 11/01/23

DEVELOPER COMMENTS - 12/20/23

- - - - -

GPM PER SQ. FT. =

TOTAL GPM =

ZURN Z100 FLOFORCE DATA

2 X 5 OFFSET

PIPE OUTLET

PONDING RATE PONDING RATE DEPTH (IN.) (GPM) DEPTH (IN.) (GPM) DEPTH (IN.) (GPM)

405.17

770.96

726.79 4.03 1106.19 4.01 1164.82

741.10 5.01 1123.76 5.03 1489.41

753.63 5.91 1136.69 6.03 1505.44

ROOF DRAIN CALCULATIONS

PARAPET WALL LENGTH (FT.) =

PARAPET WALL HEIGHT (FT.) =

HALF OF TOTAL PARAPET AREA =

VERTICAL WALL AREAS ABOVE =

RAINFALL RATE (IN. PER HR.) =

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

HALF OF VERTICAL WALL AREAS ABOVE =

TOTAL OF ROOF AND VERTICAL AREAS =

TOTAL OF FLAT ROOF AREA (SQ. FT.)=

INFORMATION IN THIS TABLE IS PERFORMANCE DATA PROVIDED BY ZURN INDUSTRIES, LLC AS PART OF THE MANUFACTURER'S SPECIFICATION DOCUMENTS AND IS SHOWN ON THIS SET OF DRAWINGS FOR REFERENCE.

4FT VERTICAL

PIPE OUTLET

ROOF FLOW

2.00 397.65

3.00 757.11

102.10 1.01 102.46

6" DRAIN

ROOF FLOW ROOF FLOW

384.97 2.00

3.01

710.94

PIPE OUTLET

1.00

2.01

3.01

4.00

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.

4,256

560.0

0.0

4,816.0

7.0 in. 0.0728

350.6 GPM

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 HAVE $\frac{1}{2}$ " 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.

	13			
	WHOLESALE AREA 102 FCC O	(E) 4" SS 9 HUB DRAIN REFER TO DETAIL ON SHEET P002	RETAIL SALES 101	
	OFFICE 105	3" SS MS-1 LAV-1 2" V RESTROOM 104 FD-1 12 11 2" SS EWC-1 WC-1		

STORE #: XXXX

ADDRESS:

12360 W. SH 29, LIBERTY HILL, TX, 78642

SHEET TITLE:

PLUMBING PLAN -WASTE & VENT

SHEET NUMBER:

SHEET NOTES:

1. 1" DOMESTIC CW PIPE FROM OUTSIDE OF BUILDING. SEE CIVIL FOR CONTINUATION.

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 EITHER ABOVE OR BELOW FIRE SPRINKLER RISER. 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. COLD WATER CONNECTION TO COFFEE MAKER. PROVIDE SHUTOFF VALVE AND BACKFLOW PREVENTER IN WALL IN A RECESSED VALVE BOX PRIOR TO CONNECTION TO EQUIPMENT.

6. ROUTE CW PIPING CONCEALED IN WALL ON WARM SIDE OF INSULATION. PIPING SHALL NOT BE EXPOSED IN SALES FLOOR.

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

8. ROUTE TEMPERATURE AND PRESSURE RELIEF VALVE DOWN AND INDIRECTLY DRAIN TO UTILITY SINK BELOW.

9. 4" SANITARY WASTE LINE OUT OF BUILDING. SEE CIVIL FOR CONTINUATION. PC
TO VERIFY EXACT SIZE, LOCATION AND INVERT ELEVATION PRIOR TO WORK.

10. ALL VENT PIPING FROM ALL FIXTURES ARE 2" DIAMETER UNLESS SPECIFIED OTHERWISE.

11. ROUTE 3" SANITARY VENT UP THROUGH ROOF. MAINTAIN A MINIMUM CLEARANCE OF 10' FROM NEAREST AIR INTAKE. VERIFY EXACT LOCATION IN

12. INSTALL 2" FLOOR DRAIN IN BATHROOM FLOOR AS SHOWN.

CONTACT ENGINEER IF ANY DISCREPANCIES ARE DISCOVERED.

13. ROUTE TEMPERATURE AND PRESSURE RELIEF VALVE DOWN AND INDIRECTLY DRAIN TO UTILITY SINK BELOW.

GENERAL NOTES:

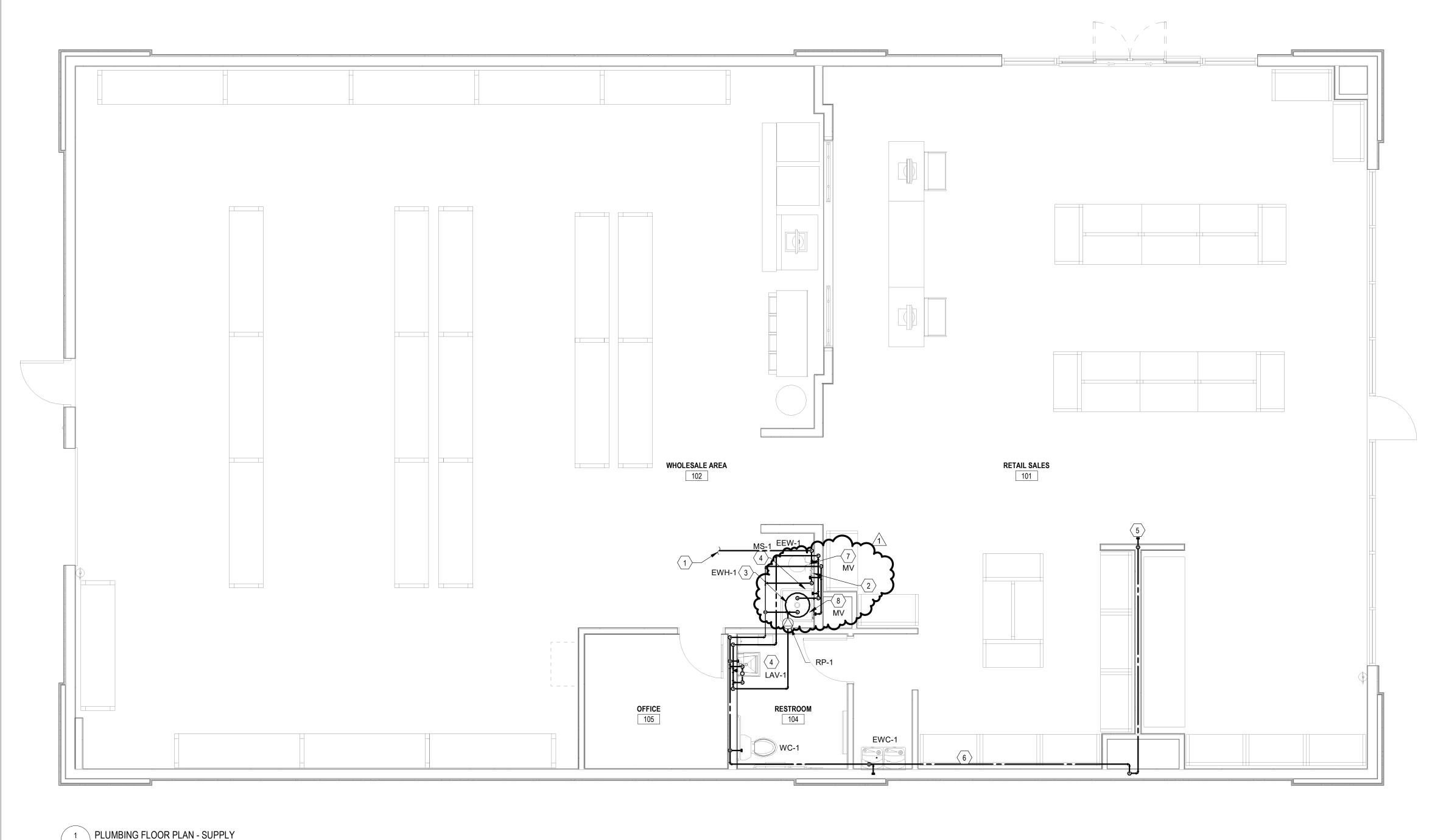
1. PLUMBING DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS, CERTIFIED EQUIPMENT DRAWINGS AND FROM THE STRUCTURE ITSELF BEFORE FABRICATING ANY WORK, VERIFY ALL 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.



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				
—— <u> </u>	PIPE TURNING DOWN				
	PIPE TURNING UP				
<u>—</u>	CHECK VALVE				
<u></u>	UNION				
AFF	ABOVE FINISHED FLOOR				
СО	CLEAN OUT				
Ô	PRESSURE REGULATING VALVE (PRV)				
	BALL VALVE				
GCO	GRADE CLEAN OUT				
	POINT OF CONNECTION				
	BALANCE VALVE				

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 HAVE $\frac{1}{2}$ " 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.

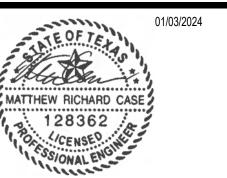


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St. Louis, MO 63026



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Project Number

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7	DEVELOPER COMMENTS - 12/20/23
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STORE #: XXXX

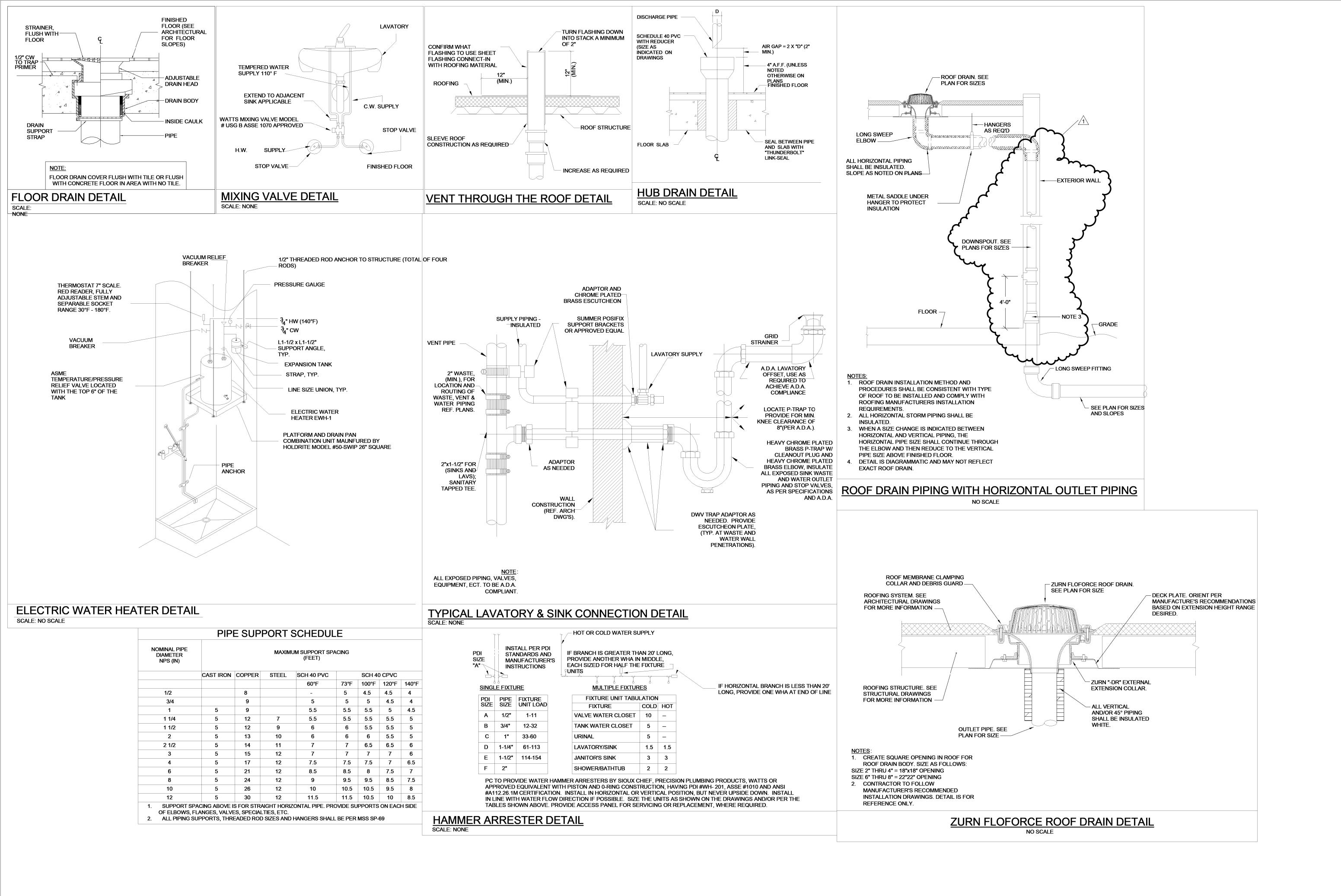
ADDRESS:

12360 W. SH 29, LIBERTY HILL, TX, 78642

SHEET TITLE:

PLUMBING FLOOR PLAN - SUPPLY

SHEET NUMBER

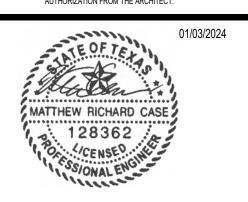


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STORE #: XXXX

12360 W. SH 29, LIBERTY HILL, TX, 78642

SHEET TITLE:

PLUMBING DETAILS

THE "ARCHITECTURAL GENERAL CONDITIONS" GOVERN WORK UNDER THIS

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. <u>INSPECTION AND COOPERATION</u>

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

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

SHOULD THE DRAWINGS AND/OR SPECIFICATIONS CONFLICT WITH SUCH LAWS OR ORDINANCES, THE CONFLICTING PORTION OF THE WORK SHALL BE INSTALLED FILLED WITH GRAVEL. IF TRENCHES ARE DEEPER THAN BOTTOM OF FLOORING OR STRICTLY IN ACCORDANCE WITH SUCH LAWS AND ORDINANCES WITHOUT EXTRA

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

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, FREE FROM CLODS, AND STONES THOROUGHLY TAMPED TO A DEPTH OF 12"

THIS CONTRACTOR SHALL PROVIDE ALL NECESSARY OFFSETS, RAISED AND DROPS IN PIPING AND DUCTWORK AS REQUIRED BY BUILDING CONDITIONS AT NO OR SAGS TO THE PIPING SYSTEMS THAT OCCUR FROM THE IMPROPER ADDITIONAL COST.

MECHANICAL DRAWINGS SHALL NOT BE USED FOR GENERAL CONSTRUCTION DIMENSIONS OR FOR TYPE OF MATERIAL USED. FOR EXACT BUILDING LAYOUT

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 10. CUTTING AND PATCHING ALL EQUIPMENT. ANY CHANGES FROM THE SPECIFIED ITEMS SHALL BE NOTED ON THE SUBMITTALS.

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.

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

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

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 13. MOTORS, STARTERS AND DISCONNECTS 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. <u>SUBSTITUTIONS OF EQUIPMENT OR MATERIAL</u>

APPROVAL OF SUBSTITUTED ITEMS WILL BE BASED ON ABILITY AND CAPACITY T 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.

ALL WORK SHALL BE DONE UNDER THE PERSONAL SUPERVISION OF THIS 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

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

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

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 MANUFACTURERS, SUCH AS HAMMOND, NIBCO-SCOTT AND/OR JENKINS WILL BE 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

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 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, BE DONE IN 12" LAYERS, THOROUGHLY TAMPED.

THIS CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO ANY DAMAGES **EXCAVATION AND BACKFILL METHODS.**

DIMENSIONS AND BUILDING MATERIAL USED, THIS CONTRACTOR SHALL REFER TO 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.

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.

IT SHALL BE THIS CONTRACTORS RESPONSIBILITY TO MAINTAIN LIAISON WITH ALL ALL PATCHING SHALL BE NEATLY FINISHED TO THE SATISFACTION OF THE

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

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. <u>DIELECTRIC UNIONS</u>

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

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.

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 23. FIRE STOPPING 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

THIS CONTRACTOR SHALL DO ALL EXCAVATION REQUIRED TO INSTALL PIPES AND 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.

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 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 λ 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

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. <u>PIPE SLEEVES AND COLLARS</u>

FILLED WITH MASTIC AND MUST BE WATERTIGHT.

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

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.

A. PIPE HANGER AND SUPPORT PRODUCTS INSTALLATION

- . 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
- d. BASE OF VERTICAL PIPING: MSS TYPE 52, SPRING HANGERS.
- B. SUPPORT VERTICAL PIPING AND TUBING AT BASE AND AT EACH
- 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
- INSTALL SUPPORTS FOR VERTICAL COPPER TUBING EVERY 10 FEET. 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.

CAULK: CP-25

APPLICABLE CODE AUTHORITIES.

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:

> 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

ON INSULATED PIPES, THE FIRE-RATING CLASSIFICATION SHALL NOT REQUIRE

SUBMIT MANUFACTURER'S PRODUCT DATA, LETTER OF CERTIFICATION OR CERTIFIED LABORATORY TEST REPORT THAT THE MATERIAL OR COMBINATION OF THE SUB-GRADES SHALL BE KEPT FREE FROM WATER WHILE PIPES ARE BEING 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 NFPME61- LIFE SAFETY CODE AND NFPA 70 NATIONAL ELECTRICAL CODE.

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. <u>CLEANUP AND ADJUSTMENT</u>

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 ALL TRENCHES TO BE DUG WITH GRADUAL FALL, THE PIPING TO BE STRAIGHT 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 OWNER'S 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. <u>SEISMIC RESTRAINTS ON MECHANICAL EQUIPMENT</u>

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.

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.

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

30. <u>DOMESTIC WATER SERVICE</u>

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 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

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.

SURFACE. FITTINGS SHALL HAVE EPDM SEALING ELEMENTS.

munumum. NOTE: WATER PIPE TO BE PROPERLY SECURED AND ALIGNED SO AS NOT TO EXERT VERTICAL OR HORIZONTAL STRESSES ON THE SEATING OF THE MATING

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

(MALE AND FEMALE) SURFACES OF THE UNIONS.

31. STERILIZATION OF DOMESTIC WATER SYSTEM THE ENTIRE DOMESTIC WATER DISTRIBUTION SYSTEM SHALL BE FLUSHED CLEAR PLUMBING EQUIPMENT: (REFER TO SCHEDULE ON THE DRAWINGS) OF ANY DEBRIS AND THOROUGHLY STERILIZED WITH A SOLUTION CONTAINING NOT LESS THAN 100 PARTS PER MILLION OF AVAILABLE CHLORINE. THE SOLUTION 37. INSULATION SHALL REMAIN IN THE SYSTEM FOR TWO (2) HOURS DURING WHICH TIME ALL VALVES AND FAUCETS SHALL BE OPENED AND CLOSED SEVERAL TIMES. AFTER STERILIZATION, THE SOLUTION SHALL BE FLUSHED FROM THE SYSTEM WITH CLEAN WATER UNTIL THE RESIDUE CHLORINE CONTENT IS NOT GREATER THAN THE CHLORINE LEVEL OF THE AVAILABLE WATER SUPPLY.

STERILIZATION SHALL BE PERFORMED PRIOR TO TURNOVER TO OCCUPANT AS TO FLAME SPREAD 25 NOT ALLOW FOR THE WATER SYSTEM TO REMAIN STAGNANT FOR LONGER THAN SMOKE DEVELOPED 50 24 HOURS.

THIS CONTRACTOR SHALL HAVE THE WATER TESTED AND APPROVED BY THE HEALTH DEPARTMENT.

32. <u>SANITARY SEWERS</u>

THIS CONTRACTOR SHALL CONNECT SANITARY SEWER AS INDICATED ON THE DRAWINGS. VERIFY DIRECTION OF FLOW PRIOR TO ANY ROUGH-IN WORK.

EACH PIPE SHALL BE LAID TO THE LINE AND GRADE INDICATED ON THE PLANS AND SUCH A MANNER AS TO FORM A CLOSE CONCENTRIC JOINT WITH THE ADJOINING PIPE AND TO PRESENT OFFSETS IN FLOW LINE. ALL PIPE SHALL BE LAID WITH THE BELLS UPHILL.

LAID. ALL PIPE SHALL BE LAID WITH ENDS ABUTTING AND TRUE TO LINE AND GRADE. THEY SHALL BE FITTED AND MATCHED SO THAT THEY WILL FORM A SEWER WITH A SMOOTH AND UNIFORM INVERT.

EACH JOINT SHALL BE CLEANED AS IT IS LAID AND ALL BELLS SHALL BE CLEANED BEFORE PIPES ARE JOINED.

PVC SEWER PIPE MAY BE USED IN LIEU OF THAT SPECIFIED ABOVE IF ALLOWED BY LOCAL CODES.

ABS AND FOAM CORE PVC ARE NOT ACCEPTABLE MATERIALS.

SDR 35 IS NOT ACCEPTABLE FOR UNDER BUILDING USE. 33. WASTE, SOIL, DRAIN AND VENT PIPING

THE DRAINS, SOIL WASTE AND VENT PIPE AND FITTINGS INCLUDING EXTENSIONS TO SEWERS SHALL BE OF THE SIZES INDICATED ON THE DRAWINGS. PIPE AND FITTINGS TO BE, CYLINDRICAL AND FREE FROM CRACKS OR OTHER DEFECTS.

THE ARRANGEMENT OF THE SYSTEM SHALL BE AS SHOWN ON THE DRAWINGS AND AS DIRECT AS POSSIBLE, AVOIDING ALL UNNECESSARY OFFSETS. THE STACKS SHALL BE FIRMLY SECURED IN POSITION WITH WROUGHT IRON CLAMPS AT EACH FLOOR.

ALL CHANGES IN DIRECTION OF SOIL OR WASTE PIPE SHALL BE MADE BY MEANS OF "Y" BRANCHES AND 1/8 BENDS. NINETY DEGREE SHORT TURN FITTINGS WILL NOT BE PERMITTED EXCEPT TO INDIVIDUAL FIXTURE CONNECTIONS OR WHERE THE FLOW IS FROM THE HORIZONTAL TO THE VERTICAL.

SANITARY CLEANOUTS ARE TO BE PROVIDED AT EVERY TURN GREATER THAN 45°,

AT INTERVALS OF NO GREATER THAN 50'. AT ANY STACK ROUTING BELOW GRADE. A.3 LISTED WITH FM (FACTORY MUTUAL) REQUIREMENTS FOR FLAMMABLE GAS NOT ALL CLEANOUTS LOCATIONS MAY BE SHOWN ON THE DRAWING. ALL TRAP SCREWS MUST BE OF FULL SIZE OF PIPE UP TO 4" AND 4" FOR ALL OVER FOR RESISTANCE TO ARCING FROM TRANSIENT ENERGY. THIS SIZE. CONNECTIONS BETWEEN OUTLETS OF FIXTURES AND SOIL OR WASTE

PIPE SHALL BE MADE WITH "Y" BRANCHES TO "TY" BRANCHES WHEREVER POSSIBLE. ALL HORIZONTAL SOIL WASTE AND VENT PIPE SHALL BE GRADED TOWARD OUTLETS AND PIPE NOT BURIED SHALL BE INSTALLED ABOVE THE CEILING OR CLOSE AS POSSIBLE TO THE CONSTRUCTION ABOVE WHERE THERE IS THE STACKS SHALL BE EXTENDED THROUGH ROOF OF BUILDING TO POINTS NOT

WATER- TIGHT BY MEANS OF A FLASHING OF FOUR POINTS SHEET LEAD SPREAD OVER A DISTANCE OF NOT LESS THAN TWELVE INCHES (12") AROUND PIPE. ROOF FLASHING SHALL CONNECT TO THE BASE AND EXTENDED OVER AND TURNED DOWN INTO END OF PIPE IN AN APPROVED MANNER. L CLEANOUTS IN FLOORS TO BE JOSAM #8360 OR EQUAL. ADJUSTABLE

CLEANOUT WITH BODY TO MATCH THE PIPING MATERIAL, CAST BRASS SCORIATED

LESS THAT 12" ABOVE ROOF. EXTENSIONS THROUGH ROOF SHALL BE MADE

CLEANOUTS SHALL BE INSTALLED IN BASE OF EACH STACK. CONCEALED CLEANOUTS SHALL HAVE JOSAM #8600 OR EQUAL. CAST BRASS CHROMIUM PLATED FLAT ACCESS COVER PLATES.

COVER WITH LETTERS C.O. CAST IN TOP AND CONCEALED BRASS PLUG.

ALL JOINTS OF CAST IRON PIPE SHALL BE MADE WITH MANUFACTURERS RECOMMENDED JOINING MATERIAL. AT THE CONTRACTOR'S OPTION HE MAY USE NO-HUB PIPE, FITTINGS, COUPLING AND GASKETS IN LIEU OF CAULKED JOINTS IF APPROVED BY THE LOCAL CODES AND ORDINANCES.

IF APPROVED BY THE LOCAL CODES, SCHEDULE 40 PVC PIPE WITH DWV FITTINGS MAY BE USED FOR THE WASTE AND VENT SYSTEM. PVC PIPE AND FITTINGS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL CODES. ENCASEMENT OF PVC PIPES WITHIN RATED SHAFTS SHALL BE THE COST OF THIS CONTRACTOR. SCHEDULE 40 PVC SHALL NOT BE INSTALLED WITHIN A PLENUM.

ABS AND FOAM CORE PVC ARE NOT ACCEPTABLE MATERIALS.

SDR 35 IS NOT ACCEPTABLE FOR UNDER BUILDING USE.

EACH VENT FLASHING SHALL BE MADE WATER-TIGHT WITH THE ROOF BY PROPER

WATER PROOF FLASHING. 35. WASTE, VENT AND WATER CONNECTIONS

THE MINIMUM SIZE OF WASTE, VENT, AND WATER CONNECTION TO THE INDIVIDUAL FIXTURES SHALL BE AS SHOWN ON DRAWINGS.

WHERE FIXTURES ARE GROUPED PIPES SHALL BE INCREASED IN PROPORTION: IN ALL CASES THE SIZE ARRANGEMENTS AND CONNECTIONS OF WATER AND VENT PIPING SHALL NOT BE LESS THAN SIZE OF OPENINGS SPECIFIED FOR FIXTURES AND APPEARING IN FIXTURE LIST. NO WATER PIPE LESS THAN 1/2" SHALL BE

INSTALLED IN CONCEALED PLACES SUCH AS IN PARTITIONS OR WALLS ETC.

36. PLUMBING FIXTURES AND TRIM

LUMBING FIXTURES SHALL BE FURNISHED AND INSTALLED IN A NEAT AND WORKMANLIKE MANNER WITH PROPER CONNECTIONS TO SUPPLY AND DRAINAGE PIPING. ALL FIXTURES SHALL BE FREE OF FLAWS AND DEFECTS OF ANY SORT IN MATERIAL AND WORKMANSHIP AND SHALL OPERATE PERFECTLY WHEN INSTALLED IN ACCORDANCE WITH MANUFACTURER'S DIRECTION.

MATERIALS: FIXTURES SHALL BE THE STANDARD PRODUCT OF ONE OF THE MANUFACTURER'S LISTED IN THE PLUMBING FIXTURE SCHEDULE, OR ANY EQUAL UNIT APPROVED BY THE ENGINEER.

INSTALLATION: THIS CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF

THE PLUMBING FIXTURES AND ACCESSORIES DURING CONSTRUCTION. HE SHALL REPLACE AT HIS EXPENSE ANY MATERIAL THAT IS MARRED, SCRATCHED, DEFACED AND/OR BROKEN. FIXTURES SHALL BE COVERED WITH BUILDING PAPER AND WOODEN CRATES DURING CONSTRUCTION.

CONTRACTOR SHALL COORDINATE EXACT AND PROVIDE ROUGH-IN LOCATIONS

WITH FIELD CONDITIONS AND PLANS PRIOR TO ANY WORK. CONTRACTOR SHALL

CONNECT ALL FIXTURES TO THE PLUMBING SYSTEM. ALL FIXTURES TO BE INSTALLED TO DIMENSIONS WITH CHROME-PLATED SUPPLIES WITH STOPS ALL FIXTURES INSTALLED TO DIMENSIONS SHOWN ON THE DRAWINGS. ALL

WATER CLOSETS SHALL HAVE CAULKING BETWEEN THE FLOOR AND UNDERSIDE

OF THE WATER CLOSET.

ALL INSULATION SHALL HAVE COMPOSITE (INSULATION, JACKET OR FACINGS AND ADHESIVE USED TO ADHERE THE FACING OR JACKET TO THE INSULATION) FIRE AND SMOKE HAZARD RATINGS AS TESTED BY PROCEDURE ASTM E-84, NFPA 225 UL 723 NOT EXCEEDING:

ALL ACCESSORIES SUCH AS ADHESIVES, MASTICS, CEMENTS, TAPES AND CLOTH FOR FITTINGS SHALL HAVE THE SAME COMPONENTS RATINGS AS LISTED ABOVE.

INSULATION SHALL BE APPLIED ON CLEAN, DRY SURFACES AND AFTER INSPECTION AND RELEASE FOR INSULATION APPLICATION. ALL INSULATION SHALL BE CONTINUOUS THROUGH WALL AND CEILING OPENINGS AND SLEEVES. INSULATION ON ALL COLD SURFACES WHERE VAPOR BARRIER JACKETS ARE USED, WILL BE APPLIED WITH A CONTINUOUS, UNBROKEN VAPOR SEAL, INCLUDING ALL FITTINGS AND VALVES. ALL INSULATION TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S. FITTINGS SHALL BE FINISHED WITH 1/4" COAT OF INSULATING CEMENT AND CANVAS.

DOMESTIC COLD WATER - 1/2" THICK ARMAFLEX (FLAME SPREAD 25/ SMOKE DOMESTIC HOT WATER - 1" THICK ARMAFLEX (FLAME SPREAD 25/ SMOKE

DOMESTIC HOT WATER RETURN- 1" THICK ARMAFLEX (FLAME SPREAD 25/ SMOKE DEVELOPED 50) EXPOSED STORM WASTE AND SANITARY WASTE - 1/2" THICK ARMAFLEX (FLAME SPREAD 25/ SMOKE DEVELOPED 50)

ALL MATERIALS USED SHALL COMPLY WITH SECTIONS 1712 AND 1713 OF THE UBC.

38. <u>NATURAL GAS PIPING SYSTEM</u>

THREE AND FOUR HOUR TESTS.

PIPING SYSTEMS. FOR SEISMIC RESISTANCE.

DEVELOPED 50)

ALL PIPING FROM GAS METER TO GAS-FIRED EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR.

ALL GAS PIPING TO BE IN ACCORDANCE WITH LOCAL CODES, NFPA-54, IFGC AND UPC ALL GAS PIPING SHALL BE INSTALLED IN ACCORDANCE WITH NFPA-54, LOCAL CODES, AND REGULATIONS.

ALL GAS PIPING SHALL BE SCHEDULE 40 BLACK OR GALVANIZED STEEL WITH

ON ALL THREADED JOINTS. FITTINGS LARGER THAN TWO INCHES (2") SHALL BE

BLACK OR GALVANIZED WITH MALLEABLE SCREWED FITTINGS. USE TEFLON TAPE

WELDED. PROVIDE UNIONS AND GAS SHUT-OFF VALVES AT EACH PIECE OF GAS

ALLOWED BY LOCAL AHJ AND RESIZED PER MANUFACTURERS SIZING GUIDELINES.

AND/OR INACCESSIBLE CEILING IS TO BE WELDED WITH WELDED FITTINGS. FLEXIBLE CSST PIPING MATERIAL IS AN ACCEPTABLE ALTERNATE ONLY IF

PENETRATION FIRE STOP REQUIREMENTS RATINGS TO INCLUDE ONE, TWO,

A.4 TUBING SHALL BE TESTED AND LISTED IN ACCORDANCE WITH ICC LC-1024.

FIRED EQUIPMENT OR APPLIANCE. ANY GAS PIPING CONCEALED IN CHASES

ALL FLEXIBLE GAS PIPING SYSTEM COMPONENTS MUST BE A.1 CSA INTERNATIONAL CERTIFIED CORRUGATED STAINLESS STEEL TUBING (CSST) FLEXIBLE GAS PIPING WITH MECHANICAL ATTACHMENT AUTOFLARE® FITTINGS THAT CONFORM TO THE LATEST ANSI STANDARDS FOR SAFE PERFORMANCE ANSI LC-1 /CSA 6.26. A.2 UNDERWRITERS LABORATORIES CLASSIFICATION LISTED FOR THRU

St. Louis, MO 63026

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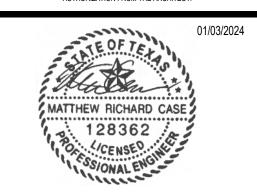
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CHECKED BY: NH

Project Number

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XXXX

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.

DISTANCES. ELEVATIONS AND EXISTING PIPE SIZES BEFORE STARTING THE WORK ABOVE THE PIPE. AFTER THAT DEPTH HAS BEEN REACHED, BACKFILLING SHALL AS ALL PIPING SYSTEMS SHOWN ON THE DRAWINGS ARE DIAGRAMMATIC ONLY.

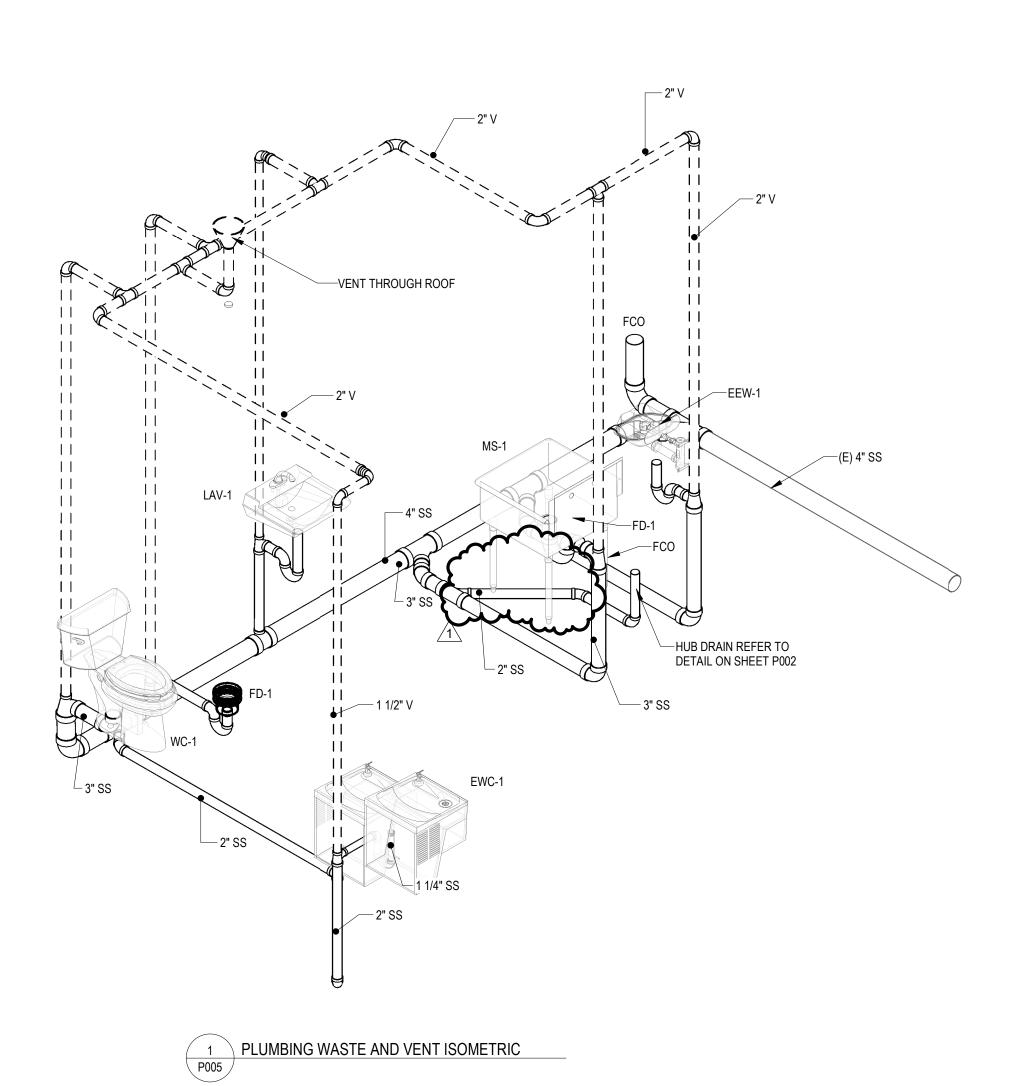
SHOP DRAWINGS OF SPECIAL APPARATUS OR EQUIPMENT WHICH IS TO BE

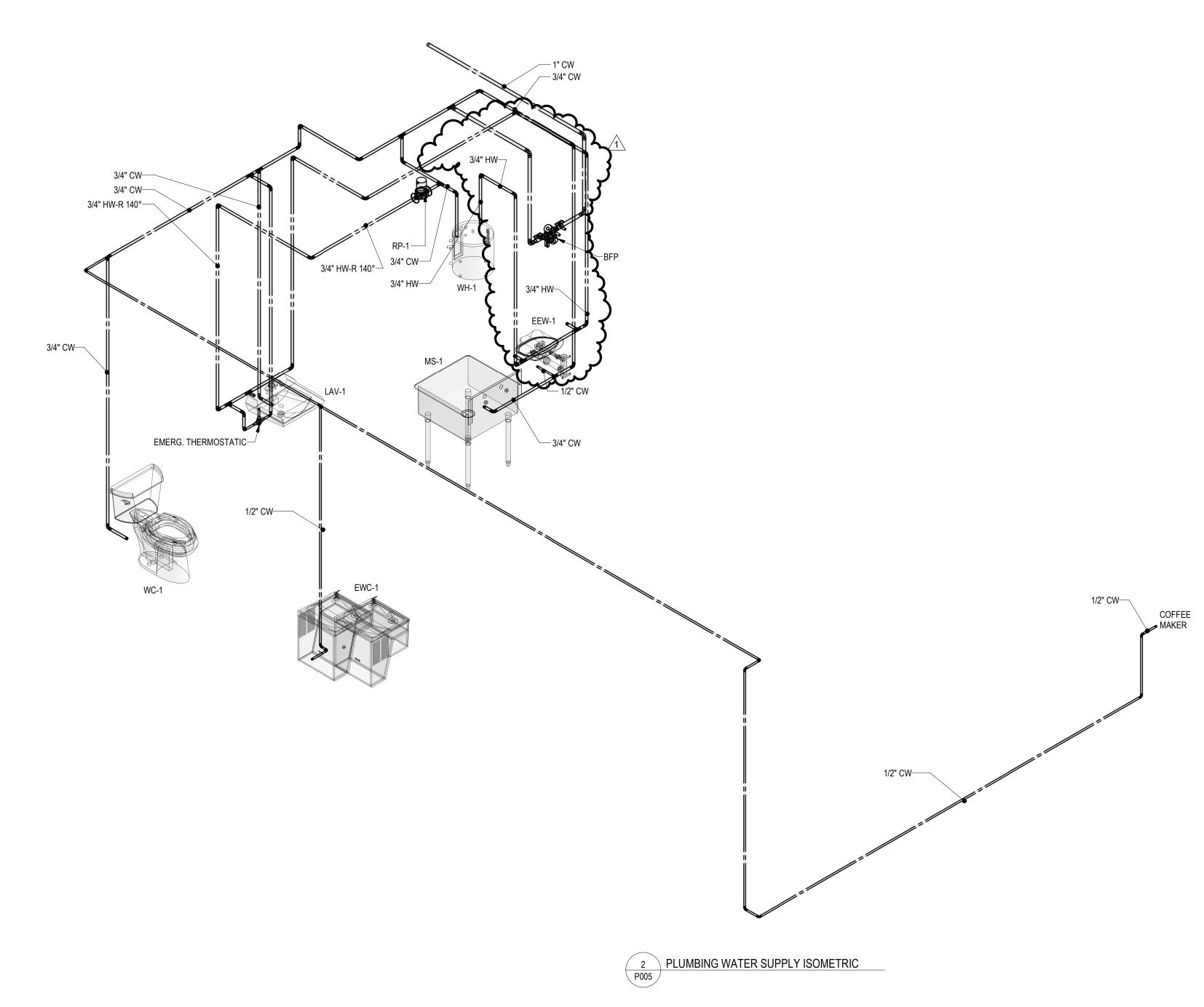
ARCHITECT'S PROCESSING WILL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ERRORS SINCE THIS CONTRACTOR IS SOLELY RESPONSIBLE FOR DIMENSIONS AND DESIGNS OF ADEQUATE CONNECTIONS, DETAILS AND

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

ERECTION OF APPARATUS CONTRACTOR WHO SHALL PROVIDE A COMPETENT FOREMAN TO LAY OUT ALL

BY ARCHITECT AND ENGINEER BEFORE INSTALLATION OF THE WORK.





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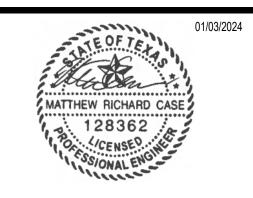
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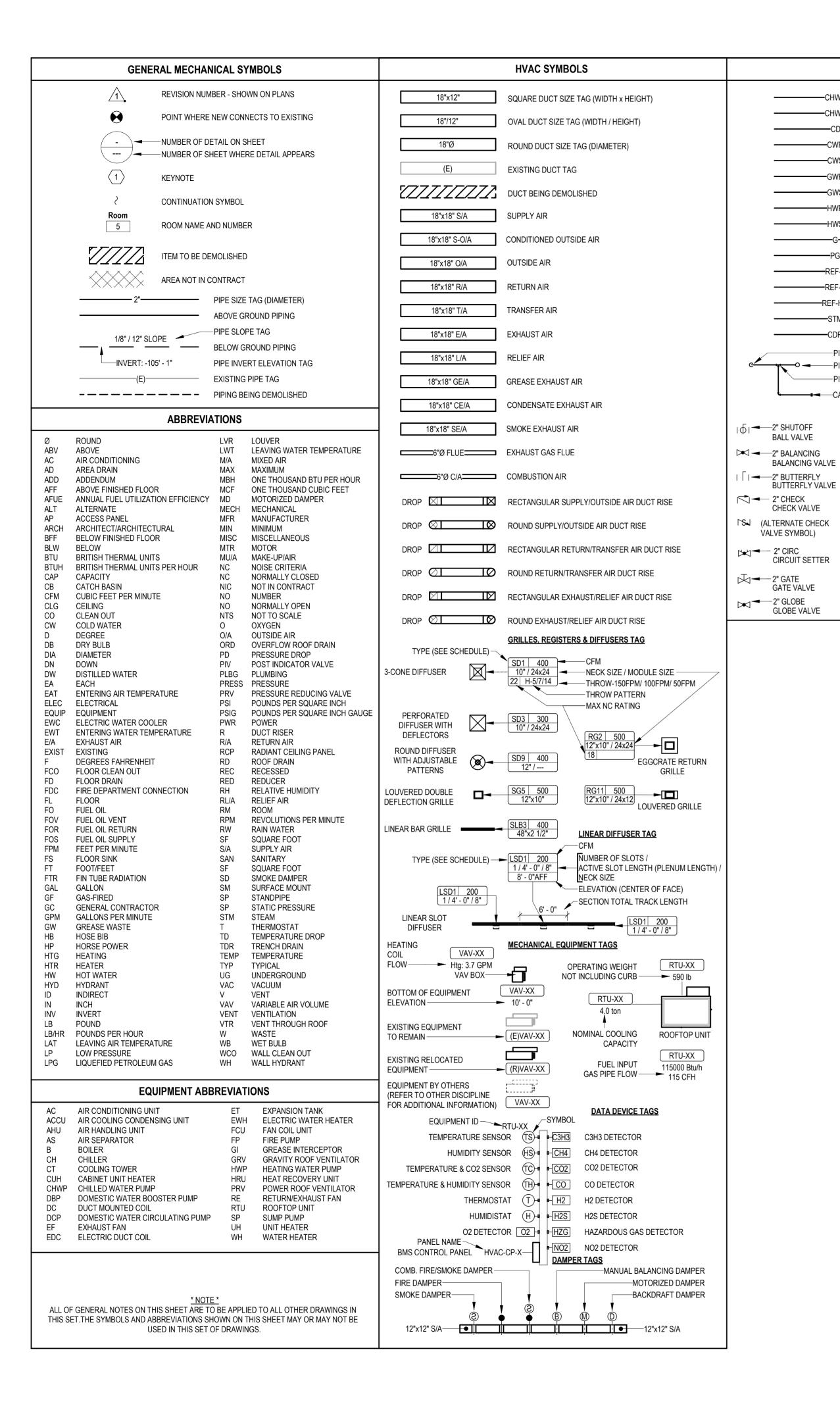
ADDR

12360 W. SH 29, LIBERTY HILL, TX, 78642

SHEET TITLE:

PLUMBING RISERS PLAN

SHEET NUMBER:



MECHANICAL GENERAL NOTES

DO NOT SCALE DRAWINGS.

PIPING SYMBOLS

—CHWR———— CHILLED WATER RETURN

CHILLED WATER SUPPLY

CONDENSATE DRAINAGE

CONDENSER WATER RETURN

CONDENSER WATER SUPPLY

GEOTHERMAL WATER RETURN

GEOTHERMAL WATER SUPPLY

HEATING WATER RETURN

HEATING WATER SUPPLY

NATURAL GAS

PROPANE GAS

REFRIGERANT-LIQUID

REFRIGERANT-SUCTION

REFRIGERANT-HOT GAS

CONDENSATE RETURN

REDUCING 45
DEGREE TEE

-45 DEGREE TEE

ELEC. CONTROL

3-WAY ELEC. CONTROL

M −−2" M-CNTRL

M 3-WAY CNTRL

PIPE DROP

-PIPE TEE

PIPE ACCESSORY TAGS

LOCK SHIELD VALVE

QUICK OPENING

EMERG. GAS SHUTOFF

PLUG VALVE

GAS SHUTOFF COCK

PRESS REGULATOR

PRESS REDUCING 🔀

Z LOCKED 2" LOCKED

──2" STRAINER

S ----1" GAS-CNTRL

→ 1" PLUG

ı∏ı 1" GAS COCK

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

BANDS SHALL BE LOCATED EVERY 25 FEET AND ON EITHER SIDE OF INTERMEDIATE BARRIER.

- 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

	HVAC SHEET INDEX
M000	HVAC TITLE SHEET
M001	MECHANICAL SPECIFICATIONS
M002	MECHANICAL SPECIFICATIONS
M100	MECHANICAL FLOOR PLAN
M200	ROOF MECHANICAL PLAN

M400 MECHANICAL DETAILS

SHEET COUNT: 7

M500 MECHANICAL SCHEDULES

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Project Number

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SHERWIN WILLIAMS

STORE #:

ADDRESS:

12360 W. SH 29, LIBERTY HILL, TX, 78642

CUEET TITLE

HVAC TITLE SHEET

SHEET NUMBER:

M000

GENERAL SPECIFICATIONS

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 FULI 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

UNDERWRITER'S LABORATORIES, INC. (U.L.)

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.

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.

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.

COMPLETE SYSTEM:

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

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.

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

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

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

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

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

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

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

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,

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

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

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

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

SEAL ALL DUCT JOINTS AND SEAMS (LONGITUDINAL AND TRANSVERSE) WITH HIGH PRESSURE DUCT SEALER.

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:

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.

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

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

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

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.

ALL PIPING SHALL BE TESTED FOR 24 HOURS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE AND PROVEN

DISCHARGE AND LIQUID REFRIGERANT PIPING--300 PSIG, NITROGEN.

INSTALL FILTER DRIER EQUIVALENT TO SPORLAN CATCH-ALL.

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 HOSE DURING CHARGING OF SYSTEMS WITH REFRIGERANT

INSULATION:

33. GENERAL

THIS SECTION APPLIES TO ALL MECHANICAL WORK.

ALL INSULATION SHALL BE IN STRICT ACCORDANCE WITH ASHRAE STANDARDS AND ALL LOCAL AND STATE

A U. L. LISTED FLAME SPREAD RATING NOT OVER 24 WITHOUT EVIDENCE OF CONTINUED PROGRESSIVE

COMBUSTION AND WITH A SMOKE DEVELOPED RATING NOT HIGHER THAN 50. ALL COATINGS AND COVERINGS

THE INSULATION WORK SHALL BE PERFORMED BY A FIRM REGULARLY ENGAGED IN THIS TYPE WORK USING MECHANICS SKILLED IN THE TRADE. INSTALL ALL MATERIALS AS RECOMMENDED BY THE MANUFACTURER FOR THE SERVICE INTENDED. ALL INSULATION MATERIAL, INCLUDING SEALER MATERIAL, ADHESIVES, COVERING MATERIAL, FINISH, ETC. SHALL HAVE

FOR HOT SERVICE SHALL BE BREATHER TYPE AND VAPOR BARRIER TYPE FOR COLD SERVICE.

34. HVAC PIPING

INSULATE REFRIGERANT SUCTION LINES AND ALL CONDENSATE DRAIN LINES WITH (CODE REQUIRED THICKNESS) CLOSE CELLED ELASTOMERIC INSULATION INSTALLED PER THE MANUFACTURERS REQUIREMENTS. PAINT EXTERIOR INSULATION WITH TWO COATS PAINT AS REQUIRED BY THE INSULATION MANUFACTURER.

35. EXTERNALLY INSULATED DUCTS:

EXTERNALLY INSULATE ALL SUPPLY AND RETURN DUCTWORK WITH 1-1/2" THICK (R-6 MIN.) DUCT WRAP FOR DUCTS LOCATED IN UNCONDITIONED SPACES AND A 2" THICK (R-8 MIN.) DUCT WRAP FOR DUCTS LOCATED OUTSIDE THE BUILDING, EXCEPT PRE-INSULATED FLEXIBLE DUCT, EXTERNALLY INSULATE ALL OUTSIDE AIR DUCTWORK WITH 2" THICK (R-8) DUCT WRAP WITH ALUMINUM ALL SERVICE JACKET, VAPOR BARRIER. ALL DUCT WRAPS SHALL MEET OR EXCEED ASHRAE'S I.A.Q. STANDARD 62 AND IEEC.

36. CHILLED WATER PIPING

INSULATE INDOOR CHILLED WATER PIPING WITH 1\" THINK HEAVY DENSITY FIBERGLASS PIPE INSULATION WITH FLAME SAFE, ALL-PURPOSE BARRIER JACKET. INSULATE EXTERIOR CHILLED WATER PIPING AS SPECIFIED ABOVE, BUT DOUBLE THICKNESS WITH ALUMINUM JACKET BANDED IN PLACE. INSULATE INDOOR, SMALL RUN OUT, CHILLED WATER PIPING WITH [" THICK FIRE RETARDANT INSULATION.

37. EQUIPMENT:

SPECIFICATION.

CAPACITY, PERFORMANCE AND CHARACTERISTICS OF EQUIPMENT SHALL BE AS INDICATED ON THE DRAWINGS AND AS SPECIFIED OR IMPLIED HEREIN. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY INCREASED COST TO HIMSELF OR OTHERS FOR EQUIPMENT WHICH DEVIATES FROM THAT SCHEDULED OR IMPLIED HEREIN. REGARDLESS OF COST AFFECT, THE ARCHITECT MUST APPROVE ANY DEVIATION FROM THE DRAWINGS AND THE

38. MOTORS AND STARTERS:

ALL ELECTRIC MOTORS SHALL BE HIGH EFFICIENCY TYPE WITH MAXIMUM OF 1750 RPM WITH OPEN DRIP PROOF OR TEFC ENCLOSURES, UNLESS OTHERWISE NOTED. MOTORS LOCATED ON AIR HANDLING UNITS SHALL BE MOUNTED IN RUBBER SUPPORTS OR THE FAN SHALL BE INDEPENDENTLY SUPPORTED ON SPRING ISOLATORS. MOTORS LOCATED IN THE CONDITIONED SPACE SHALL BE SELECTED FOR QUIET OPERATION AND SHALL NOT PRODUCE AN OBJECTIONABLE "MOTOR NOISE" IN THE SPACE.

ELECTRICAL CHARACTERISTIC SHALL BE VERIFIED FROM THE ELECTRICAL DRAWINGS, PRIOR TO BIDDING, AND VERIFIED ON THE JOB WITH THE ELECTRICAL SUB-CONTRACTOR. IF A CONFLICT ARISES, THE ELECTRICAL DRAWINGS SHALL BE THE AUTHORITY.

SHALL BE SQUARE-D OR EQUIVALENT WITH OVERLOAD TRIP ELEMENT IN EACH PHASE. LARGER MOTORS AND THEIR STARTERS SHALL MEET THE REQUIREMENTS OF THE UTILITY COMPANY AS TO INRUSH ALLOWABLE AND THE TYPE OF STARTING PERMITTED.

PROVIDE MOTOR STARTERS AND PROPER HEATER ELEMENTS SIZED IN ACCORDANCE WITH NFPA 70. STARTERS

SHOULD ANY MECHANICAL EQUIPMENT REQUIRE EXTRA WORK BY OTHER TRADES. FOR PROPER INSTALLATION. THIS CONTRACTOR SHALL BEAR ALL COSTS, SUCH AS INCREASED ELECTRICAL, STRUCTURAL, ROOFING, ETC.

SYSTEMS TEST AND BALANCE:

39. GENERAL REQUIREMENTS:

THE REQUIRED TEST & BALANCE OF THE HVAC SYSTEM SHALL BE PERFORMED BY AN APPROVED INDEPENDENT TESTING AGENCY AS SPECIFIED BELOW.

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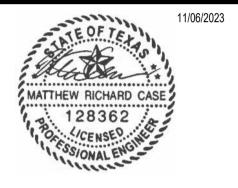
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GENERAL SPECIFICATIONS (CONTINUED)

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

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.



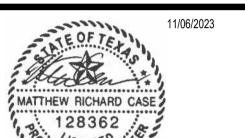
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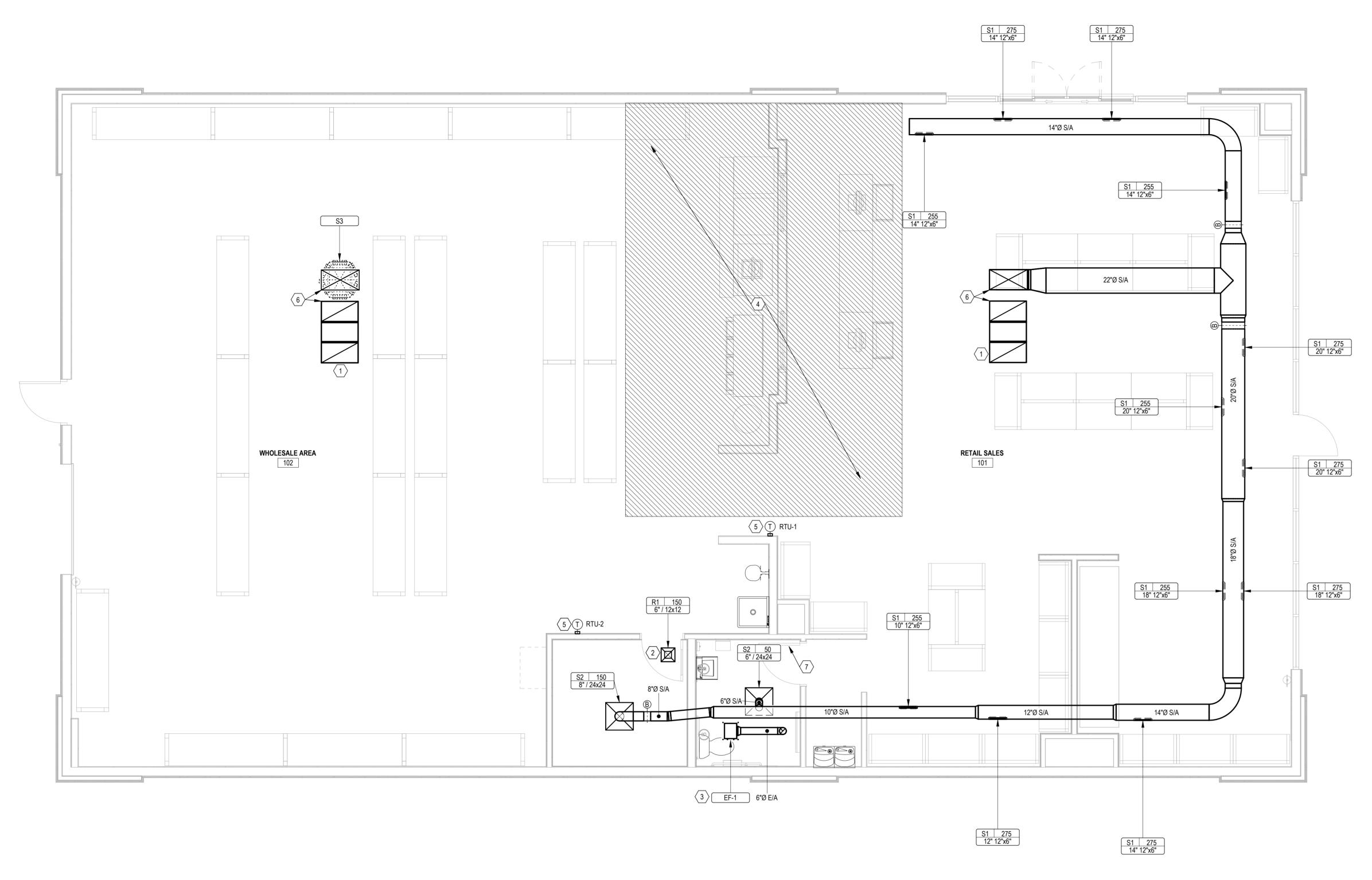
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MECHANICAL SPECIFICATIONS



1 MECHANICAL FLOOR PLAN
M100 1/4" = 1'-0"

MECHANICAL KEYNOTES

- 1 INSTALL TWO 90° ELBOWS 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.
- INSTALL <u>EF-1</u> 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.
- 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 OWNER/ARCH. VERIFY PROPER OPERATION IN FIELD. REFER TO DATABOARD DETAIL 2, E300. PROVIDE 100' T-STAT WIRE.
- 6 33"x18" SA AND 32"x18" RA DOWN FROM RTU ON ROOF. SEE ROOF PLAN ON SHEET M200.
- 7 GENERAL CONTRACTOR TO UNDERCUT DOOR 3/4" ABOVE THRESHOLD FOR TRANSFER AIR.

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.

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.

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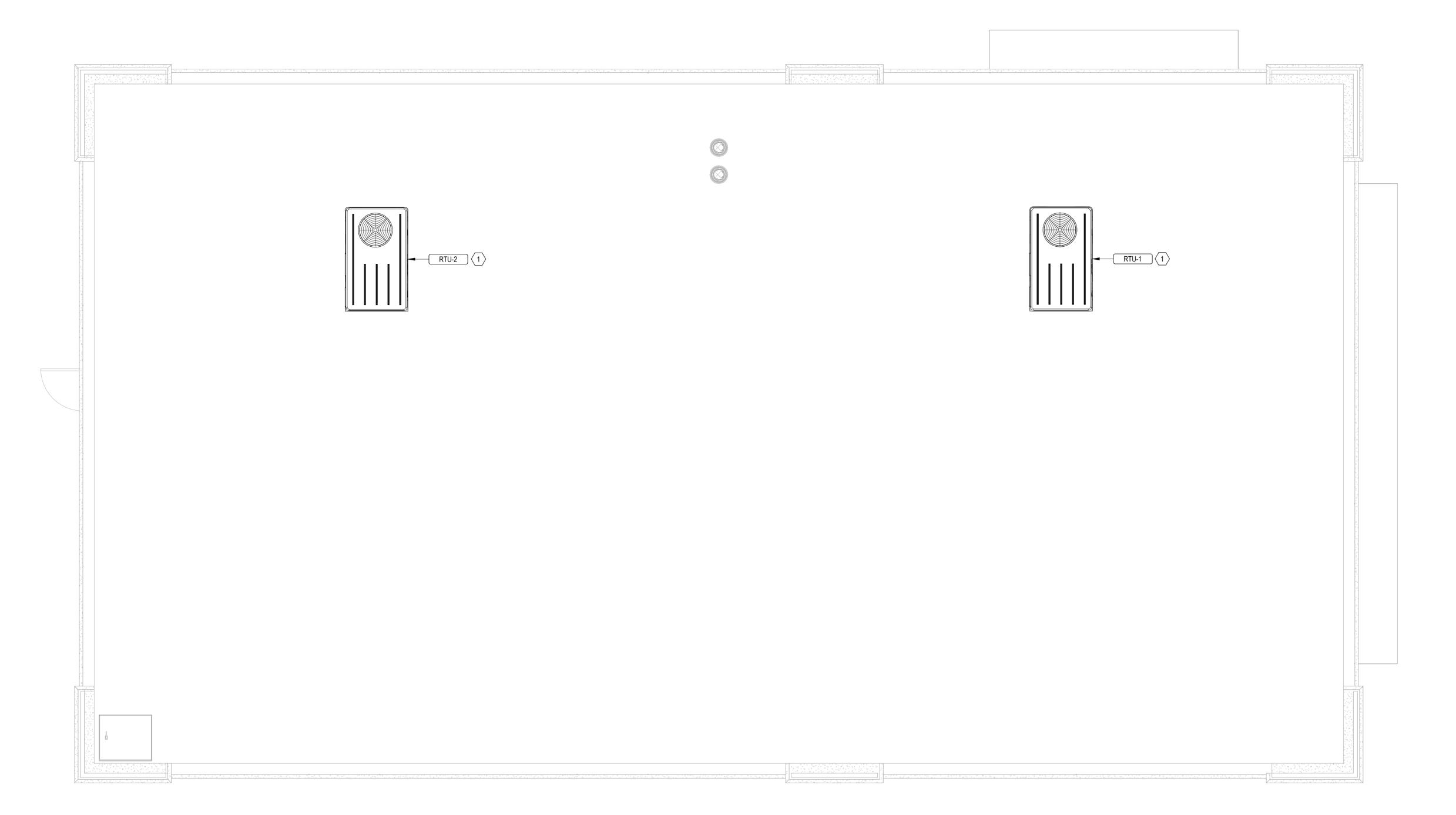
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SHEET TITLE:

MECHANICAL FLOOR PLAN

SHEET NUMBER:

M100



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

.

MECHANICAL KEYNOTES

- INSTALL RTU IN LOCATION SHOWN PER MANUF. SPECIFICATIONS.
 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.

GENERAL NOTES

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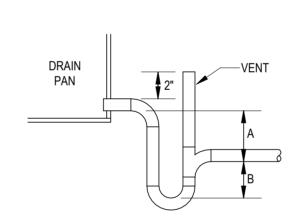
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ROOF MECHANICAL PLAN

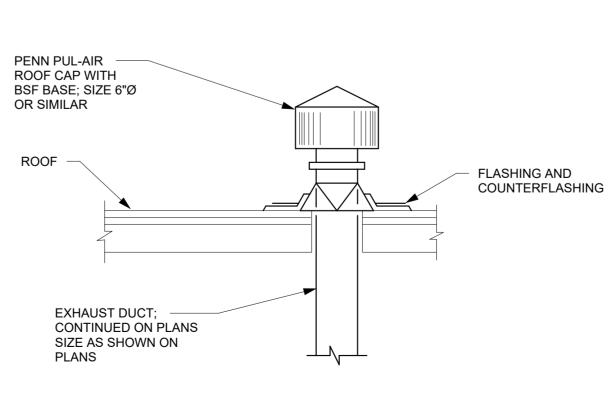
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M200

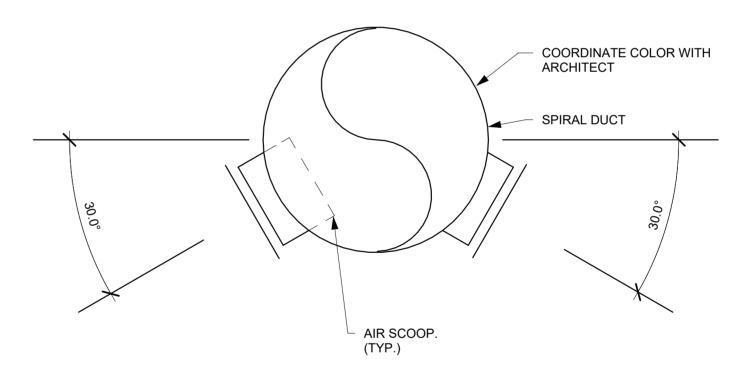


A= SCHEDULED FAN STATIC PLUS ONE INCH B= 1/2 OF SCHEDULED FAN STATIC

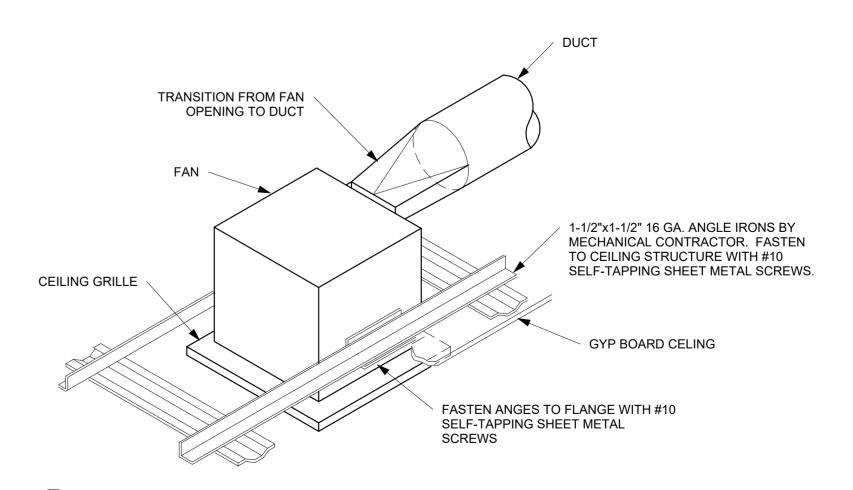




2 EXHAUST THROUGH ROOF DETAIL NOT TO SCALE



4 SPIRAL DUCT DIFFUSER TAKE OFF DETAIL NOT TO SCALE



1 CEILING EXHAUST FAN DETAIL NOT TO SCALE



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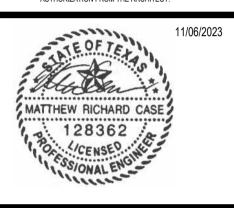
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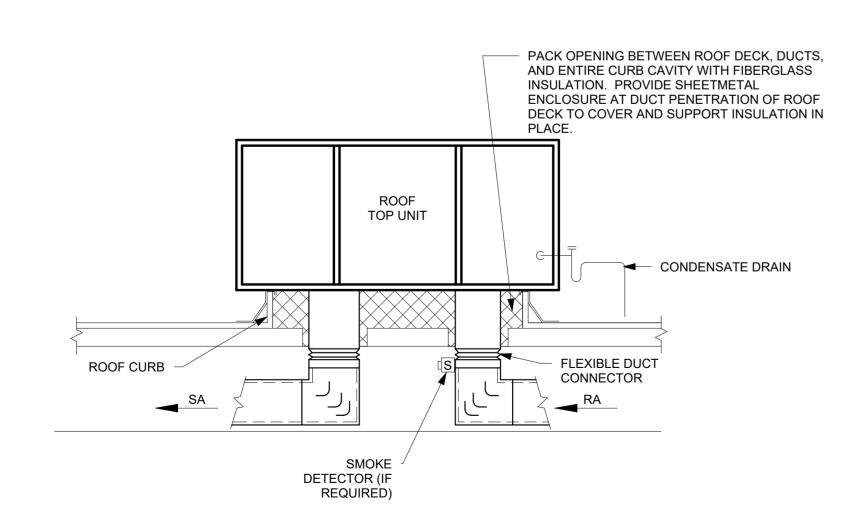
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SHEET TITLE:

MECHANICAL DETAILS

SHEET NUMBER:

M400



3 ROOFTOP UNIT DETAIL NOT TO SCALE

	ROOFTOP UNIT SCHEDULE (ELECTRIC HEATING - DX COOLING)																							
		SUPPLY FAN			ELECTRIC HEATING CAPACITY		COOLING CAPACITY																	
TAG	MANUFACTURER/ MODEL	LOCATION/ SERVICE	UNIT TON	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)	EFFICIENCY (IEER)	MCA	MOCP	VOLT/PH/HZ	WEIGHT* (LBS)	OVERALL DIMENSIONS	NOTES
RTU-1	TRANE/ TSJ102A	ROOF/ SALES AREA	8.5	3400	550	0.89	DIRECT	1225	36	122.9	58.8	91.3	94.75	86.03	11.20	78.1/62.7	53.6/52.4	14.8	107	110	208/3/60	1100	SEE MANUF.	1-7
RTU-2	TRANE/ TSJ090A	ROOF/ WHOLESALE AREA	7.5	3000	525	0.81	DIRECT	1118	36	122.9	53.3	90.2	83.0	83.0	11.20	79.6/62.5	53.2/52.4	14.8	107	110	208/3/60	1000	SEE MANUF.	1-7

OR EQUIVALENT BY OTHERS

NOTES:

- 1. FURNISH AND INSTALL ROOFTOP UNIT. PROVIDE WITH 100% OA ECONOMIZER, 2" MERV 8 FILTERS, MODULATING OA DAMPER, STANDARD EFFICIENCY UNIT, TWO STAGE HEATING, 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			
<u>EF-1</u>	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						
<u>S1</u>	SPIRAL DUCT DIFFUSER	AS SHOWN	AIR SCOOP	BY ARCH	PRICE SDG	NOMINAL SIZE VARIES, SEE DRAWINGS						
<u>S2</u>	CEILING DIFFUSER	4-WAY	O.B.D.	BY ARCH	PRICE SCD	24"x24" FACE NECK SIZE VARIES, SEE DRAWINGS						
<u>S3</u>	CONCENTRIC DIFFUSER	6-WAY		BY ARCH	UNITED ENERTECH DPD6-7.5T	12"x6" GRILLE SIZE 3000 CFM						
<u>R1</u>	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 10"Ø 12"Ø 14"Ø

376-600 601-910

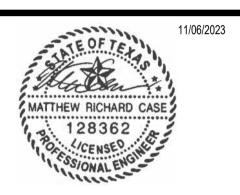
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MECHANICAL SCHEDULES

SYMBOL LEGEND

LIGHTING RATTERY BACK-LIP AND LIGHTING CONTROL SYSTEM

<u>LIGHT</u>	ING, BATTERY BACK-UP AND LIGHTING CONTROL S'
	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
\bigcirc	RECESSED LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR EXACT TYPE
	RECESSED LIGHTING FIXTURE WITH EMERGENCY BATTERY BACK- UP BALLAS, SEE FIXTURE SCHEDULE FOR EXACT TYPE
$\bigcirc\rangle$	RECESSED WALL WASHER LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR EXACT TYPE
\bigcirc	WALL MOUNTED LIGHTING FIXTURE, SEE FIXTURE SCHEDULE FOR EXACT TYPE
\triangle \triangle \triangle	TRACK LIGHTING, SEE FIXTURE FOR EXACT TYPE
\bigotimes	CEILING MOUNTED EXIT LIGHT FIXTURE, SEE FIXTURE SCHEDULE FOR EXACT TYPE. PROVIDE ARROWS WHERE SHOWN
€ H	WALL MOUNTED EXIT LIGHT FIXTURE, SEE FIXTURE SCHEDULE FOR EXACT TYPE. PROVIDE ARROWS WHERE SHOWN
₩ ₁	WALL MOUNTED EXIT LIGHT FIXTURE – SELF-CONTAINED, BATTERY OPERATED WITH EMERGENCY HEADS. SEE FIXTURE SCHEDULE FOR EXACT TYPE
\$ # 3	SINGLE POLE SWITCH (MOUNTED AT 48" A.F.F.)
\$3 44	THREE WAY SWITCH (MOUNTED AT 48" A.F.F.)
\$ ⁴ ∉ DIM	FOUR WAY SWITCH (MOUNTED AT 48" A.F.F.)
Ş DIM S P	DIMMER SWITCH (MOUNTED AT 48" A.F.F.)
⇒.	WALL MOUNTED PIR OCCUPANCY SENSOR (MOUNTED AT 48" A.F.F.)
♪ S DT	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY DIMMABLE SENSOR (MOUNTED AT 48" A.F.F.)
[⊅] TS	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR (MOUNTED AT 48" A.F.F.) WALL MOUNTED DIGITAL TIMER SWITCH (MOUNTED AT 48" A.F.F.)
ţ̈́U	WALL MOUNTED ULTRASONIC OCCUPANCY SENSOR (MOUNTED AT 48" A.F.F.)
₫ OR	WALL MOUNTED OVERRIDE SWITCH (MOUNTED AT 48" A.F.F.)
ŠLV1	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	
LUI	LIGHTING CONTROL DEVICE

ECE	PTACLES PTACLES
Ь	DUPLEX RECEPTACLE (MOUNTED AT 18" A.F.F.)
$\stackrel{ullet}{\oplus}$	GROUND FAULT CIRCUIT INTERRUPTED DUPLEX RECEPTACLE
$\widehat{\underline{\oplus}}$	TAMPER PROOF DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE WITH USB
	DUPLEX RECEPTACLE MOUNTED ABOVE COUNTERTOP BACK SPLASH
Φ_{H}	DUPLEX RECEPTACLE MOUNTED HORIZONTAL (MOUNTED ABOVE COUNTER BACKSPLASH)
j	GROUND FAULT CIRCUIT INTERRUPTED DUPLEX RECEPTACLE MOUNTED ABOVE COUNTERTOP BACK SPLASH
Θ^{+XX}	DUPLEX RECEPTACLE (MOUNTED XX" A.F.F.)
\bigoplus_{D}	DEDICATED DUPLEX RECEPTACLE (MOUNTED THAT 18" A.F.F.)
∯ _E	DUPLEX RECEPTACLE ON EMERGENCY POWER
Ů ^{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
\(\begin{array}{c} \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ 	DOUBLE DUPLEX (QUAD) RECEPTACLE (MOUNTED AT 18" A.F.F.)
	GROUND FAULT CIRCUIT INTERRUPTED DOUBLE DUPLEX (QUAD) RECEPTACLE
$\stackrel{\widehat{\Box}}{=}$	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

Ф	SINGLE RECEPTACLE - AMPERAGE/PHASE AS NOTED

POWER POLE PROVIDED BY SYSTEM FURNITURE

WIREMOLD - SEE PLANS FOR EXACT SPECIFICATIONS AND MOUNTING HEIGHT TYPE W/ FOI IIPMENT SHOP DRAWINGS BRIGHT TO SOLICI. HEIGHT. TYPE W/ EQUIPMENT SHOP DRAWINGS PRIOR TO ROUGH-IN

ELECTRICAL CONNECTIONS

(E1)	120V, SINGLE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED
	WITH EQUIPMENT.

- 208V, SINGLE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT.
- 208V, THREE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED
- WITH EQUIPMENT.
- 277V, SINGLE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT. 480V, SINGLE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED
- 480V, THREE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT.

MOTOR CONNECTIONS

- 120V, SINGLE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED
- 208V, SINGLE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT.
- 208V, THREE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT.
- 277V, SINGLE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT.
- 480V, SINGLE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED
- 480V, THREE PHASE ELECTRICAL CONNECTION, DISCONNECT PROVIDED WITH EQUIPMENT. MOTOR AND DISCONNECT. DISCONNECT SHALL BE FURNISHED AND
- INSTALL BY E.C. MOTOR AND COMBINATION MOTOR STARTER. COMBINATION MOTOR STARTER SHALL BE FURNISHED AND INSTALL BY E.C.
- MOTOR AND VFD. VFD SHALL BE FURNISHED BY OTHERS AND INSTALL BY
- JUNCTION BOX OR PULL BOX.

ELECTRICAL DISTRIBUTION EQUIPMENT

	RECESSED 120/208V PANELBOARD
_	RECESSED 277/480V PANELBOARD
	SURFACE 277/480V PANELBOARD
	SURFACE 277/480V PANELBOARD
M	METER
Т	TRANSFORMER

- NON FUSED DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- COMBINATION MAGNETIC MOTOR STARTER VARIABLE FREQUENCY DRIVE (FURNISHED BY OTHERS AND INSTALLED BY E.C.)
- MANUAL MOTOR STARTER

CEILING FAN

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
 - \pm 3/4" x 10'-0" COPPER CLAD GROUND ROD OR AS NOTED.

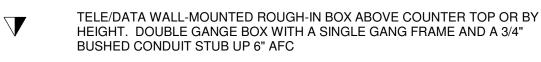
FIRE ALARM HORN/STROBE SYSTEM

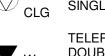
F	FIRE ALARM HORN - WALL MOUNTED
F	FIRE ALARM PULL STATION

- FIRE ALARM STROBE WALL MOUNTED. 15/75 CANDELLA UNLESS OTHERWISE NOTED.
- FIRE ALARM HORN/STROBE WALL MOUNTED. 15/75 CANDELLA UNLESS OTHERWISE NOTED.
- FIRE ALARM STROBE CEILING MOUNTED. 15/75 CANDELLA UNLESS OTHERWISE NOTED.
- FIRE ALARM HORN CEILING MOUNTED.
- FIRE ALARM HORN/STROBE CEILING MOUNTED. 15/75 CANDELLA UNLESS OTHERWISE NOTED.
- FIRE ALARM DUCT DETECTOR
- FIRE ALARM WATER FLOW SWITCH (FBO)
- FIRE ALARM TAMPER SWITCH VALVE SUPERVISION (FBO)
- FIRE ALARM SMOKE DETECTOR
- FIRE ALARM SMOKE DETECTOR ELEVATOR RECALL
- FIRE ALARM HEAT DETECTOR
- FIRE ALARM MONITORING MODULE
- FIRE ALARM CONTROL MODULE (RELAY)
- FIRE ALARM DOOR HOLD OPEN DEVICE
- FIRE ALARM CONTROL PANEL
- FIRE ALARM ANNUCIATOR PANEL
- FIRE ALARM FIREMAN'S JACK

TELE/DATA SYSTEMS







TELE/DATA OUTLET CEILING MOUNTED. DOUBLE GANGE BOX WITH A SINGLE GANG FRAME AND A 3/4" BUSHED CONDUIT KNOCKOUT.



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.



WIRELESS ACCESS POINT ROUGH IN ABOVE CEILING.



UNVERIFIED OR ASSUMED INFORMATION. VERIFY ALL REQUIRED INFO. W/ VENDOR, SHOP DRAWINGS AND SCOPE OF WORK PRIOR TO ROUGH-IN.

EQUIPMENT DESIGN, LOADS, ROUGH-IN BASED ON

ELECTRICAL SHEET INDEX E000 ELECTRICAL TITLE SHEET E001 ELECTRICAL SITE PLAN E002 SITE PHOTOMETRIC PLAN E100 ELECTRICAL SPECIFICATIONS ELECTRICAL SPECIFICATIONS E200 LIGHTING PLAN E300 POWER PLAN E400 ELECTRICAL RISER & SCHEDULES SHEET COUNT: 8

815.369.9155 1764 BLAKE ST DENVER, CO 80202 303.974.5875 WWW.LINGLEDESIGN.COM

St. Louis, MO 63026

796 Merus Court

LINGLEDESIGNGROUP, INC

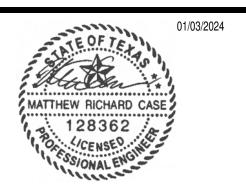
158 WEST MAIN STREET

LENA, IL 61048

F 636.349.1730

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CERTIFICATE OF AUTHORITY NO. F-20080



Project Number

DRAWN BY: Author CHECKED BY: Checker

CHECK SET - 11/01/23 DEVELOPER COMMENTS - 12/20/23

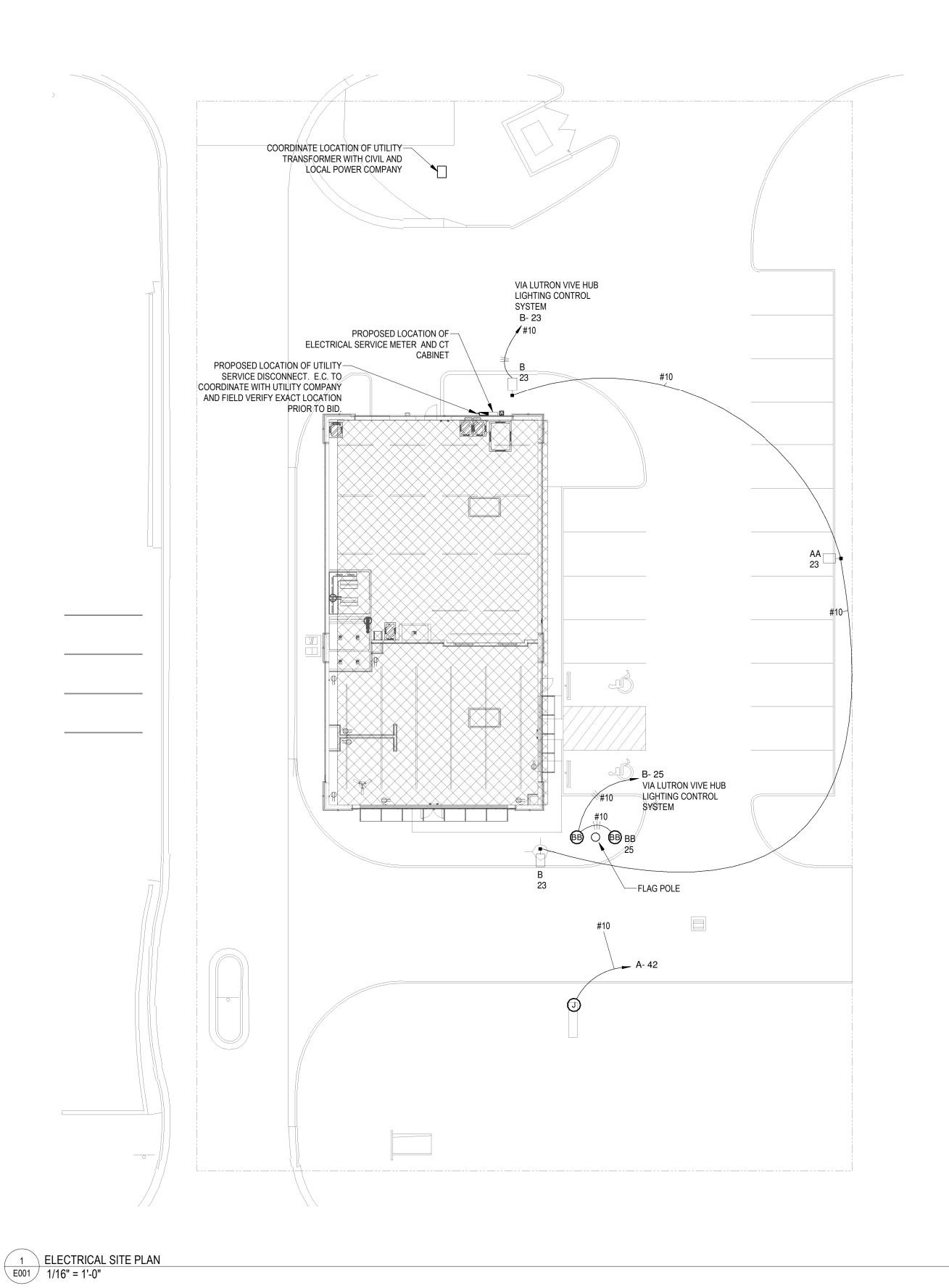
SHERWIN WILLIAMS

XXXX

12360 W. SH 29, LIBERTY HILL, TX, 78642

SHEET TITLE:

ELECTRICAL TITLE SHEET



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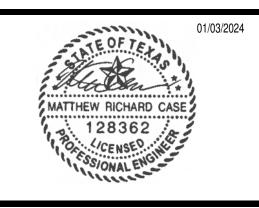
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PROJECT #: Project Number

DRAWN BY: Author

SHERWIN WILLIAMS

STORE #: XXXX

ADDE

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SHEET TITLE:

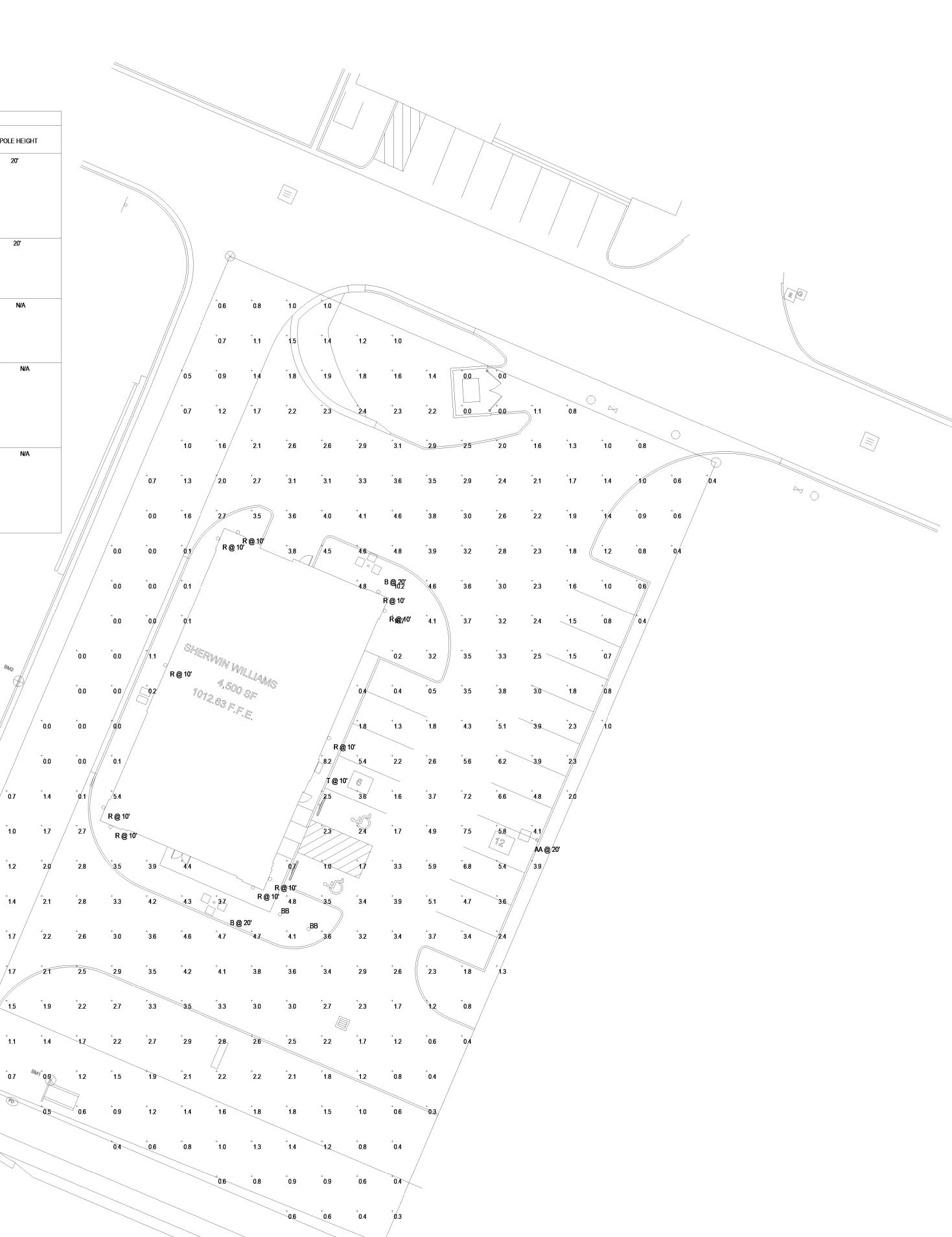
ELECTRICAL SITE PLAN

SHEET NUMBER:

E001

Schedule	I	1									
Symbol	Label	Image	Quantity	Manufacturer	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage	POLE HEIGHT
			2	Lithonia Lighting	DSX1 LED P5 40K 70CRI T5W	D-Series Size 1 Area Luminaire P5 Performance Package 4000K CCT 70 CRI Type 5 Wide	1	18708	0.8	414.48	20'
۰	В										
			1	LSI INDUSTRIES, INC.	MRS-LED-15L-SIL-3-40- 70CRI-IH		1	12572	0.93	111	20'
	AA										
			10	PROGRESS	P5641-20/30K BZ	OUTDOOR CYNLINER	1	2029	0.93	20.1	N/A
	Н										
			1	GE CURRENT	EWLS02140AF740N3CDBKBZ	WALL PACK W/PHOTOCELL	1	4102	0.93	41	N/A
	G										
			2	COOPER	BOCA 696 - 4000 KELVINS	WET PROTECTED-GROUND MOUNTED UPLIGHT	2	-	-	8	N/A
	BB										

Statistics						
Description	Symbol	Avg	Max	Min	Avg/Min	Max/Min
Calc Zone #3	+	2.2 fc	16.7 fc	0.0 fc	N/A	N/A



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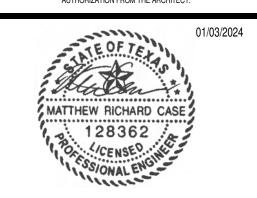
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PROJECT #:
Project Number

DRAWN BY: Author

SHERWIN WILLIAMS

<u>5</u>1

ADDR

12360 W. SH 29, LIBERTY HILL, TX, 78642

SHEET TITLE:

SITE PHOTOMETRIC PLAN

SHEET NUMBER:

E002

- 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
- 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
- 3. PROVIDE A SIGNED CERTIFICATE OF INSPECTION AT THE COMPLETION OF THE PROJECT. INCLUDE IN OPERATION AND MAINTENANCE MANUALS.

E. 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.**

F. REFERENCED STANDARDS:

- 1. ALL EQUIPMENT, APPARATUS, MATERIALS AND SYSTEMS SHALL BE RATED, TESTED,
- FABRICATED AND INSTALLED IN ACCORDANCE WITH THE APPLICABLE INDUSTRY
- FURNISH ONLY MATERIAL AND EQUIPMENT THAT IS LISTED, LABELED, CERTIFIED (OR ALL THREE) BY A NATIONALLY RECOGNIZED TESTING LABORATORY FOR THE TYPES OF

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
- 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
- 4. INSTALL INSTALL IN PLACE, MAKE READY FOR CONNECTION TO THE REQUIRED
- 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,
- 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
- 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.

- 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:
- 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.

- 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:
- 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.
- PROVIDE ALL FIELD LABOR AS REQUIRED TO OBTAIN ALL DATA NECESSARY TO CONDUCT THE STUDIES SPECIFIED HEREIN.
- 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.

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 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.
- NOMINAL VOLTAGE.
- 3. FLASH PROTECTION BOUNDARY
- 4. HAZARD RISK CATEGORY.
- 5. INCIDENT ENERGY.
- 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
- G. LABELS SHALL BE MACHINE PRINTED, WITH NO FIELD-APPLIED MARKINGS.

- 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

D. ALL LINE VOLTAGE WIRING AND FINAL CONNECTIONS TO COMPLETE MECHANICAL

OF THE WORK OF ANY CONTRACTOR ON THE PROJECT.

- 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
- 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
- 2. COORDINATE INSTALLATION AND CONNECTION OF UTILITIES AND SERVICES, INCLUDING PROVISION FOR ELECTRICITY-METERING COMPONENTS.
- CONTRACTOR. D. METER SOCKETS: COMPLY WITH REQUIREMENTS OF ELECTRICAL-POWER UTILITY

C. METERS SHALL BE FURNISHED BY UTILITY COMPANY; INSTALLED BY ELECTRICAL

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 FOUIPMENT 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.

OF THE AUTHORITY HAVING JURISDICTION.

- A. PROVIDE SEISMIC RESTRAINT FOR ELECTRICAL WORK AND SYSTEMS AND EQUIPMENT IN STRICT ACCORDANCE WITH THE APPLICABLE BUILDING CODE AND THE REQUIREMENTS
- 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
- 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.

- 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.
- 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
- 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
- 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.

LABEL SHALL BE LEGIBLY HANDWRITTEN WITH BLACK, FELT TIP PERMANENT MARKER.

ACCORDANCE WITH N.E.C. REQUIREMENTS.

- A. ALL INTERIOR AND EXTERIOR CONDUITS SHALL BE INSTALLED AND SUPPORTED IN
- B. MINIMUM CONDUIT SIZE SHALL BE ¾" TRADE SIZE. SWITCH LEGS SHALL BE ½" TRADE
- 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
- 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

ELECTRICAL METALLIC TUBING (EMT). CONDUIT FITTINGS FOR INDOOR EMT CONDUITS

- 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.

EXPANSION AND CONTRACTION.

WITH WALK-IN EQUIPMENT INSTALLER.

WHEATLAND, ELECTRI-FLEX AND ANACONDA.

- J. PVC CONDUIT SHALL ONLY BE USED BELOW GRADE. K. PROVIDE FLEXIBLE METAL CONDUIT FOR CONNECTIONS TO VIBRATING EQUIPMENT
- WITHIN INTERIOR DRY LOCATIONS. MAXIMUM CONDUIT LENGTH SHALL BE 36 INCHES. L. PROVIDE LIQUID-TIGHT FLEXIBLE METAL CONDUIT FOR CONNECTIONS TO VIBRATING EQUIPMENT IN WET OR OUTDOOR LOCATIONS. MAXIMUM CONDUIT LENGTH SHALL BE
- M. PROVIDE FLEXIBLE METAL CONDUIT FOR FINAL CONNECTIONS TO RECESSED LIGHT

FIXTURES (FIXTURE WHIPS). MAXIMUM CONDUIT LENGTH SHALL BE 72 INCHES.

- N. PROVIDE LIQUID-TIGHT FLEXIBLE METAL CONDUIT FOR FINAL ELECTRICAL CONNECTIONS TO FOOD SERVICE EQUIPMENT. O. CONDUITS THAT EXTEND UP TO THE ROOF LEVEL TO SERVE ROOF MOUNTED
- EQUIPMENT CURB. COORDINATE ELECTRICAL WORK WITH MECHANICAL EQUIPMENT INSTALLER. P. PROVIDE CONDUIT SEALING FITTINGS IN ALL CONDUITS THAT EXTEND FROM NON-REFRIGERATED SPACES TO REFRIGERATED SPACES PER NEC 300.7(A). PROVIDE

EXPANSION JOINTS FOR CONDUIT AS REQUIRED TO COMPENSATE FOR THERMAL

MECHANICAL EQUIPMENT INSTALLED ON A CURB SHALL BE ROUTED WITHIN THE

- Q. ALL CONDUITS INSTALLED IN ASSOCIATION WITH THE WALK-IN COOLER FREEZER SHALL BE INSTALLED IN ACCORDANCE WITH THE WALK-IN MANUFACTURERS RECOMMENDATIONS AND REQUIREMENTS. COORDINATE ALL CONDUIT INSTALLATION
- S. ACCEPTABLE MANUFACTURERS FOR CONDUIT FITTINGS SHALL BE THOMAS AND BETTS OR APPROVED EQUAL.

R. ACCEPTABLE MANUFACTURERS FOR GALVANIZED RIGID CONDUIT, EMT, FLEXIBLE METAL

CONDUITS AND LIQUID-TIGHT FLEXIBLE METAL CONDUITS SHALL BE ALLIED, REPUBLIC,

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CHECKED BY: Checker

Project Number

CHECK SET - 11/01/23

DEVELOPER COMMENTS - 12/20/23

STRANDED.

- 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
- 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
- H. BRANCH CIRCUITS CONCEALED IN EXISTING AND NEW CEILINGS, WALLS, AND
- BRANCH CIRCUITS CONCEALED BELOW SLABS-ON-GRADE, AND UNDERGROUND:

PARTITIONS: TYPE THHN-THWN, SINGLE CONDUCTORS IN CONDUIT.

- 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.

THOMAS AND BETTS LOCK-TITE FOR #6 AND LARGER.

GAGE (AWG - BROWN AND SHARPE).

- L. CLASS 2 CONTROL CIRCUITS: POWER-LIMITED PLENUM RATED CABLE, CONCEALED IN
- M. THE USE OF NON-METALLIC-SHEATHED CABLE (TYPE NM) AND ARMORED CABLE (TYPE AC
- RE CONNECTORS SHALL BE EQUAL TO SCOTCH LOCK FOR #8 AWG AND SMALLER,
- D. PROVIDE #10 AWG CONDUCTORS FOR BRANCH CIRCUITS HAVING A CONDUCTOR LENGTH LONGER THAN 60 FEET.

- 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.
- . 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.
- . 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.

OLYAGE DROP WERANCH CIRCLIES SHALL MOT EXCEED 3 PERGENT. W. WIRE SIZE SHALL BE CONTINUOUS THROUGH THE ENTIRE RUN.

X. ALL HOMERUNS FROM PANEL BOARD TO FIRST DEVICE SERVED SHALL BE IN EMT

- 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.
- A.B. 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.
- A.C. FOR VERTICAL DROPS IN STUD WALLS.

B. USES NOT PERMITTED:

- D1. HOMERUNS TO PANELBOARDS.
- D2. WHERE EXPOSED TO VIEW. D3. WHERE EXPOSED TO DAMAGE
- D4. HAZARDOUS LOCATIONS.
- D5. WET LOCATIONS.
- 66. INSTALLED HORIZONTALLY WITHIN STUD WALL.
- D6. WHEN RESTRICTED OTHERWISE ABOVE, AND WHEN SPECIFICALLY DISALLOWED BY THE LOCAL AHJ, OWNER OR BOTH.

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

BOXES AUD TIMUES

- 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.

 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.

AND CONDUCTORS ASSOCIATED WITH THE PULLBOX.

- 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
- 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"
- . 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

- 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, 14,000 FOR 277/480V SYSTEMS
- D. WHERE THE POWER SYSTEM STUDY IDENTIFIES AVAILABLE FAULT CURRENT VALUES AT EXISTING AND 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.
- PROVIDE NEMA 1 ENCLOSURES FOR INTERIOR PANELS.
- 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 THREE (3) EMPTY 1 INCH CONDUITS FROM EACH FLUSH MOUNTED PANEL STUBBED UP TO ABOVE ACCESSIBLE CEILING.
- Q. PROVIDE HANDLE TIES ON ALL MULTI-WIRE BRANCH CIRCUITS IN ACCORDANCE WITH
- 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
- C. PROVIDE A NEUTRAL CONDUCTOR TO ALL SWITCH LOCATIONS
- D. 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
- E. COVER PLATES FOR EXTERIOR RECEPTACLES SHALL BE RATED FOR "WEATHERPROOF WHILE IN USE"
- ADDITIONAL ACCEPTABLE MANUFACTURERS FOR SWITCHES AND RECEPTACLES: GRAND, EVITOR CONTROL OF THE PROPERTY OF THE P
- 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.
- INSTALL "D" TYPE OUTLETS WHERE, AND AT THE HEIGHTS SHOWN. EACH "D" OUTLET SHALL BE WIRED TO A DEDICATED, 20-AMP, SINGLE PHASE, 120 VOLT CIRCUIT AND SHALL RECEIVE A GRAY DUPLEX RECEPTACLE.
- INSTALL "S" TYPE OUTLETS WHERE, AND AT THE HEIGHTS SHOWN. THESE OUTLETS SHALL BE INSTALLED IN A RECESSED BOX, ARLINGTON INDUSTRIES TVBS503 AND WIRED THROUGH TO THE MASTER 8-BUTTON SWITCH LOCATED INSIDE THE OFFICE AND BEHIND THE DOOR. THESE OUTLETS SHALL RECEIVE A WHITE DUPLEX RECEPTACLE AND COVER PLATE.
- K. INSTALL RECEPTACLES PER NFPA AND LOCAL ELECTRICAL CODE AND WHEN: K.A. VERTICALLY ALIGNED, WITH THE GROUND SLOT MOUNTED AT THE TOP:
- K.B. HORIZONTALLY ALIGNED, WITH THE NEUTRAL SLOT AT THE TOP.

- 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
- 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

MANUFACTURED BY LITTLEFUSE, OR APPROVED EQUAL.

A. COVER PLATES WITHIN NON-FOOD SERVICE AREAS SHALL BE NYLON, OF CONFIGURATION TO MATCH THE WIRING DEVICE.

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
- 6. 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
- C. DISCONNECT SWITCHES INSTALLED EXPOSED IN FOOD SERVICE AREAS SHALL BE NEMA 4X

APPLICATIONS; NEMA 3R ENCLOSURES FOR OUTDOOR OR WET LOCATION APPLICATIONS.

- STAINLESS STEEL. D. ALL DISCONNECT SWITCHES SHALL BE EQUIPPED WITH AN ENGRAVED NAMEPLATE TO IDENTIFY THE SERVING PANEL, CIRCUIT NUMBERS AND THE LOAD SERVED BY THE
- E. ACCEPTABLE MANUFACTURERS FOR DISCONNECT SWITCHES: SCHNEIDER, ABB, SIEMENS OR EATON.

- A. PROVIDE CARTRIDGE FUSES RATED FOR 250 VAC AND 600 VAC AND LESS FOR USE AS
- 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.

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. PROVIDE A NEUTRAL CONDUCTOR TO ALL SWITCH LOCATIONS

ROUGH-IN SYSTEM FOR VOICE AND DATA

B. PROVIDE A 4'x8'x3/4 INCH PLYWOOD BOARD TO SUPPORT SHERWIN-WILLIAMS PHONE, COMPUTER AND SATELLITE EQUIPMENT. SEE ELEVATIONS

A. PROVIDE A ROUGH-IN SYSTEM AS SPECIFIED HEREIN FOR SERVICE TO THE OWNER'S

- FOR INSTALLATION INSTRUCTIONS AND SPECIAL ELECTRICAL REQUIREMENTS. PLYWOOD SHALL BE MINIMUM APA STRUCTURAL I RATED SHEATHING EXTERIOR C-C
- 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

. OUTLET BOXES FOR TELEPHONE AND DATA DEVICES SHALL CONSIST OF 4 11/16 IN

- ON EACH END OF CONDUIT FOR CABLE PROTECTION. 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.
- 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

G. PROVIDE PHONE AND DATA JACKS WHERE. AND AT THE HEIGHTS SHOWN. PROVIDE 3/4" EMT CONDUIT AND PULL STRING FROM EACH TELEPHONE/DATA OUTLET. ROUTE TO DATA BOARD, LOW VOLTAGE WIRING AND DEVICES BY OTHERS.

- E. PROVIDE A 120 VOLT POWER SOURCE TO ALL DUCT MOUNTED SMOKE DETECTORS INSTALLED WITHIN NEW AND EXISTING MECHANICAL EQUIPMENT
- F. 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.
- G. 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
- H. PROVIDE TEST/RESET SWITCH AND PIEZO ALERT SOUNDER AND REMOTE ANNUNCIATOR ALARM LED MOUNTED AS DIRECTED BY LOCAL AHJ. EC TO PROVIDE ALL REQUIRED
- REFER TO DETAILS ON MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.

INTERLOCK WIRING BETWEEN DUCT DETECTOR AND REMOTE SWITCH.

- 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
- D. NEW AND EXISTING PANELBOARDS SHALL HAVE PHASE CURRENTS BALANCED TO WITHIN +/- 10% VARIATION BETWEEN AVERAGE PHASE CURRENT AND MEASURED INDIVIDUAL
- 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

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.

- 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. D. GC/VENDOR/DESIGN PROFESSIONAL SHALL BE RESPONSIBLE FOR VERIFYING ALL

APPLICABLE CODE REQUIREMENTS AND ALL LOCAL FIRE ALARM SYSTEM REQUIREMENTS

- WITH THE LOCAL AUTHORITY HAVING JURISDICTION. E. GC/VENDOR/DESIGN PROFESSIONAL SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED SUBMITTAL DRAWINGS TO THE AUTHORITY HAVING JURISDICTION FOR
- REVIEW AND APPROVAL PRIOR TO COMMENCING WORK.

PROVIDE INSTALL THE BUZZER SYSTEM. INSTALL THE BUZZER ON THE WALL WHERE

F. GC/VENDOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS FOR THE

BUZZER SYSTEM

FIRE ALARM WORK

THE ENTRY DOORS TO THE SALES ARE.

A. PROVIDE THE OPTEX CHIME SYSTEM. INSTALL THE CHIME RECEIVER UNIT AND REQUIRED ELECTRICAL RECEPTACLE ON THE WALL WHERE SHOWN. INSTALL THE BATTERY POWERED CHIME SENSOR UNITS AT THE ROOF STRUCTURE AND AIMED AT

SHOWN ON. INSTALL A WEATHER PROOF BUZZER BUTTON ON THE EXTERIOR WALL BETWEEN THE

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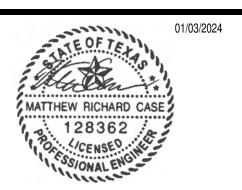
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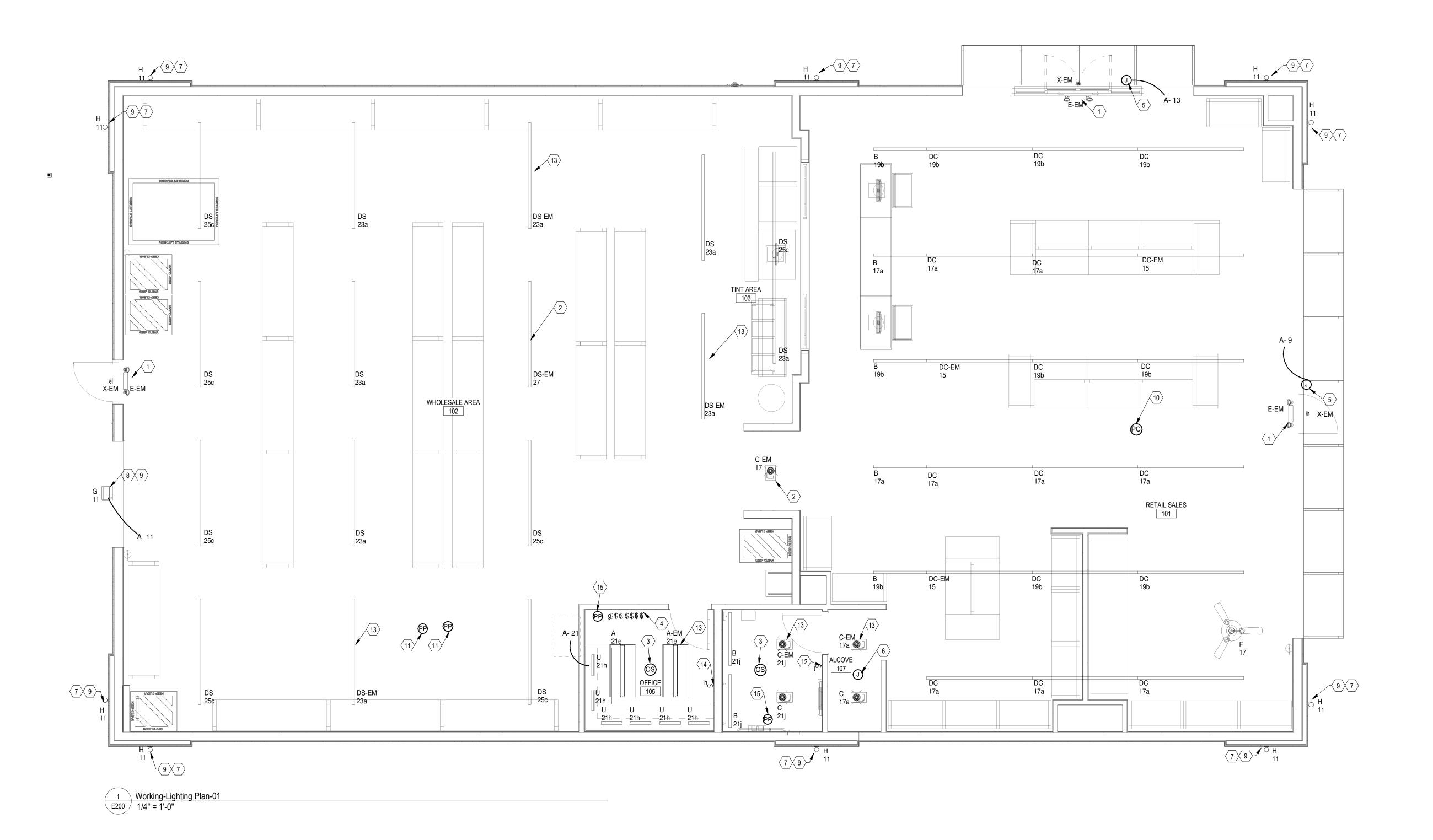
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CHECKED BY: Checker

Project Number DRAWN BY: Author

CHECK SET - 11/01/23 DEVELOPER COMMENTS - 12/20/23



	Lighting Fixture Schedule						
Type Mark	Count	Description	Manufacturer	Model	Lamp	Comments	
Α	1	2'x4' Troffer	GE Current	LVT24B048MM840VQ LTWHTE	LED	To be sourced from Wesco	
A-EM	1	2'x4' Emergency Troffer	GE Current	LVT24B048MM840VQ LTWHTEEL	LED	To be sourced from Wesco - Connect to non-switched emergency circuit	
В	7	48" Standalone Strip	GE CurrentA	LV204T04T481DSQV QSTKQW	LED	To be sourced from Wesco	
С	2	6" 1,000 Lumen LED Trim	GE Current	LRXBR61X9CWVQ	LED	To be sourced from Wesco	
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	15	8' Continuous Strip	GE CurrentA	LV208T08T481DCQV QSTKQW	LED	To be sourced from Wesco	
DC-EM	3	8' Continuous EM Strip	GE CurrentA	LV208T08T481DCQV ESTKQW	LED	To be sourced from Wesco - Connect to non-switched emergency circuit	
DS	13	8' Standalone Strip	GE CurrentA	LV208T08T481DSQV QSTKQW	LED	To be sourced from Wesco	
DS-EM	3	8' Standalone EM Strip	GE CurrentA	LV208T08T481DSQV ESTKQW	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.FInstall "lighting box" for stability	
G	1	Wall Pack W/Photocell	GE Current	EWLS02140AF740N3 CBDKBZ	LED		
Н	10	Outdoor Cylinder	PROGRESS	P5641[[20/30K BZ	LED	Mount @ 9'-0" A.F.FInstall "lighting box" for stability	
U	6	22" Undercabinet	JUNO	UPLD 22IN SWW4 90CRI W H	LED	Use splice box & jumper connectors	
X-EM	3	Remote LED Emergency Heads	COOPER	APWR2	LED	Remote from Exit sign/Emergency combo fixture	

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.

KEYNOTES

- 1 CONNECT EMERGENCY EGRESS LIGHTING FIXTURES AHEAD OF ALL LIGHTING CONTROLS OF GENERAL
- LIGHTING CIRCUIT SERVING AREA. NIGHT LIGHTING TO BE CONNECTED TO UNSWITCHED LEG OF CIRCUIT SERVING SPACE. VERIFY EXACT
- 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.
- 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
- TO PROVIDE LORON #AS-O MANUBATTANTER TED TIME CLOCK ABOVE SELLING AS RECORDED
- EXTERIOR LIGHTING CIRCUITS CONTROLLED THROUGH LUTRON VIVE HUB LIGHTING CONTROL SYSTEM. VERIFY EXACT FIXTURE MOUNTING HEIGHT PRIOR TO ROUGH-IN AND INSTALLATION.
- EXTERIOR WALL MOUNTED LED FIXTURE TO BE INSTALLED ABOVE OVERHEAD DOOR. LIGHT SHALL BE CONTROLLED VIA PHOTO-EYE SWITCH. COORDINATE EXACT LOCATION WITH G.C. PRIOR TO
- COORDINATE FIXTURE MOUNTING HEIGHT WITH ARCHITECTURAL PLANS AND G.C.

LOCATION PRIOR TO ROUGH-IN AND INSTALLATION.

- PROVIDE LUTRON EXTERIOR DAYLIGHT CONTROL PACKAGE FOR CONTROL OF EXTERIOR LIGHTING. 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
- 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
- SPECIFICATIONS. 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.

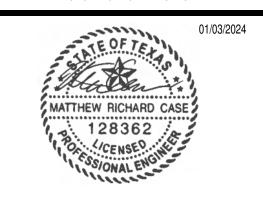
OF UNDER COUNTER TASK LIGHTING. COORDINATE WITH LUTRON SYSTEMS AND MANUFACTURER

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Engineering Inc.

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PROJECT #: Project Number DRAWN BY: Author

	CHECK SET - 11/01/23
1	DEVELOPER COMMENTS - 12/20/23
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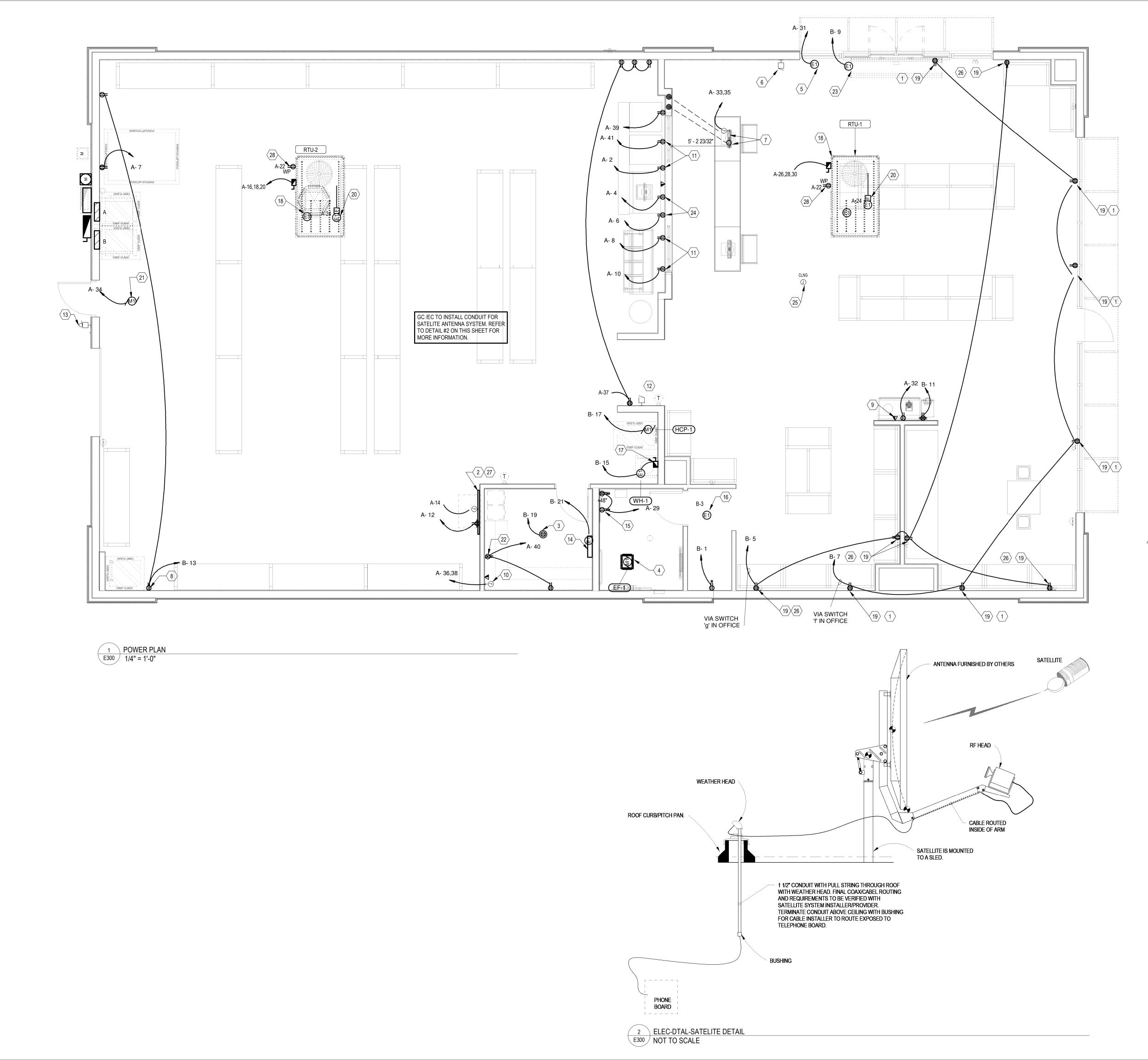
SHERWIN WILLIAMS

XXXX

12360 W. SH 29, LIBERTY HILL, TX, 78642

SHEET TITLE:

LIGHTING PLAN



KEYNOTES

- 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.
- 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. SEE DETAIL ON
- SHEET E400 FOR MORE INFORMATION E.C. TO PROVIDE J-BOX IN OFFICE FOR INSTALLATION OF CEILING MOUNTED DUPLEX OUTLET. VERIFY EXACT LOCATION WITH G.C. PRIOR TO ROUGH-IN AND INSTALLATION.
- BATHROOM EXHAUST FAN TO BE AUTOMATICALLY CONTROLLED WITH AREA OCCUPANCY LIGHTING SENSOR. COORDINATE INSTALLATION WITH M.C. 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. E.C. TO PROVIDE J-BOXES RECESSED INTO SLAB IN SALES. PULL BOX 'A' SHALL RECEIVE TWO (2) DEDICATED 20A, 1P,120V CIRCUITS ((1) 1-1/4" CONDUIT WITH PULL STRING
- TERMINATING AT TTB / PHONE BOARD). 8 E.C. TO PROVIDE DUPLEX AT +48" A.F.F. OR AS DIRECTED BY FOR CONNECTION TO FORKLIFT CHARGING STATION.
- 9 E.C. TO INSTALL DUPLEX AND DATA OUTLET 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
- 10 E.C. TO PROVIDE J-BOX AS DIRECTED BY G.C. ABOVE COUNTER FOR CONNECTION TO (2) OFFICE RACEWAYS. RACEWAY TO BE INSTALLED BY G.C. / E.C. VERIFY SCOPE OF WORK PRIOR TO BID.
- OUTLET MOUNTED AT +40" A.F.F. RECEPTACLE SHALL BE DEDICATED 20A, 1P, 120V CIRCUIT WITH GRAY DUPLEX RECEPTACLE AND COVER PLATE PER ARCHITECT
- 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.
- 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. E.C. TO PROVIDE J-BOX AND 30A, 3P, 208V DISCONNECT SWITCH WITH 4#10 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. PROVIDE NEW WEATHERPROOF GFCI PROTECTED RECEPTACLE.
- 19 E.C. TO INSTALL OUTLETS AT LOCATION AND HEIGHTS NOTED. 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.
- 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. 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. BLUE HUBBELL HBL5362SA 4-PLEX SURGE SUPPRESSION RECEPTACLE.
- J-BOX WITH CONDUIT AND PULL WIRES INSTALLED AT ROOF STRUCTURE. 26 MOUNT OUTLETS AT 86" A.F.F.

CIRCUIT NOTED.

THE EC SHALL INSTALL A 4'X8'X3/4 INCH PLYWOOD BOARD TO SUPPORT SHERW IN-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



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SHERWIN WILLIAMS

STORE #: XXXX

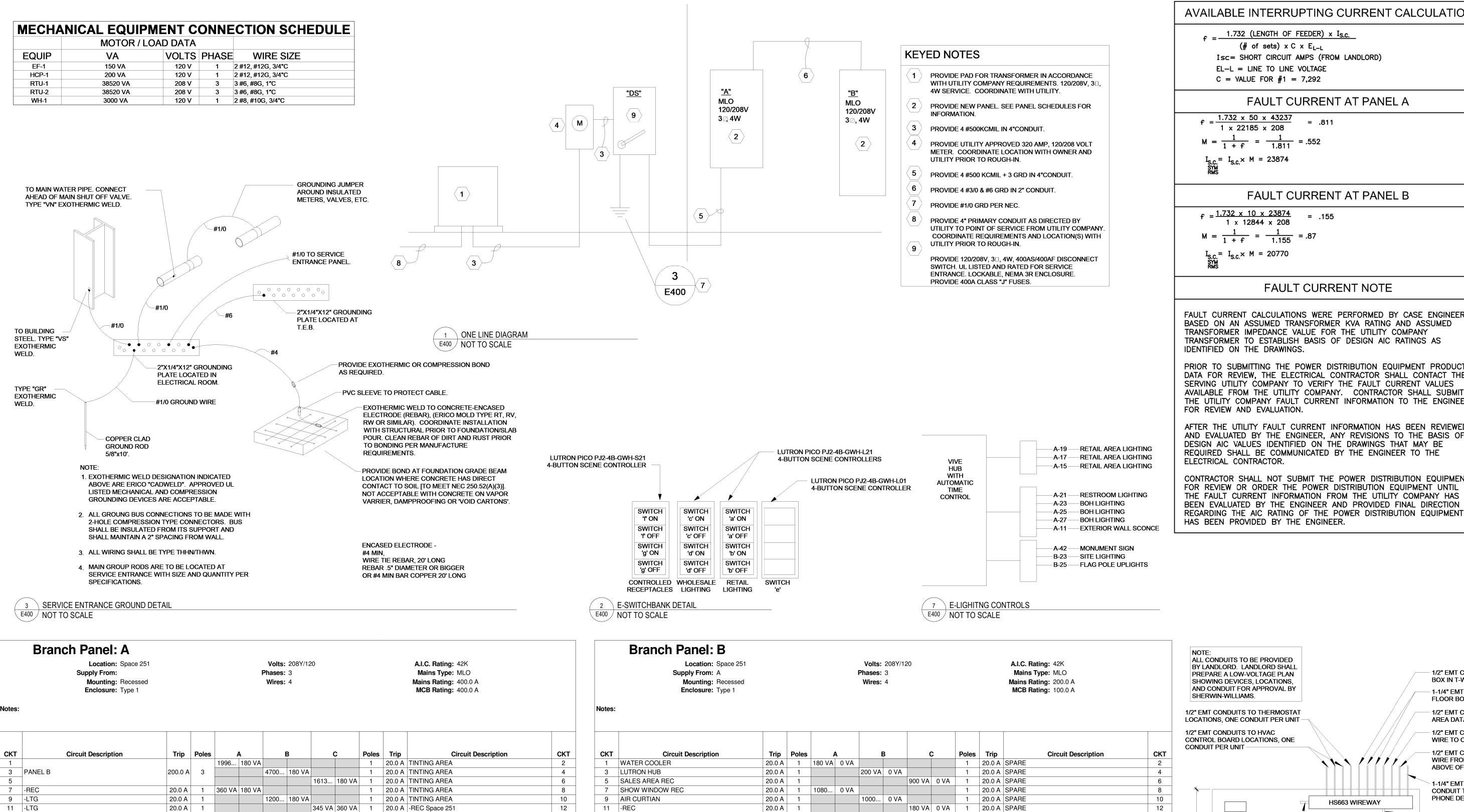
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SHEET TITLE:

POWER PLAN

SHEET NUMBER:

E300

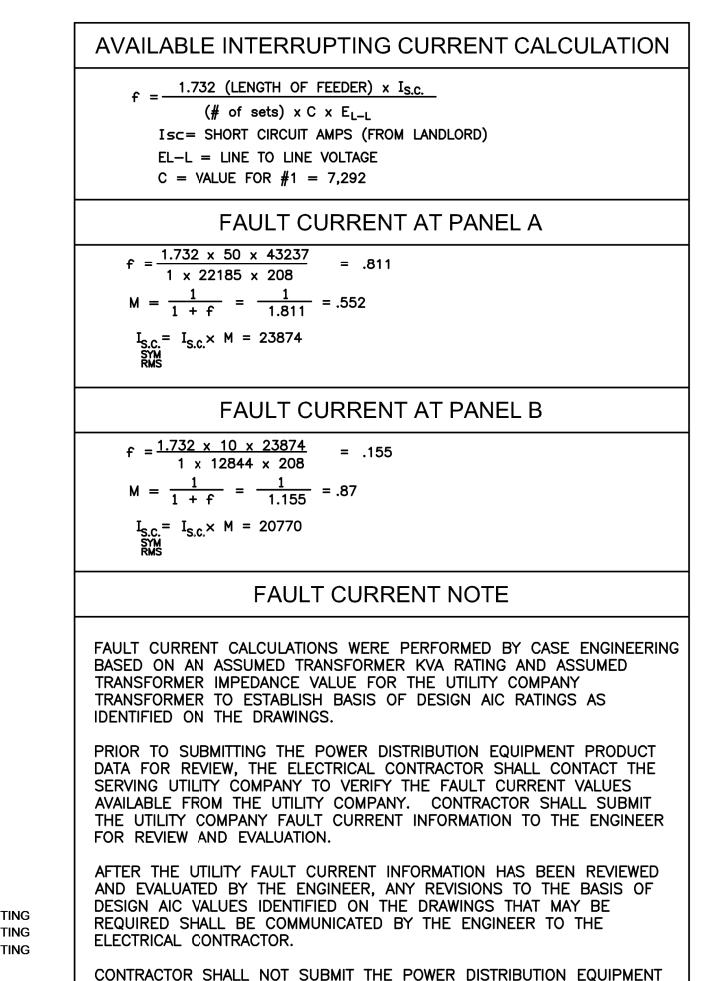


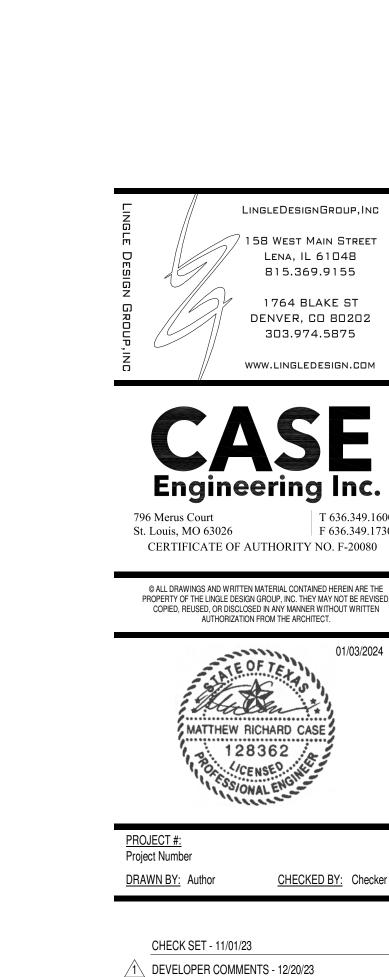
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1/2" EMT CONDUIT TO TV

1-1/4" EMT CONDUIT TO POS

1/2" EMT CONDUIT TO TINT

1/2" EMT CONDUIT WITH PULL

WIRE TO OFFICE PLUG MOLD

1/2" EMT CONDUIT WITH PULL

WIRE FROM J-BOX TO 12"

ABOVE OFFICE CEILING

- PHONE STRIP

3/4" C-D PLYWOOD

- 20A DEDICATED QUAD OUTLET

FINISHED FLOOR

BOX IN T-WALL

FLOOR BOX

1-1/4" EMT

STUB

HS663 WIREWAY

NETWORK

CABINET

1. ROUTE T-STAT WIRE TO

IN WIREWAY

START UP

PULL STRINGS

EMT OR GRAY PVC

PROVIDE 4'-0" SERVICE LOOP

2. GC TO INSTALL HVAC WIRING FOR SYSTEM BALANCING AND

3. ALL DATA CONDUIT TO HAVE

4. ALL DATA CONDUIT TO BE

STUB -

NOTE: CONCEAL ALL

CONDUIT IN WALLS

ENERGY MANAGMENT

SYSTEM CONTROLS BY

SHERWIN-WILLIAMS, LOW

VOLTAGE CONNECTIONS

AND INTERCONNECTION

HVAC CONTROLS BY

NOTE: FOR CLARITY

NOT ALL REQUIRED

CONDUIT RUNS ARE

SHOWN

DATA SWITCHBOARD

E400 / NOT TO SCALE

WITH THERMOSTATS AND NOTES:

SHERMIN WILLIAMS, TYPICAL WIREWAY THEN TO RTU,

CONDUIT TO

PHONE DEMARC

AREA DATA J-BOX

CHECK SET - 11/01/23 DEVELOPER COMMENTS - 12/20/23

AUTHORIZATION FROM THE ARCHITECT.

MATTHEW RICHARD CASE

128362

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SHERWIN WILLIAMS

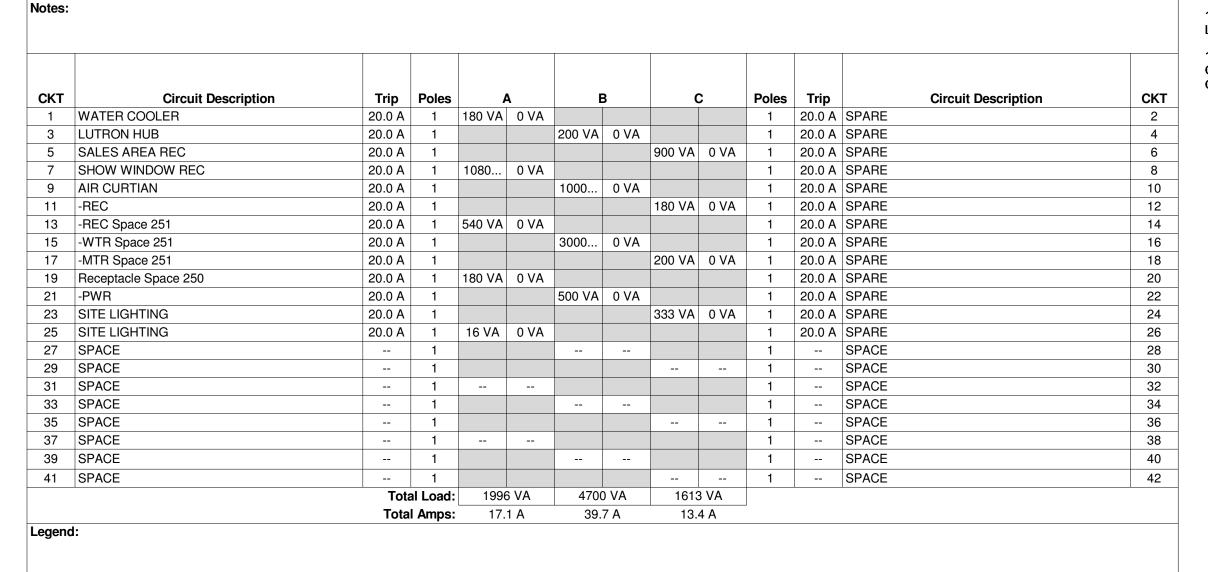
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12360 W. SH 29, LIBERTY HILL, TX, 78642

SHEET TITLE:

ELECTRICAL RISER & SCHEDULES

SHEET NUMBER:



oad Classification	Connected Load	Demand Factor	Estimated Demand	Panel	Totals
ghting	349 VA	100.00%	349 VA		
eceptacle	180 VA	100.00%	180 VA	Total Conn. Load:	8309 VA
WR	1500 VA	100.00%	1500 VA	Total Est. Demand:	8409 VA
TG	200 VA	125.00%	250 VA	Total Conn.:	23.1 A
/TR	3000 VA	100.00%	3000 VA	Total Est. Demand:	23.3 A
ITR	200 VA	125.00%	250 VA		
REC	2880 VA	100.00%	2880 VA		

180 VA 100.00% 180 VA 357 VA 100.00% 357 VA Total Conn. Load: 97185 VA 180 VA 100.00% 180 VA Total Est. Demand: 98592 VA Receptacle 2600 VA 100.00% 2600 VA Total Conn.: 269.8 A -LTG 5428 VA 125.00% 6785 VA Total Est. Demand: 273.7 A -HVAC 77040 VA 77040 VA 100.00% -WTR 3000 VA 100.00% 3000 VA -MTR 200 VA 125.00% 250 VA

Demand Factor

100.00%

1 20.0 A Other Space 251

1 20.0 A -REC

3 20.0 A RTU-1

1 20.0 A -REC

2 20.0 A -REC

1 20.0 A -REC

180 VA 8 VA 1 20.0 A Lighting

1 20.0 A -PWR Space 251

Panel Totals

576 VA 100 VA 1 20.0 A -PWR Space 251

551 VA | 1284... | 3 | 110.0 A | RTU-2

360 VA 1284..

180 VA 500 VA

30633 VA

255.3 A

Estimated Demand

8200 VA

20.0 A 1 1 1200... 180 VA

20.0 A | 1 | 380 VA | 1284...

20.0 A 1 504 VA 1284...

20.0 A | 1 | 500 VA | 180 VA |

20.0 A | 1 | 720 VA | 500 VA |

Total Amps: 273.8 A

Connected Load

8200 VA

Total Load: 32560 VA 33992 VA

20.0 A 1

114 VA | 1284...

286 VA 360 VA

72 VA | 1284...

180 VA 500 VA

180 VA 360 VA

285.7 A

13 -LTG

15 -LTG

17 -LTG

19 -LTG

21 -LTG

23 -LTG

25 -LTG

27 -LTG

29 -REC

Legend:

-REC

31 AUTO DOOR OPENER

POS RECEPTACLES

39 TINTING AREA

41 TINTING AREA

Load Classification

37 TENT AREA RECEPTACLES