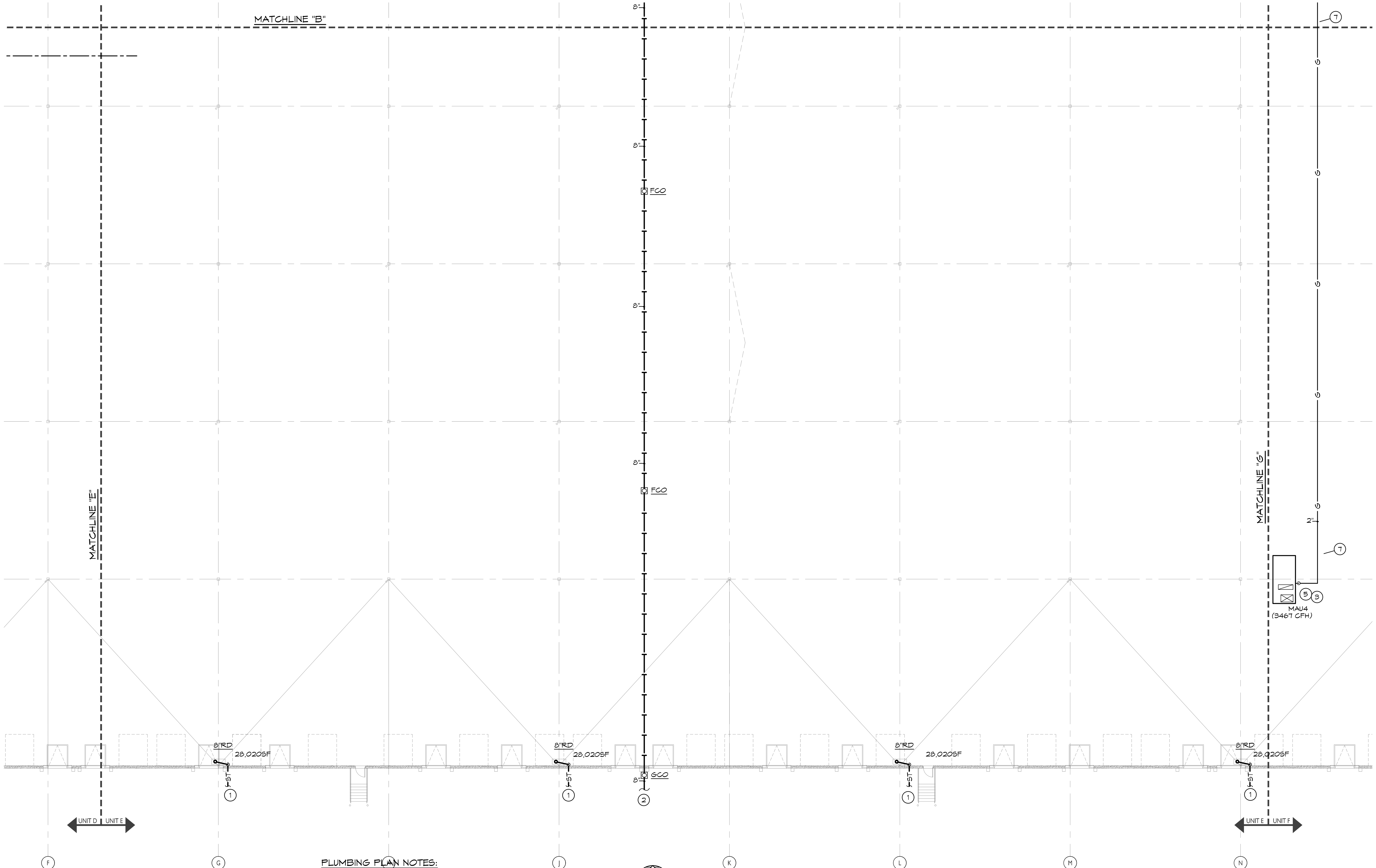


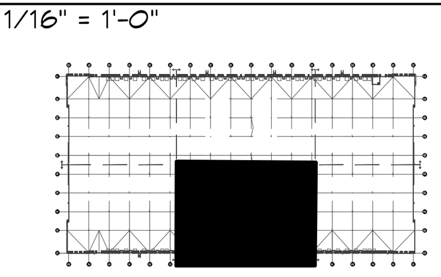
PLUMBING PLAN NOTES:

1. REFER TO CIVIL FOR 8" STORM PIPE. MAINTAIN A MIN. OF 24" COVER.
2. REFER TO CIVIL FOR 8" WASTE PIPE. MAINTAIN A MIN OF 30" COVER.
3. GAS PIPE UP THROUGH ROOF TO MAU CONNECTION. SEAL PENETRATION WEATHER TIGHT.
4. INSTALL FREEZE PROOF WALL HYDRANT 18" ABOVE GRADE.
5. CONNECT GAS PIPING TO EQUIPMENT AS DETAILED.
6. CAP 1" WATER PIPE WITH SHUT-OFF VALVE FOR FUTURE CONNECTION.
7. GAS PIPING BELOW ROOF SUPPORT AS REQUIRED.
8. GAS PIPING ON ROOF. SUPPORT AS REQUIRED AND DETAILED.

NORTH

PARTIAL PLUMBING FLOOR PLAN "UNIT E"

SCALE: 1/16" = 1'-0"
FFE = 991.50'



NORTH

KEY PLAN

SCALE: NTS

CURRAN ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
O :: 317 . 288 . 0681
F :: 317 . 288 . 0753

SCANNELL PROPERTIES

4/26/2022
STATE OF MISSOURI
ERIK B. KNUDSEN
NUMBER
PE-2004026504
PROFESSIONAL ENGINEER

LEE'S SUMMIT LOGISTICS
BUILDING A LOT 1

NW CORNER OF
NE TUDOR RD & MAIN ST
LEE'S SUMMIT, MO 64086

PERMIT SET	02.18.22

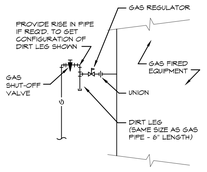
CENTRAL
PLUMBING, HEATING & AIR CONDITIONING, INC.
201 East Walnut
Cleveland, MO 64734
816-942-6355

BC PROJECT #22208
MISSOURI PE COA #2009003629

BC ENGINEERS INCORPORATED
5720 Reeder Shawnee, KS 66203 (913)262-1772

210300

PLUMBING PLAN
AREA E



GAS PRESSURE REGULATORS FOR ROOFTOP UNITS (RTU) AND MAKE-UP AIR UNITS (MAU) SHALL BE SENSUS #143-50-2, 2 PSI INLET / 7" WC OUTLET PRESSURE WITH THE ORIFICE & SPRING SIZE AS RECOMMENDED BY THE MANUFACTURER.

GAS CONNECTION DETAIL

SCALE: NONE

FOR ROOFTOP UNITS, MAKE-UP AIR UNITS, ETC. WITH 2 PSI GAS PRESSURE

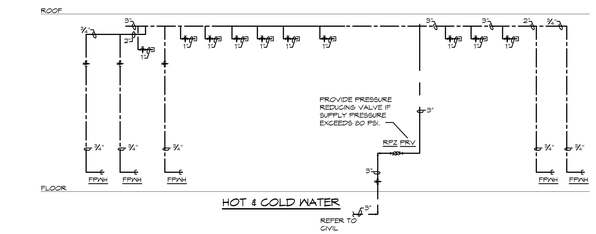
PLUMBING FIXTURE SCHEDULE: (OR EQUAL)

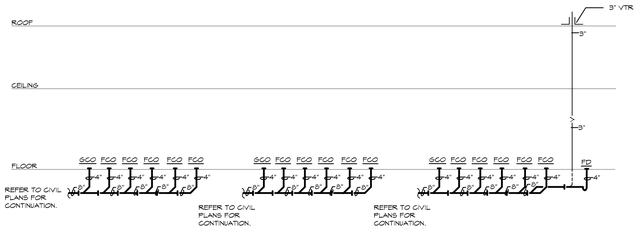
FD — FLOOR DRAIN: JR SMITH, #2005-A, CAST IRON FLOOR DRAIN WITH ADJUSTABLE TOP, 6" NIKALOY STRAINER. PROVIDE WITH #2642 QUAD CLOSE TRAP SEAL DEVICE.

FCO — VINYL TILE FLOOR: JR SMITH #4140, OR EQUAL.
QUARRY TILE FLOOR: JR SMITH #4200, OR EQUAL.
CARPETED FLOOR: JR SMITH #4020-Y, OR EQUAL.
UNFINISHED FLOOR: JR SMITH #4020, OR EQUAL.
WAREHOUSE FLOOR: JR SMITH #4100, OR EQUAL

FPWH — FREEZEPROOF WALL HYDRANT: JR SMITH #5609, 3/4" SIZE, NICKEL-BRONZE FACE, KEY OPERATED, INTEGRAL VACUUM BREAKER.

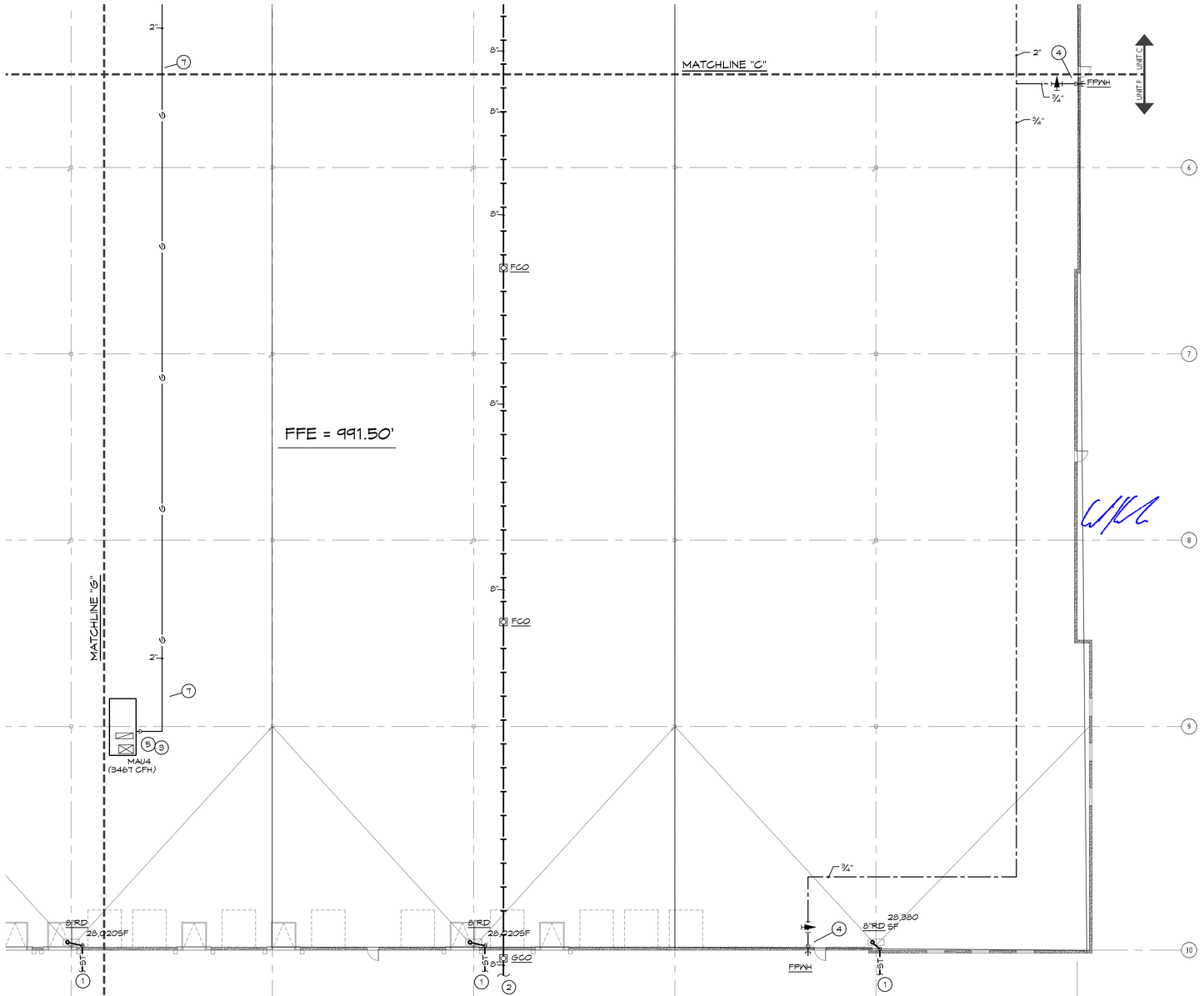
RPZ — REDUCED ZONE PRESSURE BACKFLOW PREVENTOR: WATTS #LF009, LEAD FREE BRONZE BODY CONSTRUCTION, TWO, IN-LINE INDEPENDENT CHECK VALVES, REPLACEABLE CHECK SEATS WITH AN INTERMEDIATE RELIEF VALVE, AND BALL VALVE TEST COCKS.





PLUMBING RISER DIAGRAMS

SCALE: NONE



PLUMBING PLAN NOTES:

1. REFER TO CIVIL FOR 8" STORM PIPE. MAINTAIN A MIN. OF 24" COVER.
2. REFER TO CIVIL FOR 8" WASTE PIPE. MAINTAIN A MIN OF 30" COVER.
3. GAS PIPE UP THROUGH ROOF TO MAU CONNECTION. SEAL PENETRATION WEATHER TIGHT.
4. INSTALL FREEZE PROOF WALL HYDRANT 18" ABOVE GRADE.
5. CONNECT GAS PIPING TO EQUIPMENT AS DETAILED.
6. CAP 1" WATER PIPE WITH SHUT-OFF VALVE FOR FUTURE CONNECTION.
7. GAS PIPING BELOW ROOF SUPPORT AS REQUIRED.
8. GAS PIPING ON ROOF. SUPPORT AS REQUIRED AND DETAILED.

PARTIAL PLUMBING FLOOR PLAN "UNIT F"

SCALE: 1/16" = 1'-0" FFE = 991.50'

KEY PLAN

SCALE: NTS

PLUMBING SPECIFICATIONS

1. GENERAL PROVISIONS:
   A. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, NECESSARY FOR THE COMPLETE INSTALLATION OF THE PLUMBING AND MECHANICAL SYSTEMS OUTLINED.
   B. OBTAIN ALL PERMITS, FEES, LICENSES, INSPECTIONS, AND CERTIFICATES OF COMPLIANCE OR APPROVAL AS REQUIRED BY THE AUTHORITIES.
   C. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS OF THE GOVERNMENTAL BODIES HAVING JURISDICTION OVER THE SITE.
   D. ALL TESTING REQUIRED BY AUTHORITIES SHALL BE CONSIDERED PART OF THIS WORK.
   E. DURING CONSTRUCTION, ALL FIXTURES, EQUIPMENT, PIPE, DUCT, ETC. SHALL BE COVERED, PLUGGED, OR CAPPED AS REQUIRED TO KEEP CLEAN AND UNDAMAGED. ALL DAMAGED ITEMS SHALL BE RESTORED TO ORIGINAL CONDITION OR REPLACED. ALL PROTECTIVE COVERING SHALL BE REMOVED BEFORE FINAL ACCEPTANCE.
   F. PROVIDE ALL NECESSARY CUTTING AND PATCHING OF WALLS, FLOORS, CEILINGS, AND ROOFS AS NECESSARY. PATCH AROUND ALL OPENINGS SHALL MATCH ADJACENT AREA. COORDINATE ALL ROOFING WORK WITH OWNER OR RESPONSIBLE PARTY, SO THAT THE EXISTING ROOFING WARRANTY WILL BE MAINTAINED.
   G. CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE.
2. OPERATION AND MAINTENANCE MANUALS:
   A. DURING THE COURSE OF CONSTRUCTION, COLLECT AND COMPILE OPERATING INSTRUCTIONS, WIRING DIAGRAMS, CATALOG CUTS, LUBRICATION AND PREVENTIVE MAINTENANCE INSTRUCTIONS, PARTS LISTS, ETC. FOR ALL EQUIPMENT FURNISHED UNDER THIS CONTRACT.
   B. ALL LITERATURE AND INSTRUCTIONS SHIPPED WITH THE EQUIPMENT SHALL BE SAVED FOR INCLUSION IN THE OPERATION AND MAINTENANCE MANUALS.
   C. ALL LITERATURE LISTED ABOVE AND ALL PAPERS LISTING WARRANTIES, ETC. SHALL BE BOUND IN A 3-RING BINDER AND LABELED WITH THE PROJECT NAME, ADDRESS, ARCHITECT, ENGINEER, CONTRACTORS, ETC.
3. MANUFACTURERS:
   A. MANUFACTURERS, MODEL NUMBERS, ETC. INDICATED OR SCHEDULED ON THE DRAWINGS SHALL BE INTERPRETED AS HAVING ESTABLISHED A STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. ARTICLES, FIXTURES, ETC. OF EQUAL QUALITY BY MANUFACTURERS SHALL BE ACCEPTABLE, SUBJECT TO STRUCTURAL AND ELECTRICAL CONSTRAINTS OF THE PROJECT DESIGN, UNLESS NOTED OTHERWISE.
4. TESTING, BALANCING, AND CLEANING:
   A. ALL PIPING SHALL BE TESTED FOR LEAKS BEFORE BEING CONCEALED IN WALL CONSTRUCTION OR COVERED WITH INSULATION.
   B. SEWER AND VENT PIPING SHALL BE HYDROSTATICALLY TESTED WITH NO LESS THAN 10 FEET OF HEAD FOR A PERIOD OF NOT LESS THAN 15 MINUTES, PER THE LOCAL PLUMBING CODE, WITH NO LEAKS.
   C. DOMESTIC WATER PIPING SHALL BE HYDROSTATICALLY TESTED AT A PRESSURE OF NOT LESS THAN 1-1/2 TIMES THE OPERATING PRESSURE, BUT NOT LESS THAN 60 PSI, FOR A PERIOD OF NOT LESS THAN 2 HOURS, WITH NO LEAKS.
   D. NATURAL GAS PIPING SHALL BE PNEUMATICALLY TESTED AT A PRESSURE OF NOT LESS THAN 1-1/2 TIMES THE OPERATING PRESSURE, BUT NOT LESS THAN 50 PSI, FOR A PERIOD OF NOT LESS THAN 2 HOURS WITH NO LEAKS.
   E. BEFORE DOMESTIC WATER PIPING IS PLACED IN SERVICE, ALL DOMESTIC WATER DISTRIBUTION SYSTEMS, INCLUDING THOSE FOR COLD WATER AND HOT WATER SYSTEMS, SHALL BE FLUSHED, STERILIZED AND CHLORINATED IN ACCORDANCE WITH HEALTH DEPARTMENT REGULATIONS. THE SYSTEMS SHALL BE THOROUGHLY FLUSHED OF ALL DIRT AND FOREIGN MATTER, THEN FILLED WITH WATER TREATED WITH 50 PPM OF CHLORINE. DURING THE FILLING PROCESS, VALVES AND FAUCETS SHALL BE OPENED SEVERAL TIMES TO ASSURE TREATMENT OF THE ENTIRE SYSTEM. THE TREATED WATER SHALL BE LEFT IN THE SYSTEM FOR 24 HOURS AFTER WHICH TIME THE SYSTEM SHALL BE FLUSHED; IF THE RESIDUAL CHLORINE IS NOT LESS THAN 10 PPM, THE FLUSHING SHALL BE REPEATED. AFTER STERILIZATION, SAMPLES OF WATER IN THE SYSTEM SHALL BE APPROVED BY THE BOARD OF HEALTH.
5. PLUMBING:
   A. PROVIDE AN APPROVED WATER HAMMER ARRESTOR FOR EACH PLUMBING FIXTURE SUPPLY AS REQUIRED BY FIXTURE MANUFACTURER.
   B. ALL EXPOSED WATER PIPE SHALL BE CHROME PLATED BRASS PIPE, NO FERROUS PIPE.
   C. PROVIDE CLEANOUTS AT EACH CHANGE OF DIRECTION AND AT 100 FOOT INTERVALS IN STRAIGHT RUNS.
   D. PROVIDE ACCESS PANELS FOR ALL CONCEALED VALVES AND TRAPS.
   E. CLEANOUTS:
      1) VINYL TILE FLOOR: JR SMITH #4140, OR EQUAL.
      2) QUARRY TILE FLOOR: JR SMITH #4200, OR EQUAL.
      3) CARPETED FLOOR: JR SMITH #4020-Y, OR EQUAL.
      4) UNFINISHED FLOOR: JR SMITH #4020, OR EQUAL.
      5) WALL: JR SMITH #4472, OR EQUAL, 24" ABOVE THE FLOOR.
      6) WAREHOUSE FLOORS/FORK TRUCK AREAS: JR SMITH #4100, OR EQUAL, WITH HEAVY DUTY CAST IRON BODY AND ROUND ADJUSTABLE SCORIATED EXTRA HEAVY DUTY NICKEL BRONZE TOP.
      7) GRADE: JR SMITH #4256, OR EQUAL, WITH HEAVY DUTY CAST IRON BODY AND COVER.
   F. PROVIDE DIELECTRIC UNIONS WITH APPROPRIATE END CONNECTIONS TO MATCH THE PIPE SYSTEM IN WHICH INSTALLED (SCREWED, SOLDERED, OR FLANGED). PROVIDE DIELECTRIC UNIONS ON ALL PIPING CONNECTIONS TO HOT WATER HEATERS AND EXPANSION TANKS.
   G. WATER HEATERS:
      1) EVERY WATER HEATER SHALL HAVE AN APPROVED MEANS INSTALLED ON THE COLD WATER SUPPLY LINE ABOVE THE EQUIPMENT TO PREVENT SIPHONING OF A STORAGE WATER HEATER OR TANK.
      2) BOTTOM FED WATER HEATERS AND TANKS CONNECT TO WATER HEATERS SHALL HAVE A VACUUM RELIEF VALVE INSTALLED, ANSI Z21.22.
      3) STORAGE HEATERS OPERATING ABOVE ATMOSPHERIC PRESSURE SHALL HAVE AN APPROVED PRESSURE RELIEF VALVE AND/OR TEMPERATURE RELIEF VALVE.
   H. ALL SEWER PIPING LOCATED INSIDE THE BUILDING SHALL BE INSTALLED WITH THE FOLLOWING SLOPES.
      1) INSTALL 2-1/2" AND SMALLER PIPE AT 1/4" PER FOOT FALL.
      2) INSTALL 3" - 6" PIPE AT 1/8" PER FOOT FALL.
      3) INSTALL 8" AND LARGER PIPE AT 1/16" PER FOOT FALL.
6. PIPING:
   A. DOMESTIC COLD, HOT, AND HOT WATER RECIRCULATING (ABOVEGROUND).
      1) TYPE L HARD DRAWN COPPER TUBING, ASTM B-88.
         a) WROUGHT COPPER SOLDERED FITTINGS, ASTM B75 ALLOY C12200, ANSI B16.22, MSS SP-104.
         b) MECHANICAL PRESS COPPER FITTINGS FOR USE IN PLUMBING OR MECHANICAL APPLICATIONS, ASME B16.22, ASME B16.51, or ASME B16.18. MECHANICAL PRESS COPPER FITTINGS SHALL CONFORM TO IAPMO PS-117 OR ASME B16.51.
      2) PEX, HIGH-DENSITY CROSS-LINKED POLYETHYLENE TUBING SHALL BE MANUFACTURED TO THE REQUIREMENTS OF ASTM F876 AND MEET THE STANDARD GRADE HYDROSTATIC PRESSURE RATINGS FROM PLASTIC PIPE INSTITUTE IN ACCORDANCE WITH TR-4/03. (MUST BE INSTALLED PER THE MANUFACTURERS REQUIREMENTS FOR PLENUM USE)
         a) PEX-A AND PEX-B MEETING ANSI/NSF61 AND ANSI/NSF372 STANDARDS FOR POTABLE WATER SAFETY AND LEAD-FREE STANDARDS AND MUST BE MARKED WITH "PEX-a", "NSF-61-a" OR OTHER NSF-APPROVED MARKING. ASTM F2023 FOR USE WITH CHLORINATED WATER. (MUST BE INSTALLED PER THE MANUFACTURERS REQUIREMENTS FOR PLENUM USE)
         b) PEX MECHANICAL, CRIMP/INSERT OR EXPANSION FITTINGS INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. PIPE SIZES GIVEN ON THE DRAWINGS ARE NOMINAL COPPER PIPE SIZE. INCREASE PEX PIPING SIZE TO EQUAL OR EXCEED COPPER PIPE INSIDE DIAMETER FOR SUPPLY MAINS. (MUST BE INSTALLED PER THE MANUFACTURERS REQUIREMENTS FOR PLENUM USE)
      3) VALVES
         a) TO BE INSTALLED ON THE FIXTURE SUPPLY TO EACH PLUMBING FIXTURE.
         b) TO BE INSTALLED ON THE WATER SUPPLY SIDE TO EACH APPLIANCE OR MECHANICAL EQUIPMENT.
         c) TYPES:
            1. GATE VALVE: JOMAR T/S-3015 OR EQUAL. LEAD-FREE NSF 61, ANSI B1.20.1.
            2. GLOBE VALVE: JOMAR T60 OR EQUAL.
            3. BALL VALVE: JOMAR JP100NP OR EQUAL COMPACT LEAD FREE BRASS BALL VALVE. UL842, CSA 3371-12 & 3371-12, FM, CALIFORNIA CODE AB1953, NSF61 ANNEX G APPROVED.
            4. BALL VALVE: JOMAR T-100NE OR EQUAL. UL842, FM, CSA, NSF 61-8, MSS SP-110
   B. DOMESTIC COLD, AND HOT WATER (UNDERGROUND).
      1) TYPE L HARD DRAWN COPPER TUBING, ASTM B-88.
         a) WROUGHT COPPER SOLDERED FITTINGS, ASTM B75 ALLOY C12200, ANSI B16.22, MSS SP-104.
         b) MECHANICAL PRESS COPPER FITTINGS FOR USE IN PLUMBING OR MECHANICAL APPLICATIONS, ASME B16.22, ASME B16.51, or ASME B16.18. MECHANICAL PRESS COPPER FITTINGS SHALL CONFORM TO IAPMO PS-117 OR ASME B16.51.
      2) PEX, HIGH-DENSITY CROSS-LINKED POLYETHYLENE TUBING SHALL BE MANUFACTURED TO THE REQUIREMENTS OF ASTM F876 AND MEET THE STANDARD GRADE HYDROSTATIC PRESSURE RATINGS FROM PLASTIC PIPE INSTITUTE IN ACCORDANCE WITH TR-4/03.
         a) PEX-A AND PEX-B MEETING ANSI/NSF61 AND ANSI/NSF372 STANDARDS FOR POTABLE WATER SAFETY AND LEAD-FREE STANDARDS AND MUST BE MARKED WITH "PEX-a", "NSF-61-a" OR OTHER NSF-APPROVED MARKING. ASTM F2023 FOR USE WITH CHLORINATED WATER.
         b) PEX MECHANICAL, CRIMP/INSERT OR EXPANSION FITTINGS INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. PIPE SIZES GIVEN ON THE DRAWINGS ARE NOMINAL COPPER PIPE SIZE. INCREASE PEX PIPING SIZE TO EQUAL OR EXCEED COPPER PIPE INSIDE DIAMETER FOR SUPPLY MAINS.
         c) HDPE, PIGMENTED BLUE THROUGHOUT, CTS SIZES 1"-2" ANWA C901 4710 DR9 PC250 IPS SIZES 2"-3", ANWA C901 4710 DR11 PC200.
   C. DOMESTIC WATER SERVICE, 1"-3"
      1) TYPE K SOFT DRAWN COPPER TUBING, ASTM B-88.
         a) Cast Copper Alloy Fittings for Flared Copper Tube, ASME/ANSI B16.26:
      2) HDPE, PIGMENTED BLUE THROUGHOUT, CTS SIZES 1"-2" ANWA C901 4710 DR9 PC250 IPS SIZES 2"-3", ANWA C901 4710 DR11 PC200 MATERIAL AND INSTALLATION MUST CONFORM TO WATER DEPARTMENT REQUIREMENTS.
   D. LEAD CONTENT OF WATER SUPPLY PIPE AND FITTINGS:
      1) PIPE AND PIPE FITTINGS, INCLUDING VALVES AND FAUCETS, UTILIZED IN THE WATER SUPPLY SYSTEM SHALL NOT HAVE MORE THAN 8% LEAD CONTENT.
      2) PIPE, PIPE FITTINGS, JOINTS, VALVES, FAUCETS, AND FIXTURE FITINGS UTILIZED TO SUPPLY WATER FOR DRINKING OR COOKING PURPOSES SHALL COMPLY WITH NSF 372 AND SHALL HAVE A WEIGHTED AVERAGE LEAD CONTENT OF 0.25% OR LESS.

PLUMBING SPECIFICATIONS (CONTINUED)

   E. STORM SEWER, SANITARY SEWER, GREASE WASTE, SAND OIL WASTE, AND VENTS. (UNDERGROUND, INTERIOR TO THE BUILDING).
      1) ABS SCHEDULE 40 CELLULAR CORE (FOAM CORE) PIPE AND DWV FITTING SYSTEM:(ASTM F1488) PIPE AND FITTINGS SHALL BE MANUFACTURED FROM ABS COMPOUND WITH A CELL CLASS OF 42222 FOR PIPE AND 32222 FOR FITTINGS AS PER ASTM D 3965 AND CONFORM WITH NATIONAL SANITATION FOUNDATION (NSF) STANDARD 14. PIPE SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM F 628 FITTINGS SHALL CONFORM TO ASTM D 2661. SOLVENT CEMENTS SHALL CONFORM TO ASTM D 2235.
      2) PVC SCHEDULE 40 CELLULAR CORE (FOAM CORE) PIPE AND DWV FITTING SYSTEM:(ASTM F1488) PIPE AND FITTINGS SHALL BE MANUFACTURED FROM PVC COMPOUND WITH A CELL CLASS OF 11432 PER ASTM D 4396 FOR PIPE AND 12454 PER ASTM D 1784 FOR FITTINGS AND CONFORM WITH NATIONAL SANITATION FOUNDATION (NSF) STANDARD 14. PIPE SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM F 841. INJECTION MOLDED FITTINGS SHALL CONFORM TO ASTM D 2665. FABRICATED FITTINGS SHALL CONFORM TO ASTM F 1866. SOLVENT CEMENTS SHALL CONFORM TO ASTM D 2564.
      3) PVC SCHEDULE 40 SOLID WALL PIPE AND DWV FITTING SYSTEM:(ASTM D2665) PIPE AND FITTINGS SHALL BE MANUFACTURED FROM PVC COMPOUND WITH A CELL CLASS OF 12454 PER ASTM D 1784 AND CONFORM WITH NATIONAL SANITATION FOUNDATION (NSF) STANDARD 14. PIPE SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM D 1785 AND ASTM D 2665. INJECTION MOLDED FITTINGS SHALL CONFORM TO ASTM D 2665. FABRICATED FITTINGS SHALL CONFORM TO ASTM F 1866. SOLVENT CEMENTS SHALL CONFORM TO ASTM D 2564.
      4) HUBLESS CAST IRON SOIL PIPE AND FITTINGS: HUBLESS CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A 888 AND CISPI STANDARD 301. HUBLESS COUPLINGS SHALL CONFORM TO CISPI STANDARD 310 AND BE CERTIFIED BY NSF® INTERNATIONAL.
      5) HUB AND SPIGOT CAST IRON SOIL PIPE AND FITTINGS: HUB AND SPIGOT CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A 74.
   F. STORM SEWER, SANITARY SEWER, GREASE WASTE, SAND OIL WASTE, AND VENTS. (ABOVE GROUND, INTERIOR TO THE BUILDING).
      1) ABS SCHEDULE 40 CELLULAR CORE (FOAM CORE) PIPE AND DWV FITTING SYSTEM:(ASTM F1488) PIPE AND FITTINGS SHALL BE MANUFACTURED FROM ABS COMPOUND WITH A CELL CLASS OF 42222 FOR PIPE AND 32222 FOR FITTINGS AS PER ASTM D 3965 AND CONFORM WITH NATIONAL SANITATION FOUNDATION (NSF) STANDARD 14. PIPE SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM F 628 FITTINGS SHALL CONFORM TO ASTM D 2661. SOLVENT CEMENTS SHALL CONFORM TO ASTM D 2235. (NOT FOR USE IN A RETURN AIR PLENUM)
      2) PVC SCHEDULE 40 CELLULAR CORE (FOAM CORE) PIPE AND DWV FITTING SYSTEM:(ASTM F1488) PIPE AND FITTINGS SHALL BE MANUFACTURED FROM PVC COMPOUND WITH A CELL CLASS OF 11432 PER ASTM D 4396 FOR PIPE AND 12454 PER ASTM D 1784 FOR FITTINGS AND CONFORM WITH NATIONAL SANITATION FOUNDATION (NSF) STANDARD 14. PIPE SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM F 841. INJECTION MOLDED FITTINGS SHALL CONFORM TO ASTM D 2665. FABRICATED FITTINGS SHALL CONFORM TO ASTM F 1866. SOLVENT CEMENTS SHALL CONFORM TO ASTM D 2564. (NOT FOR USE IN A RETURN AIR PLENUM)
      3) PVC SCHEDULE 40 SOLID WALL PIPE AND DWV FITTING SYSTEM: (ASTM D 2665) PIPE AND FITTINGS SHALL BE MANUFACTURED FROM PVC COMPOUND WITH A CELL CLASS OF 12454 PER ASTM D 1784 AND CONFORM WITH NATIONAL SANITATION FOUNDATION (NSF) STANDARD 14. PIPE SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM D 1785 AND ASTM D 2665. INJECTION MOLDED FITTINGS SHALL CONFORM TO ASTM D 2665. FABRICATED FITTINGS SHALL CONFORM TO ASTM F 1866. SOLVENT CEMENTS SHALL CONFORM TO ASTM D 2564. (WHERE APPROVED BY LOCAL JURISDICTIONS) (NOT FOR USE IN A RETURN AIR PLENUM)
      4) HUBLESS CAST IRON SOIL PIPE AND FITTINGS: HUBLESS CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A 888 AND CISPI STANDARD 301. HUBLESS COUPLINGS SHALL CONFORM TO CISPI STANDARD 310 AND BE CERTIFIED BY NSF® INTERNATIONAL.
      5) HUB AND SPIGOT CAST IRON SOIL PIPE AND FITTINGS: HUB AND SPIGOT CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A 74.
   G. STORM SEWER, SANITARY SEWER, GREASE WASTE, SAND OIL WASTE, AND VENTS. (UNDERGROUND, EXTERIOR TO THE BUILDING).
      1) ABS SCHEDULE 40 CELLULAR CORE (FOAM CORE) PIPE AND DWV FITTING SYSTEM: (ASTM F1488) PIPE AND FITTINGS SHALL BE MANUFACTURED FROM ABS COMPOUND WITH A CELL CLASS OF 42222 FOR PIPE AND 32222 FOR FITTINGS AS PER ASTM D 3965 AND CONFORM WITH NATIONAL SANITATION FOUNDATION (NSF) STANDARD 14. PIPE SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM F 2680 FITTINGS SHALL CONFORM TO ASTM D 2680. SOLVENT CEMENTS SHALL CONFORM TO ASTM D 2235.
      2) PVC SCHEDULE 40 CELLULAR CORE (FOAM CORE) PIPE AND DWV FITTING SYSTEM: (ASTM F1488) PIPE AND FITTINGS SHALL BE MANUFACTURED FROM PVC COMPOUND WITH A CELL CLASS OF 11432 PER ASTM D 4396 FOR PIPE AND 12454 PER ASTM D 1784 FOR FITTINGS AND CONFORM WITH NATIONAL SANITATION FOUNDATION (NSF) STANDARD 14. PIPE SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM F 841. INJECTION MOLDED FITTINGS SHALL CONFORM TO ASTM F 794. FABRICATED FITTINGS SHALL CONFORM TO ASTM F 1866. SOLVENT CEMENTS SHALL CONFORM TO ASTM D 2564.
      3) PVC SCHEDULE 40 SOLID WALL PIPE AND DWV FITTING SYSTEM: (ASTM D 2665) PIPE AND FITTINGS SHALL BE MANUFACTURED FROM PVC COMPOUND WITH A CELL CLASS OF 12454 PER ASTM D 1784 AND CONFORM WITH NATIONAL SANITATION FOUNDATION (NSF) STANDARD 14. PIPE SHALL BE IRON PIPE SIZE (IPS) CONFORMING TO ASTM F 841. INJECTION MOLDED FITTINGS SHALL CONFORM TO ASTM F 794. FITTINGS SHALL CONFORM TO ASTM D 2564. SOLVENT CEMENTS SHALL CONFORM TO ASTM D 2564.
      4) HUBLESS CAST IRON SOIL PIPE AND FITTINGS: HUBLESS CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A 888 AND CISPI STANDARD 301. HUBLESS COUPLINGS SHALL CONFORM TO CISPI STANDARD 310 AND BE CERTIFIED BY NSF® INTERNATIONAL.
      5) HUB AND SPIGOT CAST IRON SOIL PIPE AND FITTINGS: HUB AND SPIGOT CAST IRON PIPE AND FITTINGS SHALL BE MANUFACTURED FROM GRAY CAST IRON AND SHALL CONFORM TO ASTM A 74.
      6) COPPER DWV: DRAINAGE TUBE SHALL CONFORM TO ASTM B306, KROUGHT COPPER FITTINGS, ANSI B-16.29.
      7) GALVANIZED STEEL PIPE WITH MALLEABLE IRON, THREADED FITTINGS, DRAINAGE PATTERN FOR SEWERS SHALL CONFORM TO ASTM A 53.
   H. NATURAL GAS.
      1) BLACK STEEL PIPE, SCHEDULE 40, ASTM A53.
         a) PIPE 3" AND SMALLER: 150 LB. MALLEABLE IRON, THREADED FITTINGS.
         b) PIPE 4" AND SMALLER: VIEGA MEGAPRESS G FOR WATER AND GAS. GSA LC4, T95A/ASME B31 FOR USE WITH ASTM A53 SCHEDULE 40 BLACK IRON PIPE.
         c) PIPE 2-1/2" AND LARGER, WELDED
         d) PLUG VALVE: ROCKWELL NORDSTROM FIGURE NO. 142 OR 143.
         e) BALL VALVE: JOMAR T-100NE. APPROVALS- UL842, FM, CSA, NSF 61-8, MSS SP-110
      2) GAS PIPING LABELING:
         a) ALL ELEVATED PRESSURE GAS PIPING SHALL BE LABELED EVERY 40 FEET WITH SIGNS INDICATING 'ELEVATED PRESSURE'.
      3) GAS PIPING PAINTING:
         a) ALL BLACK STEEL GAS PIPING LOCATED EXTERIOR TO THE BUILDING SHALL BE PRIMED AND PAINTED TO EITHER MATCH ADJACENT EXTERIOR WHERE LOCATED ON OR NEAR EXTERIOR WALL AND PAINTED SAFETY YELLOW WHERE LOCATED ON THE ROOF.
   I. ALL PIPE HANGERS AND SUPPORTS SHALL BE STANDARD PRODUCTS OF GRINNELL, FEE AND MASON, OR ELCEN. HANGER SPACING SHALL BE IN ACCORDANCE WITH MSS-SP-69.
   J. SLEEVES
      1) PROVIDE, SET, AND PROPERLY LOCATE PIPE SLEEVES AS REQUIRED FOR THIS WORK. ALL SLEEVES SHALL BE OF SUFFICIENT SIZE TO PERMIT PIPE MOVEMENT DUE TO EXPANSION AND CONTRACTION AND TO ACCOMMODATE PIPE INSULATION.
      2) INTERIOR PARTITIONS: 18 GAGE GALVANIZED STEEL. PACK BETWEEN PIPE AND SLEEVE WITH FIRE SAFING AND CAULK AT EACH END WITH FIRE RESISTANT SEALANT.
      3) ROOF: FROSET OR EQUAL, MANUFACTURED PVC SCHEDULE 40 PIPE SLEEVE WITH WATERPROOF SEAL. COORDINATE WITH ROOFING CONTRACTOR AND FLASH AS REQUIRED TO MAINTAIN ROOF WARRANTY.
      4) PROTECTION AGAINST CONTACT: METALLIC PIPING, EXCEPT FOR CAST IRON, DUCTILE IRON AND GALVANIZED STEEL SHALL NOT BE PLACED IN DIRECT CONTACT WITH STEEL FRAMING MEMBERS, CONCRETE, OR CINDER WALLS AND FLOORS OR OTHER MASONRY. METALLIC PIPING SHALL NOT BE PLACED IN DIRECT CONTACT WITH CORROSIVE SOIL. SHEATHING USED TO PREVENT DIRECT CONTACT SHALL HAVE A THICKNESS OF GREATER THAN .008; AND THE SHEATHING SHALL BE MADE OF PLASTIC. ANY PIPE THAT PASSES THROUGH A FOUNDATION WALL OR FOOTING SHALL BE PROVIDED WITH A RELIEVING ARCH, OR A PIPE SLEEVE SHALL BE BUILT INTO THE FOUNDATION WALL. THE SLEEVE SHALL BE TWO SIZES GREATER THAN THE PIPE PASSING THOUGH THE WALL OR FOOTING.
      5) PLUMBING VENTS: FLASH ROOF VENT INTO ROOFING SYSTEM AS REQUIRED BY THE ROOFING CONTRACTOR TO MAINTAIN EXISTING ROOF WARRANTY. ALL PLUMBING VENT TERMINALS SHALL TERMINATE A MINIMUM OF 12" ABOVE ROOF OR EQUAL TO HEIGHT OF PARAPET, WHICHEVER IS GREATER.
7. INSULATION:
   A. ALL INSULATIONS AND ACCESSORIES SHALL HAVE A FIRE HAZARD CLASSIFICATION WITH A FLAME SPREAD RATING OF NOT OVER 25, A FUEL CONTRIBUTION RATING OF NOT OVER 50, AND A SMOKE DEVELOPED RATING OF NOT OVER 50, IN ACCORDANCE WITH NFPA.
   B. PIPE INSULATION - ABOVE GRADE.
      1) THE PIPING INSULATION USED SHALL HAVE A THERMAL CONDUCTIVITY OF 0.27 Btu PER in/hr*sqft*F° OR LESS.
      2) FIBERGLASS INSULATION WITH FACTORY APPLIED VAPOR BARRIER, ASJ JACKET, FACTORY APPLIED PRESSURE SEALING LONGITUDE LAP JOINT, NO STAPLES, ZESTON PREMOLDED PVC FITTING COVERS. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
      3) FLEXIBLE CLOSED CELL ELASTOMERIC THERMAL INSULATION, UNSLIT OR PRESLIT WITH PRESSURE SENSITIVE ADHESIVE SYSTEM FOR CLOSURE AND VAPOR SEALING, EQUAL TO ARMSTRONG AP ARMAFLEX OR ARMAFLEX 2000.
      4) FOR NON CIRCULATING SYSTEMS, THE FIRST 8 FEET OF INLET AND OUTLET PIPING BETWEEN THE TANK AND THE HEAT TRAP (INCLUDING THE HEAT TRAP) MUST BE INSULATED.
      5) FOR CIRCULATING SYSTEMS, ALL HOT WATER PIPING IN THE CIRCULATION LOOP MUST BE INSULATED AS SPECIFIED BELOW.
      6) INSULATION SCHEDULE:

?????	a) DOMESTIC COLD WATER	1/2"
	b) DOMESTIC HOT WATER	1" FOR PIPING UP TO 1-1/4"Ø, & 1-1/2" FOR PIPING 1-1/2"Ø AND LARGER
	c) HOT WATER RECIRCULATING	1"
	d) CONDENSATE DRAINS INSIDE BUILDING	1/2"
	e) REFRIGERANT SUCTION	3/4" FOR PIPING UP TO 1-1/4"Ø, & 1" FOR PIPING 1-1/2"Ø AND LARGER
	f) HORIZONTAL STORM PIPE	1/2"
	g) HORIZONTAL STORM OVERFLOW PIPE	1/2"
?????	h) ROOF DRAINS	1" INSULATION SHALL BE PROVIDED AT ROOF DRAIN BODY AND A MINIMUM OF 10' OF HORIZONTAL PIPING OR A MINIMUM OF 5' IF COMBINATION OF HORIZONTAL AND VERTICAL STORM PIPING DOWNSTREAM OF ROOF DRAIN BODY.

CENTRAL
PLUMBING, HEATING & AIR CONDITIONING, INC.
201 East Walnut
Cleveland, MO 64734
816-942-6355

BC PROJECT #22208
MISSOURI PE COA #2009003629

BC ENGINEERS INCORPORATED
5720 Reeder Shawnee, KS 66203 (913)262-1772

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ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
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SCANNELL PROPERTIES

4/26/2022

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

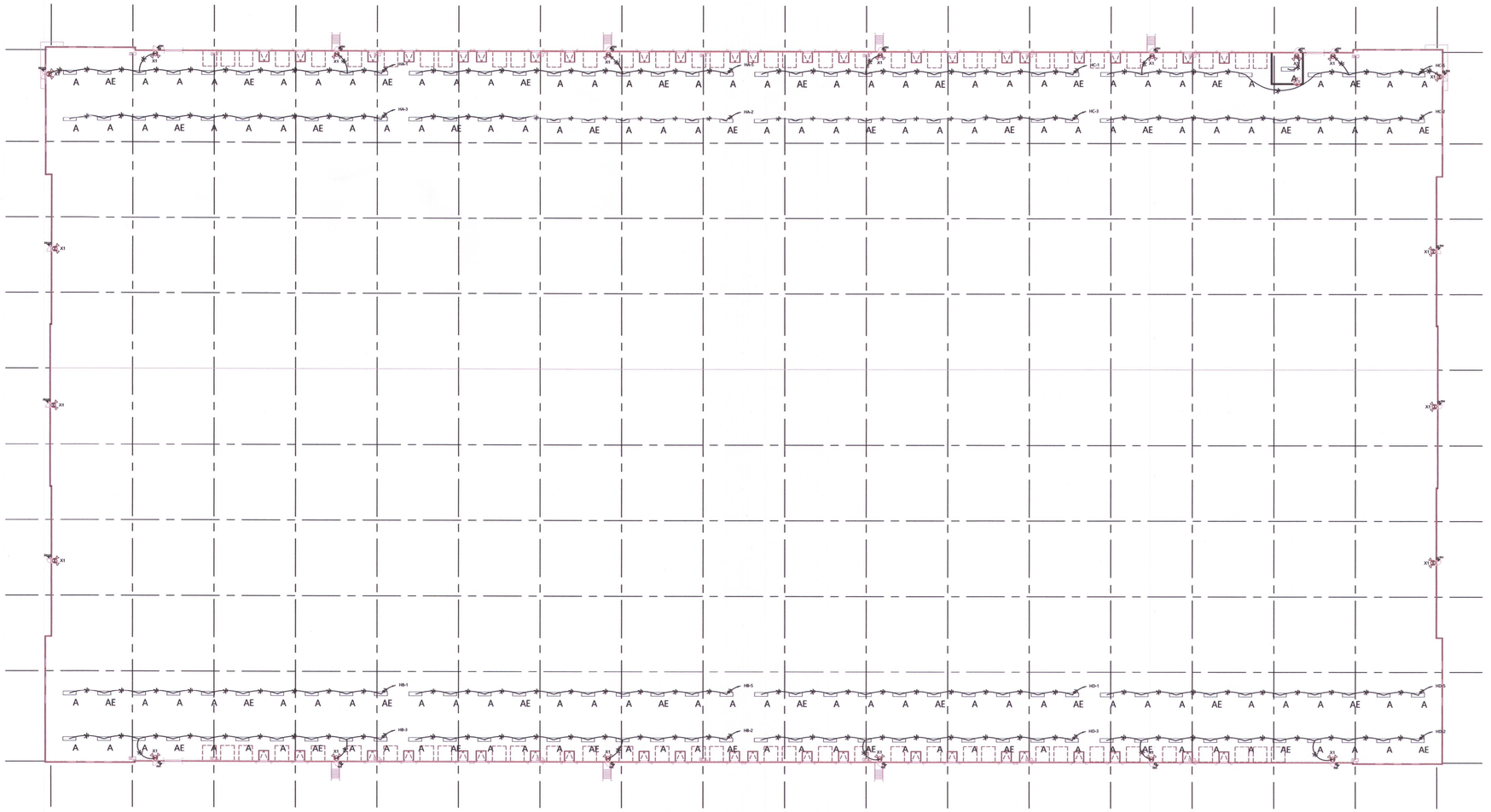
NW CORNER OF
NE TUDOR RD & MAIN ST
LEE'S SUMMIT, MO 64086

PERMIT SET	02.18.22

210300

PLUMBING SPECIFICATIONS

P106



1 LIGHTING PLAN

1" = 40'

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
12/27/2022

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SCANNELL
PROPERTIES

CERTIFICATION

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS
BUILDING A LOT 1

NW CORNER OF
NE TUDOR RD & MAIN ST
LEE'S SUMMIT, MO 64086

ISSUE DATES

PERMIT SET	02.18.22

210300

E1.00

HERITAGE ELECTRIC, L.L.C.
841 N. MARTWAY
Olathe, Kansas
phone (913) 663 1200
fax (913) 663 2025

HERITAGE ELECTRIC

STATE OF MISSOURI
JOHN WILLIAM [illegible]
NUMBER E-14378
PROFESSIONAL ENGINEER
4/26/22

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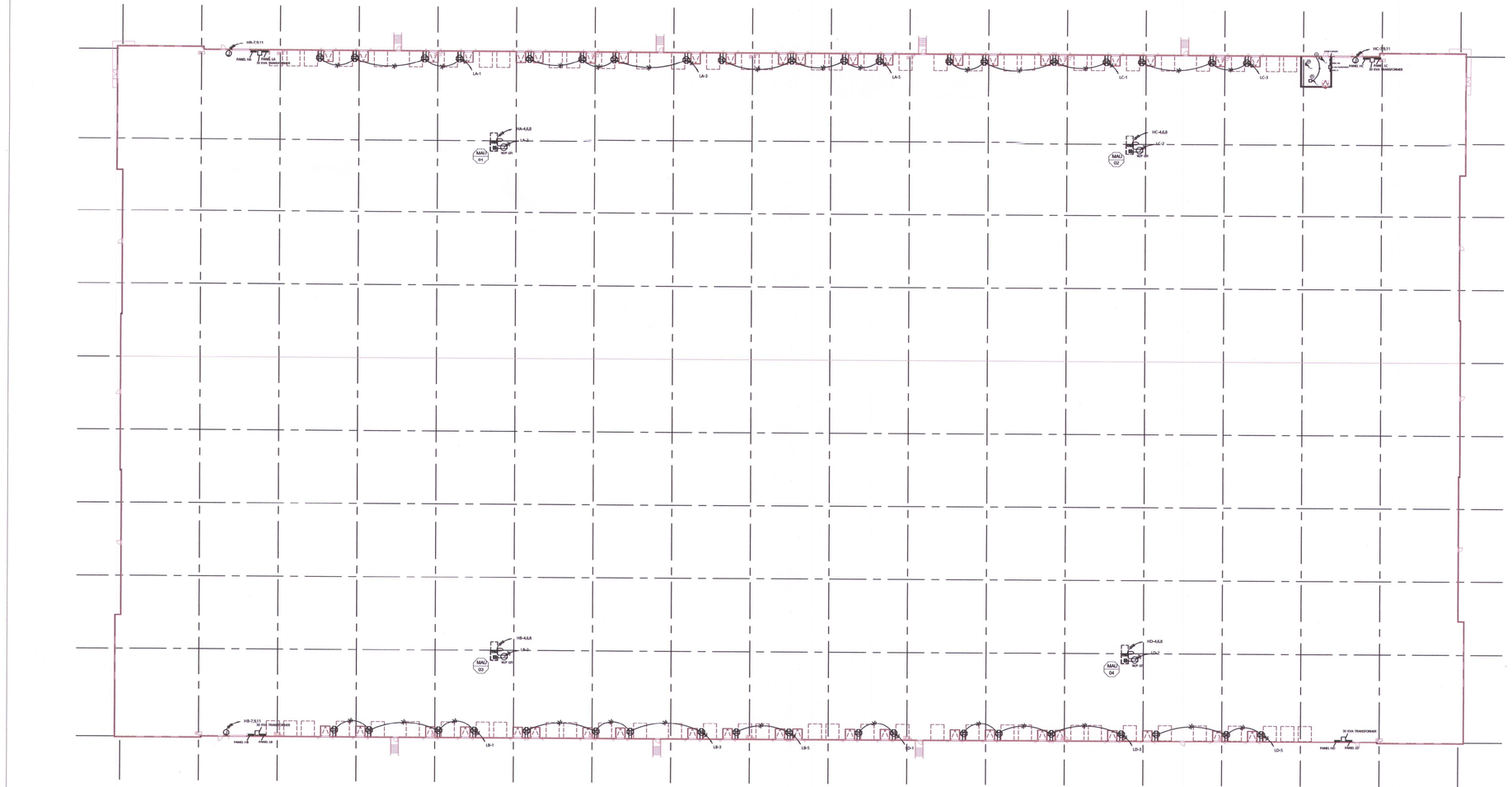

1 POWER PLAN

1" = 40'

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STATE OF MISSOURI
JOHN WILLIAM CARRUTH IV
NUMBER E-14378
PROFESSIONAL ENGINEER
4/26/22

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Lee's Summit, Missouri
12/27/2022

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SCANNELL PROPERTIES

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LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

NW CORNER OF
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LEE'S SUMMIT, MO 64086

ISSUE DATES

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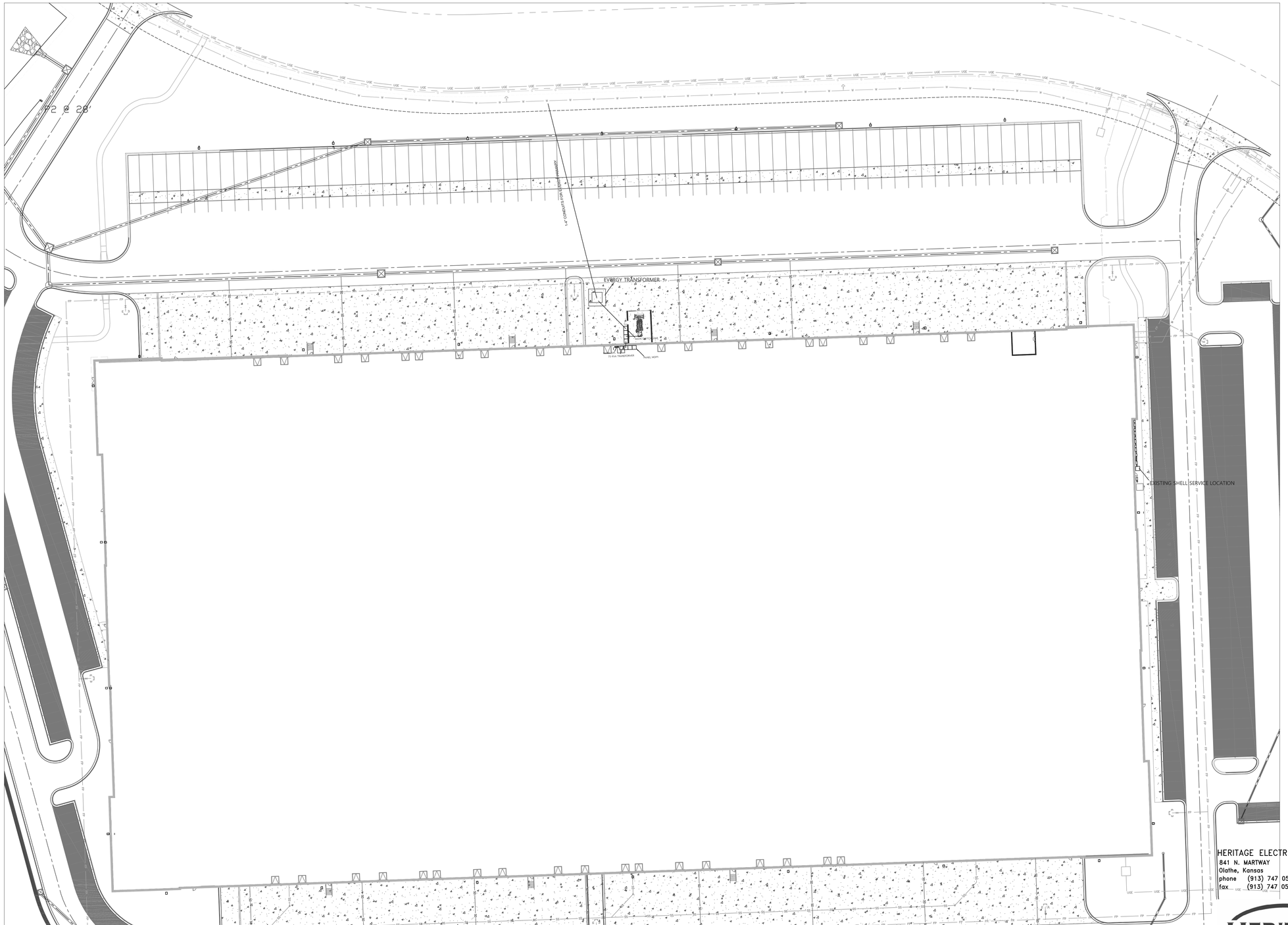
210300

E2.00



1 Site
scale: N.T.S

north

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SCANNELL
PROPERTIES

CERTIFICATION

STATE OF MISSOURI
JOHN WILLIAM CASWELL
NUMBER E-14378
PROFESSIONAL ENGINEER
10/20/22

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS
BUILDING A LOT 1

NW CORNER OF
NE TUDOR RD & MAIN ST
LEE'S SUMMIT, MO 64086

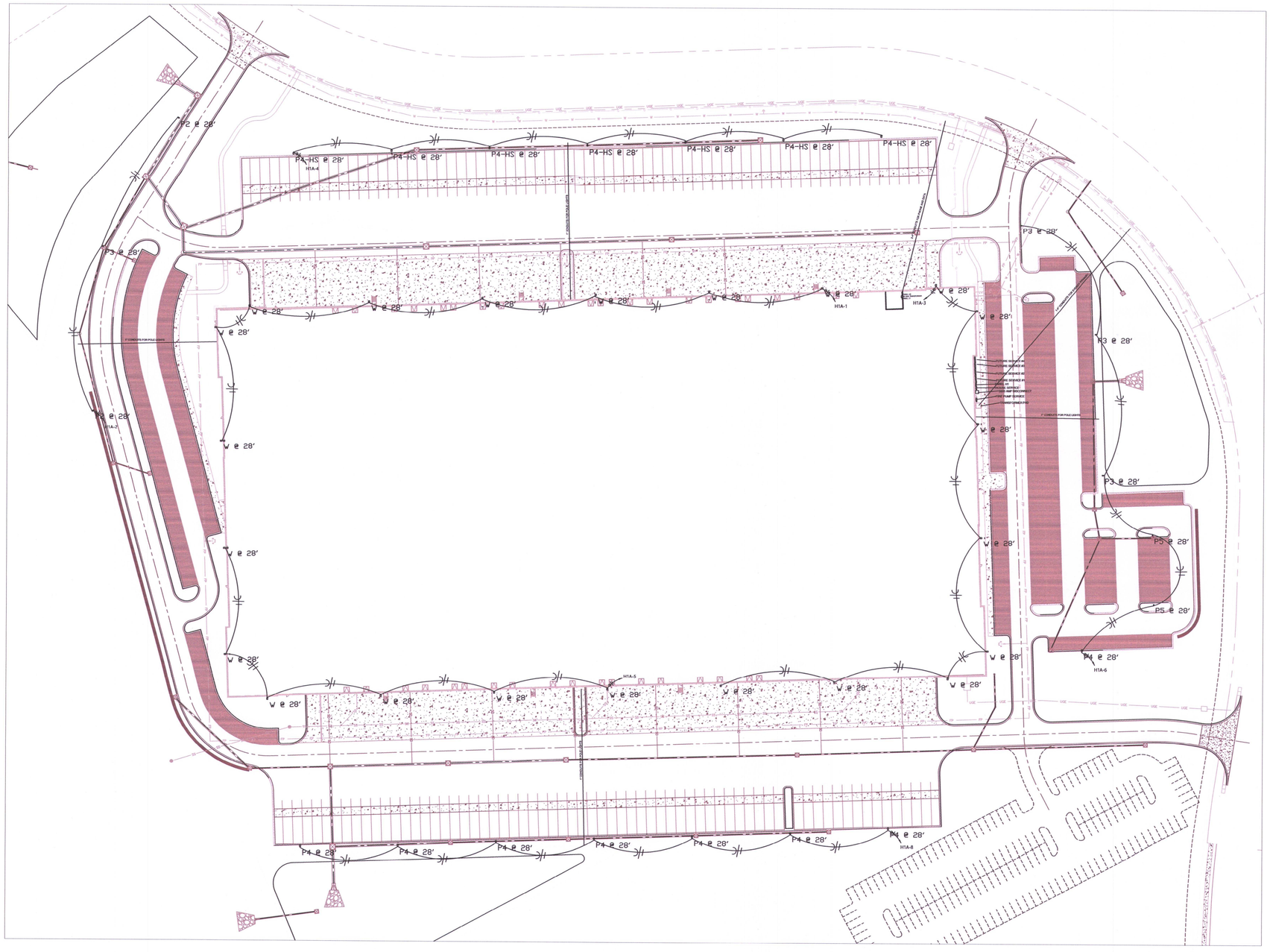
ISSUE DATES

PERMIT SET	02.18.22
CITY COMMENTS	10.17.22

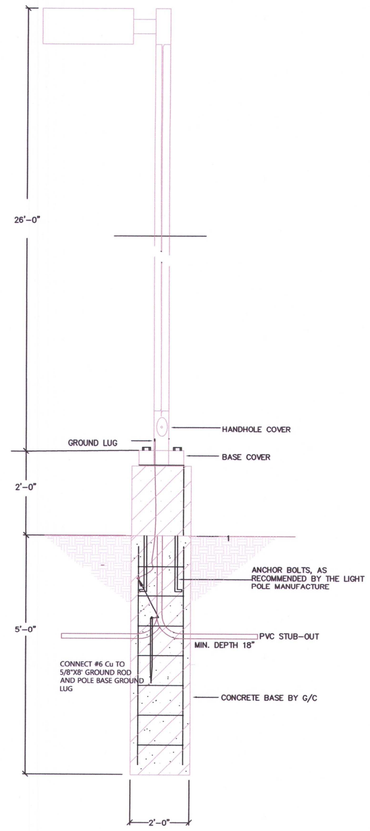
210300

Site

E4.0



1 SITE
1/64" = 1'



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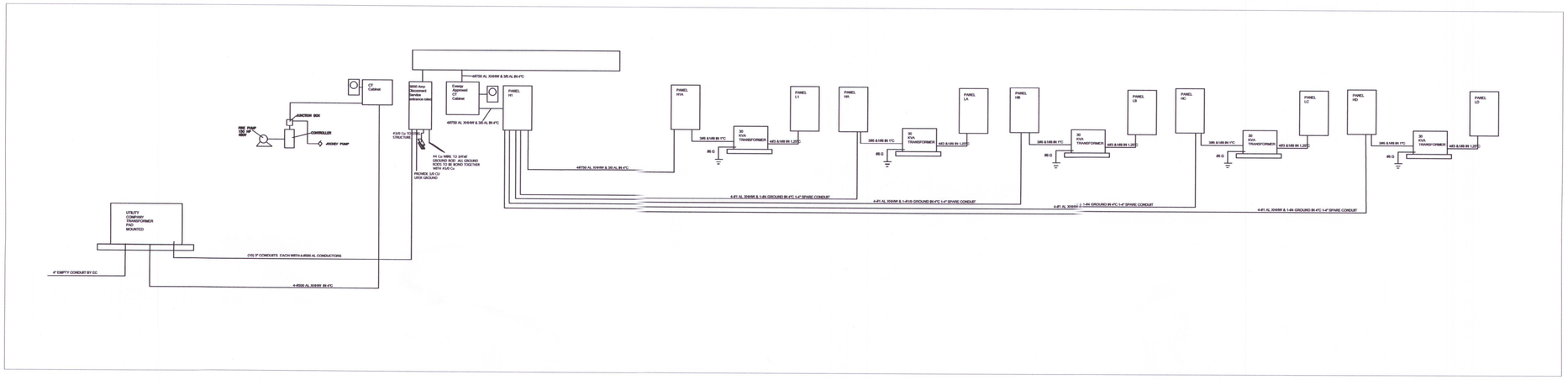
HERITAGE ELECTRIC

STATE OF MISSOURI
JOHN WILLIAM CASBURN, JR.
NUMBER E-14378
PROFESSIONAL ENGINEER
4/24/22



1 RISER DIAGRAM
N.T.S

LIGHT FIXTURE SCHEDULE						
TYPE	MANUFACTURER	CATALOG NO.	LAMPS	MOUNTING	VOLTS	REMARKS
A	Columbia Lighting	PEL4-40MV-EDU-OSI360	LED	CEILING	277	PROVIDE WITH INTEGRAL OCCUPANCY SENSOR
AE	Columbia Lighting	PEL4-40MV-EDU-ELL40-PSI 360	LED	CEILING	277	SAME AS TYPE A WITH EMERGENCY BALLAST
X1	Compass	CCR	LED	WALL	277	OR EQUAL
RH	Compass	CUWZ-PC	LED	WALL	277	OR EQUAL
P2	Hubbell	VP-S-48L-110-4K7-2	LED	POLE LIGHT	277	OR EQUAL
P3	Hubbell	VP-S-48L-110-4K7-3	LED	POLE LIGHT	277	OR EQUAL
P4	BEACON	VP-L-96L-220-4K7-4W	LED	POLE LIGHTS	277	OR EQUAL
P4-HS	BEACON	VP-L-96L-220-4K7-BC	LED	POLE LIGHTS	277	OR EQUAL
P5	HUBBELL	VP-S-48L-110-4K7-SQM	LED	POLE LIGHT	277	OR EQUAL
WP1	BEACON	VP-L-96L-280-4K7-4	LED	WALL PACK	277	OR EQUAL

Scope:
Provide electrical for new warehouse
All Electrical work shall be as per NEC 2017.
All work shall be done by qualified electricians.
All branch wiring shall be copper.
Devices shall be 20a commercial grade and color shall be by architect.

SPECIFICATIONS

1. CONDUIT ABOVE GRADE SHALL BE EMT UNLESS OTHERWISE NOTED
2. CONDUIT BELOW GRADE SHALL BE RIGID PVC UNLESS OTHERWISE NOTED
3. CONNECTIONS SHALL BE MADE USING SET SCREW CONNECTORS
4. MC CABLE IS ACCETABLE FOR FINAL CONNECTIONS TO LIGHT FIXTURES PROVIDE WITH 10' WHIP ON ALL HIGHBAYS
5. BRANCH WIRING SHALL BE #12 THHN COPPER UNLESS OTHERWISE NOTED
6. WIRING SHALL BE AS PER CURRENT NEC 2005
7. WIRING DEVICES SHALL BE OF COMMERCIAL GRADE RATED AT 20 AMP
8. INSTALLATION SHALL ADHERE TO ADA STANDARDS
9. ALUMINUM XHHW-#2 CABLE MAY BE USED FOR FEEDERS LARGER THEN #2 OTHERWISE COPPER
10. REFER TO KCP&L STANDARDS MANUAL FOR 480 SERVICES
11. ALL LIGHTING/EQUIPMENT IN WAREHOUSE SHALL BE MOUNTED TO PROVIDE A MIN OF 36' CLEAR HEIGHT

COMcheck Software Version 4.1.1.0

Interior Lighting Compliance Certificate

Project Information

Energy Code: 90.1 (2016) Standard
Project Title: Lee's Summit Logistics Building A Lot 1
Project Type: New Construction

Construction Site:
NW Corner of NE Tudor RD & Main ST
Lee's Summit, MO 64086

Owner/Agent:

Designer/Contractor:
Jeremy Hansen
Heritage Electric
841 N Martway Drive
Olathe, KS 66061
913-747-0528
jhansen@heritage-electric.com

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Warehouse	436300	0.48	209424
		Total Allowed Watts =	209424

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Warehouse				
LED 1: Other:	1	160	200	32000
		Total Proposed Watts =		32000

Interior Lighting PASSES: Design 85% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 90.1 (2016) Standard requirements in COMcheck Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Jeremy Hansen V.P. — Name - Title
Signature
03/16/2022 — Date

Project Title: Lee's Summit Logistics Building A Lot 1
Data filename: Untitled.cck
Report date: 03/15/22
Page 1 of 5

ELECTRICAL GENERAL NOTES

1. WORK INCLUDED. FURNISH ALL LABOR, MATERIAL, SERVICES AND SKILLED SUPERVISION NECESSARY FOR THE CONSTRUCTION, ERECTION, INSTALLATION CONNECTIONS, TESTING AND ADJUSTMENTS OF ALL CIRCUITS AND ELECTRICAL EQUIPMENT SPECIFIED HEREIN, OR NOTED ON THE DRAWINGS, AND ITS DELIVERY TO THE OWNER COMPLETE IN ALL RESPECTS READY FOR USE.
2. CONTRACT DRAWINGS THE CONTRACT DRAWINGS ARE SHOWN IN PART DIAGRAMMATIC, INTENDED TO CONVEY THE SCOPE OF WORK, INDICATING THE GENERAL ARRANGEMENT OF EQUIPMENT, CONDUIT AND OUTLETS. VERIFY SPACES FOR THE INSTALLATION OF THE MATERIALS BASED ON ACTUAL DIMENSIONS OF EQUIPMENT FURNISHED. IF A QUESTION EXISTS AS TO THE EXACT INTENDED LOCATION OF OUTLETS OR EQUIPMENT, OBTAIN INSTRUCTIONS FROM THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH WORK.
3. MINIMUM SIZE OF CONDUIT SHALL BE 1/2" UNLESS NOTED OTHERWISE.
4. ALL WIRING FOR LIGHTING, RECEPTACLE AND POWER CIRCUITS WHERE NOT SHOWN ON DRAWINGS SHALL BE WITH #12 CONDUCTORS, NUMBER AS REQUIRED IN CONDUIT SIZED PER N.E.C. PROVIDE EQUIPMENT GROUNDING CONDUCTOR FOR ALL BRANCH CIRCUITS AND FEEDERS. HOMERUNS TO PANEL SHALL BE IN INDIVIDUAL CONDUITS, UNLESS NOTED OTHERWISE, WITH CIRCUITS AS SHOWN.
5. THE USE OF TYPE 'MC' AND TYPE 'AC' CABLE IS PERMITTED IN ALL AREAS PER NEC AND LOCAL CODE REQUIREMENTS.
6. THE USE OF ALUMINUM CONDUCTORS WITH AMPACITY EQUIVALENT TO COPPER IS PERMITTED IN ALL AREAS PER NEC REQUIREMENTS.
7. ALL JUNCTION BOXES, PULL BOXES, AND PANELBOARDS SHALL BE RIGIDLY ATTACHED TO STRUCTURE.
8. COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACE AVAILABLE, AND WITHOUT INTERFERENCES.
9. ALL CONDUIT, BOXES, ETC. SHALL BE CONCEALED OR MOUNTED FLUSH WITH CEILING OR WALL CONSTRUCTION, CONDUITS SHALL BE MOUNTED AS HIGH AS POSSIBLE. NO SURFACE MOUNTED CONDUIT, BOXES, ETC. WILL BE PERMITTED WITHOUT PERMISSION OF THE ENGINEER PRIOR TO INSTALLATION. ALL CONDUIT PENETRATIONS SHALL BE FIRE-CAULKED AS REQUIRED.

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SCANNELL PROPERTIES

CERTIFICATION

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT I

NW CORNER OF
NE TUDOR RD & MAIN ST
LEE'S SUMMIT, MO 64086

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STATE OF MISSOURI
JOHN WILLIAM CASBON
NUMBER E-14378
PROFESSIONAL ENGINEER
4/26/22

ISSUE DATES

PERMIT SET	02.18.22

210300

E6.00

RELEASED FOR CONSTRUCTION
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Lee's Summit, Missouri
12/27/2022

PANEL: H1 — 400A MB — 277/ 480 V, 3PH, 4W.+GRND. — NEW

CCT	SERVES	VA	OCP	WIRE	PHASE	WIRE	OCP	VA	SERVES	CCT
1	PANEL HA	12125	100/3	4-#1 AL-1-#6G	A	4-#1 AL-1-#6G	100/3	11925	PANEL HC	2
3		9925			B			9725		4
5		9925			C			10125		6
7	PANEL HB	12125	100/3	4-#1 AL-1-#6G	A	4-#1 AL-1-#6G	100/3	11925	PANE HD	8
9		9925			B			9725		10
11		9925			C			9725		12
13	PANEL H1A	10088	100/3	4-#1 AL-1-#6G	A					14
15		9743			B					16
17		8428			C					18
19					A					20
21					B					22
23					C					24
25					A					26
27					B					28
29					C					30
31					A					32
33					B					34
35					C					36
37					A					38
39					B					40
41					C					42

NOTES:
1 NEMA 3R ENCLOSURE
2 PROVIDE BOLT ON BREAKERS
3

LOAD SUMMARY	CONN	NEC	DEM	LOAD BALANCE PER PHASE		
1-LIGHTING	0	1.25	0	PHASE A		58188
2-RECEPTACLES	155359	NEC	82679.5	PHASE B		49043
3-KITCHEN	0	0.65	0	PHASE C		48128
4-HVAC	0	1	0	LOWEST PHASE PLUS 10%		
5-NON-CONT	0	1	0	48128	+ 10%	52940.8
LARGEST MOTOR	0	0.25	0	REBALANCE LOADS		
TOTAL VA	155359		82679.5			
TOTAL AMPS	186.9		99.5			

PANEL: H1A — 100A MLO — 277/ 480 V, 3PH, 4W.+GRND. — NEW

CCT	SERVES	VA	OCP	WIRE	PHASE	WIRE	OCP	VA	SERVES	CCT
1	WALL PACKS	2224	20/1	2-#12,1-#12G	A	2-#12-1-#12G	20/1	324	POLE LIGHTS	2
3	WALL PACKS	2224	20/1	2-#12-1-#12G	B	2-#12-1-#12G	20/1	1519	POLE LIGHTS	4
5	WALL PACKS	1668	20/1	2-#12-1-#12G	C	2-#12-1-#12G	20/3	760	POLE LIGHTS	6
7	UNITHEATER	5000	30/3	3-#10-1-#12G	A	2-#12-1-#12G	20/1	1540	POLE LIGHTS	8
9		5000			B					10
11		5000			C					12
13					A					14
15					B					16
17					C					18
19					A					20
21					B					22
23					C					24
25					A					26
27					B					28
29					C					30
31					A					32
33					B					34
35					C					36
37					A	3-#8,1#10G	50/3	1000	TRANSFORMER	38
39					B		-	1000	TRANSFORMER	40
41					C		-	1000	TRANSFORMER	42

NOTES:
1 NEMA 1 ENCLOSURE
2 PROVIDE BOLT ON BREAKERS
3

LOAD SUMMARY	CONN	NEC	DEM	LOAD BALANCE PER PHASE		
1-LIGHTING	10259	1.25	12823.75	PHASE A		10088
2-RECEPTACLES	3000	NEC	3000	PHASE B		9743
3-KITCHEN	0	0.65	0	PHASE C		8428
4-HVAC	15000	1	15000	LOWEST PHASE PLUS 10%		
5-NON-CONT	0	1	0	8428	+ 10%	9270.8
LARGEST MOTOR	0	0.25	0	REBALANCE LOADS		
TOTAL VA	28259		30823.75			
TOTAL AMPS	34.0		37.1			

PANEL: L1 — 100 MB — 120/ 208 V, 3PH, 4W.+GRND — NEW

CCT	SERVES	VA	OCP	WIRE	PHASE	WIRE	OCP	VA	SERVES	CCT
1	EXHAUST FAN	250	20/1	2-#12,1-#12G	A				SPARE	2
3	GFCI RECEP	200	20/1	2-#12,1-#12G	B				SPARE	4
5	LIGHT	199	20/1	2-#12,1-#12G	C				SPARE	6
7	SPARE				A				SPARE	8
9	SPARE				B				SPARE	10
11	SPACE				C	-			SPACE	12
13	SPACE				A	-			SPACE	14
15	SPACE			-	B	-			SPACE	16
17	SPACE			-	C	-			SPACE	18
19	SPACE			-	A	-			SPACE	20
21	SPACE			-	B	-			SPACE	22
23	SPACE			-	C	-			SPACE	24
25	SPACE			--	A	--			SPACE	26
27	SPACE			--	B	--			SPACE	28
29	SPACE			--	C	--			SPACE	30
31	SPACE			--	A	-			SPACE	32
33	SPACE			--	B	--			SPACE	34
35	SPACE			--	C	--			SPACE	36
37	SPACE			-	A	-			SPACE	38
39	SPACE			--	B	--			SPACE	40
41	SPACE			--	C	--			SPACE	42

NOTES:
1 NEMA 1 ENCLOSURE
2 PROVIDE BOLT ON BREAKERS
3

LOAD SUMMARY	CONN	NEC	DEM	LOAD BALANCE PER PHASE		
1-LIGHTING	199	1.25	248.75	PHASE A		250
2-RECEPTACLES	200	NEC	200	PHASE B		200
3-KITCHEN	0	0.65	0	PHASE C		199
4-HVAC	250	1	250	LOWEST PHASE PLUS 10%		
5-NON-CONT	0	1	0	199	+ 10%	218.9
LARGEST MOTOR	0	0.25	0	REBALANCE LOADS		
TOTAL VA	649		698.75			
TOTAL AMPS	1.8		1.9			

PANEL: HA — 100A MLO — 277/ 480 V, 3PH, 4W.+GRND. — NEW PANEL

CCT	SERVES	VA	OCP	WIRE	PHASE	WIRE	OCP	VA	SERVES	CCT
1	WAREHOUSE LIGHTS	2000	20/1	2-#12,1-#12G	A	2-#12,1-#12G	20/1	2000	WAREHOUSE LIGHTS	2
3	WAREHOUSE LIGHTS	2000	20/1	2-#12-1-#12G	B	3-#8-1-#10G	50/3	6925	MAU 1	4
5	WAREHOUSE LIGHTS	2000	20/1	2-#12-1-#12G	C			6925		6
7	OVERHEAD DOOR	200	20/3	4-#10-1-#12G	A			6925		8
9		200			B					10
11		200			C					12
13					A					14
15					B					16
17					C					18
19					A					20
21					B					22
23					C					24
25					A					26
27					B					28
29					C					30
31					A					32
33					B					34
35					C					36
37					A	3-#8,1#10G	50/3	1000	TRANSFORMER	38
39					B		-	800	TRANSFORMER	40
41			-		C		-	800	TRANSFORMER	42

NOTES:
1 NEMA 1 ENCLOSURE
2 PROVIDE BOLT ON BREAKERS
3

LOAD SUMMARY	CONN	NEC	DEM	LOAD BALANCE PER PHASE		
1-LIGHTING	8000	1.25	10000	PHASE A		12125
2-RECEPTACLES	2600	NEC	2600	PHASE B		9925
3-KITCHEN	0	0.65	0	PHASE C		9925
4-HVAC	20775	1	20775	LOWEST PHASE PLUS 10%		
5-NON-CONT	600	1	600	9925	+ 10%	10917.5
LARGEST MOTOR	0	0.25	0	REBALANCE LOADS		
TOTAL VA	31975		33975			
TOTAL AMPS	38.5		40.9			

PANEL: LA — 100 MB — 120/ 208 V, 3PH, 4W.+GRND. — NEW PANEL

CCT	SERVES	VA	OCP	WIRE	PHASE	WIRE	OCP	VA	SERVES	CCT
1	DOCK RECEPS	800	20/1	2-#12,1-#12G	A	2-#12,1-#12G	20/1	200	GFCI RECEP	2
3	DOCK RECEPS	800	20/1	2-#12,1-#12G	B		20/1		SPARE	4
5	DOCK RECEPS	800	20/1	2-#12,1-#12G	C		20/1		SPARE	6
7	SPARE		20/1		A		20/1		SPARE	8
9	SPARE		20/1		B		20/1		SPARE	10
11	SPARE		20/1		C		20/1		SPARE	12
13	SPACE				A				SPACE	14
15	SPACE				B				SPACE	16
17	SPACE				C				SPACE	18
19	SPACE				A				SPACE	20
21	SPACE				B				SPACE	22
23	SPACE				C				SPACE	24
25	SPACE				A				SPACE	26
27	SPACE			--	B	--			SPACE	28
29	SPACE			--	C	--			SPACE	30
31	SPACE			--	A	-			SPACE	32
33	SPACE			--	B	--			SPACE	34
35	SPACE			--	C	--			SPACE	36
37	SPACE			-	A	-			SPACE	38
39	SPACE			--	B	--			SPACE	40
41	SPACE			--	C	--			SPACE	42

NOTES:
1 NEMA 1 ENCLOSURE
2 PROVIDE BOLT ON BREAKERS
3

LOAD SUMMARY	CONN	NEC	DEM	LOAD BALANCE PER PHASE		
1-LIGHTING	0	1.25	0	PHASE A		1000
2-RECEPTACLES	2600	NEC	2600	PHASE B		800
3-KITCHEN	0	0.65	0	PHASE C		800
4-HVAC	0	1	0	LOWEST PHASE PLUS 10%		
5-NON-CONT	0	1	0	800	+ 10%	880
LARGEST MOTOR	0	0.25	0	REBALANCE LOADS		
TOTAL VA	2600		2600			
TOTAL AMPS	7.2		7.2			

PANEL: HB — 100A MLO — 277/ 480 V, 3PH, 4W.+GRND. — NEW PANEL

CCT	SERVES	VA	OCP	WIRE	PHASE	WIRE	OCP	VA	SERVES	CCT
1	WAREHOUSE LIGHTS	2000	20/1	2-#12,1-#12G		2-#12,1-#12G	20/1	2000	WAREHOUSE LIGHTS	2
3	WAREHOUSE LIGHTS	2000	20/1	2-#12-1-#12G		3-#8-1-#10G	50/3	6925	MAU 1	4
5	WAREHOUSE LIGHTS	2000	20/1	2-#12-1-#12G				6925		6
7	OVERHEAD DOOR	200	20/3	4-#10-1-#12G				6925		8
9		200								10
11		200								12
13										14
15										16
17										18
19										20
21										22
23										24
25										26
27										28
29										30
31										32
33										34
35										36
37						3-#8,1#10G	50/3	1000	TRANSFORMER	38
39							-	800	TRANSFORMER	40
41							-	800	TRANSFORMER	42

NOTES:
1 NEMA 1 ENCLOSURE
2 PROVIDE BOLT ON BREAKERS
3

LOAD SUMMARY	CONN	NEC	DEM	LOAD BALANCE PER PHASE		
1-LIGHTING	29375	1.25	36718.75	PHASE A		12125
2-RECEPTACLES	2600	NEC	2600	PHASE B		9925
3-KITCHEN	0	0.65	0	PHASE C		9925
4-HVAC	0	1	0	LOWEST PHASE PLUS 10%		
5-NON-CONT	0	1	0	9925	+ 10%	10917.5
LARGEST MOTOR	0	0.25	0	REBALANCE LOADS		
TOTAL VA	31975		39318.75			
TOTAL AMPS	38.5		47.3			

PANEL: LB — 100 MB — 120/ 208 V, 3PH, 4W.+GRND. — NEW PANEL

CCT	SERVES	VA	OCP	WIRE	PHASE	WIRE	OCP	VA	SERVES	CCT
1	DOCK POWER	800	20/1	2-#12,1-#12G	A	2-#12,1-#12G	20/1	200	GFCI RECEP	2
3	DOCK POWER	800	20/1	2-#12,1-#12G	B		20/1		SPARE	4
5	DOCK POWER	800	20/1		C		20/1		SPARE	6
7	SPARE		20/1		A		20/1		SPARE	8
9	SPARE		20/1		B		20/1		SPARE	10
11	SPARE		20/1		C		20/1		SPARE	12
13	SPARE		20/1		A		20/1		SPARE	14
15	SPACE				B	-			SPACE	16
17	SPACE				C	-			SPACE	18
19	SPACE				A	-			SPACE	20
21	SPACE				B	-			SPACE	22
23	SPACE			-	C	-			SPACE	24
25	SPACE			--	A	--			SPACE	26
27	SPACE			--	B	--			SPACE	28
29	SPACE			--	C	--			SPACE	30
31	SPACE			--	A	-			SPACE	32
33	SPACE			--	B	--			SPACE	34
35	SPACE			--	C	--			SPACE	36
37	SPACE			-	A	-			SPACE	38
39	SPACE			--	B	--			SPACE	40
41	SPACE			--	C	--			SPACE	42

NOTES:
1 NEMA 1 ENCLOSURE
2 PROVIDE BOLT ON BREAKERS
3

LOAD SUMMARY	CONN	NEC	DEM	LOAD BALANCE PER PHASE		
1-LIGHTING	0	1.25	0	PHASE A		1000
2-RECEPTACLES	2600	NEC	2600	PHASE B		800
3-KITCHEN	0	0.65	0	PHASE C		800
4-HVAC	0	1	0	LOWEST PHASE PLUS 10%		
5-NON-CONT	0	1	0	800	+ 10%	880
LARGEST MOTOR	0	0.25	0	REBALANCE LOADS		
TOTAL VA	2600		2600			
TOTAL AMPS	7.2		7.2			

PANEL: HC — 100A MLO — 277/ 480 V, 3PH, 4W.+GRND. — NEW PANEL

CCT	SERVES	VA	OCP	WIRE	PHASE	WIRE	OCP	VA	SERVES	CCT
1	WAREHOUSE LIGHTS	2000	20/1	2-#12,1-#12G	A	2-#12,1-#12G	20/1	2000	WAREHOUSE LIGHTS	2
3	WAREHOUSE LIGHTS	2000	20/1	2-#12-1-#12G	B	3-#8-1-#10G	50/3	6925	MAU1	4
5	WAREHOUSE LIGHTS	2000	20/1	2-#12-1-#12G	C			6925		6
7	OVERHEAD DOOR	200	20/3	4-#10-1-#12G	A			6925		8
9		200			B					10
11		200			C					12
13					A					14
15					B					16
17					C					18
19					A					20
21					B					22
23					C					24
25					A					26
27					B					28
29					C					30
31					A					32
33					B					34
35					C	3-#8,1#10G	50/3	1000	TRANSFORMER	36
37					A		-	800	TRANSFORMER	38
39					B		-	600	TRANSFORMER	40
41					C		-			42

NOTES:
1 NEMA 1 ENCLOSURE
2 PROVIDE BOLT ON BREAKERS
3

LOAD SUMMARY	CONN	NEC	DEM	LOAD BALANCE PER PHASE		
1-LIGHTING	29375	1.25	36718.75	PHASE A		11925
2-RECEPTACLES	2400	NEC	2400	PHASE B		9725
3-KITCHEN	0	0.65	0	PHASE C		10125
4-HVAC	0	1	0	LOWEST PHASE PLUS 10%		
5-NON-CONT	0	1	0	9725	+ 10%	10697.5
LARGEST MOTOR	0	0.25	0	REBALANCE LOADS		
TOTAL VA	31775		39118.75			
TOTAL AMPS	38.2		47.1			

PANEL: LC — 100 MB — 120/ 208 V, 3PH, 4W.+GRND. — NEW PANEL

CCT	SERVES	VA	OCP	WIRE	PHASE	WIRE	OCP	VA	SERVES	CCT
1	DOCK POWER	800	20/1	2-#12,1-#12G	A	2-#12,1-#12G	20/1	200	GFCI RECEP	2
3	DOCK POWER	800	20/1	2-#12,1-#12G	B	2-#12,1-#12G	20/1		SPARE	4
5	SPARE		20/1		C	2-#12,1-#12G	20/1		SPARE	6
7	SPARE		20/1		A	2-#12,1-#12G	20/1		SPARE	8
9	SPARE		20/1		B	2-#12,1-#12G	20/1		SPARE	10
11	SPARE		20/1		C	2-#12,1-#12G	20/1		SPARE	12
13	SPACE				A				SPACE	14
15	SPACE				B	-			SPACE	16
17	SPACE				C	-			SPACE	18
19	SPACE				A	-			SPACE	20
21	SPACE				B	-			SPACE	22
23	SPACE			-	C	-			SPACE	24
25	SPACE			--	A	--			SPACE	26
27	SPACE			--	B	--			SPACE	28
29	SPACE			--	C	--			SPACE	30
31	SPACE			--	A	-			SPACE	32
33	SPACE			--	B	--			SPACE	34
35	SPACE			--	C	--			SPACE	36
37	SPACE			-	A	-			SPACE	38
39	SPACE			--	B	--			SPACE	40
41	SPACE			--	C	--			SPACE	42

NOTES:
1 NEMA 1 ENCLOSURE
2 PROVIDE BOLT ON BREAKERS
3

LOAD SUMMARY	CONN	NEC	DEM	LOAD BALANCE PER PHASE		
1-LIGHTING	0	1.25	0	PHASE A		1000
2-RECEPTACLES	1800	NEC	1800	PHASE B		800
3-KITCHEN	0	0.65	0	PHASE C		0
4-HVAC	0	1	0	LOWEST PHASE PLUS 10%		
5-NON-CONT	0	1	0	0	+ 10%	0
LARGEST MOTOR	0	0.25	0	REBALANCE LOADS		
TOTAL VA	1800		1800			
TOTAL AMPS	5.0		5.0			

PANEL: HD — 100 MLO — 277/ 480 V, 3PH, 4W.+GRND. — NEW PANEL

CCT	SERVES	VA	OCP	WIRE	PHASE	WIRE	OCP	VA	SERVES	CCT
1	WAREHOUSE LIGHTS	2000	20/1	2-#12,1-#12G	A	2-#12,1-#12G	20/1	2000	WAREHOUSE LIGHTS	2
3	WAREHOUSE LIGHTS	2000	20/1	2-#12-1-#12G	B	3-#8-1-#10G	50/3	6925	MAU 1	4
5	WAREHOUSE LIGHTS	2000	20/1	2-#12-1-#12G	C			6925		6
7					A			6925		8
9					B					10
11					C					12
13					A					14
15					B					16
17					C					18
19					A					20
21					B					22
23					C					24
25					A					26
27					B					28
29				--	C					30
31				--	A					32
33				--	B					34
35				--	C					36
37					A	3-#8,1#10G	50/3	1000	TRANSFORMER	38
39					B		-	800	TRANSFORMER	40
41					C		-	800	TRANSFORMER	42

NOTES:
1 NEMA 1 ENCLOSURE
2 PROVIDE BOLT ON BREAKERS
3

LOAD SUMMARY	CONN	NEC	DEM	LOAD BALANCE PER PHASE		
1-LIGHTING	28775	1.25	35968.75	PHASE A		11925
2-RECEPTACLES	0	NEC	0	PHASE B		9725
3-KITCHEN	0	0.65	0	PHASE C		9725
4-HVAC	0	1	0	LOWEST PHASE PLUS 10%		
5-NON-CONT	0	1	0	9725	+ 10%	10697.5
LARGEST MOTOR	0	0.25	0	REBALANCE LOADS		
TOTAL VA	28775		35968.75			
TOTAL AMPS	34.6		43.3			

PANEL: LD — 100 MB — 120/ 208 V, 3PH, 4W.+GRND. — NEW PANEL

CCT	SERVES	VA	OCP	WIRE	PHASE	WIRE	OCP	VA	SERVES	CCT
1	DOCK RECEP	800	20/1	2-#12,1-#12G	A	2-#12,1-#12G	20/1	200	GFCI	2
3	DOCK RECEP	800	20/1	2-#12,1-#12G	B		20/1		SPARE	4
5	DOCK RECEP	800	20/1	2-#12,1-#12G	C		20/1		SPARE	6
7	SPARE		20/1		A	-	20/1		SPARE	8
9	SPARE		20/1		B	-	20/1		SPARE	10
11	SPARE		20/1	-	C	-	20/1		SPARE	12
13	SPACE		20/1	-	A	-	20/1		SPACE	14
15	SPACE		20/1	-	B	-	20/1		SPACE	16
17	SPACE		20/1	-	C	-	20/1		SPACE	18
19	SPACE		20/1	-	A	-	20/1		SPACE	20
21	SPACE		20/1	-	B	-	20/1		SPACE	22
23	SPACE		20/1	-	C	-	20/1		SPACE	24
25	SPACE		20/1	--	A	--	20/1		SPACE	26
27	SPACE		20/1	--	B	--	20/1		SPACE	28
29	SPACE		20/1	--	C	--	20/1		SPACE	30
31	SPACE		20/1	--	A	-	20/1		SPACE	32
33	SPACE		20/1	--	B	--	20/1		SPACE	34
35	SPACE		20/1	--	C	--	20/1		SPACE	36
37	SPACE		20/1	-	A	-	20/1		SPACE	38
39	SPACE		20/1	--	B	--	20/1		SPACE	40
41	SPACE		20/1	--	C	--	20/1		SPACE	42

NOTES:
1 NEMA 1 ENCLOSURE
2 PROVIDE BOLT ON BREAKERS
3

LOAD SUMMARY	CONN	NEC	DEM	LOAD BALANCE PER PHASE		
1-LIGHTING	0	1.25	0	PHASE A		1000
2-RECEPTACLES	1800	NEC	1800	PHASE B		800
3-KITCHEN	0	0.65	0	PHASE C		800
4-HVAC	0	1	0	LOWEST PHASE PLUS 10%		
5-NON-CONT	0	1	0	800	+ 10%	880
LARGEST MOTOR	0	0.25	0	REBALANCE LOADS		
TOTAL VA	1800		1800			
TOTAL AMPS	5.0		5.0			

CURRAN ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
O :: 317 . 288 . 0681
F :: 317 . 288 . 0753

SCANNELL PROPERTIES

CERTIFICATION

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS
BUILDING A LOT I

NW CORNER OF
NE TUDOR RD & MAIN ST
LEE'S SUMMIT, MO 64086

ISSUE DATES

PERMIT SET 02.18.22

HERITAGE ELECTRIC, L.L.C.
841 N. MARTWAY
Olathe, Kansas
phone (913) 663 1200
fax (913) 663 2025

HERITAGE ELECTRIC

STATE OF MISSOURI — JOHN W. CA... — NUMBER E-14378 — PROFESSIONAL ENGINEER
4/ 26/22

210300

E7.00

FIRE PROTECTION PLANS

F. E. MORAN, INC. FIRE PROTECTION
16815 COLLEGE BLVD.
LENEXA, KS 66219
(217) 356-0700 (217) 356-0777 FAX

MISSOURI COA: E-2022012018

SCOPE OF WORK

SCOPE OF WORK:
** FURNISH & INSTALL (11) NEW WET PIPE SPRINKLER SYSTEM FOR THE NEW BUILDING.
** FURNISH & INSTALL A NEW FIRE PUMP AND ACCESSORIES
** FIRE PUMP ROOM POINT OF CONNECTION (START OF CONTRACT): 10'' FLANGE, 12'' ABOVE THE FINISHED FLOOR IN THE FIRE PUMP ROOM.
**FEED RISER POINT OF CONNECTION (START OF CONTRACT): 8'' FLANGE, 12'' ABOVE THE FINISHED FLOOR IN THE FIRE PUMP ROOM. TWO LOCATED ON EACH END OF THE BUILDING AND ONE ON EACH SIDE.
** INSTALL (18) 2½'' HOSE VALVES LOCATED AT MAN DOORS AND FED FROM ADJACENT SYSTEMS

NOT INCLUDED:
** WIRING OF ELECTRICAL DEVICES
** FIRE EXTINGUISHERS
** STANDPIPES AND HOSE STATIONS
** FIRE PUMP CONTROLLER AUTO TRANSFER SWITCH
** UNDERGROUND PIPING AND TESTING
** COLUMN SPRINKLERS
** SEISMIC BRACING
** PAINTED PIPING
** CONCRETE PADS
** COMPONENT IDENTIFICATION BEYOND NFPA 13 REQUIREMENTS
** ACCESS PANELS
** CUTTING AND PATCHING
** PIPE SLEEVES
** WALL POST INDICATOR VALVE
** PUMP CONTROLLER AUTOMATIC TRANSFER SWITCH

CODE INFORMATION

CODE INFORMATION:
**NFPA 13, 2016 EDITION: INSTALLATION OF SPRINKLER SYSTEMS
**NFPA 20, 2016 EDITION: INSTALLATION OF CENTRIFUGAL FIRE PUMPS
**INTERNATIONAL BUILDING & FIRE CODE, 2018 EDITION
**LOCAL AMENDMENTS

BUILDING INFO:
IBC OCCUPANCY CLASSIFICATION: S-1
IBC CONSTRUCTION TYPE: II-B
IBC SEISMIC DESIGN CATEGORY: B
HIGHEST FLOOR ELEVATION FROM FIRE DEPARTMENT VEHICLE ACCESS: GRADE
NUMBER OF STORIES: 1
BUILDING AREA: 433,364 S.F.

GENERAL REQUIREMENTS

** SUPPLY A SPARE SPRINKLER CABINET WITH WRENCH FOR EACH SPRINKLER TYPE AS REQUIRED BY NFPA 13.
** IDENTIFY ALL HYDRAULICALLY CALCULATED SYSTEMS WITH A PERMANENTLY MARKED AND WEATHERPROOF SIGN.
** ALL NEW PIPING OR PIPING MODIFICATIONS WHICH AFFECT MORE THAN 20 SPRINKLERS SHALL BE HYDROSTATICALLY TESTED AT 200 PSI OR 50 PSI OVER THE SYSTEM WORKING PRESSURE. THE SYSTEM SHALL MAINTAIN THIS PRESSURE WITHOUT LOSS FOR 2 HOURS.
** ** ALL NEW PIPING OR PIPING MODIFICATIONS WHICH AFFECT 20 SPRINKLERS OR LESS, SHALL BE TESTED AT THE SYSTEM WORKING PRESSURE.
** ALL PIPING MODIFICATIONS WHICH CANNOT BE ISOLATED FROM THE EXISTING SYSTEM, SHALL BE TESTED AT THE SYSTEM WORKING PRESSURE.
** THE LOCAL FIRE/BUILDING INSPECTOR IS TO BE NOTIFIED 48 HOURS IN ADVANCE OF ALL TESTING.
UNDERGROUND TESTING AND FLUSHING:
** ALL UNDERGROUND PIPE SHALL BE TESTED AND FLUSHED BY THE INSTALLING CONTRACTOR AS REQUIRED BY NFPA 24 BEFORE ANY OVERHEAD SPRINKLER PIPING IS CONNECTED.

VALVES

** ALL VALVES CONTROLLING WATER FLOW TO SPRINKLERS SHALL BE INDICATING & SUPERVISED.
** ALL VALVES SHALL BE ACCESSIBLE AT ALL TIMES AND PERMANENTLY IDENTIFIED.
** THE IDENTIFICATION OF CONTROL VALVES SHALL INCLUDE A DESCRIPTION OR DIAGRAM OF WHAT THEY CONTROL.
** ALL TRAPPED PORTIONS OF SPRINKLER PIPING SHALL BE PROVIDED WITH A LOW POINT DRAIN AS REQUIRED BY NFPA 13.

PIPE HANGERS

** 2½''-6'' HANGER RINGS ARE TO BE ADJUSTABLE SWIVEL RINGS, ZINC PLATED, MANUFACTURED TO ANSI/MSS SP-69 STANDARDS.
** 2½''-6'' CLEVIS HANGERS ARE TO BE ADJUSTABLE CLEVIS RINGS, PLAIN, MANUFACTURED TO ANSI/MSS SP-69 STANDARDS.
** HANGERS AND SEISMIC BRACING ARE TO BE INSTALLED PER NFPA 13 REQUIREMENTS.
** HANGER ROD SIZES AND LOCATIONS ARE TO BE AS REQUIRED BY NFPA 13.

DESIGN CRITERIA - LIGHT HAZARD

SPRINKLER SYSTEM DESIGN CRITERIA - LIGHT HAZARD AREA/DENSITY (WET & SINGLE INTERLOCKED PREACTION SYSTEMS):
THE NEW SYSTEM HAS BEEN DESIGNED WITH A DESIGN DENSITY OF .10 GPM/S.F. OVER THE MOST REMOTE AND DEMANDING DESIGN AREA OF 1500 S.F. WITH 225 S.F. (15') MAXIMUM SPRINKLER HEAD SPACING AND 100 GPM OUTSIDE HOSE ALLOWANCE. WHERE ROOF OR CEILING SLOPES EXCEED A PITCH OF 2:12, THE DESIGN AREA HAS BEEN INCREASED IN SIZE BY 30% TO 1950 S.F. THE DESIGN AREA MAY BE REDUCED IN SIZE IN ACCORDANCE WITH NFPA 13 DUE TO THE USE OF QUICK RESPONSE SPRINKLERS BUT SHALL NEVER CONTAIN LESS THAN 5 SPRINKLERS. TOTAL SYSTEM SIZE SHALL NOT EXCEED 52,000 S.F.

WHERE EXTENDED COVERAGE SPRINKLERS ARE UTILIZED, THE MINIMUM DESIGN AREA SHALL BE 5 SPRINKLERS WITH 400 S.F. (20') MAXIMUM SPRINKLER HEAD SPACING. EXTENDED COVERAGE SPRINKLERS SHALL NOT BE USED WHERE ROOF OR CEILING SLOPES EXCEED A PITCH OF 2:12. WHERE SPECIFICALLY LISTED FOR SUCH USE, EXTENDED COVERAGE SPRINKLERS MAY BE USED FOR ROOF OR CEILING SLOPES UP TO A 4:12 PITCH.

WHEN A REDUCTION IN THE DESIGN AREA IS NOT USED, SPRINKLER DISCHARGE IN SMALL ROOMS SUCH AS CLOSETS AND WASHROOMS CONTAINING A SINGLE SPRINKLER MAY BE OMITTED FROM THE HYDRAULIC CALCULATIONS.

DRAWING SYMBOLS
PIPING CENTERLINES
★ 0'' TS — TO TOP OF STEEL OR ROOF DECK
★ 0'' TS — TO FLOOR
HANGER LOCATION
HYDRAULIC NODE
ELECTRIC ALARM BELL

WET SYSTEM PIPE & FITTINGS

WET-PIPE SPRINKLER SYSTEM BLACK PIPE:
** 1'' LINE PIPING SHALL BE BLACK STEEL SCH. 40 PIPE, MANUFACTURED TO ASTM A53 OR A795 STANDARDS.
** 2½'' LINE PIPING SHALL BE BLACK STEEL SCH. 7 PIPE, MANUFACTURED TO ASTM A795 STANDARDS.

** 8'' MAIN PIPING SHALL BE BLACK STEEL SCH. 10 PIPE, MANUFACTURED TO ASTM A135 STANDARDS.
** 2''-6'' MAIN PIPING SHALL BE BLACK STEEL SCH. 7 PIPE, MANUFACTURED TO ASTM A795 STANDARDS.

WET-PIPE SPRINKLER SYSTEM BLACK FITTINGS:
** 1'' BRANCH LINE FITTINGS SHALL BE BLACK DUCTILE IRON THREADED, CLASS 150 STANDARD, MANUFACTURED PER ANSI/ASME B16.3, U.L. LISTED FOR FIRE PROTECTION USE UP TO 175 PSI WORKING PRESSURE.
** 1/2'' - 3'' BRANCH LINE PIPE OUTLETS TO BE WELDED MANUFACTURED TO ASTM A53 & ANSI B1.20.1 STANDARDS.
** 1 1/4''-3'' BRANCH LINE FITTINGS SHALL BE STANDARD GROOVED DUCTILE IRON, MANUF. TO ASTM A536 STANDARDS.

** 2½''-8'' MAIN PIPE BRANCH OUTLETS TO BE WELDED MANUFACTURED TO ASTM A53 & ANSI B1.20.1 STANDARDS.
** 2½''-8'' MAIN PIPE FITTINGS SHALL BE STANDARD GROOVED DUCTILE IRON, MANUF. TO ASTM A536 STANDARDS.
** 2½''-8'' MAIN PIPE FITTINGS SHALL BE STANDARD GROOVED STEEL, MANUF. TO ASTM A958/A53 STANDARDS.

DESIGN CRITERIA - ESFR

SPRINKLER SYSTEM DESIGN CRITERIA (ESFR)-PALLETIZED/SOLID-PILE/RACK STORAGE:

FROM NFPA 13, 2016 EDITION TABLE 16.3.3.1
COMMODITY CLASSIFICATION: CLASS I, II, III OR IV, ENCAPSULATED OR UNENCAPSULATED, NO OPEN TOP CONTAINERS
STORAGE ARRANGEMENT: PALLETIZED/SOLID-PILE/SINGLE & DOUBLE ROW RACKS WITH NO SOLID SHELVING
CONSTRUCTION TYPE: ALL TYPES
MAXIMUM STORAGE HEIGHT: 35 FEET
MAXIMUM CEILING/ROOF HEIGHT: 40 FEET
MINIMUM CLEARANCE FROM SPRINKLER DEFLECTOR TO TOP OF STORAGE: 36 INCHES
SPRINKLER TYPE: ESFR (EARLY SUPPRESSION FAST-RESPONSE)
SPRINKLER K-FACTOR: 16.8
SPRINKLER TEMPERATURE RATING: 205°F
SPRINKLER ORIENTATION: PENDENT
MAXIMUM SPRINKLER DEFLECTOR DISTANCE BELOW CEILING: 14 INCHES
MINIMUM SPRINKLER DEFLECTOR DISTANCE BELOW CEILING: 6 INCHES
MAXIMUM SPRINKLER SPACING/AREA: 10 FEET/100 S.F.
MINIMUM SPRINKLER SPACING: 8 FEET/64 S.F.
TYPE OF SYSTEM: WET
NUMBER OF DESIGN SPRINKLERS: 12
MINIMUM SPRINKLER OPERATING PRESSURE: 52 PSI
INSIDE HOSE STREAM ALLOWANCE: 0 GPM
OUTSIDE HOSE STREAM ALLOWANCE: 250 GPM
TOTAL HOSE STREAM ALLOWANCE: 250 GPM
IN-RACK SPRINKLERS: NO

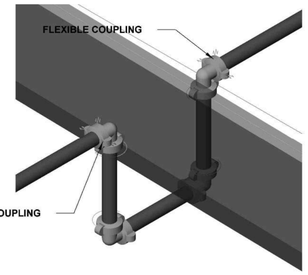
SPRINKLER SYSTEM DESIGN CRITERIA (ESFR)-PALLETIZED/SOLID-PILE/RACK STORAGE:

FROM NFPA 13, 2016 EDITION TABLE 16.3.3.1
COMMODITY CLASSIFICATION: CLASS I, II, III OR IV, ENCAPSULATED OR UNENCAPSULATED, NO OPEN TOP CONTAINERS
STORAGE ARRANGEMENT: PALLETIZED/SOLID-PILE/SINGLE & DOUBLE ROW RACKS WITH NO SOLID SHELVING
CONSTRUCTION TYPE: ALL TYPES
MAXIMUM STORAGE HEIGHT: 40 FEET
MAXIMUM CEILING/ROOF HEIGHT: 45 FEET
MINIMUM CLEARANCE FROM SPRINKLER DEFLECTOR TO TOP OF STORAGE: 36 INCHES
SPRINKLER TYPE: ESFR (EARLY SUPPRESSION FAST-RESPONSE)
SPRINKLER K-FACTOR: 22.4
SPRINKLER TEMPERATURE RATING: 205°F
SPRINKLER ORIENTATION: PENDENT
MAXIMUM SPRINKLER DEFLECTOR DISTANCE BELOW CEILING: 18 INCHES
MINIMUM SPRINKLER DEFLECTOR DISTANCE BELOW CEILING: 6 INCHES
MAXIMUM SPRINKLER SPACING/AREA: 10 FEET/100 S.F.
MINIMUM SPRINKLER SPACING: 8 FEET/64 S.F.
TYPE OF SYSTEM: WET
NUMBER OF DESIGN SPRINKLERS: 12
MINIMUM SPRINKLER OPERATING PRESSURE: 40 PSI
INSIDE HOSE STREAM ALLOWANCE: 0 GPM
OUTSIDE HOSE STREAM ALLOWANCE: 250 GPM
TOTAL HOSE STREAM ALLOWANCE: 250 GPM
IN-RACK SPRINKLERS: NO

SYSTEMS SHALL BE WET ONLY.

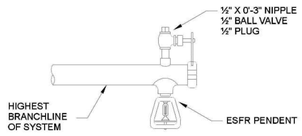
ROOF OR CEILING SLOPES SHALL NOT EXCEED A PITCH OF 2:12.

TOTAL SYSTEM SIZE SHALL NOT EXCEED 40,000 S.F. COMBINED HIGH PILED/RACK STORAGE & LIGHT/ORDINARY HAZARD SYSTEMS MAY COVER UP TO 52,000 S.F.



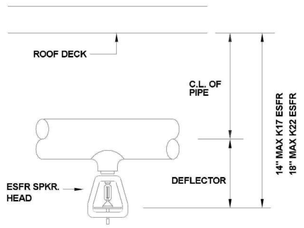
TYPICAL LINE AT EXPANSION JOINT

N.T.S.



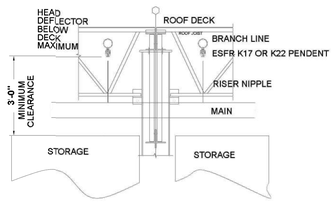
MANUAL AIR VENT DETAIL

N.T.S.



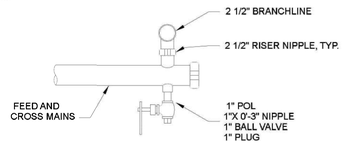
ESFR PENDENT DETAIL

N.T.S.



STORAGE CLEARANCE

N.T.S.



TYPICAL DRAIN DETAIL

N.T.S.

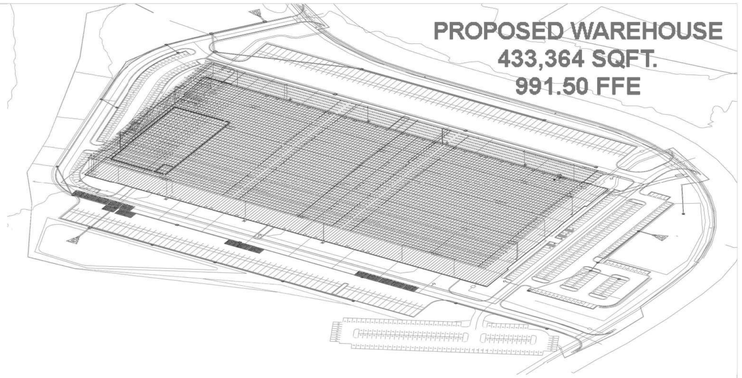
HANGER INSTALLATION REQUIREMENTS

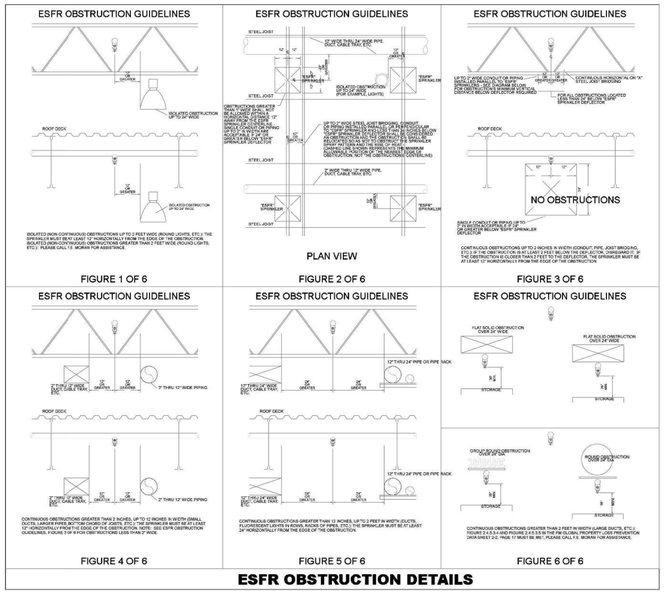
	MAXIMUM DISTANCE BETWEEN HANGERS							
NOMINAL PIPE SIZE	3/4''	1''	1-1/4''	1-1/2''	2''	2-1/2''	3''	4''
BLAZEMASTER CPVC	5' 8''	6' 0''	6' 8''	7' 0''	8' 0''	9' 0''	10' 0''	N/A
THREADABLE LIGHTWALL	N/A	12' 0''	12' 0''	12' 0''	12' 0''	12' 0''	12' 0''	N/A
STEEL PIPE (7/10/ 40)	N/A	12' 0''	12' 0''	15' 0''	15' 0''	15' 0''	15' 0''	15' 0''

THE UNSUPPORTED LENGTH BETWEEN THE END SPRINKLER AND THE LAST HANGER ON THE LINE SHALL NOT EXCEED 36'' FOR 1'' PIPE, 48'' FOR 1 1/4'' PIPE AND 60'' FOR 1 1/2'' PIPE OR LARGER

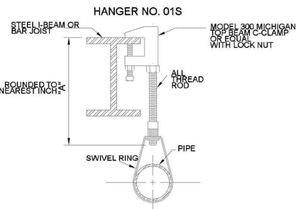
THE CUMULATIVE HORIZONTAL LENGTH OF AN UNSUPPORTED ARMOVER TO A SPRINKLER, SPRINKLER DROP, OR SPRIG-UP SHALL NOT EXCEED 24''

NOMINAL PIPE SIZE	SCHEDULE 40			SCHEDULE 10			EDDYFLOW		
	O.D.	I.D.	WALL THICKNESS	O.D.	I.D.	WALL THICKNESS	O.D.	I.D.	WALL THICKNESS
1	1.315	1.049	.133	1.315	1.097	.109	1.315	1.191	.062
1¼	1.660	1.380	.140	1.660	1.442	.109	1.660	1.536	.062
1½	1.900	1.610	.145	1.900	1.682	.109	1.900	1.728	.086
2	2.375	2.067	.154	2.375	2.157	.109	2.375	2.203	.086
2½	2.875	2.469	.203	2.875	2.635	.120	2.875	2.703	.086
3	3.500	3.068	.216	3.500	3.260	.120	3.500	3.314	.093
4	4.500	4.026	.237	4.500	4.260	.120	4.500	4.310	.095
5	5.563	5.047	.258	5.563	5.295	.134	----	----	----
6	6.625	6.065	.280	6.625	6.357	.134	----	----	----
8	8.625	7.981	.322	8.625	8.249	.188	----	----	----
10	10.750	10.020	.365	10.750	10.370	.188	----	----	----





ESFR OBSTRUCTION DETAILS

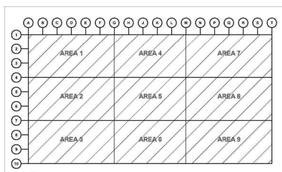


NOTE ON PLAN: HANGER NUMBER AND "A" DIMENSION

TOP BEAM C-CLAMP DETAIL

N.T.S.

DRAWING INDEX



KEY PLAN

NICET #156488 CERTIFIED

JASIEL COLBERT
NICET LEVEL 1
AUTO. SPRINKLER SYS. LAYOUT
VALID THROUGH MARCH 03, 2025

RELEASED FOR CONSTRUCTION
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Development Services Department
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12/27/2022

CURRAN
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SCANNELL PROPERTIES

CERTIFICATION

STATE OF MISSOURI
MICHELLE A. LOPEZ
NUMBER PE-2022007904
PROFESSIONAL ENGINEER
09/07/22

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1
NW CORNER OF
NE TUDOR RD & MAIN ST
LEE'S SUMMIT, MO 64086

ISSUE DATES

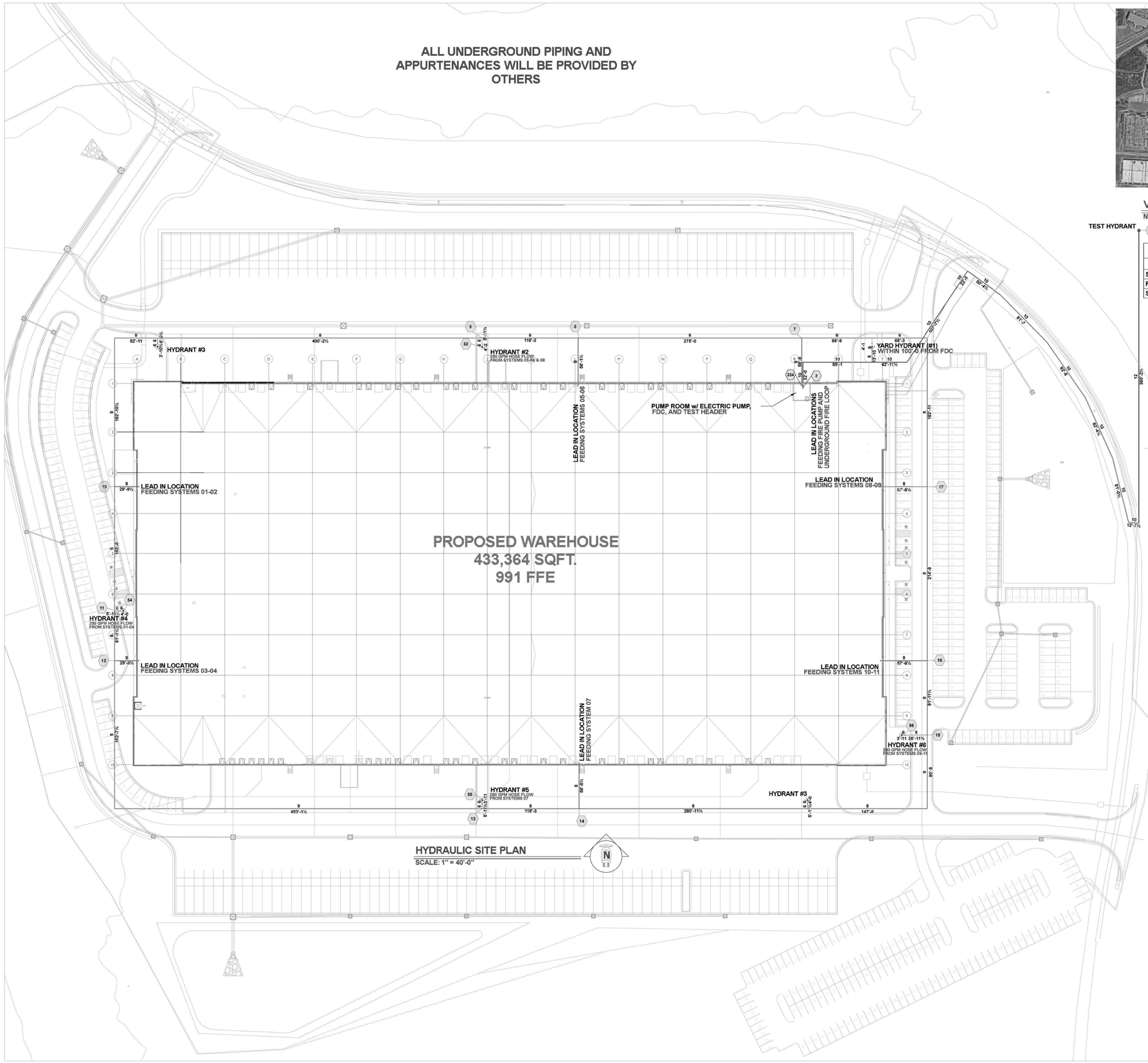
	PERMIT SET	02.18.22
1	TENANT IMPROVEMENT	09.07.22

210300

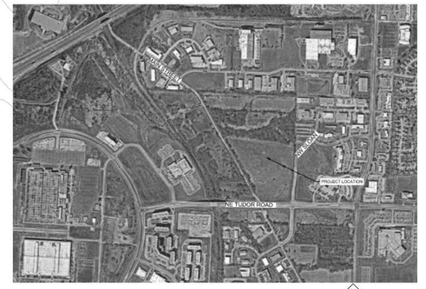
FP0.0

SYSTEM NOTES

ALL UNDERGROUND PIPING AND APPURTENANCES WILL BE PROVIDED BY OTHERS

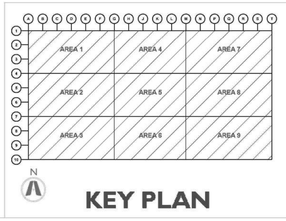


HYDRAULIC SITE PLAN
SCALE: 1" = 40'-0"



VICINITY SITE MAP
N.T.S.

WATER FLOW TEST DATA	
DATE	03.31.2022
STATIC PRESSURE	97 PSI (980 ELEV.)
RESIDUAL PRESSURE	88 PSI @ 1900 GPM
SOURCE INFO	LEE'S SUMMIT WATER UTILITIES



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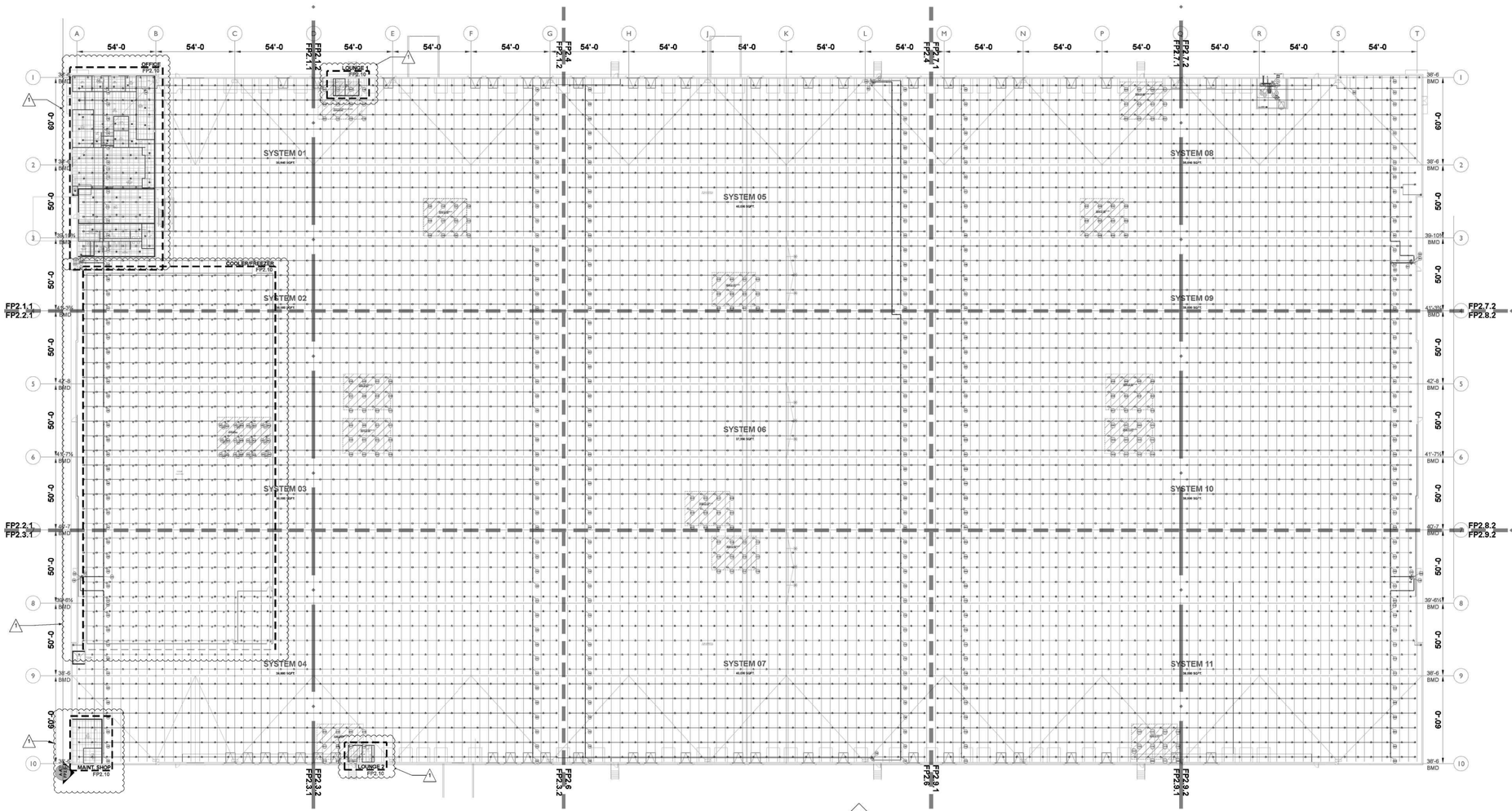
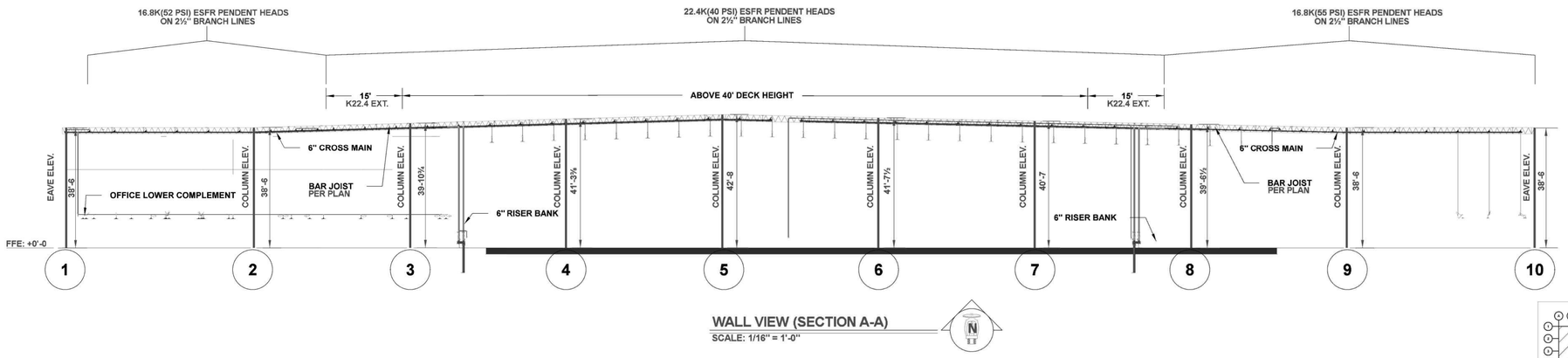
HYDRAULIC SITE PLAN



OVERHEAD PIPING
SCALE: 1" = 30'-0"

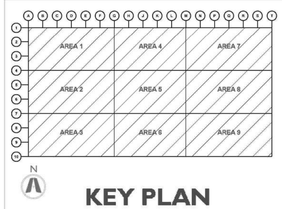


WALL VIEW (SECTION A-A)
SCALE: 1/16" = 1'-0"

Sprinkler Legend

SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE
▲	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	¾	FAST	BRASS	200°F
⊗	4	VICTAULIC	V3406	V34	8	PENDENT	½	QUICK	BRASS	200°F
◖◗	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1	FAST	BRASS	200°F
◉	48	VIKING	VK600	MICROFAST	5.6	PENDENT	½	QUICK	CHROME	135°F
◎	6	VIKING	VK3021		5.6	PENDENT	½	QUICK	CHROME	135°F
◆	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	¾	QUICK	BRASS	205°F
	TOTAL = 5234									

**JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6 OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE



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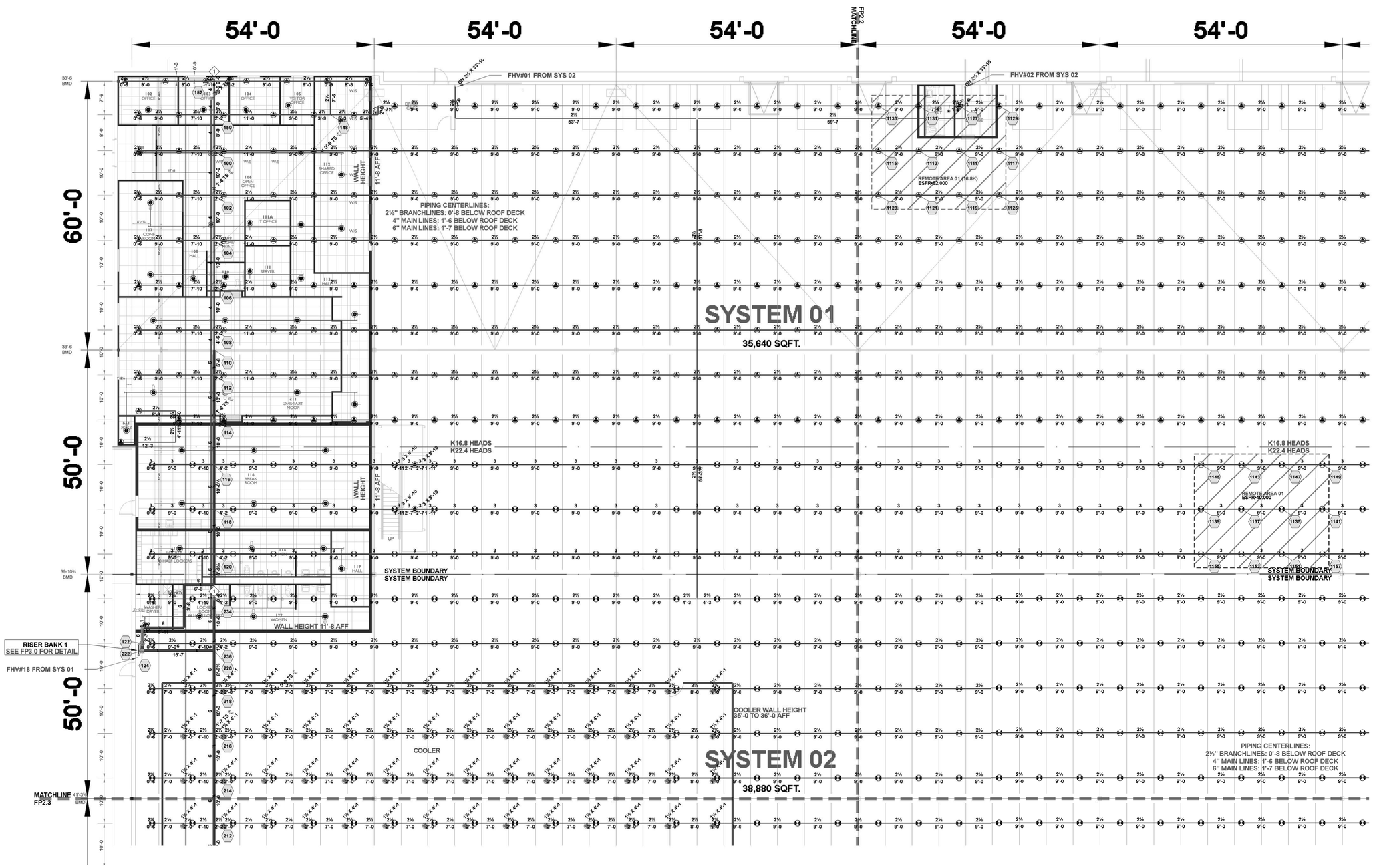
FP2.0

OVERHEAD PIPING LAYOUT



Hydraulic Information	
Remote Area 01 (K16.8)	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1711.60
TOTAL PRESSURE REQUIRED	75.095
BASE OF RISER (GPM)	1711.60
BASE OF RISER (PSI)	75.095
SAFETY MARGIN (PSI)	+14.486 (16.2%)

Hydraulic Information	
Remote Area 01	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1959.70
TOTAL PRESSURE REQUIRED	68.043
BASE OF RISER (GPM)	1959.70
BASE OF RISER (PSI)	68.043
SAFETY MARGIN (PSI)	+19.427 (22.2%)

AREA 1: SYSTEMS 01-02

SCALE: 3/32" = 1'-0"

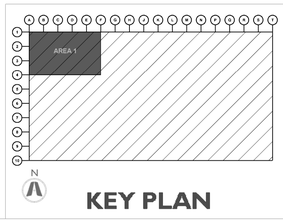
Sprinkler Legend

SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	¾	FAST	BRASS	200°F	
⊗	4	VICTAULIC	V3406	V34	8	PENDENT	¾	QUICK	BRASS	200°F	
◆	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1	FAST	BRASS	200°F	
●	48	VIKING	VK600	MICROFAST	5.6	PENDENT	½	QUICK	CHROME	135°F	
◎	6	VIKING	VK3021		5.6	PENDENT	½	QUICK	CHROME	135°F	
◆	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	¾	QUICK	BRASS	205°F	
	TOTAL = 5234										

**JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6 OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE

① - AUXILIARY DRAIN SEE FP0.0 FOR DETAIL

② - AIR VENT SEE FP0.0 FOR DETAIL



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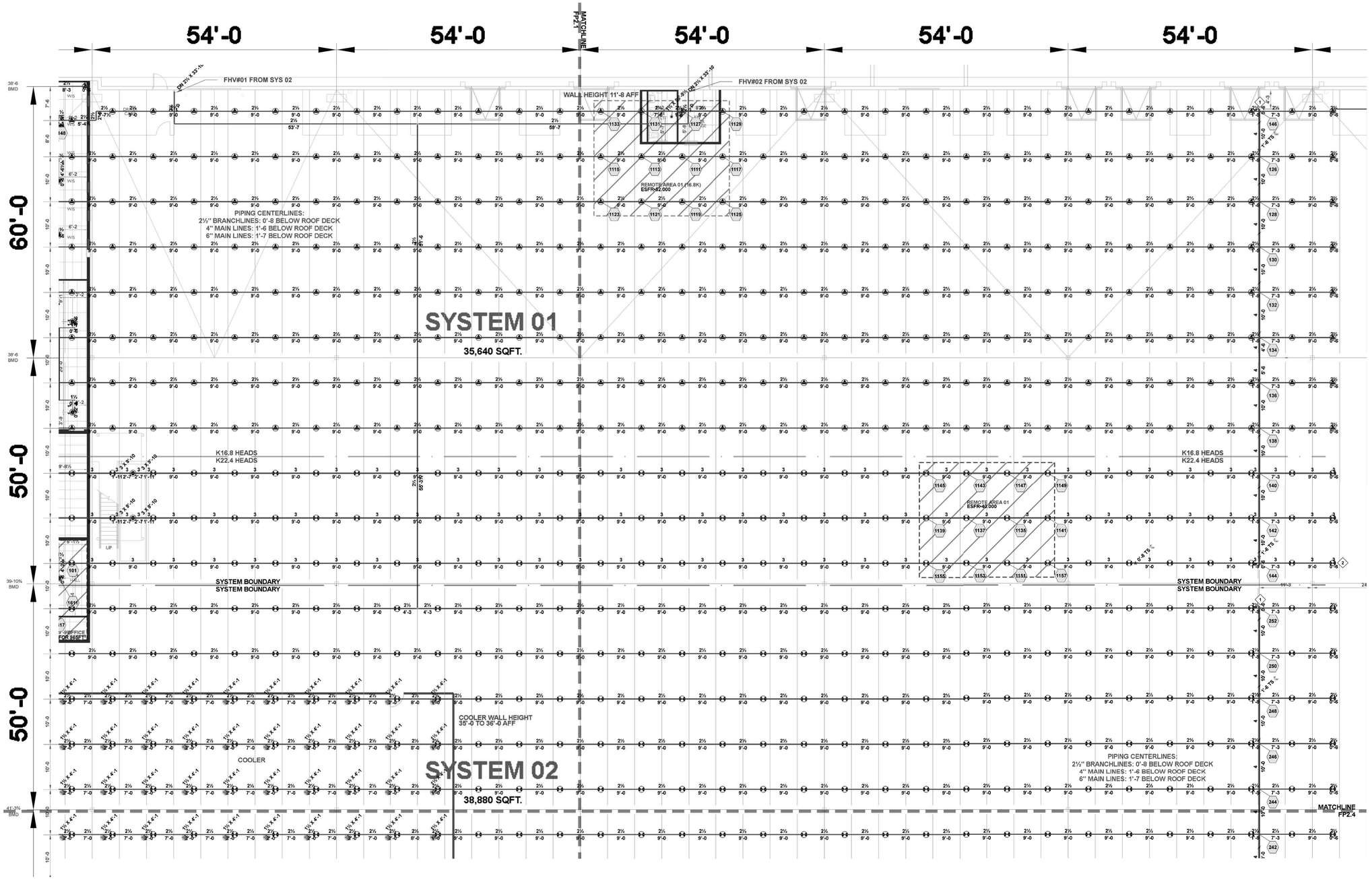
210300

FP2.1.1

AREA 1: SYSTEMS 01-02



Hydraulic Information	
Remote Area 01 (K16.8)	
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TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1711.60
TOTAL PRESSURE REQUIRED	75.095
BASE OF RISER (GPM)	1711.60
BASE OF RISER (PSI)	75.095
SAFETY MARGIN (PSI)	+14.486 (16.2%)

Hydraulic Information	
Remote Area 01	
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MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1959.70
TOTAL PRESSURE REQUIRED	68.043
BASE OF RISER (GPM)	1959.70
BASE OF RISER (PSI)	68.043
SAFETY MARGIN (PSI)	+19.427 (22.2%)

AREA 1 (CONT.): SYSTEMS 01-02

SCALE: 3/32" = 1'-0"

Sprinkler Legend											
SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
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⊗	4	VICTAULIC	V3406	V34	8	PENDENT	¾	QUICK	BRASS	200°F	
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	TOTAL = 5234										

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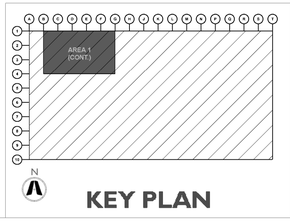

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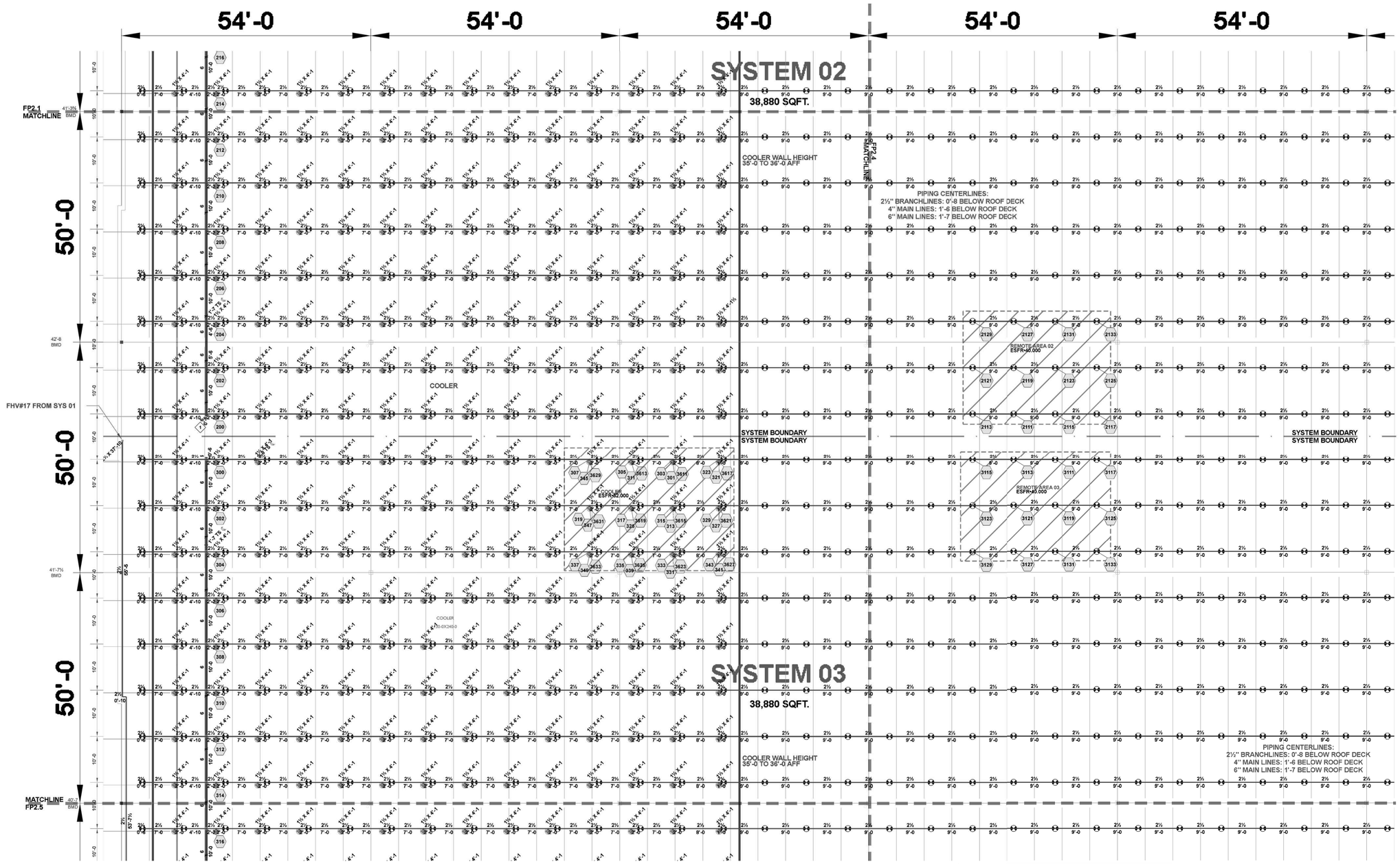
210300

FP2.1.2

AREA 1 (CONT.): SYSTEMS 01-02



Hydraulic Information	
Remote Area 02	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1956.70
TOTAL PRESSURE REQUIRED	78.341
BASE OF RISER (GPM)	1956.70
BASE OF RISER (PSI)	78.341
SAFETY MARGIN (PSI)	+9.156 (10.5%)

Hydraulic Information	
Remote Area 03	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1958.59
TOTAL PRESSURE REQUIRED	79.726
BASE OF RISER (GPM)	1958.59
BASE OF RISER (PSI)	79.726
SAFETY MARGIN (PSI)	+7.754 (8.9%)

AREA 2: SYSTEMS 02-03

SCALE: 3/32" = 1'-0"

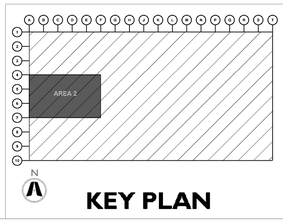
**JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6 OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE

Sprinkler Legend

SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	¾	FAST	BRASS	200°F	
⊗	4	VICTAULIC	V3406	V34	8	PENDENT	¾	QUICK	BRASS	200°F	
◆◆	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1	FAST	BRASS	200°F	
●	48	VIKING	VK600	MICROFAST	5.6	PENDENT	½	QUICK	CHROME	135°F	
◎	6	VIKING	VK3021		5.6	PENDENT	½	QUICK	CHROME	135°F	
◆	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	¾	QUICK	BRASS	205°F	
	TOTAL = 5234										

① - AUXILIARY DRAIN
SEE FP0.0 FOR DETAIL

② - AIR VENT
SEE FP0.0 FOR DETAIL



KEY PLAN

RELEASED FOR CONSTRUCTION
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Development Services Department
Lee's Summit, Missouri
12/27/2022

CURRAN
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5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
O :: 317 . 288 . 0681
F :: 317 . 288 . 0753

SCANNELL PROPERTIES

CERTIFICATION

STATE OF MISSOURI
MICHELLE A. LOPEZ
NUMBER PE-2022007904
PROFESSIONAL ENGINEER
09/07/22

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

NW CORNER OF
NE TUDOR RD & MAIN ST
LEE'S SUMMIT, MO 64086

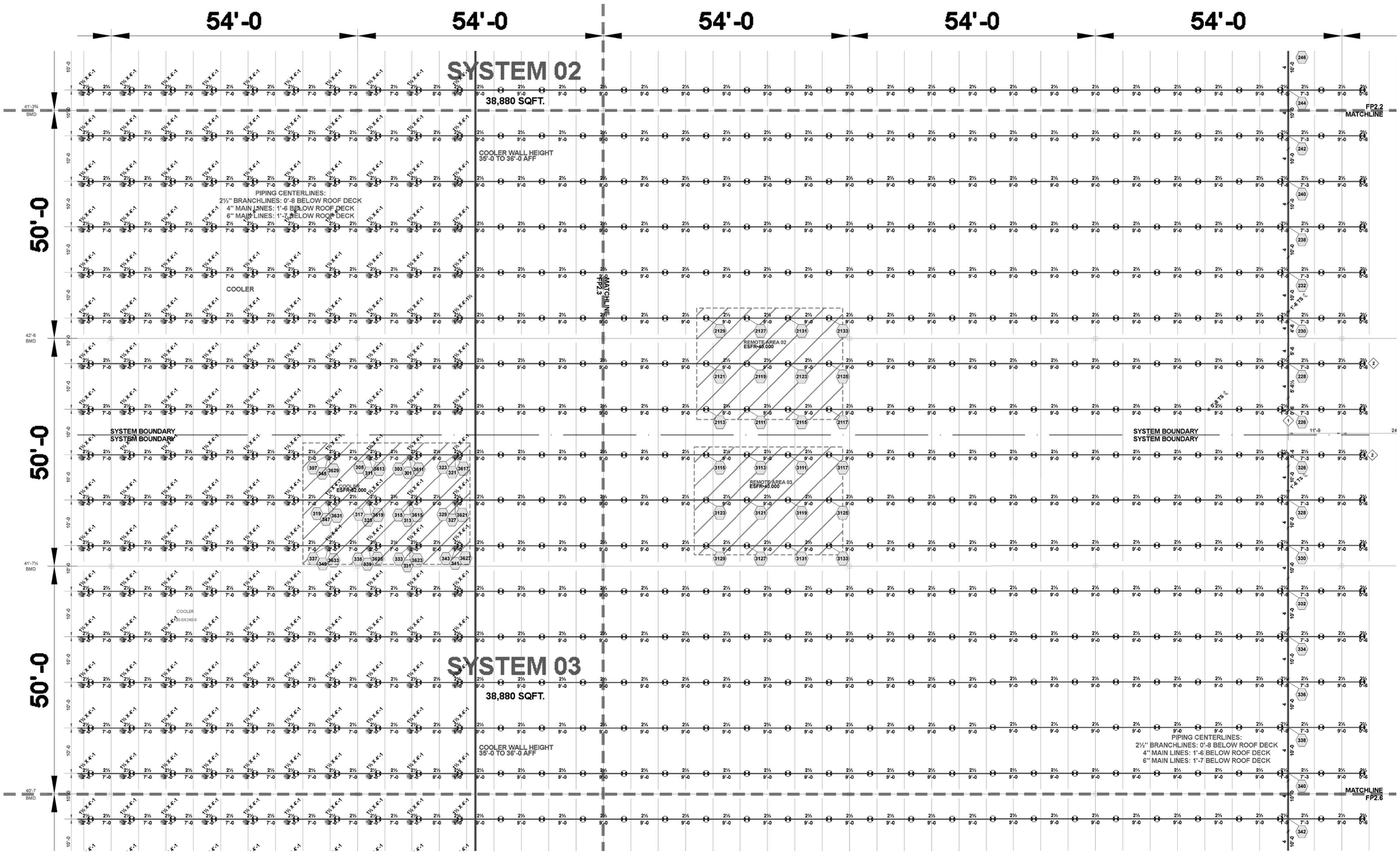
ISSUE DATES

PERMIT SET	02.18.22
1 TENANT IMPROVEMENT	09.07.22

210300

FP2.2.1

AREA 2: SYSTEM 02-03



Hydraulic Information	
Remote Area 02	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1956.70
TOTAL PRESSURE REQUIRED	78.341
BASE OF RISER (GPM)	1956.70
BASE OF RISER (PSI)	78.341
SAFETY MARGIN (PSI)	+9.156 (10.5%)

Hydraulic Information	
Remote Area 03	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1958.59
TOTAL PRESSURE REQUIRED	79.726
BASE OF RISER (GPM)	1958.59
BASE OF RISER (PSI)	79.726
SAFETY MARGIN (PSI)	+7.754 (8.9%)

AREA 2(CONT): SYSTEMS 02-03

SCALE: 3/32" = 1'-0"

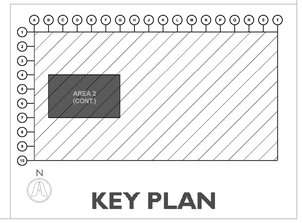
**JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6 OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE

Sprinkler Legend

SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	¾	FAST	BRASS	200°F	
⊗	4	VICTAULIC	V3406	V34	8	PENDENT	¾	QUICK	BRASS	200°F	
◆	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1	FAST	BRASS	200°F	
●	48	VIKING	VK600	MICROFAST	5.6	PENDENT	½	QUICK	CHROME	135°F	
◎	6	VIKING	VK3021		5.6	PENDENT	½	QUICK	CHROME	135°F	
◆	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	¾	QUICK	BRASS	205°F	
	TOTAL = 5234										

① - AUXILIARY DRAIN
SEE FP0.0 FOR DETAIL

② - AIR VENT
SEE FP0.0 FOR DETAIL



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PROFESSIONAL ENGINEER
09/07/22

PROJECT INFORMATION

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BUILDING A LOT 1
NW CORNER OF
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LEE'S SUMMIT, MO 64086

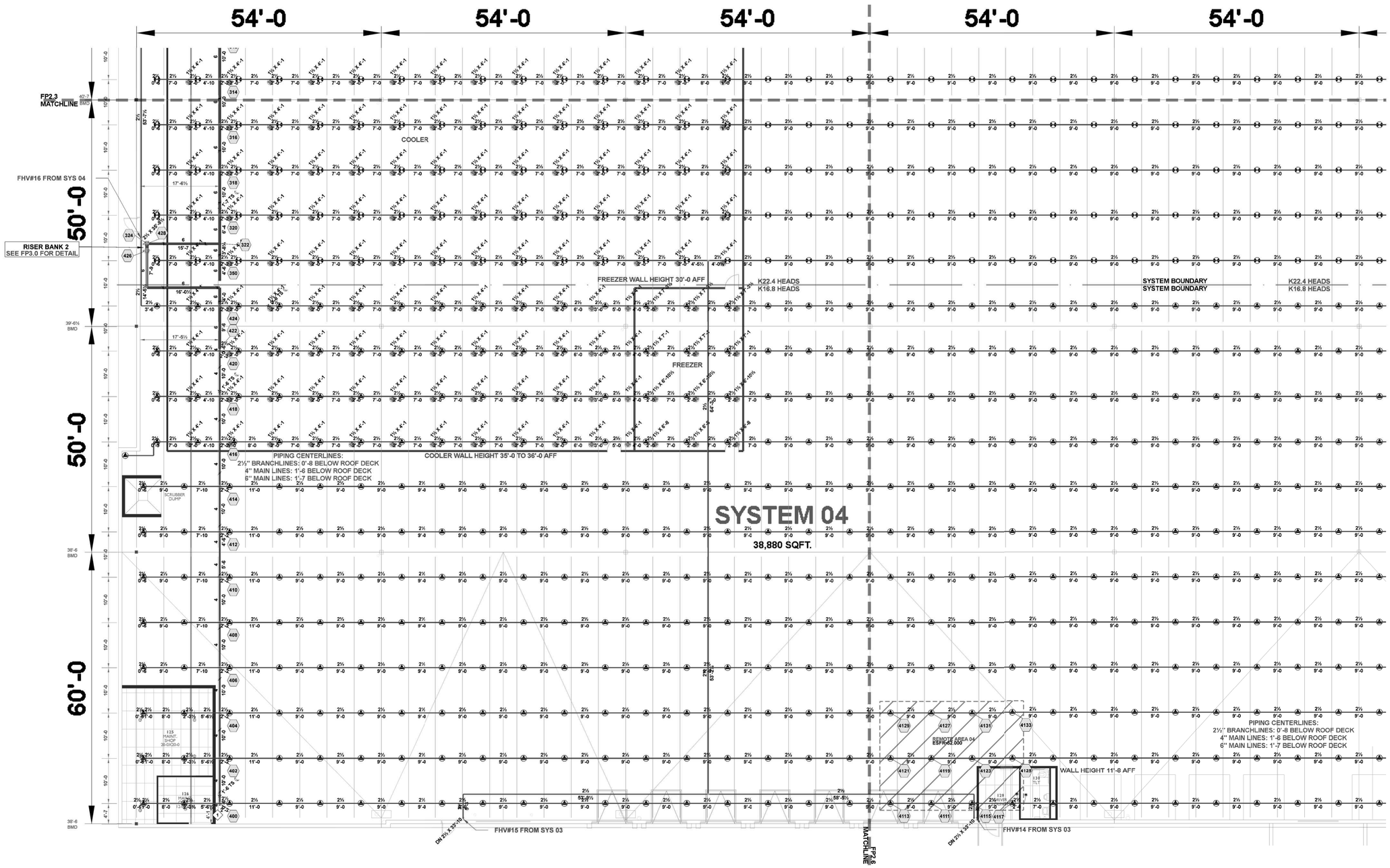
ISSUE DATES

	PERMIT SET	02.18.22
1	TENANT IMPROVEMENT	09.07.22

210300

FP2.2.2

AREA 2(CONT):
SYSTEMS 02-03



Hydraulic Information	
Remote Area 04	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1708.55
TOTAL PRESSURE REQUIRED	80.726
BASE OF RISER (GPM)	1708.55
BASE OF RISER (PSI)	80.726
SAFETY MARGIN (PSI)	+8.879 (9.9%)

AREA 3: SYSTEMS 03-04

SCALE: 3/32" = 1'-0"

Sprinkler Legend											
SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	¾	FAST	BRASS	200°F	
⊗	4	VICTAULIC	V3406	V34	8	PENDENT	¾	QUICK	BRASS	200°F	
◆	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1	FAST	BRASS	200°F	
●	48	VIKING	VK600	MICROFAST	5.6	PENDENT	½	QUICK	CHROME	135°F	
◎	6	VIKING	VK3021		5.6	PENDENT	½	QUICK	CHROME	135°F	
◆	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	¾	QUICK	BRASS	205°F	
	TOTAL = 5234										

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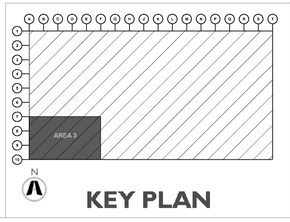
① - AUXILIARY DRAIN SEE FP0.0 FOR DETAIL

② - AIR VENT SEE FP0.0 FOR DETAIL



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STATE OF MISSOURI
MICHELLE A. LOPEZ
NUMBER PE-2022007904
PROFESSIONAL ENGINEER
09/07/22

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT I

NW CORNER OF
NE TUDOR RD & MAIN ST
LEE'S SUMMIT, MO 64086

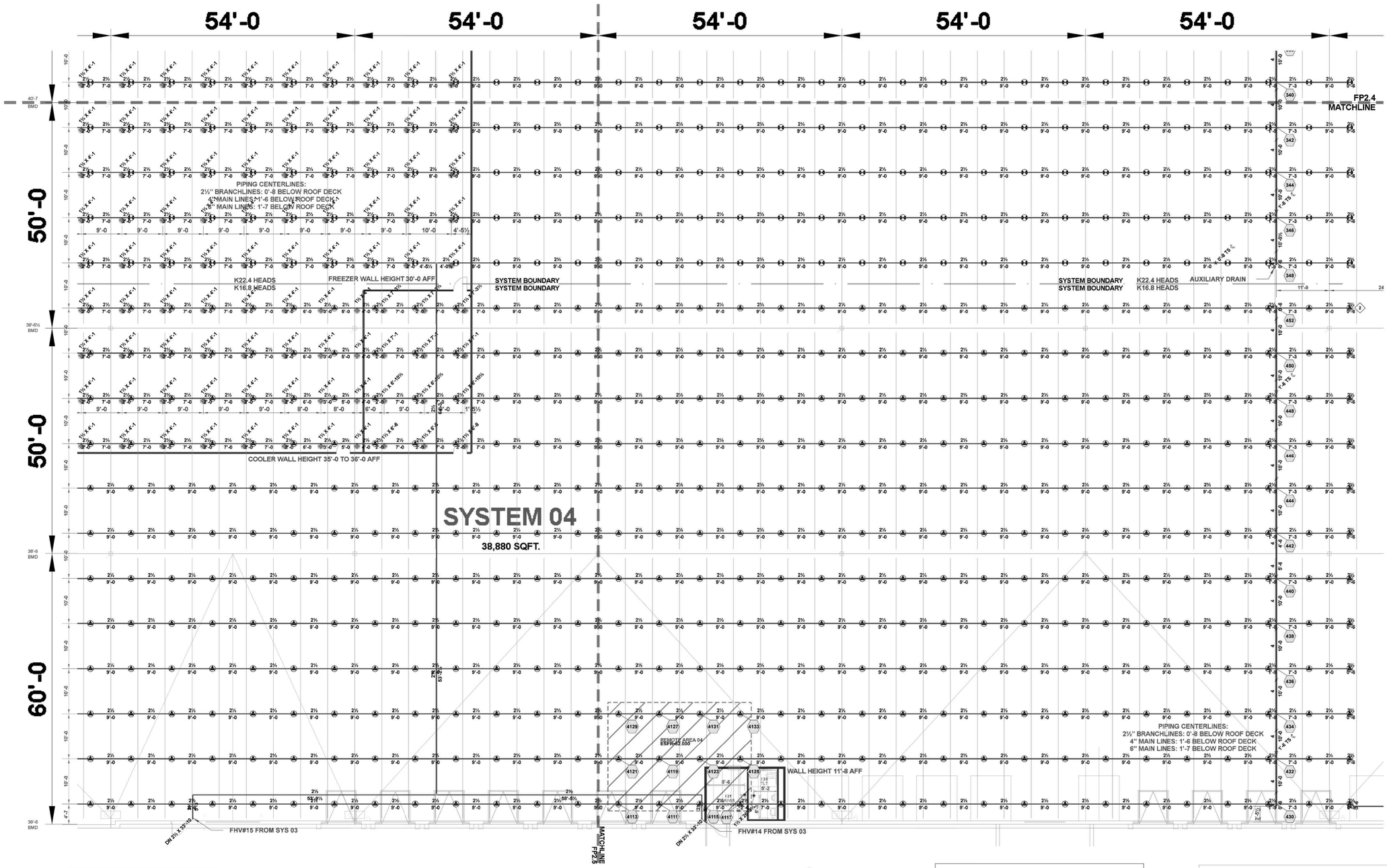
ISSUE DATES

	PERMIT SET	02.18.22
1	TENANT IMPROVEMENT	09.07.22

210300

FP2.3.1

AREA 3: SYSTEMS 03-04



Hydraulic Information

Remote Area 04	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1708.55
TOTAL PRESSURE REQUIRED	80.726
BASE OF RISER (GPM)	1708.55
BASE OF RISER (PSI)	80.726
SAFETY MARGIN (PSI)	+8.879 (9.9%)

AREA 3(CONT.): SYSTEMS 03-04

SCALE: 3/32" = 1'-0"

Sprinkler Legend

SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	¾	FAST	BRASS	200°F	
⊗	4	VICTAULIC	V3406	V34	8	PENDENT	¾	QUICK	BRASS	200°F	
◆	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1	FAST	BRASS	200°F	
●	48	VIKING	VK600	MICROFAST	5.6	PENDENT	½	QUICK	CHROME	135°F	
◎	6	VIKING	VK3021		5.6	PENDENT	½	QUICK	CHROME	135°F	
◆	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	¾	QUICK	BRASS	205°F	
	TOTAL = 5234										

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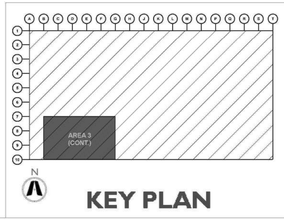
1 - AUXILIARY DRAIN SEE FP0.0 FOR DETAIL

2 - AIR VENT SEE FP0.0 FOR DETAIL



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NUMBER PE-2022007904
PROFESSIONAL ENGINEER
09/07/22

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

NW CORNER OF
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LEE'S SUMMIT, MO 64086

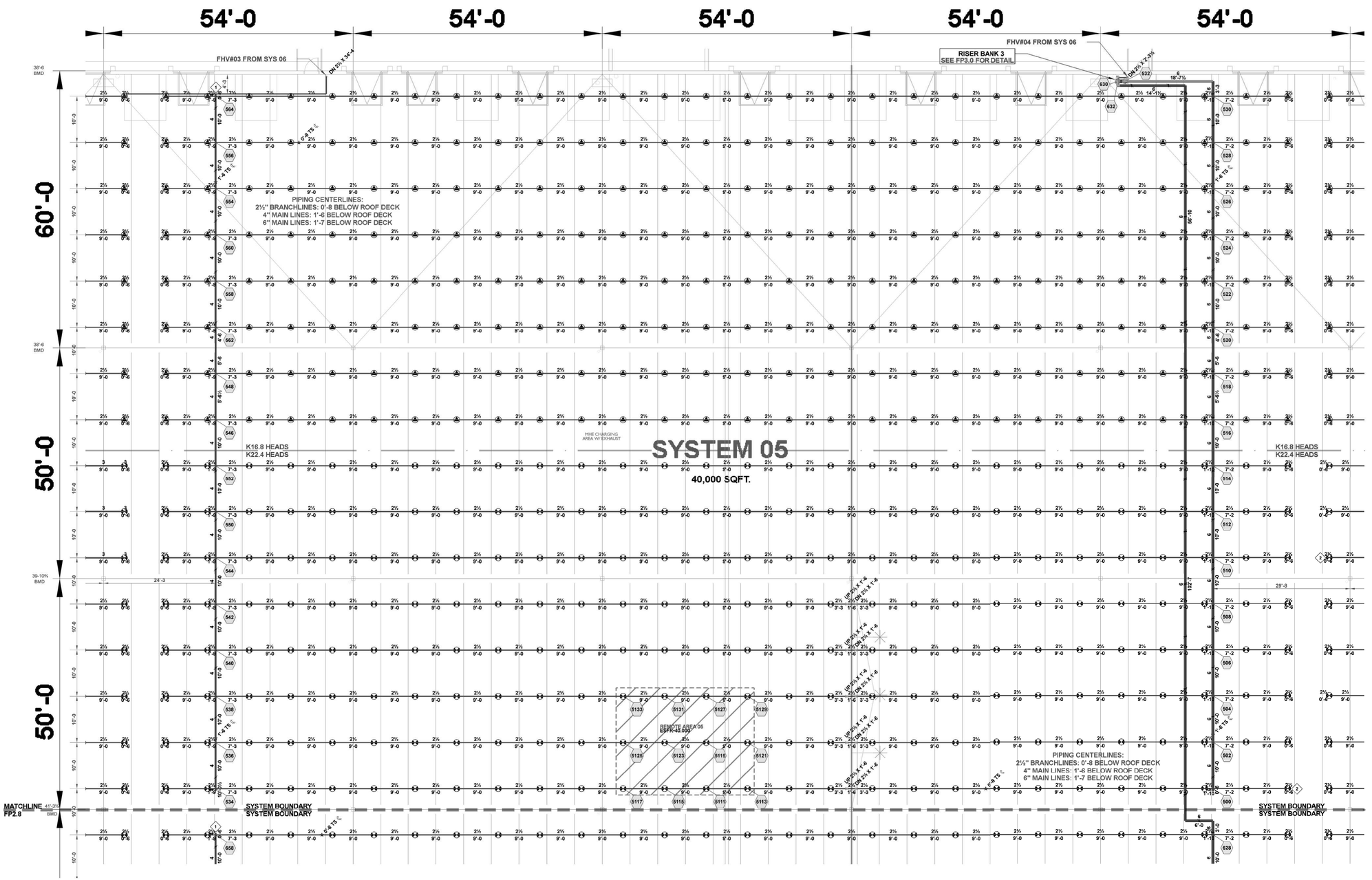
ISSUE DATES

PERMIT SET	02.18.22
1 TENANT IMPROVEMENT	09.07.22

210300

FP2.3.2

AREA 3(CONT.):
SYSTEMS 03-04



Hydraulic Information

Remote Area 05	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1959.12
TOTAL PRESSURE REQUIRED	73.843
BASE OF RISER (GPM)	1959.12
BASE OF RISER (PSI)	73.843
SAFETY MARGIN (PSI)	+13.633 (15.6%)

AREA 4: SYSTEM 05

SCALE: 3/32" = 1'-0"

Sprinkler Legend

SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	¾	FAST	BRASS	200°F	
⊗	4	VICTAULIC	V3406	V34	8	PENDENT	¾	QUICK	BRASS	200°F	
◆	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1	FAST	BRASS	200°F	
●	48	VIKING	VK600	MICROFAST	5.6	PENDENT	½	QUICK	CHROME	135°F	
◎	6	VIKING	VK3021		5.6	PENDENT	½	QUICK	CHROME	135°F	
◆	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	¾	QUICK	BRASS	205°F	
	TOTAL = 5234										

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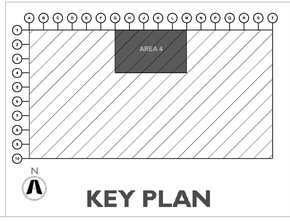
② - AIR VENT SEE FP0.0 FOR DETAIL



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SCANNELL PROPERTIES

CERTIFICATION

STATE OF MISSOURI
MICHELLE A. LOPEZ
NUMBER PE-2022007904
PROFESSIONAL ENGINEER
09/07/22

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

NW CORNER OF
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LEE'S SUMMIT, MO 64086

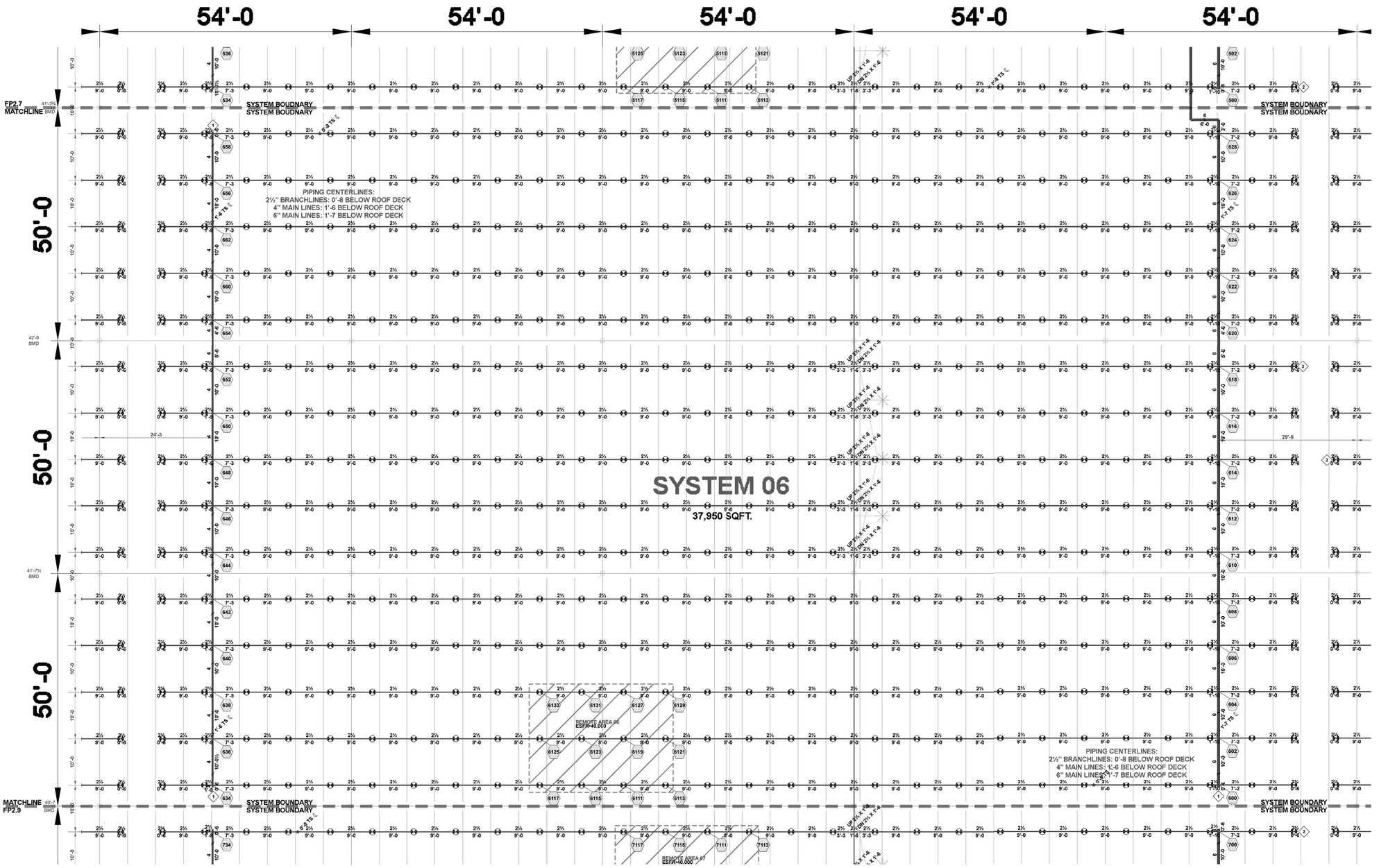
ISSUE DATES

PERMIT SET	02.18.22
1 TENANT IMPROVEMENT	09.07.22

210300

FP2.4

AREA 4: SYSTEM 05



Hydraulic Information

Remote Area 06	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1956.47
TOTAL PRESSURE REQUIRED	80.319
BASE OF RISER (GPM)	1956.47
BASE OF RISER (PSI)	80.319
SAFETY MARGIN (PSI)	+7.179 (8.2%)

AREA 5: SYSTEM 06

SCALE: 3/32" = 1'-0"

Sprinkler Legend

SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	¾	FAST	BRASS	200°F	
⊗	4	VICTAULIC	V3406	V34	8	PENDENT	¾	QUICK	BRASS	200°F	
◆	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1	FAST	BRASS	200°F	
●	48	VIKING	VK600	MICROFAST	5.6	PENDENT	½	QUICK	CHROME	135°F	
◎	6	VIKING	VK3021		5.6	PENDENT	½	QUICK	CHROME	135°F	
◆	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	¾	QUICK	BRASS	205°F	
	TOTAL = 5234										

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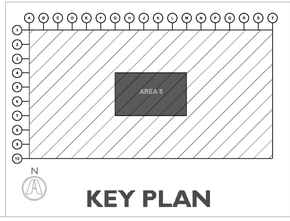
① - AUXILIARY DRAIN SEE FP0.0 FOR DETAIL

② - AIR VENT SEE FP0.0 FOR DETAIL



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MICHELLE A. LOPEZ
NUMBER PE-2022007904
PROFESSIONAL ENGINEER
09/07/22

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

NW CORNER OF
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LEE'S SUMMIT, MO 64086

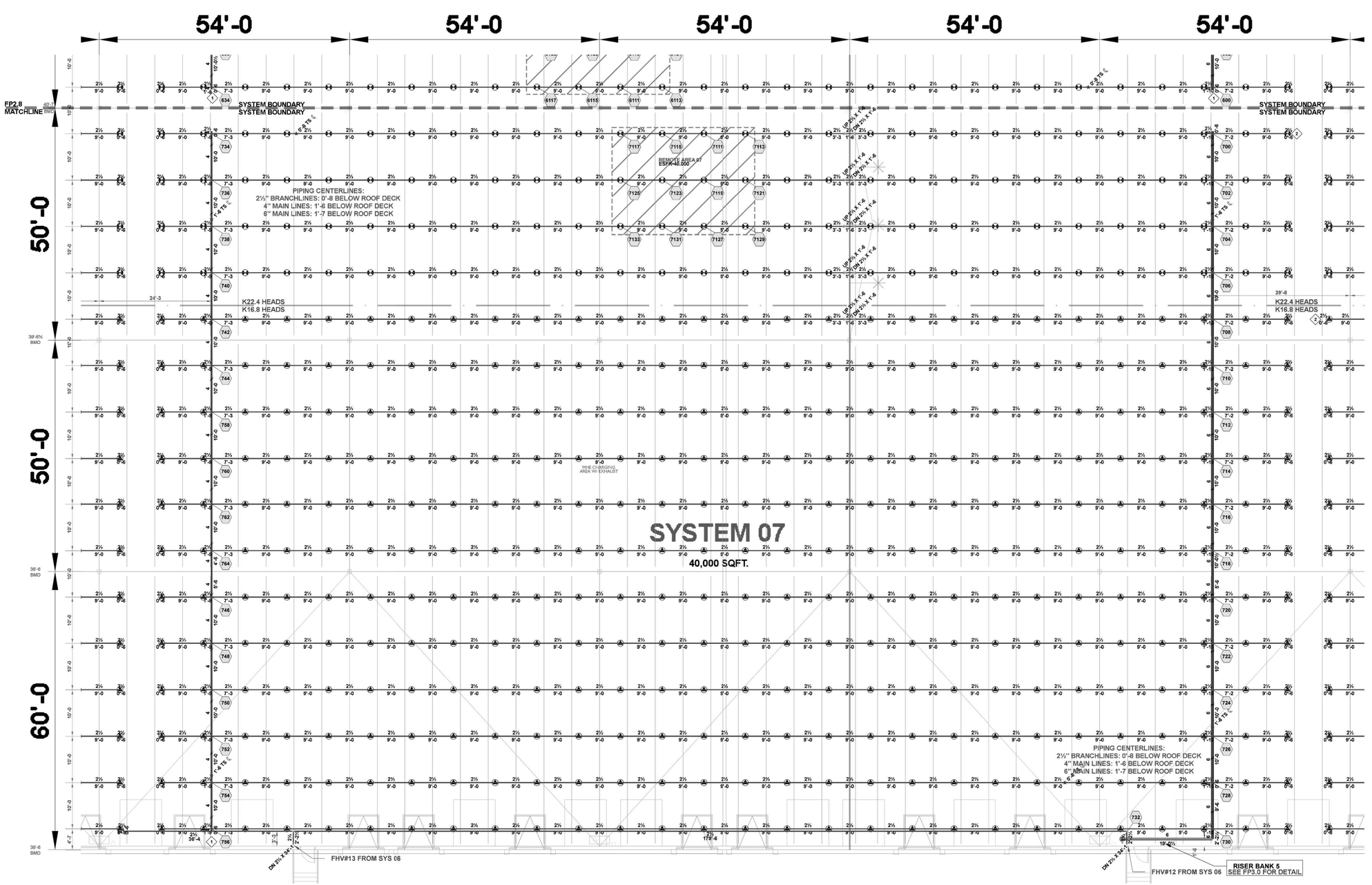
ISSUE DATES

	PERMIT SET	02.18.22
1	TENANT IMPROVEMENT	09.07.22

210300

FP2.5

AREA 5: SYSTEM 06



Hydraulic Information

Remote Area 07	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1958.72
TOTAL PRESSURE REQUIRED	74.363
BASE OF RISER (GPM)	1958.72
BASE OF RISER (PSI)	74.363
SAFETY MARGIN (PSI)	+13.116 (15.0%)

AREA 6: SYSTEM 07

SCALE: 3/32" = 1'-0"

Sprinkler Legend

SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	¾	FAST	BRASS	200°F	
⊗	4	VICTAULIC	V3406	V34	8	PENDENT	¾	QUICK	BRASS	200°F	
◆	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1	FAST	BRASS	200°F	
●	48	VIKING	VK600	MICROFAST	5.6	PENDENT	½	QUICK	CHROME	135°F	
◎	6	VIKING	VK3021		5.6	PENDENT	½	QUICK	CHROME	135°F	
◆	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	¾	QUICK	BRASS	205°F	
	TOTAL = 5234										

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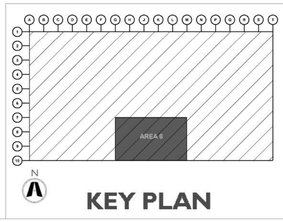
① - AUXILIARY DRAIN SEE FP0.0 FOR DETAIL

② - AIR VENT SEE FP0.0 FOR DETAIL



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SCANNELL PROPERTIES

STATE OF MISSOURI
MICHELLE A. LOPEZ
NUMBER PE-2022007904
PROFESSIONAL ENGINEER
09/07/22

PROJECT INFORMATION

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BUILDING A LOT 1
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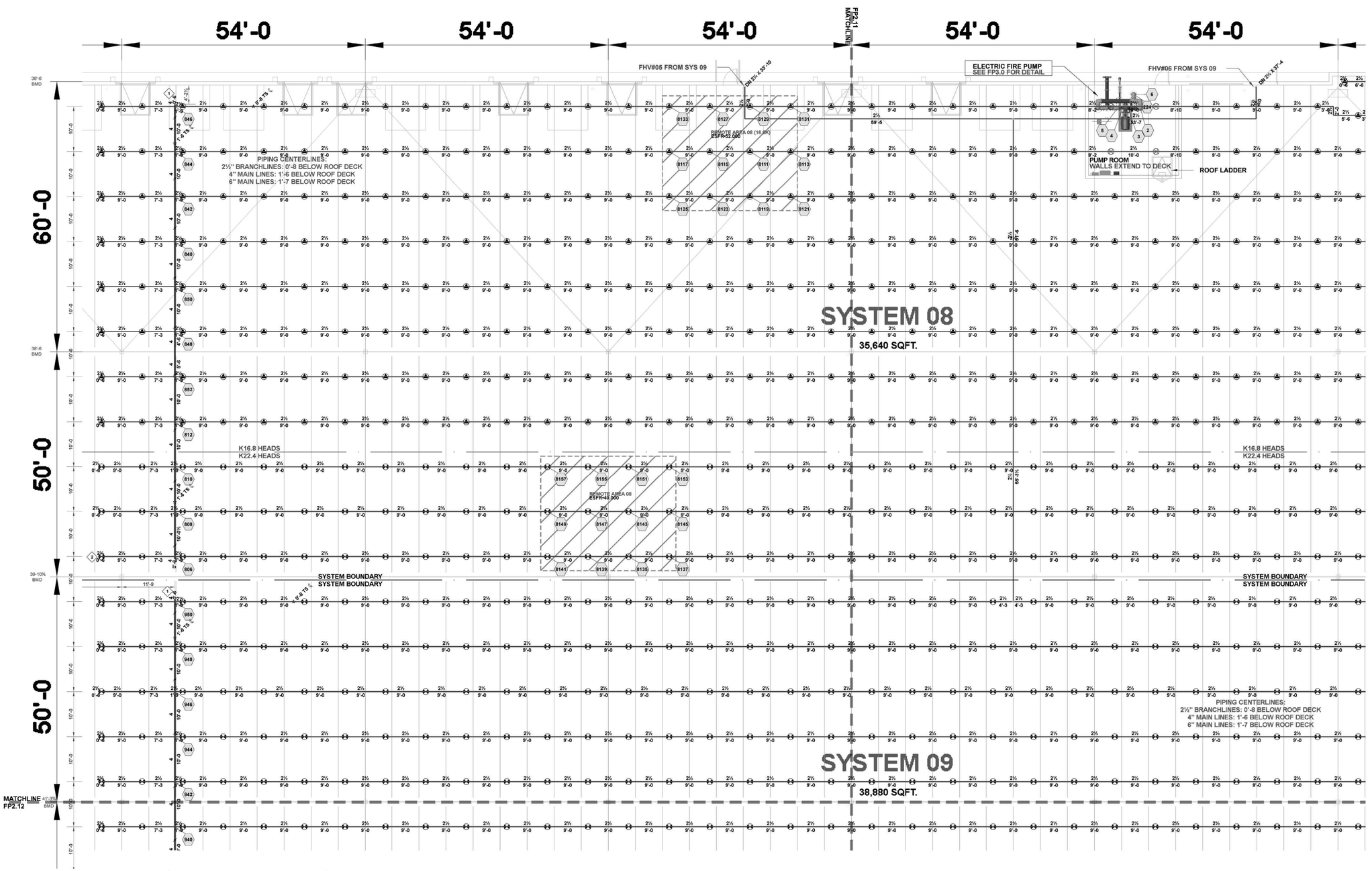
ISSUE DATES

	PERMIT SET	02.18.22
1	TENANT IMPROVEMENT	09.07.22

210300

FP2.6

AREA 6: SYSTEM 07



Hydraulic Information	
Remote Area 08 (K16.8)	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1711.62
TOTAL PRESSURE REQUIRED	73.476
BASE OF RISER (GPM)	1711.62
BASE OF RISER (PSI)	73.476
SAFETY MARGIN (PSI)	+16.104 (18.0%)

Hydraulic Information	
Remote Area 08	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1956.80
TOTAL PRESSURE REQUIRED	81.616
BASE OF RISER (GPM)	1956.80
BASE OF RISER (PSI)	81.616
SAFETY MARGIN (PSI)	+5.880 (6.7%)

AREA 7: SYSTEMS 08-09

SCALE: 3/32" = 1'-0"

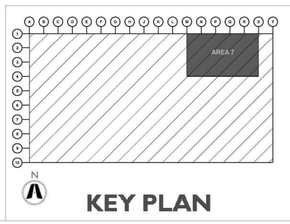
Sprinkler Legend

SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	¾	FAST	BRASS	200°F	
⊗	4	VICTAULIC	V3406	V34	8	PENDENT	¾	QUICK	BRASS	200°F	
◆	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1	FAST	BRASS	200°F	
●	48	VIKING	VK600	MICROFAST	5.6	PENDENT	½	QUICK	CHROME	135°F	
◎	6	VIKING	VK3021		5.6	PENDENT	½	QUICK	CHROME	135°F	
◆	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	¾	QUICK	BRASS	205°F	
	TOTAL = 5234										

**JOIST BRIDGING ROWS CANNOT BE ERECTED WITHIN OF 1'-6 OF ANY SURROUNDING ESFR BRANCH LINE CENTERLINE

① - AUXILIARY DRAIN SEE FP0.0 FOR DETAIL

② - AIR VENT SEE FP0.0 FOR DETAIL



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12/27/2022

CURRAN ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
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F :: 317 . 288 . 0753

SCANNELL PROPERTIES

CERTIFICATION

STATE OF MISSOURI
MICHELLE A. LOPEZ
NUMBER PE-2022007904
PROFESSIONAL ENGINEER
09/07/22

PROJECT INFORMATION

LEE'S SUMMIT LOGISTICS BUILDING A LOT 1

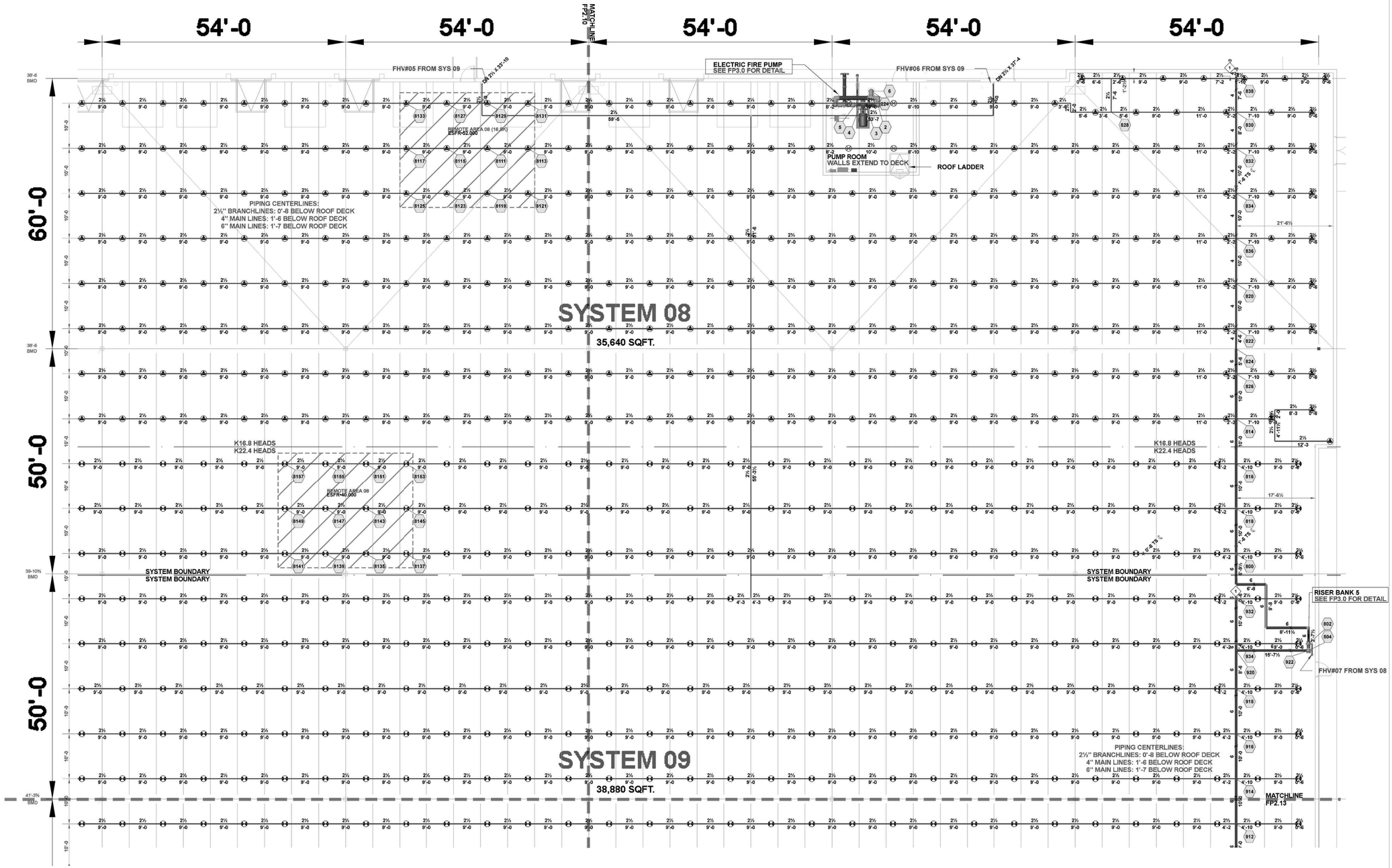
NW CORNER OF
NE TUDOR RD & MAIN ST
LEE'S SUMMIT, MO 64086

ISSUE DATES	
PERMIT SET	02.18.22
1 TENANT IMPROVEMENT	09.07.22

210300

FP2.7.1

AREA 7: SYSTEMS 08-09



Hydraulic Information	
Remote Area 08 (K16.8)	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1711.62
TOTAL PRESSURE REQUIRED	73.476
BASE OF RISER (GPM)	1711.62
BASE OF RISER (PSI)	73.476
SAFETY MARGIN (PSI)	+16.104 (18.0%)

Hydraulic Information	
Remote Area 08	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1956.80
TOTAL PRESSURE REQUIRED	81.616
BASE OF RISER (GPM)	1956.80
BASE OF RISER (PSI)	81.616
SAFETY MARGIN (PSI)	+5.880 (6.7%)

AREA 7(CONT): SYSTEMS 08-09

SCALE: 3/32" = 1'-0"

Sprinkler Legend

SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	¾	FAST	BRASS	200°F	
⊗	4	VICTAULIC	V3406	V34	8	PENDENT	¾	QUICK	BRASS	200°F	
◆	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1	FAST	BRASS	200°F	
●	48	VIKING	VK600	MICROFAST	5.6	PENDENT	½	QUICK	CHROME	135°F	
◎	6	VIKING	VK3021		5.6	PENDENT	½	QUICK	CHROME	135°F	
◆	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	¾	QUICK	BRASS	205°F	
	TOTAL = 5234										

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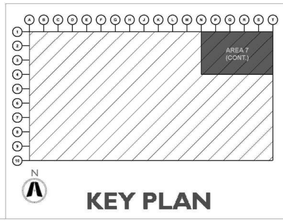

KEY PLAN

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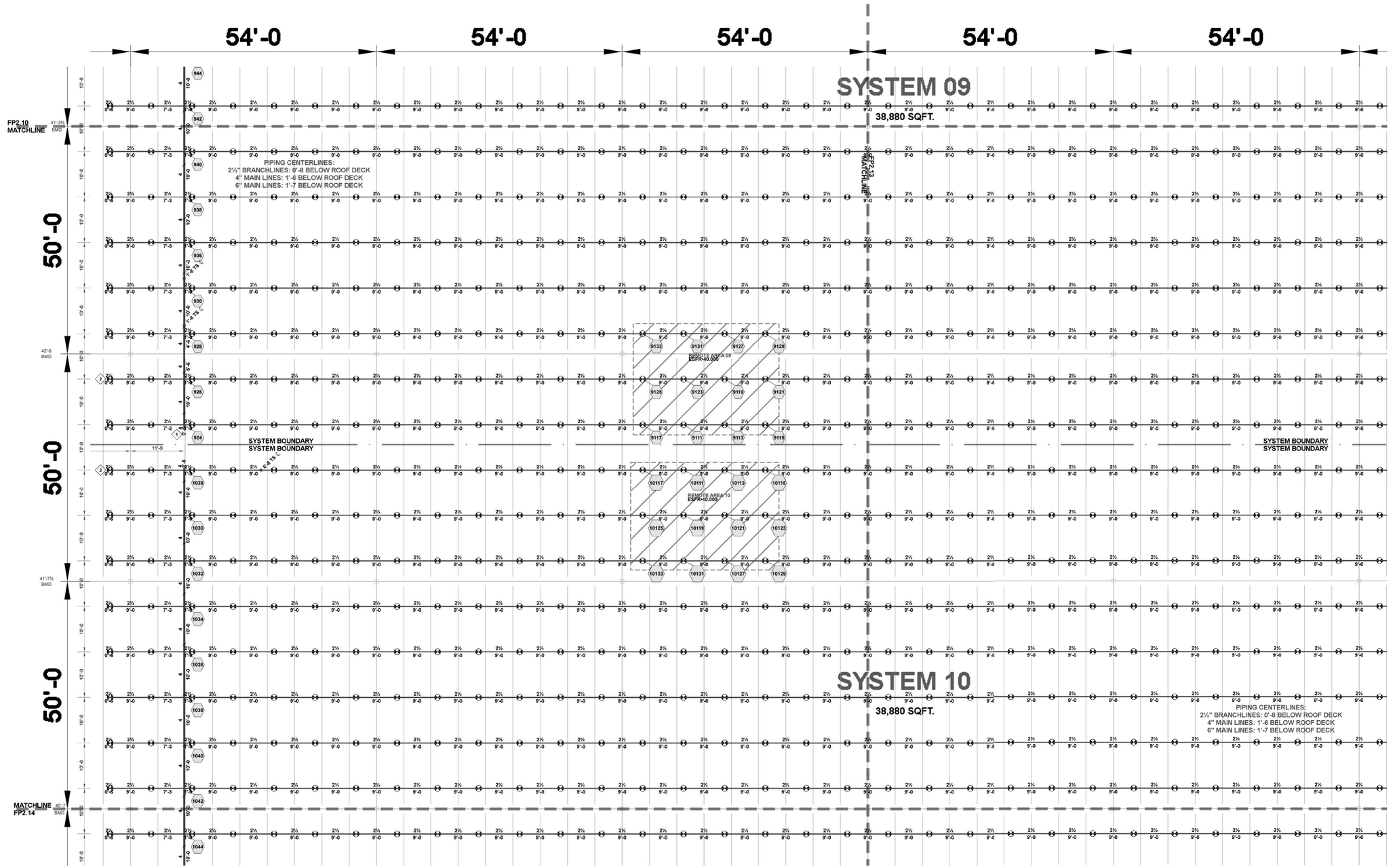
AREA 7(CONT): SYSTEMS 08-09



AREA 8: SYSTEMS 09-10

SCALE: 3/32" = 1'-0"

Hydraulic Information	
Remote Area 09	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1956.70
TOTAL PRESSURE REQUIRED	75.314
BASE OF RISER (GPM)	1956.70
BASE OF RISER (PSI)	75.314
SAFETY MARGIN (PSI)	+12.183 (13.9%)

Hydraulic Information	
Remote Area 10	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1958.59
TOTAL PRESSURE REQUIRED	77.654
BASE OF RISER (GPM)	1958.59
BASE OF RISER (PSI)	77.654
SAFETY MARGIN (PSI)	+9.826 (11.2%)

Sprinkler Legend

SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
▲	2054	VICTAULIC	V4702	FL-QR/ST/ESFR	16.8	PENDENT	¾	FAST	BRASS	200°F	
⊗	4	VICTAULIC	V3406	V34	8	PENDENT	¾	QUICK	BRASS	200°F	
◆	2754	VICTAULIC	V3428	ESFR	22.4	PENDENT	1	FAST	BRASS	200°F	
●	48	VIKING	VK600	MICROFAST	5.6	PENDENT	½	QUICK	CHROME	135°F	
◎	6	VIKING	VK3021		5.6	PENDENT	½	QUICK	CHROME	135°F	
◆	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	¾	QUICK	BRASS	205°F	
	TOTAL = 5234										

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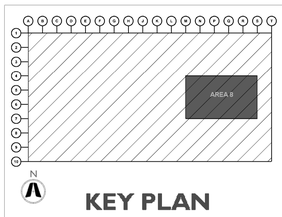

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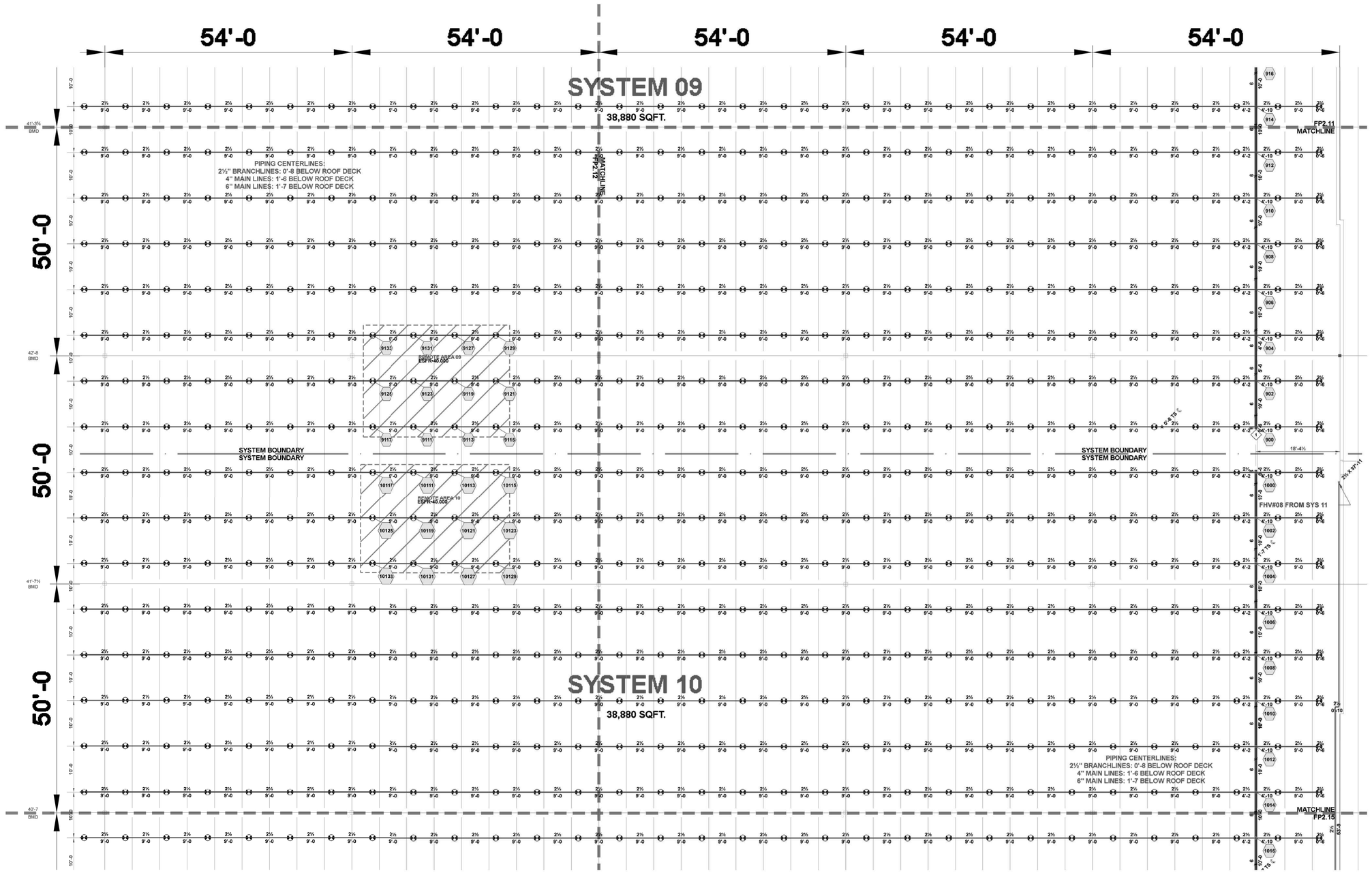
AREA 8: SYSTEMS 09-10



Hydraulic Information	
Remote Area 09	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	22.4
TOTAL WATER REQUIRED	1956.70
TOTAL PRESSURE REQUIRED	75.314
BASE OF RISER (GPM)	1956.70
BASE OF RISER (PSI)	75.314
SAFETY MARGIN (PSI)	+12.183 (13.9%)

Hydraulic Information	
Remote Area 10	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	40.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
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TOTAL WATER REQUIRED	1958.59
TOTAL PRESSURE REQUIRED	77.654
BASE OF RISER (GPM)	1958.59
BASE OF RISER (PSI)	77.654
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AREA 8 (CONT.): SYSTEMS 09-10

SCALE: 3/32" = 1'-0"

Sprinkler Legend

SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
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◎	6	VIKING	VK3021		5.6	PENDENT	½	QUICK	CHROME	135°F	
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	TOTAL = 5234										

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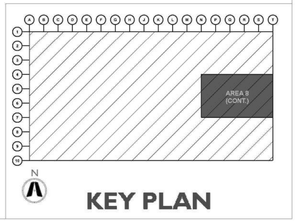

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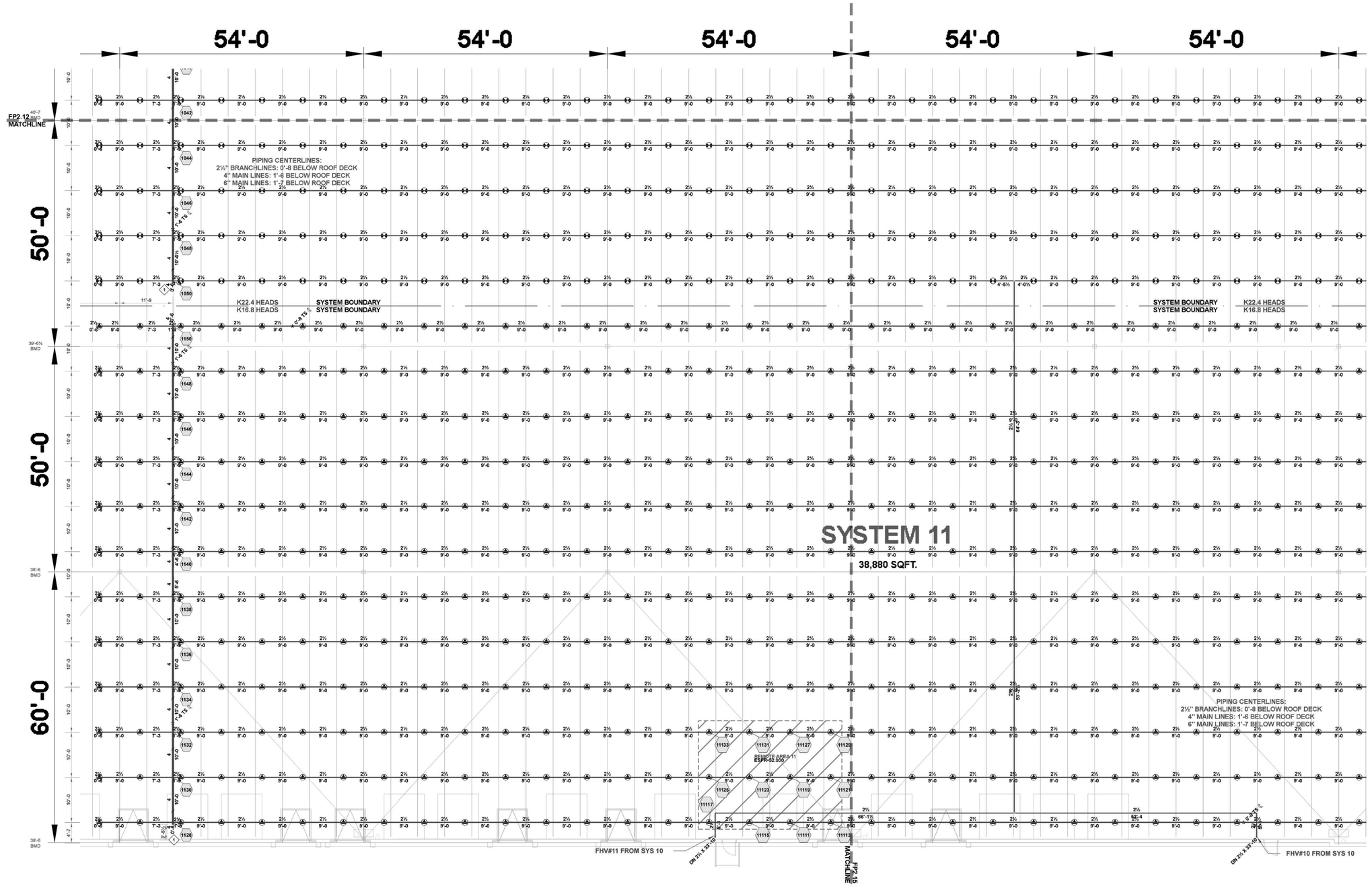
AREA 8 (CONT.): SYSTEMS 09-10



AREA 9: SYSTEMS 10-11

SCALE: 3/32" = 1'-0"

Hydraulic Information	
Remote Area 11	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1708.55
TOTAL PRESSURE REQUIRED	79.115
BASE OF RISER (GPM)	1708.55
BASE OF RISER (PSI)	79.115
SAFETY MARGIN (PSI)	+10.490 (11.7%)

Sprinkler Legend

SYMBOL	QUANTITY	MANUFACTURER	SIN	MODEL	K-FACTOR	TYPE	SIZE	RESPONSE	FINISH	TEMPERATURE	NOTE
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●	48	VIKING	VK600	MICROFAST	5.6	PENDENT	½	QUICK	CHROME	135°F	
◎	6	VIKING	VK3021		5.6	PENDENT	½	QUICK	CHROME	135°F	
◆	368	VIKING	VK504	ESFR DRY	16.8	PENDENT	¾	QUICK	BRASS	205°F	
	TOTAL = 5234										

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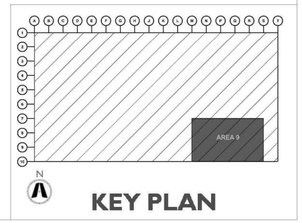

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09/07/22

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210300

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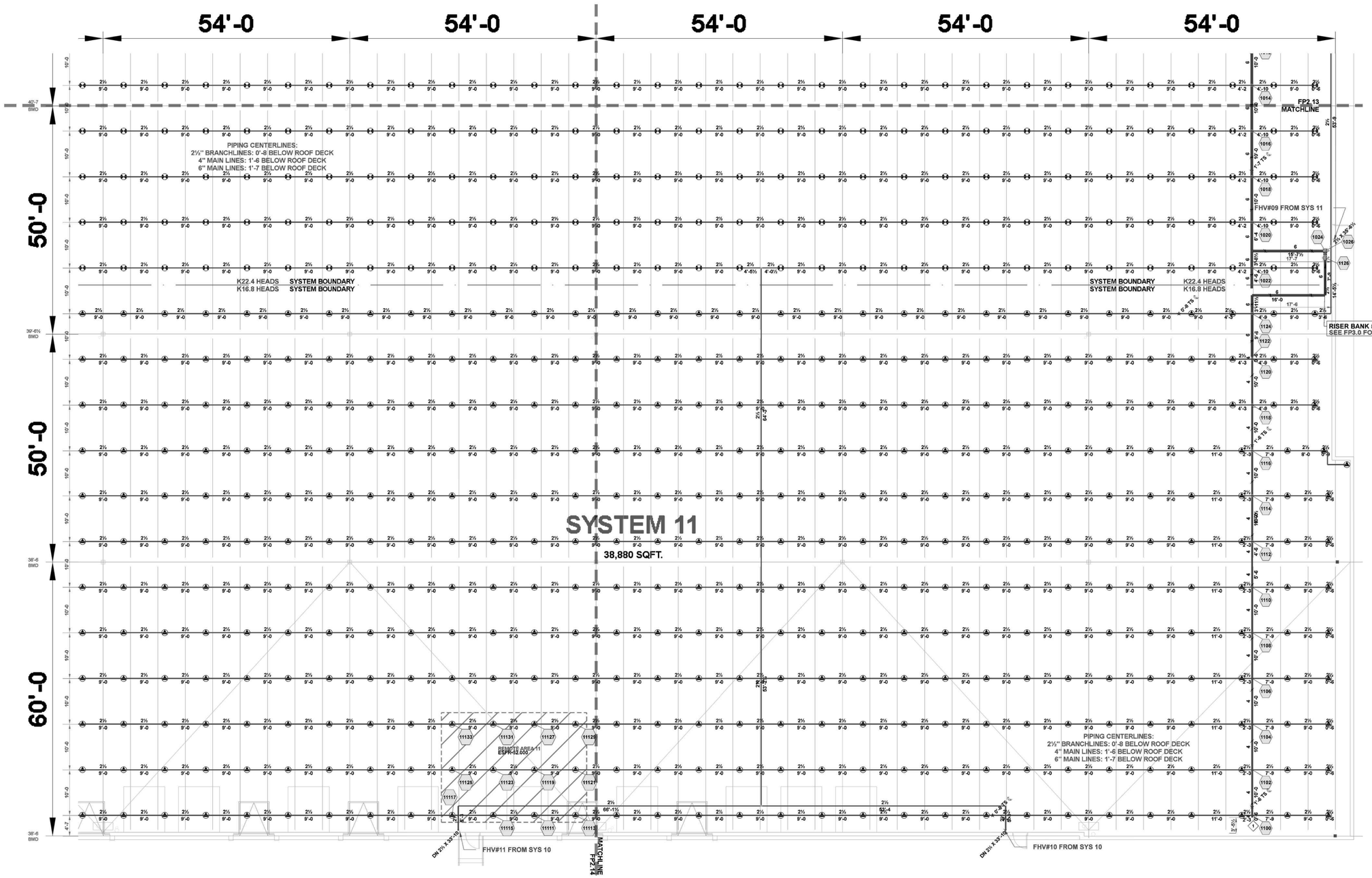
AREA 9: SYSTEMS 10-11



AREA 9(CONT.): SYSTEMS 10-11

SCALE: 3/32" = 1'-0"

Hydraulic Information	
Remote Area 11	
OCCUPANCY CLASSIFICATION	ESFR
MIN. END HEAD PRESSURE	52.000 (ESFR)
TOTAL HOSE STREAMS	250.00
TOTAL HEADS FLOWING	12
K-FACTOR	16.8
TOTAL WATER REQUIRED	1708.55
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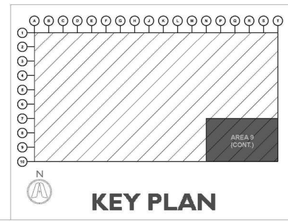

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05/07/22

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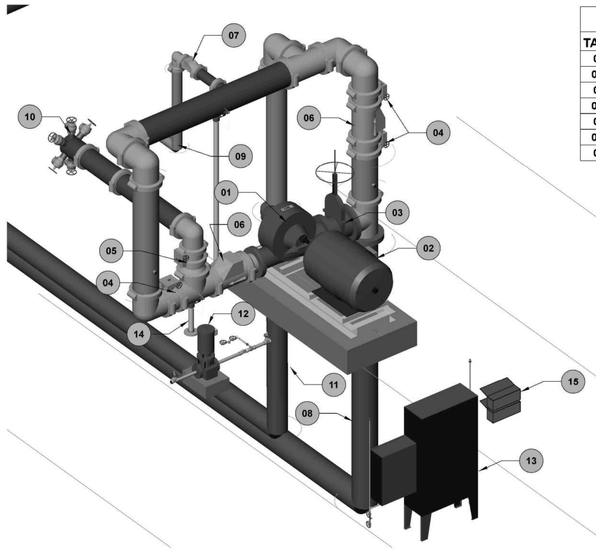
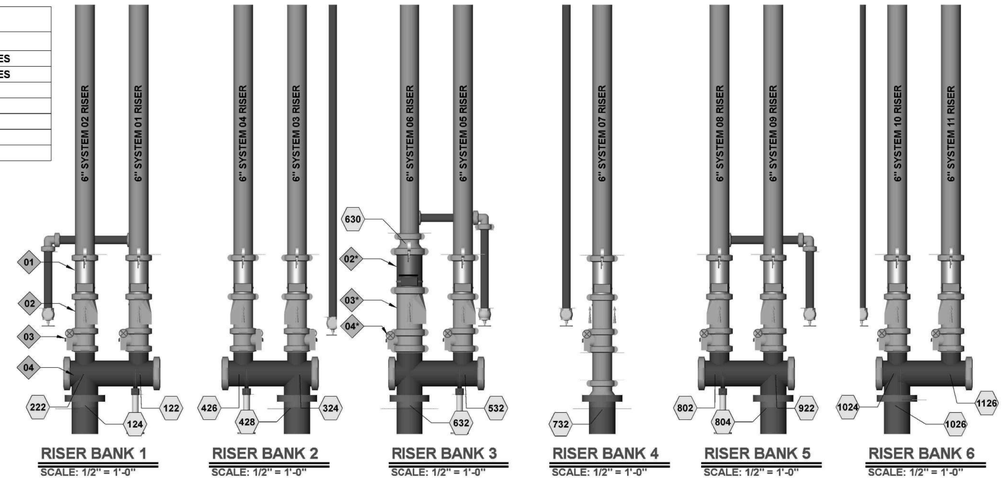
AREA 9(CONT.):
SYSTEMS 10-11

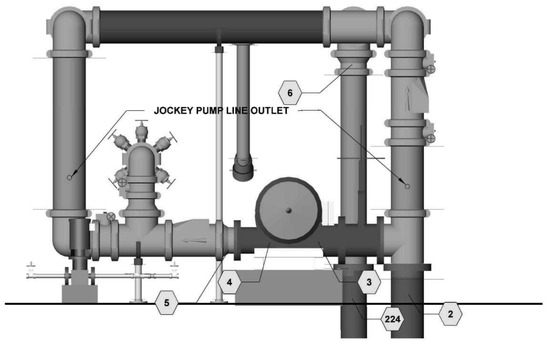


PUMP ROOM (3D VIEW)
SCALE: 3/32" = 1'-0"

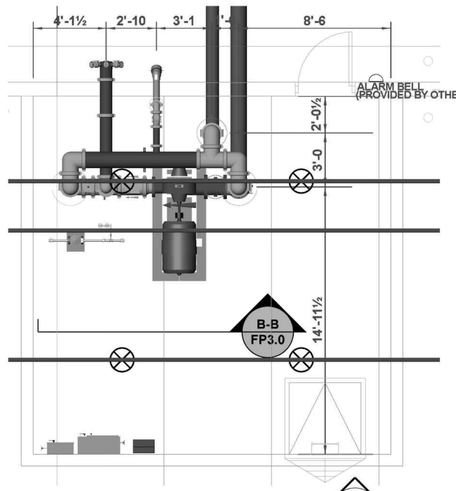
FIRE PUMP RISER BANK MATERIAL LIST	#
TAG#	MATERIAL CALL OUT
01	6" RISER MANIFOLD W/ FLOW SWITCH, INSP. TEST AND 2" MAIN DRAIN, & PRESSURE RELIEF VALVES
01*	8" RISER MANIFOLD W/ FLOW SWITCH, INSP. TEST AND 2" MAIN DRAIN, & PRESSURE RELIEF VALVES
02	6" CHECK VALVE
02*	8" CHECK VALVE
03	6" BUTTERFLY VALVE W/ TAMPER (NORMALLY OPEN)
03*	8" BUTTERFLY VALVE W/ TAMPER (NORMALLY OPEN)
04	8" RISER BANK HEADER

FIRE PUMP ROOM MATERIAL LIST	#
TAG#	MATERIAL CALL OUT
01	2000 GPM @ 60 PSI 10X8 FIRE PUMP
02	SPP 100 HP ELECTRIC MOTOR
03	10" FLG OS&Y GATE VALVE W/ TAMPER (NORMALLY OPEN)
04	10" BUTTERFLY VALVE W/ TAMPER (NORMALLY OPEN)
05	8" BUTTERFLY VALVE W/ TAMPER (NORMALLY CLOSED)
06	10" CHECK VALVE
07	4" CHECK VALVE
08	10" UNDERGROUND SUPPLY PIPING
09	4" FDC PIPING W/ STORZ TYPE CONNECTION
10	8X2½(6) TEST HEADER
11	10" WATER DISCHARGE PIPING TO FIRE LOOP
12	2 HP JOCKEY PUMP ASSEMBLY (15 GPM @ 104 PSI)
13	ELECTRIC & JOCKEY PUMP CONTROLLERS
14	10" PIPE STAND
15	SPARE HEAD BOXES

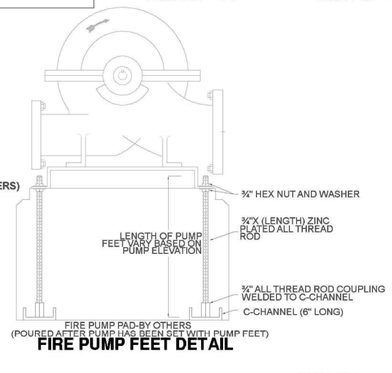




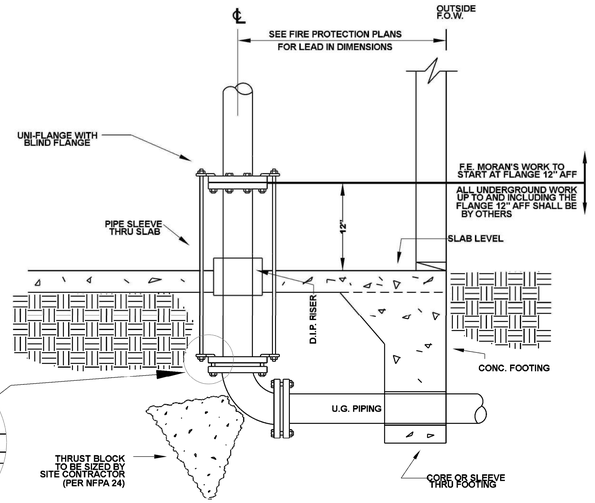
FIRE PUMP (SECTION B-B)
SCALE: 1/2" = 1'-0"



PUMP ROOM (PLAN VIEW)
SCALE: 1/4" = 1'-0"



FIRE PUMP FEET DETAIL



TYPICAL UNDERGROUND LEAD-IN

FIRE PUMP NOTES:
-IN ADDITION TO THE FOLLOWING NOTES, ALL WORK AND MATERIAL SHALL CONFORM TO NFPA 13 AND NFPA 20, AS APPLICABLE

NFPA 20 REQUIREMENTS:

EQUIPMENT PROTECTION:
SUITABLE MEANS SHALL BE PROVIDED FOR MAINTAINING THE TEMPERATURE OF A PUMP ROOM OR PUMP HOUSE, WHERE REQUIRED, ABOVE 40 DEG F. ARTIFICIAL LIGHT SHALL BE PROVIDED IN THE PUMP ROOM OR PUMP HOUSE. EMERGENCY LIGHTING SHALL BE PROVIDED BY FIXED OR PORTABLE BATTERY OPERATED LIGHTS, INCLUDING FLASHLIGHTS. EMERGENCY LIGHTS SHALL NOT BE CONNECTED TO AN ENGINE STARTING BATTERY. PROVISION SHALL BE MADE FOR VENTILATION OF THE PUMP ROOM OR PUMP HOUSE. FLOORS SHALL BE PITCHED FOR ADEQUATE DRAINAGE OF ESCAPING WATER AWAY FROM CRITICAL EQUIPMENT SUCH AS THE PUMP, DRIVER, CONTROLLER, ECT. THE PUMP ROOM OR PUMP HOUSE SHALL BE PROVIDED WITH A FLOOR DRAIN THAT WILL DISCHARGE TO A FROST-FREE LOCATION.

PIPE AND FITTINGS:
WHERE CORROSIVE CONDITIONS EXIST, THE STEEL SUCTION PIPE SHALL BE GALVANIZED. ALL PROVISIONS FOR WELDED PIPE SHALL BE IN ACCORDANCE WITH NFPA 51B, STANDARD FOR FIRE PREVENTION DURING WELDING, CUTTING, AND OTHER HOT WORK.

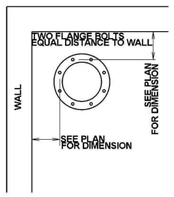
SUCTION PIPE AND FITTINGS:
THE SUCTION PIPE SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH NFPA. A BY-PASS SHALL BE INSTALLED AROUND THE PUMP WHEN THE SUCTION PRESSURE IS OF MATERIAL VALUE WITHOUT THE PUMP. THE PIPE SIZE OF THE BY-PASS SHALL BE AS LARGE AS THE SIZE REQUIRED FOR SUCTION PIPE IN NFPA 20. THE BY-PASS CONTROL VALVES SHALL BE NORMALLY OPEN

DISCHARGE PIPE:
SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH NFPA 13. THE SIZE OF THE PUMP DISCHARGE PIPE AND FITTINGS SHALL BE NOT LESS THAN THAT GIVEN IN NFPA 20.

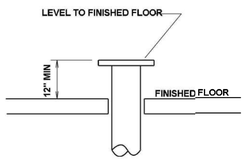
ELECTRIC DRIVE FOR PUMPS:
ALL ELECTRICAL WORK TO SUPPLY POWER TO THE FIRE PUMP SHALL BE IN ACCORDANCE WITH CHAPTER 6 OF NFPA 20. ELECTRICAL WORK SHALL COMPLY WITH NFPA 70, ARTICLE 695 AND OTHER APPLICABLE ARTICLES. THE FIRE PUMP FEEDER CIRCUIT CONDUCTORS AND THEIR ACCESSORIES SHALL BE DEDICATED AND PROTECTED TO RESIST POSSIBLE DAMAGE BY FIRE, STRUCTURAL FAILURE, OR OPERATIONAL ACCIDENT. THE SUPPLY CONDUCTORS DIRECTLY CONNECT THE POWER SOURCE TO THE LISTED FIRE PUMP CONTROLLER.

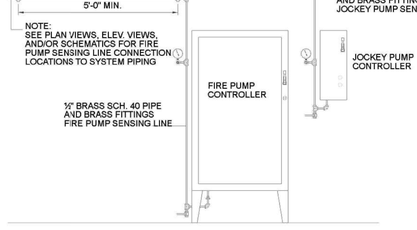
FIRE PUMP CONTROLLER:
SHALL BE WIRED FOR MANUAL SHUTDOWN. FIRE PUMP SHALL BE MONITORED FOR THE FOLLOWING CONDITIONS: FIRE PUMP OR MOTOR RUNNING, LOSS OF PHASE, PHASE REVERSAL.

NOTE: ALL FIRE PROTECTION PIPING STUB-UPS WHETHER INSIDE OR OUTSIDE A BUILDING (INCLUDING PUMP ROOMS), SHALL BE INSTALLED UTILIZING THE "2-HOLE METHOD" ON ALL FLANGES. THE FLANGE SHALL BE INSTALLED WITH THE BOLT HOLES ALIGNED SO THAT FITTING, VALVES, AND EQUIPMENT ARE IN A SQUARE ALIGNMENT WITH ADJACENT WALLS AND FLOOR.

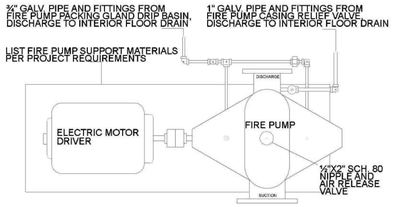


INCOMING FIRE PROTECTION SUPPLY DETAIL
NOT TO SCALE





FIRE PUMP AND JOCKEY PUMP SENSING SCHEMATIC
NO SCALE



ELECTRIC FIRE PUMP SCHEMATIC
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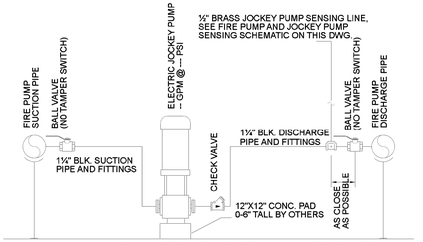

JOCKEY PUMP SCHEMATIC
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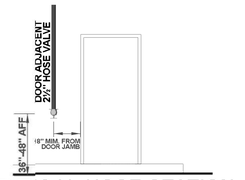
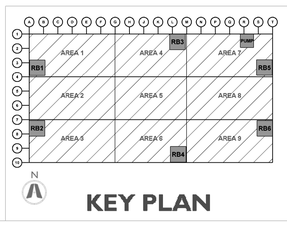


TYPICAL HOSE STATION
N.T.S.



KEY PLAN

CURRAN
ARCHITECTURE
5719 LAWTON LOOP E. DR. #212
INDIANAPOLIS, IN 46216
O :: 317 . 288 . 0681
F :: 317 . 288 . 0753

SCANNELL PROPERTIES

CERTIFICATION

STATE OF MISSOURI
MICHELLE A. LOPEZ
NUMBER PE-2022007904
PROFESSIONAL ENGINEER
09/07/22

PROJECT INFORMATION

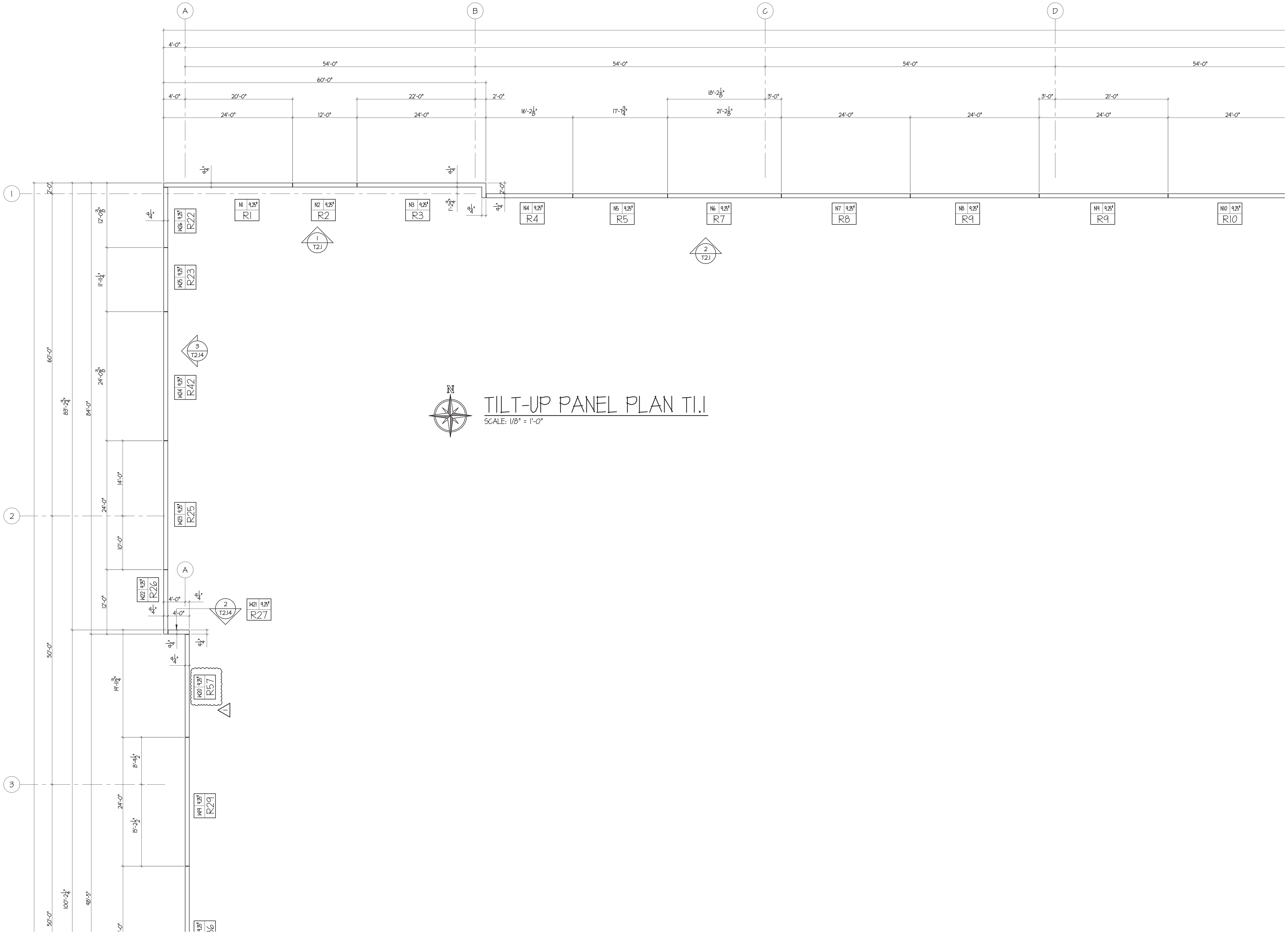
LEE'S SUMMIT LOGISTICS BUILDING A LOT 1
NW CORNER OF
NE TUDOR RD & MAIN ST
LEE'S SUMMIT, MO 64086

ISSUE DATES	
PERMIT SET	02.18.22
1 TENANT IMPROVEMENT	09.07.22

210300

FP3.0

FIRE PUMP & RISER DETAIL



TILT-UP PANEL PLAN T1.1

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

FIELD USE 2022-06-09

Knapp Engineering, LLC
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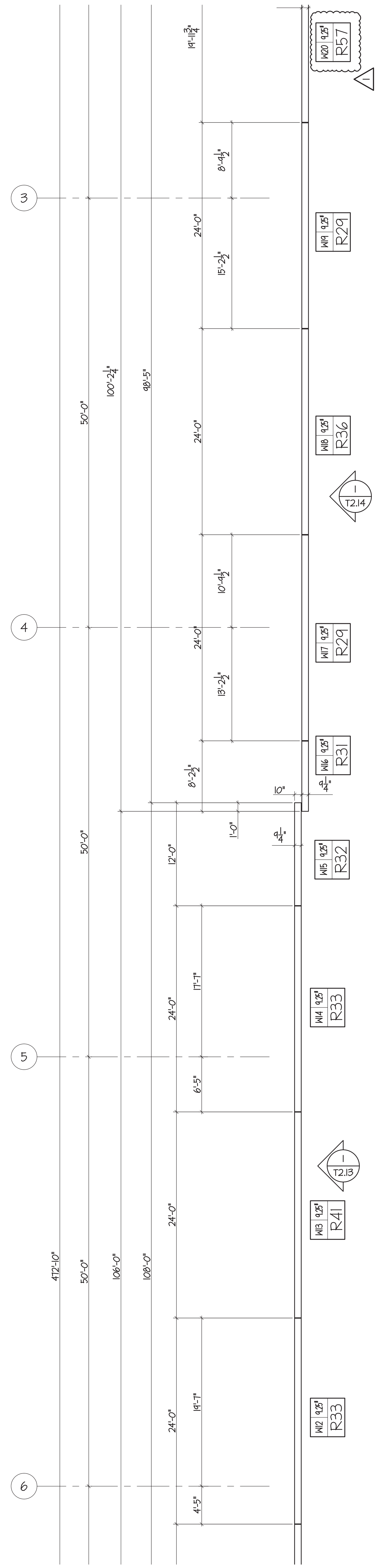
Lee's Summit Logistics
Building A Lot 1
NW Corner of NE Tudor Rd. & Main St.
Lee's Summit, MO 64086

ISSUE TYPE	ISSUE DATE
FOR REVIEW AND APPROVAL	2022-05-16
FIELD USE	2022-06-09
REVISION 1 △1	2022-06-27

SHEET NO:

T1.1



TILT-UP PANEL PLAN T1.2

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

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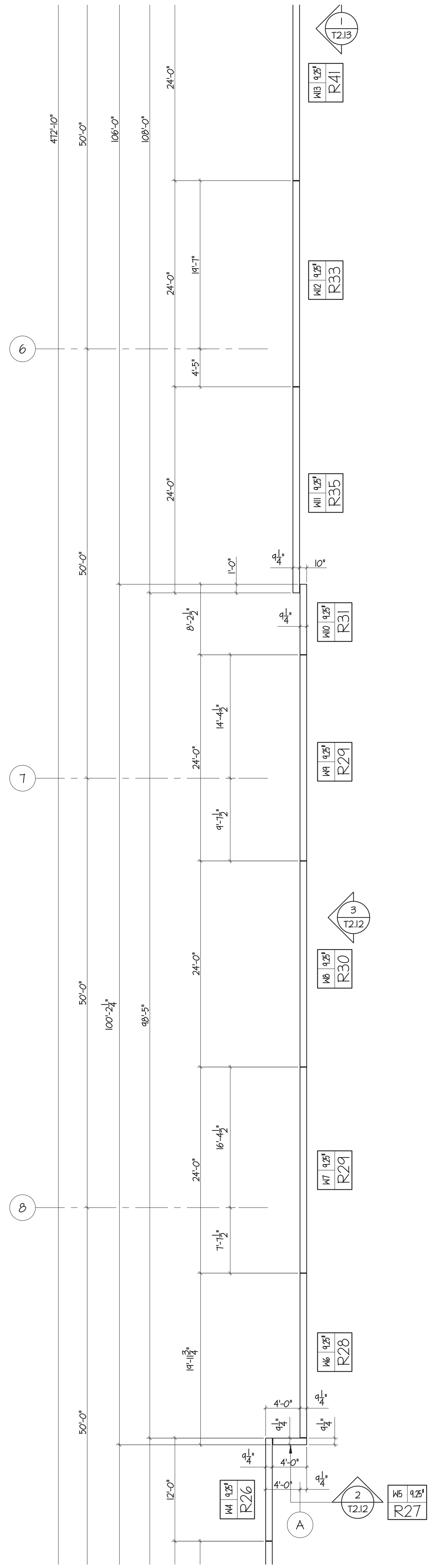
REVISION 1	2022-06-27

SHEET NO:

T1.2



TILT-UP PANEL PLAN T1.3

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

FIELD USE 2022-06-09

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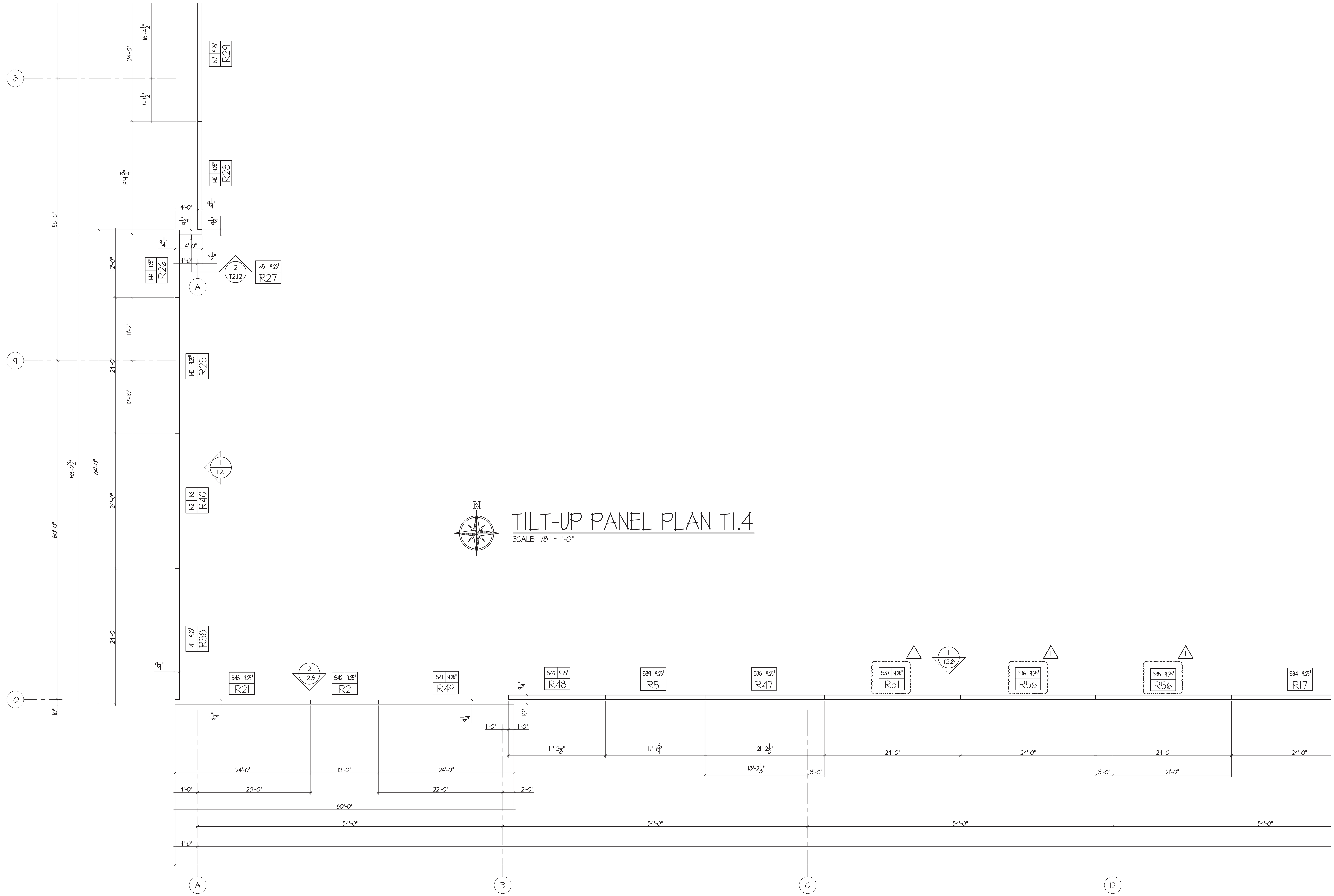
SHEET NO:

T1.3



TILT-UP PANEL PLAN T1.4

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

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Lee's Summit Logistics
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FIELD USE 2022-06-09

ISSUE TYPE	ISSUE DATE
FOR REVIEW AND APPROVAL	2022-05-16
FIELD USE	2022-06-09
REVISION 1 ⚠1	2022-06-27

SHEET NO:

T1.4

N

TILT-UP PANEL PLAN T1.5A

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

N

TILT-UP PANEL PLAN T1.5B

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

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As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
2022-06-27

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Lee's Summit Logistics
Building A Lot 1

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FIELD USE 2022-06-09

SHEET NO:

T1.5

N

TILT-UP PANEL PLAN T1.6A

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

N

TILT-UP PANEL PLAN T1.6B

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

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STATE OF MISSOURI
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Lee's Summit Logistics Building A Lot 1

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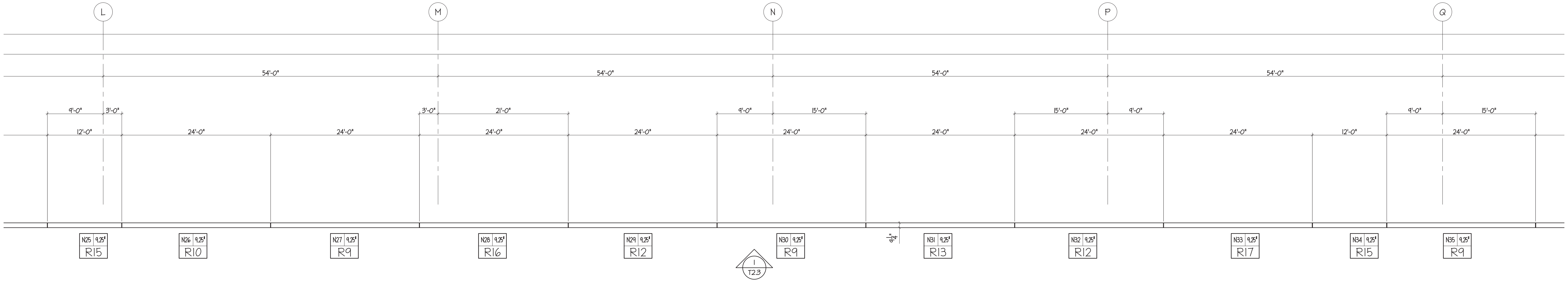
ISSUE TYPE	ISSUE DATE
FOR REVIEW AND APPROVAL	2022-05-16
FIELD USE	2022-06-09
REVISION 1 (1)	2022-06-27

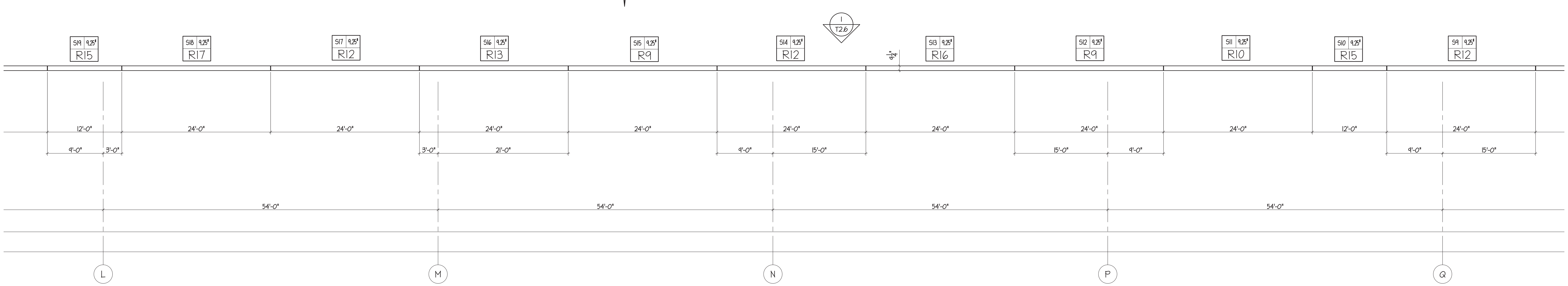
SHEET NO:

T1.6



TILT-UP PANEL PLAN T1.7A
SCALE: 1/8" = 1'-0"

TILT-UP PANEL PLAN T1.7B
SCALE: 1/8" = 1'-0"



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SHEET NO:
T1.7

N

TILT-UP PANEL PLAN T1.8

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

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STATE OF MISSOURI
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Lee's Summit Logistics Building A Lot 1

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REVISION 1 △1	2022-06-27

SHEET NO:

T1.8

FIELD USE 2022-06-09

TILT-UP PANEL PLAN T1.9

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

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STATE OF MISSOURI
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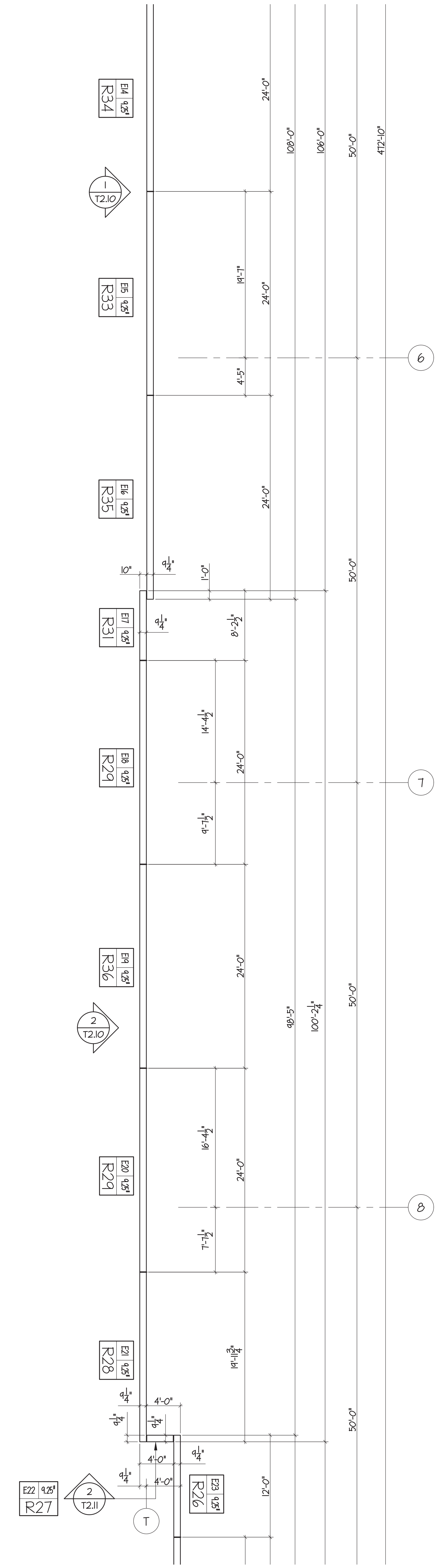
SHEET NO:

T1.9

FIELD USE 2022-06-09



TILT-UP PANEL PLAN T1.10

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

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ISSUE TYPE	ISSUE DATE
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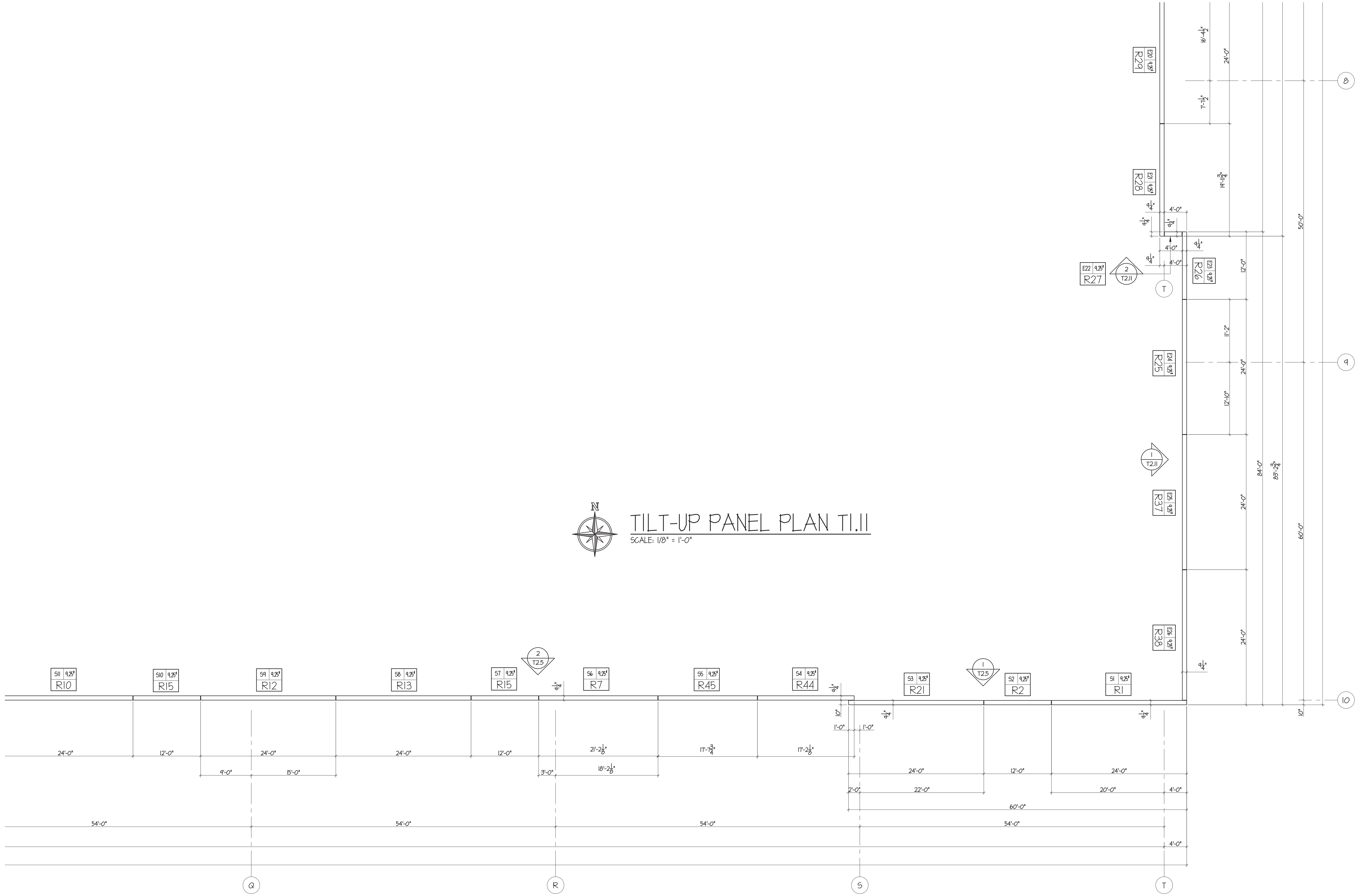
SHEET NO:
T1.10



TILT-UP PANEL PLAN T1.11

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

FIELD USE 2022-06-09

STATE OF MISSOURI
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PE-2003035062
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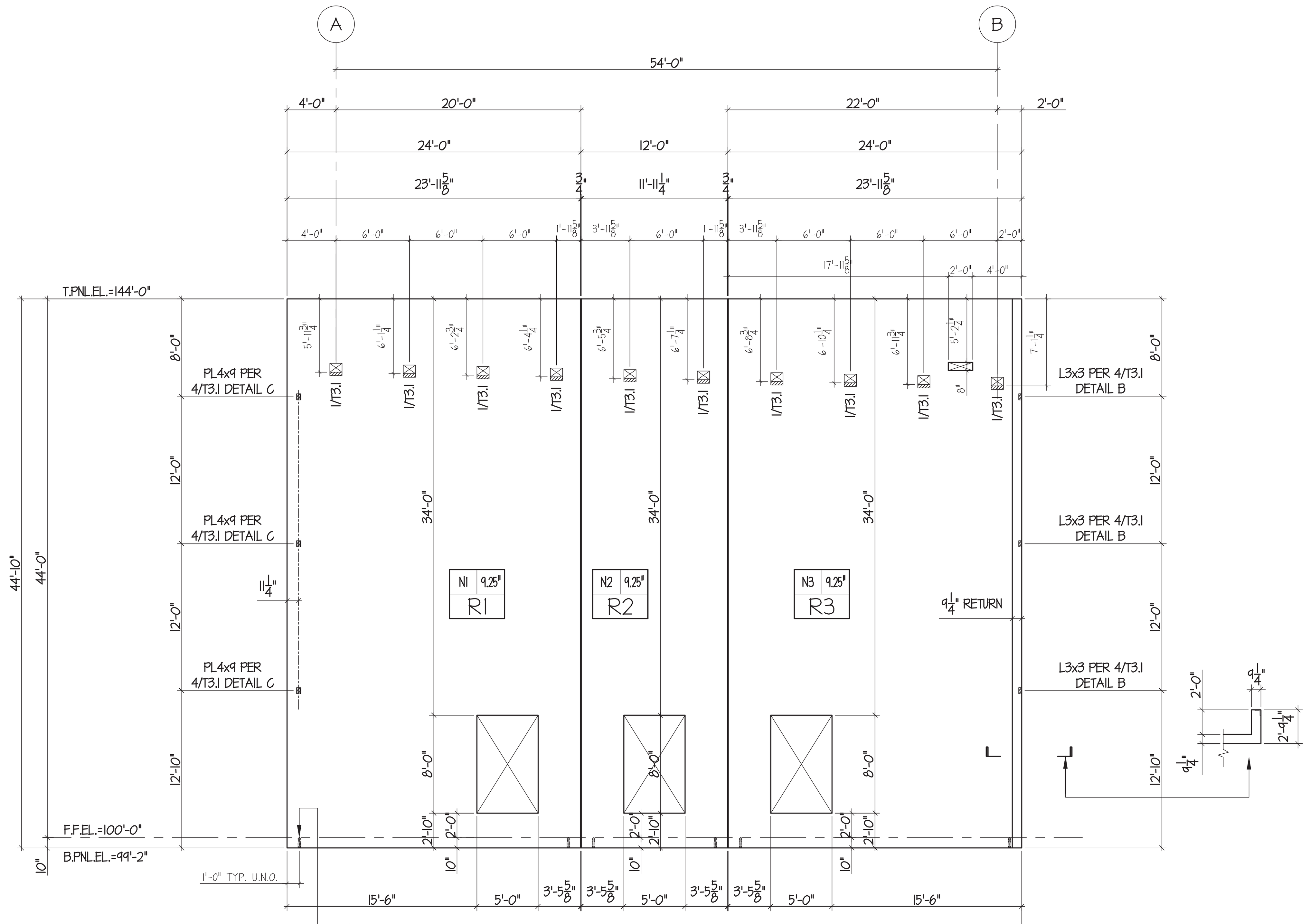
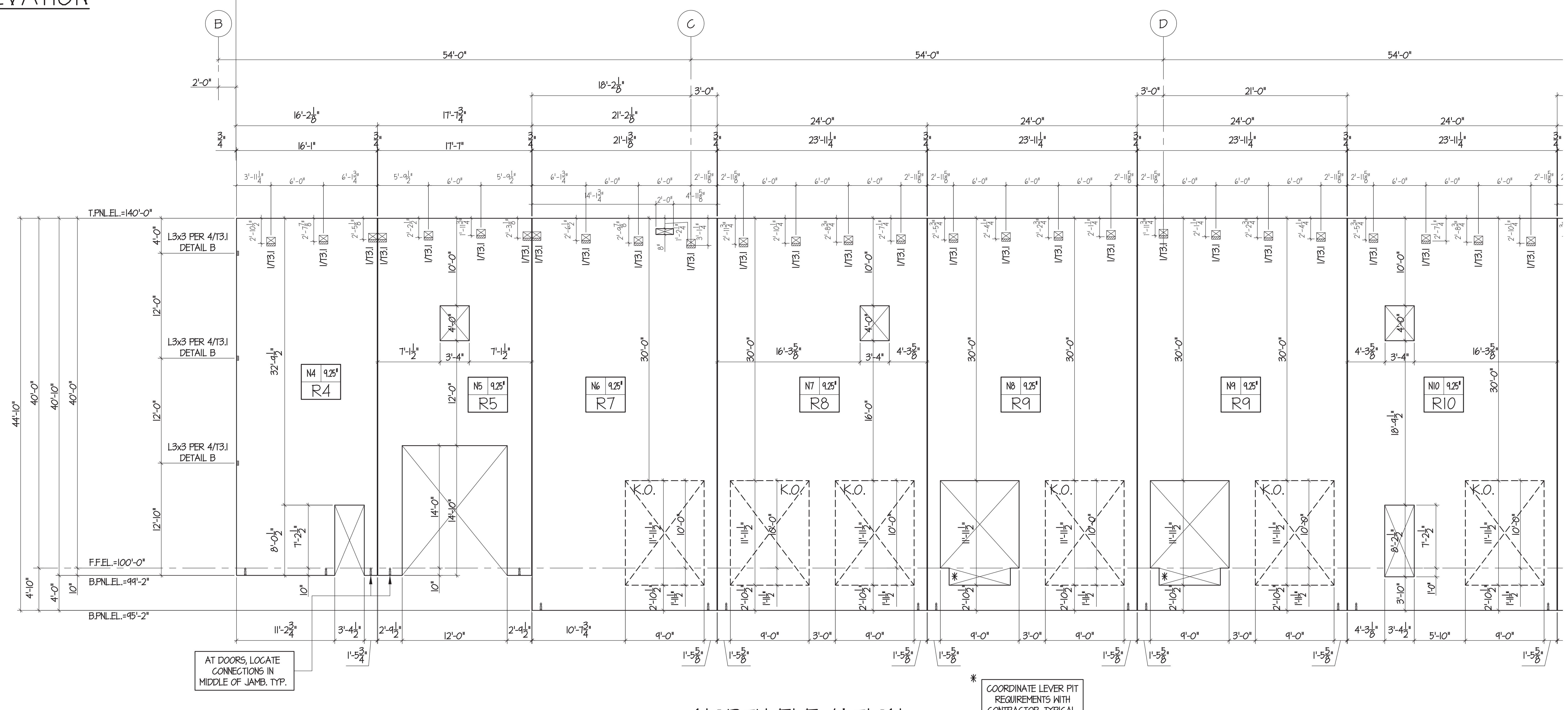
SHEET NO:

T1.11



1 / T2.1 NORTH ELEVATION
SCALE: 1/8" = 1'-0"



2 / T2.1 NORTH ELEVATION
SCALE: 1/8" = 1'-0"

FIELD USE 2022-06-09

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Lee's Summit Logistics
Building A Lot 1
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Lee's Summit, MO 64086

ISSUE TYPE	ISSUE DATE
FOR REVIEW AND APPROVAL	2022-05-16
FIELD USE	2022-06-09
REVISION 1 △1	2022-06-27

SHEET NO:
T2.1

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, TYPICAL.

1 T2.2 NORTH ELEVATION
SCALE: 1/8" = 1'-0"

2 T2.2 NORTH ELEVATION
SCALE: 1/8" = 1'-0"

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
2022-06-27

STATE OF MISSOURI
MICHAEL D. KNAPP
NUMBER PE-2010035002
PROFESSIONAL ENGINEER

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Lee's Summit Logistics Building A Lot 1

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Lee's Summit, MO 64086

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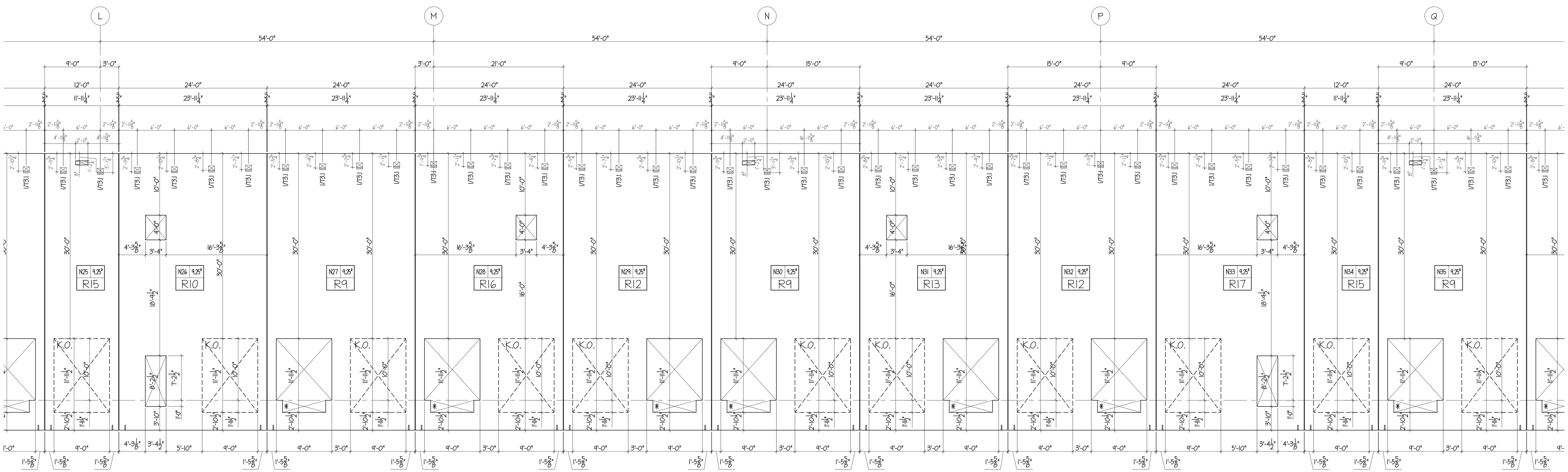
FOR REVIEW AND APPROVAL	2022-05-16
FIELD USE	2022-06-09
REVISION 1 1	2022-06-27

FIELD USE 2022-06-09

SHEET NO:

T2.2



1 T2.3 NORTH ELEVATION
SCALE: 1/8" = 1'-0"

FIELD USE 2022-06-09

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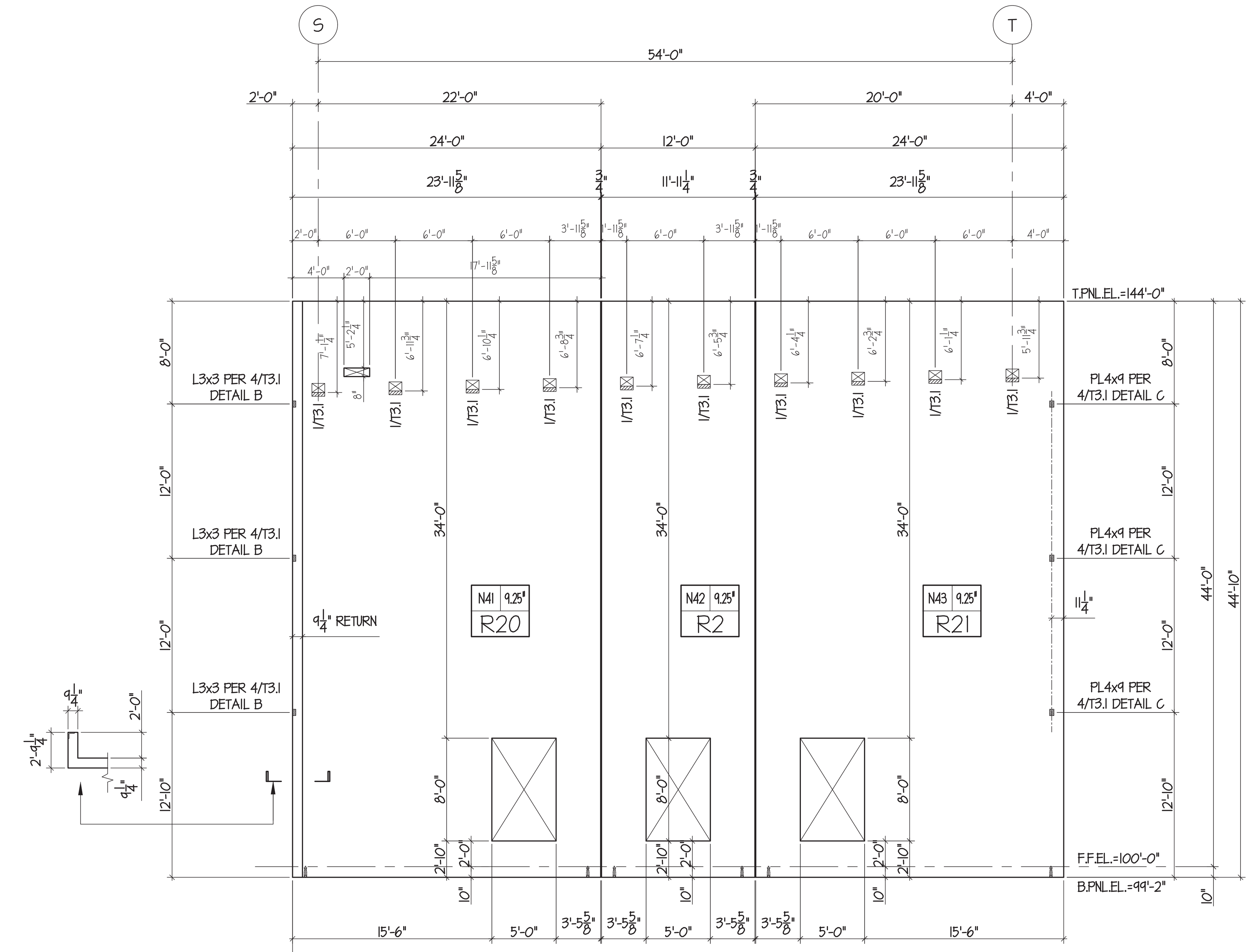
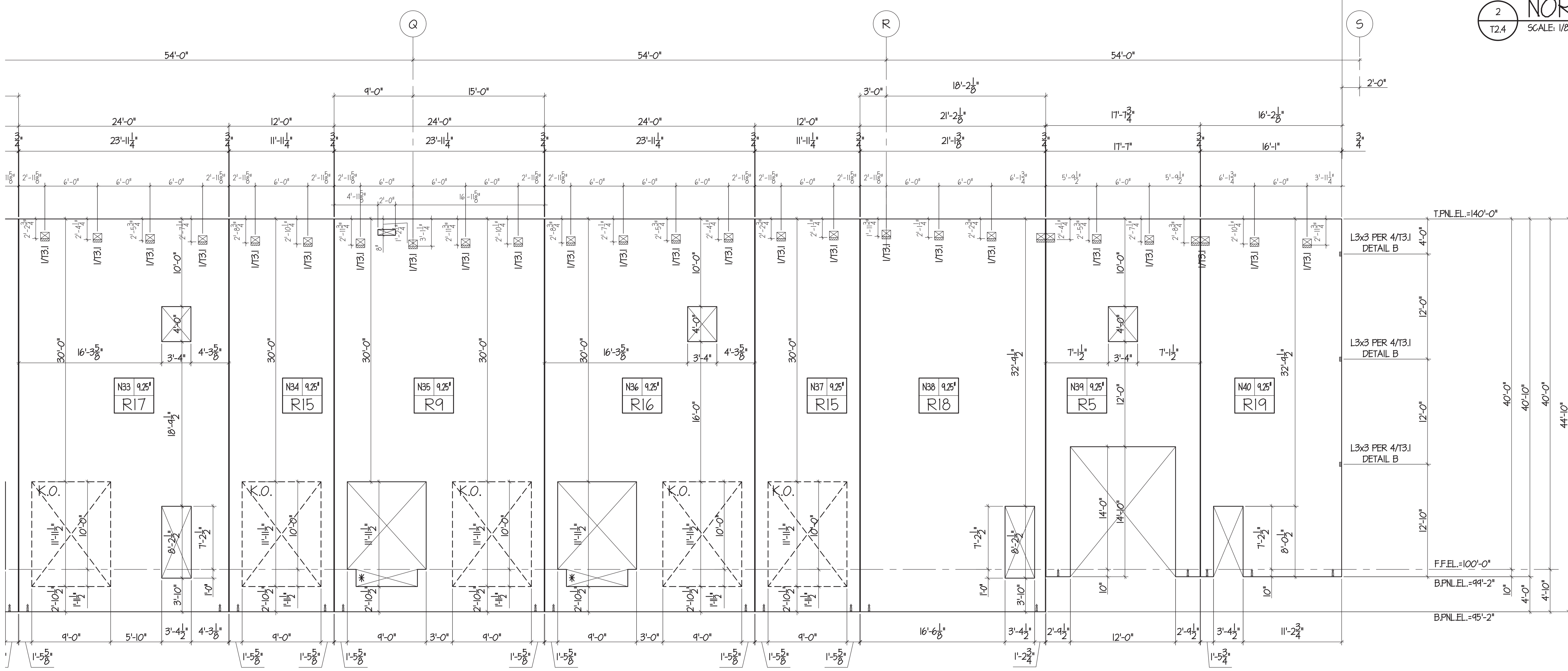
SHEET NO:
T2.3



2 NORTH ELEVATION
T2.4 SCALE: 1/8" = 1'-0"



1 NORTH ELEVATION
T2.4 SCALE: 1/8" = 1'-0"

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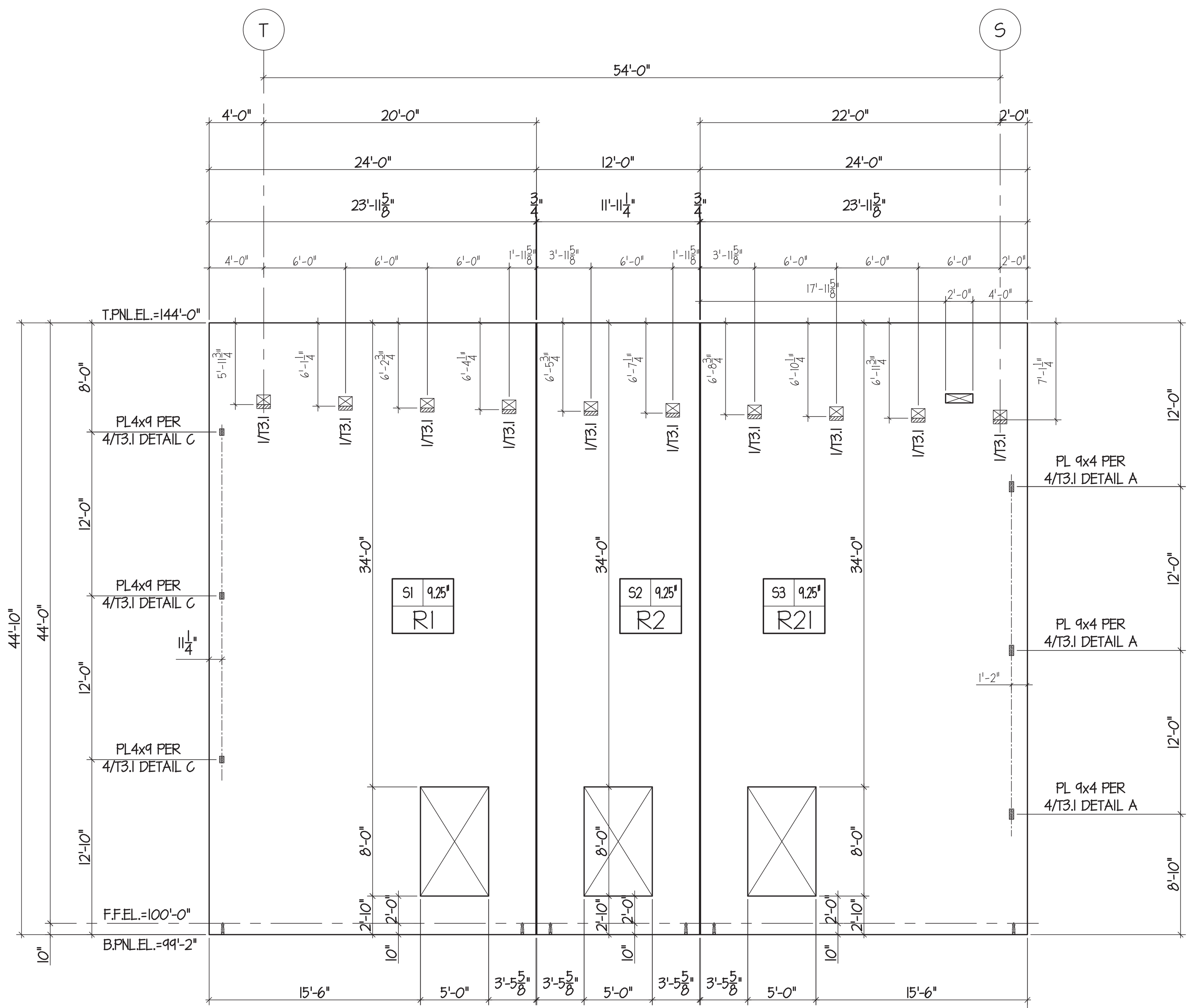
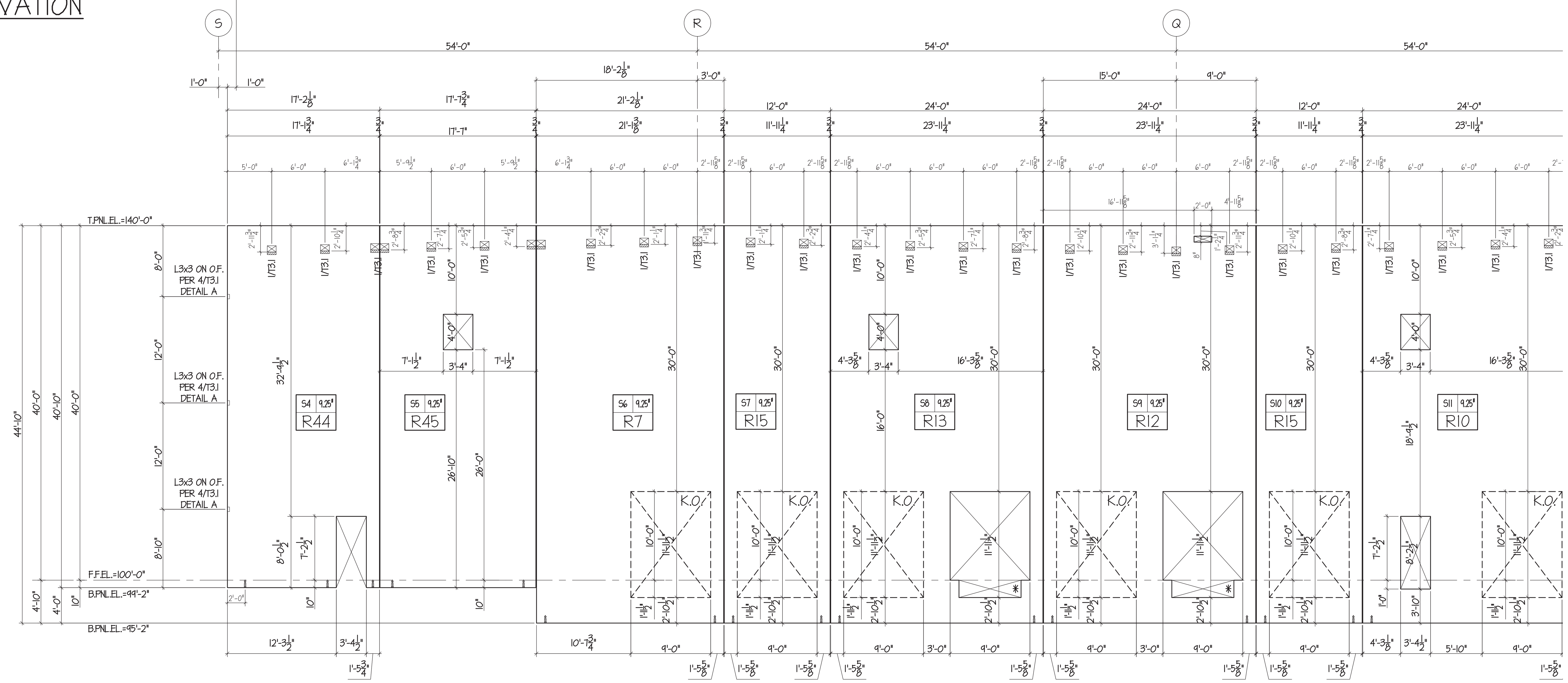


1 T2.5 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



2 T25 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

FIELD USE 2022-06-09

STATE OF MISSOURI
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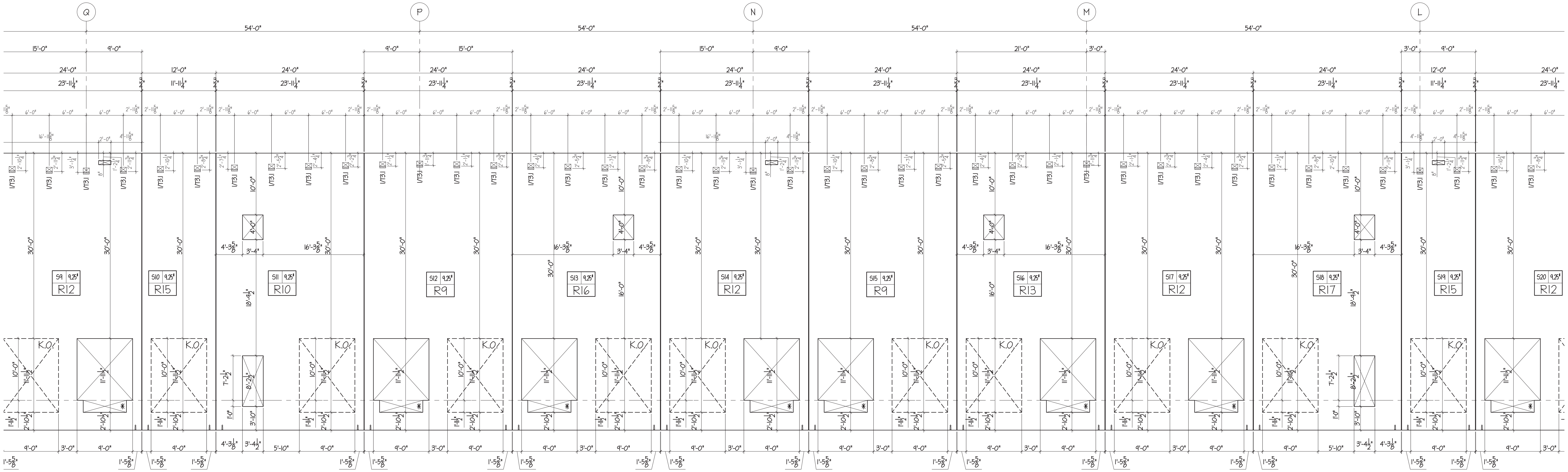
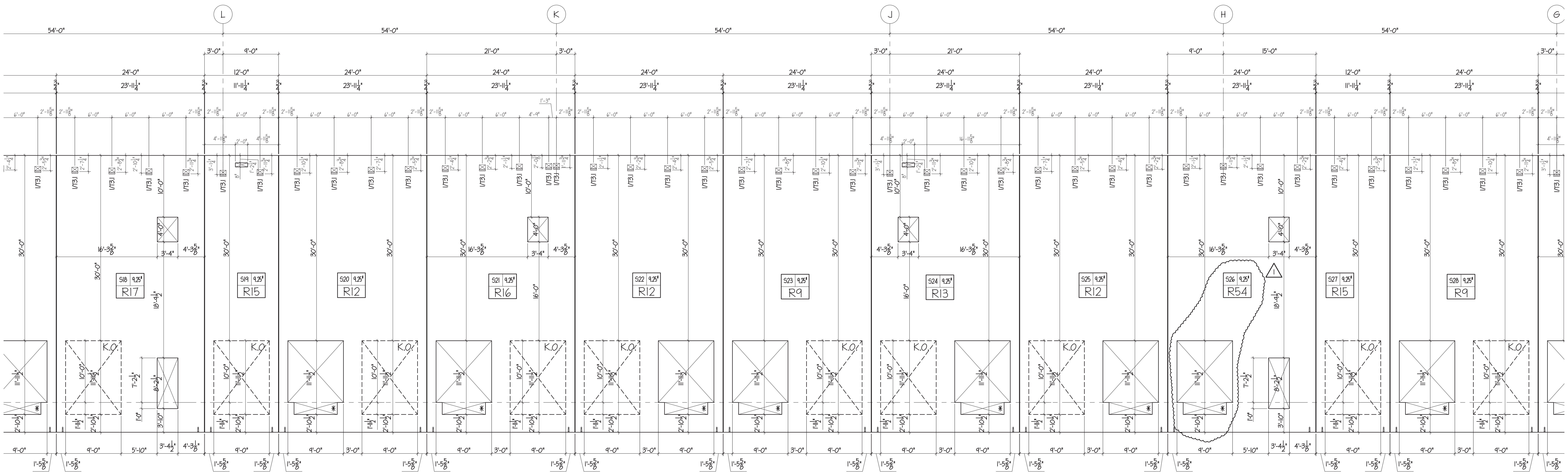
Lee's Summit Logistics
Building A Lot 1
NW Corner of NE Tudor Rd. & Main St.
Lee's Summit, MO 64086

ISSUE TYPE	ISSUE DATE
FOR REVIEW AND APPROVAL	2022-05-16
FIELD USE	2022-06-09
REVISION 1 △1	2022-06-27

SHEET NO:
T2.5



1 / T2.6 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



2 / T2.6 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

FIELD USE 2022-06-09

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FOR REVIEW AND APPROVAL	2022-05-16
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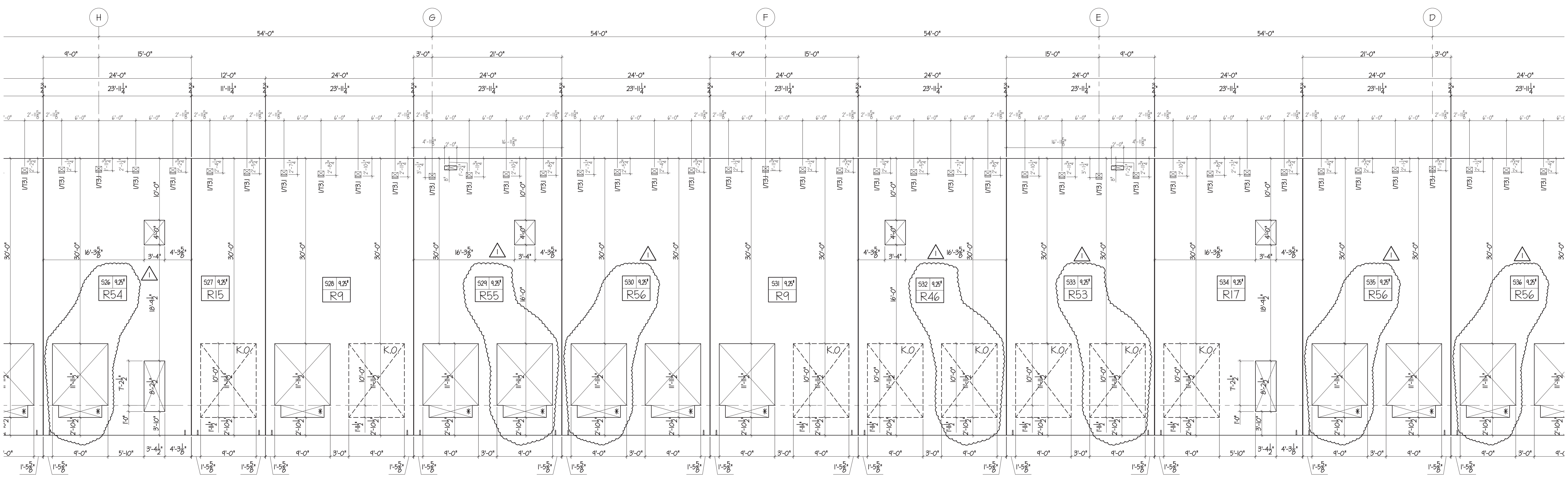
REVISION 1 △1	2022-06-27

SHEET NO:
T2.6



1 T2.7 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

FIELD USE 2022-06-09

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SHEET NO:
T2.7

2 T2.8 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

1 T2.8 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"

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Lee's Summit, Missouri
2022-06-27

STATE OF MISSOURI
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FIELD USE 2022-06-09

SHEET NO:

T2.8

1 T2.9 EAST ELEVATION
SCALE: 1/8" = 1'-0"

2 T2.9 EAST ELEVATION
SCALE: 1/8" = 1'-0"

3 T2.9 EAST ELEVATION
SCALE: 1/8" = 1'-0"

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Lee's Summit, Missouri
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STATE OF MISSOURI
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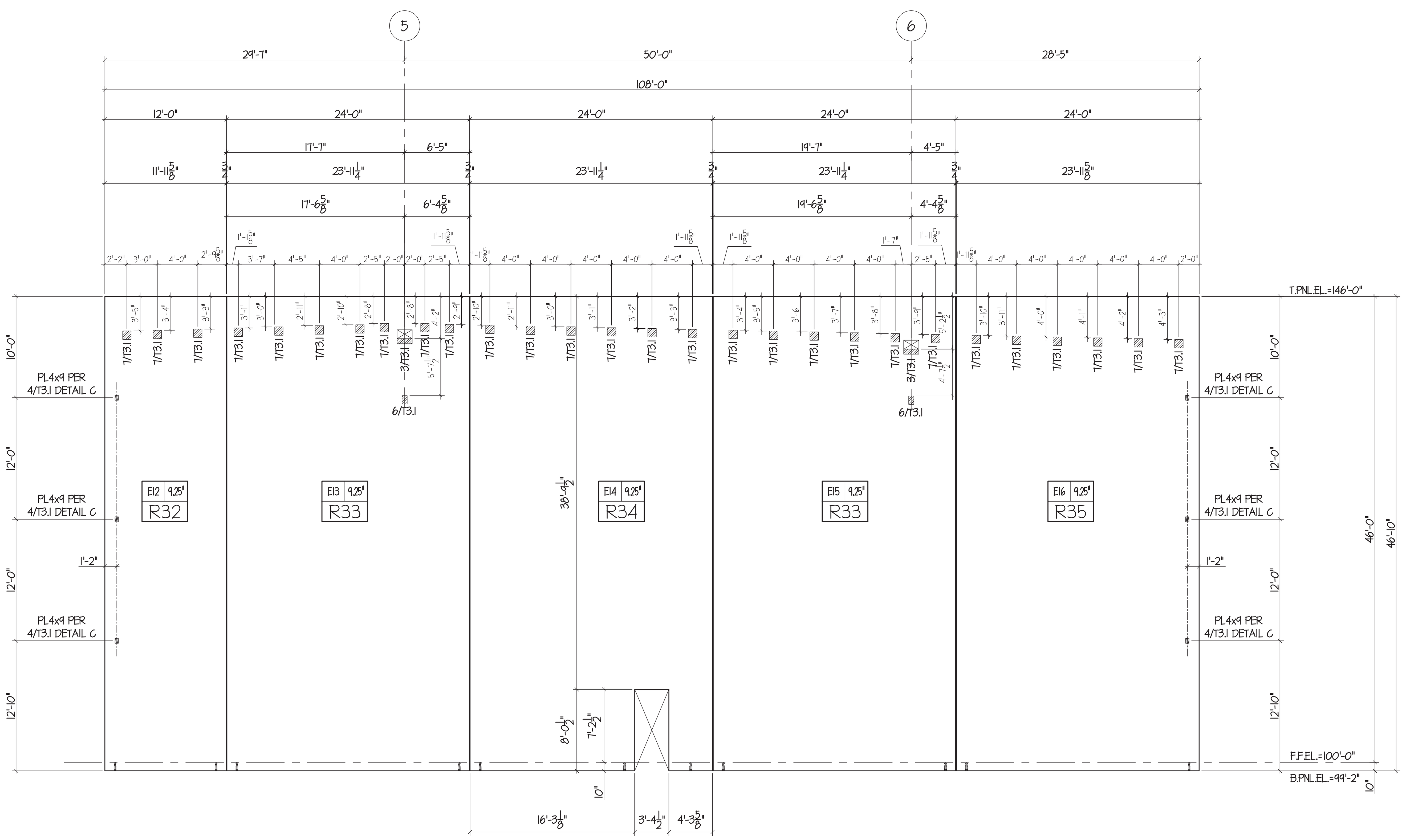
FIELD USE 2022-06-09

SHEET NO:
T2.9



EAST ELEVATION
SCALE: 1/8" = 1'-0"

FIELD USE 2022-06-09

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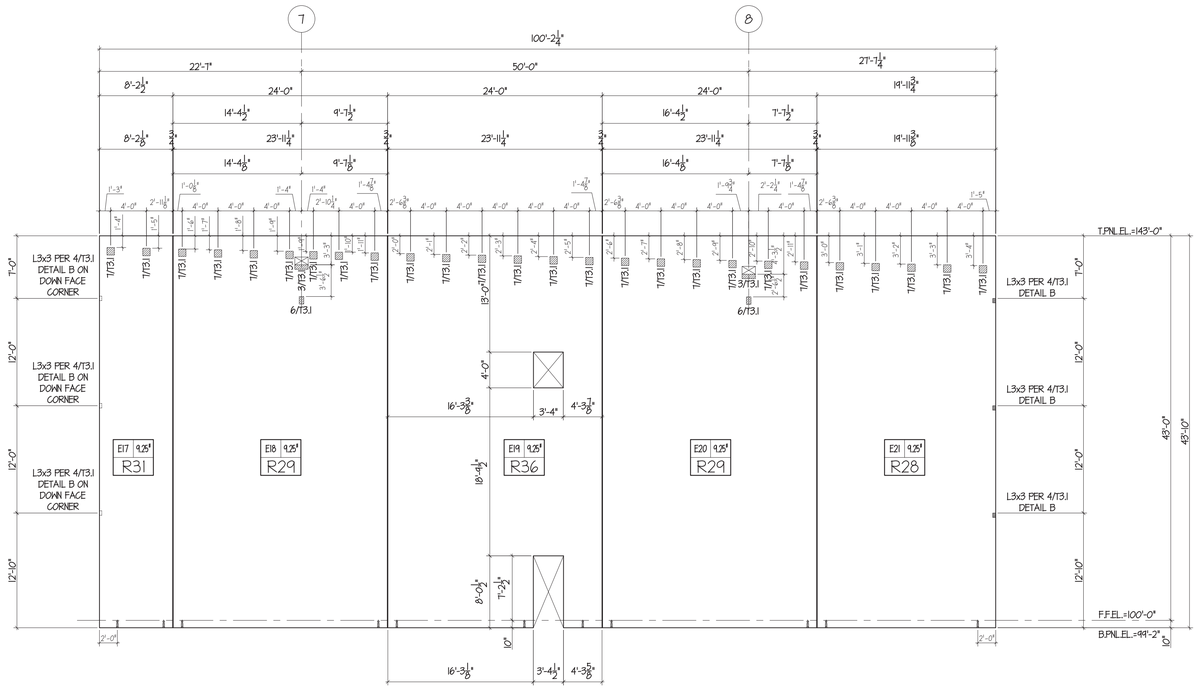
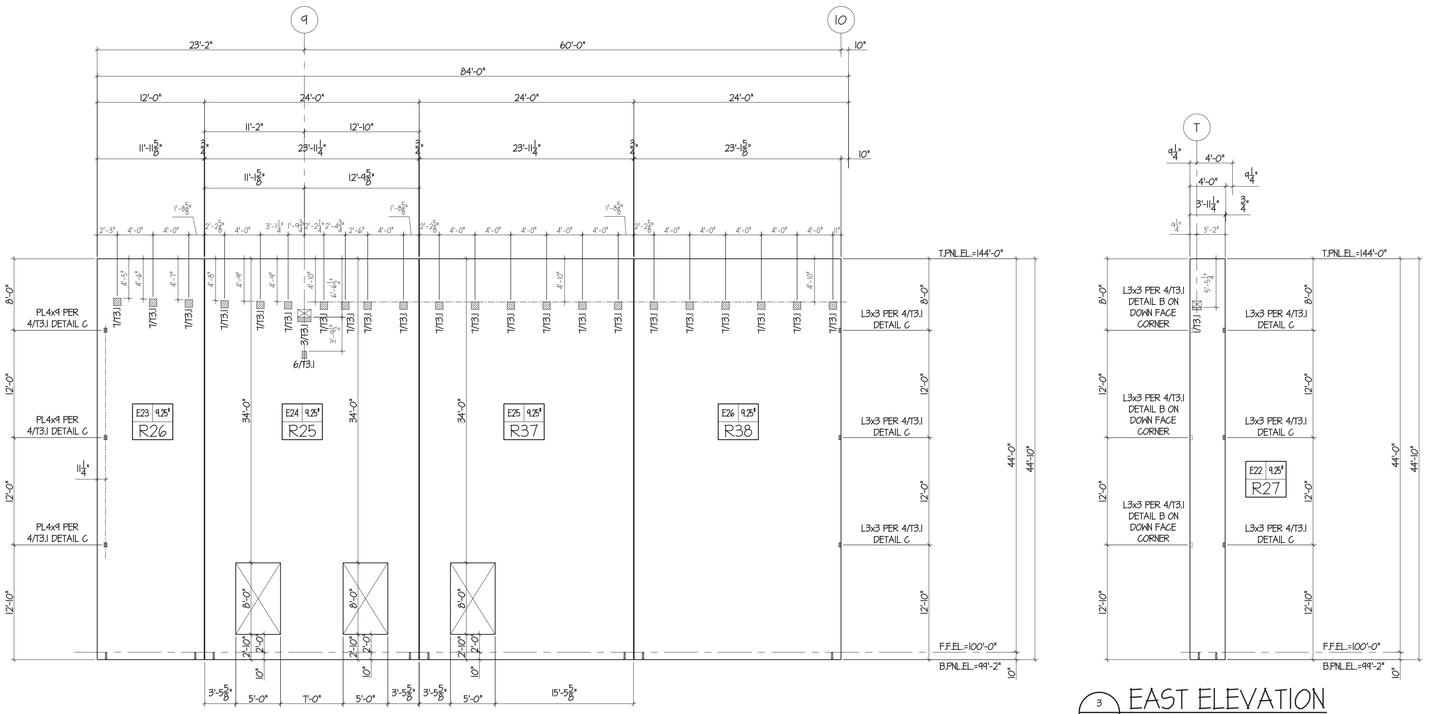
SHEET NO:
T2.10



1 T2.11 EAST ELEVATION

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



2 T2.11 EAST ELEVATION

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

3 T2.11 EAST ELEVATION

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

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2022-06-27

STATE OF MISSOURI
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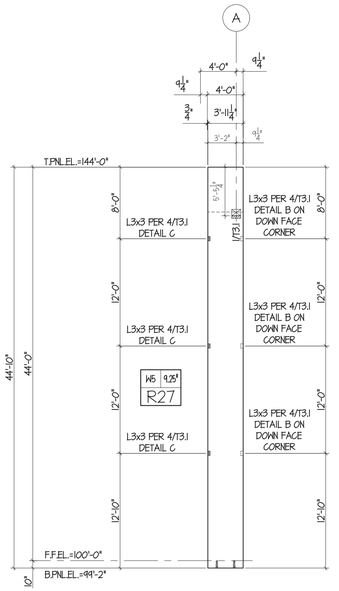
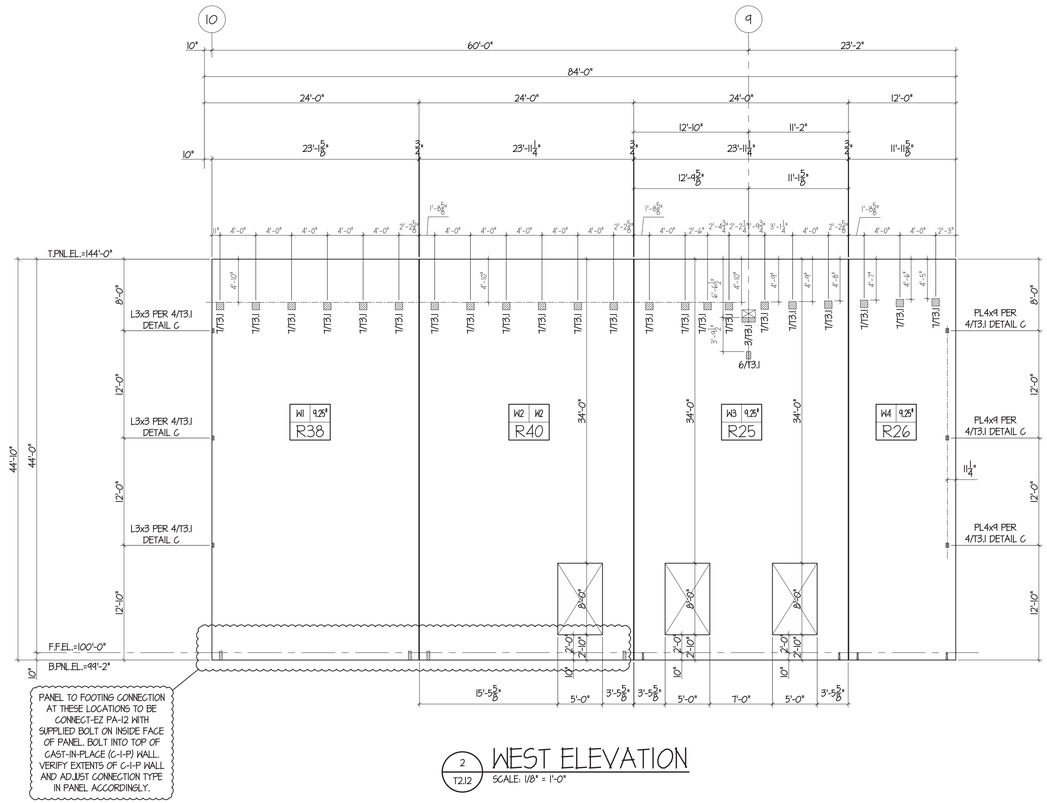
FIELD USE 2022-06-09

SHEET NO:

T2.11

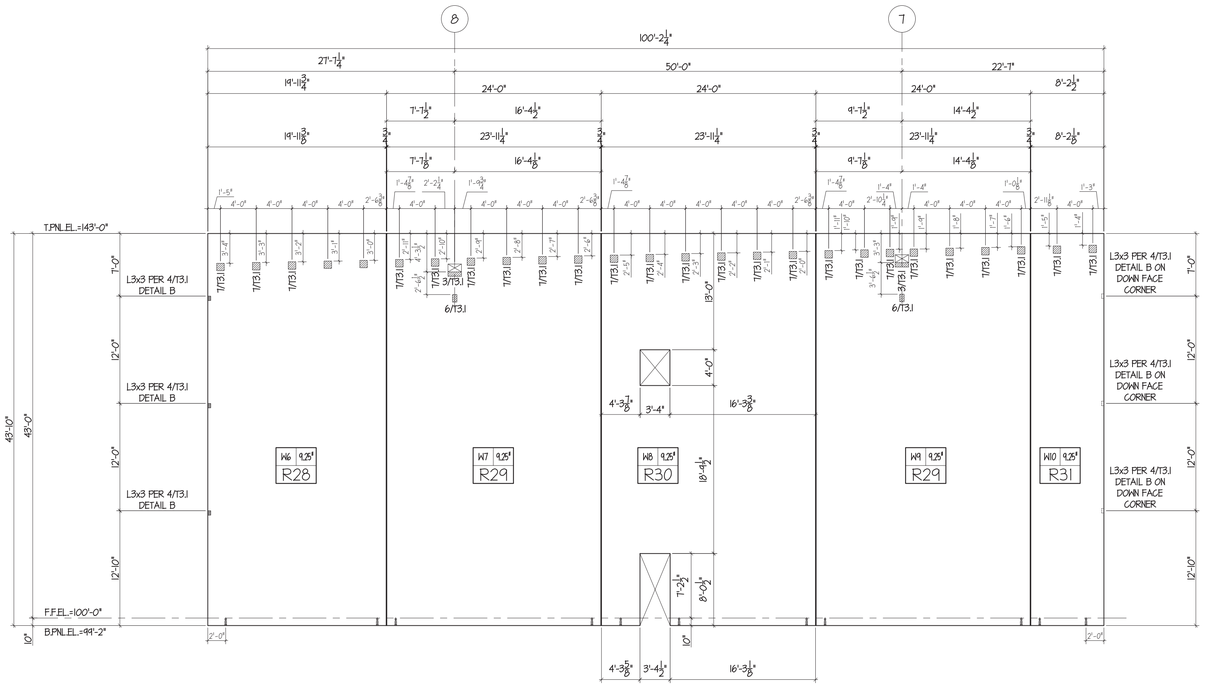


1 T2.12 WEST ELEVATION
SCALE: 1/8" = 1'-0"



PANEL TO FOOTING CONNECTION AT THESE LOCATIONS TO BE CONNECT-EZ PA-12 WITH SUPPLIED BOLT ON INSIDE FACE OF PANEL. BOLT INTO TOP OF CAST-IN-PLACE (C-I-P) WALL. VERIFY EXTENTS OF C-I-P WALL AND ADJUST CONNECTION TYPE IN PANEL ACCORDINGLY.

2 T2.12 WEST ELEVATION
SCALE: 1/8" = 1'-0"



3 T2.12 WEST ELEVATION
SCALE: 1/8" = 1'-0"

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SHEET NO:
T2.12

1 T2.13 WEST ELEVATION

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

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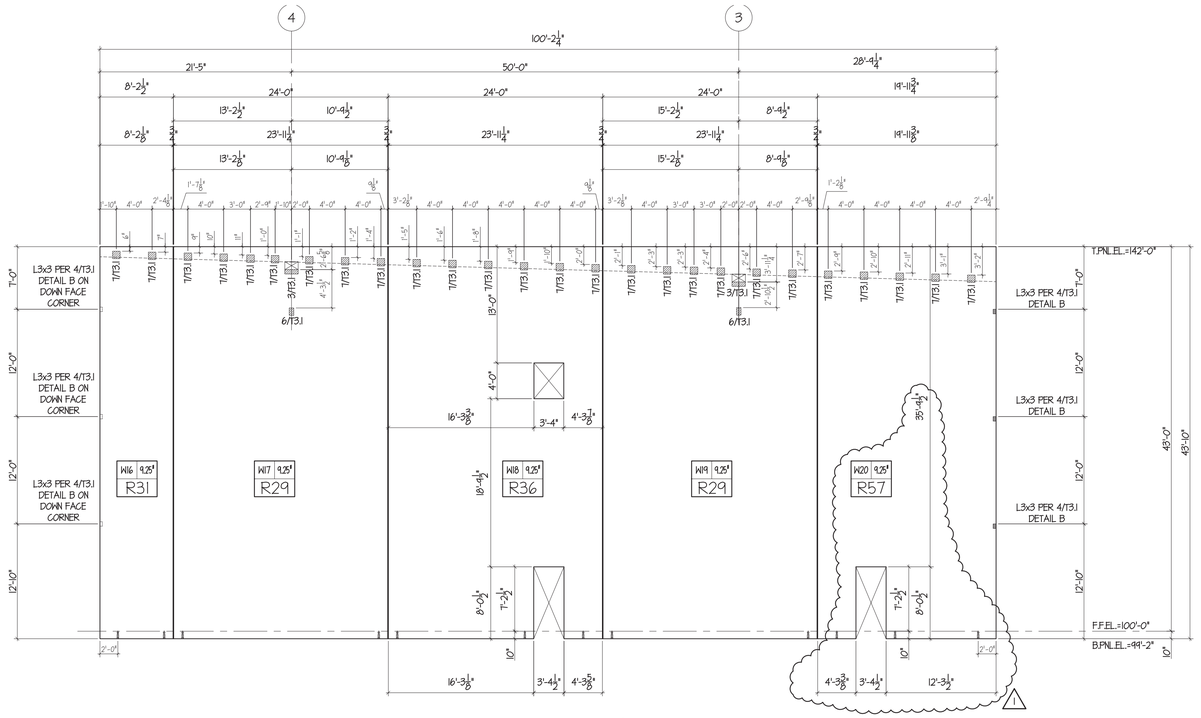
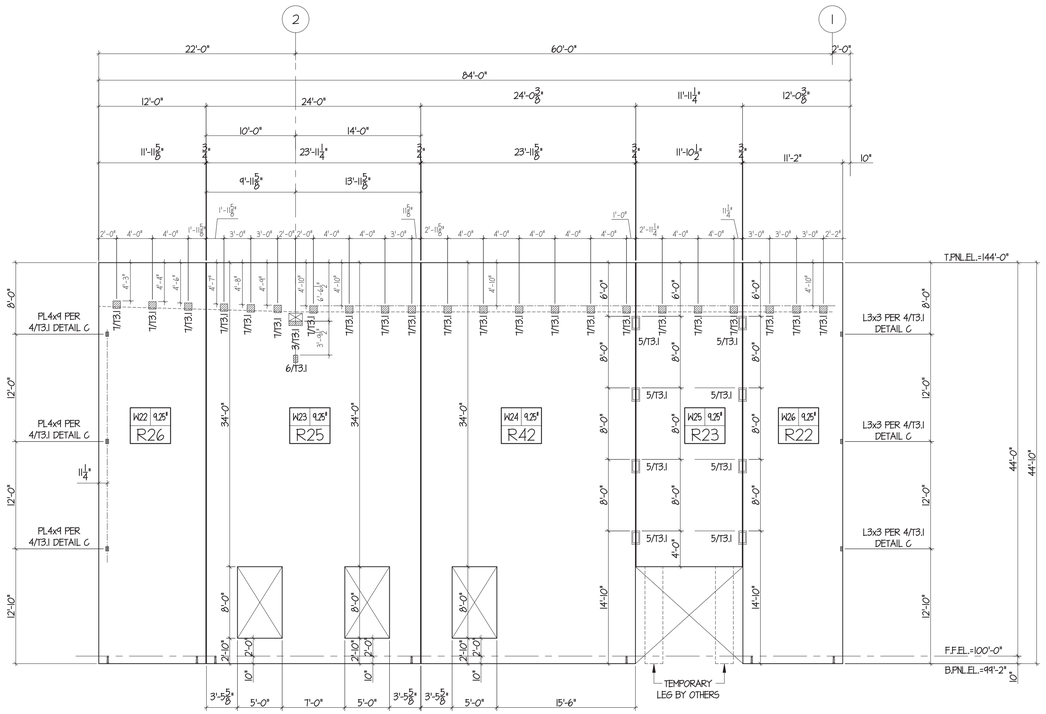
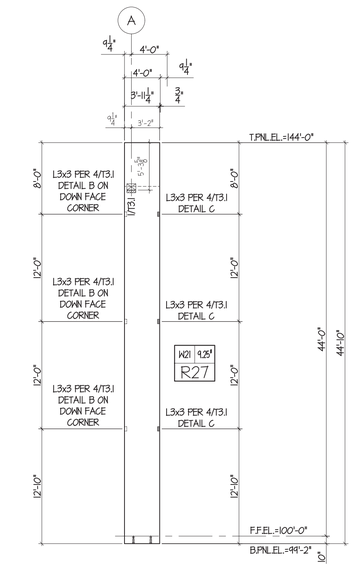
FIELD USE 2022-06-09



1 T2.14 WEST ELEVATION
SCALE: 1/8" = 1'-0"



2 T2.14 WEST ELEVATION
SCALE: 1/8" = 1'-0"



3 T2.14 WEST ELEVATION
SCALE: 1/8" = 1'-0"

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Lee's Summit, Missouri
XXXX/XXXX

STATE OF MISSOURI
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SHEET NO:
T2.14

PANEL GENERAL NOTES:

1.) ALL TILTUP PANELS ARE SHOWN FROM THE INSIDE WITH THE OUTSIDE FACE DOWN.

2.) WALL PANELS SHALL NOT BE LIFTED UNTIL THE CONCRETE HAS ATTAINED A COMPRESSIVE STRENGTH OF 3,000psi AND A MINIMUM FLEXURAL STRENGTH OF 500psi AS DETERMINED BY STANDARD BEAMS FIELD CURED AND BROKEN IN ACCORDANCE WITH ASTM C78-64 (OR AS OTHERWISE SPECIFIED BY THE LIFTING AND BRACING ENGINEER). CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4,500psi (OR AS NOTED OTHERWISE ON DRAWINGS).

3.) FOR REINFORCING STEEL PLACEMENT REFER TO THE T4 SHEETS.

4.) FOR PANEL LIFTING AND BRACING, REFER TO DRAWINGS BY OTHERS.

5.) CHLORIDE BASED ADMIXTURES ARE PROHIBITED IN CONCRETE USED FOR WALL PANELS.

6.) TEMPORARY BRACING (BY OTHERS) SHALL BE PROVIDED FOR WALL PANELS IN THE ERECTED POSITION. INSTALLATION OF WALL BRACES SHALL MEET ALL REQUIREMENTS OF THE BRACE SUPPLIER.

7.) TEMPORARY BRACING (BY OTHERS, ie. MEADOW-BURKE) SHALL BE DESIGNED PER "TILT-UP CONCRETE ASSOCIATIONS GUIDELINE FOR TEMPORARY WIND BRACING OF TILT-UP CONCRETE PANELS DURING CONSTRUCTION" (LATEST VERSION).

8.) MAXIMUM DEPTH OF HORIZONTAL AND VERTICAL REVEALS (OR BRICK) IS 3/4". ALL TILTUP PANELS WILL BE SIZED AND DETAILED BASED ON A 3/4" REVEAL (BRICK) DEPTH. ANY REDESIGN REQUIRED DUE TO DEEPER REVEALS WILL BE TREATED AS ADDITIONAL SERVICES. REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL REVEAL INFORMATION INCLUDING EXACT LOCATIONS. REVEALS (BRICK) MAY BE SHOWN ON THE TILTUP DRAWINGS IN THEIR APPROXIMATE LOCATIONS OR MAY BE EXCLUDED FROM THE TILTUP DRAWINGS FOR CLARITY. TILTUP DRAWINGS WILL NOT BE REVISED TO SHOW RELOCATED OR ADDITIONAL REVEALS (BRICK).

9.) TEMPORARY BRACING SHALL NOT BE REMOVED UNTIL BUILDING LATERAL FRAMING SYSTEM IS COMPLETE (i.e.-METAL ROOF DECK, BRACES, MOMENT FRAMES, FLOOR SLAB, etc.) OR AS DIRECTED BY THE PROJECT "ENGINEER OF RECORD".

PANEL REINFORCING NOTES:

1.) ALL REBAR TO BE ASTM A615 GRADE 60 U.N.O.

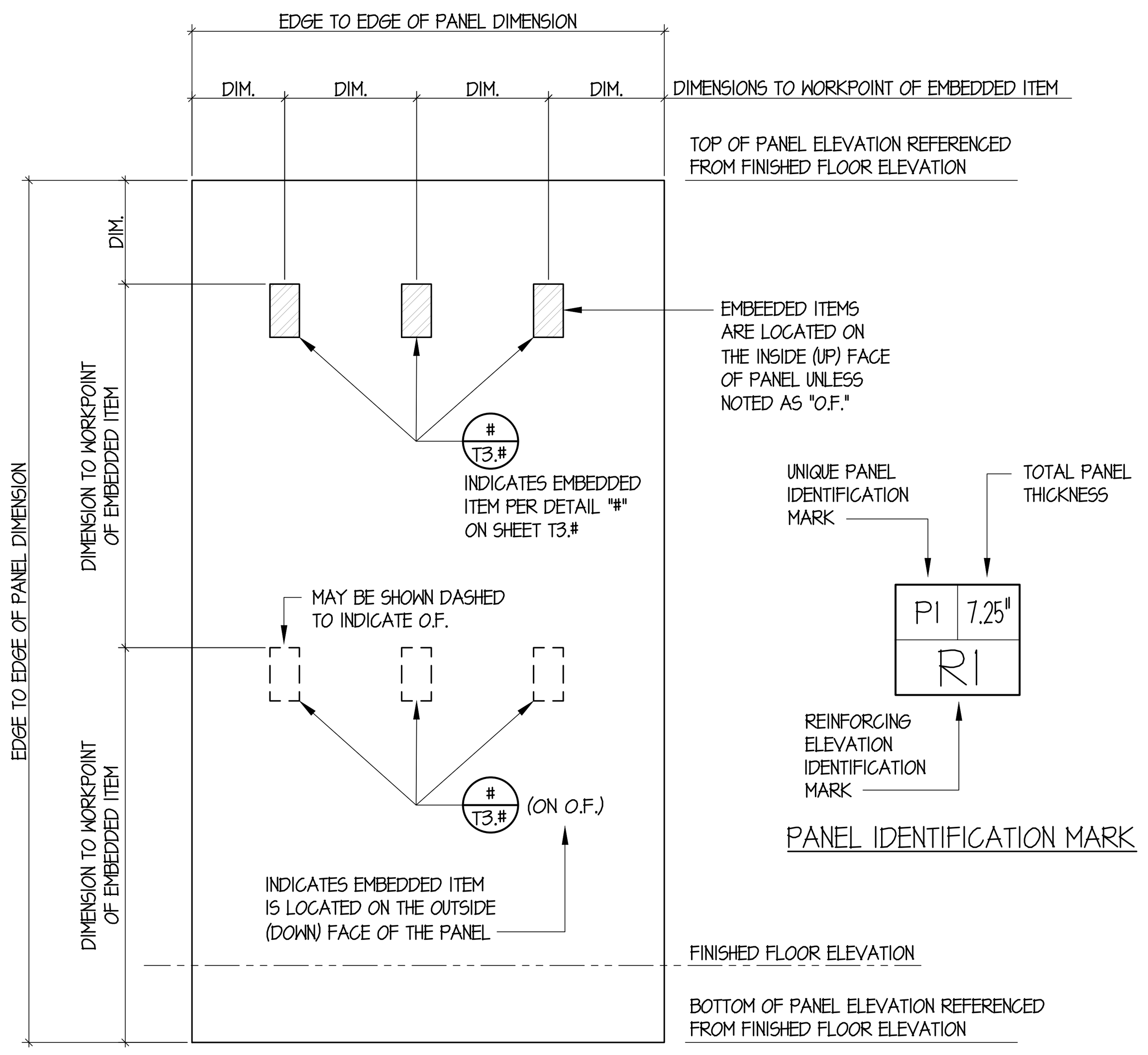
2.) MAINTAIN 6" CLEAR FOR ALL BARS PARALLEL TO FUTURE OPENINGS UNLESS SHOWN OTHERWISE. ADDITIONAL REINFORCING BARS AT FORMED OR FUTURE OPENINGS SHALL BE LOCATED AS SHOWN.

3.) THE CLEAR DISTANCE BETWEEN PARALLEL BARS IN A LEVEL SHALL NOT BE LESS THAN 2".

4.) REBAR CLEAR DISTANCE AT EDGES OF PANEL PER THE FOLLOWING: (COMPLIES WITH THE APPLICABLE VERSION OF ACI-318)
AT SIDES OF PANELS WITH CAULKED PANEL JOINTS = 3/4".
AT BOTTOM OF GROUTED PANELS = 3/4".
AT TOP OF PANELS WITH WEATHER PROOFING (ie. METAL FLASHING, TIMBER NAILER, etc.) = 3/4".
AT ANY EDGE OF PANELS THAT ARE NOT PROTECTED FROM THE WEATHER:
#6 BARS OR LARGER = 2".
#5 BARS OR SMALLER = 1 1/2".
INSIDE AND OUTSIDE FACE REBAR CLEAR DISTANCES PER THE DETAILS ON THE T3 SHEETS.

5.) HORIZONTAL & VERTICAL BARS SHALL NOT BE SPLICED EXCEPT AS APPROVED BY THE TILT-UP ENGINEER.

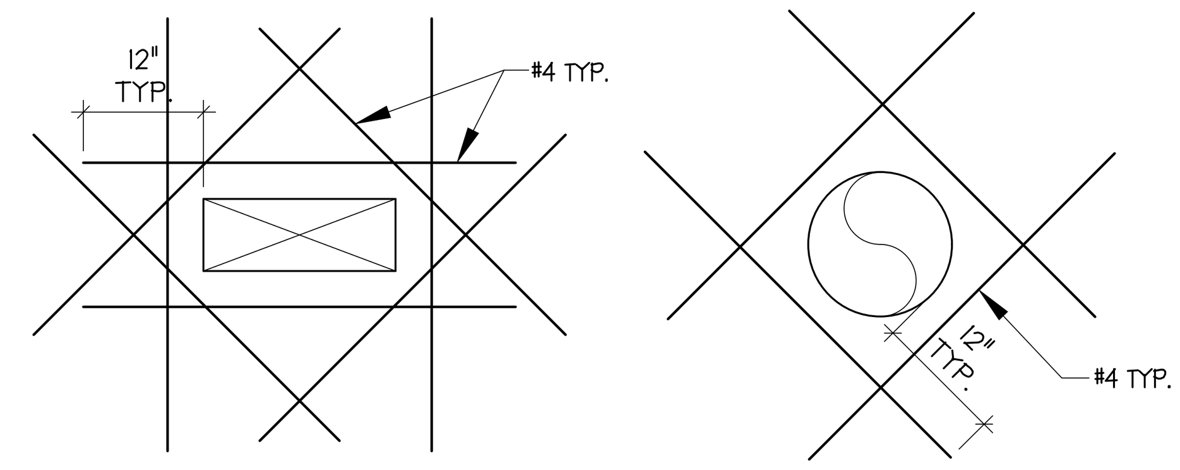
6.) HORIZONTAL AND VERTICAL REINFORCING BARS SHALL BE SECURELY TIED AT 30% OF THEIR INTERSECTIONS. TIES ARE TO BE DISTRIBUTED UNIFORMLY THROUGHOUT THE REINFORCING MAT. BARS SHALL BE TIED ADEQUATELY TO TO PREVENT REBAR FROM MOVING DURING CONCRETE PLACEMENT.



TYPICAL PANEL ELEVATION

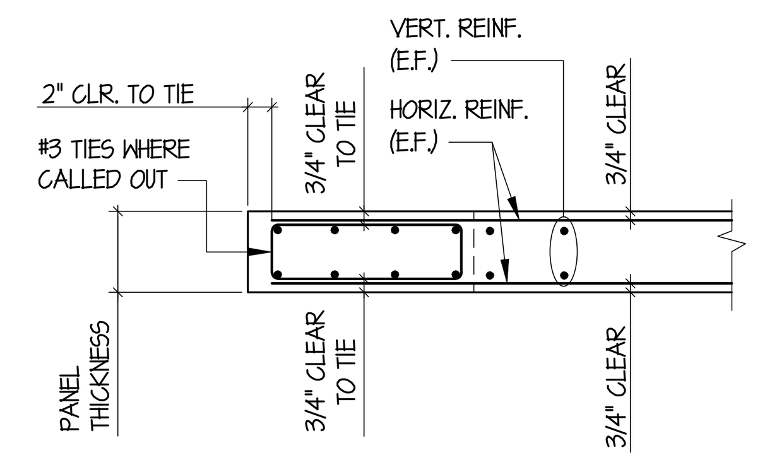
DETAIL A T3.1 SCALE: 3/4" = 1'-0"

PANEL IDENTIFICATION MARK



TYPICAL REINFORCING AT MEP/SCUPPER OPENINGS

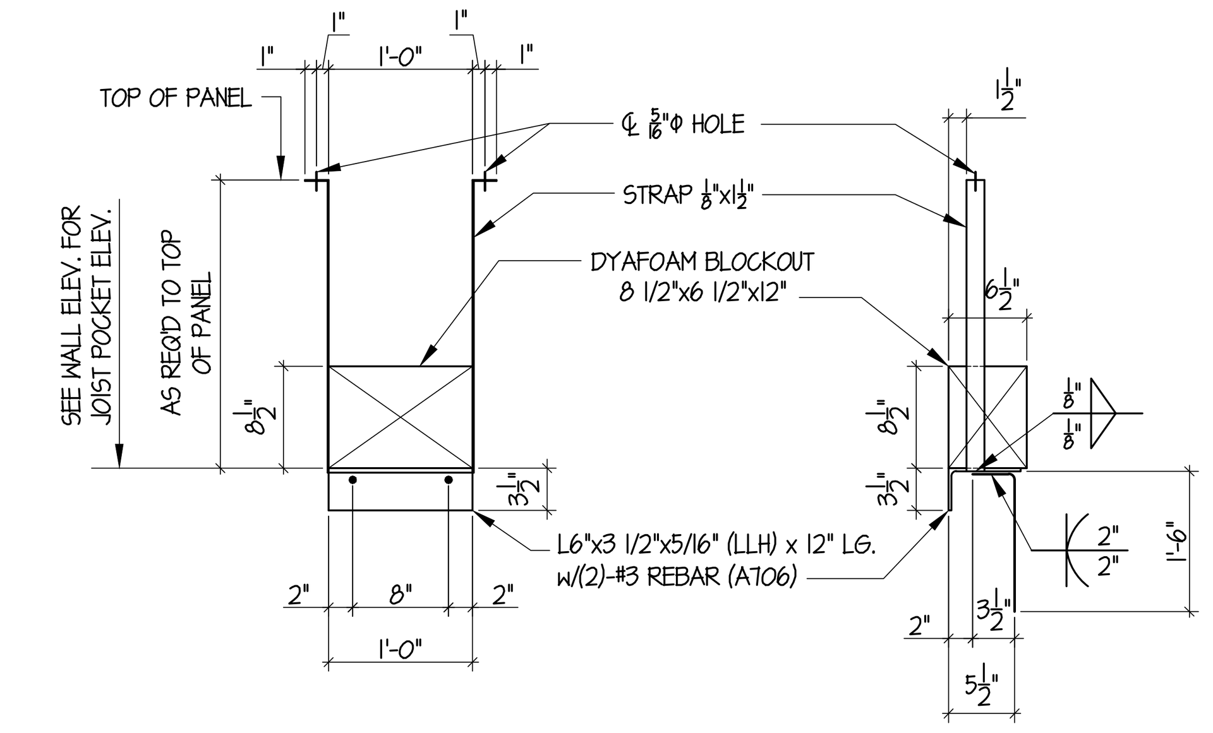
DETAIL B T3.1 SCALE: 3/4" = 1'-0"



PANELS WITH REINFORCING EACH FACE (E.F.)

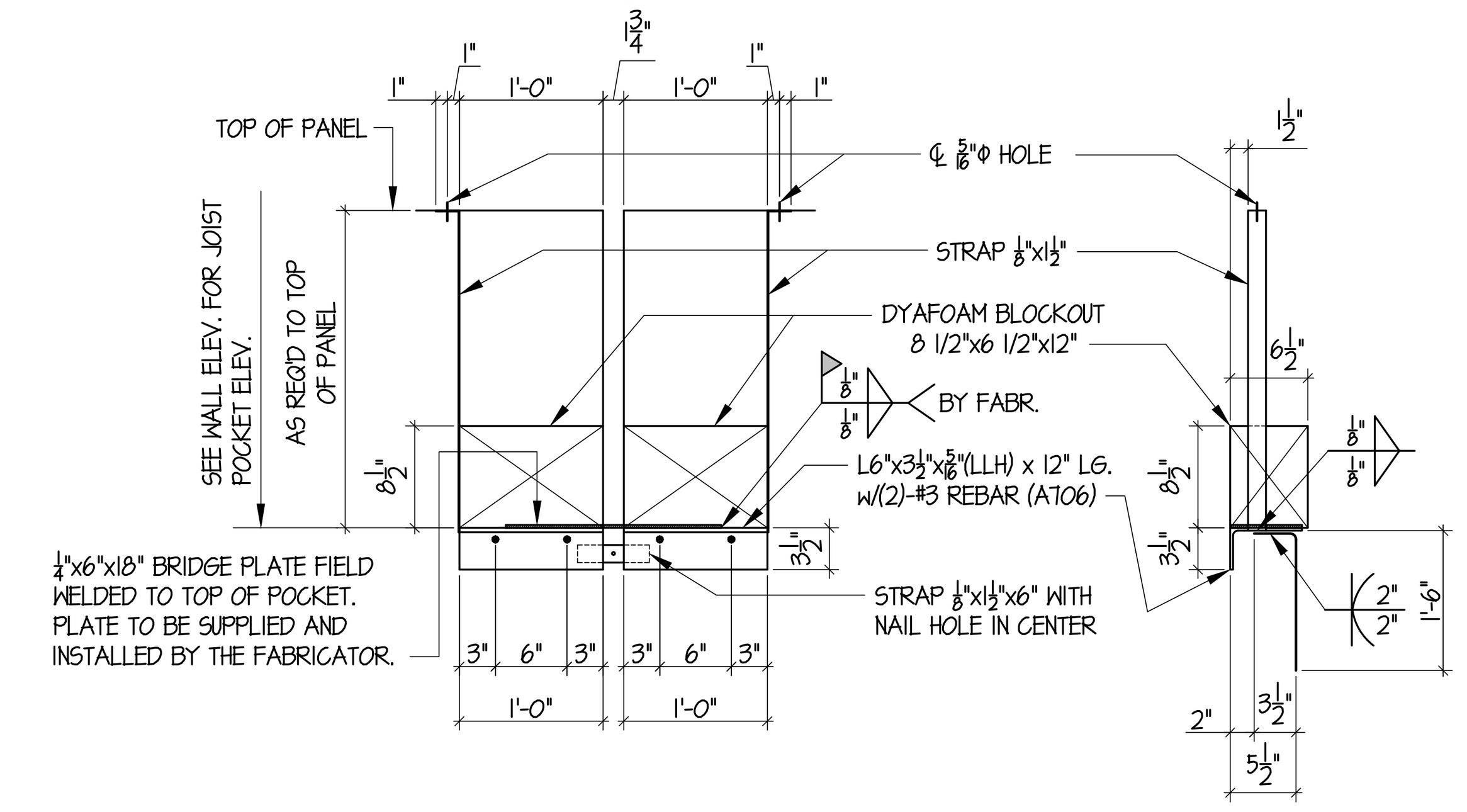
TYPICAL PANEL REINFORCING DETAILS

DETAIL C T3.1 SCALE: 3/4" = 1'-0"



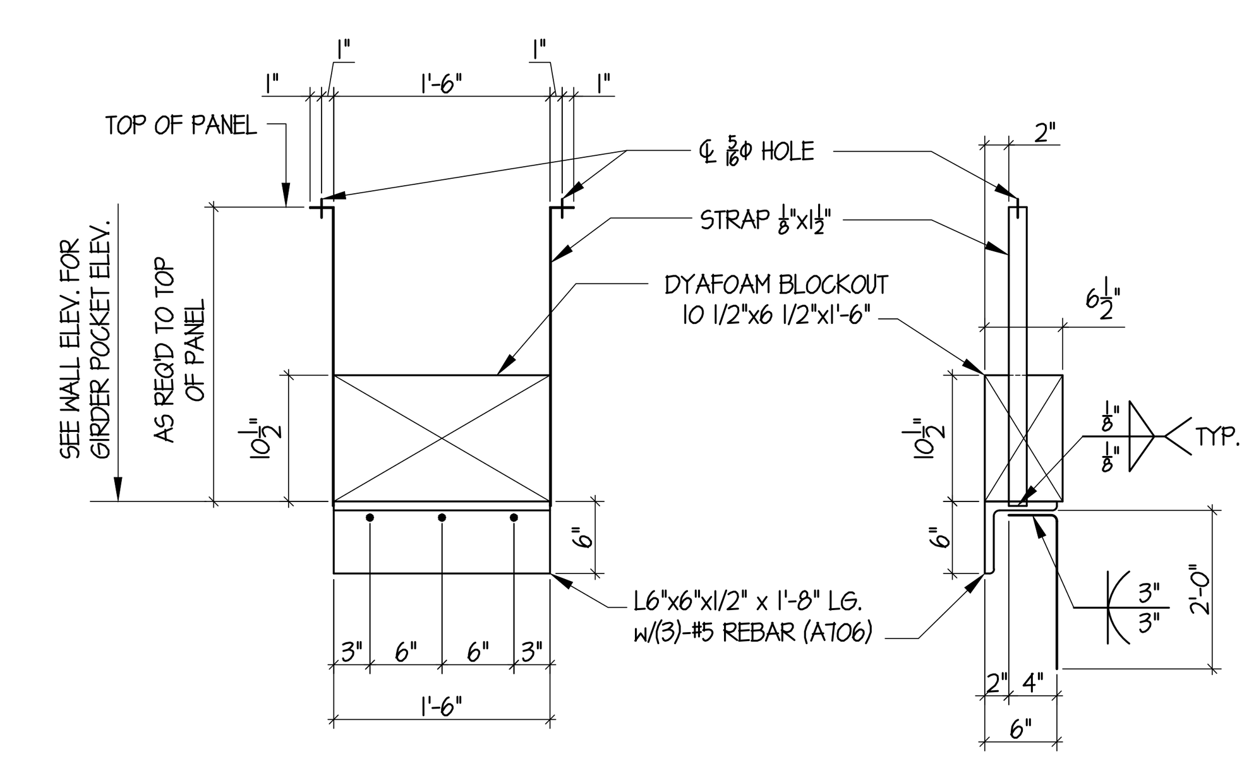
TYPICAL "LH" JOIST BEARING SEAT

DETAIL 1 T3.1 SCALE: 3/4" = 1'-0"



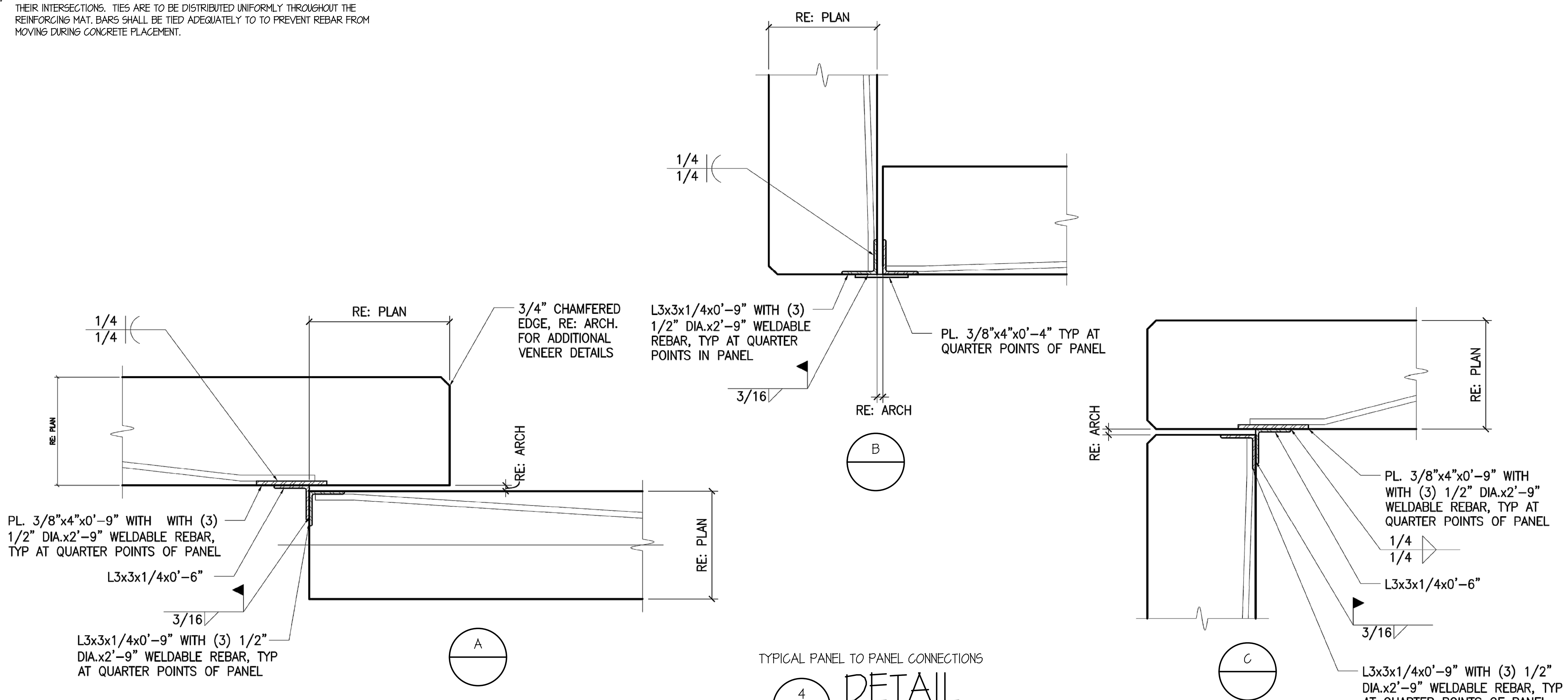
TYPICAL LH JOIST BEARING SEAT AT PANEL JOINT

DETAIL 2 T3.1 SCALE: 3/4" = 1'-0"



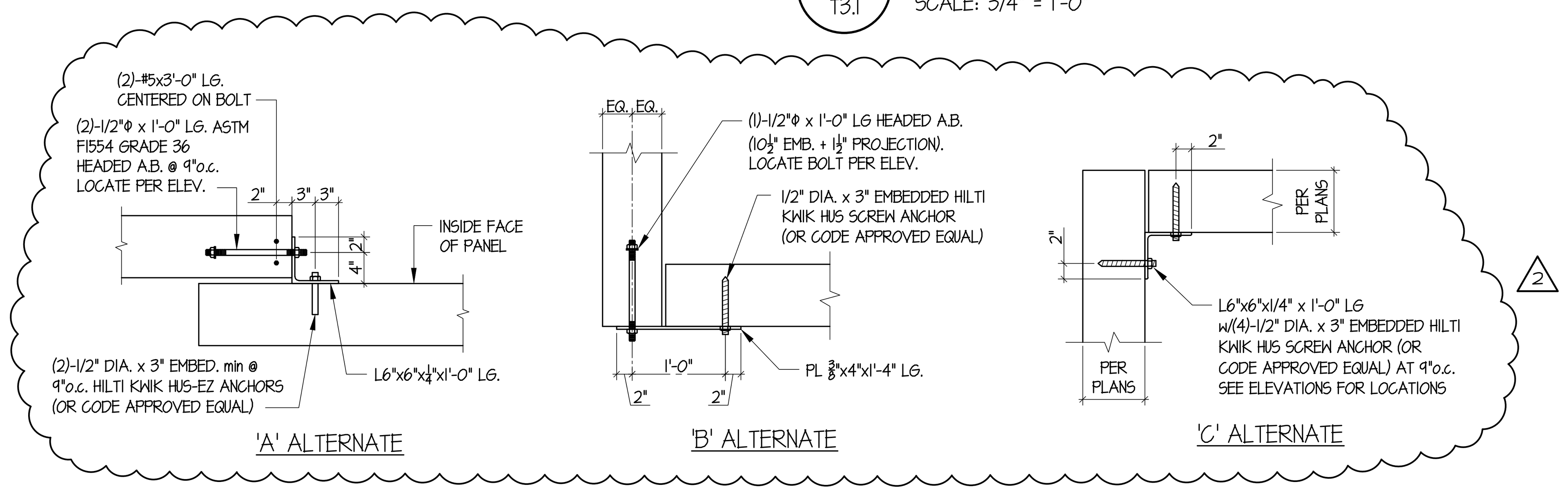
TYPICAL GIRDER BEARING SEAT

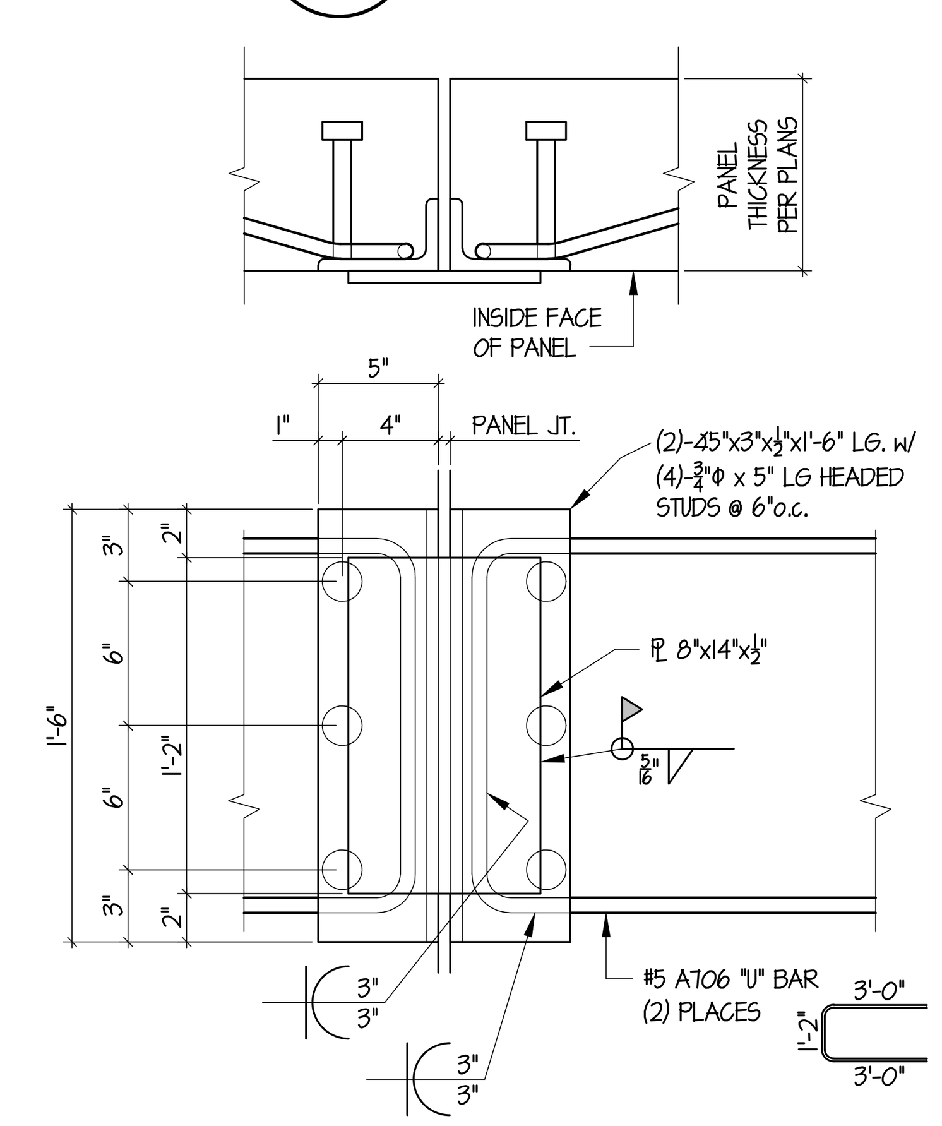
DETAIL 3 T3.1 SCALE: 3/4" = 1'-0"



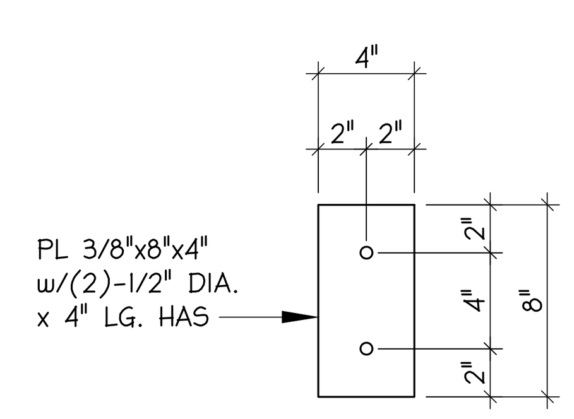
TYPICAL PANEL TO PANEL CONNECTIONS

DETAIL 4 T3.1 SCALE: 3/4" = 1'-0"

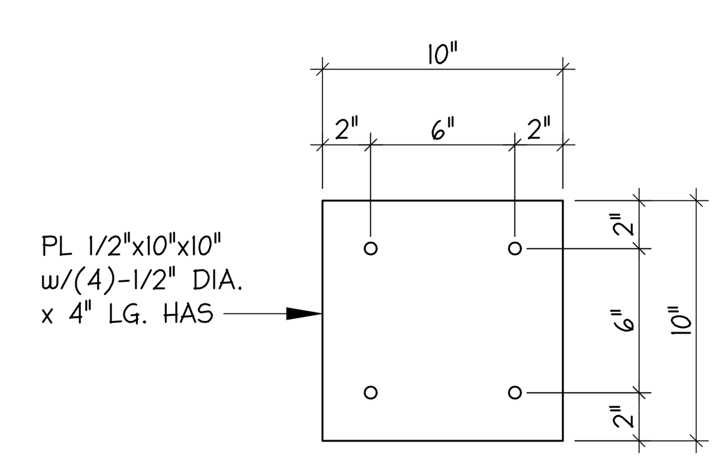




DETAIL 5 T3.1 SCALE: 1 1/2" = 1'-0"



DETAIL 6 T3.1 SCALE: 1 1/2" = 1'-0"



DETAIL 7 T3.1 SCALE: 1 1/2" = 1'-0"

FIELD USE 2022-06-09

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FIELD USE	2022-06-09
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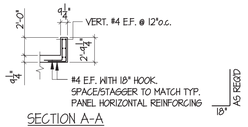
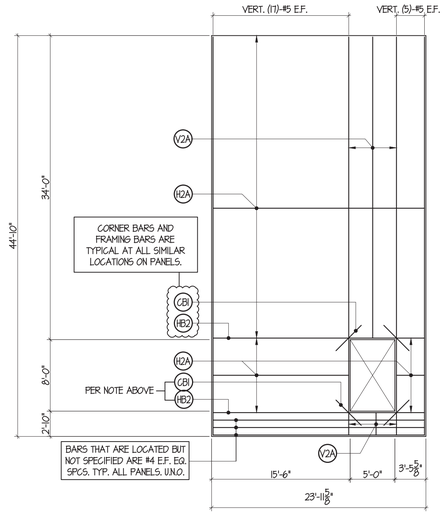
REVISION 2 (2)	2022-07-05

SHEET NO:

T3.1



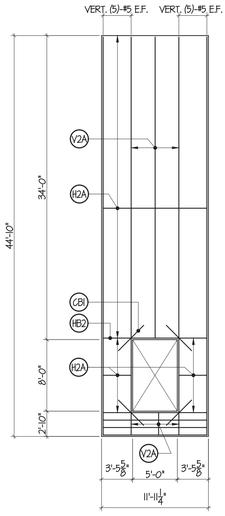
SECTION A-A



PANEL R1

2 REQUIRED

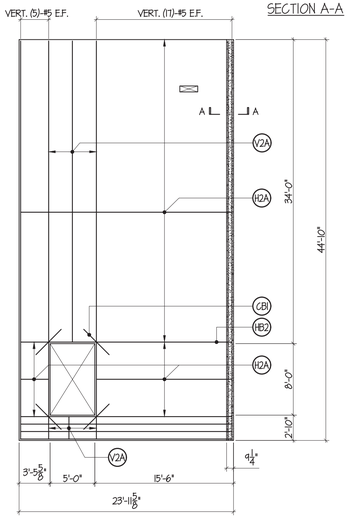
N1	9.25°	S1	9.25°
R1		R1	



PANEL R2

4 REQUIRED

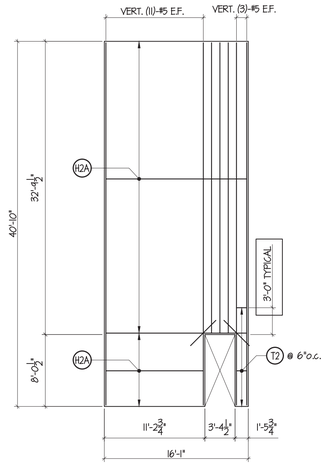
N2	9.25°	N42	9.25°
R2		R2	
S2	9.25°	S42	9.25°
R2		R2	



PANEL R3

1 REQUIRED

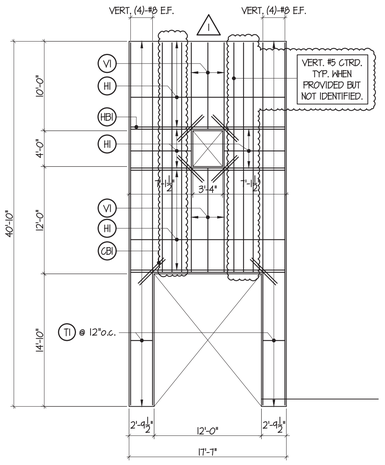
N3	9.25°
R3	



PANEL R4

1 REQUIRED

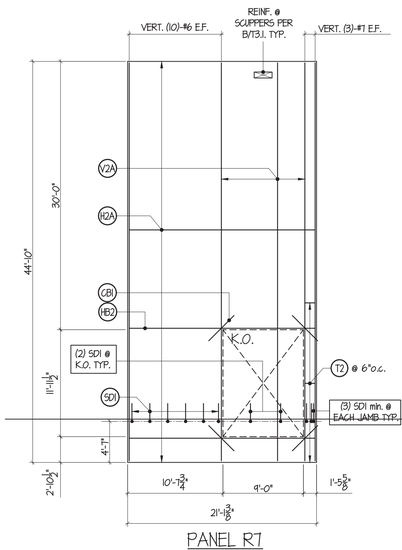
N4	9.25°
R4	



PANEL R5

3 REQUIRED

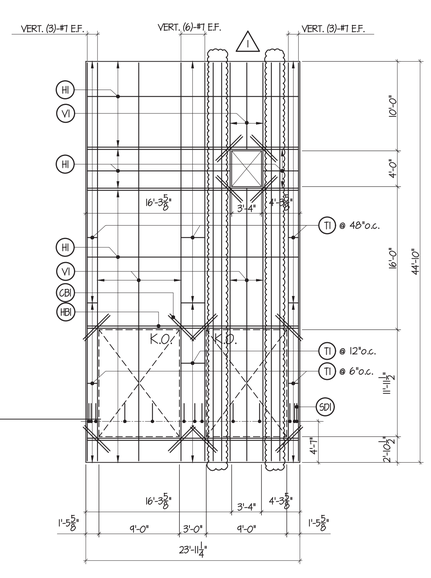
N5	9.25°	N39	9.25°	S39	9.25°
R5		R5		R5	



PANEL R7

2 REQUIRED

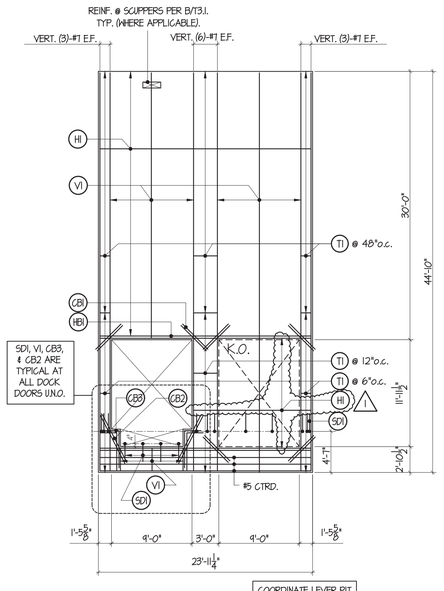
N6	9.25°	S6	9.25°
R7		R7	



PANEL R8

1 REQUIRED

N7 9.25°
R8

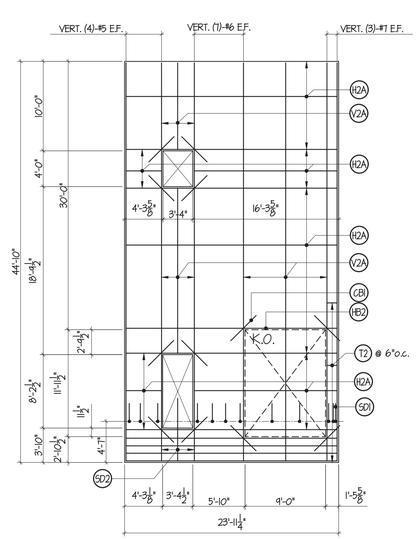


PANEL R9

COORDINATE LEVER PIT REQUIREMENTS WITH CONTRACTOR. TYPICAL.

14 REQUIRED

N8	9.25°	N9	9.25°	N11	9.25°	N14	9.25°	N19	9.25°
R9		R9		R9		R9		R9	
N22	9.25°	N27	9.25°	N30	9.25°	N35	9.25°	S12	9.25°
R9		R9		R9		R9		R9	
S15	9.25°	S23	9.25°	S26	9.25°	S31	9.25°		
R9		R9		R9		R9			



PANEL R10

4 REQUIRED

N10	9.25°	N18	9.25°	N26	9.25°	S11	9.25°
R10		R10		R10		R10	

REINFORCING SCHEDULE

V1	VERT. #4 @ 16" o.c. CTRD.	H1	HORZ. #5 @ 16'o.c. CTRD.
V2	VERT. #4 @ 18" o.c. E.F.	H2	HORZ. #4 @ 18'o.c. E.F.
V2A	VERT. #4 @ 32" o.c. E.F. EACH LAYER STAGGERED 16'o.c.	H2A	HORZ. #5 @ 32" o.c. E.F. EACH LAYER STAGGERED 16'o.c.
		SD1	#4 SLAB DOWELS @ 24"o.c. MAX. (min. 3 PER LEG/JAMB)
		SD2	#4 x 1'-0" LG. SLAB DOWELS @ 12"o.c. (FIELD BEND)
T1	#3 ONE PIECE TIE W/90° HOOKS	CB1	(2)-#5 x 4'-0" CORNER BARS (1) E.F. OR (2) CTRD. @ 3'o.c.
T2	#3 TWO PIECE TIE W/90° HOOKS	CB2	(2)-#5 x 6'-0" CORNER BARS (1) E.F. OR (2) CTRD. @ 3'o.c.
T1 & T2	MAY BE USED INTERCHANGEABLY	CB3	(2)-#5 CORNER BARS (1) E.F. OR (2) CTRD. @ 3'o.c.
HB2	HORIZONTAL BAR #5 E.F. W/10" HOOKS EA. END (HOOK NOT REQ'D IF JAMB IS 30" OR MORE)		
HB1	HORIZONTAL BAR (2)-#5 CTRD. @ 3'o.c. W/10" HOOKS EA. END (HOOK NOT REQ'D IF JAMB IS 30" OR MORE)		

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
2022-06-27

STATE OF MISSOURI
MICHAEL DENNIS KNAPP
NUMBER 2010035002
PROFESSIONAL ENGINEER

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Lee's Summit Logistics Building A Lot 1

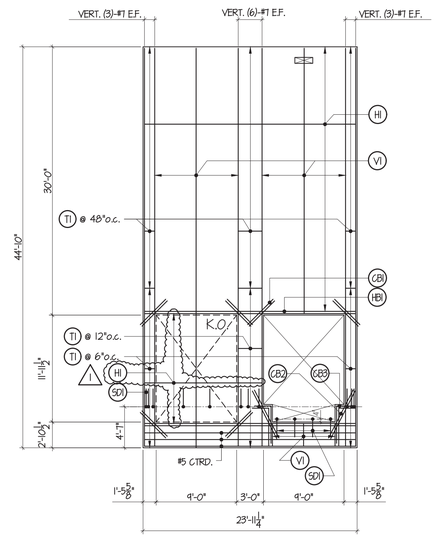
NW Corner of NE Tudor Rd. & Main St.
Lee's Summit, MO 64086

ISSUE TYPE	ISSUE DATE
FOR REVIEW AND APPROVAL	2022-05-16
FIELD USE	2022-06-09
REVISION 1 (1)	2022-06-27

FIELD USE 2022-06-09

SHEET NO:

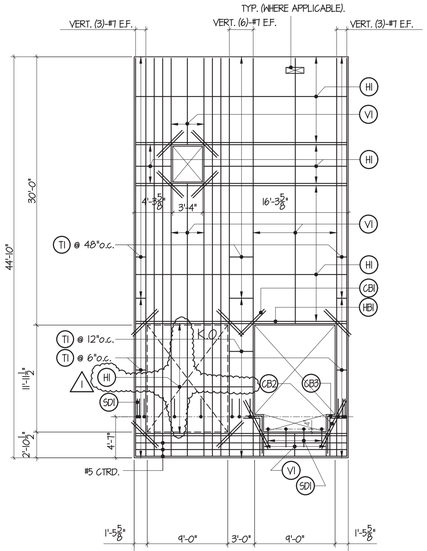
T4.1



PANEL R12

11 REQUIRED

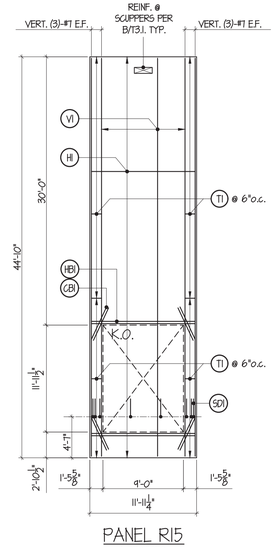
S9 9.25"	S14 9.25"	S17 9.25"	S20 9.25"	S22 9.25"		
R12	R12	R12	R12	R12		
S25 9.25"						
R12						
N13 9.25"	N16 9.25"			N24 9.25"	N29 9.25"	
R12	R12			R12	R12	
N32 9.25"						
R12						



PANEL R13

6 REQUIRED

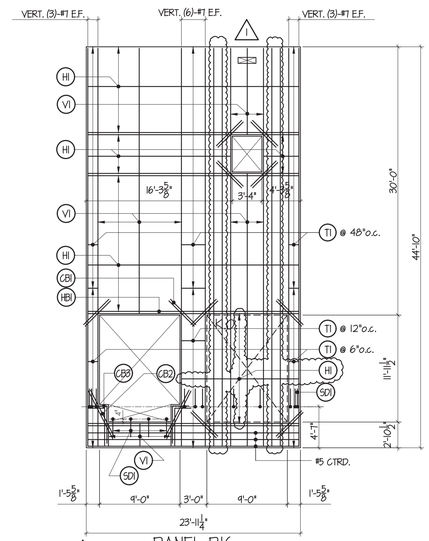
	N23 9.25"	N31 9.25"	
	R13	R13	
S8 9.25"	S16 9.25"	S24 9.25"	
R13	R13	R13	



PANEL R15

8 REQUIRED

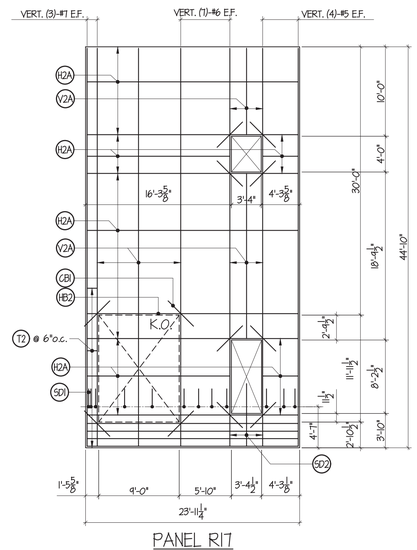
N17 9.25"	N25 9.25"	N34 9.25"	N37 9.25"	
R15	R15	R15	R15	
S7 9.25"	S10 9.25"	S19 9.25"	S27 9.25"	
R15	R15	R15	R15	



PANEL R16

5 REQUIRED

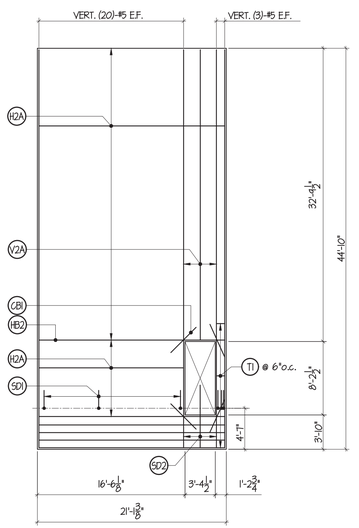
	N20 9.25"	N28 9.25"	N36 9.25"	
	R16	R16	R16	
S13 9.25"	S21 9.25"			
R16	R16			



PANEL R17

3 REQUIRED

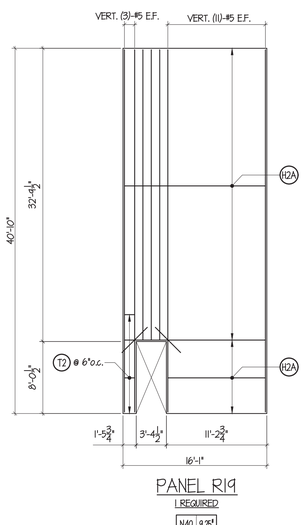
N33 9.25"	S18 9.25"		S34 9.25"
R17	R17		R17



PANEL R18

1 REQUIRED

N38 9.25"
R18

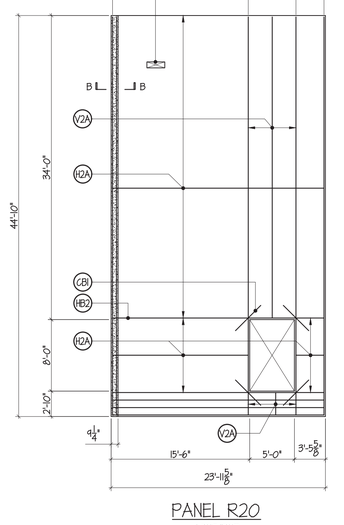


PANEL R19

1 REQUIRED

N40 9.25"
R19

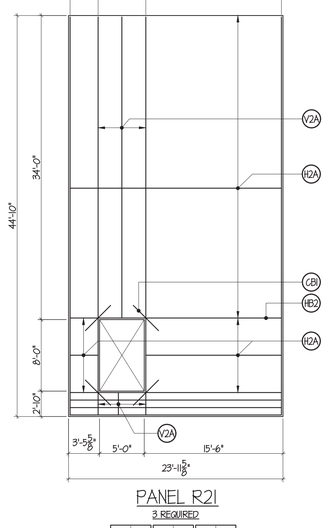
SECTION B-B



PANEL R20

1 REQUIRED

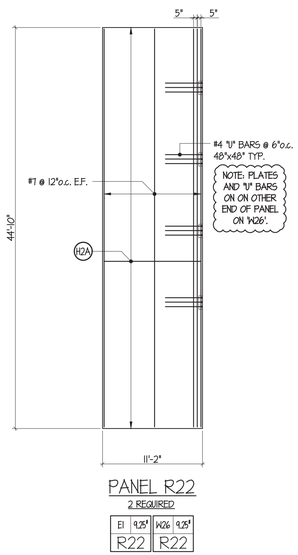
N41 9.25"
R20



PANEL R21

3 REQUIRED

N43 9.25"	S3 9.25"	S43 9.25"	
R21	R21	R21	



PANEL R22

2 REQUIRED

E1 9.25"	W26 9.25"
R22	R22

REINFORCING SCHEDULE

V1	VERT. #4 @ 16" o.c. CTRD.	H1	HORZ. #5 @ 16"o.c. CTRD.
V2	VERT. #4 @ 18" o.c. E.F.	H2	HORZ. #4 @ 18"o.c. E.F.
V2A	VERT. #4 @ 32" o.c. E.F. EACH LAYER STAGGERED 16"o.c.	H2A	HORZ. #5 @ 32" o.c. E.F. EACH LAYER STAGGERED 16"o.c.
		SD1	#4 SLAB DOWELS @ 24"o.c. MAX. (min. 3 PER LEG/JAMB)
		SD2	#4 x 1'-0" LG. SLAB DOWELS @ 12"o.c. (FIELD BEND)
		CB1	(2)-#5 x 4'-0" CORNER BARS (1) E.F. OR (2) CTRD. @ 3'o.c.
		CB2	(2)-#5 x 6'-0" CORNER BARS (1) E.F. OR (2) CTRD. @ 3'o.c.
T1	#3 ONE PIECE TIE W/90° HOOKS	CB3	(2)-#5 CORNER BARS (1) E.F. OR (2) CTRD. @ 3'o.c.
T2	#3 TWO PIECE TIE W/90° HOOKS		
T1 & T2	MAY BE USED INTERCHANGEABLY		
HB2	HORIZONTAL BAR #5 E.F. W/10" HOOKS EA. END (HOOK NOT REQ'D IF JAMB IS 30" OR MORE)		
HB1	HORIZONTAL BAR (2)-#5 CTRD. @ 3'o.c. W/10" HOOKS EA. END (HOOK NOT REQ'D IF JAMB IS 30" OR MORE)		

RELEASED FOR CONSTRUCTION
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Development Services Department
Lee's Summit, Missouri
2022-06-28

STATE OF MISSOURI
MICHAEL D. KNAPP
NUMBER PE-2010035002
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Lee's Summit Logistics Building A Lot 1

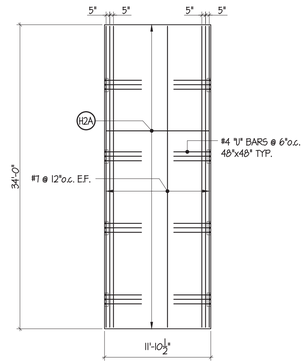
NW Corner of NE Tudor Rd. & Main St.
Lee's Summit, MO 64086

ISSUE TYPE	ISSUE DATE
FOR REVIEW AND APPROVAL	2022-05-16
FIELD USE	2022-06-09
REVISION 1 (1)	2022-06-27

FIELD USE 2022-06-09

SHEET NO:

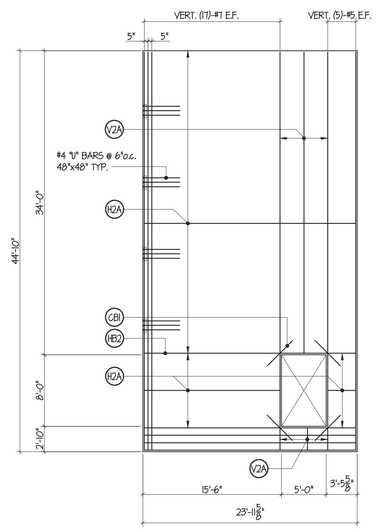
T4.2



PANEL R23

2 REQUIRED

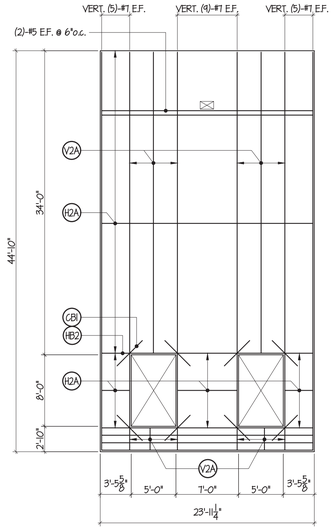
E2	9.25"	W25	9.25"
R23		R23	



PANEL R24

1 REQUIRED

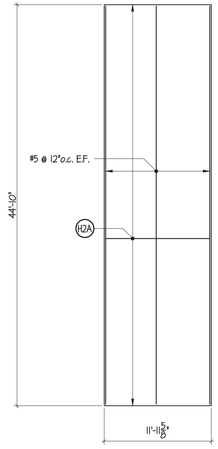
E3	9.25"
R24	



PANEL R25

4 REQUIRED

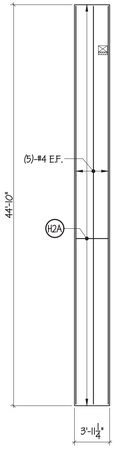
E4	9.25"	E24	9.25"	W3	9.25"	W23	9.25"
R25		R25		R25		R25	



PANEL R26

4 REQUIRED

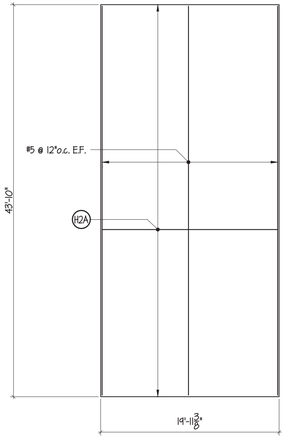
E5	9.25"	E23	9.25"	W4	9.25"	W22	9.25"
R26		R26		R26		R26	



PANEL R27

4 REQUIRED

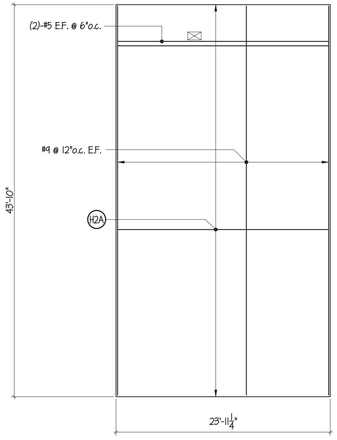
E6	9.25"	E22	9.25"	W5	9.25"	W21	9.25"
R27		R27		R27		R27	



PANEL R28 ⚠1

3 REQUIRED

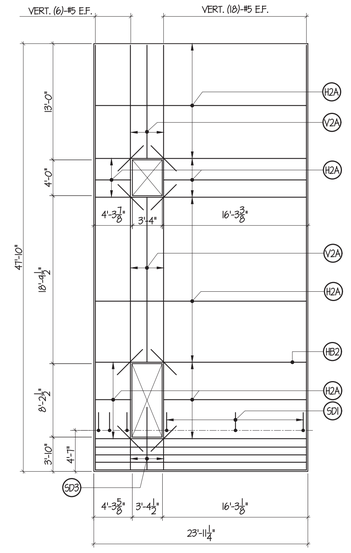
E7	9.25"	E21	9.25"	W6	9.25"
R28		R28		R28	



PANEL R29

8 REQUIRED

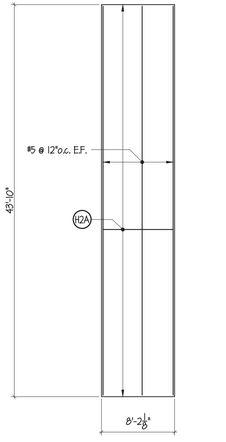
E8	9.25"	E10	9.25"	E18	9.25"	E20	9.25"
R29		R29		R29		R29	
W7	9.25"	W9	9.25"	W17	9.25"	W19	9.25"
R29		R29		R29		R29	



PANEL R30

2 REQUIRED

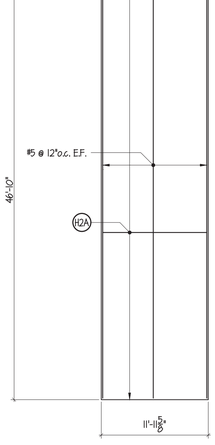
E9	9.25"	W8	9.25"
R30		R30	



PANEL R31

4 REQUIRED

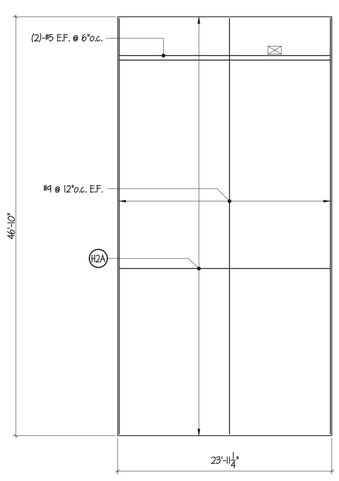
E11	9.25"	E17	9.25"	W10	9.25"	W16	9.25"
R31		R31		R31		R31	



PANEL R32

2 REQUIRED

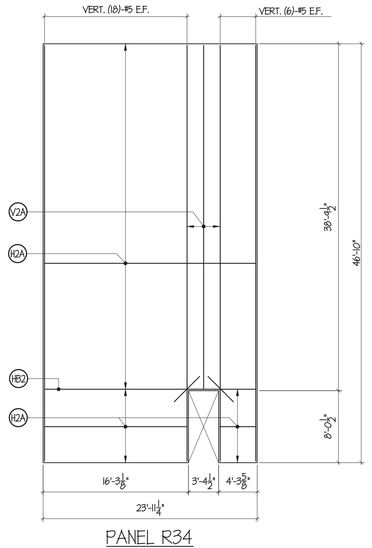
E12	9.25"	W15	9.25"
R32		R32	



PANEL R33

4 REQUIRED

E13	9.25"	E15	9.25"	W12	9.25"	W14	9.25"
R33		R33		R33		R33	



PANEL R34

1 REQUIRED

E14	9.25"
R34	

REINFORCING SCHEDULE

V1	VERT. #4 @ 16" o.c. CTRD.	H1	HORZ. #5 @ 16"o.c. CTRD.
V2	VERT. #4 @ 18" o.c. E.F.	H2	HORZ. #4 @ 18"o.c. E.F.
V2A	VERT. #4 @ 32" o.c. E.F. EACH LAYER STAGGERED 16"o.c.	H2A	HORZ. #5 @ 32" o.c. E.F. EACH LAYER STAGGERED 16"o.c.
		SD1	#4 SLAB DOWELS @ 24"o.c. MAX. (min. 3 PER LEG/JAMB)
		SD2	#4 x 1'-0" LG. SLAB DOWELS @ 12"o.c. (FIELD BEND)
T1	#3 ONE PIECE TIE W/90° HOOKS	CB1	(2)-#5 x 4'-0" CORNER BARS (1) E.F. OR (2) CTRD. @ 3'o.c.
T2	#3 TWO PIECE TIE W/90° HOOKS	CB2	(2)-#5 x 6'-0" CORNER BARS (1) E.F. OR (2) CTRD. @ 3'o.c.
T1 & T2	MAY BE USED INTERCHANGEABLY	CB3	(2)-#5 CORNER BARS (1) E.F. OR (2) CTRD. @ 3'o.c.
HB2	HORIZONTAL BAR #5 E.F. W/10" HOOKS EA. END (HOOK NOT REQ'D IF JAMB IS 30" OR MORE)		
HB1	HORIZONTAL BAR (2)-#5 CTRD. @ 3'o.c. W/10" HOOKS EA. END (HOOK NOT REQ'D IF JAMB IS 30" OR MORE)		

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Lee's Summit, Missouri
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STATE OF MISSOURI
MICHAEL DENNIS KNAPP
NUMBER 2010035002
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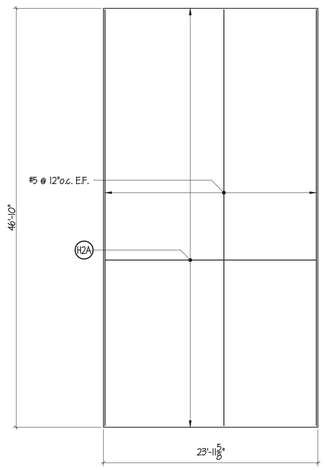
Lee's Summit, MO 64086

ISSUE TYPE	ISSUE DATE
FOR REVIEW AND APPROVAL	2022-05-16
FIELD USE	2022-06-09
REVISION 1 ⚠1	2022-06-27

FIELD USE 2022-06-09

SHEET NO:

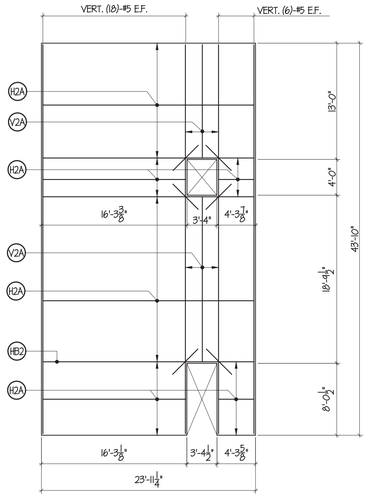
T4.3



PANEL R35

2 REQUIRED

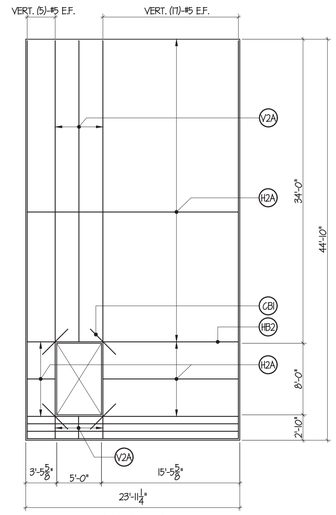
E16 9.25'	W11 9.25'
R35	R35



PANEL R36

2 REQUIRED

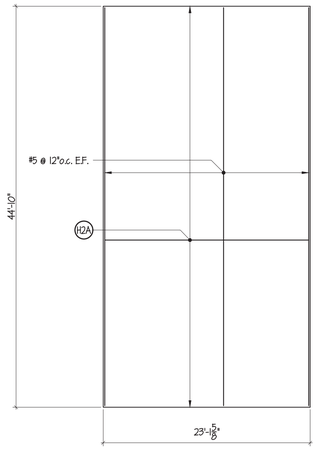
E19 9.25'	W18 9.25'
R36	R36



PANEL R37

1 REQUIRED

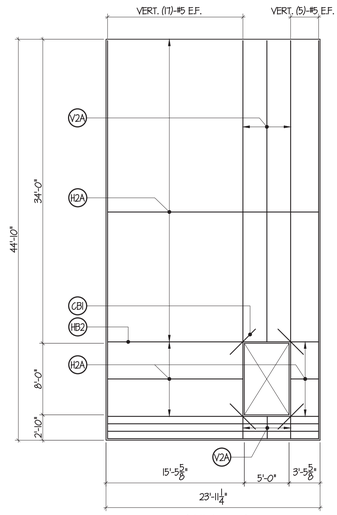
E25 9.25'
R37



PANEL R38

2 REQUIRED

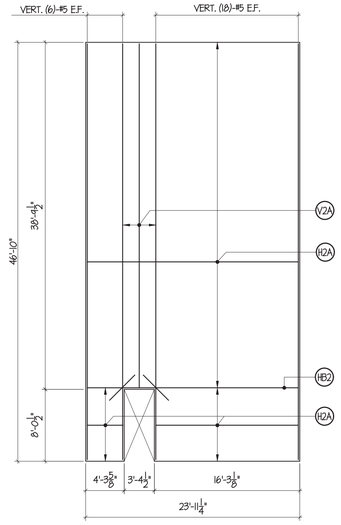
E26 9.25'	W1 9.25'
R38	R38



PANEL R40

1 REQUIRED

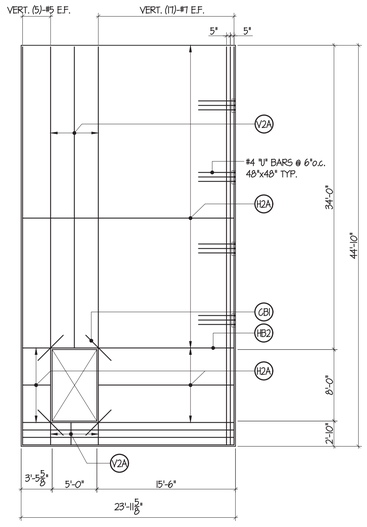
W2 W2
R40



PANEL R41

1 REQUIRED

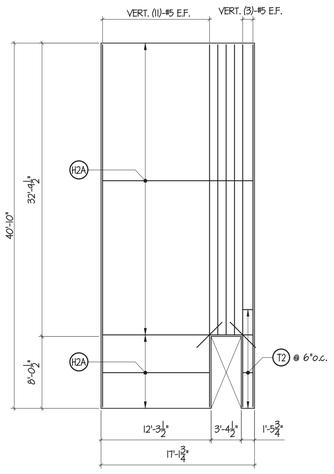
W13 9.25'
R41



PANEL R42

1 REQUIRED

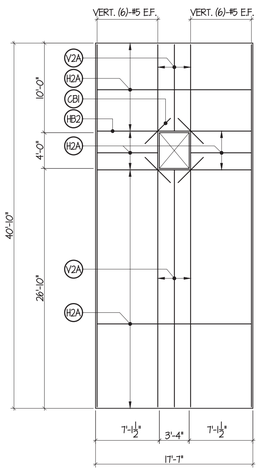
W24 9.25'
R42



PANEL R44

1 REQUIRED

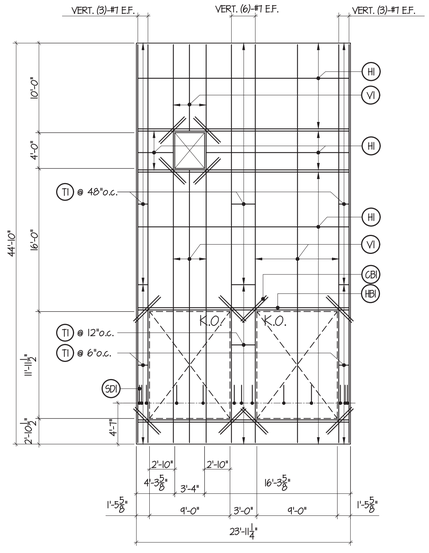
S4 9.25'
R44



PANEL R45

1 REQUIRED

S5 9.25'
R45



PANEL R46

1 REQUIRED

S32 9.25'
R46

1

REINFORCING SCHEDULE

V1	VERT. #4 @ 16" o.c. CTRD.	H1	HORZ. #5 @ 16"o.c. CTRD.
V2	VERT. #4 @ 18" o.c. E.F.	H2	HORZ. #4 @ 18"o.c. E.F.
V2A	VERT. #4 @ 32" o.c. E.F. EACH LAYER STAGGERED 16"o.c.	H2A	HORZ. #5 @ 32" o.c. E.F. EACH LAYER STAGGERED 16"o.c.
		SD1	#4 SLAB DOWELS @ 24"o.c. MAX. (min. 3 PER LEG/JAMB)
		SD2	#4 x 1'-0" LG. SLAB DOWELS @ 12"o.c. (FIELD BEND)
T1	#3 ONE PIECE TIE W/90° HOOKS	CB1	(2)-#5 x 4'-0" CORNER BARS (1) E.F. OR (2) CTRD. @ 3"o.c.
T2	#3 TWO PIECE TIE W/90° HOOKS	CB2	(2)-#5 x 6'-0" CORNER BARS (1) E.F. OR (2) CTRD. @ 3"o.c.
T1 & T2	MAY BE USED INTERCHANGEABLY	CB3	(2)-#5 CORNER BARS (1) E.F. OR (2) CTRD. @ 3"o.c.
HB2	HORIZONTAL BAR #5 E.F. W/10" HOOKS EA. END (HOOK NOT REQ'D IF JAMB IS 30" OR MORE)		
HB1	HORIZONTAL BAR (2)-#5 CTRD. @ 3"o.c. W/10" HOOKS EA. END (HOOK NOT REQ'D IF JAMB IS 30" OR MORE)		

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
2022-06-27

STATE OF MISSOURI
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FIELD USE 2022-06-09

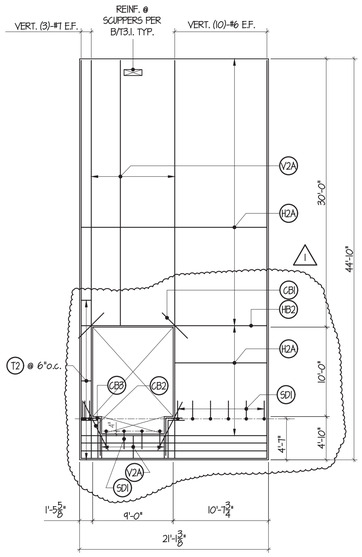
Lee's Summit Logistics Building A Lot 1

NW Corner of NE Tudor Rd. & Main St.
Lee's Summit, MO 64086

ISSUE TYPE	ISSUE DATE
FOR REVIEW AND APPROVAL	2022-05-16
FIELD USE	2022-06-09
REVISION 1 1	2022-06-27

SHEET NO:

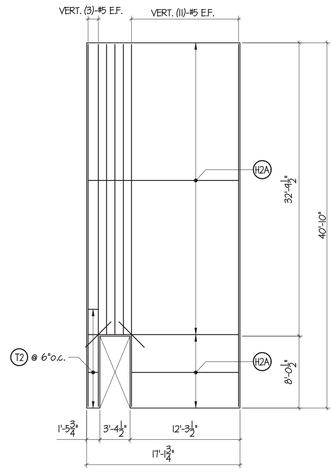
T4.4



PANEL R47

1 REQUIRED

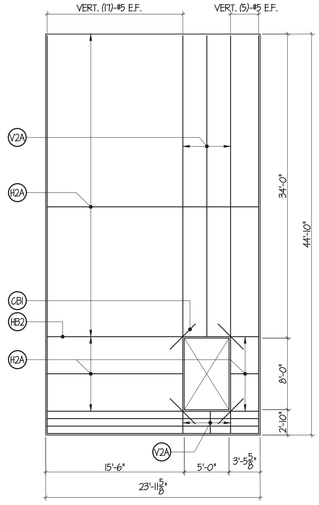
S38	9.25°
R47	



PANEL R48

1 REQUIRED

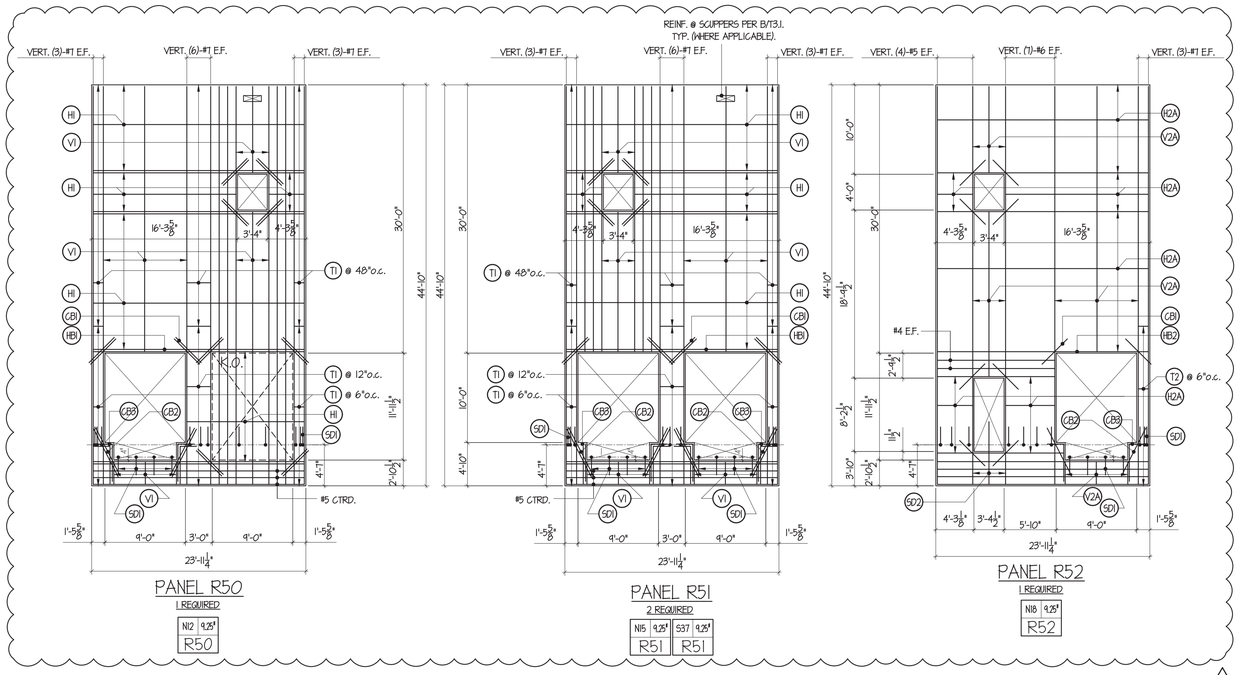
S40	9.25°
R48	



PANEL R49

1 REQUIRED

S41	9.25°
R49	



PANEL R50

1 REQUIRED

N12	9.25°
R50	

PANEL R51

2 REQUIRED

N15	9.25°	S37	9.25°
R51		R51	

PANEL R52

1 REQUIRED

N18	9.25°
R52	

REINFORCING SCHEDULE

V1	VERT. #4 @ 16" o.c. CTRD.	H1	HORZ. #5 @ 16"o.c. CTRD.
V2	VERT. #4 @ 18" o.c. E.F.	H2	HORZ. #4 @ 18"o.c. E.F.
V2A	VERT. #4 @ 32" o.c. E.F. EACH LAYER STAGGERED 16"o.c.	H2A	HORZ. #5 @ 32" o.c. E.F. EACH LAYER STAGGERED 16"o.c.
		SD1	#4 SLAB DOWELS @ 24"o.c. MAX. (min. 3 PER LEG/JAMB)
		SD2	#4 x 1'-0" LG. SLAB DOWELS @ 12"o.c. (FIELD BEND)
T1	#3 ONE PIECE TIE W/90° HOOKS	CB1	(2)-#5 x 4'-0" CORNER BARS (1) E.F. OR (2) CTRD. @ 3'o.c.
T2	#3 TWO PIECE TIE W/90° HOOKS	CB2	(2)-#5 x 6'-0" CORNER BARS (1) E.F. OR (2) CTRD. @ 3'o.c.
T1 & T2	MAY BE USED INTERCHANGEABLY	CB3	(2)-#5 CORNER BARS (1) E.F. OR (2) CTRD. @ 3'o.c.
HB2	HORIZONTAL BAR #5 E.F. W/10" HOOKS EA. END (HOOK NOT REQ'D IF JAMB IS 30" OR MORE)		
HB1	HORIZONTAL BAR (2)-#5 CTRD. @ 3'o.c. W/10" HOOKS EA. END (HOOK NOT REQ'D IF JAMB IS 30" OR MORE)		

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
2022-06-27

STATE OF MISSOURI
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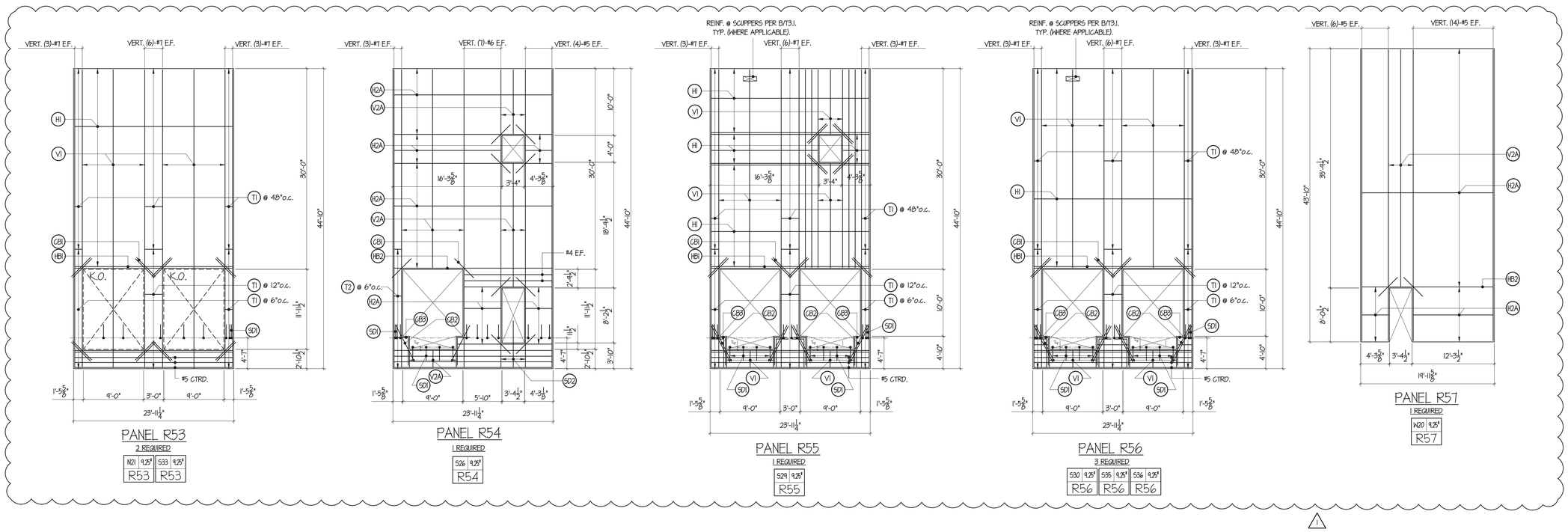
FIELD USE 2022-06-09

Lee's Summit Logistics
Building A Lot 1
NW Corner of NE Tudor Rd. & Main St.
Lee's Summit, MO 64086

ISSUE TYPE	ISSUE DATE
FOR REVIEW AND APPROVAL	2022-05-16
FIELD USE	2022-06-09
REVISION 1 △1	2022-06-27

SHEET NO:

T4.5



REINFORCING SCHEDULE

V1	VERT. #4 @ 16" o.c. CTRD.	H1	HORZ. #5 @ 16"o.c. CTRD.
V2	VERT. #4 @ 18" o.c. E.F.	H2	HORZ. #4 @ 18"o.c. E.F.
V2A	VERT. #4 @ 32" o.c. E.F. EACH LAYER STAGGERED 16"o.c. (16", 32")	H2A	HORZ. #5 @ 32" o.c. E.F. EACH LAYER STAGGERED 16"o.c. (16", 32")
		SD1	#4 SLAB DOWELS @ 24"o.c. MAX. (min. 3 PER LEG/JAMB) (30", 30")
		SD2	#4 x 1'-0" LG. SLAB DOWELS @ 12"o.c. (FIELD BEND) (BEND)
T1	#3 ONE PIECE TIE W/90° HOOKS	CB1	(2)-#5 x 4'-0" CORNER BARS (1) E.F. OR (2) CTRD. @ 3'o.c.
T2	#3 TWO PIECE TIE W/90° HOOKS	CB2	(2)-#5 x 6'-0" CORNER BARS (1) E.F. OR (2) CTRD. @ 3'o.c.
T1 & T2	MAY BE USED INTERCHANGEABLY	CB3	(2)-#5 CORNER BARS (1) E.F. OR (2) CTRD. @ 3'o.c. (1'-10", 4½")
HB2	HORIZONTAL BAR #5 E.F. W/10" HOOKS EA. END (HOOK NOT REQ'D IF JAMB IS 30" OR MORE)		
HB1	HORIZONTAL BAR (2)-#5 CTRD. @ 3'o.c. W/10" HOOKS EA. END (HOOK NOT REQ'D IF JAMB IS 30" OR MORE)		

FIELD USE 2022-06-09

RELEASED FOR CONSTRUCTION
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Development Services Department
Lee's Summit, Missouri
2022-06-27

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Building A Lot 1

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ISSUE TYPE	ISSUE DATE
FOR REVIEW AND APPROVAL	2022-05-16
FIELD USE	2022-06-09
REVISION 1 (1)	2022-06-27

SHEET NO: (1)

T4.6